Universitat Autònoma de Barcelona

Alexandria in Antiquity
A Topographical Reconstruction

Volume I

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Departament de Ciències de l'Antiguitat i de l'Edat Mitjana

Alexandria in Antiquity

A Topographical Reconstruction

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A Dissertation Submitted in Fulfilment of the Requirements for the Degree of Doctor of Philosophy in Classical Archaeology

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Cover image: game counter with a representation of a city gate

Kom el-Dikka, Alexandria (PAM IX, reports 1997) PCMA © 2008

He (Ptolemy Lagid) made his residence 'the fortress of the King of Upper and Lower Egypt, [Meri-Amun, Setep-en-Re]: beloved by Amun, the sun-chosen, Son of the Sun, Alexandros' – so its name was – being on the shore of the great sea of the Hau-Nebu (the Mediterranean); (it was) formerly called Râ-Kedet (Rhakotis).

Excerpt from the Satrap Stela (ca. 311 BC)

Contents

Abstract

A topographical reconstruction of Alexandria in antiquity is attempting to find a way through an archaeological labyrinth of fragmentary evidence. In the light of the recent discoveries, therefore, a new attempt becomes complementary to earlier ones (Adriani 1934, 1966; Tkaczow 1993). The current study, taking into account the last two centuries of systematic research into the topography of the ancient city, aims at: (i) cataloguing the archaeological sites, from the French Expedition (1798-99) to date; (ii) infer the urban plan and cityscape of the foundation (4th cent. BC), and the subsequent changes taking place to the Arab conquest of Egypt (7th cent. AD). To this end, a holistic approach to topographical reconstruction is adopted, where 'material culture' is studied in conjunction with the 'historical record' (vol. I: text). Vol. II of the thesis (plates; AutoCAD maps) serves to display the results.

Resum (Català)

Una reconstrucció topogràfica d'Alexandria a l'antiguitat és un intent de trobar un camí en un laberint arqueològic d'evidències fragmentàries. A la llum de les recents troballes, per tant, es tracta d'un intent complementari a d'altres anteriors (Adriani 1934, 1966; Tkaczow 1993). L'estudi actual, té en compte els darrers dos segles de recerca sistemàtica sobre la topografia de l'antiga ciutat, que té com a objectiu: (i) un catàleg de jaciments arqueològics, des de l'Expedició francesa (1798-9) fins ara; (ii) inferir la planta urbana i el paisatge de la ciutat en la seva fundació (segle IV aC), i els subsegüents canvis que van tenir lloc fins a la conquesta àrab d'Egipte (VII dC). Per aquesta raó, s'adopta una aproximació holística a la reconstrucció topogràfica, a on la cultura material s'estudia conjuntament amb el registre històric (vol. I: text). Vol. II de la tesis (imatges; plantes d'AutoCAD) serveixen per mostrar els resultats.

Resumen (Español)

Una reconstrucción topográfica de Alejandría en la antigüedad es un intento de encontrar un camino en un laberinto arqueológico de evidencias fragmentarias (capít. II y III). A la luz de los recientes hallazgos, por lo tanto, se trata de un intento complementario a otros anteriores (Adriani 1934, 1966; Tkaczow 1993). El estudio actual, tiene en cuenta los últimos dos siglos de investigación sistemática

sobre la topografía de la antigua ciudad, que tiene como objetivo: (i) un catálogo de yacimientos arqueológicos, desde la Expedición francesa (1798-9) hasta la actualidad; (ii) inferir la planta urbana y el paisaje de la ciudad en su fundación (siglo IV aC), y los subsiguientes cambios que tuvieron lugar hasta la conquista árabe de Egipto (VII dC). Por esta razón, se adopta una aproximación holística a la reconstrucción topográfica, donde la cultura material se estudia conjuntamente con el registro histórico (vol. I: texto). Vol. II de la tesis (imágenes; plantas de AutoCAD) sirven para mostrar los resultados.

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Introduction

I. Theoretical Framework

The Hellenistic period is marked by a shift in urban culture away from the Classical ideals of the city-states (πόλεις). Certain uniform institutions and infrastructural norms are attested throughout the annexed lands of the Hellenized East. Concurrent changes in the urban landscape seem to have been fostered by the socio-political developments which marked the course of the second half of the fourth century BC (Owens 1992: 74). At the time, scores of new cities were founded or remodeled on the Greek pattern, in consequence of a rapid expansion of Macedonian colonialism eastwards, from Asia Minor to the trans-Tigris regions of Media and Bactria, through the Levantine coast, Egypt, and Mesopotamia (Chamoux 2002: 12-30). Besides their principal role as focal points for international trade and metropolitan disseminators of the Hellenic culture, the founded *cosmopoleis* had served as administrative centres, in securing the political unity of the newly-established kingdoms of the Διάδοχοι (i.e. the successors of Alexander the Great) (Wycherley 1951: 178). The physical and cultural sophistication of urban development within the Hellenistic οἰκουμένη, thus hints towards far more intricate, intercity-mercantile relations between increasingly globalized societies. A cosmopolitan commercialism as such, is well manifested in the eventual dominance of the Hellenistic κοινή over local (Ionic, Aeolic, Doric, etc.) dialect forms of the fifth-century, Classical πόλεις (Billows 2005: 196). In this context, the capital of Graeco-Roman Egypt, Alexandria, exemplifies one such prototype of a series of Hellenized urban-hubs established across the Macedonian-controlled, Afro-Asiatic East.

The geographer Carl O. Sauer maintains: “the works of man express themselves in the cultural landscape. There may be a succession of these landscapes with a succession of cultures. They are derived in each case from the natural landscape, man expressing his place in nature as a distinct agent of modification. Of especial significance is that climax of culture which we call civilization” (Sauer 1925: 307). Accordingly, cultural landscapes are subject to change either by the development of a culture or by the replacement of cultures. In studying such inter-relationship between natural landscapes and cultural groups, the grandiose metropolis of Graeco-Roman Egypt offers a case in point of the ways in which the topographical components of alien (i.e. foreign or colonial) civic life, religious rites, and funerary practices, are on display in concurrence with the indigenous tradition, hence the attempt to piece together the fragmentary evidence towards a holistic picture of the city.

II. History of Research

a) Earlier Maps of the Renaissance

One of the Renaissance earlier-surviving scenes of Alexandria, is the fifteenth-century 'Veduta d'Alessandria' of Codice Urbinate (277), issued by Ugo Comminelli de Maceriis, on the fifth day of January 1472, as part of the Biblioteca Vaticana's *Codice Latino di Tolomeo* (CLT) (Plate I) (Jodent 1921: Planche I). In 1493, a picturesque view of the city appeared in *Liber Chronicarum*, a book edited by the German physician and cartographer Hartmann Schedel (Plate II) (Schedel 1493: pl. LXXVIII). In 1521, following the Ottoman conquest of Egypt (1516-17), the cartographic catalogue of the geographer and navigator Ahmet Muhittin Piri (aka Piri Reis), *Kitāb-ı* Baḥrīye, featured the Mediterranean port of the newly-annexed eyālet (Plate III) (Piri 1525: 295). In 1548, during his voyages to the Orient (1546-49), the French traveller Pierre Belon produced a *vray portraict de la ville*, which was published in *Les Observations de Plusieurs Singularitez et Choses Mémorables Trouvées en: Grèce, Asie, Judée, Égypte, Arabie et Autres Pays Estranges, Rédigées en Trois Livres* (1553) (Plate IV) (Belon 1553: 206). At least, three derivatives of Belon's *carte* were released subsequently, in: (i) *Civitates Orbis Terrarum*, the illustrative volume edited by George Braun and lavishly engraved by Frans Hogenberg (vol. II: 1575) (Plate VIa) (Braun and Hogenberg 1575: 56); (ii) Johann Helffrich's 1582 travelogue (visit: 1565-66), *Kurtzer & Warhafftiger Bericht von der Reis aus Venedig nach Hierusalem, von Dannen in Aegypten, auff den Berg Sinai, und Folgends Widerumb gen Venedig* (Plate VIb) (Helffrich 1582: Der Stadt Alexandria); (iii) *Naukeurige Beschrijvinge der Afrikaensche Gewesten* (1668), an ethnographic survey of Africa by the Dutch physician Olfert Dapper (Plate VII) (Dapper 1668: 74-75). Preceding the Belon derivatives, in 1570, the Flemish geographer Abraham Ortelius included 'Aegyptus Antiqua' with an inset-map of Alexandria, in *Theatrum Orbis Terrarum* (1587) (Plates: Va-b) (Ortelius 1587: 107). Later, towards the end of the seventeenth century, three *cartes* were made for King Louis XIV, first by Razaud (1687), then Christian Melchien and Antoine Massy (1699) (Plates: VIII; IX; X) (Jondet 1921: Planches VIII, IX and X).

b) The Eighteenth Century

Early in the eighteenth century, another French *carte* was issued by the Marquese de la Garde, ca. 1713 (Plate XI) (Jondet 1921: Planche XI). An earlier attempt to map the ancient town was made by Pierre-Nicolas Bonamy, the prominent French historian (1694-1770), as part of "Description de la

Ville d'Alexandrie, Telle qu'elle Estoit du Temps de Strabon": an article, written around 1731, which was published later, in *Histoire de l'Academie des Inscriptions et Belles-Lettres* (Tome IX: 1736) (Plate XII) (Bonamy 1736: 416-431). In 1755, the Royal Danish Academy of Sciences and Letters, by order of King Frederick V of Denmark, released a first edition of Frederik-Ludvig Norden's *Voyage d'Égypte et de Nubie*, with two maps of Alexandria in attachment (Norden's visit to Alexandria: June 1737). Norden's maps were in fact, republished in the Nouvelle Édition of 1795 (Tome Premier) (Plates: XIII; XIV) (Norden 1795: Planches I and II). The latter is followed by Richard Pococke's anthropological account, *A Description of the East, and Some Other Countries* (1743; Pococke's visit: 1737), of which volume I (Observations on Egypt) features a draft-plan of the city (Plate XV) (Pocock 1743: Plate II). A derivative of the Razaud map, along with another showing Alexandria's hinterland (the coastline, lakes Edku and Mareotis, the Abu Qir Bay, and the Rosetta Nilotic-exit), complement Jacques-Nicolas Bellin's *Le Petit Atlas Maritime: Recueil de Cartes et Plans des Quatre Parties du Monde* (Tome III: in 1764) (Plates: XVI; XVII) (Bellin 1764: Plates 85 and 86). In the same year, Joseph Roux (i.e. *hidrographe du roy à Marseille*) released the so-called 'Alexandrie Barbarie', together with an extensive atlas of ca. 121 harbour plans, published then under the title: *Recueil des Principaux Plans des Ports et Rades de la Mer Mediterrane* (in 1764; extended edition: 1804) (Plate XVIII) (Roux 1804: Planche 65). Another French cartographer, Jean-Baptiste Bourguignon d'Anville, was in turn, influenced by the Razaud map (b), as evident on his own version of Alexandria, in *Mémoires sur l'Égypte Ancienne et Moderne* (1766) (Plate XIX) (Bourguignon d'Anville 1766: 53). In 1785, the landscape-painter Louis-François Cassas created a view of the city, during his visits to Egypt. It was published later, in *Voyage Pittoresque de la Syrie, de la Phénicie, de la Palestine, et de la Basse Égypte* (vol. III: 1799) (Plate XX) (Cassas 1799: Planche 47).

c) Bonaparte and Mohamed Ali

The French Expedition to Egypt (1798 – 1801) marks another turning point in mapping the city of Alexandria. Three *planches* were produced by the engineers accompanying Bonaparte's Armée d'Orient: (a) "Alexandrie", a regional view of the city in relation to its environs (Plate XXI), (b) "Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie" (Plate XXII), and (c) "Plan Général des Deux Ports, de la Ville Moderne, et de la Ville des Arabes" (Plate XXIII). The three maps are published in the nineteenth-century enterprise entitled *Description de l'Égypte* (Imperial Edition: 1809-1822;

Panckoucke Edition: 1821-1829), where they are listed as F^lle^ 37 (Carte Topographique de l'Égypt), *planche* 84 (Etat Moderne II), and *planche* 31 (Antiquities V). At the time of such expedition, wide-scale, scientific studies of both the ancient and modern town were undertaken by Gratien Le Père (*ingénieur en chef au corps royal des ponts et chaussées*. Mémoire sur la Ville d'Alexandrie, 1813, Etat Moderne, Tome Second, II^e^ Partie, Imperial Edition, 1809-1822) and Alexandre de Saint-Genis (*ingénieur en chef des ponts et chaussées*. Description des Antiquités d'Alexandrie et de Ses Environs, 1818, Antiquités, Descriptions, Tome Second, Imperial Edition, 1809-1822). Shortly after, in 1802, Pierre-Jean-Baptiste (Publicola) Chaussard's *Histoire des Expéditions d'Alexandre, par Flave Arrien de Nicomédie* (1.2) (Traduction Nouvelle, Tome Premiere) featured a 'Plan Comparative d'Alexandrie Ancienne, Moderne et du Temps des Arabes' (Plate XXIV) (Chaussard 1802: Planche VI).

Following the British victory in the Battle of Alexandria (1801), a map had been published with supplementary narratives by Captain Thomas Walsh, in the *Journal of the Late Campaign in Egypt* (1803) (Plate XXV) (Walsh 1803: Plate 24). Henry Salt, then British consular in Alexandria, carried out a geometric survey of the town, around 1806. The results were plotted and released later, in George Viscount Valentia's V*oyages and Travels to India, Ceylon, the Red Sea, Abyssinia, and Egypt, in the Years 1802-1806* (vol. III: 1809) (Plate XXVI) (Valentia 1809: Plate III).

In consequence of a rapid urban and demographic growth towards the end of Mohamed Ali's lengthy rule as *wāli* (1805-49), several contemporary maps began to display the expansion of the Ottoman village built earlier on a silted-up isthmus, back into the enclosure of the mediaeval town. The Arab walls were erected in the ninth century (267 Hijri, AD 881), by order of Ahmed ibn Tulun (restoration works: 11th century – the Fatimid caliph el-Mustansir Billah; 15th century – the Burji mameluke el-Sultan el-Ashraf Qaitbay; L'Expédition Française d'Égypte, 1798-1801 – Caffarelli du Falga; 19th century – Barthélémy Gallice) (De Vaujany 1888: 79-80). An urban expansion southwards, is therefore, seen on the charts of: (1) Captain W.H. Smyth (1825, 1833, the Hydrographical Office of the Admiralty; 1843, J.G. Wilkinson, *Modern Egypt and Thebes*, volume I) (Plates: XXVII; XXVIII); (2) Le Saulnier de Vauhello (1834) (Plate XXIX); (3) E. Napier (1841) (Plate XXX); (4) Captain Charles Muller (1855, issued under *Wāli* Saïd Pasha) (Plate XXXI) (Wilkinson 1843: 120; Jondet 1916: Tome IX, Planche I; Jondet 1921: Planches XXXI, XXXIII, and XXXV).

d) The Maps of el-Falaki

Our knowledge of the topography of ancient Alexandria owes a great deal to the pioneer work of Mahmoud Pasha el-Falaki, whose recordings back in the nineteenth century, had saved the last chance for attaining a rather coherent understanding of the city's ancient layout which would have otherwise vanished in such oblivion of modern urbanization. His cartographic repertoire provides the basis upon which archaeological investigation strives today to piece together the fragmentary material evidence towards a relatively clear picture of 'Alexandria in antiquity'. Perhaps, Napoleon III (presidency: 1848-52; reign: 1852-70) should be as much credited (Kiepert 1872: 338-339). Indeed, el-Falaki's investigations were instigated by the literary ambitions of the French emperor in writing a biography of Julius Caesar: *Histoire de Jules César* (1865: Tome Premier, 1866: Tome Deuxième).

Hence, in need of a map displaying the urban layout of ancient Alexandria, Napoleon III turned to his friend Ismaīl Pasha, then *Khedive* (i.e. Ottoman viceroy) of Egypt (1863-79). In turn, the task was given to the khedivial court-astronomer Mahmoud Bey Hamdy, known by the title: 'el-Falaki', which literary means 'the astronomer' in Arabic. Mahmoud Pasha el-Falaki (1815-85) was, in fact, a local engineer, who held the traditional epithet for a scientist operating in a nineteenth-century Ottoman court. The French-educated cartographer (*alumnus* of Ecole des Artes et Metries in Paris) has carried out a strenuous survey-work around 1864-1866. The outcome is a corpus of three maps that were published with supplementary text, in *Mémoire sur l'Antique Alexandrie: Ses Faubourgs et Environs Découverts, par les Fouilles, Sondages, Nivellements et Autres Recherches* (publ. 1872, Imprimerie de Bianco Luno, Copenhagen). In addition to his main "Carte de l'Antique Alexandrie et des Ses Faubourgs" (Plates: XXXII; XXXIII), there is one of the contemporary town, "Carte d'Alexandrie" (Plate XXXIV), and another of its environs, "Carte des Environs d'Alexandrie" (Plate XXXV). Relevant to the current topographical study would be the first *carte* (1866): a contour map showing the circuit-walls and street-grid of ancient Alexandria along with some of its principal edifices known primarily, from classical sources. In 1872, the German cartographer Heinrich Kiepert re-produced el-Falaki's map of the ancient city (Plan der Alten Stadt Alexandria), in volume VII of *Zeitschrift der Gesellschaft für Erdkunde zu Berlin*, which includes a concise contribution entitled: "Zur Topographie des Alten Alexandria. Nach Mahmud Beg's Entdeckungen" (Plate XXXVI) (Kiepert 1872: Tafel V).

e) The Late-Nineteenth Century

Urban expansion towards the south is on display, as seen on the maps of J. Millie (ca. 1867-68) and A.L. Mansell (1869), where modern constructions cover progressively the mediaeval enclosure of the Tulunid town (Pates: XXXVII; XXXVIII) (Jondet 1921: Planche XXXIX; De Bellefonds 1872-1873: Planche VIII[b]). Two maps of ancient and modern Alexandria were then drafted by Erhard in 1877, to be published in a book by Arthur Rhone, *L'Égypte a Petites Journees: Etudes et Souvenirs: Le Kaire et ses Environs* (Plate XXXIX) (Rhone 1877: 7). In the same year, Wagner and Debes released their own version, in Karl Baedeker's periegesis, *Aegypten: Handbuch für Reisende* (in Erster Theil: Unter-Aegypten bis zum Fayûm und die Sinai-Halbinsel) (Plates: XL; XLI) (Baedeker 1877: Pläne 4 and 5).

The British bombardment of the city on July 11th, 1882, is well documented in *Revue d'Artillerie Française* (Tome XX: Avril - Septembre, 1882) (Plate XLII) (Jondet 1921: Planche XLIV). In *Military History of the Campaign of 1882 in Egypt* (1887), Colonel John F. Maurice (British Royal Artillery) provides a state-of-art draft-plan showing the fortified positions occupied by the British troops on July 23rd, 1882, at el-Ramleh (Plate XLIII) (Maurice 1887: map N°. 3). Another panoramic view of Alexandria and its harbours dates to 1882. It was published in Paris, as part of an *Atlas des Ports Étrangers* (troisième livraison, 1887) (Plate XLIV) (*Atlas des Ports Étrangers* 1887: Planche XVII). A 'Plan Comparatif d'Alexandrie Ancienne et Moderne', with el-Falaki's orthogonal grid superimposed in red, is published in Henry de Vaujany's guidebook, *Description de l'Égypte: Alexandrie et la Basse-Égypte* (deuxième partie, 1885) (Plate XLV) (De Vaujany 1885: 27). An official map of the town was issued in 1887, by the Western Inspectorate operating at the time, under the government's 'General Management of the Tanzim' (Plate XLVI) (Jondet 1921: Planche XLVII). The growing influence of Strabo's descriptive account of ancient Alexandria (*Γεωγραφικά*, late-first century BC) is evident on De Vaujany's plan of the Royal Quarter, supplementing *Recherches sur les Anciens Monuments Situe sur le Grand-Port d'Alexandrie* (1888) (Plate XLVII) (De Vaujany 1888: Plan Comparatif du Port Oriental d'Alexandrie).

One major attempt to mapping the ancient town and its suburbs, is that of the Greek physician and epigraphist Tassos D. Neroutsos. His map forms part of the monograph, *L'Ancienne Alexandrie: Étude Archéologique et Topographique* (publ. 1888) (Plate XLVIII) (Neroutsos 1888: 'Alexandrie Ancienne').

A 'Plan de la Ville d'Alexandrie et du Marché de Minet-el-Bassal' was drafted by C. Marchettini in 1890 (Plate XLIX) (Bibliothèque Nationale de France). In 1894-1895, the British archaeologist David George Hogarth (renowned for his excavations at ancient Naukratis: Kom el-Geif, el-Beheira) investigated the city with the prime aim of assessing its archaeological potential (Plate L) (Hogarth and Benson 1894-95: Alexandria). While finding very little of what was recorded earlier by el-Falaki (1864-1866; 1872), Tassos Neroutsos (1875; 1888), and Henry de Vaujany (1885; 1888), Hogarth thus questioned the relevance of a 'future' British expedition, in his *Report on Prospects of Research in Alexandria*. He even undermined any potential for Kom el-Dikka after excavating few trenches there, a judgment proven wrong, with the successive discoveries made in the central district since the 1960s, by the Polish Centre of Mediterranean Archaeology (aka PCMA, University of Warsaw) (*Alexandrie* I-VIII, 1976-2010).

In 1897, the Italian founder and first director of Alexandria's Graeco-Roman Museum, Giuseppe Botti (1892-1903; founded the museum on October 17th, 1892), published a map of Rhakotis, the city's Egyptian borough, in the Roman period: *Plan du Quartier Rhakotis dans l'Alexandrie Romaine* (Plate LI) (Botti 1897c). In the following year, Botti attempted a reconstruction of the Ptolemaic town, in *Plan de la Ville d'Alexandrie a l'Époque Ptolémaique; (et) Monuments et Localités de l'Ancienne Alexandrie d'Apres les Écrivain et les Fouilles* (Mémoire Présenté a la Société Archéologique) (Plate LII) (Botti 1898c: Carte de l'Antique Alexandrie). The century ends with a season of successive excavations (1898-99) directed by the German archaeologist Ferdinand Noack. Its results have been published shortly after, in "Neue Untersuchungen in Alexandrien" (Mittheilungen des Kaiserlich Deutschen Archaeologischen Instituts, Band XXV of *Athenische Abtheilung*, 1900) (Plate LIII) (Noack 1900). At the time, the German industrialist Ernst von Sieglin financed an extended archaeological expedition to Alexandria, from 1898 to 1902. Its members include: Theodor Schreiber, Friedrich W. von Bissing, Ferdinand Noack, Ernst R. Fiechter, Siegfried Loeschcke, Rudolf Pagenstecher, Joseph Vogt, Carl Watzinger, Alfred Schiff, August and Hermann Thiersch, and Giuseppe Botti (see *supra*). The outcome was two volumes released under the title: *Expedition Ernst von Sieglin: Ausgrabungen in Alexandria* (Plate LIV) (Band I: Schreiber et al. 1908a-b. Die Nekropole von Kom-Esch-Schukafa. Band II: Miscellaneous 1913-27. Die Griechisch-Ägyptische Sammlung Ernst von Sieglin). Whereas, Ernst's brother, the geographer Wilhelm

Sieglin, had produced earlier, two maps of ancient Alexandria at different epochs, in Karl Baedeker's *vierte auflage* of *Aegypten: Handbuch für Reisende* (Leipzig, 1897) (Plates: LV; LVI) (Baedeker 1897: Pläne 4 and 5).

f) The Twentieth Century and Recent Research

An ever-expanding metropolis is clearly depicted on the charts of the early-twentieth century. A case in point would be the one issued by the technical services of the Municipality of Alexandria (1902), and that of Sir Richard Massie Blomfield (1905) (Plates: LVII; LVIII) (Jondet 1921: Planche L; Breccia 1907b: 3). The next cartographic attempt pertains to Mariano Bartocci, the draftsman of the Graeco-Roman Museum. It supplements *Alexandrea ad Aegyptum: Guide de la Ville Ancienne et Moderne et du Musée Gréco-Romain*, the guidebook written by the second, Italian director of the museum, Evaristo Breccia (1904-16, 1918-31; the French archaeologist Étienne Combe replaced Breccia as director of the museum, during the latter years of the First World War. First, French edition: 1914; second, English edition: 1922; Bergamo) (Plate LIX) (Breccia 1914a: Alexandrie). In 1912, Gaston Jondet, then Chief Engineer of the Department of Ports and Lighthouses of Egypt, published a 'Carte de la Rade d'Alexandrie', on the occasion of the major harbour-works which were carried out ca. 1911-1915 (Plate LX) (Jondet 1916: Tome IX, Planche III). Another map of the city and its harbour-infrastructure was issued by the Survey Department, in 1917 (Plate LXI) (Jondet 1921: Planche LIII).

Two maps of the ancient and modern city are featured in Edward M. Forster's iconic guidebook, *Alexandria: A History and a Guide* (1922; *Pharos and Pharillon*, 1923) (Plate LXIIa-b) (Forster 1922: 14-15, 84-85). About a decade later, the third, Italian director of the Graeco-Roman Museum, Achille Adriani (1932-1940, 1949-52; in the earlier years of the Second World War, the British archaeologist Alan Rowe took over the directorship of the museum), produced a map of the Royal Quarter, including the archaeological sites registered to date, in his "Saggio di una Pianta Archeologica di Alessandria": i.e. an appendix to the 1934 *Annuario del Museo Greco-Romano (1932-33)* (Plate LXIII) (Adriani 1934). The latter formed the nucleus of an extensive topographical study of ancient Alexandria published under the title: *Repertorio d'Arte dell'Egitto Greco-Romano* (serie C or Alessandria: Architettura e Topografia, vol. I: testo, vol. II: tavole, Palermo, 1966) (Plate LXIVa-b). The reference work of Adriani

is followed by another monumental *opus* in three volumes: Peter M. Fraser's *Ptolemaic Alexandria* (Oxford 1972, vol. I), of which chapter 1 (Foundation and Topography) features an outline map of the city with an informative legend (Plate LXV) (Fraser 1972: Outline Map of Alexandria).

In 1993, the Polish archaeologist Barbara Tkaczow has created a repertoire of four maps, three displaying the configuration at different epochs, besides a fourth, collective one, in *The Topography of Ancient Alexandria: An Archaeological Map* (Plates: LXVI; LXVII; LXVIII) (Tkaczow 1993: maps A, B, C, D). A year later, the German scholars Wolfram Hoepfner and Ernst-Ludwig Schwandner published their version (Rekonstruktionsversuch der Frühen Stadtanlage) in the second edition of their extensive study of classical urbanism, entitled: *Haus und Stadt im Klassischen Griechenland* (Wohnen in der Klassishen Polis, Band I; first edition: 1986) (Plate LXIXa-c) (Hoepfner and Schwandner 1994: Abb. 225). The political and social developments of Late Antique Alexandria were then discussed by Christopher Haas, in relation to contemporary urban milieus, in *Alexandria in Late Antiquity: Topography and Social Conflict* (1997). At the turn of the century, Marjorie Susan Venit has adopted a chronological-thematic approach to cataloguing the funerary remnants of antiquity, in her thorough inquiry into the *Monumental Tombs of Ancient Alexandria: The Theater of the Dead* (Venit 2002: appendix 'A', 191-200). In 2007, Judith McKenzie released various plans of the ancient city, in a topographic prelude to *The Architecture of Alexandria and Egypt, 300 BC-AD 700* (Plates: LXX; LXXI) (McKenzie 2007: 26, 38, 175).

Topographical studies of ancient Alexandria took a great-leap forward with the publication of results from: (a) the geophysical (bathymetric and magnetic) surveys and underwater excavations of the Institut Européen d'Archéologie Sous-Marine (IEASM) (Plate LXXII) (Goddio and Darwish 1998; De Graauw 1998; Goddio 2000, 2011; Goddio and Bernard 2004; Fabre and Goddio 2010); (b) the salvage excavations (both underwater and terrestrial) of the Centre d'Études Alexandrines (CEAlex) (Empereur, *BCH* 1994 - 2002; Empereur and Nenna 2001, 2003a-b; Empereur 2017. CNRS: Arnaud 1997, 2002a-b, 2009; Benech 2009; Hairy 2007, 2008, 2009, 2013; Hairy and Sennoune 2011); (c) the resistivity geophysical surveys conducted by the Centre de Recherche Géophysiques (CRG, Fra), Universités Paris VI and VII, the Centre d'Études Alexandrines, and the National Research Institute of Astronomy and Geophysics (the NRIAG, Egypt) (Hesse 1998; Hesse et al. 2002); (d) the underwater

archaeological surveys carried out east of the Silsileh headland, by the Hellenic Institute of Ancient and Mediaeval Alexandrian Studies (HIAMAS) (Tzalas 2012, 2013, 2015). Archaeological investigation continues in the compact city of today, whether by the Egyptian Ministry of Antiquities or foreign institutions working under license from the government.

III. Research Objectives and Methodology

The current study takes the previous scholarship (see *supra*, History of Research) into account jointly with a corpus of relevant chronicles from Classical and Late Antiquity, and the Renaissance, in order to produce a comprehensive, up-to-date topographical reconstruction of 'Alexandria in antiquity', from the time of its foundation in the fourth century BC to the Arab conquest of Egypt in the seventh century AD. To this end, the main line of research shall encompass:

(a) Setting the context of foundation: geomorphology, location, and orientation (Chapter I).

(b) Tracing the urban layout: circuit-walls (lines of defences), street-grid, waterways, and harbour-infrastructure (Chapter II).

(c) Contextualizing the principal civic, religious, and funerary edifices within a spatially-determined urban and suburban sectors (Chapter III).

Chapter III is subdivided into: (1) physical remnants corresponding to known historical narratives, (2) physical remnants without known historical reference, and (3) literary accounts pending physical evidence.

(d) Cataloguing the archaeological sites in Alexandria, from the finds of the Napoleonic Expedition at the end of the eighteenth century, to the recent discoveries of the twenty-first century (chapters II and III).

(e_1) Inferring the urban plan of the Graeco-Macedonian founders, and the subsequent adjustments made through the course of Classical and Late Antiquity, from the historical foundation of the city (ca. 331 BC) to the Arab conquest of Egypt (AD 641-2) (Chapter II: Conclusion I).

(e_2) Identifying the distributional patterns of edifices across the Alexandrian metropolis, to gain a deeper insight into the topographical configuration of the cityscape in the Hellenistic, Roman, and Late Antique periods (Chapter III: Conclusion II).

Theoretical analysis of the topography of ancient Alexandria is constantly informed through a critical study of the literary sources being calibrated to the results of archaeological investigation. This is approached by integrating the historical narratives with a full repertoire of material culture including architecture, sculpture, mosaics, iconography, ceramics, inscriptions, and numismatics. Text is supported with illustrative figures and charts listed in plates and cited using Roman numerals. The maps (Plates: LXXIIIa-c: V1-V3; LXXIV: V4; LXXV: V5) intend to serve as digital models of reconstruction, and are drawn up using conceptualization software (AutoCAD) as a tool for visualizing spatial data. Five maps are generated: four of the city, Pharos Island, and the western suburbs (Ptolemaic: late-4th to 2nd century BC; Late Ptolemaic-Roman: 1st century BC to 4th century AD; Late Antique: 4th to 7th century; collective: late-4th century BC to 7th century AD), and one of the eastern suburbs. The thesis follows basically, two interrelated approaches: descriptive and analytical, with the latter being dependent on the former. The descriptive discourse includes: (1) introductory sections on the foundation [Chapter (I)], previous archaeological investigation [(2.1.1); (2.1.2.1); (2.1.3.1); (2.1.4.1); (2.2.1); (2.3.3.1)], and (sub)urban division [(3.1.1-8)]; (2) a set of 168 archaeological sites connected geographically and typologically. Analyses and proposals are either in separate sections [(2.1.2.2); (2.1.3.2); (2.1.4.2); (2.2.3); (2.3.1); (2.3.2)] following prerequisite, descriptive accounts, or together with the data in the same section [(2.2.2); (2.3.3.2); (2.3.3.3); (2.3.3.4); (2.3.3.5); (2.3.3.6); (2.3.4); (2.3.5)] or site [(3.2-3.9)]. All the hypotheses introduced here [urban layout: objectives (b) and (e_1); cityscape: objectives (c) and (e_2)], are based on archaeological and/or historical evidence from the catalogue [objective (d)]. Finally, the conclusion provides an integrated summary of all proposals, with the evidence shown between brackets, as a reference number corresponding to the relevant site(s) from the catalogue. A two-volume format is adoped, where in-text, Roman numerals serve to relate the narrative to the 1,025 illustrations listed in the second volume. The three constituents of this thesis [(text: volume I); (plates: volume II); (AutoCAD maps in A0 paper-size: annex to volume II)] should be considered together, as one unit, in order to attain an understanding of the content.

Chapter I: Context of Foundation

1.1) Geomorphological Configuration

35,000 yrs. BP, carbonate-rich sands began accumulating in the northwestern sector of the Nile Delta region of Egypt, in response to relative sea-level change during the Late Pleistocene. A series of coastal ridges formed of cemented, calcareous sandstone known as kurkar, were subsequently deposited near the seashore. At the time of ridge-formation, back-barrier lagoons (i.e. the future lakes of Mareotis, Abu Qir, and Idku) were developing in depressions on the landward side of the coastal ridge-complex (Plate LXXVI) (Warne and Stanley 1993: 57-58). A set of petrologic and radiocarbon data from the region, indicates an elongate, partially-enclosed embayment formed at the lee of an oblong island (Pharos) and a natural headland (Lochias) on the Pleistocene ridge of Mareotis, and flooded by seawater during a marine transgression at 8,000 yrs. BP (Stanley and Bernasconi 2006: 283).

Around 4,000-3,000 yrs. BP, tectonic subsidence, and a concomitant rise in relative sea-levels, have led to: (a) the expansion of Lake Mareotis in a southerly direction, and (b) a migration of the Nile's Canopic branch westwards, to almost reach the eastern perimeter of the Abu Qir (Maadiya) lagoon (Plate LXXVII). During the first millennium BC, Lake Mareotis was constantly supplied with fresh water through several Canopic arteries, including the one that provided direct access to the Greek ἐμπόριον of Naukratis (the present-day site of Kom el-Geif in el-Beheira). The influx of fresh water from these channels has diluted the salt in the lake, making its water rather drinkable and suitable for subsistence agriculture (Rodziewicz 1983a: 204). Meanwhile, with subsequent formation of urban settlements, which relied on the cultivation of grain, vines, and olives, the developed economy of the Mareotic region would have been central to prompting the foundation of a metropolitan hub for commercial activities on the Mediterranean coast of Egypt: *Alexandrea ad Aegyptum*.

Before to the transformations wrought by the construction of an embankment-dam at Aswan, Egypt's Mediterranean coast had a different geomorphological configuration which offered, apart from few dock-landing points at the Pelusiac and Canopic exits, no suitable anchorages to mooring ships (Goddio and Bernard 2004: 114; el-Abbadi 2000: 17). One of the few havens to be found, in antiquity, alongside the seashore, from Ammonia or Paraetonium (Marsa Matrouh) in the west, to Pelusium

(Tel el-Farama, Port-Saīd) in the east, was associated with the coastal lee of Pharos. The advantages of the sheltered anchorage, situated opposite an oblong island, must have been acknowledged by archaic Greeks as early as the eighth-seventh century BC, the time by which the maritime activities of the Hellenes have reached new horizons (Reed 2003: 71-72). With the influx of Greek mercenaries in service of the Saītic kings (Matthews and Römer 2003: 12), and merchants who became residents of Naukratis (Hornblower et al. 2014: 797), from various Greek πόλεις (city-states), through the course of the seventh and sixth centuries, the coastal site, marked by the island of Pharos, about forty miles northwest of the Naukratite ἐμπόριον (post), became renowned as opportune transit-point before reaching the Nile's Canopic mouth at the customs-port of Thonis-Herakleion, towards inland Egypt.

1.2) Location and Urban Planning

The Greek perception of the site as a landing stage for international navigation, is documented in Book IV of Homer's *Odyssey*:

νῆσος ἔπεντά τις ἔστι πολυκλύστῳ ἐνὶ πόντῳ Αἰγύπτου προπάροιθε, Φάρον δέ ἑ κικλήσκουσι, τόσσον ἄνευθ᾽ ὅσσον τε πανημερίη γλαφυρὴ νηῦς ἤνυσεν, ᾗ λιγὺς οὖρος ἐπιπνείῃσιν ὄπισθεν᾽ἐν δὲ λιμὴν ἐύορμος, ὅθεν τ᾽ ἀπὸ νῆας ἐίσας ἐς πόντον βάλλουσιν, ἀφυσσάμενοι μέλαν ὕδωρ.

Now in the surging sea an island lies, - Pharos they call it - , distant as far from the Egyptian stream (Canopic mouth) as a hollow ship runs in a day when a whistling wind blows after. By it there lies a bay with a good anchorage, from which they send the trim ships off to sea after supplying them with black water.

(Homer, Odyssey: IV. 351-381)

In his biography of Alexander, Plutarch yet affirms the Homeric view of the Pharos site and its harbour-amenities (Plate LXXVIII). In *Life of Alexander* (*Parallel Lives*), the Greek biographer relates:

εἶτα νύκτωρ κοιμώμενος ὄψιν εἶδε θαυμαστήν. ἀνὴρ πολιὸς εὖ μάλα τὴν κόμῃ καὶ γεραρὸς τὸ εἶδος ἔδοξεν αὐτῷ παραστὰς λέγειν τὰ ἔπη τάδε.

Νῆσος ἔπειτά τις ἔστι πολυκλύστῳ ἐνὶ πόντῳ, Αἰγύπτου προπάροιθε. Φάρον δέ ἑ κικλήσκουσιν.

εὐθὺς οὖν ἐξαναστὰς ἐβάδιζεν ἐπὶ τὴν Φάρον, ἣ τότε μὲν ἔτι νῆσος ἦν, τοῦ Κανωβικοῦ μικρὸν ἀνωτέρω στόματος, νῦν δὲ διὰ χώματος ἀνείληπται πρὸς τὴν ἤπειρον. ὡς οὖν εἶδε τόπον εὐφυΐᾳ διαφέροντα (ταινία γάρ ἐστιν ἰσθμῷ πλάτος ἔχοντι σύμμετρον ἐπιεικῶς διείργουσα λίμνην τε πολλὴν καὶ θάλασσαν ἐν λιμένι μεγάλῳ τελευτῶσαν), εἰπὼν ὡς Ὅμηρος ἦν ἄρα τά τε ἄλλα θαυμαστὸς καὶ σοφώτατος ἀρχιτέκτων, ἐκέλευσε διαγράψαι τὸ σχῆμα τῆς πόλ τῷ τόπῳ συναρμόττοντας.

he (Alexander the Great) saw a wonderful vision. A man with very hoary locks, and of a venerable aspect, appeared to stand by his side, and recite these verses:

Now, there is an island in the much-dashing sea, in front of Egypt; Pharos is what men call it.

Accordingly, he rose up at once and went to Pharos, which at that time was still an island, a little above the Canopic mouth of the Nile, but now it has been joined to the mainland by a causeway (Plutarch is writing in the first-second century AD). And when he saw a site of surpassing natural advantages (i.e. for it is a strip of land like enough to a broad isthmus, extending between a great lagoon and a stretch of sea which terminates in a large harbour), he said he saw now that Homer was not only admirable in other ways, but also a very wise architect, and ordered the plan of the city to be drawn in conformity with this site (terrain).

(Plutarch, Lives, Alexander: XXVI. 3-4)

A rather sober account of the historical foundation of Tybi 25th (April 7th), 331 BC (Bagnall 1979: 48), is given in Arrian's *Anabasis Alexandri*:

Ἐλθὼν δὲ ἐς Κάνωβον καὶ κατὰ τὴν λίμνην τὴν Μαρίαν περιπλεύσας ἀποβαίνει ὅπου νῦν Αλεξάνσρεια πόλισ ᾠκισται, Ἀλεξάνδρου ἐπώνυμος. Καὶ ἔδοξεν αὐτῷ ὁ χῶροσ κάλλιστοσ κτίσαι ἐν αὐτῷ πόλιν καὶ γενέσθαι ἂν εὐδαίμονα τὴν πόλιν. Πόθος οὖν λάμβανει αὐτὸν τοῦ ἔργου, καὶ

αὐτὸς τὰ σημεῖα τῇ πόλει ἔθηκεν ἵνα τε ἀγορὰν ἐν αὐτῇ δείμασθαι ἔδει καὶ ἱερὰ ὅσα καὶ θεῶν ὧντινων, τῶν μὲν Ἑλληνικῶν, Ἴσιδος δὲ Αἰγυπτίας, καὶ τὸ τεῖχος ᾗ περιβεβλῆσθαι. Καὶ ἐπὶ τούτοις ἐθύετο, καὶ τὰ ἱερὰ καλὰ ἐφαίνετο.

When he (Alexander) had reached Canopus, and sailed round Lake Mareotis, he came ashore, just where is now the city of Alexandria, named after Alexander (Arrian is writing in the second century AD). It struck him that the position was admirable for founding a city there, and that such a city was bound to be prosperous. He was, therefore, filled with eagerness to get to work, and himself marked out the ground plan of the city, both where the market-place (agora) was to be laid out, how many temples were to be built, and in honour of what gods, some of these Greek, and Isis, the Egyptian; and where the wall was to be built round it. In view of all this, he offered sacrifice, and the sacrifice proved favourable.

(Arrian, Anabasis Alexandri: III. 1.5)

The historical narratives thus indicate that Alexandria was founded in spring 331 BC, on a narrow limestone ridge separating the Mediterranean Sea from the now-largely-desiccated Lake Mareotis, to the west of the Nile Delta (Plate LXXIX). In antiquity, the site was protected from the sea winds and swell waves, by clusters of huddled reefs, two natural headlands, and an oblong-shape island. The newly-founded city, being conveniently situated "between a great marsh (Lake Mareotis) and the (Mediterranean) sea, affords by land, only two approaches, both narrow, and very easily blocked" (Diodorus, Bibliotheca Historica: XVII. 52.1). A strategic site as such, was shielded all around, by successive natural barriers. Josephus records:

τετείχισται δὲ πάντοθεν ἢ δυσβάτοις ἐρημίαις ἢ θαλάσσαις ἀλιμένοις ἢ ποταμοῖς ἢ ἕλεσιν.

(Alexandria) is also walled round on all sides, either by almost impassable deserts, or seas that have no havens, or by rivers, or by lakes.

(Josephus, Bellum Iudaicum: II. 16.4)

It may be proposed, therefore, that certain geomorphological features and systematic artificial development of the coastal areas (Chapter II, sec. 2.3.1-5) were central to the foundation and retaining of Alexandria as "the first city of the civilized world", for it was "certainly, far ahead of all the rest in elegance and extent and riches and luxury" (Diodorus, Bibliotheca Historica: XVII. 52.5).

1.3) Orientation and Climate Conditions

Alexander's allocation of urban areas and edifices for specific purposes (see *supra*) in advance of their actual establishment, reflects a great deal of Hellenic influence in planning the original layout of the city. Whereas, the use of barely-meal to mark the urban peripheries, as was mentioned by Plutarch, Arrian, and Strabo before them, seems to signal a Macedonian form of blessing. Perhaps, the three might have been reiterating earlier narratives as that of Diodorus Siculus (ca. 60-59 BC):

κρίνας δ' ἐν ταύτῃ πόλιν μεγάλην κτίσαι προσέταξε τοῖς ἐπὶ τὴν ἐπιμέλειαν ταύτην καταλειπομένοις ἀνὰ μέσον τῆς τε λίμνης καὶ τῆς θαλάσσης οἰκίσαι τὴν πόλιν. διαμετρήσας δὲ τὸν τόπον καὶ ῥυμοτομήσας φιλοτέχνως τὴν πόλιν ἀφ' αὑτοῦ προσηγόρευσεν Ἀλεξάνδρειαν.

He (Alexander) decided to found a great city in Egypt, and gave orders to the men left behind with this mission, to build the city between the marsh and the sea. He laid out the site, and traced the streets skillfully, and ordered that the city should be called after him Alexandria.

(Diodorus, Bibliotheca Historica: XVII. 52.1)

The Macedonian king was advised on designing the details of the city's Hippodamian layout, by Dinokrates (Rhodian engineer), Kleomenes of Naukratis (sec. 1.4), Krateron of Olynthus, Eroa (Libyan stonemason) and his brother, Hiponemos, who designed a water-supply and drainage system with subterranean conduits, numerous wells, and sewers (sec. 2.2.2; Chapter III), and thus it became known as *hiponoses* (Pseudo-Callisthenes, Alexander Romance: 80-82). The orthogonal grid of the ancient city (Plate LXXX) was designed in accordance with the local climate conditions. In fact, "by selecting the right-angle of the streets, Alexander made the city breathe with the Etesian (meaning annual or periodic) winds, so that, as these blow across a great expanse of sea, they cool the air of the town, and so,

he provided its inhabitants with a moderate climate and good health" (Diodorus, Bibliotheca Historica: XVII. 52.2).

The coastline configuration of the calcareous Mareotic ridge (1) meant that the dominant north-westerly winds were to hit the city at right-angles and accordingly, the streets of the Hippodamian grid (after Hippodamos of Miletos) have been oriented NW-SE for the city to receive the prevailing Etesian winds, "so that the Alexandrians would pass their time most pleasantly in summer" (Strabo, Geōgraphikȅ: XVII. 1.7). The orthogonal grid plan of ancient Alexandria has its origin in Classical urban designs of the rebuilt, fifth-century BC πόλεις (Hellenic city-states) of mainland Greece, the Aegean archipelago, and Ionia along the west coast of Asia Minor (Shipley and Hansen 2006: 55). Indeed, similar grid patterns are often met at Greek cities and islands such as Piraeus (Attica), Olynthus (Chalkidiki), Priene (Ionia), Knidos, and Rhodes (the Aegean) (Ward-Perkins 1974: 14-16).

1.4) Ptolemy in Charge: The Political Aspect

Upon his departure to Syria, Alexander made Kleomenes receiver of the tribute from all Egypt, and accountable of its financial administration (Fraser 1972: 6-7). Kleomenes hence became in charge of developing the newly-founded, coastal city into a major municipal and commercial centre. The Naukratite financier, largely in control of the grain trade, has managed to amass a fortune of 8000 talents in the state-treasury (Parsons 1952: 55). Around 323 BC, following the death of Alexander the Great in Babylon, Kleomenes, as being in allegiance with the regent Perdiccas, was first demoted to *hyparchos*, before getting eliminated by suspicious Ptolemy, the son of Lagos (Bingen and Bagnall 2007: 23). The latter is one of Alexander's senior military associates, who took charge of Egypt, as satrap, under the co-sovereignty of Philip III Arrhiddaeus (323 - 317 BC) and Alexander IV (323-17 - 309 BC). Eventually, the Macedonian general assumed the title of 'king' ca. 306 BC, not long before he had been proclaimed, yet with the aid of the local priestly-elite, pharaoh, ca. 304 BC (Hölbl 2001: 318-323; Ellis 2005: 77; Worthington 2016: 3).

Contemporary with Ptolemy's governorship is the so-called Satrap Stela which does provide the earliest-known, hierographic reference to Alexandria (datable ca. 311 BC) (Egyptian Museum, Inv. No.

22182) (Diodorus, Bibliotheca Historica: XIX. 81, 82-85; Pfeiffer 2005: 19-20; Mueller 2006: 18-21). The decree was commissioned to record 'the restoration of the Land of Uto to the Temple of Buto' in Lower Egypt: the present-day site of Tell el-Farraīn (Kafr el-Sheikh, the Nile Delta). It states that Ptolemy Lagides as satrap, has restored the ownership of the land to the temple after being proclaimed by Xerxes a Persian estate. The upper part of the *stela* thus shows the return of the divine statuaries and sacred scrolls looted by the Persians to the local deities of Buto (Plate LXXXI). In this context, the victories of Ptolemy over Demetrios I Poliorcetes at the Battle of Gaza (312 BC), are mentioned along with an extended list of Ptolemy's virtues as governor and soldier. Important to the current study though, is the *stela*'s record of the satrap residence at the time of issuance:

He (Ptolemy Lagid as satrap) made his residence 'the fortress of the King of Upper and Lower Egypt, [Meri-Amun, Setep-en-Re]: beloved by Amun, the sun-chosen, Son of the Sun (of Re), Alexandros' – so its name was – being on the shore of the great sea of the Hau-Nebu (of the Ionians or Hellenes: the Mediterranean); (it was) formerly called Râ-Kedet (Rhakotis).

The text indicates a priestly-adaptation of the Greek toponym 'Αλεξάνδρεια':: 'the fortress of the King of Upper and Lower Egypt, Son of Re, Alexandros': the fortress of the Son of Re, Alexander. It was founded on 'the shore of the Sea of the Hau-Nebu' (the Mediterranean), at the site of the village of 'Râ-Kedet' or Rakote (Hellenized form: Rhakotis). Besides the descriptive accounts of the ancient sources (Strabo, Geōgraphikȅ: XVII. 1.6), the presence of 'Râ-Kedet' is backed by material evidence for on-site habitation antedating the Macedonian conquest of 332 BC (sec. 2.3.3.5.1; sec. 2.3.4). However, with the arrival of the Graeco-Macedonian settlers, the coastal lee of Pharos (1.1), and the Mareotic νομός as a whole, would have reached a new stage of development subsequent to the foundation of *Alexandrea ad Aegyptum*. If the historical narratives credit Alexander and his technical associates for deciding on the location, orientation, and layout of the city, archaeological investigation shows that its main development, during the course of the third century BC, into a grandiose metropolis, with public areas and extravagant edifices, was, for the most part, the work of the first generation of successive Ptolemaic kings: Soter (ca. 306-285/2 BC), Philadelphos (ca. 285/2-246 BC), Euergetes I (ca. 246-221 BC), and Philopator (ca. 221-204/3 BC), as further discussed in chapters (II) and (III).

Chapter II: Urban Layout

2.1) Circuit-Walls

2.1.1) Miscellaneous Measurements

It is commonly held that Alexandria had the fourth largest urban enclosure in Classical Antiquity after Athens (approx. 35 km, including Piraeus: Attica, mainland Greece), Syracuse (approx. 27 km: Sicily, Μεγάλη Ἑλλάς), and Rome (the Servian or Republican circuit: 11 km, Aurelian circuit: 19 km) (Empereur 1998a: 46-48; McKenzie 2007: 38-39; Witcher 2013: 207-208). According to the survey carried out by Mahmoud el-Falaki in 1864-66 (standards:: *stadion*: 165 m, *plethron*: 27.50 m), the urban circuit, at its maximum extent, has measured about 15.80 - 16.40 km in total (approx. 96.75 - 99.39 *stadia*). The city reached nearly 5.09 km in length (approx. 30.84 *stadia*). Its width varies:: the extremities: 1.15 km at Nekropolis (approx. 6.96 *stadia*), 1.40 km at the Canopic gate (approx. 8.48 *stadia*); the interior: 1.56 km at the Heptastadion (approx. 9.57 *stadia*), and 2.25 km at Cape Lochias (approx. 13.63 *stadia*); the centre: 1.70 km at maximum extent (approx. 10.30 *stadia*) (Mahmoud-Bey 1872: 15). Perhaps, apart from Diodorus Siculus and Pliny the Elder (*infra*), both of whom must have included the necropolitan suburbs in their estimates, the figures from el-Falaki's surveys seem to tally with the ancient authorities:

- Diodorus Siculus:: length: 40 *stadia* (approx. 6.60 km).
  (*Bibliotheca Historica*: XVII. 52; ca. 60-59 BC)
- Strabo:: length: 30 *stadia* (approx. 4.95 km), breadth: 7 - 8 *stadia* (approx. 1.15 - 1.32 km).
  (*Geōgraphikḕ*: XVII. 1.8; ca. 25 BC)
- Philo:: breadth: 10 *stadia* (approx. 1.65 km).
  (*In Flaccum*: XI. 92; ca. AD 42)
- Quintus Curtius Rufus:: circuit: 80 *stadia* (approx. 13.20 km).
  (*Historiae Alexandri Magni*: IV. 8.31; ca. AD 50)
- Josephus:: length: 30 *stadia* (approx. 4.95 km), breadth: 10 *stadia* (approx. 1.65 km).
  (*Bellum Iudaicum*: II. 16.4; ca. AD 75)
- Pliny the Elder:: circuit: 15 Roman miles (approx. 22.19 km).
  (*Natural History*: V. 11.62; ca. AD 77)

2.1.2) The Eastern Wall(s)

2.1.2.1) el-Falaki's Excavations

Remnants of massive foundations were traced by Mahmoud el-Falaki, almost at sea-level, to the east of el-Silsileh (Mahmoud-Bey 1872: 12-13). The recorded vestiges, measuring 5.00 m in height, would have belonged to a defensive construction of stonework in mortar composed of lime and crushed-brick. el-Falaki followed this segment of the fortifications over 300 m, between two points marked (A) and (B) on his 'Carte de l'Antique Alexandrie et des Ses Faubourgs' (1866). Further excavations eastwards, have revealed more remnants of the same construction, extending over 2.00 km to the southeast, and reaching at point (C). Along the (B - C) segment, the preserved (lower) sections were found buried at about 3.00 to 4.00 m beneath accumulated debris. According to oral testimonies, el-Falaki noted that the missing (upper) parts were regularly plundered by stone robbers, in search of building material at times the developing town of the nineteenth century was undergoing major reconstruction.

At point (C), the terrain started to slope down, reaching 5.00 m above sea-level. Groundwater was met at just 2.00 m below the surface-level; further digging was thus not possible beyond that point. A phenomenon as such, is evident elsewhere in a city which subsided by 6.00 - 7.00 m since the time of its Macedonian foundation in the fourth century BC (sec. 2.3.1). This would explain why most Ptolemaic (sub)structures from previous excavations were found already partially-drenched, with their footings descending below the levels of the rising water table. Indeed, high influx-rates from strong aquifers seem not uncommon in present-day Alexandria. A case in point would be the flooded hypogea at the Hellenistic necropolis of el-Chatby (site 145), and the large foundation walls encountered at groundwater-level during construction work which was carried out in 1980, at the premises of the ex-Cricket Playground (site 122b).

Mahmoud el-Falaki, in keeping with oral testimonies, conjectured a continuation of the eastern periphery, over 700 m (C - D). As said by residents of the area under investigation, at el-Ibrahimiya Qibly, remains of the same defensive structure were accidently unearthed during the construction of dwellings and a mosque on a height marked (D). A hypothetical, dotted contour has been drawn

accordingly, between points (C) and (D), as a possible extension of the parts determined by actual digging. Mahmoud el-Falaki, convinced by the local testimonies, found no reason that would have forced the Rhodian engineer Dinokrates to deflect the line of defenses at this point. Beyond point (D), excavations became increasingly impractical between el-Mahmoudiya Canal and the Minet el-Bassal mounds extending towards the Western Port, given the buildings and groves occupying the areas of interest.

2.1.2.2) Inferring the Peripheries

2.1.2.2.1) The Wall of the Roman Principate: to ca. the third century AD

Mahmoud el-Falaki described the remains revealed through five test-pits sunk at the southern periphery, as being: “grands blocs de maçonnerie de 5 mètres de largeur, faites en moellons plus ou moins gros et où la composition du mortier diffère un peu de celui de la partie découverte en premier lieu” (Mahmoud-Bey 1872: 14). Although el-Falaki does not mention the type of mortar used in the construction of the southern circuit-wall, the fact it was of a different composition from “la partie découverte en premier lieu (i.e. segments: A-B and B-C)”, is key to understanding the multi-phase evolution of the city’s surface area in antiquity. At the beginning of Chapitre Premier (1872), el-Falaki records that he has found “des fondations larges de 5 mètres et construites en moellons et mortiers composés de chaux (of lime) et de briques pilées. Les restes de ce mur se voient encore aujourd'hui, aux bords de la mer, dans une étendue de 300 mètres de A jusqu'à B sur la carte du plan de la ville” (Mahmoud-Bey 1872: 12). He adds, “les fouilles ont été continuées dans les décombres; et les restes du même mur paraissaient toujours de même construction et de même largeur, 3 ou 4 mètres au dessous des décombres, dans l'étendue de deux kilomètres environ; c'est-à-dire de B juspu'à C sur la carte” (Mahmoud-Bey 1872: 12-13). It seems, accordingly, that the mortar used in the construction of the defences unearthed by el-Falaki, over ca. 2.30 km at the northeastern segment of the urban circuit, was composed of lime and crushed-brick. In *De Architectura*, Vitruvius refers in detail, to this form of construction where *pozzolana* is mixed with lime and rubble (first century BC).

The use of crushed-brick in lime-mortar became gradually predominant in the construction of masonry walls, especially in coastal areas of humid weather, ca. the first century BC-first century AD (Sear 1983: 73-77). At the time, the Romans developed a technique by which a reddish, volcanic dust

known as *pozzolana*, for being first encountered in the town of Pozzuoli in Campania, was applied to a fine hard cement in order to withstand damp conditions. On lime-*pozzolana*, Vitruvius relates:

This substance (pozzolana), when mixed with lime and rubble, not only lends strength to buildings of other kinds, but even when piers of it are constructed in the sea, they set hard under water. The reason for this seems to be that the soil on the slopes of the mountains in these neighbourhoods (i.e. of Baiae and in the country belonging to the towns round about Mt. Vesuvius) is hot and full of hot springs. This would not be so unless the mountains had beneath them huge fires of burning sulphur or alum or asphalt. So the fire and the heat of the flames, coming up hot from far within through the fissures, make the soil there light, and the tufa found there is spongy and free from moisture. Hence, when the three substances, all formed on a similar principle by the force of fire, are mixed together, the water suddenly taken in makes them cohere, and the moisture quickly hardens them so that they set into a mass which neither the waves nor the force of the water can dissolve.

(Vitruvius, De Architectura: II. 6.1)

In Alexandria, *opus caementicium* is likely to have been employed during the opening decades of the Augustan Principate, in constructing the new line of defences which ran east of its Ptolemaic antecedent, to accommodate a metropolis-in-continuous-expansion. el-Falaki's narrative of "des fondations larges de 5.00 mètres et construites en moellons et mortiers composés de chaux et de briques pilées", seems to reinforce such proposition. In fact, the course of the presumed defences was traced and intermittently excavated by el-Falaki, to the east of el-Silsileh (beyond the ancient Cape Lochias), over an approximate distance of 2.30 km:: (A-B): 0.30 km, (B-C): 2.00 km. On Kiepert's version, Plan der Alten Stadt Alexandria (1872), which reveals the general layout of the terrain at the time of el-Falaki's investigations, a series of hills is seen stretching NW-SE, almost in alignment with the orthogonal grid, at a maximum height of approximately 20 - 30 m. The recorded vestiges of el-Falaki's defences appear to have followed the tight contours of the mounds known today as el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly, as they slope down towards the eastern suburbs. This tendency to exploit the terrain heights in determining the course of the urban defences, is not

restricted to the eastern periphery, as evident on the conjectured course of the southern periphery which follows the series of hills extending NE-SW, south of the Arab town, including Kom el-Shoqafa (2.1.3). A phenomenon as such, is intrinsic to the urban enclosure of ancient Alexandria, and seems yet, to have been dictated, as hypothesized hereafter, by (a) demographic growth and living-space economy in the east, and (b) the defensible layout of the Graeco-Roman metropolis in the south.

The line of defences would have diverted towards the interior, before the east end of street L4, to reach at el-Falak's fortification-point (E), hence bypassing the depression of el-Ibrahimiya Qibly where the conjectured segment of the circuit runs. This path is favoured by the terrain and backed by the fact that el-Falaki was unable to carry out excavations in the subsided zone extending over 700 m, through which a hypothetical periphery (C - D) was proposed by him, on the grounds of local testimonies. The authority of el-Falaki's conjecture of the urban defences between the east end of street L4 and fortification-point (E), is to be reconsidered accordingly. It is doubtful that the vestiges at the east end of L4 had continued for yet another 1,650 m to reach that further point marked (D), about 620 m from the east end of L'2: the area beyond el-Falaki's point (C), whence "la continuation des fouilles était impossible" across el-Ibrahimiya Qibly: a depression suitable for the construction of a *hippodromos* below the steep slopes of the eastern mounds (sec. 3.9.3.1, J).

The English anthropologist and traveller Richard Pococke, who visited the city in 1737, relates:

The racing place, called the Hippodromus, without (i.e. outside) the gate of Canopus, was probably in the plain towards the canal, beyond the high ground, where I suppose that gate was …… At the first entrance on the height from the plain, I observed they had been digging out stones, which, as they said, were foundations of a wall.

(Pococke 1743: 10-11)

On the course of the ancient walls in the east, Pococke adds:

The old walls of the city seem to have been built on the height, which extends from Cape Lochias towards the east, the remains of a grand gateway (Canopic gate: point M on Pococke's map) being

to be seen in the road to Rosetto at this high ground; and the foundations of the walls may from thence be traced to the canal.

(Pococke 1743: 3)

Accordingly, a hypothetical contour (C4: A - E) is rendered on the featured AutoCAD maps (V2; V4). It represents the northeastern and eastern frontiers of the ancient city at its maximum extent: the first-third century AD. This section of the urban circuit would have been altered following the Crisis of the Third Century (AD 235-284). In AD 272, the eastern defences were destroyed and the Bruccheion (a term to designate the Royal Quarter: i.e. Ptolemaic βασίλεια) was laid waste during Aurelian's campaign in the Roman East, to recover the city from the Palmyrenes (Capponi 2011: 60). The turbulent events are recorded by the fourth-century historian Ammianus Marcellinus:

But Alexandria herself, not gradually (i.e. like other cities), but at her very origin, attained her wide extent; and for a long time she was greviously troubled by internal dissensions, until at last, many years later under the rule of Aurelian (AD 270 - 275), the quarrels of the citizens turned into deadly strife; then her walls were destroyed and she lost the greater part of the district called Bruchion, which had long been the abode of distinguished men.

(Ammian. Marcellin., Res Gestae: XXII. 16.15)

Marcellinus, however, neither specifies which sections of the fortifications have been destroyed, nor the extent of destruction wrought by Aurelian's offensive.

Conditions within the once prosperous Bruccheion must have continued to deteriorate in the aftermath of Diocletian's sack of the city (AD 297), and the major tsunami of AD 365 (sec. 2.3.1), as affirmed by Epiphanius of Salamis, in his fourth-century treatise on weights and measures:

He (Ptolemy II Philadelphos) established a library in the same city of Alexander, in the (part) called the Bruchium; this is a quarter of the city today (fourth century AD) lying waste.

(Epiphanius, On Weights and Measures: 9.52b)

2.1.2.2.2) The Wall of the Macedonian Foundation: to ca. the first century BC

The Hellenistic origin of el-Falaki's conjectured circuit in the east, is in dispute, for it contained within its premises, in contrast to universal Greek practice, the earlier *nekropoleis* at present-day el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly. The possibility of a defensive antecedent to the west, should, therefore, be examined. No conclusive evidence for a defensive construction as such, has been discovered to date, although the absence of evidence is not necessarily an evidence of absence. Hence, the notion of two successive lines of defences in the east, is assessed hereafter.

2.1.2.2.2.1) Literary Evidence

The presumed circuit-walls of the Macedonian foundation are recorded by Diodorus Siculus, in *Bibliotheca Historica* (first century BC):

Alexander also laid out the (defensive) walls (of the city) so that they were at once, exceedingly large and marvellously strong.

(Diodorus, Bibliotheca Historica: XVII. 52.3)

Diodorus who visited the city around 60-59 BC, records an Alexandrian population of 300,000 free inhabitants (Diodorus, Bibliotheca Historica: XVII. 52.6). This estimate would reach 400,000 when slaves are added in. Thus, already by the first century BC, the capital of the Ptolemies seems to have been experiencing high population-growth rates. Judging by the relatively low-density housing gleaned from archaeological discoveries for the Hellenistic period (Chapter III), the populace could barely be accommodated within a contracted area of el-Falaki's enclosure (sec. 2.1.1). It is natural under such circumstances to find the compact city spreading out in search of new *lebensraum*, or living space, for its residents. Given the geographical extent of the necropolitan suburbs in the west (sites: 46-49), and the geomorphological configuration of the Mareotic ridge (sec. 1.1), urban expansion would have been possible only in one direction, that leading to Nikopolis: eastwards.

As the name implies, the coastal town of Nikopolis was developed by a triumphant Augustus, at ca. 30 *stadia* to the east of Alexandria. Its establishment is likely to have hastened the process of

spatial alteration in the city under the Augustan Principate. Expansion beyond the urban enclosure already by the time of Strabo, may be glimpsed from his descriptive account on the eastern suburbs:

The broad street (el-Falaki's L1) that runs lengthwise extends from Nekropolis (western extremity) past the Gymnasium (city centre) to the Canobic Gate (eastern extremity); and then one comes to the Hippodrome, as it is called, and to the other (settlements or thoroughfares?) that lie parallel, extending (southwards) as far as the Canobic Canal. Having passed through the Hippodrome, one comes to Nicopolis, which has a settlement on the sea no smaller than a city. It is thirty stadia distant from Alexandria.

(Strabo, Geōgraphikȅ: XVII. 1.10)

Hence, at the advent of Imperial rule, athletic edifices such as a *hippodromos*, and settlements which have developed in Roman times into *villae urbanae*, were already extending to the east of the Ptolemaic periphery. It would be reasonable therefore, to find the estimate figure recorded by Mahmoud el-Falaki for the length of the city at its maximum extent (5.09 km: approx. 30.84 *stadia*), almost tallies with that of Strabo and Flavius Josephus (30 *stadia*: approx. 4.95 km). The correlation between both figures may justify Strabo's silence on the sepulchral nature of the eastern suburbs (the present-day districts of el-Chatby and el-Hadra), at the very same time he firmly labelled the western suburbs 'Nekropolis' (sites: 46-49): a city of the dead, with embalming workshops, funerary groves, and innumerable tombs (Strabo, Geōgraphikȅ: XVII. 1.10).

For the first generation of Alexandrian settlers, the mounds to the east of the newly established city in the late-fourth and third century BC, would have been most suitable to receive interments. This is evident on the predominant Macedonian character of the earlier necropolises at el-Chatby and el-Hadra, which feature funerary architecture that strongly recalls the Argead Royal Tombs of the Great Tumulus at Vergina (ancient Αἰγαί, northern Greece) (sec. 3.8.3.1, I). It is quite reasonable to assume that the Macedonian settlers would have interred their dead in *tumulus*-like structures reminiscent of those in the homeland. When Strabo had visited the city around 25 BC however, the eastern necropolises were already being transformed steadily into areas of residential habitation. This proposition is backed by the stratigraphic sequence of el-Chatby and el-Hadra, where the upper

(Roman and Late Roman) *strata* reveal signs of continuous occupation in the form of: (a) domestic architecture (*villae urbanae*), (b) water-supply and drainage system (a set of conduits and sewers), and (c) sections of hardstone pavement representing the remnants of el-Falaki's transversal street $R2^{bis}$ and those of intermediate, longitudinal streets [evidence for (a): sites: 32; 144; 148; 149a; 167. (b) and (c): sec. 2.2.2]. Stratigraphy here seems to back Philo's first-century account on the Alexandrian riots of AD 38; in particular, his treatise against Aulus Avilius Flaccus (*praefectus Aegypti* ca. AD 32-38):

They (a hostile Alexandrian population unleashed by Flaccus' license) drove the Jews entirely out of four quarters, and crammed them all, into a very small portion of one; and by reason of their numbers, they were dispersed over the sea-shore, and desert places, and among the tombs, being deprived of all their property.

(Philo, In Flaccum: VIII. 55-56)

Philo's localisation of the Jewish Quarter (Δ), is affirmed by Flavius Josephus who, in turn, relates:

It was Alexander himself, that gave them (the Jews) that place (part of the city near the coast) for their habitation, when they obtained equal privileges there with the Macedonians ..... Nor can I devise what Apion would have said, had their habitation been at Nekropolis (western suburbs), and not been fixed hard by the royal palace (in proximity to Cape Lochias), as it is.

(Josephus, Contra Apionem: II. 4)

The respective testaments of both Philo (ca. 25 BC-AD 50) and Flavius Josephus (ca. AD 37-100) suggest that the Jewish Quarter might have extended under imperial rule, in an easterly direction, south-southeast of Lochias, between the coastal plateau and the abandoned eastern *nekropoleis*, whence the pursued Jews of the first century AD had fled in search of safe refuge, into the eastern suburbs: i.e. Philo's 'desert places'. An eastwards expansion as such, would not have been possible unless the dead were no longer interred into the necropolitan mounds where the developed areas of habitation, as reflected in the archaeological record, had to be finally contained within the new urban enclosure of the Principality, hence el-Falaki's encounters in *opus caementicium* (sec. 2.1.2.1).

2.1.2.2.2.2) Archaeological Evidence

A possible course for the line of defences in question, is inferable by examining:

a) Remnants of defensive constructions between street R1 and the eastern mounds.

b) Remnants of Ptolemaic waterfront constructions east of Cape Lochias or el-Silsileh.

c) Distributional patterns of Ptolemaic civic constructions antedating 100 BC, east of R1.

d) Relative location of (a), (b), and (c) to the Hellenistic *nekropoleis* at el-Chatby and el-Hadra.

Site 1: *Insula* L1-L2-R1-R2^{bis} (CDist.)

Maps: V1; V4

Fortification-point (α): el-Shallalat Gardens [criterion (a): Ptolemaic (?); Arab]

A defensive construction yet stands *in situ*, at el-Shallalat Park (known formerly as Lady Cromer). The three-storey structure integrates a semicircular tower which formed the northeastern corner of the Arab circuit (Plate LXXXIIa-c) (Adriani 1966a-b: 68, No. 16; Tav. 9, Fig. 22-28). Unlike most parts of the mediaeval remnant, the preserved fragment of the façade is built of larger, rectangular blocks of nummulithic limestone, measuring over ca. one metre in width. Crammed with shell fossils, these isodomic blocks are distinct, as they bear a band of drafting around their edges (Plate LXXXIIIa-b).

The surviving vestige at el-Shallalat Gardens suggests that parts of the Arab fortifications might have incorporated remnants of pre-existing defences, which were possibly, reused by the Tulunid stonemasons in the ninth century while constructing their urban enclosure around a tapered area of the Graeco-Roman metropolis. The reuse of ancient (structural and/or decorative) elements in the buildings of the Arab town, is not uncommon in Alexandria, as documented in the chroniclers of the middle ages and later, in the aquatints of the seventeenth and eighteenth centuries. A case in point would be the one by the Italian-German painter Luigi Mayer, showing a mosque near the Rosetta Gate, with an antique fragment of a Corinthian column in pink granite, as well as another, of the gateway itself (datable ca. 1792) (Plates: LXXXIV; LXXXV).

On the reuse of ancient remnants in the constructions of the Arab town, Richard Pococke relates:

The outer walls round the old city are very beautifully built of hewn stone, and seem to be ancient; all the arches being true, and the workmanship very good. They are defended by semicircular towers, twenty feet diameter, and about one hundred and thirty feet apart ……. The inner walls of the old city, which seem to be of the middle ages, are much stronger and higher than the others, and defended by large high towers.

(Pococke 1743: 3-4)

Perhaps, the outer-façade of nummulithic limestone blocks at el-Shallalat Gardens had formed part of an earlier, Ptolemaic (?) line of defences, which presumably, would have run somewhere to the east of the main transversal avenue (i.e. el-Falaki's R1), towards the western belt of the Hellenistic necropolises at el-Chatby and el-Hadra; and although the notion of vestiges of Ptolemaic defences on the Tulunid circuit cannot be verified in the absence of stratigraphic excavation within the area of interest, the possibilities could still be examined theoretically.

The urban layout of the Graeco-Roman city seems to have been preserved to the ninth century, for the Tulunid fortifications have followed, where possible, the orientation of the ancient circuit. It would have been possible, therefore, for the Arabs, to make use of the surviving vestiges of the ancient defences, in the west and the north, where the mediaeval circuit retraces only in part, its Graeco-Roman predecessor. The Arab town contained a contracted area of the ancient metropolis, which had shrunk greatly in the south following the declining status of the once-thriving Mareotic harbours. Whereas, a possible readjustment to the Hellenistic frontier in the east, is likely to have taken place at an earlier date: probably, ca. the third-fourth century, in the aftermath of the stormy campaigns of Aurelian (AD 272) and Diocletian (AD 297), and the major tsunami of AD 365. After all, the Tulunids might have been retracing the course of the Ptolemaic and Late Antique peripheries.

An eastwards-arm which gives the Arab town a distinct layout, seems to have been a deliberate extension to hold the line of ancient defences at a certain point (α) to the east of transversal street R1. The narrowness of the circuit towards the east, is seen along both sides of the ancient πλατεία, where the mediaeval walls run in alignment with longitudinal streets L2 (approx. el-Sultan Hussein)

and L'2 (approx. Abd el-Moneim), only to reach out for the Rosetta Gate, to the east of street R1. An eastern entrance to the Ptolemaic city, on the L1 alignment, could be conjectured accordingly, to the southeast of el-Shallalat Gardens, not far from the Arab gateway. The strategic importance of this site (approx. the vicinity of the present-day Saet el-Zohour), may be glimpsed on the charts of the seventeenth and eighteenth centuries, where habitation within the abandoned Arab town, is restricted to the area around Bab Sharq. The Arab (re)utilization of ancient remnants of massive nummulithic limestone in constructing their urban fortifications, should, therefore, not come as a surprise: a notion strengthened by a slight deviation in the segment of the circuit-walls to the east of el-Falaki's transversal street R1, one dictated in the ninth century, by the location of pre-existing remnants of defences at el-Shallalat Gardens (Plate LXXXVI).

Site 2: Intersection of R2^{bis} with L5 (EDist.)

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Pavement of L5 [Roman; Late Roman]

(ii) Brick-walls and canals: *thermae* (?) [Roman; Late Roman]

(iii) Fortification-point (ε): foundations of defensive structure [criterion (b): Ptolemaic]

In 1798-1799, during the French Expedition, the geologist Déodat Gratet de Dolomieu recorded the remains of brick-walls coated with stucco, and extending alongside the seashore to the east of el-Silsileh: i.e. a point northwest of the present-day site of the university's administration building (Lacroix and Daressy 1922: 37-38). Dolomieu noted as well, several rock-cut channels leading down into the sea. On an upper level, about 10 feet (3 m) above the brick ruins, a section of street pavement of basalt blocks, was found laid upon a debris-*stratum*. In 1841, Sir J.G. Wilkinson identified both, the "arched brick-work" and the "water channels", as the remnants of what seemed to have been an ancient bathing-establishment. Wilkinson recorded "some black stones apparently making the existence of a street or causeway". The basalt pavement mentioned by Dolomieu then Wilkinson, would be that of longitudinal street L5, uncovered by Ferdinand Noack in 1898-99, and added by him to el-Falaki's orthogonal grid (sec. 2.2.2). Wilkinson maintains that "below, upon the beach, are masses of an old wall" (Wilkinson 1843: 157). It appears that the latter was perhaps, the only remnant

to survive the construction of the Corniche (the city's coast-road) (sec. 2.3.1), as noticed at the time the site was reinvestigated by the GRM director Achille Adriani, almost a century later.

In 1950, Achille Adriani recognized almost at the water-level, remnants of defences of massive blocks of nummulithic limestone, jutting out into the sea, east of el-Silsileh (Plate LXXXVIIa-b) (Adriani 1966a-b: 82, No. 43; Tav. 21, Fig. 75-76). Stonework and building technique together date the submerged construction to the Ptolemaic period. Considering its proximity to Cape Lochias, this segment of the urban circuit which could have formed part of the fortifications of Strabo's 'inner palaces', owes its survival to land subsidence. In antiquity, it would have run adjacent to the subsided, southeastern sector of Lochias, as was shown during the IEASM geophysical surveys (Plate LXXXVIII). The defences, oriented off-grid, cut through the transversal course of street $R2^{bis}$ when extended, and in turn, the (A-B) segment of defences traced by el-Falaki in 1864-66, and built in *opus caementicium* (sec. 2.1.2.1). Adriani's recordings are key to inferring the possible extent of Ptolemaic waterfront constructions to the east of el-Silsileh. It shows that the royal residences, and yet, other luxurious edifices of the (military?) elite, have extended beyond the promontory of Lochias, to reach almost the future site of el-Falaki's street $R2^{bis}$ (approximately, the Suez Canal Road), as indicated by a nearby discovery.

Site 3: Section of $R2^{bis}$, between L3 and Lα (EDist.)

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Pavement of $R2^{bis}$ [Roman; Late Roman]

(ii) Water-supply and drainage system [Roman; Late Roman]

(iii) Building complex with floor-mosaics [criterion (c): Ptolemaic]

In July 1921, ancient ruins were accidentally unearthed during construction works at the Royal Institute of Hydrobiology or the present-day site of the Association of Muslim Youths, in el-Chatby (Breccia 1923a: 158-65; *idem* 1923b: 3-10). Excavations were carried out under the supervision of Evaristo Breccia (director of the Graeco-Roman Museum). Sections of pavement of polygonal basalt blocks were found at one metre below the surface-level. In 1864-66, a few meters to the south, el-Falaki uncovered sections of transversal street $R2^{bis}$, immediately, to the east of the junction of the Suez

Canal Road with Alexander the Great (Omar Lotfy: el-Tram). Breccia's thoroughfare which extends on a north-to-south axis, correlates with el-Falaki's street R2^{bis}. It measured about 6.00 m in width: not constructed on virgin soil, but on a thick levelling-*stratum*. At the middle of the street, 2.50 m below its stone pavement, a canal (1.20 x 1.20 m) ran on the same axis. It was built of large, finely-hewn limestone blocks in mortar. A view of the canal was obtainable by means of an access-shaft encountered towards the north end of the excavation profile.

To the east of the street pavement, at 3.00 m below its level, remnants of a figural floor-mosaic (3.35 x 4.60 m; frame: 1.40 m wide) were encountered within the main trench measuring 180 m^2. Unearthed about 1.30 m to the south were the remnants of a second floor-mosaic (3.60 x 6.60 m) composed of pebbles and grey pieces of stone and marble (size: 3 to 5 cm). On the east side, about 1.50 m to the north, a third floor-mosaic (3.50 x 3.90 m) was met at a level 0.30 m higher than the other two. Excavated on one side of the pebbled floor-mosaic was fragment of a wall plastered in stucco. About 2.00 m north of the figural mosaic, another shaft (2.50 m deep; 0.54 m wide), coated with thick reddish-cement, was found leading to a conduit which after a few meters, had diverted towards the sewer underneath the excavated street pavement. In the opposite direction, the shaft led into a vast low-basin irregularly cut into the rock. Several test-pits sunk at various points within the areas of interest, have reached virgin soil by cutting through a *stratum* of accumulated debris.

Stratigraphy thus signals at least, two phases of construction separated by a thick layer of debris. el-Falaki's (Late) Roman street R2^{bis}, the most recent in the sequence, was probably constructed a considerable time after the abandonment of the building complex with floor-mosaics. The edifice seems to have been plundered and destroyed to ground already in antiquity. Violence is recorded through an extended layer of fill subsequent to an utter destruction of all the walls but a stuccoed fragment. Although a reconstruction of the ground plan would be impossible, the character of the devastated complex is inferable from the partially-preserved floor-mosaics displaying conventional Macedonian iconography. Foremost of the latter, is the panel of an emblematic Macedonian hunt-scene involving three winged-Erotes engaged with a stag (Graeco-Roman Museum, Inv. No. 21643) (Plate LXXXIX). The *emblema* is framed by an ivy-scroll surrounded from all four sides by a rectangular band

that features wild (mythological and real) creatures in a recurring sequence. In terms of style and technique, the panel is significant for art historians as to archaeologists. 'Erotes hunting a stag' is actually made of a combination of coloured *tesserae* (i.e. stone cubes) with few pebbles filled-in: an exemplification of the way tessellated mosaics have evolved from their pebbled antecedents in Pella, the second capital of ancient Macedon (Daszewski 1985a: 103-111, No. 2; Guimier-Sorbets 2004b: 68). The mosaic is likely to have been decorating a spacious banqueting room, as suggested by an off-centre panel marking the threshold of an entrance. For archaeologists, the building complex would be datable, accordingly, ca. 290 - 250 BC. It thus shows that habitation to the east of Cape Lochias, can be traced back to the reigns of Ptolemy I Soter and his successor, Ptolemy II Philadelphos: ca. the first half of the third century BC, the time by which sumptuous edifices with floor-mosaics and stuccoed walls, were being constructed on Cape Lochias and its southern belt (12; 138; 139; 140; 141).

Hence, by considering the location of the excavated vestiges from sites (1), (2), and (3) (see *supra*, criteria a-d), a hypothetical contour representing the Hellenistic frontier ca. the late-fourth to second century BC, is labelled (C3) on the featured maps (V1; V4). It extends NW-SE, between transversal streets R2^{bis} (the Suez Canal Road) and R3^{bis} (Aflaton - Selim Hassan), in conformity with el-Falaki's orthogonal grid: from the western slope of el-Hadra Qibly (south) (site 146) to join the defences of the Royal Quarter, labelled (C1) and (C2), at the C1-L1 junction north of Wabour el-Meyah (centre), before reaching the C2-C3 junction, ca. 250-300 m west of el-Chatby's necropolis (north) (site 145).

2.1.3) The Southern and Western Walls

2.1.3.1) el-Falaki's Excavations

Investigating the course of the southern periphery, Mahmoud Bey searched for foundations by seeking their respective intersections with the roads connecting the city to el-Mahmoudiya Canal (Mahmoud-Bey 1872: 13-14). Eight test-pits were sunk at discrete points, alongside the roads. Five of the excavated *sondages* (E, F, G, H, and I) have revealed the remains of large blocks of masonry, which measure 5.00 m in height, made of hewn stone of varied size, bound in mortar of a slightly different composition compared to that of the defences unearthed at the northeastern sector of the urban circuit. As is the case in the east, the remnants here, were met at 3 to 4 m below the surface-level.

The remaining stretches of the hypothesized periphery were then interpolated between the test-pits. el-Falaki's contour is rather strengthened by the distributional patterns of the vestiges found on either side of the excavated test-pits. These patterns hint towards a physical boundary of some sort that has riven an area cluttered with ancient remains to the north, from another to the south, displaying almost no signs of habitation between the defensive circuit and el-Mahmoudiya Canal.

Excavations were rendered impractical by Mahmoud el-Falaki, in the west, between the Karmouz acropolis, the site of the Sarapeion (52), and the Western Port (Mahmoud-Bey 1872: 14-15). A hypothetical contour for the urban periphery was proposed by el-Falaki, by assessing the general layout of the terrain. After all, he adapts to Strabo's narratives on the western fringe of the ancient metropolis:

Now outside (west of) the (navigable or Kibotos) canal, there is still left only a small part of the city.

(Strabo, Geōgraphikȅ: XVII. 1.10)

2.1.3.2) Inferring the Peripheries

2.1.3.2.1) The Southern Wall

According to Mahmoud el-Falaki, the remnants of the urban circuit at the traced (A-B) segment beyond (to the east of) el-Silsileh, were "en moellons et mortiers composés de chaux et de briques pilées" (Mahmoud-Bey 1872: 12-13). On the other hand, the large blocks of masonry in the south, were "faites en moellons plus ou moins gros et où la composition du mortier diffère un peu de celui de la partie découverte en premier lieu" (Mahmoud-Bey 1872: 14). The variation in stone proportion within the same construction would suggest a line of defences undergoing several phases of Roman and Late Antique restoration. Various signs of stone vicissitude, with a change in mortar-composition, signal the process carried out by the Romans in fortifying the city: (a) the restoration of pre-existing defences in the south (points: G; H; I); (b) the establishment of new lines of defences further east: northeast (A-B); east (B-E); southeast (E-F). Should this be the case, the remnants excavated by el-Falaki, at three of the five recorded *sondages*, would be datable, in origin, to the Ptolemaic period.

The geomorphological configuration of the Mareotic ridge (Chapter I, sec. 1.1) must have dictated the vertical extent of the urban enclosure as early as the Macedonian foundation. Indeed, in a city

built on a narrow strip of land, between the Mediterranean and Lake Mareotis, it would have been necessary to extend the urban enclosure to the entire width of the ridge on which it is situated. A layout as such, has restricted possible attacks to a single front: either east or west. The Hellenistic origin of el-Falaki's periphery is backed when considering the stretch of terrain heights in the south. From a defensive point of view, it is imperative to contain the series of hills stretching east-to-west, between the mediaeval and ancient circuits. Their strategic importance was yet retained until the nineteenth century, as shown by the set of defences organized at the time, by the French engineer Barthélémy Gallice, Mohamed Ali's director of fortifications (De Vaujany 1888: 80).

Further west, where trial-pitting was not possible beyond point (I), the course of the southern periphery is inferable from the topographical features situated on the urban fringe: the Sarapeion (site 52) and the *circus* (site 51). Their proximity to one another, suggests two contextually associated edifices. A first phase of construction for the Roman-developed *circus*, is datable to the Ptolemaic period, ca. the third century BC, the time when the structure was dug into Kom el-Shuqafa, hence the crescent-shape of the plateau. As a norm of urban planning in Hellenistic times, hippodromes were conventionally constructed in proximity to the urban enclosure, adjacent to the circuit-walls, which would have run in Alexandria, immediately alongside the *circus*, before turning northwards. The late-utilization of Kom el-Shuqafa to receive interments, ca. the first century AD (site 53), hints towards a strategic peripheral mound under Lagid rule, intended exclusively for defensive purposes.

2.1.3.2.2) The Western Wall

Inferring the course of the urban defences in the west, is carried out by studying: (a) the sinuosity of the Kibotos canal in antiquity; (b) the relative location of the Kibotos basin to the Tulunid circuit in the west; (c) the geographical extent, and chronology of the Minet el-Bassal necropolis (site 46).

On the 1866 *carte* of Mahmoud el-Falaki (Introduction, sec. II.d), the ancient stream is seen cutting through the urban enclosure, at its westernmost sector. A layout as such, would have had a direct effect on the line of defences, now breached by the navigable waterway. The validity of el-Falaki's hypothesized periphery in the west, should therefore be questioned. Some of the earlier maps of

the Renaissance: i.e. Belon's 1553 *vray portraict* and its sixteenth-seventeenth-century derivatives (Braun-Hogenberg: 1575; Helffrich: 1582; Dapper: 1668) (Introduction II.a), show the water as being constantly supplied to the Arab town via several channels branching off the artery running to the south. These derivatives seem to follow Belon's abstract representation of the way the arteries of the Nile gushes through Alexandria. In reality, the depicted channels would have run underground, as is shown on the Late Mameluke-Early Ottoman maps preceding Belon's vray *portraict* ('Veduta d'Alessandria' of Codice Urbinate 277: 1472; Piri Reis: 1521) (Introduction II.a), and those postdating the Belon derivatives (Razaud: 1687; Christian Melchien and Antoine Massy: 1699) (Introduction II.a). This setting is seen on the maps of the eighteenth century (Norden and Pococke: 1737) (Introduction II.b), and on Le Père's *planche* 84 of *Description de l'Égypte*, where the canal is seen changing course before Minet el-Bassal's southern mounds which extend to the southwest of the mediaeval town. It diverts eastwards, before heading north, to the Tulunid circuit, at the section of it between Fort Triangulaire and the southern gateway known as Bab Sidra. The canal however, does not penetrate the enclosure of the Arabs. Instead, it connects with the mediaeval town by means of subterranean aqueducts, as further evident on Saint-Genis' *planche* 31 of *Description de l'Égypte*. Archaeological investigation seems to reveal the situation as not much different in antiquity. Excavations carried out by Mahmoud el-Falaki (1864-66), Ferdinand Noack (1898-99), and others after them, indicate that the water-supply and drainage system, basically an underground, intricate network of sewers and conduits, depended on the subterranean aqueducts branching off the Canopic-supplied water artery which ran to the south of the urban enclosure (sec. 2.2.2; sec. 2.3.5). Accordingly, it would have been rather unnecessary for the navigable canal to breach the southwestern defences, into the city.

The course of the navigable canal in the west, may be glimpsed from the location of its Kibotos outlet. In 1798-1799, Saint-Genis identified a natural, round-shaped depression with a narrow exit on the side of the coast, as the Kibotos of ancient Alexandria: the N.-NW. sector of Minet el-Bassal (Saint-Genis 1818a: 16). His identification is backed by the coastal terrain and the inward-deviation of the Tulunid circuit in the west. The latter deviation must have been dictated by the relative location of the defences to the depression, as the case with the hypothesized inward-deviation in the east, at el-Ibrahimiya Qibly. In theory, the ancient circuit, at its northwestern segment, would have run approximately, along the course of its mediaeval successor. Whereas, in the southwest, the canal

bypassed the southern mounds of Minet el-Bassal, before proceeding northwards, to the Kibotos basin. A shift-in-course as such, would have yielded in turn, a crescent-shaped curve recalling that of today's el-Mahmoudiya Canal: i.e. Mohamed Ali's revival of the ancient waterway. The latter was however, formed in the nineteenth century, when the canal readjusted to its initial path favoured by the terrain, after being diverted eastwards, in the direction of the Arab enclosure. The sinuosity of the canal in antiquity, is likely to have been accommodated by a second inward-deviation in the urban circuit, approximately, at the section of it between the southern mounds of Minet el-Bassal and the mediaeval Fort Triangulaire.

Unlike the case in the east and the south, the terrain heights in the west, i.e. at Minet el-Bassal and Gabbari, seem to have never been part of the urban defences in antiquity. The presence of a water-barrier as the first line of defence before the circuit-walls, would have altered the use of the mounds for other purposes: a proposition backed by the accidental discovery in 1950, of the Minet el-Bassal necropolis, adjacent to the area bypassed by both the ancient and modern canals. Three sections of rock-cut hypogea have been excavated by Achille Adriani, immediately to the west of el-Hawiis Street. The earliest, Sezione (A), is datable ca. the third to second century BC (Adriani 1956a: 17-33; Adriani 1966a-b: 157-159, No. 110-112; Tav. 81, Fig. 265-266, 268-270, Tav. 82, Fig. 271-275, Tav. 83, Fig. 276, Tav. 101, Fig. 341) (Chapter III, site 46). The western mounds, like those in the east, were utilized by the Graeco-Macedonian settlers, as to receive interments, as early as the reigns of the first Ptolemies. Indeed, the funerary architecture of Minet el-Bassal's Sezione (A) strongly echoes that met in the eastern *nekropoleis* of the Ptolemaic city: particularly, at Sidi Gaber and Mustapha Pasha (156; 160).

Mahmoud el-Falaki, as many after him, seems to have been influenced by Strabo's description of the western fringe of the ancient metropolis. The narrative of Strabo, as is argued hitherto, not only contradicts the conventions of urban defence in antiquity, but also does not conform with the topographic relief of the designated areas. Perhaps, the Greek geographer was denoting the ship-sheds of the Kibotos basin, which could have extended beyond, i.e. west of, his "navigable canal":

the artificial harbour (basin), which is also called Cibotus; it too has ship-houses (νεώρια). Farther in there, is a navigable canal, which extends to Lake Mareotis.

(Strabo, Geōgraphikȅ: XVII. 1.10)

2.1.4) Waterfront Constructions

2.1.4.1) el-Falaki's Observations

Submerged foundations pertaining to waterfront constructions were met intermittently, from the base of el-Silsileh to the site of the Caesareum (Hotel Le Métropole) (93-100). The remains were traced by Mahmoud Bey on a clear day at 2 to 3 m below water-surface (Mahmoud-Bey 1872: 15). Exact find-spots are marked A, b, c, d, e, f, g, h, i, k and l on his *carte* (Plate XC). According to the surveyor, most of the ruins were indicative of a certain form of construction which would be interpreted as 'ancient quays jutting out into the Great Harbour' (sec. 2.3.3). Further inspection, beyond point (l), across the area of the silted-up isthmus, was challenging in such populous district as el-Mansheiya. However, a westwards-continuation of quay-like structures, between el-Falaki's points (l) and (P), is conjectured by the aid of knowledge gained from random discoveries: points (m) and (n), made during earlier constructions of foundations for modern houses in 'the District of the Franks'. Both sites, i.e. (m) and (n), are located at the northeast and southeast ends of the Square of the Consuls (renamed Mohamed Ali or el-Mansheiya). Overall, el-Falaki's hypothetical periphery in the north, is in dispute with archaeological investigation at the coastal zone and across the silted-up isthmus.

2.1.4.2) Inferring the Periphery

2.1.4.2.1) Archaeological Evidence

Site 4: NW. corner of the Arab circuit (WDist.)

Maps: V1; V2; V3; V4

Fortification-point (γ): Minet el-Bassal [Ptolemaic (?); Roman-Late Antique (?); Arab]

In spring 1979, during the digging of foundations for a new building at Minet el-Bassal, remnants of a defensive construction were accidently unearthed. The director of the Graeco-Roman Museum, Youssef el-Gheriani, had initiated subsequent salvage excavations on site. The aim at the time, was "le dégagement d'une des portes d'Alexandrie, située dans la partie ouest de la cité, près de Miniet el-Bassal" (Leclant 1979: 343). It is not clear which of the mediaeval gateways is meant here. However, nearby possibilities would be Bab Gharb (Porte des Catacombes) and Bab el-Akhdar, both of which cannot be located at the reported find-spot; yet the same applies to other defensive constructions,

such as Kom el-Nadura (the site of Fort Caffarelli). The GRM scope, therefore, would have been to investigate the northwestern corner of the Tulunid enclosure, south of el-Falaki's fortification-point (P), for a possible defensive complement to the mediaeval Fort Triangulaire. After all, the site seems to correlate with the western entrance to the Graeco-Roman city, known from literary sources as the 'Moon Gate' (Plate XCI) (Achilles Tatius, τὰ κατὰ Λευκίππην καὶ Κλειτοφῶντα: V. 1.1-4).

As the case at el-Shallalat Gardens (1), the outer-façade of the excavated structure was built of large blocks of limestone. It is rather slightly oblique towards the edges, and ends with a projecting cornice at the top (Plate XCII). The wall formed part of a watch-tower construction with an arcaded-passage and a flight of steps. Another equally-massive wall joined the latter at an angle (Plate XCIII). Architecture and building technique suggest that fragments of a defensive enclosure, most likely of Ptolemaic or Roman origin, were included in the fortifications of the Arab town. Overall, structural design strongly recalls Pococke's descriptive narrative on the urban defences:

They (the outer walls) are defended by semicircular towers, twenty feet diameter, and about one hundred and thirty feet apart; at each of them, are stairs to ascend up to the battlements, there being a walk round on the top of the walls built on arches.

(Pococke 1743: 3)

The frequent recovery of this form of defensive constructions on the course of the Tulunid circuit, backs a probable correlation between the mediaeval and ancient peripheries at least, in part, and subsequently, the Arab reutilization of pre-existing remnants of ancient defences where possible.

Site 5: North of the L2-R7 junction (NDist.)

Maps: V1; V2; V3; V4

Fortifications: el-Mansheiya [Ptolemaic (?); Roman-Late Antique (?); Arab]

In 1841, during his second visit to Alexandria, the British Egyptologist Sir John Gardner Wilkinson described one of the northern entrances to the Arab town, Bab el-Bahr, as a 'gateway flanked by two large towers': points (C) and (D) (Plate XCIV). Wilkinson noted several Doric triglyphs, and some

ornamented soffits on the massive blocks that formed part of its walls. At either side of the gate, a large granite architrave was placed upright before the jambs (Wilkinson 1843: 165-166). The curtains between the towers were built of smaller blocks, as was the case with the Saracenic tower (D) at the extreme end of the wall towards the sea (Plate XCV). In the summer of 1842, the whole complex was taken down in order to create room for the Frankish Quarter's southward expansion back into the less-inhabited Tulunid enclosure of the mediaeval town.

Wilkinson's observations denote 'two distinct forms of construction' at Bab el-Bahr (aka Porte de la Marine). One signalled by the Saracenic towers and the curtains joining them, the other, by the large blocks of the gate-walls and the reused elements of architecture, which must have been retained from a dismantled edifice. The continuation of such form of defensive constructions into the area of the silted-up isthmus is significant, for it shows that the utilization of ancient remnants by the Arabs, has extended along the waterfront of the ancient town. In fact, the defences at Bab el-Bahr stood near the silted-up shores of the Great Harbour (2.3.3), below the coastal belt to the Heptastadion, where Strabo had precisely sited the city's Mediterranean trading-post (ἐμπόριον), the warehouses (αποστάσεις) and ship-sheds (νεώρια). Perhaps, a frequent Arab reuse of building material retained from ancient waterfront constructions at the silted-up district of el-Mansheiya, may justify the course of the Tulunid circuit in cutting through the isthmus rather than containing the marshy ground on which the Ottoman village was to develop later. If this is the case, the Arabs of the ninth century could have been retracing the ruined waterfront constructions of the ancient city, from the defensive structure south of el-Falaki's point (P) (site 4) to the so-called Tower of the Romans at el-Ramleh (site 6). This proposition is yet backed by the location of el-Falaki's points (m) and (n) on the approximate course of the Tulunid circuit, at the section of it towards the northeast and southeast ends of the Square of the Consuls: the later Mohamed Ali or el-Mansheiya Square.

Site 6: Section of L3, between R4 and R5 (NDist.)

Maps: V1; V2; V3; V4

Fortification-point (β): el-Ramleh [Ptolemaic (?); Roman-Late Antique (?); Arab]

In 1818, on the grounds of observations made previously during the Napoleonic Expedition of 1798-99, Saint-Genis provided a detailed description of a fortified complex situated northeast of the Heliopolis obelisks (aka Cleopatra's Needles): i.e. the present-day site of the Italian Consulate. The structure in question, was demolished around 1905, following the construction of the Corniche (Adriani 1966a-b: 66-68, No. 15; Tav. 7, Figs. 17-18, Tav. 8, Figs. 19-21). Indeed, its frequent appearance in the aquatints of the seventeenth and eighteenth centuries (e.g. Cornelis de Bruijn, 1681, publ. 1698; Louis-François Cassas, 1785, publ. 1799; Luigi Mayer, ca. 1792, publ. 1801-1804) (Plates: XCVI; XCVII; XCVIII), and in some of the photographs of the nineteenth century (Plates: XCIX; C), seems related to its proximity to the renowned obelisks (site 93).

The three-storeyed complex (Plates: CI; CII), labelled 'tour dite des Romaines' at the time of the expedition, stood on a protruding tip, upon the old seashore, as seen on *planche* 32 of *Description de l'Égypte* (1822, Antiquités, Planches, Tome Cinquième, Imperial Edition, 1809-1822) (Plate CIII). According to Saint-Genis, the tower is "parfaitement circulaire, et paroît peu engagée par sa base dans les fondemens de l'ancien système de fortifications, sur une partie desquels s'élèvent les murailles Arabes qui aboutissent à ce point" (Saint-Genis 1818a: 43). On the southwest side, it joined another structure, not as ancient, yet predates the Arab defensive walls: possibly a Roman or Late Antique supplement. To the east, a defensive wall about 3.45 m thick, ran over 10.50 m, alongside the shore. It was built of isodomic blocks (ca. 0.82 x 1.90 m) similar to those of the tower to which it is attached (De Vaujany 1888: 88-89). In structural design, the complex seemed different from other towers met along the Arab circuit, as is evident on its stonework, niches, and cornices. It even had one engaged Doric column crowned with an assemblage of mouldings: a reused vestige that most probably, belonged to the ruins of the nearby, dismantled Caesareum (sites: 94-100) (Plates: CIV; CV).

The 'Tower of the Romans' (height: 15.00 m, diameter: 14.10 m) must have undergone several phases of restoration and/or renovation work, as indicated by the use of fired-brick in the vaulted structure, which seems in clear contrast with the large nummulithic limestone blocks that form the façade and part of the interior (Plate CVI) (De Vaujany 1888: 85-87). These isodomic blocks (ca. 0.80 m: average width; 1.90 m: maximum length), with bands of drafting around the edges, strongly recall

the ones forming the façade of the Shallalat defences (site 1). Saint-Genis' remarks on construction technique, are key to understanding the chronology of the architectural fragments of nummulithic limestone. He maintains that "les blocs sont retenus les uns aux autres au moyen d'ancres de fer" (Saint-Genis 1818a: 43). This seems to be a reference to the Hellenistic and Republican 'hook clamps': i.e. a simple iron-bar with both ends bent down, forming the shape of an anchor (Plate CVII). In this mode of construction, the limestone blocks, having been laid dry, without mortar, were fastened to those below them (vertically) and connected in the same course (horizontally) by means of iron dowels and clamps as ponding agents (Plate CVIII). They were then sealed in molten lead to minimize corrosion by preventing air and moisture from rusting and expanding the metal (Dinsmoor 1950: 174-175; Camp II and Dinsmoor Jr. 1984: 13-14). Given the fact that at the time of the Augustan conquest ca. 30 BC, *opus caementicium* began to be in use by the Romans, the surviving vestiges of nummulithic limestone (dry masonry), are thus likely to be of Ptolemaic origin.

Site 7: Northern sector of *insula* R2-R3-L3-Lα (NDist.)

Maps: V1; V2; V4

Miscellaneous: el-Mazarita

(i) (a) Fortifications: Tabiat el-Menchérieh [Arab]

(ii) (a) Bath complex: *thermae* [Roman; Late Roman]

(iii) (a-d) Waterfront and monumental constructions [Ptolemaic]

(a) In 1798-99, while examining the section of the shore between the 'Tower of the Romans' and el-Silsileh: a point NE. of the present-day Mohamed Abd el-Wahab Theatre, Saint-Genis observed foundations of limestone blocks laid upon the bedrock, and covered with *opus-incertum stratum*: irregularly-hewn, small stone inserted into a core of *opus caementicium*. On top, was yet, a whole mass of brick-masonry in *pozzolana* lime-mortar. Saint-Genis identified these remnants with "un établissement thermal" (Saint-Genis 1818a: 47-48). At the lower part of the main complex, were small vaulted structures communicating with one another, and within which the fire circulated to heat the water of the baths. Above the vaults, circular furnaces of four or five feet (ca. 1.20 - 1.50 m) in diameter, were found covered with brick, the surface of which was vitrified in places. The remains of this *thermae* facility were encountered at the headland marked 'palais ruiné' on *planche* 84 of

Description de l'Égypte (Plate CIX). It was 15 m wide, and extended over 29 m into the sea (De Vaujany 1888: 18-19). Using the rocky platform as a quarry, the Arabs had built a defensive tower known as Tabiat el-Menchérieh, a stronghold that formed part of their fortifications along the coastal zone. The mediaeval fort, demolished ca. the early 1890s, appears in the photographs of the nineteenth century, where it stands on a protruding tip, to the east of the 'Tower of the Romans' (Plate CX).

In 1892, Giuseppe Botti maintained that the Roman *thermae* would have been built upon the ruins of an earlier construction datable to the Ptolemaic period, judging by building material and technique (Botti and Simond 1899: 62). The substructures were built of massive blocks of nummulithic and Mex limestone, with some bearing traces of stonecutters' marks from the Greek alphabet:

a) 0.56 X 0.56 X 0.50 m (letter Ω).
b) 1.95 X 0.92 X 0.82 m.
c) 0.75 X 0.53 X 0.38 m.
d) 1.90 X 0.82 X 0.72 m.

Besides the stonework, Botti recorded some surviving fragments of architecture, mainly "un petit tronc de colonne dorique (engaged?)", standing the rough waves *in situ*, and a huge granite block forming the half of a lintel of a 'monumental gateway' (Botti 1898b: 82). Botti's observations are on display in Luigi Mayer's plate XVII of *Views in Egypt* (ca. 1792, publ. 1801-04), where fragments of an enclosure wall of large nummulithic blocks of limestone, are visible at the so-called 'palais ruiné' headland (Plate CXI). Sections of the massive construction had survived the dismantling of the Arab fortification towards the end of the nineteenth century (Plate CXII).

Stratigraphic sequence on site, shows Roman *thermae* being built upon the foundations of an earlier substructure of large blocks of nummulithic and Mex limestone, integrating a giant gateway. Stonework, architectural elements, and context of recovery, all suggest a continuation of a certain form of construction along the shores of the city's eastern harbour. In 1898-1899, Ferdinand Noack encountered "Griechisches quaderwerk ohne verband" in his (K4) test-pit dug immediately to the

south of the recorded foundations at 'palais ruiné' **(b)**. Noack's finds bring forth the probability of a waterfront construction that seems to have adjoined a larger complex of monumental buildings (Noack 1900: 225; Adriani 1934: 66, No. 28). This proposition is strengthened by the unearthing of massive foundations at two other *sondages* located nearby: i.e. on the eastern and northern limits of *insula* R2-R3-L3-Lα (Plate CXIII). **(c)** In Noack's test-pit (L), adjacent to el-Falak's transversal street R2, large foundations, and the stylobate of a monumental Doric colonnade of Mex limestone, with possible connection to (K4) and (K3), were met at groundwater-level, and extended up thru the lowermost *strata*, from + 0.87 to 2.27 m above sea-level (Plate CXIV) (Noack 1900: 260-261; Adriani 1934: 63, No. 23). **(d)** Towards the seashore, about 150 m to the east of palais ruiné, within a third test-pit, (K3), Noack encountered a section of another walling-structure "dessen fortseizung sich bei ruhiger see weithin unter dem wasser verfolgen lässt". Other contextual finds in limestone, include several fragments of column bases, and an Ionic capital (Noack 1900: 224, 262; Adriani 1934: 63, No. 22).

Site 8: West of the L4-R2 junction (NDist.)

Maps: V1; V2; V4

Waterfront constructions: el-Mazarita [Ptolemaic; Roman]

In 1798-99, ca. 350 m to the east of 'palais ruiné': approximately, the present-day parking area west of the Bibliotheca Alexandrina, Saint-Genis recorded another headland marked 'mole ruiné' on *planche* 84 of *Description de l'Égypte* (Plate CXV). It was identified by him, as the western pier of Strabo's 'closed harbour dug by the hand of man'. In fact, it is the midst of the inner-ports revealed by the IEASM geophysical surveys in the 1990s (sec. 2.3.3.2): i.e. inner-port (Y) on the featured maps. Saint-Genis located what he thought then, to be the 'eastern extremity of Port Creusé', at 200 m further east, below the promontory known as el-Silsileh (Saint-Genis 1818a: 50). In turn, Gratien Le Père described the mole in question, as constructed "en pierres de taille de fortes dimensions" (Le Père 1813: 319-320, No. 101). The headland so-called 'mole ruiné', provides evidence for the continuation of waterfront constructions of massive blocks of nummulithic limestone, from the site of the Tower of the Romans (Italian Consulate, el-Ramleh) to Cape Lochias (el-Silsileh, el-Chatby): approximately, the area partially concealed beneath the pseudo-coastal belt of the city's Corniche, beyond which extend the submerged substructures of the Great Harbour of ancient Alexandria (sec. 2.3.1; sec. 2.3.3).

Site 9: el-Silsileh (NDist.)

Maps: V1; V2; V4

Fortifications: el-Chatby [Ptolemaic (?); Roman (?); Arab]

In 1887-1888, on the occasion of his "recherches sur les anciens monuments situé sur le Grand-Port d'Alexandrie", Henry de Vaujany investigated the mediaeval fortification upon the extremity of el-Silsileh (De Vaujany 1888: 36, 41). At the time, the quadrangular fort, already detached from the partially-submerged isthmus which connected it to the promontory, had formed an islet amid the huddled reefs. Vestiges of fragmentary architecture were found everywhere, in a debris at the foot of the structure (fragments of granite columns), and as reused building-material employed by the Arabs in the Middle Ages. Some of the surviving sections of the so-called Pharillon, a complement to Fort Qaitbay, were constructed using brick of varied size, inserted into a core of concrete: *opus incertum*, suggesting a possible Roman restoration of an earlier, Ptolemaic (?) structure (Plate CXVI) (Adriani 1966a-b: 81-82, No. 42; Tav. 21, Fig. 73-74). The defensive construction was found coated with a massive curtain of isodomic limestone blocks, as the one reported at 'palais ruiné' (site 7) (Plate CXVII), hence bringing forth the probability of a reused segment of ancient fortifications on Cape Lochias.

2.2) Street-Grid

2.2.1) el-Falaki's Excavations

In 1864-1866, Mahmoud el-Falaki managed to trace the remains of eighteen paved streets by means of actual excavation: eleven transversal and seven longitudinal. On his 'Carte de l'Antique Alexandrie et des Ses Faubourgs', the transversal ones are labelled: R1, R2, R3, R4, R5, R6, R7, R8, $R2^{bis}$, $R3^{bis}$, $R4^{bis}$; the longitudinal: L1, L2, L3, L4, L'2, L'3, L'4 (Mahmoud-Bey 1872: 18-28). These labels are used as standards in the study of the topography of ancient Alexandria. Of the eighteen streets, there were only five not well preserved: R4, R8, $R4^{bis}$, L4, L'3. On the other hand, sections of stone pavement have been identified over nearly, the whole extent of the other streets. It is remarkable to find the Hippodamian grid plan being retained where some of the modern streets correlate with ancient ones: L1 (Bab Sharq: Fouad I: el-Horreya; east of R1: Abu Qir); L2 (el-Sultan Hussein Kamel: Salah Mustapha: aka Istanbul); L3 (Alexander the Great: Omar Lotfy: aka el-Tram); L'2 (el-Amir Abd

el-Moneim: Ismaīl Mahanna – el-Amir Abd el-Qader: Suleīman Yousri); L'3 (el-Khedeiwi el-Auwal: Sherif); R2 (el-Batalsa); R3 (el-Mathaf, at a slight angle); R4 (Pereira: Mohamed Rafat); R5 (el-Nebi Daniel, at a slight angle); R6 (Ibn Khaldoun); R7 (Abu el-Dardaa); R8 (el-Genneina); R9 (el-Taufiqeia); R2^{bis} (Suez Canal, at an angle); R3^{bis} (Aflaton – Selim Hassan); R4^{bis} (Trajan: Ahmed Lotfy el-Sayed).

All longitudinal streets were regulated at a standard inter-axial spacing of 278 m (approx. 1.68 *stadion*; approx. 10.10 *plethra*). Three exceptions would be: (1) streets L'3 - L'4, separated by 177 m (approx. 1.07 *stadion*; approx. 6.43 *plethra*); (2) streets L1 - L2 and (3) L1 - L'2, separated by 294 m (approx. 1.78 *stadion*; approx. 10.69 *plethra*). About 100 m to the south of street L'4, el-Falaki identified the remnants of another longitudinal street labelled L'5. It is rendered on his 1866 *carte* as dotted line, for no digs were carried out on its course. Streets L'3 and L'5 accord to the standard spacing of 278 m, suggesting that L'4 was perhaps, an intermediate avenue. Another hypothetical street, L'6, was identified to the south of L'5 without excavation, therefore rendered as dotted line between transversal street R1 and the western periphery. As the case with the longitudinal ones, all transversal streets were regulated at a standard inter-axial spacing, which was a bit wider: 330 m (approx. 2.00 *stadia*; approx. 12.00 *plethra*). The westernmost street, R9, was identified without excavation. It is rendered as solid line on the featured AutoCAD maps, for a team of geophysicists has shown the Heptastadion as extension of R9 (sec. 2.3.2). The most significant of el-Falaki's streets would be L1 and R1, with their preserved pavement exceptionally measuring some 14 m in width: almost half the distance recorded by Strabo, ca. 25 BC (i.e. over a *plethron*: + 27.50 m), for the city's main arteries (πλατείες). These measurements pertain however to the Roman street-grid than to the Hellenistic one. All other streets have measured approx. 3.50 - 9.50 m in average: half the width of the πλατείες (L1 and R1). Besides the main ones, archaeological investigation provides evidence for internal street-division: intermediate thoroughfares within the urban *insulae* (sec. 2.2.2.13).

2.2.2) Archaeological Evidence

2.2.2.1) Traces of R1

Site 10: Section of R1, between L'6 and L5 (SDist; CDist.; NDist.)

Maps: V2; V4

Pavement of R1: Moharram Bey; Latin Quarter; el-Mazarita [Roman; Late Roman]

According to el-Falaki, street R1 comprised 'three lanes laid on the same level'. The one to the east, was paved with slabs, the other, is a sort of masonry composed of lime, earth, small pebbles, and rubble (Mahmoud-Bey 1872: 23-24, 49; Adriani 1934: 95-96, No. 118-121). Both lanes equally measured 6.50 m in width. Between the lanes, along the axis of the street, was an earthen border one-metre wide. On either side of the street, the excavation trenches have yielded fragmentary architecture: primarily, column shafts and capitals which, given their find-spot, would have belonged to the R1 colonnade. The finds are marked on Kiepert's plan of 1872 (Introduction, sec. II.d). Running N-S, along the east side of the street, was a major subterranean aqueduct branching off the freshwater artery south of the city. A sewer has been installed on the other side for draining wastewater. Street R1 was traced by el-Falaki farther south, beyond the urban defences, at test-pit (G). On his 1866 *carte*, it is shown extending to reach almost at the canal's 3rd *pont*: a cross-over bridge, the ruins of which have been identified by el-Falaki some 130 m from the city walls. It is marked as well, on *planches* 31 (Antiquities V) and 84 (Etat Moderne II) of *Description de l'Égypte*.

Site 11: Section of R1, north of the junction with Lα (NDist.)

Maps: V2; V4

Pavement of R1: el-Mazarita [Roman; Late Roman]

In 1898-99, Ferdinand Noack uncovered sections of stone pavement on the transversal course of el-Falaki's street R1 (Noack 1900: 226, 233-239; Adriani 1934: 60, No. 12). Noack's ca. 22 m trench, N5, dug at + 5.00 m above sea-level, i.e. approx. 2.40 m below surface-level, was located north of the intersection with street Lα, in el-Mazarita (near the present-day site of the Faculty of Commerce). It revealed three lanes all bedded on the same level, and preserved over their entire breadth. The surface was, however, divided quite differently from what was recorded by el-Falaki. In fact, there was a middle roadway paved with polygonal blocks, and bordered on either side, by earthen lanes (L_w: 5.75 m + side platforms: 1.05 m: 6.80 m; L_e: 7.25 + side platforms: 1.05: 8.30 m). Both lanes were found on a relatively higher ground (approx. + 5.38 m above sea-level) to the paved street (approx. + 5.18 m above sea-level). The former were separated from the latter by ca. 0.50 - 0.55 m curbs of small limestone blocks (preserved height: 0.30 - 0.35 m). The stone-paved section is approximately

4.70 - 5.70 m wide (maximum value includes the half-a-meter-wide side-curbs). Hence, the entire thoroughfare width measured about 19.80 m (Plate CXVIII). Judging by the overlay of the excavated surface, three pathways seem inferable here: one facilitating the mobility of carriages, while two sidewalks served pedestrian traffic. A pattern as such, is characteristic of the Roman *viae munitae* which were often flanked by raised footpaths (sec. 2.2.3).

Site 12: Section of R1 (?), at the junction with L4 (NDist.)

Maps: V1; V2; V4

Miscellaneous: el-Mazarita

Pavement of R1 or L4 (?); mosaics [Roman; Late Roman]

Foundations: "spärliche mauerreste"; mosaics [Ptolemaic]

In 1929, while excavating the area presently occupied by the faculties of humanities and social sciences, Evaristo Breccia recorded the remains of a thoroughfare at right-angle with the Lα section uncovered to the southwest (site 28). Breccia did not describe the excavated remnants in *Le Musée Gréco-Romain (1925-31)*. Instead, they were marked "route-mosaïque" on *planche* LXII (Plate CXIX) (Breccia 1932: ck. Planche LXII; Adriani 1934: 60, No. 15; Adriani 1966a-b: 80-81, No. 40; Tav. 20, Fig. 71). Given the context of recovery (approximately, towards the present-day entrance to the Faculty of Commerce) the pavement might have belonged to street R1 or otherwise, L4. The former seems likely on the grounds of Breccia's account of "ces routes (perhaps, Lα and R1?) se croisaient à angle droit, selon la direction des points cardinaux" (Breccia 1932: 53). The course of the street in question, yet remains unclear, provided the limited section of exposed stone pavement shown on Breccia's *planche* XLII.

Encountered at ca. + 5.27 m above the sea-level, Breccia's "route" would be datable, in general, to the Roman or Late Roman period. A possible correlation with el-Falaki's R1 is indeed significant for it shows the main transversal street extending up towards Cape Lochias. This is backed by the fact that in 1864-66, el-Falaki uncovered sections of street R1 north of the intersection with street L4 (maps: V2; V4). Likewise, Breccia's label would put forth the assumption that his "mosaïque" was encountered on the same stratigraphic level and accordingly, pertain to a structure contemporary with the excavated street.

A few meters yet to the north, crossing Port-Saīd Street into the plaza of the current Bibliotheca Alexandrina (just to the east of the old Lazzaretto), is the site where Ferdinand Noack has dug his (N1), (N2), (N3), and (N4) test-pits in 1898-1899 (Noack 1900: 226; Adriani 1934: 59, No. 8-11). (N1), west of R1, has yielded "spärliche mauerreste" (Ptolemaic?) (site 28). (N2) and (N4), east of R1, revealed no finds. In (N3), east of R1, other remains of a floor-mosaic were excavated at + 4.12 m above the sea-level, a few meters northeast of Breccia's 1929 'mosaïque'. In May-December 1992, during the digging of foundations for the new Bibliotheca Alexandrina, two mosaics were accidently unearthed along with the remnants of a large foundation wall and gate (site 139). These vestiges strengthen the notion of an elite-inhabited area of monumental structures with mosaic pavements, between the Suez Canal Road and Champollion, reaching westwards, to el-Khaledin Garden and Safia Zaghloul.

2.2.2.2) Traces of R3

Site 13: Section of R3, between L1 and L2 (CDist.)

Maps: V2; V4

Pavement of R3: el-Messallah Sharq [Roman; Late Roman]

In 1907, while installing sewers near the premises of the Graeco-Roman Museum, two sections of street pavement have been accidently discovered at either end of the main edifice (Breccia 1907a: 108; Adriani 1934: 82, No. 64-65). The encounters, recorded by Evaristo Breccia, then the GRM director, were constructed of blocks of limestone and black basalt. According to Mahmoud el-Falaki's urban grid, the uncovered surface, which measured 6.00 m in width, would pertain to transversal street R3, hence is datable by analogy with hardstone pavement elsewhere, to the (Late) Roman period.

Site 14: Chantier Djanikian (GHH): Section of R3, SW. of the junction with L3 (NDist.)

Maps: V1; V2; V4

Miscellaneous: el-Mazarita

(i) Pavement of R3 [Roman]

(ii) Foundations; canal [Ptolemaic]

In October 1932, the remains of a monumental structure have been accidently unearthed during the digging of foundations at a plot of Djanikian: a site located to the east of the British Consulate,

on the slope of the Government Hospital Hill (the R3-L3 junc.) (Adriani 1934: 11-18, No. 38). Excavations carried out by the Graeco-Roman Museum, revealed the remains of two foundation walls of large, hewn limestone blocks held without mortar (dry masonry) (Plate CXXa-f). The walls, oriented NW-SE, were interrupted by longitudinal street L3 (approx. the present-day Alexander the Great: el-Tram), before proceeding southwards, from the hill. One wall measured about 4.80 m in thickness, and was traced over a distance of 20.60 m of which 8 m were followed along the gallery trenches. The other, was 4.10 m wide, and extended over 17.38 m. They were built directly upon the bedrock, at + 5.80 m above sea-level. The terrain within either wall had a coarse surface (sign of quarrying?). On some of the blocks with a smooth surface, the wedge-shaped cutting-signs usually left by 'swallow-tail' clamps were noticed by Achille Adriani, who recorded the distinct mark in the text of *Annuario del Museo Greco-Romano (1932-33)*, yet without emphasizing its chronological significance (Plate CXXI) (Adriani 1934: 12). Incised stonecutters' marks left by Greek stonemasons on the blocks of both walls, are indicators of employing such clamps in the construction of a monumental building (Plate CXXII). The swallow-tail fasteners were employed in dry masonry, as early as the mid-sixth century BC, as evident on an Archaic Temple dedicated to Apollo at Corinth (Plate CVII) (Dinsmoor 1950: 175; Pfaff 2003: 104). Recent studies have shown that they continued to be used in the joints of the Early Hellenistic, mortar-free constructions of ca. the late-fourth and third century BC, as exemplified by the Delian Temple of Apollo and the Artemision at Sardis (Asia Minor) (Martin 1965: 254-55; Cooper 1996: 172-73). The use of such clamps in the joining of the large nummulithic blocks of the excavated walls, should therefore, date the structure in question, to the reigns of the first four Ptolemies: third century BC. Building technique here, recalls that met at the 'Tower of the Romans' (the present-day site of the Italian Consulate, not far from this *chantier*), where traces of the later 'hook' clamp on some blocks of nummulithic limestone were recorded earlier by Saint-Genis, ca. 1798-99 (site 6). To the west of the excavated ruins, a rock-cut canal coated with waterproof plaster, was found already partially-collapsed. It probably belonged to the water-supply and drainage system of a large urban complex of which the adjacent walls would have formed part (associates on the GHH, sites: 129; 131; 132; 133; 134).

On an upper level, sections of a hardstone pavement of black basalt were recorded by Adriani, as pertaining to el-Falaki's transversal street R3. As the case with street R4 at Cinema Amir (site 17),

the excavated stone pavement has overrun the above-mentioned, Hellenistic construction. In fact, it cuts thru one of the foundation walls encountered at a lower level: Adriani's wall (B), suggesting a Late Ptolemaic - Early Roman date (1st cent. BC - 1st cent. AD) for phase (II) of the orthogonal grid: phase (I) of el-Falaki's grid of *viae munitae*, with subsequent adjustments occurring intermittently, in response to Roman and Late Antique urban encroachments on the *viae* of the former βασίλεια.

Site 15: Section of R3, on either side of the junction with L2 (CDist.; NDist.)

Maps: V1; V2; V4

Miscellaneous: el-Mazarita

15a) South of the R3-L2 junction

(i) Structures [c: Roman]

(ii) Structures [a-b: Ptolemaic]

15b) North of the R3-L2 junction

(i) Structures; canals (γ) and (ε); stone pavement of R3 [d: Late Roman]

(ii) Structures; canal (γ); stone pavement of R3 [c: Roman]

(iii) Structures; gravelled surface of R3 (*δ*) [b: Ptolemaic]

(iv) Structures [a: Ptolemaic]

(a) In 1897, accidental discovery of architectural remains occurred during the demolition of the Arab fortifications near el-Sultan Hussein Street (approximately, el-Falaki's longitudinal street L2), south of the Government Hospital Hill, within el-Mazarita (Botti 1898a: 56-58; Adriani 1934: 85-86, No. 89). Subsequent excavation work carried out on site, under the supervision of Johannes Schiess Pasha, then director of the Government Hospital, revealed a number of reused fragments of architecture: column shafts and capitals of pink and grey granite, often re-employed by the Arabs as decorative elements. Encountered at 9.00 m below the level of Gallice-Bey Street (later, Rue des Allemands: el-Sultan Hussein Kamel), were the remnants of a monumental edifice of large blocks of limestone, "décore de colonnes en calcaire compact", and oriented in conformity with el-Falaki's orthogonal grid (Botti: the L2 colonnade; Noack: large peristyle). Other fragmentary architecture includes two polychrome, Corinthian capitals of the Alexandrian type-I (Graeco-Roman Museum, Inv. No. 3860 - 3861) (Plates: CXXIII; CXXIV). The unearthed structures remained *in situ* at least, till February 1898, as is last

recorded by Wilhelm Dörpfeld, before they were 'dismantled shortly after' (Noack 1900: 219). When Noack began his excavations in October of the same year, there was nothing left of what had been reported earlier by Giuseppe Botti, in the first bulletin of Alexandria's archaeological society (*BSAA* I, 1898). The recovered corpus of column shafts and capitals was transferred to the premises of the Government Hospital, and later, donated by Schiess Pasha to the city's museum. In October 1898, Ferdinand Noack opened another trench, (G), reaching down to 8.00 m below street-level. At this point, it was not possible to locate any remnant of the 'monumental edifice' described previously, by Botti (Noack 1900: 223, 251-252; Adriani 1934: 76-77, No. 50). Instead, the remains of a wall built of small blocks of limestone, were found at + 5.50 - 6.90 m above the sea-level. Its construction is analogous to the foundations excavated at + 6.30 - 7.80 m, in trenches (B1) and (B2) north of the R3-L2 junction (see *infra*: phase c), and to those "murs formes de petits moellons de calcaire en assises régulières", recorded and described by Botti, as being well above the remnants of the monumental edifice, and accordingly, labelled 'Byzantine' by him.

(b) Two trenches, (B1) and (B2), were excavated by Ferdinand Noack, north of the R3-L2 junction, where four chronological phases are identifiable (Plate CXXVa-b) (Noack 1900: 239-52; Adriani 1934: 77-78, No. 51-52). A section of stone pavement of el-Falaki's street R3, was uncovered along the extent of the (B1) profile that measured ca. 28 m. Several layers of architectural remains were encountered along the west side of the transversal street. The earliest is represented by a structure laid directly upon the bedrock. The surviving parts of it, include a wall of limestone blocks held without mortar, stretching over a distance of approximately, 11.50 m: Noack's phase (a). Partially superimposed on the latter, were foundations of small, finely-hewn blocks joined together by means of a firm layer of a clay-mortar serving as an adhesive paste (analogies, sites: 116; 121; 122b). Other surviving sections of wall, represent mortar-free constructions of finely-hewn blocks laid directly, as is the case with Noack's phase (a), upon the natural bedrock. Their surfaces were coated with white plaster without traces of brick-dust. Several vestiges from this phase of construction extended substantially across the sequence, while showing yet clear signs of successive repair and renovation (b). When much of building (b) has been dismantled, a third building, of hewn-blocks, was in turn, constructed upon a levelling debris-*stratum*. The rubble-layer seems to signal the demolition of antecedent structures

which were utilized subsequently, as foundations. In some parts where building (c) did not appear leaning against pre-existing subfoundations, reused fragments of architecture: column shafts and capitals, were evident. These have been covered with a layer of stucco painted white, red, yellow, and black. One of the reused columns, was found bearing a first-century AD graffiti, thus providing a *terminus ante quem* for building (c). Traces of a fourth building, pertaining to Noack's phase (d), were recognizable within the western section of the main trench. Its walls were built with mortar, and seem to have ran parallel with el-Falaki's longitudinal street L2. Whereas, the presence of two fragments of column shafts coated with a layer of painted stucco, suggests a continuous reuse of architectural material at this late stage of construction.

A canal discovered alongside the western edge of street R3, was partially rock-cut, with sections built of limestone slabs (γ). It extended across the sequence, indicating several phases of (re)use. Besides the conduit, an access-shaft (η) built partially of small, reddish limestone (plastered?), was traced down to groundwater (cut). Its uppermost part was on the level of phase (d), at + 11.79 m. Uncovered within the same trench, at 2.00 m below the hardstone pavement, was a section of an earlier gravelled surface (δ) formed of small stone and pebbles, with a line of blocks on its western edge. By analogy with other sites (17; 19; 24), the gravelled surface seems datable to Noack's phase (b). In trench (B2), dug ca. 20 m north of (B1), the stone pavement of street R3, contemporary with phases (c-d), was uncovered over its entire width of ca. 5.55 - 6.65 m (maximum value includes the one-meter-wide side-platforms: approx. 0.55 m each). Structures lining street R3, were unearthed on either of its sides, as revealed through the (B2) profile. On the west side, the remnants pertained to phase (c) of trench (B1). Excavated to the east, were structures datable to phase (b), and a canal built of fired-brick (ε), running along the east side of the uncovered street. Judging by stratigraphy and building technique, the architecture from Noack's phase (a), at (B1), would be datable to the Early Ptolemaic period, thus echoing Botti's 'monumental edifice' met south of the R3-L2 junction. Epigraphic evidence in the form of a graffiti, shows the constructions of phase (c) as datable to the first century AD. A continuation of this phase to the south of the R3-L2 junction, is evident on the remnants erroneously labelled 'Byzantine' by Botti, and on those excavated nearby, at Noack's (G). Construction phase (b) would date in turn, to the Ptolemaic period: the mid-third - first century BC.

By analogy with similar surfaces elsewhere, the stone pavement of el-Falaki's street R3, is datable to the Roman - Late Roman period (c-d); the earlier gravelled surface hence pertains to phase (b).

2.2.2.3) Traces of R4

Site 16 (59): Section of R4, at the junction with L'3 (SDist.)

Maps: V2; V4

Miscellaneous: Moharram Bey

(i) Pavement of R4 [Roman; Late Roman]

(ii) Structures; building with floor-mosaics [Roman]

In the 1890s, Giuseppe Botti investigated the ancient remnants accidently discovered beyond the northern belt of Moharram Bey, subsequent to the demolition of the Arab circuit-walls, along the course of Abd el-Moneim Street (longitudinal street L'2), in 1892, and the construction works carried out by the Administration of the Railways, "sur la voie du Caire", in 1897 (Chapter III, site 59) (Botti 1893: 16; *idem* 1898c: 62-63). "Fuori di Moharem bey, sulla sinistra", Botti recognized, "avanzi di un arco trionfale romano (interpreted by him, as a 'Trajanic, triumphal arc', on the grounds of an inscription): ne' fossati delle fortificazioni a Kom el-Demas, oltre a poche rovine granitiche di un tempio, verificammo il tracciato di altra via romana perpendicolare al Corso Canopico". Given the context of recovery, Botti's "via Romana" would be transversal street R4. Its stone pavement was excavated by el-Falaki, in 1864-1866, at several sections between longitudinal streets L'2 and L'4 (maps: V2; V4). "E, sulla destra", Botti thought to have found "le rovine di una antica abitazione con diversi pavimenti in mosaico a due colori". Apart from Botti's, quoted statement, no details were provided to enable a precise determination of the location, chronology, or nature of such remains.

Site 17: Cinema Amir: Section of R4, south of the junction with L1 (CDist.)

Maps: V1; V2; V4

Miscellaneous (associates of ii-iii: construction phase I-II, sites: 76a; 77): Kom el-Dikka

(i) Stone pavement of R4; cistern [Roman; Late Roman]

(ii) Structures; gravelled surface of R4; canal; well [Ptolemaic]

(iii) Building complex; canals [Ptolemaic]

Between the end of 1950 and the beginning of 1951, excavation works were carried out by the Graeco-Roman Museum, on the occasion of demolishing a domestic edifice which was built in the nineteenth century, on the south side of Fouad (aka el-Horreya) Street, and the subsequent digging of foundations for a replacement: Cinema Twentieth Century Fox (Cinema Amir) (Plate CXXVI) (Adriani 1956a: 1-10; Adriani 1966a-b: 87-88, No. 48; Tav. 26, Fig. 93-95, Tav. 27, Fig. 96-101). A corpus of archaeological remains pertaining to three phases of construction, was recorded within the foundation trenches.

The earlier vestiges on site, were massive foundations of roughly-hewn blocks of nummulithic, mortar-free limestone. Detected within pits dug to receive pillar-reinforcement, these foundations almost reached the groundwater-level (Plate CXXVII). Twelve rows of limestone blocks were met at a depth of 5.25 m while excavating through the main pit No. (11) (Plate CXXVIII). One preserved section extended NE-SW, over 14.50 m, parallel with Fouad, the other, NW-SE, over 12.50 m, perpendicular to it. Above the third row of blocks, a buffer-layer of earth-and-rubble signals two possible phases of construction for the massive foundations. The interruption confined to this stratigraphic column, with no correspondence elsewhere in the sequence, is rather indicative of the presence of a primary fill. Stonecutters' marks in the form of letters from the Greek alphabet (for instance Θ, Γ, Ο), were often found engraved on the large limestone blocks. Two subterranean conduits served the whole complex at either end, where they ran parallel with one another, and with Fouad Street (the ancient πλατεία: L1). The larger of the latter, partially exposed along the northern profile, was built of rows of small overlapping stone blocks, and covered with conical-roofing. Further to the south, a limited section of the other canal was revealed. Relatively small compared to the other, it was formed of blocks arranged with great regularity, and sealed up on top, by means of roofing-slabs (Plate CXXIX). A small grotesque figurehead in glazed terracotta, was found at ca. 5.00 m below the street-level; its Hellenistic character is ascertained (Graeco-Roman Museum, Inv. No. 26291) (Plate CXXX).

On an upper level, sections of an earthen surface tamped with pebbles were uncovered together with the remains of contemporary canal running NW-SE, perpendicular to Fouad Street. Excavated within the same unit, was a small circular well (x), the lowermost section of which shows a possible connection with the underlying substructures (Plate CXXXI). Excavated remnants of limestone walls

of unidentified structures pertaining to a second phase of construction, were characterized by: (1) the coarseness of the masonry, and (2) the employment of reused material in construction. Overall, the ruins of such phase, recognizable through their modest proportions, were met in part, resting upon earlier subfoundations, while elsewhere, separated by a buffer-*stratum* of earth-and-rubble.

A third phase of construction is represented by sections of street pavement of polygonal blocks of basalt and limestone, traced intermittently, over a distance of 52 m (Plate CXXXII). The pavement was laid upon an infill layer of earth-and-rubble, serving as buffer-debris between the paved street and the underlying remains of earlier structures. At the same level of the stone pavement, towards the centre of the site, a rectangular cistern of fired-brick coated with waterproof plaster, has been found with a semicircular apse built into the north wall. The hardstone pavement which belongs to el-Falaki's transversal street R4, seems to have partially overrun the eastern side of the preceding, gravelled surface and in turn, the Hellenistic complex encountered underneath. A continuation of this street was uncovered further to the south, within the Polish concession (18), two decades after Adriani's excavations at Cinema Amir.

Site 18: Section of R4, between L1 and L'2 (CDist.)
Maps: V1; V2; V3; V4
Miscellaneous: Kom el-Dikka
(i) Habitation; refuse dumps; interments [Arab]
(ii) Complex of houses and workshops [Late Antique]
(iii) Pavement of R4 [Roman; Late Antique]
(iv) *Villae urbanae* with floor-mosaics [Roman]
(v) Foundations; sewers [Ptolemaic; Roman]

In 1970, the accidental discovery of ancient remains during the construction of air-raid shelter at the Kom el-Dikka archaeological park, has instigated investigation of the (W_1N) sector within the Polish concession. In particular, the eastern section of it, adjacent to Safia Zaghloul (el-Messallah) Street (Tkaczow 1993: 108-110). Four chronological phases of construction were identified within the areas of interest.

The uppermost levels signal the eastern extremity of the Upper Necropolis (datable to ca. the 12th - 13th century AD), as is indicated by a sharp hypothetical boundary beyond which no graves were identified (Tkaczow 2000: 141-3). The mediaeval Arab cemetery seems to have spread gradually over transversal street R4, both eastwards and southwards, where the succeeding layers of earth and refuse dumps, have led to the formation of an artificial hill: basically, an accumulation of Arab waste on which Fort Cretin was to be built at the time of the Napoleonic Expedition (1798 - 1801). The Lower Necropolis (datable to ca. the 9th - 10th century AD) is not represented on site, for its eastern limits correlate with the western border of transversal street R4. On the latter's east side, Early Arab habitation (ca. the 7th - 8th century AD) is attested in the form of dwellings with several enclosures for domesticated animals. In terms of plan and architecture, these structures are of a distinctly different character compared to the preceding houses and workshops of Late Antiquity.

The next phase is represented within the sequence by a group of houses and workshops which developed along the east side of transversal street R4, from ca. the 4th to the 6th-7th century AD (Plate CXXXIII). The remnants of the tightly-built complex were met above a levelling debris-*stratum* of ashes and fragmentary architecture, marking the resume of habitation on site, following a brief pause. Abandonment and reoccupation are indicated by surviving vestiges of excavated walls laid upon foundations with no direct access to earlier substructures (Majcherek 1991: 19-21). The buildings of the residential complex were constructed chiefly, of small limestone blocks in a layer of mortar. Originally, they were designed as 'typical domestic dwellings', before adjusting to serve the needs of workshops. Buildings (E), (G), and (H) are datable to the 4th century (Plate CXXXIV). Whereas, (A), (B), (C), (D), and (F) reflect the later developments of the 5th century. Perhaps, with exception to (A), (B), and (F), all houses extended up to street R4, whence they were accessible. The continuous encroachments of building activities, carried out from ca. the 1st century BC to the 6th-7th century AD, have constantly narrowed the width of the adjacent thoroughfare, R4, as indicated by further investigation of the habitation quarter (Plates: CXXXV; CXXXVI).

Excavations below and northeast the one-storeyed houses (A) and (B), have revealed the ruins of an earlier residential complex of *villae urbanae* with mosaics, datable to ca. the 1st-3rd century

AD. Unearthed fragments included, monochrome and polychrome geometric panels, ornamental designs in *opus sectile*, besides figural representations of birds and flowers (Plates: CXXXVII; CXXXVIII). Judging by the extent of destruction, as is reflected on the walls of the largely devastated complex, the sumptuous villas (*alpha*; *beta*; *gamma; delta*) are likely to have been abandoned towards the second half of the 3rd century, in consequence to contemporary repressions: Palmyrene invasion of Zenobia (AD 270); the violent campaigns of emperors Aurelian (AD 272) and Diocletian (AD 297). Habitation predating the first century AD is yet suggested by negative trenches of walls underlying the mosaic pavements. The walls belonged to substructures that were demolished when the area has been levelled in preparation for the construction of the *villae urbanae*. A continuation of such earlier phase was detected elsewhere within the residential complex (see *infra*).

Proceeding northwards within sector (W_1N), an Early Roman phase for House (H), was identified (Majcherek 1995b: 135-140). Two units of Mex limestone blocks (nummulithic limestone and dolomite to a lesser extent), built ca. the early-first century AD in *opus quadratum* (*opus isodomum* for the exterior walls), were met below the Late Roman levels: one, of a commercial nature, adjacent to street R4, the other, living-quarters and workshops, at the interior. House (H) was accessible from street R4, by means of a πρόθυρον: a projecting-entrance with its porch and pilasters (Plate CXXXIX). These Early Roman structures were built over deeply-entrenched, Late Ptolemaic subfoundations excavated in room (H-1), with preserved sections of walls of large limestone blocks (ca. 1.10 m in length). Contextual finds from the corresponding layers: pottery (black tableware, Late Hellenistic lamps, and Graeco-Italic *amphorae*), date the remains to ca. the first century BC. The Late Ptolemaic structures, reaching a depth of ca. 4.50 m below street-level, were laid upon a buffer clay-*stratum* which in turn, separated the buildings constituting the earliest dwellings detected on site (Majcherek 1991: 23-24). A section of street pavement of irregularly-hewn dolomite slabs, was cleared along the façade of House (H). It became evident that street-width reduced from 9.50 m in the Early Roman period to 3.50 in the 6th century, where signs of extensive wear seem indicative of a thoroughfare which was in constant use over considerable time. At 0.30 m below the dolomite level, the remains of an earlier, (Late) Roman surface of street R4, were found to have been constructed in the same mode (Majcherek 1990: 79). A sewage was excavated, with conduits running alongside the façade of

the adjacent buildings. One canal (width: ca. 0.40 m) ran N-S, under the R4 pavement, terminating in a rectangular sewage tank. The bottom of the main drain reached ca. 3.70 m below the surface-level. Another conduit was met at a depth of ca. 4.80 m below the R4 street-level. Given such level relative to the excavated Roman and Late Antique remnants, the conduit might have formed part of the Ptolemaic sewage. Its proximity to the residential quarter (W_1N) strengthens the notion of continuous occupation (Late Ptolemaic: ca. 2nd-1st cent. BC - Early Arab: ca. 7th-8th cent. AD) at Kom el-Dikka, not excluding the possibility of Hellenistic habitation on site, antedating the second century BC. The stratigraphy of the excavated architecture, the contextual ceramic finds, and the adjacent sewage system, hint towards a thoroughfare of stone pavement, constructed in the Early Roman period, on the line of earlier, Hellenistic *via*, with the original width shrinking intermittently, in response to continuous urban encroachments of Roman and Late Antique building activities, as is further attested on the west side of transversal street R4 (sites: 19; 20).

Site 19: Section of R4, between L1 and L'2 (CDist.)

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Interments [Arab]

(ii) Cisterns [Late Antique]

(iii) *Villa urbana* [Roman]

(iv) Foundations; gravelled surface of R4 [Ptolemaic]

In 1962-1963, while excavating the dense clusters of Arab interments of the Middle and Upper Necropolis (datable to ca. the 11th - 13th century AD), within sector (L) of the Polish concession at Kom el-Dikka, the remnants of two structures were identified to the west of transversal street R4 (Tkaczow 1993: 94-95; *idem* 2000: 132, 135, 137-138). The earlier one (datable to ca. the late-third or early-fourth century AD) is a rectangular-shaped cistern (14 x 28 m) built of brick. It must have suffered extensive damage during the tsunami of AD 365, for it was replaced by a larger cistern in the fifth century. The latter (36 x 40 m; height: approx. 10 m) was built of brick and yet, blocks of limestone, and had a major aqueduct which ran to the east, adjacent to street R4. The aqueduct itself, would have extended southwards, along the western edge of R4, possibly reaching at longitudinal street

L'2. It adjoined the cistern wall by means of a wooden roof, hence creating an enclosed hall (width: 6.50 m; height: 4.50 m) found filled with earth and rubble, to serve as one large buttress which has in turn, complemented those built into the semicircular walls to the south and west of the structure. Adjoining constructions added to the east of the great cistern ca. the fifth century, were gradually encroaching upon the west side of transversal street R4.

On the occasion of an extended restoration programme carried out in the 1990s, two trenches were excavated around the ruined structure (Majcherek 1992: 5-7; *idem* 1993: 11-14; *idem* 1996: 20-22; *idem* 1998: 23-25, 30-34). The first has been dug at the northeastern corner where the cistern foundations reached a depth of about 8.40 m below surface-level. The destroyed substructures comprised the remains of two large basins (reservoirs) built of fired-brick, the inner surface of which was coated with waterproof plaster. At a subsequent phase (ca. the fifth century), the out-of-use basins were tightly filled with a rubble debris, in order to serve as solid substructures for the buttresses of the great cistern. Nonetheless, these basins seem to have formed part of an earlier reservoir complex built directly upon the remnants of Early Roman structures. In a later extension of the same trench eastwards, a façade belonging to an Early Roman *villa urbana* (FD), was unearthed in the segment between the cisterns complex and the aqueduct-wall adjoining street R4, indicating that the area was occupied by Early Roman, residential buildings before the cisterns have been built (Plates: CXL; CXLI). Below one corner of the great cistern, a πρόθυρον-entrance (see *supra*) with its flight of steps, was unearthed. The stratigraphic level of the side-street (alley) whence the house was accessible, corresponds to that of the one uncovered on the other side of transversal street R4, at sector (W_1N) (site 18). Chronological analysis of the contextual ceramic finds, suggests a building constructed ca. the end of the first century BC, or the beginning of the first century AD. The proposed dates would strengthen the notion of urban encroachments on both sides of street R4, datable as early as the first century BC. The earlier *villa urbana* was built yet, on the remains of Late Ptolemaic structures, probably of similar domestic character, as is indicated by the stratigraphic sequence of the nearby habitation quarter: sector (W_1N). Continuous occupation is confirmed within sector (L) where the remains of a Late Ptolemaic wall in *opus isodomum*, were excavated below the façade of the Early Roman house, at the northeastern corner of the great cistern. The side-street itself (5.00 m wide),

seems a continuation of the alley met at sector (W_1N): a possible westward-extension of Breccia's intermediate street L'α, partially excavated in the 1920s, at the Latin Quarter (site 29).

A second trench excavated to the south, revealed sections of a gravelled surface met below a 2-3 m refuse-*stratum* of broken, Late Roman potsherds (imported, LR *amphorae* of type-1 and 4; Egyptian, LR *amphorae* class-7), and ashes from the nearby bath complex. The foundations of the cistern's southernmost buttresses were met at about 5.25 m, confirming its construction on earlier ruins which served as solid substructures. Whereas, preserved sections of a gravelled overlay were found at a depth of ca. 9.50 - 9.60 m below the surface-level. It seems a continuation of the surface tamped with small stone and pebbles, excavated approx. at 9.90 m, in the hall enclosed between the cistern's eastern façade and the adjacent aqueduct-wall running alongside transversal street R4. The gravelled surfaces here, recall the one uncovered by Adriani, in 1950-1951, at the site of Cinema Amir, north of sectors (L) and (W_1N) of the Polish concession (Kom el-Dikka) (analogies, sites: 15b; 17; 24). The gravelled surfaces of small stone and pebbles, west of R4, back the proposition of a wider thoroughfare exceeding 10 m in the (Early) Hellenistic period, ca. the 3rd-2nd century BC.

Site 20: Section of R4, between L1 and L'2 (CDist.)
Maps: V2; V3; V4
Miscellaneous: Kom el-Dikka
(i) Interments [Arab]
(ii) Bath complex; latrines; *auditoria* [Late Antique]
(iii) Pavement of R4 [Roman; Late Antique]
(iv) *Villa urbana* with private *thermae* [Roman]

In 1960-1969, the remnants of an imperial bath complex were excavated in the northeast sector of the Polish concession at Kom el-Dikka (Tkaczow 1993: 97-100; *idem* 2000: 132-133, 135, 137-138, 140, 142). The partially-preserved complex (3000 m^2; datable ca. the mid-fourth to mid-seventh century AD) is accessible from transversal street R4, by means of a vestibule equipped with a flight of steps (ca. 2.65 m above street-level) and a geometric, black-and-white floor-mosaic displaying a welcoming pattern. An *apodyterium* (undressing room) and a *frigidarium* (a cold pool) formed the main entry which led into the bathing chambers comprising a *caldarium* (hot steamy bath), *tepidarium* (warm

bath), *sudatorium* (sweating room), and *destrictarium* (i.e. an area for smearing the body with oil). Another characteristic feature, are the wood-burning furnaces added conventionally, beyond the *caldarium*. The imperial bath complex is delimited from the north and south side, by two porticoes formed of granite columns (height: 5.00 m; diameter: 0.60 - 0.80 m). Whereas, a great wall defined its western edge. The ruined structure was exploited as a stone quarry, since the Early Arab period, for only limited sections of the floor, have survived continuous mediaeval pillaging. The preserved fragments above ground, built mostly of fired-brick, were constructed upon a subterranean vaulted structure of limestone blocks. The latter belonged probably, to an earlier edifice, the remnants of which were utilized as subfoundations for the bath complex. A *terminus ante quem* at the second century AD, is provided by a contextual find in the form of an inscribed pedestal which was reused in the western corridor of the underground service area.

The nature of the substructures can be inferred from the discovery of the remains of a building adjacent to the western wall of the Late Antique baths. Its rooms were identified with *tepidarium*, *caldarium*, and *frigidarium*, suggesting the presence of a private property with bathing facility that includes a *hypocaustum* (i.e. underground heating) and *tubuli* (heating tubes built into the walls). The building, with extensions under the neighbouring bath complex, is datable to the first-second century AD, on the grounds of contextual finds: (1) a figural mosaic depicting a Dionysiac scene in glass *tesserae*, and (2) a fragmentary statue in marble. Hence, an earlier cluster of *villae urbanae*, some with private *thermae*, seems to have been overbuilt with the Late Antique bath complex and its accompanying structures: latrines and *auditoria* (ca. 4th-6th century). During the course of the seventh century, the whole complex suffered serious damages, and towards the end of the eighth century, the graves of the Lower Necropolis began to be dug into the pavement of its colonnaded porticoes and *frigidarium*. Arab interments continued in the area of the imperial baths, as evident on the dense concentration of the 11th-13th-century graves of the Middle and Upper Necropolis.

Further evidence of continuous habitation on site, is found to the east and yet south of the bath complex, where the pavement of the *frigidarium*, the *apodyterium*, and even the southern portico, includes reused material (decorative nummulithic slabs) retained from earlier structures. Near the

entrance to the *frigidarium* itself, sections of stone pavement of irregularly-hewn limestone blocks and black basalt were excavated. The uncovered surface measured about 4.40 m, which is only a fragment of the original width of transversal street R4, as indicated further west, by a constricted portion of battered earth (bedding) of the same consistency as the pavement (Rodziewicz 1984a: 19-23). The street pavement at this point, must have extended to the adjacent wall of large limestone blocks, to measure approximately 6.75 m: a figure yet to change when considering the annexes to the *frigidarium* and *apodyterium* of the Late Antique bath complex.

2.2.2.4) Traces of R5

Site 21: Section of R5, north of the junction with L'2 (CDist.)

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka; el-Attarine

(i) Interments; cistern [Arab]

(ii) Structures; colonnade; pavement of R5 [Late Antique]

(iii) Foundations; canal; pavement of R5 [Ptolemaic; Roman]

In 1929, excavations were carried out by the Graeco-Roman Museum, on the west side of el-Nebi Daniel Street, at the junction with the alley of Sidi el-Bardissi, where Breccia's main trench (D) has yielded a granite column (height: 5.85 m; circumference: ca. 2.34 m) standing *in situ*, on a base of white marble (height: 0.35 m), at an approx. distance of 18 m from the sidewalk of el-Nebi Daniel (Plate CXLII) (Breccia 1932: 50-52). It rested on a thick, pyramidal-form wall of roughly-hewn limestone blocks, serving as pseudo-stylobate (height: 1.45 m; width: 1.35) for the colonnade which extended on a north-south axis (Plate CXLIII). Two other column bases of white marble, were on the extension of the stylobate, separated by a 5-m interval. Not far from these bases, a marble Corinthian capital of considerable size, has been found. The colonnade (A) seems to have been assembled of reused material, as is indicated by the different diameter of the granite column and the Ionic marble base upon which it stood. All the bases varied in size, and were coated with stucco probably at the time they have been reused in the colonnade. Uncovered at the foot of the stylobate, on the east side of the colonnade, was a section of pavement of beaten-earth tiled with fragments of marble slabs (Plate CXLIV). It is likely to have once belonged to a portico running between the eastern colonnade

of transversal street R5 and the structures lining it. Parts of the structures that probably extended eastwards, to el-Nebi Daniel, are represented by the remnants of a wall running at 11.50 m farther east, parallel with the colonnade. Towards the north, at the same interval of ca. 5 m, the base of a fourth column, was found just under the staircase giving access to the adjacent Sidi Abd el-Razzak el-Wafa'i Mosque. Excavations subsequently, had to bypass the latter, into the neighbouring alley which carries the same name as the mosque itself, where two *sondages*, (E) and (F), have revealed no columns or bases, but a continuation of the stylobate uncovered to the south, at Sidi el-Bardissi (it actually ran underneath the mosque).

Excavations resumed between March and September of 1933, following accidental discoveries made during construction work commissioned at the time, next to the mosque (Adriani 1934: 19-27). Breccia's main trench of 1929 (D), was extended westwards, where Adriani encountered the ruins of two large and parallel walls (height: 5.60 m) built of irregular blocks of limestone (0.25 - 0.40 m x 0.30 - 0.35 m) held by a thick layer of mortar and coated with a fine plaster. Basalt and limestone blocks formed the pavement between these walls. The remains of yet a second pavement of white limestone blocks were found restricted to one corner, and separated from the basalt-and-limestone fragment by a 0.70 m thick debris-*stratum*. Both walls ran almost in alignment with the colonnade; in fact, at a slight angle (Plate CXLVa-b). Adjoining them, was a third, horizontal wall, with a narrower extension to the west. Underneath it, an earlier canal of limestone blocks, ran northwards, in the direction of the adjacent mosque. The walls seem to have formed part of an unidentified structure which has been probably built at times the adjacent colonnade was assembled of reused material of which some were stuccoed. At ca. 5.85 m below the level of el-Nebi Daniel Street, in the stretch between the colonnade and the structure in question, fragments of pavement of white limestone blocks were uncovered. These represent one surviving section of transversal street R5 after being narrowed from either side, by encroaching Late Roman and Byzantine constructions, at the corner of one of which the remains of two distinct phases of shattered pavement were still visible within Adriani's trench. At the upper layers of earth-and-rubble, about 3.50 m below the level of el-Nebi Daniel Street, the excavated remnants of a cistern, and Early Arab burials of the Lower Necropolis,

were dated to the 9th century (AD 860, ca. 246 Hijri), on the grounds of two fragments of funerary inscriptions engraved into marble slabs.

2.2.2.5) Traces of R2^{bis}

Site 3 (sec. 2.1.2.2.2.2): Section of R2^{bis}, between L3 and Lα (EDist.)

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Pavement of R2^{bis} [Roman; Late Roman]

(ii) Water-supply and drainage [Roman; Late Roman]

(iii) Building complex with floor-mosaics [Ptolemaic]

2.2.2.6) Traces of L1

Site 22 (61): Colonnade of L1, between R5 and R7 (CDist.)

Maps: V2; V4

Granite columns: el-Attarine [Roman; Late Roman]

Vestiges of the L1 colonnade are featured frequently, in the 17th-to-19th-century descriptions and paintings of European travellers. In June-July 1681, the Dutch artist and traveller Cornelis de Bruijn visited the city during his extended journeys (1674 - 1693) to southeastern Europe and the Near East (Bruijn 1698). Accounts from his periegetic surveys were published in 1698, as *Reizen van Cornelis de Bruyn: Door de Vermaardste Deelen van Klein Asia*, *de Eylanden Scio, Rhodus, Cyprus, Metelino, Stanchio, &c. Mitsgaders de Voornaamste Steden van Aegypten, Syrien en Palestina*. One of Bruijn's scenes shows the Rosetta Road (Tariq Bab Sharq) with two granite columns lining its edge. In the background, is a panoramic view of the eastern harbour and waterfront constructions in ruins: fortifications; structures; (the New York) obelisk; the 'Tower of the Romans', known then among European travellers as 'Cleopatra's palace' (Plate CXLVI). In 1737 (publ. 1743), Richard Pococke recorded two columns opposite el-Attarine or St. Athanasius Mosque, marked (c) on his map. To the east, four others were lined up at the site he labelled 'the Gymnasium' (Y) (Introduction, sec. II.b). In 1785 (publ. 1799), Louis-François Cassas produced a view of the Rosetta Road with six columns lined up on its southern edge: three opposite el-Attarine Mosque, the others, at a short distance to

the east (Plate CXLVII; Introduction, sec. II.b). Ca. 1792 (publ. 1801-04), Luigi Mayer created two reverse views of the Rosetta Road and el-Attarine Mosque with six columns standing and two overturned (Plates: CXLVIII; CXLIX). Three of Mayer's were recorded in 1798-99, during the Napoleonic Expedition, as shown in *Description de l'Égypte*:: (1) Etat Moderne, Planches, Tome Deuxième, 1817: Le Père's *planche* 84 (Plate CL); (2) Antiquités, Planches, Tome Cinquième, 1822: (a) Saint-Genis' *planche* 31 (Plate CLI) and (b) *planche* 35, Fig. 1 (Plate CLII). In 1841 (publ. 1843), the granite columns were shown on the chart accompanying Sir J.G. Wilkinson's vol. I of *Modern Egypt and Thebes* (originally, from the surveys of Captain W.H. Smith, R.N.), where they are represented by three points marked (G), opposite the 'Mosk of St. Athanasius' (F) (Plate CLIII). By 1864-1866, the time during which el-Falaki has carried out a thorough investigation of the surviving remnants, the columns at this section of the Rosetta Road, became just two. Other vestiges of the ancient colonnade were visible however elsewhere, alongside the town's principal thoroughfare: Tariq Bab Sharq or el-Falaki's L1 (Plate CLIV).

Site 23: Colonnade of L1, between R1 and R5 (CDist.)

Maps: V2; V4

Columns: Latin Quarter; el-Messallah Sharq and Gharb [Roman; Late Roman]

In 1864-66, Mahmoud el-Falaki recorded massive foundation walls and numerous overturned columns, being encountered regularly, during the digging of foundations for houses on either side of the Rosetta Road (Fouad I), between transversal streets R1 and R2: a section of Fouad between the Ptolemies (el-Batalsa) and Adolfo Capua (i.e. Sidi el-Motayem). As well as at several other sites along its longitudinal course: (a) opposite el-Attarine Mosque (historical site of the Church of Saint Athanasius: site 22: reported by G. Le Père in 1813); (b) on the extension of the street vis-à-vis the village of Charakoué, not far from the Rosetta Gate (Bab Sharq; reported earlier by Le Père, 1813); (c) in the garden of Gibara, opposite Kom el-Dikka (el-Falaki's account is based on oral testimony); (d) some were discovered by means of actual excavation carried out by Mahmoud el-Falaki, whose finds are marked on Kiepert's version of 1872 (Mahmoud-Bey 1872: 20, 56-57; Kiepert 1872: Plan der Alten Stadt Alexandria; Adriani 1934: 87, No. 95). In 1885, Henry de Vaujany maintained that the vestiges were recognizable over ca. 150 m, along a hypothetical line perpendicular to the Arab circuit-walls: on

either side of Fouad? whether perpendicular to L'2 (Abd el-Moneim) and/or L2 (el-Sultan Hussein), is not specified by el-Falaki nor De Vaujany (De Vaujany 1885: 80-81).

In 1888, Tassos Neroutsos reported "des fùts et des chapiteaux de colonnes en granit, du style grec le plus pur et de dimensions colossales", accidently discovered (in 1876?) during construction works carried out on the north side of Fouad Street, at the section of it between Goussio (present-day Noah Effendi) and the Ptolemies (el-Batalsa): a point opposite the Spanish Consulate (Neroutsos 1888: 72; Adriani 1934: 84, No. 79). The site is marked 'Palestre' on Neroutsos' map entitled 'Alexandrie Ancienne' (Plate CLV). By 1898, given G. Botti's commentary in *Monuments et Localités de l'Ancienne Alexandrie d'Apres les Écrivain et les Fouilles*, the last surviving vestiges of the L1 colonnade, were no longer in place (Botti 1898c: 92).

2.2.2.7) Traces of L2

Site 24: Section of L2, on either side of the junction with R2 (NDist.)
Maps: V1; V2; V4
Miscellaneous: el-Mazarita
(i) Structures; canal (λ); stone pavement of L2 [d: Late Roman]
(ii) Structures; canal (λ); stone pavement of L2 [c: Roman]
(iii) Structures; canal (θ); gravelled surface of L2 (i) [b: Ptolemaic]
(iv) Canal with access-shafts (μ) [a-b: Ptolemaic]

In 1898-99, Ferdinand Noack excavated two test-pits, (J) and (M), at Nubar Pasha's Park, to the east of el-Khartoum Square (ex-Saīd Square, el-Mazarita), between the course of the demolished Arab fortifications and the intersection of el-Batalsa (approx. transversal street R2) with el-Sultan Hussein (approx. longitudinal street L2) (Noack 1900: 224-25, 252-59, Fig. 8; Adriani 1934: 80-81, No. 60-61). On the west side of Nubar Pasha's park, test-pit (J) yielded sections of polygonal stone pavement, extending east-west, at + 9.04 m above sea-level. About 50 m to the east, within test-pit (M), the same pavement was encountered at + 8.35 m above sea-level. The street was unearthed over its entire width which measured about 7.00 m, including the side-platforms of small limestone blocks (Plate CLVIa-b). According to el-Falaki's orthogonal grid, the excavated pavement seems to correlate

with longitudinal street L2. Partially uncovered at ca. 2.00 m below the stone pavement, were the remains of a gravelled surface marked (i), which signals an earlier phase of longitudinal street L2, contemporary with Noack's construction phase (b) at site (15b), north of the R3-L2 junction.

A canal (θ) of large limestone slabs bedded directly on the bedrock, ran south of the street at + 3.97 m above sea-level. Next to it, about 0.90 m to the south, were the foundations of a building datable to Noack's phase (b). A surviving section of its collapsed walls, built on virgin soil, was traced over a distance of 6.00 m, with a preserved height measuring 1.70 m. After the dismantling of its upper parts, + 5.00 m above sea-level, rubble-fill was deposited in preparation for the foundations of a new structure contemporary with phase (c). The building, met at + 6.65 m above sea-level, is represented by one section of wall, approx. 0.55 m thick, of hewn-limestone blocks and fired-brick. It was preserved over 6.00 m of its length. The inner surface of the wall was coated with a layer of painted plaster. On the north side of the street, i.e. at the foot of the Arab fortification, a canal (λ) with a gable-shaped roof, was constructed at a later date, perhaps not earlier than phases (c) and (d), for its uppermost parts, to quote Noack, "liegen bereits über dem niveau der strasse (i)". Below the Arab walls, a "grossen felskanal", labelled (μ) (0.47 - 0.50 m x 1.65 m), extended over 27.00 m, along the northern profile, and even beyond, at ca. + 1.40 m (bottom) to + 2.52 m (top) above the sea-level. Its Ptolemaic origin is indicated by inner pipes (ca. 0.51 - 0.52 m long; diameter: 0.26 m) fitted into one another, and covered with a waterproof layer of plaster. This type of subterranean conduits is found at other Hellenistic cities such as Pergamon and Laodicea in Asia Minor. The canal was accessible by means of six shafts opened at irregular-intervals along the exposed section of it. The westernmost ones (1 and 2) were cylindrical; (3) was rectangular as was (4), which had a 1.50 m square cover; (5) was square, with four small holes on either side of the inner walls. Connection between the latter shaft and the canal itself, was established via a 1.15-m opening. Whereas, the easternmost shaft (6), which was rectangular, differed from the others in that its lateral walls were lined with small stone cubes. Noack's canal (μ) exemplifies water-drainage in Ptolemaic Alexandria.

2.2.2.8) Traces of L3

Site 25: Section of L3, between R4 and R5 (NDist.)

Maps: V2; V4

Pavement of L3: el-Ramleh [Roman; Late Roman]

In 1798-99, Saint-Genis recorded the remains of stone pavement in black basalt, at a point to the east of the 'Tower of the Romans': approximately, the present-day site of Patisserie Athineos (Saint-Genis 1818a: 44-45; Adriani 1934: 93, No. 114). The vestiges were encountered "sur le rivage de la mer et à très-peu de hauteur au-dessus de l'eau". Sections of the hardstone pavement were found upon a debris-*stratum*, or "sol de ruines", to quote Saint-Genis, suggesting they were constructed on the ruins of demolished structures. Both, the basalt overlay and the underlying layer of rubble, date the street to the (Late) Roman period. According to el-Falaki's grid, the pavement would have belonged to longitudinal street L3.

Site 26: Section of L3, east of the junction with R4 (NDist.)

Maps: V2; V4

Baths; pavement of L3: el-Ramleh [Roman; Late Roman]

In 1897, Giuseppe Botti recorded the faint traces of "une route byzantine aboutissent à la Tour Romaine": approximately, a point between the junction of Pereira and Amin Fikri with Alexander the Great (aka el-Tram) (Botti 1897b: 5-6; Adriani 1934: 93, No. 113). Botti provides no details about the ancient thoroughfare reported then in *fascicule* I of *La Côte Alexandrine dans l'Antiquit* (1897), in the context of a brief account on the remnants of 'ancient constructions which seem recognizable below the water-surface, on a calm day, alongside the shores of the eastern harbour'. These ruins are especially observed around 'des bains Zouro' (near the present-day site of Patisserie Athineos) which was built at the time, on a platform protruding out into the sea, prior to the construction of the Corniche and the subsequent formation of a pseudo-coastal belt between el-Silsileh and Saad Zaghloul Square. Botti might have meant the bathing brick-structures recorded during the French Expedition by Le Père, Saint-Genis, and De Dolomieu. The remnants are datable, in general, to the Roman and Late Roman periods, and could be traced alongside the seashore, from the site of the 'Tower of the Romans' to el-Silsileh, and beyond. Within such range, bathing facilities of stuccoed brick were found to have been built often upon earlier ruins of Ptolemaic waterfront constructions (2; 7a; 112b; 113; 138; 139). Botti's "route byzantine", a possible continuation of the L3 section reported

earlier by Saint-Genis further to the west, would hence be contemporary with some of the coastal *thermae* of Roman Alexandria.

2.2.2.9) Traces of Lα

Site 27: Section of Lα, between R2 and R3 (NDist.)

Maps: V2; V4

Pavement of Lα: el-Mazarita [Roman; Late Roman]

In 1898-99, Ferdinand Noack added a longitudinal street (Lα) to el-Falaki's orthogonal grid plan, between streets L3 and L4. He maintained that Lα was added "aufgrund unserer beobachtungen" (Noack 1900: 232, 260-262; Adriani 1934: 63, No. 24-25; Adriani 1966a-b: 73-74, No. 28; Tav. 13, Fig. 43A). Sections of hardstone pavement were recorded by Noack, at two points: (1) approx. the present-day site of the Mabaret el-Asafra Lab, north of the junction of Champollion with Abd el-Hameed Badawi; (2) about 100 m to the east of (1), towards the junction of Marmeruon with Dr. Abd el-Hameed Sayed. The remains of Noack's street Lα were met at + 6.27 m above sea-level. Judging by the differences in the level of the bedding to other neighbouring sites with earlier, Ptolemaic vestiges: i.e. Noack's test-pits (K3, K4, L) (site 7b-d), longitudinal street Lα seems to have been added at a late date, to the grid of el-Falaki. In fact, its westward-extension cuts through the "längeres fundamentmauerwerk" excavated by Noack himself, at test-pit (K3) (site 7d) (Noack 1900: 224).

Site 28: Section of Lα, between R1 and R2 (NDist.)

Maps: V1; V2; V4

Miscellaneous: el-Mazarita

Pavement of Lα [Roman; Late Roman]

Foundations [Ptolemaic]

In 1929, on the occasion of construction work commissioned by the Municipality of Alexandria within the urban unit presently occupied by the faculties of humanities and social sciences: a point to the east of Ptolemy Soter (Ali Musharrafa) Street, an Egyptian architrave of Aswan granite was unearthed. Securing a budget of ca. 300 EGP, Evaristo Breccia, then director of the Graeco-Roman Museum, was able to move in, and excavate a vast trench around the accidental find (the approx.

site of the present-day Faculty of Law) (Plates: CLVII; CLVIII) (Breccia 1932: 52-53; Adriani 1934: 60, No. 13-14; Adriani 1966a-b: 80-81, No. 40; Tav. 20, Fig. 71). He was however unable to put the architrave in a context (Plate CLIX). Other trenches were excavated nearby, reaching down to groundwater-level, at + 1.485 m. Encountered at the same level, + 1.50 m (Faculty of Law), and + 1.58 m (west of the Faculty of Commerce), beneath a debris-*stratum* of earth-and-rubble, were "fondations .. construites avec de beaux blocs en calcaire de dimensions considérables" (Plate CLX). At a much higher level, + 5.05 m, large sections of pavement of polygonal basalt blocks were uncovered on an east-to-west axis, next to the present-day site of the Faculty of Commerce. The pavement was on the extension of those fragments recorded earlier by Noack, in 1898-99, at Champollion, thus considered a continuation of longitudinal street Lα. The sequence here backs the chronology established at site (27): a street added a considerable time after the demolition of earlier, monumental edifices of large blocks of nummulithic and Mex limestone, and the subsequent levelling of the terrain in preparation for new constructions. Whereas to attain a better understanding of the nature of the massive foundations met just above the level of the water table, it is key to place the excavated remnants into a wider context that includes the nearby building complex with sumptuous floor-mosaics (site 3), and other analogous architectural forms unearthed within the vicinity of el-Silsileh (7; 8; 12; 138; 139; 140; 141).

2.2.2.10) Traces of L'α

Site 29: Section of L'α, between R1 and R2 (CDist.)

Maps: V2; V4

Pavement of L'α: Latin Quarter [Roman; Late Roman]

In 1929, the director of the Graeco-Roman Museum, Evaristo Breccia, attempted yet a second reconstruction of the ancient city, in volume I of *Enciclopedia Italiana*. On his map published under the title 'Alessandria', a longitudinal street has been added to el-Falaki's grid, between streets L1 and L'2. Sections of hardstone pavement pertaining to Breccia's thoroughfare, labelled 'L'α', were excavated within *insula* L1-L'2-R1-R2, at a point near the present-day site of the Turkish Consulate (Adriani 1966a-b: 63, No. 11; Tav. 5, Fig. 12). Street L'α is datable, by analogy with similar paved surfaces, to the (Late) Roman period.

2.2.2.11) Traces of L5

Site 30: Section of L5, west of the junction with R4^{bis} (EDist.)

Maps: V2; V4

Pavement of L5: el-Chatby [Roman; Late Roman]

In 1892, while investigating the remnants of the eastern *nekropoleis* at the district of el-Chatby, Giuseppe Botti, then director of the Graeco-Roman Museum, maintained that "un tratto della via romana al mare fu distrutto dai soliti anonimi" (Botti 1893: 14). Given Botti's context of recovery, the reported 'via romana' would have belonged to longitudinal street L5 which was partially uncovered by Ferdinand Noack, further to the west, i.e. a few meters before the headland of el-Silsileh (site 2).

Site 2 (sec. 2.1.2.2.2.2): Intersection of R2^{bis} with L5 (EDist.)

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Pavement of L5 [Roman; Late Roman]

(ii) Brick-walls and canals: *thermae* (?) [Roman; Late Roman]

(iii) Fortification-point (ε): foundations of defensive structure [Ptolemaic]

In 1898-99, Ferdinand Noack uncovered sections of hardstone pavement within his (K1) trench excavated to the east of el-Silsileh, i.e. at the site where traces of an ancient street were recorded earlier, first by Dolomieu (1798-99), then Sir Wilkinson (1841): a point on the Corniche, northwest of the present-day site of the Alexandria University administration building (Noack 1900: 224, 232-233). In fact, the remnants were encountered at + 5.50 m above the sea-level. Accordingly, a longitudinal street, labelled 'L5', was added by Noack, to el-Falaki's orthogonal grid.

2.2.2.12) Traces of L'2

Site 31: Section of L'2, east of the junction with R5 (CDist.)

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Dwelling; cistern; refuse; interments [Arab]

(ii) Double-vault structure [Late Antique]

(iii) Pavement of L'2, and structures lining it; canal and reservoirs [Roman; Late Roman]

(iv) Foundations; canal [Ptolemaic]

From October 1933 to August 1934, the Graeco-Roman Museum carried out a series of surveys in the central district of Kom el-Dikka, with the prime aim of studying the stratification of the *kom* (mound) (Adriani 1940a: 55-63). The investigations took place prior to levelling-works commissioned at the time, by the Municipality of Alexandria, in preparation for the construction of an extension of el-Amir Abd el-Moneim (Ismaīl Mahanna) Street at the foot of the mound. The excavated areas of interest thus encompassed a section of Abd el-Moneim, east of the junction with el-Nebi Daniel (Plates: CLXI; CLXII).

A large number of Arab potsherds were encountered through several layers of earth extending towards the *kom*'s upper *strata* on el-Nebi Daniel. Met further down the street-level, at a distance of about 18.50 m from its eastern edge (i.e. within Abd el-Moneim), were the remains of collapsed walls of an Arab building of domestic character, which features a mosaic pavement within one of its chambers (Plates: CLXIII; CLXIV). Other vestiges revealed by the test-pits, include the remnants of Arab sepulchres constructed of very coarse masonry, a large cistern, and a Late Antique (?) double-vault structure (Plate CLXV).

On a lower level, at ca. + 5.67 m above sea-level, sections of street pavement of blocks of black basalt and limestone, were found 'well preserved' in some pits, but 'partially destroyed' in others, suggesting that street L'2 was probably abandoned for quite a long time and partially dismantled, as confirmed by the absence of stone pavement in some intermediate test-pits (widest conserved section measured 3 m). The street itself, was delimited from the south by a staircase of four steps. Most of its varied-size blocks were of nummulithic limestone, yet with some in marble. They were roughly placed side by side with no signs of mortar in the joints (Plate CLXVI). These blocks seem to have been retained from earlier buildings to be used in the staircase. To the south, on the side of a platform (No. 3) formed by a single row of rectangular limestone blocks of varied size, and held together by a thick layer of mortar, a large void was found marking the line of a collapsed row of

pink granite columns (colonnade?) (Plate CLXVII). The blocks of the stylobate, and the column bases, were apparently plundered to be reused in later constructions. One section of wall (No. 2), built of limestone blocks held together with a thick layer of mortar, was met towards the NW. extremity of the staircase. It had a distinct pyramidal form, reaching down to the level of the rising water table (Plate CLXVIII; analogous pyramidal-form constructions, sites: 21; 63; 117).

The main platform was built upon a thick layer of earth-and-rubble, the upper part of which is formed by large quantities of carbonized substances, i.e. a clear indication of fire. At a lower level, sections of two walls of limestone blocks joined together without mortar, were identifiable. These had a different orientation from the remains of the upper complex (staircase; colonnade; platform) and the street. Both walls are likely to have belonged to the same construction, for one must have joined the other at right-angles. The better-preserved of the two (No. 4), had obvious signs of fire at its topmost. Whereas, its footing, as was the case with the less-preserved wall (No. 5), stood on a slightly-wider platform, reaching almost to the level of the rising water table (Plate CLXIX). Building technique here, recalls that employed at Chantier Moustaki (northern district) and the necropolis of Mustapha Pasha (eastern suburbs) (sites: 116; 160). Following this wall over about 3.50 m, led to subfoundations of large limestone blocks. Excavations were however terminated at this point for safety reasons. At the south end of the excavated trench, two walls (No. 7 and 9) emerged slightly above the level of the rising water table. Already partially-drenched, they cannot be identified as contemporary structures on solid grounds.

Two reservoirs of brick and limestone blocks, were found coated with a thick layer of a reddish stucco (waterproof). A canal built of limestone blocks, and covered with terracotta tiles (roofing), poured into the first reservoir. The conduit and the reservoirs succeeded a much earlier wall with a substantially different orientation. At the time the reservoirs were constructed, the earlier canal (most probably contemporary with the mortar-free walls) has been coated with a similar layer of reddish stucco, and covered with roofing-tiles. Both reservoirs, and subsequently the canal, were used to serve a structure contemporary with the main platform, as suggested by a surviving section of wall (No. 6) with three rows of irregular blocks held in a thick layer of mortar composed of lime,

sand, and small quantity of crushed-brick. It was built on the same alignment, on a debris-*stratum*, the upper part of which was similarly, formed of ruins of carbonized substances. Given the limited exposure of Adriani's trench at Abd el-Moneim (Plate CLXX), the other side of longitudinal street L'2 could not have been reached to calculate its entire breadth. A granite column however, excavated on the northern profile, is indicative of the proximity of the opposite street-colonnade.

2.2.2.13) Intermediate Streets

Site 32: Traces within *insulae* L1-L2-R2^{bis}-R4^{bis} (EDist.)

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) (a; d) Pavement of longitudinal street [Roman; Late Roman]

(ii) (a; b; c) *Villae urbanae* with floor-mosaics [Roman]

(iii) (c; d) Necropolis [Ptolemaic]

(a) In 1930, during works to widen the Abu Qir Street, and those minor ones perpendicular to it, sections of stone pavement were accidently excavated to the north, within the area delimited by the European cemeteries (west) and el-Ibrahimiya (east) (Breccia 1932: 27). Uncovered pavement of polygonal blocks of limestone and black basalt, was traced over a distance of ca. 50 m (Plate CLXXI). Breccia has not provided yet sufficient information to enable a precise determination of its course: possibly, an intermediate thoroughfare added somewhere within *insulae* L1-L2-R2^{bis}-R4^{bis}. In 1931, fragments of Roman mosaic pavements with geometric patterns, were encountered to the east of the designated area, alongside Diocletian Street (Ahmed Kamha?) (Plates: CLXXII; CLXXIII) (Breccia 1933: 20-21). The panels, datable to ca. the 2nd-3rd century AD, would have decorated the floors of one of the *villae urbanae* on either side of transversal street R4^{bis}, as shown by Adriani's investigations.

(b) In January 1932, a fragment of a black-and-white, tessellated floor-mosaic (5.00 x 1.10 m) with yellow and red cubes in places, was accidently discovered during levelling-work to the north of the Abu Qir Road, between the streets of Trajan (Ahmed Lotfy el-Sayed: approx. R4^{bis}) and Octavianus Augustus (Ahmed Hassanein Pasha: University Stadium) (Adriani 1934: 35-36). The panel, met at 2.50 m below the level of the Abu Qir Street, is formed of a pattern of large, white diamonds set within

broad, black bands. At the centre of each of the diamonds, were decorative motifs which vary from one row to another. In the middle row, a Greek inscription read ΕΠΑΓΑΘΩ (to the good): a textual motif often found on Roman mosaic-pavements in Alexandria. On the surviving side, is a kind of a short stretch of border formed by a series of small rhombi. In January 1934, another fragment of the same pavement, was unearthed to the north of the former. It measured about 1.50 x 1.30 m, and comprised one full frame and yet a small section of another, with lozenge patterns decorating both panels. Borders of guilloches surrounded these recurring frames from all sides (Plates: CLXXIV; CLXXV). The excavated fragments of tessellated floor-mosaics followed the orientation of Abu Qir Street, suggesting the presence of Roman urban structures along the northern side of el-Falaki's L1, at the section of it east of R3^{bis}. A contextual relation seems inferable with the remnants excavated in 1930-31, somewhere to the north of Adriani's finds, and briefly reported by Evaristo Breccia (a).

(c) In December 1936, the remains of a large mosaic pavement, were accidently discovered while digging foundations for the English Girls' College (present-day el-Nasr Girls' College) at el-Chatby. The site is delimited on either side, by the streets of Trajan (Ahmed Lotfy el-Sayed: approx. R4^{bis}) and Octavianus Augustus (Ahmed Hassanein Pasha: University Stadium). Whereas, from the north, Mohamed Fouad Helmy (approx. on the line of L2) separates the urban block from the Alexandria University Stadium. About 200 m to the south, extends the Abu Qir Road as an extension of L1 to the east of street R1 (Plate CLXXVI) (Adriani 1940a: 149-150; Adriani 1966a-b: 82-83, No. 44; Tav. 14, Fig. 46-47). Achille Adriani, then director of the Graeco-Roman Museum, decided to step in, and inspected the partially-preserved panel exhibiting various geometric motifs around a central *emblema* with fish rendered on a greenish-blue background as allusion to the sea (Plate CLXXVII). The mosaic fragment (Graeco-Roman Museum, Inv. No. 25093) features the Greek inscription ΕΠΑΓΑΘΩ (to the good), on the grounds of which a 2nd-3rd-century date was proposed. In search of a Roman *villa urbana*, several test-pits were dug by Adriani, within the vicinity of the accidental find. No remnants of walls were found. Encountered instead, at 3.00 m to the north, was a large octagonal pool coated with a layer of waterproof plaster. Each of its 2.50 m long sides, had a small, spherical cavity, suggesting a fish pond with eight cavities cut to serve as nests (Plates: CLXXVIII; CLXXIX). The finds thus seem contextually related, and most probably, would have belonged to the same estate.

(d) At 8.00 m south of the fish mosaic, sections of pavement of polygonal blocks, were uncovered over about 250 m. The street which ran on an east-west axis, measured 7.00 m in width, and was added in the Roman period between longitudinal streets L1 and L2. Given the context of recovery, a possible correlation would be proposed with that uncovered by Breccia in 1930. Its construction should therefore be considered integral to the Roman urbanization of the area east of transversal street R3^{bis}, at times the deceased were no longer interred into the eastern mounds. This sequence is backed by the stratigraphy of the site under investigation, and elsewhere, between transversal street R2^{bis} (the Suez Canal Road) and the hypothesized Augustan periphery in the east, along the western belt of el-Ibrahimiya and el-Ibrahimiya Qibly. In fact, several of the test-pits excavated here by Adriani, have revealed the remnants of isolated tombs met at considerably lower levels to that of the above-mentioned Roman vestiges. Besides confirming the sepulchral character of the region in Hellenistic times, these tombs shed light on the geographical extent of the eastern *nekropoleis*, often divided in the modern scholarly mind into two delimited sectors: north (el-Chatby) and south (el-Hadra el-Bahareiya; el-Hadra Qibly) of the Abu Qir Road (sites: 145; 146).

Site 33: Traces within *insula* L1-L2-R1-R2 (CDist.)

Maps: V2; V4

Colonnade and pavement of transversal street: Latin Quarter [Roman; Late Roman]

In March 1934, sections of stone pavement were accidently discovered during the installation of a sewage system along the southern edge of el-Sultan Hussein Street (approx. L2), southeast of the junction with Goussio (Noah Effendi): a few meters to the Irish Consulate (Adriani 1934: 87, No. 94). A number of polygonal basalt blocks were found in a backfill, suggesting a street-pavement which was dismantled already. In 1864-66, near this point within *insula* L1-L2-R1-R2, el-Falaki excavated sections of the colonnade of an intermediate street which was added by him, between R1 and R2 (maps: V2; V3; V4). The basalt blocks reported by Adriani at the junction of Noah Effendi with el-Sultan Hussein, would have belonged to the stone pavement of el-Falaki's transversal street marked 'R'.

Site 34: Traces within *insula* L2-L3-R4-R5 (NDist.)

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) Fortifications; reused material [Arab]

(ii) Pavement of transversal street (northward-extension of the *odeum*'s portico? site 69a) [Late Antique]

(iii) Structure (extension of the Caesareum? sites: 93-100) [Late Ptolemaic; Roman]

In 1892, during the levelling of the Arab fortifications at el-Ramleh, the remains of "un grande edifizio a grossi blocchi", were discovered in the vicinity of el-Ramleh Central Station, south of the Italian Consulate (Botti 1893: 15; Adriani 1934: 92, No. 111). Botti's 'grande edifizio' is delimited from the east by a transversal thoroughfare with a pavement of polygonal basalt blocks. It started from the 'Tower of the Romans' and ran perpendicular to the course of the Via Canopica (L1). Botti's 'street' seems an intermediate one added between el-Falaki's transversal streets R4 and R5. Judging by its course, cutting thru the areas occupied by the historical Caesareum (sites: 93-100), the street would have been constructed at times the pagan temple has ceased to function: datable to Late Antiquity. A Late Ptolemaic - Early Roman date might be proposed for Botti's 'edifizio', as a possible eastward-extension of the Caesareum. The array of ruins stretched well in the direction of the Government Hospital Street (presently, Faculty of Medicine Street). Fragmentary architecture on site, includes: column drums in breccia marble and Aswan granite; capitals engraved with letters from the Greek alphabet; remains of floor-mosaics; the lower part of a damsel statuette (votive offering?); a Greek votive inscription (datable to the Roman period); an Arab portico built of reused material (marble pedestal bearing a dedicatory inscription). The latter is among other vestiges from the designated area, mainly fortifications and civic structures, which show the frequent use of the ruined temple complex, as a quarry of building material, already in Late Antiquity, and later, by the Arabs.

Site 35: Traces within *insula* L2-L3-R4-R5 (NDist.)

Maps: V3; V4

Miscellaneous: el-Ramleh

(i) Settlement; cisterns; reused material [Arab]

(ii) Pavement of transversal street (northward-extension of the *odeum*'s portico? site 69a) [Late Antique]

(iii) Structures; sewer; interments (analogies with nearby funerary vestiges, sites: 100; 114) [Late Antique]

In 1893, Giuseppe Botti excavated three test-pits at ca. 61 m, 40 m, and 21 m from the Ramleh Boulevard (presently, Saad Zaghloul Street) as part of an investigation carried out near the Ramleh Central Station, within the area commonly identified with the site of the historical Caesareum (Botti 1894: 3-4; *idem* 1898c: 66-69; Adriani 1934: 91, No. 107). At ca. 61 m, the layers were completely disturbed with no traces of architecture. The second pit revealed "des restes de constructions de très basse epoque Byzantine". In the third pit were "des cisternes Arabes ecroulees, fondees sur des tombes Byzantines et sur un egout Byzantine". Botti reported two levels of a thoroughfare met within the second test-pit. First, at ca. 4 m below the surface-level, a section of pavement was laid upon the ruins of earlier structures; then, at ca. 5.50 m, a 'second surface' appeared to be "pavé en mortier compose de chaux et de briques pilées". The intermediate street in question, would be a possible continuation of the one reported earlier by Botti, further north, next to el-Ramleh Central Station (site 34). A fourth test-pit was sunk at the junction of the Government Hospital Street (present-day Faculty of Medicine) with Safia Zaghloul (el-Messallah), where the remnants of an Arab settlement were found together with an assortment of reused architecture. Perhaps, apart from Botti's own interpretation of the excavated material, these finds seem to reflect the developments occurring on site, thru the Byzantine and Early Arab periods: (a) the termination of the monumental temple, (b) subsequent urban adjustments within *insula* L2-L3-R4-R5, and eventually, (c) the Arab utilization of the dismantled complex as accessible source of architectural material (structural and decorative) for reuse in civic and/or defensive constructions.

Site 36: Traces within *insula* L2-L3-R3-R4 (NDist.)

Maps: V2; V4

Canals; transversal street (possible associates, site 122c): el-Ramleh [Roman]

In 1907, subterranean canals were accidently discovered during construction work carried out at the former Victoria House in el-Ramleh, east of the junction of Amin Fikry with the Government Hospital Street (Faculty of Medicine) (Breccia 1907a: 107; Adriani 1934: 76, No. 46). The rock-cut conduits, coated with red plaster (waterproof), were on the course of el-Falaki's intermediate thoroughfare added by him, between transversal streets R3 and R4 (V2; V3; V4). No traces of stone pavement were recorded in 1864-66, along the course of the hypothetical thoroughfare. Perhaps, an intermediate

street was proposed by el-Falaki, on the grounds of the subterranean conduits, which were later, reported by Breccia, in the ninth bulletin of the Archaeological Society of Alexandria (*BSAA IX*, 1907a).

2.2.2.14) Suburban Roads

Site 37: (ESubs.)

Maps: V2; V4; V5

Miscellaneous: Camp Caesar; el-Ibrahimiya

(i) Suburban road to Nikopolis [Roman; Late Roman]

(ii) Fragmentary architecture [n.d.]

In 1892, on the plateau which separated el-Ibrahimiya from the seashore at the time, Giuseppe Botti encountered column shafts 'that would have certainly belonged to an important monument'. At first, he thought of the historical Heroon of Stratonike (after Neroutsos, 1888), but the rosettes engraved on other fragmentary architecture, led him to conclude that the remnants belonged to a 'Roman triumphal arc'. Botti maintained to have observed "de faibles restes a gauche de la gare de l'Ibrahimiya, sur l'ancienne route militaire conduisant d'Alexandrie a l'Oppidum Romanorum" (Botti 1898b: 109; Botti 1898c: 62). He associated the ruins with an Alexandrian version of the triumphal arc commemorating the victories of Titus over the Judeans. Whereas, "l'ancienne route militaire" would have connected the city of Alexandria to the *oppidum Romanorum*: i.e. Nikopolis. A possible extension of Botti's 'roadway', is evident farther east, at Sidi Gaber (site 38).

Site 38: (ESubs.)

Maps: V5

Miscellaneous: Sidi Gaber

(i) Suburban road to Nikopolis [Roman; Late Roman]

(ii) Structures [n.d.]

In 1888, during an investigation of the suburban hypogea cast in the east (sites: 150-164), Tassos Neroutsos recorded large foundations and several architectural vestiges: mainly granite columns, both overturned and broken, at the Sidi Gaber Mosque, i.e. between el-Tram and Port-Saīd Street (Neroutsos 1888: 86). He identified the ruins with an 'ancient temple', upon the foundations of which

the mosque was built. On his map entitled 'Alexandrie Ancienne', the find-spot is marked "Ruines de Temple" (Plate CLXXX). Neroutsos' observations at the time, have triggered further investigation of the designated area by Ferdinand Noack in 1898-99. A test-pit dug on site, has revealed sections of street-pavement of polygonal basalt blocks, extending over a long distance. The pavement was laid upon remnants of masonry, "felsenharten wand", to quote Noack, at about one meter, below which were accumulated layers of potsherds (Noack 1900: 228-229). Noack's account indicates signs of continuous habitation, hence the presence of suburban settlements in the east. Probably, after the Augustan conquest ca. 30 BC, and the subsequent development of the town of Nikopolis, the eastern suburbs would have undergone an extended process of infrastructure-alteration, including the construction of paved roads (site 37) connecting Alexandria to the *oppidum* commemorating the military victories of the new rulers.

2.2.3) A Multi-Phase Grid Plan

Hardstone pavement was found often laid upon a thick debris-*stratum*, indicating the levelling of an earlier relief. A sequence as such, would have been necessitated by the construction process of typical *viae munitae*: public roadways of gravelled subsurface with hardstone pavement on top. The *viae munitae* were constructed by carefully levelling the substrate and if necessary, the earthen surface was rammed tight. This was followed by filling the ditch, a few meters in depth, with rubble and concrete of crushed-brick and lime (*statumen* and *audits*). As the fill came within ca. one metre from the ground-level, a fine layer of cement of pounded potsherds and lime (the *nucleus*) was then added to serve as a bedding for the elliptical overlay of polygonal basalt blocks and limestone. The latter (aka *dorsum* or *agger viae*) was flanked on either side, by (a) *umbones* or kerb and (b) *crepido*, *margo*, or *semita*: raised-footpaths intended to serve pedestrian traffic (Plate CLXXXI) (Allen 2014: 64). Archaeological excavations (see *supra*, sec. 2.2.2) show the construction of this type of thoroughfares in Alexandria, as contemporary with Noack's phases (c) and (d): Roman to Late Roman. Sections of street pavement excavated primarily, by el-Falaki, Noack, and others after them, seem to suggest a Roman-Late Roman date for the *viae munitae* shown on el-Falaki's "Carte de l'Antique Alexandrie et des Ses Faubourgs" (1866). At several sites, scant remnants of earlier streets were encountered below the hardstone pavement (sites: 15b; 17; 19; 24). These were basically earthen surfaces tamped

with small stone and pebbles, recalling those streets with gravelled surfaces known in antiquity as *viae glareatae*. Titus Livius relates in Book XLI of *Ab Urbe Condita* (Quilici 2008: 562-564, 567-568):

Censores vias sternendas silice in urbe (Romae), glarea extra urbem substruendas marginandasque primi omnium locaverunt, pontesque multis locis faciendos.

The censors (ca. 194 - 174 BC) first made contracts for paving the streets of the city (of Rome) with flints (silice: hardstone: viae munitae), and the roads outside with gravel (glarea: small stone and pebbles: viae glareatae), and footpaths raised at the sides (site 11), and also for the construction of bridges at various points.

(Livius, Ab Urbe Condita: XLI. 27.5)

In Alexandria, archaeological excavations show the *viae glareatae*, where visible, almost on the alignment of the *viae munitae* (ca. the 1st cent. BC - 7th cent. AD) which were constantly narrowed by urban encroachments of archaeologically-attested Roman and Late Antique constructions (18; 19; 20; 21; 24; 31). Their alignment puts forth the possibility of three chronological phases for el-Falaki's orthogonal grid:: (1) ca. the mid-third - mid-first century BC: Noack's phase (b): a predominant use of earth-beaten and gravelled surfaces in street-construction; (2) the first century BC - first century AD: phase (c): the introduction of the *viae munitae* under Cleopatra VII and/or the Julio-Claudians; (3) ca. the third-fifth century AD: phase (d): the restoration of the urban grid, hence the Late Roman *viae* excavated by Mahmoud el-Falaki, in 1864-66 (2.2.1). The khedivial court-astronomer maintains:

Les pavés de toutes les rues de la ville ne sont pas rigoureusement parlant, posés sur le terrain primitif: celui-ci se trouve, généralement, d'un mètre ou même plus, au-dessous du pavage; il est même à plus d'un mètre et demi, au-dessous dans la petite vallée et ses environs, ce qui prouve: 1. Que le pavage n'a été fait que quelques siècles après la fondation de la ville, c'est-à-dire, dans l'époque Romaine.

(Mahmoud-Bey 1872: 27)

It would be natural therefore, to find the streets and buildings of el-Falaki's grid cutting thru earlier, Hellenistic constructions antedating the second-first century BC (2; 3; 14; 15b; 17; 25; 26; 27; 28; 34; 35; 131.2b; 139). Yet most, not all, of the structures contemporary with Noack's phases (a-b) were found

to follow the orientation of el-Falaki's grid (7a-d; 14; 15; 17; 24; 52.II; 77; 92; 115-123; 131). A phenomenon as such, is key to understanding the multi-phase evolution of the urban plan hypothesized hereafter.

During his visit to Alexandria ca. 25 BC, Strabo recorded that "the city as a whole, is intersected by streets practicable for horse-riding and chariot-driving" (Strabo, Geōgraphikè: XVII. 1.8). This phrase confirms the orthogonal patterns of the urban plan as plotted by Mahmoud Bey in the nineteenth century. Historical narratives (Chapter I) record that the city of Alexandria was founded ca. 331 BC, on the Hippodamian principals of town planning. Accordingly, an orthogonal grid plan would have existed from the very beginning. Given the fact that most, not all, excavated structures antedating the second century BC, were oriented in conformity with el-Falaki's grid, the axes of the Macedonian foundation must have been retained thru antiquity, and yet, in the Middle Ages (Tariq Bab Sharq).

In this context, four thoroughfares from el-Falaki's grid, their origin could be traced back to the Hellenistic period:: (1) and (2) the πλατείες: L1 and R1; (3) R9; (4) R8. L1, the Via Canopica, to start with, is the principal artery of the city to the east, towards inland Egypt. It was retained through the centuries, carrying names of various cultural and political domains (Plate CLXXXII). R1 led to the Royal Quarter, conveying freshwater to the northern districts via an adjacent aqueduct. R9, the western complement of R1, which served almost the same function: a thoroughfare to the contiguous island of Pharos, and a water-supplier to its inhabitants. R8 would have been added, however, following the construction of the first phase of the Ptolemaic Sarapeion atop the Rhakotis acropolis, as early as the reigns of Soter and Philadelphos: ca. the first half of the third century BC (Chapter III, site 52.I). The street itself, is usually designated 'the δρόμος of the great god Sarapis', for it ran in a perfect alignment with the eastern edge of the rectangular τέμενος whence the sanctuary was accessible (McKenzie 2007: 39). A possible processional route during the Dionysiac festivals of Philadelphos, R8 would have been rather 'cross-cultural' in Hellenistic times: a pathway through the city's Egyptian borough, Rhakotis, which the Graeco-Macedonian settlers had to pass, to reach for the sanctuary of the syncretic deity. When the Ptolemaic τέμενος was expanded under the Augustan Principate, the earlier 'δρόμος' seems to have become less-functional, with two intermediate thoroughfares, shown on el-Falaki's *carte*, added on either side of the much-wider Roman precinct (Plate CLXXXIII).

The orthogonal grid of the foundation seems to have comprised a principal longitudinal pathway (L1), with two main transversal ones at either end of the city (R1 and R9). This configuration tallies with the hypothesized courses of the Ptolemaic circuit-walls relative to transversal streets R1 and R9 (sec. 2.1.2.2.2; 2.1.3.2.2). Under Roman dominion, the scene changes with the abandonment of the eastern necropolises, and the subsequent urbanization of the necropolitan areas of el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly, between transversal street R2^{bis} (i.e. the Suez Canal Road) and the western belt of el-Ibrahimiya and el-Ibrahimiya Qibly (32; Chapter III, sites: 144; 148; 149a; 167). The Early Ptolemaic city would have had minor streets as those traced by el-Falaki, and attributed by him, to the Roman period. Remnants of these enigmatic streets, however, barely appear in the archaeological record, unlike their (gravelled and hardstone) replacements. Perhaps, they had the ordinary surface of battered earth known in antiquity as *viae terrenae*: "a mere track worn by the feet of men and beasts and the wheels of waggons across the fields" (sites: 122c; 123; 134) (Smith 1859: 1192; Graham 1902: 66). In the absence of basalt, limestone, or pebbles, with no gravelled subsurface, the primitive streets of earthen surfaces disappear when the terrain is levelled in preparation for new constructions, thus become unrecognizable within the sequence. Archaeological excavations show the *viae terrenae* and *glareatae* as wider than the *viae* of el-Falaki. A case in point would be Noack's trenches (B1-B2: transversal street R3) and (J: longitudinal street L2). In (B1-B2), dug north of el-Sultan Hussein (site 15b), the earliest structures of phases (a) and (b) were uncovered at either end of the profile, indicating an approximate width of 14 m for a possible Ptolemaic thoroughfare (Hoepfner and Schwandner 1994: 238-239). In fact, the (Late) Roman canal (γ) ran at the midst of such a distance corresponding to the hypothesized street. In (J), dug east of el-Khartoum square (site 24), almost the same width seems inferable, given the relative location of Noack's Hellenistic 'grossen felskanal' (μ) to the earliest remains south of L2: phase (b) and canal (θ). Accordingly, a benchmark measurement for the width of the *viae terrenae* and *glareatae* is deducible at ca. 10 - 14 m: double the average width of the excavated (Late) Roman *viae munitae* (3.50 - 9.50 m). In turn, the πλατείες of the Ptolemaic city would have reached ca. 20 - 28 m in average: almost twice the measurements reported by el-Falaki and Noack, for the Roman phase of transversal street R1 (14 - 19.80 m) (10; 11). These figures tally with Strabo's record of 'over a *plethron* in breadth': approximately, + 27.50 m, for the πλατείες or streets L1 and R1, as taken at the advent of the Augustan conquest, ca. 25 BC:

ἅπασα μὲν ὁδοῖς κατατέτμηται ἱππηλάτοις καὶ ἁρματηλάτοις, δυσὶ δὲ πλατυτάταις, ἐπὶ πλέον ἢ πλέθρον ἀναπεπταμέναις, αἱ δὴ δίχα καὶ πρὸς ὀρθὰς τέμνουσιν ἀλλήλας.

The city as a whole is intersected by streets practicable for horse-riding and chariot-driving, and by two that are very broad, extending to more than a plethrum in breadth (+ 27.50 m), which cut one another into two sections and at right-angles.

(Strabo, Geōgraphikȅ: XVII. 1.8)

The hypothesized multi-phase evolution of Alexandria's orthogonal grid coincides with the main historical events which were central to triggering urban adjustments throughout the centuries. In this context, most, not all, of the Hellenistic structures of the third-second century BC, were found to have been oriented almost in accordance with a Hippodamian plan. Archaeological investigation however, provides evidence for exceptions to the norm: few structures that follow a geographical orientation, excavated within the Ptolemaic Royal Quarter (2; 131.2b; 134; 138; 139; 140a; 141; 147), but also at other sites elsewhere (52.I; 64a; 69c; 78). By the first century BC, the first phase of *viae munitae* replaced the earlier, earthen and gravelled *viae*: a development which has probably taken place as part of the (re)building programme initiated under Cleopatra VII, considering the damage inflicted on the city's public edifices, and its infrastructure, following the aftermath of Caesar's Alexandrian War of ca. 48-47 BC (Roller 2010: 108-111). A restoration phase pertaining to the *viae munitae* in stone pavement (polygonal basalt/limestone), is datable ca. the fourth-fifth century: a transition through which the city was recovering from the percussions of the second half of the third century: basically, the Palmyrene invasion of Zenobia, and the retributions of Aurelian and Diocletian (Watson 2003: 62-63 and 221-224; Watts 2006: 150-152; Milne 2013: 223-224; Southern 2015: 234). In archaeological terms, urban development at the time, is evident on contemporary constructions within the central district (sites: 18; 19; 20; 21; 26; 31; 67; 69; 70; 71). The material and textual evidence thus seem to back the hypothesis of a multi-phase orthogonal grid: i.e. the urban layout designed by Alexander's technical associates, in accordance with the Hippodamian principals of town planning (Chapter I: Context of Foundation), and constantly adjusted to the provincial and regional developments of antiquity. In theory, therefore, it would have been unlikely for different grid-patterns to be imposed upon a constricted metropolis with continuous occupation thru a period of almost a millennium, from the time of its Macedonian foundation (ca. 331 BC) to the Arab conquest of Egypt (AD 641-2).

2.3) Waterways and Harbour-Infrastructure

2.3.1) Tracing the Ancient Coastline

The southern coastline of the eastern Mediterranean is subject to variable tectonic movements due to the subduction of the African Plate beneath the Anatolian Plate. An average subsidence rate during the past 7,500 years, is recorded at ca. 0.5 ± 1 mm per year in the western sector of Egypt's Nile Delta (Goiran et al. 2000: 83). In Alexandria, long-term subsidence over the previous 2000 years, reached 5 to 6 m (2.50 to 3 mm per annum), and sea-level has risen by 1 to 1.50 m (5 to 7.50 cm per century) (De Graauw 1998: 58). Steadily accelerating subsidence in antiquity, was partly instigated by the increasing weight of accumulated sediment brought down by the presently-desiccated Canopic branch of the Nile (Fraser 1972: 8). Another contributing factor to geological subsidence, was a series of earthquakes and subsequent swell waves which occurred intermittently, around 1,700 yrs. BP, between ca. the mid-fourth and mid-sixth century of the Common Era. The destructive events of Late Antiquity, occurring within the Eastern Mediterranean Basin, are commonly known today, as the Early Byzantine Tectonic Paroxysm (EBTP) (Pirazzoli 1991: 97; McCalpin and Nelson 2009: 4-5).

Five major earthquakes in the first millennium of the Common Era (365, 551, 796/7, 881, 955/6) have caused a rapid littoral-erosion, with concomitant marine-ingression, along the coastal margin of the Mareotic ridge, where the operational facilities of the city's Great Harbour (2.3.3) were being constantly inundated by tectonic subsidence and sea-level rise, leading up eventually to extensive changes to local topography (Nur 2010: 134-5). Yet in reaction to tsunami-shockwaves, a recovery of beach progradation had been generated through the mobilization of substantial sediment-stocks (Goiran et al. 2005: 61-64). Around the eighth-tenth century AD, a sharp rise in relative sea-level has led to marine transgression followed by a subsequent adjustment of the waterfront to higher ground. Coastline progradation resumed during the Late Arab (Ayyubid), Mameluke, and Ottoman periods.

In the 1990s, the IEASM geophysical surveys had encountered submerged, *in-situ* substructures pertaining to ancient harbour-installations, at a maximum depth of 6.80 m (Goddio and Darwish 1998: 12). Now by considering a likely minimum height of ca. 2 m above sea-level for these constructions in antiquity, and a recorded relative sea-level rise of 1.00 - 1.50 m, an average sediment-substrate

subsidence of 7.30 - 7.80 m could be deduced accordingly. Considerable submergence of land by seawater, and/or burial by accumulated sediment, along the shores of the Mareotic ridge, seems a function of the tectonically-associated, catastrophic events of Late Antiquity and the Early Arab period, which led to a concurrent rise in relative sea-level (Stanley 2005: 71-72). Despite the constant encroachments of the sea, the submerged waterfront of ancient Alexandria was partially mapped during the IEASM surveys. The detected sections of it, extend from ca. the base of the present-day headland of el-Silsileh, towards the southwest, past the submerged remnants of the Poseidion and Antirrhodos, reaching the middle of the eastern harbour at el-Ramleh (i.e. Saad Zaghloul Square), whence they disappear under the modern embankment of the Corniche: coast-road (Plate CLXXXIV).

The modern urban undertakings which yielded a built-up, pseudo-coastal belt, date mainly to the late-nineteenth century (post 1882) and the turn to the twentieth century, the time thru which urban developments have encroached on more than ca. 50 - 250 m of the sea: an extent that can be best noted on nineteenth-century photographs showing the position of the 'New York obelisk' and the 'Tower of the Romans', as they stood next to the seashore, at the sites of the present-day Hotel Le Métropole and the Italian Consulate (Plates: XCIX; CLXXXV). These buildings, i.e. as reference points, are seen today at 80 - 150 m from the waterfront of the current built-up belt (Plate CLXXXVI). Beyond that point, from the site of the present-day Hotel Cecil (approx. at el-Falaki's point k), the ancient coastline is indeed concealed beneath accumulated sediments that have been depositing annually since Classical Antiquity, alongside the Heptastadion, thus forming the silted-up grounds of the modern urban district of el-Mansheiya, the Arabic name of which is derived from the Coptic toponym *mànsheei*, meaning 'pool' or 'marshy ground' (Wilkinson 1843: 166).

2.3.2) Heptastadion

The ancient Heptastadion was a man-made embankment that formed a causeway connecting 'mainland Alexandria' to the 'island of Pharos' (Strabo, Geōgraphikȅ: XVII. 1.6; Millet and Goiran 2007: 167). It was built upon the summit of a tombolo, which began accreting between the coastline and the adjacent island as early as the fourth millennium BC (Goiran et al. 2005: 61). Its construction had thus created a dual-harbour complex, with the principal aim of maximizing the use of the coastal zone

on two fronts. The western bay, subject to the dominant, north-westerly winds, is relatively large compared to its eastern complement. The initial construction of the mole might have commenced towards the end of the reign of Ptolemy Soter, as part of the major harbour-works conducted ca. 285-270 BC, hence were probably initiated under the Soter-Philadelphos co-regency: 285-282 BC. Epigram 115 AB of Posidippos (Chapter III, site 43) shows that a 'causeway' was already in place, and functioning by the time of Ptolemy II Philadelphos. As the name itself implies, the total length of the Heptastadion measured seven *stadia* (ca. 1,155 m). It served not only as a 'bridge' connecting the mainland to the offshore island, constantly supplying its Pharian inhabitants with fresh water by means of an aqueduct, but also as a 'breakwater' that provided a year-round protection to the Great Harbour: now in shelter from the influence of the prevailing north-westerly currents, while a rapid sediment-infilling of the harbour-floor could be avoided (Hesse 1998: 21; Millet and Goiran 2007: 174-175).

Sediments on the beaches of Alexandria are made of sand with a granular-size of 0.2 - 0.5 mm. Movements of sands in either direction, alongside the seashore, are estimated at 100,000 cu. m. per annum (De Graauw 1998: 58). The construction of the Heptastadion as an obstruction which runs perpendicular to the coastline, has led to an annual deposition of 100,000 cu. m. of sand on either of its flanks. Rapid silting-up within the harbour basins, and concomitant littoral progradation, are subsequent to the development of mud-rich deposits, from 200 BC to AD 200 (Stanley and Bernasconi 2006: 283; Goiran et al. 2005: 61). The accumulated layers of sedimentary deposits: basically, a mixture of sand and clay, began to gradually, transform the man-made structure into a broad, flat isthmus (Plate CLXXXVII). On that belt, between both harbours, Ottoman Alexandria developed on virgin soil, from the sixteenth century onwards. The Ottoman village has spread away from its mediaeval, Arab predecessor, which is situated on the mainland, within a tapered area of the ancient metropolis. A shift northward is on display, given the seventeenth-century view of Razaud (1687; Introduction, sec. II.a), where just a few houses are plotted yet-standing within the Tulunid enclosure. Many of these buildings were cluttered around Bab Sharq (the Rosetta Gate). Almost all other buildings featured on the Razaud map of 1687, have covered the alluvial embankment which has been silting up since antiquity, on either side of the Heptastadion (sec. 2.3.1).

Transhipment between both harbours: i.e. Megas Limen to the east, and Eunostos to the west, was possibly carried out by means of a slipway for ships, as is the case with the Δίολκος of Corinth, constructed across the isthmus to transport commercial vessels and cargo between the Corinthian and Saronic gulfs (Strabo, Geōgraphikȇ: VIII. 6.22; Fraser 1961: 134-138; Hesse et al. 2002: 195; Dixon 2014: 48). The hypothesis of 'a Δίολκος in Alexandria' is suggested by two fragments preserved by Oribasius, the personal physician of the Roman emperor Julian the Apostate (ca. AD 361-363), in his *Ἰατρικαὶ Συναγωγαί* (aka *Collectiones Medicae*). Both passages (II. 58.54-55; II. 58.129) are often attributed to the first-century AD, Greek physician Xenocrates of Aphrodisias:

γίνονται δέ καὶ γένη πελωρίδων τε καὶ χημῶν διάφοροι δὲ ποικίλαι καὶ στρογγύλαι ὡς αἱ ἐν Δικαιαρχία ἐν τῷ Λουκρίνῳ λάκκῳ καὶ ἐν τῷ ἐν Ἀλεξανδρείᾳ λιμένι γλυκεῖαι γὰρ καὶ εὔχυλοι. αἱ δ ὑπὲρ Φάρον καὶ τὸν Δίολκον τήν τε γέφυραν καὶ τὴν νῆσον ἐπιμὴκεις, τραχεῖαι, βαλάνοις ἐοικυῖαι δρυίναις, ἐμφερῶς φηγοῖς τὸν ἐχῖνον φερόμεναι.

(Oribasius, Ἰατρικαὶ Συναγωγαί: II. 58.54-55)

αἱ δὲ γλυκυμαρίδες χαριέστεραι τῶν λειοστράκων κογχῶν, ἥττους δὲ πελωρίδων. διαλλάττουσι δὲ κατὰ τόπους τοῖς εἴδεσι, ὡς πελωρίδες καὶ χημαί, ποικλίᾳ καὶ σχηματισμῷ αἱ μὲν γὰρ ἐν τῷ ἐν Ἀλεξανδρείᾳ λιμένι ἄρισται, αἱ δέ περὶ τὸν Δίολκον καὶ Φάρον καὶ γέφυραν ἐπιμήκεις καὶ τραχεῖαι.

(Oribasius, Ἰατρικαὶ Συναγωγαί: II. 58.129)

In describing the 'different species of mussels and cockles', Xenocrates yet specifies a group in "Ἀλεξανδρείᾳ λιμένι: i.e. the harbour of Alexandria", as opposed to another beyond "Φάρον (the lighthouse) καὶ τὸν Δίολκον (the slipway) τήν τε γέφυραν (the bridge) καὶ τὴν νῆσον (the island)". When referring to 'the slipway' in conjunction with 'the lighthouse and the bridge and the island', as he distinguishes two different species of mussels and clams, Xenocrates makes it clear that the Δίολκος was central to bypassing the physical barrier between both basins. A possible path seems inferable towards the southernmost extremity of the Pharos Island, next to the dockyards (νεώρια) mapped during the surveys of el-Falaki and later, the IEASM (sec. 2.3.3.6). Given such configuration,

a bridge-over passageway would have been required on exiting the mole for crossing the Δίολκος into the oblong island. In the Letter of pseudo-Aristeas (allegedly written ca. the mid-second century BC), the topography of the area is described in the context of 'the formulation of the Septuagint': i.e. a third-century BC, Alexandrian translation of the Hebrew Scriptures into κοινή Greek by order of Ptolemy II Philadelphos:

Μετὰ δὲ τρεῖς ἡμέρας ὁ Δημήτριος παραλαβὼν αὐτούς, καὶ διελθὼν τὸ τῶν ἑπτὰ σταδίων ἀνάχωμα τῆς θαλάσσης πρὸς τὴν νῆσον, καὶ διαβὰς τὴν γέφυραν, καὶ προσελθὼν ὡς ἐπὶ τὰ βόρεια.

Now after three days, Demetrios (Phaleros) took them (i.e. the Judean translators) and passed the dyke, seven stadia long in the sea, towards the island (of Pharos); then, he crossed over the bridge, and proceeded into the northern (Pharian) districts.

(Aristeas, Letter: X. 301)

The writer here, uses the noun "ἀνάχωμα" (dyke) to denote the Heptastadion, and "γέφυραν" in referring to the 'bridge' which Demetrios and the Judean translators had to cross over to get into the island. The pseudo-Aristeas sequence of narration, and the use of the singular form "γέφυραν", not "γέφυρες", rather hint at a certain 'crossover' on the southernmost tip of the island, than two 'offshore, bridged-over passageways' built into the mole itself. Xenocrates, who uses "γέφυραν", not "ἀνάχωμα", always in conjunction with "Φάρον", "Δίολκον", and "νῆσον", seems, in turn, to be distinguishing the species of mussels and clams 'in the Great Harbour', from those 'around the island of Pharos and its amenities: lighthouse, slipway, and bridge'. Strabo, however, who provides a detailed account of the Corinthian Δίολκος in Book VIII of *Geōgraphikȅ*, would not have ignored a counterpart in Alexandria. Perhaps, Oribasius' 'Δίολκος' was no longer in use at the time Strabo visited the city ca. 25 BC. It is possible, therefore, that Xenocrates of Aphrodisias, whose narratives postdate Strabo, has been deriving his information on 'the provenance of muscles and cockles in Alexandria' from earlier (ca. third century BC?) Hellenistic sources: a phenomenon not uncommon in the medical *compendia* of the Roman Principate. After all, it is not clear whether Xenocrates had ever visited the city of Alexandria to provide a treatise based on direct observation.

An alternative to Oribasius' 'Δίολκος' was already functioning in the 1st century BC. Strabo relates:

The embankment forms a bridge extending from the mainland to the western portion of the island, and leaves open only two passages into the harbour of Eunostus, which are bridged over.

(Strabo, Geōgraphikȅ: XVII. 1.6)

It is unlikely that Strabo was describing an installation postdating the Alexandrian War, for part of Caesar's battle against the Alexandrians has taken place 'on the mole' where both sides struggled to gain control of its strategic arched-passages:

Caesar praeda militibus concessa aedificia diripi iussit castellumque ad pontem, qui propior erat Pharo, communivit atque ibi praesidium posuit. Hunc fuga Pharitae reliquerant; artiorem illum propioremque oppido Alexandrini tuebantur.

(Caesar, Alexandrian War: 19)

Hence, the bridged-over passageways were most probably added as an ease-of-access, at a much earlier date; perhaps, as early as the third century BC: at times the hauling channel of Pharos was no longer suitable for regulating the traffic-flow of Alexandria's 'thriving ἐμπόριον' (sec. 3.7.3.1, G).

Recent surveys jointly conducted in the 1990s, by a team of geophysicists from the Centre de Recherche Géophysiques (CRG), Universités Paris VI and VII, Centre d'Études Alexandrines (CEAlex), and the National Research Institute of Astronomy and Geophysics (NRIAG), have shown the ancient mole as a 'northward-extension of transversal street R9', confirming its alignment with el-Falaki's orthogonal grid (Hesse 1998: 21-33; Hesse et al. 2002: 191-273). On the grounds of results obtained by a systematic application of electromagnetic and electrostatic methods in resistivity-surveying (Plate CLXXXVIIIa-b), a rectilinear causeway measuring ca. seven *stadia*, has been proposed, launching at the junction of the πλατεία (L1) with transversal street R9, towards the southwestern tip of the Pharos Island. Its point of departure on the mainland, is marked by a triangular promontory, at the end of which a subterranean aqueduct would have joined the artificial mole. The CRG electrostatic maps

show a man-made bridge constructed in two rectilinear-segments approaching one another at a rock-feature situated midway between the mainland and the Pharos Island. Yet, at a point in time, two bridged-over passageways were installed at either side of the islet, perhaps, as an alternative to the earlier Δίολκος (see *supra*). This development is represented on the CRG electrostatic charts, by intervals of low resistivity within a restricted area of land.

The identification of the course of the Heptastadion changed earlier perceptions involving an oblique orientation for the ancient mole (Plates: CLXXXIX; CXC). More importantly though, it has shed further light on the shape of the Great Harbour in antiquity, where the southwestern sector of it, would have formed a well-protected, inner basin, especially when considering its relative location to the dockyards and jetties installed to the southeast of the Pharos Island (sec. 2.3.3.6).

2.3.3) The Great Harbour (Μέγας Λιμήν)

2.3.3.1) The IEASM Project

Topographical surveys and underwater excavations were carried out in the Great Harbour of ancient Alexandria (Μέγας Λιμήν: approximately, 500 hectares: 0.50 km^2) by the Institut Europeen d'Archeologie Sous-Marine (IEASM, France), in co-operation with the Department of Underwater Archaeology of the Supreme Council of Antiquities (SCA, Egypt) (Goddio and Darwish 1998; Goddio 2011). The project, led by the IEASM, had the principal objective of establishing: "the topography of the submerged regions and substructures, and to draw up a map corresponding as closely as possible to the region as it appeared in antiquity" (Goddio and Bernard 2004: 174). Geophysical (bathymetric and magnetic) surveys commenced in 1992. The results revealed remarkable anomalies at the eastern sector of the Great Harbour, thus triggering two seasons of archaeological investigation (1996-97), during which constricted areas of harbour-infrastructure were regularly surveyed and recorded.

Following the five-year project, a cartographic programme was launched to visualize the outcome: the topography of submerged land, various remains of harbour-installations, and *in-situ* positions of discovered artefacts, on geographical charts with absolute (latitude and longitude) coordinates (Plate CXCIa).

2.3.3.2) Cape Lochias and the Inner-Ports (X; Y; Z)

The present-day headland known as el-Silsileh, forms part of the ancient *akra* of Lochias which was however much wider. It has extended over a distance of some 450 m to the north-northwest, narrowing together with the eastern extremity of Pharos, the main entrance to Megas Limen (P1). In *Geōgraphikȅ*, Strabo relates:

Of the extremities of Pharos, the eastern one lies closer to the mainland and to the promontory (of Lochias) opposite it, and thus makes the (Great: eastern) harbour narrow at the mouth.

(Strabo, Geōgraphikȅ: XVII. 1.6)

In 1864-66, Mahmoud Bey traced the foundations of a dyke extending well in a north-westerly direction, off the northern extremity of el-Silsileh: the approx. site of the mediaeval Fort Pharillon, over a distance of about 200 m (Plate CXCIb). The breakwater structure marked DA2 on the featured maps, was visible at 'just 3 or 4 m below water-surface, in calm conditions' (Mahmoud-Bey 1872: 42). The submerged foundations of el-Falaki's ancient bulwark, basically formed of massive blocks of eroded limestone, were re-detected during the construction of the 800 m long, concrete dyke to the northwest of el-Silsileh: the one marked DM2 on the featured maps (Fabre and Goddio 2010: 55). In antiquity, the installation of such bulwark at the northern extremity of Cape Lochias, must have been necessitated by the need to minimize the impact of offshore swell on the promontory itself, and on the harbour's inner-ports (X; Y; Z).

Geophysical measurement techniques followed by limited underwater excavation, have revealed small, submerged basins within the eastern sector of Megas Limen, created in part, by man-made jetties and moles constructed of large blocks cast in lime-mortar, and reinforced using traditional timber (wooden) frames. These havens were well integrated into two natural headlands (Lochias and Poseidion) and a T-shaped islet known as Antirrhodos (sec. 2.3.3.4-5). The coastline configuration as revealed by the IEASM topographical surveys in the 1990s, seems quite different compared to Strabo's descriptive account in *Geōgraphikȅ*, which yielded two centuries of invalid cartographies for the eastern harbour:

The shore of the mainland forms a bay, since it thrusts two promontories into the open sea, and between these, is situated the island (of Antirrhodos), which closes the bay, for it lies lengthwise, parallel to the shore.

(Strabo, Geōgraphikȅ: XVII. 1.6)

The inner-port (Z), to start with, also known as the Royal Port of the Galleys, covers an area of ca. seven hectares (Goddio and Darwish 1998: 18). It is formed by a large, man-made dyke (240 m long; 15 m wide) marked (J2) on the featured maps. At the latter's end, a small, perpendicular jetty (J3) ran over 80 m to the southwest. Another mole, (J4) (110 m long; 20 m wide), divided the port into two sub basins. The western entrance is narrowed by an L-shaped jetty (J5). In antiquity, the well-protected anchorage, labelled (Z), must have been approached with great caution, by negotiating an intricate set of treacherous reefs.

A second inner-port, marked (Y) (500 m long; 300 m wide), was built between the headland of Poseidion and the large, man-made dyke (J2). It covers an area of ca. 15 hectares (Goddio and Darwish 1998: 27). Its northwestern entrance is well protected, as in Port (Z), by the central reefs. Providing further protection against sea swell and tidal waves, is a large breakwater-extension (J6) installed at the north end of the neighbouring peninsula. At least, four jetties have served the docking ships on entering the inner basin: two (J8 and J9) on the eastern side of Poseidion, one (J3) towards the north end of (J2), and another (J1), jutting out from Cape Lochias into the port.

The third inner-port (X), is likely to have been foremost of ports (Y) and (Z), given the extent of its size (capacity), operational facilities (1,250 m of quays), and strategic (i.e. defensible) location. Port (X) (320 m long; 500 m wide) takes the shape of a parallelogram, and covers an area of ca. 16 hectares (Goddio and Darwish 1998: 51). It is accessible via two passages: (E1) to the north (80 m wide; flanked by B1-J7), and (E2) at the western exit (40 m wide; flanked by B2-J11). The well-protected basin is sheltered all around from the north-westerly winds and sea swell, being surrounded from all sides, by the mainland (coastline), artificial mole (J11), the T-shaped islet of Antirrhodos, and the Poseidion peninsula.

At several points on the mapped area, artificial moles are seen jutting out at various distances, into the sea. The longest on shore (J11: 130 m long; 30 m wide), was paved with limestone blocks. At its end, an elbow (J12) parallel with (J10) of Antirrhodos, extends to the northeast, forming the western entrance to inner-port (X): (E2). Yet to the east of (J11), another relatively small jetty (J13) (80 m long; 15 m wide) ran in a north-westerly direction. Judging by its relative location to all other docking installations within Port (X), mainly (J11) and (J12), (J13) would have been added to create the safe haven marked (H2) on the featured maps.

2.3.3.3) Reefs and Rock-Features

Reefs in the Great Harbour could be categorized into two sets: with and without erosion-lines. Those bearing signs of corrosion must have broken the water-surface in antiquity. Otherwise, the reefs would have been under water. The latter includes four clusters of reefs: (F1); (F2); (F4); (F5). Whereas, (F3) and (F6) were identified as ancient breakwaters with erosion-lines recorded at a spot height of ca. 6.80 m and 6.70 m respectively. As for the localisation of the huddled reefs, (F1), near Djarf el-Wasat (K5), lies at the east end of the modern breakwater, (DM1), constructed to the east of Fort Qaitbay, in 1911-15. (F2 - F3) form together, a recognizable shoal which extends lengthwise, parallel with the limestone bulwark (DA2) traced by el-Falaki, in 1864-66, beyond the extremity of el-Silsileh: the site where the modern dyke (DM2) is constructed. Other reefs such as (F4), (F5), and (F6), are found cluttered to the south of the dyke (DM2), with some reaching almost, at the centre of the eastern harbour. The consecutive lines of protection, natural and man-made, seem justified by the topography of the eastern sector of the harbour:: Cape Lochias and the inner-ports (2.3.3.2).

A descriptive testament to the reefs identified during the IEASM surveys, the hidden ones and those breaking the water-surface, is provided by Strabo, in *Geōgraphikȅ*:

In addition to the narrowness of the intervening passage (of the Great Harbour: P1), there are also rocks (i.e. reefs), some under the water, and others projecting out of it, which at all hours roughen the waves that strike them from the open sea.

(Strabo, Geōgraphikȅ: XVII. 1.6)

Navigating the Great Harbour into the city at the time of Strabo, was not a straightforward process for approaching sailors. The submerged reefs would have been the most treacherous in antiquity; their patterns of distribution across the eastern harbour, recall Pliny's first-century AD account of "the three channels of the sea: Steganus, Posideum, and Taurus, only through which the city could be reached":

Namque fallacibus vadis Alexandria tribus omnino aditur alveis maris, Stegano, Posideo, Tauro.

(Pliny, Natural History: V. 34.128)

The widest of Pliny's navigable routes can be correlated with that marked (P1) on the featured maps, between (F1-K5) to the west, and (F2/F3-F4/F5/F6) to the east. Its breadth measures about 300 m, hence is likely to have functioned as the principal fairway to the Great Harbour in antiquity. An inner, much-narrower channel running between the central reefs, would have been navigable by maneuvering oared-ships; yet, it must have led into the royal residences on Lochias, Poseidion, Antirrhodos, and their inner-ports (X; Y; Z). Judging by the width of (P1), Pliny's other passageways would have been secondary. One, marked (P2), seems inferable to the northeast of Fort Qaitbay, between (K3-K4) to the west, and (F1-K5) to the east. (K4), aka the Diamond Islet, is a rock-feature met today at ca. 3.00 m below the water-surface (Frost 2000: 64). The third of Pliny's 'passageways', marked (P3), is rather risky: the passageway to Eunostos or the western harbour. It was navigable though, at the western extremity of the Pharos Island, by negotiating an array of treacherous reefs huddled around the rock-feature of Abu Bakar (K1).

2.3.3.4) Poseidion

Site 39: Eastern harbour (NDist.)

Maps: V2; V4

Timoneion (T1): Megas Limen [Late Ptolemaic; Roman]

To the southwest of Cape Lochias, lies the submerged, natural headland of Poseidion (350 m long; 100 m wide). Its name is derived from a temple to Poseidon, which is held to have been built on its premises (Strabo, Geōgraphikȅ: XVII. 1.9). The remnants of two jetties were recorded during the

IEASM surveys, on the eastern shores of the headland: (J8) (40 m long; 6 m wide) is located closer to the mainland; (J9) (50 m long; 7 m wide) was added further north, with a 12-m extension towards the southeast (Goddio and Darwish 1998: 22). At the north end of the headland, an artificial mole, (J6) (180 m long; 18 m wide), probably served to offset sea-swells coming thru the harbour's principal fairway (P1). Projecting in a westerly direction, is another large mole, (J7) (90 m long; 25 m wide), paved with limestone slabs. Its extremity is formed by an esplanade, (T1) (50 x 22 m), built of large blocks in mortar, and extends to the southeast.

The location of the esplanade (platform), and its contextual associates: large limestone blocks, red-granite column shafts, and fragmentary pieces of marble, seem to recall Strabo's narrative of the royal lodge known as Timoneion, after Timon the Athenian: an exemplification of misanthropy in Classical Antiquity. Allegedly, it was built by Markus Antonius following a decisive defeat at the naval Battle of Actium (ca. 31 BC), on the extremity of a man-mad pier that projected into a private (royal) haven (Strabo, Geōgraphikȅ: XVII. 1.9). The identification of the (T1) esplanade as the site of the historical Timoneion, is backed by (i) Carbon dating and (ii) dendrochronological analysis of wooden substructures: piles and sheet-pile walls reinforcing foundations in mortar. The remnants date the construction in question, to ca. 25 BC ± 45 yrs. (Goddio and Bernard 2004: 140-141).

Site 40: Eastern harbour (NDist.)

Maps: V1; V2; V4

Temple to Poseidon: Megas Limen [Ptolemaic; Roman]

Identifiable remains of a temple to Poseidon, the Olympian God of the Sea, were traced at the base of the headland, where at least, two concentrations of archaeological material are detected:

(a) Scattered remains of fragmentary architecture, including column shafts (diameter: ca. 90 - 100 cm), bases, and capitals, all in Aswan granite, have been found cluttered within a constricted area paved in large limestone slabs, towards the southern belt of the peninsula itself (Goddio and Darwish 1998: 24).

(b) A large corpus of fragmentary architecture, including red granite column shafts (diameter: ca. 45 - 90 cm), bases, capitals, blocks of red granite and quartzite, and other items in marble, covered a vast, rectangular area paved with limestone slabs, southeast of the submerged headland (Goddio and Darwish 1998: 24-25). The recognizable rectangular shape of a temple precinct is outlined by large blocks of limestone. Wooden piles, spaced approximately 30 cm apart, have been used to reinforce the mortared foundations of the monumental building (Goddio and Bernard 2004: 144-145). These rows of wooden reinforcements, datable by radiocarbon to the Antonine Dynasty (AD 138 - 192), signal what seems to be a second-century restoration/renovation work of an earlier structure: perhaps, the historical temple to Poseidon recorded by Strabo, ca. 25 BC. Coherent patterns of fragmentary architecture encountered *in situ*, during the IEASM surveys (various pieces of pink-granite column shafts), suggest a constricted edifice that collapsed abruptly, in the aftermath of a natural disaster: a possible effect of the major tsunami of AD 365, which led eventually to the abandonment of the Royal Quarter's devastated coastal zone, the area extending today from the headland of el-Silsileh (el-Chatby) to Saad Zaghloul Square (el-Ramleh).

2.3.3.5) Antirrhodos

Site 41: Eastern harbour (NDist.)

Maps: V1; V2; V4

Royal palace and harbour: Megas Limen [Ptolemaic; Roman]

The submerged rival island of Rhodes, Antirrhodos (350 m long; 70 m wide), is formed of three branches: (B1), (B2), and (B3). (B1), the largest of the three, is oriented east-west, thus aligned at slight angle, with artificial mole (J7) of Poseidion (sec. 2.3.3.4). At the centre of (B1), the remnants of a wider esplanade (ca. 6,000 m^2) were recorded during the IEASM surveys (Goddio and Bernard 2004: 88-91). Considering its central location being constructed on the widest of the island's branches, and the dense concentration of fragmentary architecture found scattered on its limestone pavement (column shafts in red granite; large blocks of Aswan granite; various blocks of limestone, quartzite, and basalt), the platform in question, seems associated with the site of the Ptolemaic royal palace recorded by Strabo, in *Geōgraphikȅ*, ca. 25 BC (Strabo, Geōgraphikȅ: XVII. 1.9).

In archaeological terms, the identification of the esplanade with the site of Strabo's 'palace' is backed by the results of the IEASM excavations southwest of the (B1) esplanade, where a wooden framework was found resting directly on the bedrock, under a block of alternating layers of mortar and limestone. The wooden structure is made of pine, and served to shutter the mortar poured into the masonry. Carbon 14 analysis of the shuttering provided a 'conventional' date at 250 BC ± 45 yrs., and a 'calibrated' date at 390 cal. BC - 170/130 cal. BC (Goddio and Darwish 1998: 32-37). The C14 dates thus suggest a third-century BC, Ptolemaic building undergoing several phases of alteration over a life span which extended at least, to the time of Strabo (25 BC), if not beyond, as is indicated by epigraphic evidence in the form of eight Greek, dedicatory inscriptions found during the IEASM surveys. One, carved into a marble slab, is datable to the reign of Commodus (AD 180 - 192), while seven were cartouche-engraved onto column shafts, under Caracalla as *imperator* (AD 198 - 217).

The island's minor branches, (B2) and (B3), give Antirrhodos its T-shape. (B2) (340 m long; 30 m wide), deviating slightly off (B3), is oriented NW-SE. At the end of it, a small jetty (J10) ran parallel with (J12) at the extremity of the (J11) elbow. Both jetties (J10 and J12) extend lengthwise, parallel with the seashore, in a north-easterly direction. The (B1-J7) and (B2-J11) alignments yield two minor passages to inner-port (X): (E1) and (E2). Whereas, the oblique orientation of (B1), (B2), and (J10), has allowed the creation of a safe haven (H1), recalling Strabo's narrative of a 'small royal harbour at Antirrhodos'.

Site 42: Eastern harbour (NDist.)

Maps: V1; V2; V4

Temple to Isis: Megas Limen [Ptolemaic; Roman]

The IEASM underwater excavations at the island's (B2) branch, have revealed the remnants of a partially-collapsed esplanade paved in limestone slabs (40 x 40 cm) and flagstones (120 x 55 cm). Encountered on site, were various pieces of fragmentary architecture, including column shafts in red granite (diameter: 95 - 110 cm), and large blocks of red and grey granite, basalt, quartzite, and limestone (Goddio and Darwish 1998: 39-41; Goddio and Bernard 2004: 96-101). Prominent among the finds, were two sphinxes, one in grey granite, as Ptolemy XII Auletes (80 - 51 BC), and another, in diorite,

as a late Ptolemy. Their state of preservation, almost intact, with no signs of hammering, suggests a platform that collapsed in place, suffering the effects of a natural disaster. The destructive event could not have occurred before ca. the second century AD, given the chronology of the recovered potsherds. The structure for which the esplanade was built, is identifiable with an Isiac temple, on the grounds of a grey granite statue of a priest of Isis, carrying a Canopic jar with the head of Osiris emerging from it: a temple dedicated to the cult of Osiris-Canopus.

2.3.3.5.1) Evidence of Earlier Habitation

Among the archaeological material encountered at Antirrhodos, the wooden remnants are of utmost importance for the chronological data they provide to archaeologists. Wooden fragments were found below a debris of rubble, at the eastern extremity of the island's main branch (B1), as one of the rare cases in Alexandria where organic material is detected in the archaeological record. The remnants, probably of wooden quay-structures, comprise two rows of stakes of elm with an average spacing of 1.5 - 1.8 m. Dating analysis using Carbon 14 has yielded the following figures:: (i) conventional C14: 410 BC ± 40 yrs.; (ii) calibrated C14: 760 cal. BC - 360 cal. BC (Goddio and Darwish 1998: 29-31).

The C14 dates from Antirrhodos tally with the ancient authorities in suggesting earlier harbour-installations predating the Macedonian conquest of ca. 332-1 BC. Human activity on site, is rather confirmed by archaeological, stratigraphical, petrological, and geochemical components recorded in radiocarbon-dated sediment-cores from the eastern harbour: the Great Harbour of the ancient city: (a) ceramics; (b) allochthonous rock-fragments from 'Middle and Upper Egypt'; (c) sediments with a markedly-increased lead concentration; (d) heavy minerals; (e) organic matter (Stanley et al. 2007: 4-9; Stanley and Landau 2010: 38-46). The markers, mainly potsherds and lithic fragments from the eastern sector of the eastern harbour, increase substantially in the upper part of the Middle Sand (III) unit of ± 3000 yrs. BP; calibrated C14 dates: 940 cal. BC - 420 cal. BC. They signal a depositional phase that corresponds to a 'Third-Intermediate' to 'Late-Dynastic' habitation datable as early as seven centuries before the arrival of Alexander the Great and the foundation of Alexandria (Plates: CXCII; CXCIII; CXCIV). Studies of sediment cores thus seem to justify Strabo's narrative on the garrison

stationed at the coastal lee of Pharos, the site known among the natives, as Râ-Kedet (Hellenized: Rhakotis): the fortress-village that later formed "the part of the city of the Alexandrians which lies above the ship-sheds": the western district, for Strabo described the city as it would appear when approached by sea (Strabo, Geōgraphikȅ: XVII. 1.6).

2.3.3.6) Dockyards at Pharos

During the IEASM surveys, geophysical and archaeological prospection and limited underwater excavation in the western sector of the eastern harbour, at a point southeast of the Pharos Island, have revealed the remnants of a vast harbour-structure branching off the coastal platform of the Sea Scout Club, southeast of Abu el-Abbas el-Morsi Mosque (Goddio and Bernard 2004: 156b-164). The submerged remnants formed a fan-like peninsula connected at its northwestern extremity to the island: a point marked on el-Falaki's 1866 *carte* (Plate CXCV). Jutting out from the central dock, were long, narrow quays and breakwaters constructed of large limestone blocks, and paved in limestone slabs. A pattern as such, seems to have been purposely designed to create a safe haven protected from the north, by a partially-paved, natural islet. Considering its artificial jetties, the latter would have functioned in antiquity, as a dock necessitated by the neighbouring port itself. The scattered remains of mortared foundations, stone pavement, and fragmentary architecture (columns in red granite), suggest a collapsed structure that once stood on the central mole. Judging by its relative location to the Heptastadion, the port in question, would have operated as dockyard for mooring vessels on the way across the causeway into Eunostos. Besides its main function as anchorage and transit-point, the entire installation could have served as breakwater, in sheltering the man-made mole from sea swell and tidal waves coming through the harbour's principal fairways (P1 and P2).

Port-structures were encountered on the southern side of the silted-up pier which connected the Pharos Island to the (K3) rock-feature in antiquity: present-day site of the Yacht Club of Egypt, and the Greek Marine Club. Construction technique strongly recalls that met at Antirrhodos: four rows of tightly-spaced, wooden piles and oak planks, spaced ca. 50 cm apart, and supporting the foundations of port-structures: quays and docks built of large blocks of limestone. C14 analysis of the wooden reinforcements yielded the following figures:: piles: (i) conventional C14: 1840 ± 40

yrs. BP, and (ii) calibrated C14: AD 80 cal. - AD 315 cal.; planks: (i) conventional C14: 1920 ± 40 yrs. BP, and (ii) calibrated C14: 20 cal. BC - AD 215 cal. (Fabre and Goddio 2010: 61-62, C14, 68). The mortared foundations of the submerged port-structures ran parallel with the narrow isthmus connecting Fort Qaitbay (K3) to the mainland (i.e. Pharos Island in antiquity). Elements of fragmentary architecture found in the area, include blocks of limestone, quartzite and pink granite, column bases, and drums of fluted shafts.

A few meters to the east, at the so-called 'Ball Trap', south of Fort Qaitbay: approx. site of the ex-skeet-shooting club, large, mortared foundations in limestone, were found reinforced within a wooden framework of oak piles and pine planks: a point marked, in turn, on el-Falaki's 1866 *carte* (Plate CXCVI). Wooden samples taken close to the seashore, at ca. 3.50 m below the water-surface, were Carbon dated at:: (i) conventional C14: 1730 ± 40 yrs. BP, and (ii) calibrated C14: AD 225 cal. - AD 415 cal.; planks: (i) conventional C14: 1795 ± 50 yrs. BP, and (ii) calibrated C14: AD 80 cal. - AD 345 cal. Other samples taken near the extremity of the submerged docks, at 5.75 m below the water-surface, were Carbon dated at:: (i) conventional C14: 1835 ± 40 yrs. BP, and (ii) calibrated C14: AD 80 cal. - AD 320 cal.; planks: (i) conventional C14: 1880 ± 40 yrs. BP, and (ii) calibrated C14: AD 30 cal. - AD 230 cal. (Fabre and Goddio 2010: 61-62, C14, 68).

The Carbon dates pertaining to the submerged port-structures at the ancient islands of Pharos and Antirrhodos, thus provide concrete evidence of the extensive renovation work carried out by the Romans in the Great Harbour, between ca. the first and fourth century AD. Optimisation of the Ptolemaic port-infrastructure under the Principate, was necessitated by the need to facilitate the commercial activities of *Provincia Aegypti* as a major grain-supplier to Rome, and a central hub on the trade routes connecting the markets of the dominated Mediterranean with the exotic Orient.

2.3.4) The Western Harbour: Eunostos

In preparation for the construction of breakwater-facilities at the western harbour, the French port-engineer Gaston Jondet thoroughly investigated the region to the south, west, and northwest of the Ras el-Tin peninsula (Plates: CXCVII; CXCVIII) (Jondet 1916: 39; Lebedinsky 2003: 289). The results of

Jondet's topographical surveys (1911-1915) were published in *Les Ports Submergés de L'Ancienne Île de Pharos* (Mémoires de l'Institut Égyptien, Tome IX, 1916). Recorded in detail, were "les restes submerges de travaux maritimes grandioses qui prouvent d'une maniere incontestable l'existence de ports antiques" (Plates: CXCIX; CC) (Jondet 1916: 2). The grandiose harbour-works were met at some 600 m from the mainland. They extend parallel with a nineteenth-century dyke constructed under Ismaïl Pasha, in 1870-74, between the Ras el-Tin lighthouse and the westernmost rock-feature of Abu Bakar (marked K1) (Plate CCI). Judging by their location and extent, the massive constructions must have been necessitated by the need to minimize the impact of the prevailing north-westerly currents and offshore swell which would have otherwise hindered safe navigation into the western harbour known in Classical Antiquity as Εὔνοστος: the port of safe return. In theory, therefore, the construction date of the seven-*stadia* mole (sec. 2.3.2) that created a dual-harbour complex, would provide a *terminus post quem* ca. the early third century BC, for port-installations of such defensive nature. Nevertheless, the identification of the structures in question, as the submerged remnants of an ancient anchorage, should not eliminate the notion of a safe haven at Pharos, antedating the Macedonian conquest of 332 BC, which is backed by: (a) ancient text (Homer's *Odyssey*: the Greek perception of the coastal amenities at the Pharos site; Strabo's *Geōgraphikȅ*: account on Rhakotis), (b) archaeological evidence (remnants of reinforced quay-structures at the island of Antirrhodos), and (c) sedimentological analysis of core samples taken at the eastern harbour (evidence of Third-Intermediate and Late-Dynastic habitation).

The quay-structures in question, comprise three consecutive lines of massive limestone blocks, with segments separated at intervals to prevent siltation. The foremost breakwater extends over ca. 2.36 km (Jondet 1916: 14). It is likely to have been deliberately built, as is the case with the inner ones, to complement the adjacent clusters of barrier-reefs and shoals. Reefs, ca. 4-8 m below the water-surface, are found huddled along the northern-northwestern shores of Ras el-Tin peninsula, reaching as far as the westernmost rock-feature of Abu Bakar (K1), which would have served as a cornerstone for the entire network of natural and man-made bulwarks (Plates: CCII; CCIII). Before the construction of the Heptastadion, both harbours, Megas Limen and Eunostos, have communicated freely, and formed together, the natural anchorage of Rhakotis, which was completely protected

by the line of shoals extending east-west, over nearly 13 km, from Cape Lochias to the headland of el-Agami (Plate CCIV). Optimization of the natural environment seems on display. Port- installations were probably added to the west and northwest of the ancient island, to enable the anchoring of vessels within an immense basin sheltered all around from tidal waves. An artificial development as such, may shed some light on the scale of human impact on the Pharos site, in pre-Macedonian times. In this context, the island, and its coastal lee, would have been suitable for the construction of mooring-infrastructure as transit-points on the navigable trade routes towards Egypt's customs-port at Thonis-Herakleion (sec. 1.1).

2.3.5) Lake Mareotis and the Canopic Canals

The Mareotic region had reached a new stage of development with the Macedonian conquest of ca. 332 BC, and the subsequent foundation of Alexandria as a major commercial hub on Egypt's Mediterranean coast: *Alexandrea ad Aegyptum* (De Cosson 1935: 37-38). Urban and economic growth within the coastal nome of Mareotis, is attested by the establishment of villages and rural-estates which depended basically, on vine, grain, and olive cultivation (Strabo, Geōgraphikȅ: XVII. 1.14; Ptolemy, Geōgraphikȅ Hyphḗgēsis: IV. 5; Blue 2010: 28-33). Lake Mareotis, as a principal medium of transportation, had been vital in connecting the hinterland of presses, mills, and vineyards, with the Alexandrian market, its Canopic trading-post at Σχεδία (Schedia: the present-day site of Kom el-Giza and Kom el-Hamam), and beyond: the commercial centres of the Graeco-Roman era (Bergmann, Heinzelmann, and Martin 2010: 107). Besides the city's Lake-Port, Phyale, the significance of which is emphasized by Strabo in *Geōgraphikȅ* (see *infra*), other harbour-installations were added around the thriving shores of Mareotis.

Archaeological investigation at the yet-accessible westward-arm of the lake has revealed port-structures contextually associated with wine-production centres (wineries:: *Mareōticum vīnum*), and pottery workshops and kilns (*Amphore Égyptienne*: AE1, AE2, AE3, AE4, AE5) (el-Fakharani 1983: 182-184; Empereur and Picon 1998: 75-84; Hopkinson 2010: 43-44; Rodziewicz 2010: 71-72; Babraj and Szymańska 2010: 82-83; Dzierzbicka 2010: 127-130). Foremost among these rural-estates were Marea/Philoxenité (approx. 45 km west of Alexandria) and Taposiris Magna (Abu Sir: north of the present-day district of Borg el-Arab). In fact, both sites do exemplify two of three known-forms of port-structure within

Mareotis:: (a) closed anchorage surrounded with a long dyke, and accessible via restricted entries or the so-called bridges (Taposiris Magna); (b) anchorage with half-open basins formed by several quays jutting out into the lake (Marea/Philoxenité); (c) relatively-small-structured anchorage with a single pier (Rodziewicz 1983a: 200; *idem* 2002: 4; Boussac and el-Amouri 2010: 87-90). As regard to the now-largely-desiccated main basin (area: approx. 90 km^2), the prime source of information, apart from Strabo's narrative, would be Saint-Genis' plate 31 of *Description de l'Égypte* (Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie, Antiquities V, Imperial Edition, 1822), where the key-label 'Moles' marks the sites of two headlands (Plate CCV). The first, i.e. located immediately to the south of the city, is in proximity to the navigable tributary mentioned by Strabo in *Geōgraphikȅ*; the one which connected Lake Mareotis to the Kibotos basin in antiquity. Accordingly, a possible correlation may be drawn between this site and the Lake-Port of Graeco-Roman Alexandria (Plate CCVI). The second headland is found further to the west, south of the suburban district of el-Max: approximately, at the present-day roadway of Mehwar el-Tamir, where harbour-installations seem complementary to an 'Ancien Canal' which would have probably served as a secondary passageway between Lake Mareotis and the Mediterranean (Plate CCVII).

In antiquity, Lake Mareotis extended southwards, to reach almost, at the town of Ψενέμφαια (Psenemphaia: the present-day site of Kom el-Truga), and yet westwards, to the fortress-village of Chimo (i.e. the present-day el-Bordan, northwest of el-Hammam) (Plate CCVIII). In the first half of the seventh century, a period of provincial turmoil and disorder (Phocas-Heraclius civil war: 608-610; Sassanian Persian invasion of Khosrow II: AD 618/9-628; Byzantine restoration: AD 628-629; Arab conquest: AD 641-2), the destructive tactics employed around the Canopic waterways, southeast of Mareotis, have contributed greatly, to the reduction of the water-intake into the lake (De Cosson 1935: 53-58; Rodziewicz 1998: 103). The situation has only worsened under Arab rule, with the lack of regular maintenance of the silting channels during the eighth to the tenth century. At the time, the Canopic distributary ceased to be navigable, which justifies the course of the Tulunid circuit away from the abandoned shores of Lake Mareotis (Morcos 2000: 33-34). Around the twelfth century, the Mareotic depression, out of water-supply from the Nile's Canopic arteries, had dried out, leading eventually, to the economic decay of the once prosperous wine and oil production centres of the coastal nome.

In 1801, the British, yet seeking to isolate the French forces stationed in the city, had inundated the ancient lake to sea-level, by destroying the dyke which separated the Abu Qir Lagoon from the desiccated lake-bed of the Maryut Depression (Plate CCIX) (De Cosson 1935: 88-93). Hence, by doing so, the British had cut-off the freshwater supply brought to Alexandria by means of a canal which ran along the penetrated strip of land between Abu Qir and Mareotis, i.e. on the approximate path of the waterway in antiquity. At Schedia, the ancient canal branched off the westernmost, Canopic arm of the Nile, which flew downstream, about 20-25 km northeast of Alexandria (Goiran et al. 2000: 83). Running lengthwise, parallel with the Mareotic shores, the canal constantly brought fresh water into the city, via subterranean aqueducts connected to an intricate network of reservoirs, sewers, and conduits (sec. 2.2.2). The Alexandrian metropolis was well joined with its immediate hinterland and inland Egypt by means of a navigable tributary which connected Lake Mareotis to the Kibotos, and, in turn, to the Mediterranean (Strabo, Geōgraphikȅ: XVII. 1.10). Together with the Schedian canal, it functioned as a principal artery of commercial activities, conveying products coming as far from the Indian Ocean through the Red Sea ports of Berenike and Myos Hormos (Quseir el-Qadim), via Coptos (caravan routes), down the Nile, reaching the Canopic channels into Lake Mareotis, towards the Kibotos outlet to the Mediterranean. On such a route, the city's Lake-Port would have been of utmost importance for mooring vessels. It is natural, therefore, to find its location on Saint-Genis' *planche* 31 of *Description de l'Égypte*, not far from Strabo's 'navigable canal':

Next, after the Heptastadium, one comes to the (western) Harbour of Eunostus, and, above this, to the artificial harbour, which is also called Cibotus; it too has ship-houses. Farther in there, is a navigable canal, which extends to Lake Mareotis … this (i.e. Lake Mareotis) is filled by many canals from the (Canopic arm of the) Nile, both, from above (from the south), and on the sides (from the east), and through these canals, the imports are much larger than those from the sea, so that the harbour on the lake, was in fact, richer than that on the sea.

(Strabo, Geōgraphikȅ: XVII. 1.7)

The prolongation of the mediaeval artery towards the Ottoman-controlled western port, first appears on the Razaud map (1687). Unlike the conjectured course of antiquity, the canal does not circumvent the mounds of Minet el-Bassal, towards a Mediterranean outlet: the Kibotos. Instead, it diverts eastwards, before the mounds, in the direction of the Tulunid circuit, at the section of it

between Fort Triangulaire and Bab Sidra (Plate CCX). When el-Mahmoudiya Canal was commissioned in 1817-19, to serve the purpose of its ancient antecedent, the waterway readjusted to its original path, creating the crescent-shaped curve seen on the maps of the modern city (Plate CCXI). A change-of-course as such, must have been dictated by the coastal terrain, where a depression identified by Saint-Genis, with the Kibotos of ancient Alexandria (sec. 2.1.3.2.2), would have been most suitable for receiving the canal's outlet to the present-day Western Port: within the N.-NW. sector of Minet el-Bassal (Plates: CCXII; CCXIII). Likewise, the approximate course of Strabo's navigable canal in antiquity, could not have been much different from Mohamed Ali's revival, given its relative location to the Minet el-Bassal mounds as a natural obstacle, and the morphology of the coastal plateau (Plate CCXIV).

The Razaud map provides a *terminus ante quem* for the development of the canal system of post-mediaeval Alexandria, a process which postdates Belon's *vray portraict de la ville*, hence inferable ca. 1548 - 1687. Within this range, the Ottomans altered the main freshwater supply seen running immediately to the east of Diocletian's column on the Late Mameluke-Early Ottoman maps of the Biblioteca Vaticana (1472) and Piri Reis (1521), with three subterranean aqueducts branching off a revival of the ancient Canal of Alexandria, which was yet, prolonged westwards, to reach at Minet el-Bassal. The Ottoman-revived waterway follows the path of its ancient antecedent in connecting with Lake Mareotis via a short tributary that allows navigation between the western port (reserved for Ottoman use) and the hinterland, as did Strabo's Kibotos canal in antiquity. The Ottoman artery however did not circumvent the mounds to a Mediterranean outlet. Instead, navigation terminated before Fort Triangulaire where a fourth subterranean aqueduct served as a water-supplier to the port-zone. This setting, evident on the maps of *Description de l'Égypte*, was further developed in the second decade of the 19th century to yield present-day el-Mahmoudiya Canal. More importantly is that establishing a chronology for the canal system as depicted on post-mediaeval and modern maps, shows that contemporary reconstructions of the course of the Kibotos waterway and in turn, the western periphery of the Alexandrian metropolis in antiquity, have been rather misled, as were the cartographies of Μέγας Λιμήν prior to the IEASM surveys, by the narratives of Strabo and yet, the issuance of derivates of Belon's abstract representation of the city's canal system at the very time it was being profoundly modified by the Ottomans to facilitate traffic-flow toward the eyālet's main port on the Mediterranean, perhaps, about two centuries before Mohamed Ali's grand enterprise.

Chapter III: Cityscape

3.1) Segmenting the Cityscape

In this chapter, the principal edifices (civic; religious) and funerary structures of the ancient city are contextualized in accordance with predetermined, urban and suburban sectors:

3.1.1) Pharos and the Heptastadion (PH.)

At present, the areas roughly corresponding to the ancient island of Pharos, now adjoined with the mainland through a silted-up isthmus, encompass the urban districts of: (i) el-Anfushy (eastern and central sectors) and (ii) Ras el-Tin (westernmost sector). Subterranean hypogea datable to ca. the second century BC - first century AD, were excavated at the Pharian districts (sites: 44; 45). On the northeastern extremity of el-Anfushy, the largely-restored mediaeval fort of Sultan Qaitbay (15th century) is built on a rocky spot marked (K3) on the featured maps, where the historical Lighthouse of Pharos is traditionally held to have once stood. In antiquity, (K3), originally an islet, was connected to the main island of Pharos, thru an artificial embankment (DA1) that silted up over the centuries, into a narrow tombolo. A protruding rock-feature on the northeastern coastline of el-Anfushy, to the west of the Mameluke fort, marked (K2) on the featured maps, is the site of Barthélémy Gallice's Fort Adda (19th century). It was, in turn, absorbed over time, into the current littoral, due to beach progradation. Whereas, the alluvial embankment which has been silting up since antiquity on either side of the Heptastadion, correlates, for the most part, with the district of el-Mansheiya (sec. 2.3.1; toponym derived from Coptic *mànsheei*, meaning 'pool' or 'marshy ground').

3.1.2) Western Suburbs (WSubs.)

The western suburbs correspond roughly to five districts situated from east-to-west: Minet el-Bassal (in part); Gabbari; el-Mafrouza; el-Wardian; el-Max. The farthest point is about 4-5 km from the hypothesized periphery of the ancient city (sec. 2.1.3.2.2; Conclusion I.a). The region, known for its sepulchral character, has formed the greater part of Alexandria's necropolitan suburbs in antiquity, hence the label 'Nekropolis' in classical literature. Its remnants are reflected in the archaeological record through a wide range of material culture excavated within clusters of hypogea (sites: 46-49).

3.1.3) Western District (WDist.)

This sector of the city extends from el-Falaki's transversal street R7 to the hypothesized circuit-walls in the west. It corresponds to the northern districts of Minet el-Bassal (in part), el-Labbane, and el-Genneina. In the south, lies the populace district of Karmouz, which encompasses a number of known archaeological sites: the Sarapeion (i.e. sanctuary of the syncretic, Graeco-Egyptian deity of ancient Alexandria, Sarapis) (site 52), a Ptolemaic *hippodromos*: Roman-developed *circus* (site 51), and a subterranean complex of hypogea, excavated into the Kom el-Shuqafa plateau, datable ca. the first-third to fourth-sixth century AD (site 53). The western sector correlates accordingly, with the premises of the Egyptian borough, Rhakotis. In part, Karmouz is separated from el-Labbane to the north, by a narrow strip of land largely occupied by Arab cemeteries, known as Bab Sidra.

3.1.4) Central District (CDist.)

The central district covers the region contained within el-Falaki's longitudinal streets L2-L'2 and transversal streets R7-R2^{bis}: *insulae* L2-L'2- R7-R2^{bis}. It corresponds roughly, to the urban areas of el-Attarine, Kom el-Dikka, el-Messallah Gharb and Sharq, the Latin Quarter, and el-Shallalat Park. Perhaps, apart from the tourist-attraction site of the Sarapeion, situated on the Karmouz acropolis (Amud el-Sawari), this sector of the city encompasses the only archaeological park in present-day Alexandria, where systematic excavations are carried out by the Polish Mission (PCMA) since 1960.

3.1.5) Northern District (NDist.)

The coastal region restricted to the north of el-Falaki's longitudinal street L2. It is yet delimited from the east by transversal street R2^{bis}, and in the west, by R7. It corresponds from east-to-west, to the modern districts of el-Chatby (in part), el-Mazarita, el-Ramleh, and el-Mansheiya (in part). The corpus of archaeological material excavated within such range (east: Suez Canal Road - west: Safia Zaghloul Street - south: el-Sultan Hussein Street), recalls the first-century BC narrative of the Greek geographer Strabo, on the extravagant edifices of the Ptolemaic Royal Quarter:: βασίλεια:: Bruccheion (Strabo, Geōgraphikȅ: XVII. 1.8-1.9). Resistivity geophysical surveys and limited underwater excavations, carried out by the IEASM in the 1990s, led eventually to the mapping of the subsided

coastline of the Royal Quarter, now partially-concealed beneath a pseudo-coastal belt of modern urbanization and the Corniche (sec. 2.3.1; sec. 2.3.3).

3.1.6) Eastern District (EDist.)

The eastern district of the Roman city occupies the areas between el-Falaki's transversal street $R2^{bis}$ and the hypothesized periphery of the Augustan Principate in the east: (sec. 2.1.2.2.1; Concl. I.a). From about the late-fourth to the late-second century BC, this region, as was Nekropolis in the west, formed part of the necropolitan suburbs. Archaeological investigation within the designated areas, shows the terrains heights extending NW-SE, as being constantly utilized by the earlier settlers to receive interments. The situation seems to have changed during the course of the last century of Lagid rule, due to living-space economy leading to urban expansion in an easterly direction, which further developed under the Principate, as well attested by a variety of archaeological finds: *villae (sub)urbanae*, mosaic pavements, thoroughfares, sewers, and conduits. This sector correlates with el-Chatby (in part), Wabour el-Meyah (in part), el-Hadra el-Bahareiya, and el-Hadra Qibly.

3.1.7) Eastern Suburbs (ESubs.)

The eastern suburbs correspond roughly to the region extending well beyond the hypothesized circuit-walls of the Roman city, from el-Ibrahimiya to Stanley, past the urban districts of Sporting, Cleopatra, Sidi Gaber, and Mustapha Pasha (aka Mustapha Kamel) respectively. It encompasses a group of subterranean hypogea dispersed alongside the coastline, indicating the utilisation of the coastal plateau, as is the case in the west, in the interment of the dead. Nevertheless, a new stage of development within the suburban areas, seems subsequent to the Augustan conquest of 30 BC, and the establishment of Nikopolis at 30 *stadia* to the east of Alexandria (sec. 2.1.2.2.2.1; sites: 37; 38).

3.1.8) Southern District (SDist.)

This sector of the city, which yields the least amount of material culture compared to the other districts, covers the area restricted to the south of el-Falaki's L'2 (Abd el-Moneim/Ismaīl Mahanna - Abd el-Qader/Suleīman Yousri). It is delimited on either side, by streets $R2^{bis}$ (Suez Canal) and R7 (Abu el-Dardaa), and thus, corresponds, for the most part, to the urban district of Moharram Bey.

3.2) Pharos and the Heptastadion (PH.)

3.2.1) Physical Remnants Corresponding to Known Historical Narratives

3.2.1.1) Civic Edifices

Site 43: Submerged corpus of archaeological material off Qaitbay

Maps: V1; V2; V3; V4

Miscellaneous: el-Anfushy

(i) Fort Qaitbay [Mameluke: 15th century, ca. 1477-79]

(ii) Submerged vestiges: dumped [miscellaneous incl. dynastic material relocated to Alexandria]

(iii) Submerged vestiges of the Lighthouse: collapsed in place [Ptolemaic; Roman; Late Antique]

The Lighthouse of Pharos (Plate CCXV), an emblem of the ancient city, is traditionally held to have been commissioned by a certain courtier and architect (?): Sostratos, son of Dexiphanes, from the Aegean island of Knidos, and dedicated to the Divine Saviours (θεοὶ Σωτῆρες): Ptolemy I Soter and Berenike I assimilated to Sarapis and Isis (?) (site 90), or as an allusion to the saviour attribute of Zeus, Poseidon, and the assimilated Ptolemaic king (?), as attests an epitaph allegedly carved into its base:

Σώστρατος Κνίδιος Δεξιφάνους θεοῖς ὑπὲρ τῶν πλωϊζονμένων

Sostratus of Knidos, the son of Dexiphanes, to the Divine Saviours,
for the sake of them who sail at sea

(Lucian, Πῶς δεῖ Ἱστορίαν συγγράφειν: 62)

Construction might have commenced towards the end of the reign of Ptolemy I Soter (306 BC - 285/2 BC), who at least, took the initiative for such elaborate building, ca. the opening decades of the third century BC. The Lighthouse, however, was completed and already functioning early in the reign of his successor, Ptolemy II Philadelphos (285/2 BC - 246 BC), as indicated in a Greek epigram commonly attributed to the contemporary court-epigrammatist Posidippos of Pella:

Ελλήνων σωτήρα φάρου σκοπόν, ω άνα Πρωτεύ
Σώστρατος έστησε Δεξιφάνους Κνίδιος
Ου γαρ εν Αιγύπτω σκοπιωρείσθ' απονήσων

αλλά χαμαί χηλή ναύλοχος εκτέταται
Του χάριν ευθείαν τε και όρθιον αιθέρα τέμνων
πύργος όδ' απλάτων φαίνεται από σπιλάδων
ήματι˙ παννύχιος δε θέων συν κύμματι ναύτης
όψεται εκ κορυφής πυρ μέγα καιόμενον
και κεν επ' αυτού δράμοι, Ταύρου Κέρας ουδ'
αν αμάρτοι Σωτήρος, Πρωτεύ ξείνιε, τήδε πλέων

As a saviour of the Greeks, this watchman of Pharos, O lord Proteus, was set up by Sostratos, son of Dexiphanes, from Knidos (see supra). For in Egypt, there are no look-out posts on a mountain, as in the (Greek) islands, but low lies the breakwater (i.e. the Heptastadion) where ships take harbour. Therefore, this tower, in a straight and upright line, appears to cleave the sky from countless furlongs away, during the day, but throughout the night, quickly, a sailor on the waves will see a great fire blazing from its summit. And he may even run to the Bull's Horn (2.3.3.3) and not miss Zeus the Saviour (Ptolemy Soter assimilated to Poseidon and/or Zeus?), O Proteus (the Pharian sea-deity featured in Homer's Odyssey), whoever sails this way.

(Posidippos: Epigram 115 AB)

Epigram 115 AB of Posidippos thus reveals the intended function of the Lighthouse in rendering guidance to sailors approaching the city via the eastern harbour. Indeed, rough seas, swell waves, and, perhaps, above all, shoals, and reefs huddled around the navigable fairways to Μέγας Λιμήν, would have all necessitated a construction as such, in a port-city renowned as a centre of maritime trade in the eastern Mediterranean. This seems to have been the case, especially when considering the increasing Ptolemaic interest in the Aegean markets of Rhodes, Delos, and Knidos, as testified, for instance, by the large number of Rhodian-stamped *amphorae* found in Alexandria, and yet, by a dedicatory inscription commissioned on the Aegean island of Delos, by 'the Chiefs of the Union of Alexandrian Merchants' (Walbank 1986: 101; el-Abbadi 2000: 18).

According to Strabo, the tower became known by the name of the island on which it stood: i.e. Pharos. It was built of 'white stone' (marble in use with limestone?), and comprised several stories

(Plate CCXVI). The colossal structure featured on Roman coinage (Plates: CCXVII; CCXVIII; CCXIX) and a Late Antique mosaic from Leptis Magna (present-day Labda el-Kobra, Libya) (Plate CCXX), and frequently described in the chronicles of various travellers most of whom were Arab (ca. 7th to 15th century), seems to have been a polygonal building about 100 m in height, consisting of three tapering tiers: square, octagonal, and cylindrical (Thiersch 1909: 7-13: Roman coinage, 37-52: mediaeval travellers). It often appears having two vertical rows of apertures cut into its walls. Openings as such, were purposely designed for the tower to withstand the blowing winds. The building was approachable via a flight of steps leading up to a giant doorway. A figural statue, identifiable with Ptolemy Soter assimilated to Ζεύς or perhaps, more likely, Ποσειδῶν Σωτήρ (see *supra*: Posidippos' epigram 115 AB) of the Olympian pantheon, is depicted standing at the beacon's summit; whereas, tritons in bronze, are occasionally seen holding trumpets on a lower level. The Alexandrian accomplishment of such a *colossus*, is best illustrated through the words of Edward Morgan Forster:

The Pharos (as it was called) was the greatest practical achievement of the Alexandrian mind and the outward expression of the mathematical studies carried on in the Mouseion (sec. 3.7.3.1, E).

(Forster 1922: 26)

In structural design, the Pharos Lighthouse in Alexandria recalls another stone-tower near the site of Taposiris Magna (present-day Abu Sir) on the Taenia, the calcareous ridge west of Alexandria (Plates: CCXXI; CCXXII). It is datable ca. the 2nd-1st century BC, and accepted as a funerary monument (Adriani 1952: 137-139; Fraser 1972: 18). The largely-restored beacon at Taposiris Magna (restoration ca. 1937-39) is approx. 20 m in height, thus reflects the possible design of the Pharos Lighthouse, yet, on a rather small scale. In Late Antiquity, the *colossus* in Alexandria had undergone several known phases of restoration during the course of the fourth to sixth century of the Common Era: possibly, in consequence to the Early Byzantine Tectonic Paroxysm (EBTP in Alexandria: ca. AD 365; AD 551) (sec. 2.3.1), then during the Arab period, under the Tulunids (destructive events: AD 796/7 – Abbasid; AD 881 – Tulunid; restoration 9th century; recorded by el-Yaqubi), the Abbasids (restored rule) or less likely, the Ikhshidids (restoration: 10th century; recorded by el-Masudi), and later, the Fatimids (destructive event: AD 955/6 – Ikhshidid; restoration: 10th/11th cent.; recorded by Nasir Khusraw,

el-Idrisi, el-Balawi, Yaqut el-Hamawi, and el-Qazwini) (Plates: CCXXIII; CCXXIV; CCXXV) (Thiersch 1909: 37-64). Eventually, the structurally-modified, mediaeval tower was severely devastated ca. summer 1303, in the aftermath of an earthquake which hit the eastern basin of the Mediterranean (Ibn Battuta and el-Maqrisi in Thiersch 1909: 47-49; Gorringe 1885: 108 – estimated date of the partial collapse: ca. August 8th, 1303).

In June 1477, during a visit to Alexandria, the Burji mameluke Sultan el-Ashraf Qaitbay decided to build a fortress on the ruins of the Lighthouse (el-Suyuti and Ibn Iyas in Thiersch 1909: 50-1; Fior et al. 2008: 315). The fifteenth-century, Mameluke stronghold, constructed on (K3), in proximity to the Diamond islet (K4), is indeed documented on *planches* 85 and 87.1-5 of *Description de l'Égypte* (Etat Moderne, Tome Deuxième, Imperial Edition, 1817) (Plates: CCXXVI; CCXXVII; CCXXVIII). During the British bombardment of the town, in July 1882, the greater part of the building collapsed, along with its Islamic minaret. This was followed by several phases of restoration work (Plates: CCXXIX; CCXXX; CCXXXI), which yielded the fort in its present-day form. Systematic archaeological investigation is being carried out on site, since the 1990s, following a much-debated project for the construction of submerged breakwater to protect the worn base of the fort from coastal erosion. The long-anticipated salvage inspection has turned opportune to resume the earlier, enthusiastic work of a local diver and an underwater archaeologist from London, namely Kamel Abul-Saadat and Honor Frost.

One of the submerged sites explored by Abul-Saadat in the eastern port (Plate CCXXXII), was that identified towards the foot of Fort Qaitbay, where, in May 1961, he encountered, along with other miscellaneous objects (two headless sphinxes and fragmentary columns), a colossal female statue broken in two (length: ca. 8 m; weight: 22 tonnes; material: granite) (Plate CCXXXIII) (Halim 2000: 47-48). After few attempts, it was finally raised by frogmen from the Egyptian Navy, in October 1963, yet, left on the docks for a year, before a decision was taken to put it on display at the Karmouz site of Amud el-Sawari, and eventually, at the premises of the Maritime Museum. On discovery, the statue was misinterpreted to have belonged to the temple of Isis Pharia, which appears on Roman coins, and is known from classical sources, to have been built at the northeastern tip of the Pharos Island, thus not far from the Lighthouse (Plate CCXXXIV). Other contextually-related statuary on site, would, however, provide an alternative identification of the depicted figure (see *infra*). Abul-Saadat's finds

at Pharos had led to the UNESCO-funded mission which investigated the site in October-November 1968. It included two members, Honor Frost (an underwater archaeologist) and Vladimir Nesteroff (geologist), who were soon joined by Abul-Saadat. The survey covered an area of approx. 180 m^2 northeast of the Qaitbay citadel, where a corpus of submerged material has been found scattered on the seabed, between the mediaeval fort (K3) and the Diamond islet (K4) (Frost 1975: 126-130). A list of finds was made by Frost, then reported to UNESCO in 1969, in an attempt to raise international support for a future-aided excavation on site. Nonetheless, since Egypt was in a state-of-war, and accordingly, the coastal area had become a closed military-zone, archaeological investigation was not among the government's priorities at the time. The project, therefore, was to be put on hold, and it remained as such, until the 1990s when wide-scale exploration of the submerged remnants of interest has finally taken place.

In 1993, the rather misguided placing of approximately, 180 concrete blocks (average weight: 7 - 20 tonnes) on top of the submerged remnants identified by Abul-Saadat and Frost, at ca. 30 m off the eroded base of the Mameluke fortress, led the Egyptian Supreme Council of Antiquities, in autumn 1994, to request the Centre d'Études Alexandrines to carry out a salvage excavation. The purpose of such campaign was to: "de prendre la mesure de ce site et d'en entreprendre un relevé topographique et photographique, avant de mettre à terre quelques-unes des pièces choisies par les autorités égyptiennes" (Empereur 1995: 756-760; Morcos 2003: 16). The submerged site was found to cover an estimated area of about 2.25 hectares, within which thousands of architectural material, chiefly in granite, but few in sandstone, limestone, and marble, were identified at ca. 6 - 20 m below the water-surface (Plate CCXXXV). They include fragments of column shafts (some measuring 2.40 m in diameter), bases (Ionic), capitals (Corinthian of the Alexandrian type, with floral volutes), cornices, architraves, thresholds, lintels, jambs, and large stone blocks (some weighting up to ca. 75 tonnes). Architectural styles were mainly classical (i.e. in traditional Greek orders), yet, with pharaonic-style elements, such as papyriform columns, broken obelisks, and monolithic ναΐσκοι, recorded on site.

Statuary includes a trunk of a standing male figure, measuring ca. 4.55 m from the neck to the knees. It was salvaged in October 1995, the head, in April 1996. A re-joined product stands today, at the plaza of the new Bibliotheca Alexandrina (Plate CCXXXVI). The *colossus* represents a Ptolemaic

king in pharaonic guise, recalling the female figure discovered by Abul-Saadat, back in 1961. Both statues seem to represent a Ptolemaic royal couple portrayed by a sculptor heavily influenced by the millennia-long canons of Egyptian dynastic art: i.e. the king as pharaoh, the queen as Isis. The contextual relationship is rather strengthened by the almost-similar dimensions of the recovered fragments, the commonly-adopted pharaonic style, and yet, the identification of their respective bases (height: ca. 2.30 m) next to one another. This couple is likely to have been accompanied by other *colossi* in pairs, as indicated by a recovered repertoire of fragmentary statues: (i) two heads wearing a *nemes* (striped headcloth traditionally worn by local pharaohs), (ii) the bust of a female figure, and (iii) the bases of at least, four *colossi* (Plate CCXXXVII) (Empereur 2000b: 57). The local element is further evident on the salvaged crown of 'Isis-Hathor', identified and reported by Frost, in 1968-69, and by a group of sphinxes brought to surface. The majority of salvaged objects were relocated to the archaeological park at Kom el-Dikka, where they are on display within an open-air museum.

The archaeological material off Qaitbay: an estimate of over 3,500 pieces of stonework, could be categorized into two sets: (1) remnants contextually associated with one another, thus belong to a structure not far from the reported find-spot; (2) remnants unrelated chronologically, as well as stylistically, and accordingly, seem out-of-context (i.e. relocated to the find-spot and dumped).

Group (1), to start with, includes the recorded corpus of stone blocks which possibly belonged to a monumental structure at the northeastern extremity of Pharos Island. Given the testaments of ancient and mediaeval chroniclers, the edifice in question, would be the historical Lighthouse of Sostratos. Two key finds serve to reinforce this proposition: (i) the faint traces of four Greek letters in bronze (ΑΡΙΣ: approx. 0.45 m), found carved into white marble; (ii) the fragments of door-jambs (measuring up to 11.50 m) and a lintel, which, judging by their dimensions and architectural order (Doric, recalling the southern entrance to the Alabaster tomb) (site 147), seem to have formed part of a giant gateway to a monumental building (Empereur 1995: 757; *idem* 1996: 967; Hairy 2007: 69-71, 82). In this context, the Ptolemaic *colossi* might have stood in pairs, before the Lighthouse, at the main entrance to the Great Harbour, as an explicit exemplification of royal publicity. Comparable forms of exposure would be the placement of a *colossus* of Ferdinand de Lesseps at the entrance to the

Suez Canal. Parts of the Sostratos Lighthouse might have collapsed already in the Alexandrian War of 48-47 BC, as did Cleopatra's rebuilt structure in Late Antiquity (EBTP) and the Early Arab period, in consequence to a series of natural disasters (sec. 2.3.1), hence the recorded vestiges of group (1).

The contextually-unrelated material from group (2) could have been deliberately dumped at a point in time not earlier than the partial collapse of the rebuilt Lighthouse of Cleopatra VII, in Late Antiquity. A possible date for the event is inferable at times of marine transgression: ca. the eighth-tenth century of the Common Era, during which a sharp rise in the sea-level relative to the land, had caused the waterfront to (re)adjust towards higher ground. Consequently, a 'bulwark' would have been needed to protect the severely-affected structure of the Lighthouse, situated on the flooded islet (K3). This phenomenon may justify the consecutive phases of Arab renovation and structural modification carried out first under the Tulunids and Abbasids, then the Fatimids (*supra*). It is likely that fragmentary architecture pertaining to group (2), was retained at the time, from the dismantled constructions of the ancient city, which were constantly used by the Arabs, as a quarry of building material. As was the case in 1993, a much-earlier, though likewise-controversial attempt to protect late constructions on the (K3) islet, this time the structurally-modified, mediaeval beacon, has led the quarried remains of the city's Graeco-Roman edifices, to end up partially-buried on the seabed.

Some of the identified material off Qaitbay were brought by the *praefecti Alexandreae et Aegypti*, to the city of Alexandria, having been taken out of their original context in Heliopolis, as indicated by hieroglyphic inscriptions on recovered obelisks and sphinxes. They record votive offerings made to the local divinities of Heliopolis (i.e. to the sun-god Re), where pharaonic sanctuaries served as quarries of structural and decorative material: *Aegyptiaca*. Foremost among the latter, is a pair of obelisks from Heliopolis, known as 'Cleopatra's Needles' (site 93). The recovery of a relocated corpus of pharaonic material, often termed *Aegyptiaca*, sheds some light on the Alexandrian cityscape in the Late Hellenistic and Roman periods, at times classical architectural settings were being readily complemented with Egyptian and Egyptianizing elements of decoration attested by contemporary funerary structures excavated within the Pharian district: the present-day el-Anfushy and Ras el-Tin (sites: 44; 45).

3.2.1.2) Funerary Structures

Site 44: el-Anfushy Bay

Maps: V1; V2; V4

Necropolis: el-Anfushy [Ptolemaic; Early Roman]

Remnants of rock-cut hypogea were recorded during the Napoleonic Expedition, ca. 1798-99, by Saint-Genis and Dolomieu, towards the central and western sectors of Pharos: the present-day el-Anfushy bay and Ras el-Tin (Saint-Genis 1829a: 215; *idem* 1829b: 391, No. 22; Lacroix and Daressy 1922: 11). Walls and ceilings were found covered with a coating-plaster exhibiting fresco paintings. Besides the stuccoed fragments, traces of festooned garlands and Greek inscriptions painted in ochre, were encountered. Burial-chambers of the *oikos*-type seemed interconnected, as they extended "plus dans l'intérieur de l'île, et notamment vers cette large saillie qu'elle forme directement au nord-ouest, au milieu environ de sa longueur". Several of these structures, with "cavités prismatiques", recall the hypogea of Nekropolis: the City of the Dead, evident through the western suburbs (46-49).

In 1901, the remnants of two hypogea were accidently discovered while clearing a property of Prince Omar Toussoun, in proximity to el-Anfushy Bay. Giuseppe Botti, then director of the Graeco-Roman Museum, was the first to investigate the subterranean structures which echoed the earlier recordings of Saint-Genis and Dolomieu (Botti 1897b: 52-54; *idem* 1902a: 13-15; *idem* 1902b: 16-36). These structures, labelled hypogea (I) and (II), were revisited later by Evaristo Breccia, first in 1912, then 1919-1920. During Breccia's latter inspection, hypogea (I) and (II) were found to have formed part of a larger, funerary complex comprising four other hypogea: (III) - (VI) (Plate CCXXXVIII) (Breccia 1913: 13; *idem* 1914a: 115-120; *idem* 1921: 55-69; *idem* 1922: 329-334). By the time Achille Adriani has provided a detailed description of the necropolis in *Annuaire du Musée Gréco-Romain (1940-50)* (publ. 1952), complementing the reporting of his 1939-40 excavations at Ras el-Tin (site 45), hypogeum (VI) (Plate CCXXXIX), recorded by Breccia at ca. forty meters to the northwest of hypogea (III; IV; V), i.e. outside the current enclosure, had already disappeared underneath the public gardens bordering the site (Adriani 1952: 55-97, 98-128; *idem* 1966a-b: 191-197, No. 141-146; Tav. 106, Fig. 363, Tav. 107, Fig. 365-366, Tav. 108, Fig. 369-374, Tav. 109, Fig. 375-377, Tav. 110, Fig. 378-381, Tav. 111, Fig. 382-386, Tav. 112, Fig. 387-391, Tav. 113, Fig. 392-396).

The current complex of five extant hypogea, covers an area of ca. 60 m^2 (Plate CCXL). Hypogeum (I), datable to the second half of the second century BC, has an open court (irregular quadrilateral: ca. 5.30 x 3.75 m; max. height: ca. 4.50 m) that gives access to: (i) a pair of burial-suites, with each encompassing two chambers:: suit (I): a rectangular chamber (No. 1): ca. 6.70 x 3.55 m, maximum height: 3.20 m, and chamber-tomb (No. 2): ca. 2.80 x 2.45 m, height: ca. 1.80 m; suit (II): chamber-tomb (No. 3): ca. 4.00 x 3.80 m, max. height: 2.50 m, and chamber-tomb (No. 4): ca. 3.15 x 4.40 m, height: ca. 2.50 m; (ii) reservoir-room (No. 5): ca. 2.70 x 2.75 m, height: 2.00 m; (iii) *loculus* (No. 6); (iv) well (No. 7) (Plates: CCXLI; CCXLIIa-b). The general plan of Hypogeum (II) bears analogies with (I):: a central court (ca. 4.20 x 5.50 m; max. height: 4.65 m) opening onto:: (i) a pair of burial-suits:: suit (I): a rectangular chamber (No. 1): ca. 2.40 x 5.95 m, height: ca. 3.10 m, and chamber-tomb (No. 2): ca. 2.10 x 2.10 m, max. height: 2.20 m; suit (II): a rectangular chamber (No. 3): ca. 3.40 x 6.25 m, maximum height: 3.00 m, and burial-chamber (No. 4): ca. 2.80 x 3.35 m; (ii) well (No. 5) (Plate CCXLIII).

Unlike (I) and (II), Hypogeum (III) has: (i) a narrow portico reached via an access-staircase, which opens, in turn, onto the central court (6.50 x 5.70 m); (ii) a small basin coated with reddish plaster (waterproof), beyond which is a rectangular cavity irregularly cut into the natural rock; (iii) at least, three burial-suits varying from those at (I) and (II):: suit (I): a rectangular vestibule (No. 1): 6.00 x 3.40 m, and chamber-tomb (No. 2): 2.40 x 6.40 m; suit (II): chamber-tomb (No. 3): 3.00 x 7.00 m; suit (III): a rectangular hall (No. 4): ca. 7.00 x 3.10 m, chamber-tomb (No. 5): 8.00 x 3.15 m, and a rock-cut annex (No. 6): 1.55 x 1.30 m (Plate CCXLIV).

Of all five hypogea, (IV) is the most deteriorated. Its ground plan departs from the conventions seen elsewhere at el-Anfushy. In the absence of a staircase, the hypogeum is accessible via a slope excavated into the embankment that separates it from (III). The court, already in ruins, leads onto two burial-suits accessible via partially-collapsed doorways:: suit (I): ca. 6.00 x 3.80 m, consists of a rectangular chamber (No. 1) and a rock-cut reservoir (No. 2); suit (II): 11.10 x 3.50 m, is formed of two chambers, (No. 3) and (No. 4), now-interconnected, with an intermediate wall already violated (by tomb-robbers?). Suit (II) opens onto two chamber-tombs, (No. 5) and (No. 6), which postdate the initial construction. They must have been necessitated by burial-space economy, as suggested

by the number of *loculi* cut into the walls of chamber-tomb (No. 6): ca. 4.70 x 2.40 m, which, once filled with interments, has been followed by chamber-tomb (No. 5): ca. 7.10 x 3.00 m (Plate CCXLV).

Hypogeum (V), found in a relatively-fair state of preservation when first excavated, consists of a central court (relatively small compared to the *atria* of the other hypogea: 3.00 x 3.20 m; height: 6.00 m) which opens onto:: (i) three burial suits:: suit (I): a vast rectangular vestibule (No. 1): 4.80 x 2.40 m, and chamber-tomb (No. 2): ca. 2.40 x 1.50 m, max. height: 1.60 m; suit (II): a rectangular vestibule (No. 4): 4.20 x 2.80 m, height: 2.00 m, and chamber-tomb (No. 5): 2.20 x 1.80 m, height: 2.10 m; suit (III): a rectangular chamber (No. 3): ca. 3.20 x 6.30 m; (ii) rock-cut chamberette (No. 6): 2.10 x 1.65 m (Plates: CCXLVI; CCXLVIIa-b; CCXLVIIIa-b).

Architectural decoration and wall painting at the hypogea of el-Anfushy, would serve as explicit testament to Graeco-Egyptian eclecticism: aesthetic trend intrinsic of Late Hellenistic and Roman funerary contexts in Alexandria (ca. the 2nd-1st century BC - the 3rd century AD). Examples include, but not limited to:: (1) Hypogeum (II), datable to ca. the second half of the second century BC, i.e. cotemporary with (I):: the rectangular chamber (No. 1): Egyptianizing phase of the doorway leading into chamber-tomb (No. 2), where two miniature sphinxes with their heads slightly turned towards rectangular chamber (No. 1), are seen on either side of the entrance, on upright bases stuccoed to imitate alabaster. Whereas, the piers of the doorframe, are crowned with papyriform capitals (Plate CCXLIX). (2) Burial-chamber (No. 2): Egyptian-style ναΐσκος, or *aedicula*, coated with white plaster, and represented as on wooden base projecting from the back wall (Plate CCLa). (3) A painting facing the first-ramp of the access-staircase, where four Egyptian figures are rendered against the plain, white background: the deceased, head-covered and dressed in a long, white tunic, is standing at the centre of the sepulchral scene, between Horus, on the left, and Osiris, on the right (Plate CCLb). (4) Hypogeum (V), datable to ca. the second half of the first century BC:: the rectangular vestibule (No. 4): a *loculus*-framing in the form of Egyptian-style ναΐσκος, with two papyriform pillars added on either side of the plastic-imitation (Plate CCLI). Such readiness to integrate Egyptianizing schemes into the funerary architecture of Late Hellenistic and Early Roman Alexandria, is exposed yet within the Pharian district, a few hundred meters further west, at Ras el-Tin: i.e. the Cape of Figs (site 45).

Site 45: Ras el-Tin Palace

Maps: V1; V2; V4

Necropolis: Ras el-Tin [Ptolemaic; Early Roman]

In 1913, northwest of the gardens of the Ras el-Tin Royal Palace, a site at the western extremity of the Pharos Island, Evaristo Breccia unearthed a vast hypogeum of three subterranean galleries, with finely-cut *loculi* arranged regularly in three rows. In there, were yet, hundreds of mummified corpses, mostly in a poor-state-of-preservation (Breccia 1914b: 9; Adriani 1952: 54). Breccia's tomb was no longer in place when the area was reinvestigated by Achille Adriani, in 1939-1940. At the time, excavation works were carried out by the Graeco-Roman Museum, on behalf of the Administration of the Royal Palaces, at the west-northwest sector of the palace gardens (Adriani 1952: 47-54, 98-128; Adriani 1966a-b: 188-191, No. 134-140; Tav. 105, Fig. 356-359, Tav. 106, Fig. 361-362, 364, Tav. 107, Fig. 367-368). On the eve of the Second World War, remnants of an ancient necropolis were discovered on site. These pertained basically, to eleven rock-cut hypogea categorized by Adriani, into four groups: all were severely affected by weathering-damage and violent-plundering.

Set (1) includes three contiguous hypogea: (I), (II), and (III) (Plate CCLII). Hypogeum (I) is accessible via a staircase leading down into a rectangular court (ca. 4.90 x 4.50 m) which, in turn, opens onto:: (i) suit (I): a rectangular chamber (No. 1): ca. 6.60 x 3.30 m, with two niches cut on either of its side walls to receive votive offerings; an irregularly-cut, square annex at the beginning of the chamber's right wall (No. 3): ca. 1.80 x 2.00 m; chamberette (No. 2): ca. 2.20 x 2.45 m (Plate CCLIII); (ii) suit (II): a rectangular chamber (No. 4): ca. 5.50 x 2.75 m, with one irregularly-cut chamberette at the end of the left wall (No. 5): ca. 2.00 x 2.10 m; (iii) rock-cut *loculus* (No. 6) at the northwestern corner of the open court; (iv) reservoir-room (No. 7): 2.95 x 2.60 m. Hypogeum (II) is reachable through a long access-corridor which lead into a largely-destroyed courtyard of which only the southern side had survived. It opened onto another burial-suit:: (i) a rectangular chamber (No. 8): ca. 6.50 x 3.40 m, with five *loculi* (No. 10-14) cut deep into the side walls; the two into the eastern wall, (No. 13) and (No. 14), were dug partially underneath the pavement of the neighbouring hypogeum, (III), which was excavated at a level higher than that of (I) and (II); (ii) an almost-square chamberette (No. 9): 2.75 x 3.40 m, with a *loculus* cut into the back wall. The access-corridor to Hypogeum (II) lead, at

first, to a partially-excavated chamber, the state of preservation of which made an investigation into its nature rather dangerous; then to a reservoir-room (No. 15): ca. 2.50 x 3.95 m, with walls coated in hydraulic-plaster, and two support-pillars at the centre. Hypogeum (III), the richest in terms of fresco-painting, is accessible via corridor (No. 16); on its left wall (in fact, the only preserved one), is a rock-cut niche, and immediately next to it, the mouth of a well that postdates the hypogeum's first phase of construction. The corridor lead into:: (i) a rectangular chamber (No. 17): 3.80 x 6.75 m, with two niches cut into the left wall to receive votive offerings; (ii) two *loculi*, (No. 19 and 20), cut into the right wall; (iii) a square chamberette (No. 18): ca. 2.90 x 2.60 m, accessible through the back wall of the main chamber. Traceable among the fading frescoes of (No. 17), were the painted scenes of the façade, involving patterns of garlands and ribbons, floral motifs, and representations of human figures. Perhaps, the most prominent would be the one of a pot with a bushy plant atop which a bird poses; above, is a nude figure of Ἡρακλῆς (Herakles), the mythological, divine hero of the Hellenes (Plate CCLIVa-b).

Set (II) includes hypogea (IV), (V), and (VI). Hypogeum (IV) (Plate CCLV), the better preserved, is accessible via a staircase (length: 4 m; width: 1 m) leading into a central court (ca. 3.20 x 3.60 m) which opens onto:: (i) burial-suit (I): a rectangular chamber (No. 1): 4.90 x 3.20 m, with four niches for votive offerings, cut into either lateral wall, and a *loculus* at the end of the right wall; a smaller, square chamberette (No. 2): 2.00 x 2.00 m; (ii) burial-suit (II): a rectangular chamber (No. 3): 3.40 x 6.50 m, with four niches for votive offerings, and four *loculi* into all three walls; one *loculus*, cut into the left wall, is exceptionally large, almost like a chamberette (No. 4): ca. 2.00 x 2.20 m. (iii) a small, square chamber (No. 5): 1.60 x 1.60 m, towards the end of the access-staircase. Next to the passage to chamber (No. 1), is a large, rectangular basin coated in hydraulic-plaster. The surviving sections of Hypogeum (V) include one burial-suit reachable by means of an already-violated, open-air courtyard, and consists of: (i) a rectangular chamber (No. 6): 6.25 x 3.40 m, with votive-offering niche and *loculus* into the right wall; cut into the opposite wall, is a large, chamberette-like *loculus* (No. 8): 2.00 x 2.00 m; (ii) a trapezoidal chamber (No. 7): 2.80 x 2.00 m, with a large niche cut into the bottom wall to receive a sarcophagus. The back wall of the niche itself, has collapsed, allowing communication with the neighbouring hypogeum, (IV), through an annex cut (by tomb-robbers?)

at the southwestern corner of the courtyard. Of Hypogeum (VI), partially-excavated, survives only one section of a burial-chamber (No. 9) with, at least, five rock-cut *loculi*.

Set (III) includes hypogea (VII) and (VIII). The only surviving part of Hypogeum (VII), is basically, another rectangular chamber with nine *loculi*: three cut into each of its walls (Plate CCLVIa). Likewise, Hypogeum (VIII) is represented by a single chamber (ca. 2.35 x 3.30 m), rectangular and elongated, (Plate CCLVIb). A form of a *triclinium*, with a narrow, central passage, is formed by a U-shaped bench alongside all three walls. Whereas, a chamberette-like *loculus* (ca. 2.25 x 1.80 m) has been opened on the right wall. At the back wall, is a κλίνη-alcove (*klinē*: funerary couch), with a *loculus* cut into the left wall. The architectural façade of the alcove features: two half-columns supported with two pillars, thus creating three passageways: a wider one at the centre, and two narrow on either side. Both columns, stuccoed and painted alternating red and white bands, are crowned with Corinthian capitals of the composite-type (Plate CCLVII). The upper part of the façade consisted of an architrave and projecting cornice added beneath a segmental pediment. Within the alcove itself, a funerary κλίνη is carved out of the rock, with a mattress and cushions on the upper part; below, the framed *tapis* covers the rectangular façade of the κλίνη. It exhibits two large birds flanking a central floral-motif, with stylized-volutes decorating the corners.

Set (IV) includes hypogea (IX), (X), and (XI). They were excavated by Breccia, in 1913 (XI) and 1914 (IX-X), and published later, by Adriani, in *Annuaire du Musée Gréco-Romain (1940-50)* (1952), with ground plans drawn by M. Bartocci. The surviving sections of hypogea (IX) and (X) include:: (IX): a rectangular chamber (ca. 3.20 x 1.50 m) with four *loculi*: one cut into the back wall, three into the lateral walls; (X): another elongated chamber (ca. 4.00 x 1.50 m), which, besides the four *loculi* into its side walls, had a large niche cut into the bottom wall, recalling that of chamber-tomb (No. 2) in Hypogeum (I) (Plate CCLVIIIa-b). Hypogeum (XI), briefly reported by Breccia, in *Rapport sur la Marche du Service du Musée en 1913* (1914), was, to a certain extent, structurally different from the other hypogea encountered at the Ras el-Tin necropolis. Its exceptional, T-shaped plan comprises three irregularly-cut, subterranean galleries, with each having tens of rock-cut *loculi* regularly-arranged in three rows, and containing hundreds of mummified corpses (Plate CCLIX).

The excavated hypogea at Ras el-Tin, datable, in general, ca. the first century BC - first century AD, bear remarkable analogies, both topographical as well as typological (architectural decoration and wall painting), with those unearthed near el-Anfushy bay, suggesting the presence of a major necropolis towards the wester sector of the ancient island: i.e. a Pharian Nekropolis, one extending through the Ras el-Tin promontory, where the funerary structures reported, first by Breccia, then Adriani, represent only a confined section of the necropolitan areas of Pharos. A Graeco-Egyptian, eclectic trend seems on display at both premises, el-Anfushy (site 44) and Ras el-Tin:: (i) Hypogeum (III): chamber-tomb (No. 17): local motifs, such as the painted figure of an Apis bull, the Memphite deity, with the *emblema* of the sacred solar-disk of Hathor on its forehead, is met within the same context of the nude Ἡρακλῆς; (ii) Hypogeum (VIII): main burial-chamber: the architectural façade of the κλίνη-alcove, where a bicultural trend is exemplified by two composite (Corinthio-Egyptian) capitals, and an Egyptian segmental pediment. Eclectic patterns as such, from Late Hellenistic and Early Roman funerary contexts, become rather explicit in imperial times, within the hypogea of the Alexandrian mainland, as evident, for instance, at Kom el-Shuqafa (site 53).

3.3) Western Suburbs (WSubs.)

3.3.1) Physical Remnants Corresponding to Known Historical Narratives

3.3.1.1) Funerary Structures

Site 46: Nekropolis: Phase I: West of el-Mahmoudiya Canal

Maps: V1; V2; V3; V4

Necropolis: Minet el-Bassal [Ptolemaic; Roman; Late Antique]

Between the end of 1950 and the beginning of 1951, a complex of subterranean hypogea was accidently unearthed during construction works carried out by the Société Générale de Pressage et de Dépôts, in the district of Minet el-Bassal (the Port of Onions). Achille Adriani, who intervened in an attempt to salvage the largely-destroyed structures, located the site "in un terreno situato, subito dopo il ponte sul canale Mahmudieh, a NE. della via el-Tarikh, e delimitato ad oriente, dalla via el-Hawis" (Adriani 1956a: 17-33; Adriani 1966a-b: 157-159, No. 110-112; Tav. 81, Fig. 265-266, 268-270, Tav. 82, Fig. 271-275, Tav. 83, Fig. 276, Tav. 101, Fig. 341). The excavated zone has yielded quite a dense cluster

of rock-cut hypogea which were abandoned and severely devastated already in antiquity, before modern urbanization disturbed the remains. Only three sections (*infra*) of the once vast necropolis were yet identifiable at the time of Adriani's salvage excavation; of these, only one was thoroughly studied and reported: Sezione (A).

Sezione (A) includes three hypogea (Plates: CCLX; CCLXI). Hypogeum (I) consisted of:: (i) an access-staircase; (ii) a rectangular vestibule (No. 1) (ca. 2.45 x 1.35 m) flanked by two sarcophagus-alcoves; (iii) a rectangular chamber (No. 2), irregularly-cut (7.50 x 3.00 m), with *loculi* into the walls. Of the two alcoves flanking the vestibule, the one on the left, had a fairly-preserved, architectural façade that features protruding pillars; the interior was occupied by a rock-cut sarcophagus with a sloping lid. The alcove on the opposite side contained: a κλίνη-like sarcophagus carved out of the rock (an imitation of funerary κλίναι), mattress, a pair of cushions carved out at either end, and turned legs (Plate CCLXII); the façade was stuccoed, and painted motifs which were no longer visible. Hypogeum (II), indeed the least-preserved, was accessible via a staircase with side-entrance to a rectangular chamber (No. 7) occupied on all three sides, by three or four rows of rock-cut *loculi*.

"Più vasto, più complesso, più intéressante", to quote Adriani, seems to have been Hypogeum (III), extending to the south, west, and northwest, through the excavation profile, with an extension to the southeast and southwest, where digging was 'not possible'. The excavated section includes a quadrangular, partially-collapsed court (No. 3):: (i) the south side had no openings, but a couple of *loculi* cut at its westernmost segment; (ii) the north side: a wide entrance to an alcove (see *infra*); (iii) the east side: a much-wider entrance leading to a quadrangular compartment (3.50 x 3.10 m) which gave access to a vast, rectangular chamber (No. 6) (ca. 3.50 x 7.00 m); (iv) the west side: a partially-excavated chamber (No. 4) (max. reached: 2.75 x 3.25 m) forming the southern extension of a narrow, elongated chamber (No. 5) (2.35 x 6.00 m), with *loculi* cut into its back and lateral walls. Best preserved among the remnants, perhaps the most significant as well, is the alcove (ii) carved out of the northern wall of the central courtyard. It had a wide entrance flanked on either side by Ionic half-columns supported with a couple of pillars; they, in turn, served to support an architrave with garland patterns, above which ran a band of Ionic *kyma*, surmounted by a projecting cornice

(Plate CCLXIIIa-b). Inside the alcove itself, were the remains of a funerary κλίνη. In this case, however, it was found completely destroyed, yet recognizable through faint traces of two pairs of cushions, each carved out at either end of the rock-cut mattress. Cut at the centre of the alcove's back wall, above the κλίνη, was a rectangular niche with a stuccoed frame. Traces of funerary painting were still visible at the time of discovery, on either side: one scene is traceable to the right (Plate CCLXIV); whereas, on the left, a fading one seems to have been already violated by a deep cut intended to create room for a trapezoid-shaped *loculus* that connects with the neighbouring *loculus*-chamber (No. 5). Analogies between the κλίνη-alcoves excavated at Minet el-Bassal, and other Hellenistic, funerary architecture encountered within the eastern *necropoleis*, in particular, Hypogeum (II) at Mustapha Pasha and Thiersch's Sidi Gaber hypogeum (sites: 156; 160), would date Sezione (A) to ca. the third - early-second century BC: a chronological range of use backed by the sporadic fragments of Hadra *hydriai* recovered through the excavated zone.

Sezione (B) includes a *loculus*-chamber which would have formed part of one of the destroyed hypogea on site. It is basically, a perfectly-square chamber (3.00 x 3.00 m) with regularly-arranged rows of *loculi* cut into its walls (Plate CCLXV). An unusual encounter within the chamber, was a *loculus* cut into the eastern wall, which retained its stuccoed closing-slab: a richly-decorated, architectural frame (Doric leaf; Lesbian leaf; Ionic egg-and-dart ornament) enclosing a figurative scene flanked by two supporting pillars, within which stood a male in the nude, with his right hand outstretched, and the left bent upwards, to his chest; a relatively-small, dressed female figure is represented yet sitting at the upper-left corner of the *loculus*-closing slab (Plate CCLXVI). The compositional scheme of such a type of painted architectural frames, which recalls similar patterns of Pompeian painting in the third and fourth style, suggest a possible date not earlier than the first-second century AD.

As the case with (B), Sezione (C) includes a *loculus*-chamber, however, rectangular (3.00 x 4.50 m). It features:: (i) a wide entrance-hall to the chamber; (ii) four *loculi* irregularly cut into the left wall; (iii) nine *loculi* arranged in regular rows, into the bottom wall; (iv) a rectangular alcove cut into the right wall (Plate CCLXVII). Two sarcophagi of nummulithic limestone, thus locally-manufactured, were found within the chamber: one without ornaments, alongside the bottom wall, and another

occupied the alcove into the lateral wall. The latter (length: 2.00 m; width: 0.93 m; height: 0.87 m, 0.71 m without the lid) was transferred to the Graeco-Roman Museum in Alexandria (Inv. No. 25879). Ornamentation is carved in low relief, and consists of festooned garlands within three Βουκράνια (ox heads); two bunches of grapes are rendered hanging down below a couple of ἀγαθοδαίμονες (serpents as the spirit of vineyards) (Plate CCLXVIII). Greek, funerary epitaphs (Adriani: 1st cent. AD, Fraser: 2nd cent. AD; the sarcophagus itself, Adriani: ca. 1st cent. BC) on the lid, read: (a) AXIΛΛEYC EYΨYXEI; (b) AXIΛΛA EYΨYXEI: be of good cheer (i.e. be cheerful) Achilleus/Achilla (the deceased).

The chronology of the partially-excavated necropolis at Minet el-Bassal, seems inferable given its: (i) architectural decoration, funerary painting, and contextual finds; (ii) relative location to the western periphery of the ancient city. (i) and (ii) are interrelated. In fact, the excavated repertoire of archaeological material suggests a necropolis in use, from the third century BC to about the first-second century AD: an extended range of use for clusters of funerary structures of which the oldest were constructed by earlier generations of Graeco-Macedonian settlers, immediately to the west of Strabo's navigable canal that connects Lake Mareotis to its Kibotos outlet to the Mediterranean. The excavated hypogea at Minet el-Bassal would therefore, constitute a first phase of Nekropolis, with contemporary, and subsequent, phases represented by an array of subterranean catacombs stretching westwards, from Gabbari to el-Max. Interments at Minet el-Bassal seem to halt around the second century AD, possibly in consequence to burial-space economy within the four-century-old necropolis. This is the time the Kom el-Shuqafa plateau, extending at the southwestern corner of the urban circuit, was reutilised to receive collective interments on a rather large scale (site 53).

In the 1880s, during the levelling of the terrain heights at the Village of Tartouchy, not far from Pont Neuf of el-Mahmoudiya Canal, "des hypogées chrétiens et des sépultures entassées jusqu'à la surface supérieure de collines". The accidental encounters were reported by Tassos Neroutsos:

Un peu plus loin, derrière la Bourse de Minet-el-Bassal; sur l'emplacement du mur d'enceinte arabe (Tulunid circuit-wall) et après la porte occidentale ou de Qabbàry d'autrefois (i.e. Bab Gharb), entre celle-ci et la mer, en creusant pour jeter les fondations d'une usine à pressage mécanique de coton, on a trouvé des sépultures chrétiennes souterraines, tout un quartier de catacombes creusées dans

le roc, avec des loculi et des inscriptions écrites en ocre rouge sur les parois extérieures indiquant les noms de personnes d'ordre religieux. On trouva même quelques tablettes en marbre (loculus-closing slabs) ayant servi à fermer les ouvertures d'autres loculi, qui portaient des inscriptions de l'époque constantinienne.

(Neroutsos 1888: 61)

Neroutsos' recordings shed further light on the geographical extent of the first phase of Nekropolis along the west bank of Strabo's 'navigable canal'. His "chrétiennes souterraines" rather exemplify the Christian (re)utilisation of abandoned funerary structures, during the course of ca. the fourth-to-seventh century, in Minet el-Bassal and yet westwards, at Gabbari and el-Mafrouza (sites: 47; 48).

Site 47: Nekropolis: Eastern Sector

Maps: V1; V2; V3; V4

Necropolis: Gabbari [Ptolemaic; Roman; Late Antique]

47.a) Initial Investigation: Tassos Neroutsos

As is the case elsewhere in Alexandria, progressive urbanisation in the nineteenth century had a direct effect on the extant remains of ancient Nekropolis. Continuous vandalism at the time, may be glimpsed from Neroutsos' narrative in his 1888 monograph:

Des hypogées qui donnent sur le rivage de la mer, une partie, est usée par les courants intérieurs de la rade; une autre partie, plus en dedans, et creusée vers le village de Méks (el-Max), est écroulée et comblée, ou a été détruite par la Compagnie anglaise des jetées et docks du port d'Alexandrie, pour en extraire les matériaux nécessaires à ses travaux hydrauliques.

Les fouilles qu'on fait de nos jours dans cet endroit (i.e. Gabbari), ne sont point exécutées à un point de vue archéologique; l'objet de ces fouilles est, comme ailleurs, l'exploitation des matériaux de construction, sous la surveillance de marchands de pierres et de chaufourniers, qui prennent peu d'intérêt aux restes vénérables de l'antiquité, et qui jugent de la valeur intrinsèque des anciens monuments par leur contenu en matériaux solides, pesés au quintal ou mesurés au mètre cube.

(Neroutsos 1888: 74-75)

While surveying the necropolitan areas of interest, Neroutsos has encountered miscellaneous artefacts pertaining chiefly, to the Hellenistic period: i.e. terracotta figurines of the Tanagra-type, statuettes of Dionysos holding a bunch of grapes, others of Hypnos next to a poppy-stem, and a variety of cinerary urns of the Hadra-type (plates: CCLXIX; CCLXX). Other hypogea, of the second and third centuries AD, yielded funerary *stelae* and inscriptions painted in ochre, indicating both pagan and Early Christian interment. Of the latter, one hypogeum was discovered in August 1876, on the sea-side, northwest of Gabbari (Neroutsos 1888: 76-79). It had a quadrangular, vaulted chamber (3.24 x 3.24 x 4.46 m). On entering, in the middle of the structure, was an altar of bluish marble, circular in shape at the base, and irregularly cut at the top. It might have served, as it appears, among the earlier Christians, to lay down the Eucharistic loaves offered in funereal feasts. The altar was 0.89 m high; its diameter measured 0.73 m at the base. The left wall was smooth and intact. The right wall featured a painted escutcheon enormous in profile, greenish in colour; the upper quarter of it, bears the Greek acronyms XP and XT:: Χριστοῦ Χάριτι: i.e. 'by the grace of Christ'; whereas, on the lower quarter, were three branches of an olive tree.

Neroutsos' finds at Gabbari, briefly reported in *L'Ancienne Alexandrie: Étude Archéologique et Topographique* (1888), attest the wide chronological range of use pertaining to this zone of ancient Nekropolis, spanning from the third century BC to ca. the sixth-seventh century AD. A millennium-long range of burial practices within Gabbari, is confirmed by a series of excavation works carried out over a century, from G. Botti's investigations in the 1890s, to the salvage interventions of the Centre d'Études Alexandrines in the 1990s (site 47b-k).

47.b) Miscellaneous Finds: Giuseppe Botti

In 1892, while investigating the finds reported earlier by Neroutsos, at Gabbari, Giuseppe Botti, the first director of the Graeco-Roman Museum, encountered "tombe di buona conservazione e l'ingresso di altre che sembrano inesplorate" (Botti 1893: 18). Botti's surveys took place in 1892-96; the results were briefly reported in 1897:

Gabbari: hypogées d'époque ptolémaïque et romaine, chapelles funéraires chrétiennes.

(Botti 1897b: 27)

Botti then gave a Strabonic account of 'the region in antiquity':

C'etaient d'abord des jardins et des plantations pour fournir les couronnes de fleurs devant orner les tombeaux et les plantes destinees a l'embellissement des enclos funeraires: des poupees en ivoire, des figurines en terre cuite du Fayoum, des steles en calcaire sculptees et auxquelles il ne manquait que la legende indiquant le nom du mort, son pere et son age; des cartonnages de momies, des cercueils peints, des jarres et des cruches, des fioles a parfums, des autels d'offrandes.

Il y avait sans doute des ateliers de sculpture et de peinture, des entrepreneurs de monuments funeraires, des embaumeurs, des croque-morts, des pretres de l'ordre inferieur, des jardiniers qui se chargeaient d'entretenir les monuments sepulcraux.

(Botti 1898c: 54-55)

In 1898-1899, the construction of a roadway connecting the city of Alexandria to the suburban district of el-Max, commissioned at the time by the Administration of Railways, brought to surface a number of accidental finds (Botti 1899b: 37-56). Known among the sporadic encounters, have been the remnants of a large hypogeum to the west of the ex-Fort Saleh (Tabbyet Saleh), in proximity to the seashore. In September 1898, having thirty workers under command, Botti decided to excavate the already-collapsed, subterranean structure which was constantly quarried for the construction of a new quay at the Western Port. Accessible via a staircase which led down to a square vestibule, the hypogeum yielded an Ionic colonnade:: intercolumniation: 1.50 m at the centre, 1.27 m on the sides; diameter of pillars: 0.23 m; fluted columns:: diameter: 0.46 m, height: 4.15 m; façade: 5.42 m (Plate CCLXXI). Other partially-excavated, rock-cut hypogea were reported by Botti, in the second volume of the *Bulletin de la Société Archéologique d'Alexandrie*. Most of these funerary structures were accidently unearthed within Gabbari (Plate CCLXXIIa-b) and el-Mafrouza (site 48).

The remnants of the subterranean structures of ancient Nekropolis, which were encountered by the Administration of Railways while working in progress on the roadway to el-Max, had raised an interest during the Sieglin Expedition to investigate the necropolitan areas west of Minet el-Bassal.

47.c) Zwei Gräber: (I) and (II): Hermann Thiersch

In July 1899, while mining the southern slope of the Gabbari plateau (47b) by the Administration of Railways, the remains of two hypogea datable to the Roman period, were accidently unearthed. Five months later, in December, the Archaeological Society of Alexandria then asked the German archaeologist Hermann Thiersch to carry out excavations on site (Thiersch 1900: 7-40). Hypogeum (I) was accessible via a staircase which led into a burial-chamber of 4 m^2 (Plates: CCLXXIIIa-c; CCLXXIV). On either side-wall, were two rows of three rock-cut *loculi*. At one corner, to the left, was a deep well, the fresh water it supplied, was poured into a nearby reservoir. At the midst of the chamber, stood an altar for sacrificial rites. The first burial-chamber opened onto another, which was similarly, of a stonemasonry construction (material employed: Mex limestone). It had a vaulted ceiling; whereas, the level of its floor was lower by ca. two steps than that of the first room. An extant fragment of a floor-mosaic in various colours, was found at the centre of the vaulted structure. Rows of *loculi* were cut into the walls, where at the middle of the upper row, into the bottom wall, was an infant's sarcophagus in lead, in front of which a large wooden one has been placed. Above the *loculus* cut immediately to the right of the latter, two funerary epitaphs painted in red and black ochre, read: (1) ΓΑΙΟΥ ΙΟΥΛΙΟΥ ΕΠΙΜΕΛΟΥC: 'Gaius Iulius Epimeles' (the deceased); (2) ΜΑΡΓΑΡΙ ΚΥΡΙΑ ΕΥΨΥΧΙ L ΚΘ ΜΗ Δ ΗΜΕΡωΝ ΙΙΙ: 'the lady, Margaris, died at the age of 28 years, 3 months, and 3 days'. In all, within Thiersch's Hypogeum (I), there were twenty-eight *loculi* containing about sixty corpses.

Hypogeum (II) was reachable via an access-staircase that lead down into a burial-chamber (area: 4 m^2; height: 3.50 m) (Plate CCLXXVa-c). In the middle, a square-pillar supported a horizontal ceiling. Four columns segmented the left wall into which a large *loculus*-recess was cut. The back wall had two regular rows of four *loculi*, divided vertically, by standing pillars surmounted by plain capitals. Installed at the right wall, was a rectangular door with stuccoed, segmental pediment. In between the metopes, instead of the conventional triglyphs, were Egyptian motifs: basically, three *uraeus*-serpents crowned with solar-discs (Plate CCLXXVIa-b). In turn, the inner burial-chamber had about ten irregularly-arranged *loculi* into its walls. Whereas, in all, the hypogeum encompassed about forty-one *loculi*, of which few contained various funerary objects such as cinerary urns. In January 1900,

Thiersch finally reported the results of his excavations, which were published in the same year, in the third volume of the *Bulletin de la Société Archéologique d'Alexandrie*.

47.d) Fort Saleh Hypogeum: Evaristo Breccia: DAI's Hypogeum (A1)

In 1930, during the construction of two streets to el-Mafrouza, with one almost parallel with the modern quay of the Western Port, near the area formerly occupied by the demolished Fort Saleh, the remnants of funerary monuments were accidently unearthed. They were built of large blocks of limestone, forming a rectangular base, upon which two or three relatively-smaller, cubic blocks elevate: stepped pedestals. On top, was either a *stela* painted or carved in low relief, or pillars as grave-posts. Analogies with other funerary monuments excavated within the eastern *nekropoleis*, i.e. at el-Chatby (site 145), together with a corpus of contextual finds: fragment of a limestone altar, pottery, lamps, figurines, and cinerary urns, would date the Fort Saleh remnants to the Ptolemaic period: ca. the third century BC.

Perhaps, the most significant among Breccia's encounters at the time, was a large subterranean hypogeum accessible via a staircase leading down into several chambers and galleries of rock-cut *loculi*. Accidently discovered about 50 m to the northwest of the junction of both streets, the vast, underground structure was partially excavated given the 'limited budget assigned to the project'. One burial-chamber was of particular interest to Evaristo Breccia, for it had an alcove cut into the bottom wall (Plate CCLXXVIIa-b). In fact, the Egyptianizing façade of the alcove was flanked by columns crowned with capitals of the composite, Egyptian-Corinthian style with floral-volutes, papyrus, and lotus. The Egyptianizing effect is reinforced by broken lintels attached to either column. The lower section of the alcove, was occupied by a rock-cut κλίνη-sarcophagus with a total length of ca. 3.05 m. A rectangular *châssis*, 2.95 m long, was supported by four colonnettes, each measuring approx. 1 m in height. Two *fulcra* were fixed to hold firmly the pair of cushions placed at either end of the mattress. Whereas, a rich polychrome painting has covered the mattress itself, and its rectangular *châssis*, as it descended almost towards the ground. Entry into the κλίνη-sarcophagus, which had an irremovable lid, was carried out from the rear, through the alcove's short-side. The walls of the alcove had almost nothing left but meagre remains of a richly-painted decoration above a layer of

stucco with which they had previously been coated. Three shallow niches have been hollowed out of the back wall, above the κλίνη-sarcophagus. The rectangular niche at the centre, touched down the mattress; the other two, relatively-short, were on the level of the side-cushions. In the central niche, was a painted figure of Osiris standing below a frieze of *uraei*; he is armed with a whip and a *lituus*. The painting of the other two, was violently damaged by a hammer (tomb-robbers); below these, were traces of two serpents in attacking pose. Within the space between the external niches and the lateral walls of the alcove, were vestiges of paintings: on the right, a seated female-deity: Isis (?), as suggested by Breccia; on the left, a Thoth, or Horus (?), rendered in right-profile. On the side walls, were the remains of two figures of a mummified Osiris. The ceiling was decorated in a way as to imitate a drapery or *baldacchino*. Breccia, unable then to excavate the other chambers of the vast hypogeum datable to ca. the first century BC, maintained: "J'ai pu assurer la conservation de ce souterrain. Peut-être pourra-t-on l'explorer plus à fond dans l'avenir" (47i) (Breccia 1932: 36-37).

47.e) Two Contiguous Hypogea: (A) and (B): Banoub Habachi

In February 1935, two contiguous hypogea datable to the Roman period, were accidently found during the digging of foundations for new constructions by the Administration of Railways, within the vicinity of the Gabbari Goods Station (Habachi 1937: 270-285). Both structures were excavated by Banoub Habachi from the Graeco-Roman Museum (Plate CCLXXVIII). Hypogeum (A) was accessible via a U-shaped staircase leading down to a courtyard (No.1) (3.50 x 3.00 m; preserved height of walls: 3.70 m); at the centre of the court, was an altar in stonemasonry (0.50 x 0.50 m; maximum height: ca. 0.25 m). The courtyard opened onto:: (i) the left wall: an alcove (2.20 x 2.15 m; height: 2.00 m) occupied by a rock-cut sarcophagus flanked by engaged pilasters. A set of figurative, Egyptianizing scenes were recognizable on the façade of the sarcophagus, the back and side walls of the alcove, and the lateral faces of the doorway's jambs. Various motifs decorated the celling. The polychrome painting, poorly-preserved, was of a lesser quality. Both panels, on the façade of the sarcophagus, and the back wall of the alcove, had a common mortuary-theme: a mummified figure laid out on a lion-bed set up on low-pedestals, and flanked by local deities. (ii) The back wall of the courtyard: a trapezoidal chamber (No. 2) (ca. 3.30 x 3.20 m; height: 2.50 m) with two rows of *loculi* cut into all three walls. (iii) The right wall of the courtyard: an intermediate chamber (No. 3) (ca. 2.15 x 1.75 m;

height: 2.50 m) with two rock-cut niches into the side walls. (iv) The back wall of (No. 3): a *loculus*-chamber (No. 4) (ca. 3.20 x 3.15 m; height: 2.50 m).

Hypogeum (B), already largely-destroyed on discovery, had a surviving, quadrangular chamber (No. 1) (ca. 3.00 x 3.00 m) with a vaulted ceiling, and regularly-arranged rows of *loculi* cut into the walls. The latter opened onto yet another *loculus*-chamber (No. 2). Among several rock-cut *loculi*, almost all sunk and violated, a distinguishable one was found enclosed by a painted slab exhibiting figurative motifs of an eclectic, Graeco-Egyptianizing style. Signs of reinforcements and renovation are evident on the main entrance, where the original, rock-cut flat-lintel of the doorway has been replaced with a segmental pediment in limestone.

47.f) A Soldier's Hypogeum: Victor Ghirghis

On July 27th, 1954, the remnants of a hypogeum were accidently discovered in Gabbari, at Ard el-Moaiz Street, during the construction of a new depository, a replacement of a demolished one, by the ex-Société Générale de Pressage et de Dépôts (Adriani 1966a-b: 160-161, No. 116; Tav. 84, Fig. 282, Tav. 85, Figs. 283-284, 286, 288). Salvage excavations were carried out by Victor Ghirghis, then director of the Graeco-Roman Museum. The results supported with photographs, were communicated to Achille Adriani, who published them, in *serie* (C) of his *Repertorio d'Arte dell Egitto Greco-Romano* (Plates: CCLXXIX; CCLXXXa-b). The surviving parts of Ghirghis' hypogeum comprised: (i) a κλίνη-alcove; (ii) two burial-chambers with rock-cut *loculi*; (iii) a larger chamber where excavations seemed not possible. The latter communicated with the κλίνη-alcove through an opening on the left wall. The Doric-framed gateway of the κλίνη-alcove was flanked by two ἀγαθοδαίμονες carved out in relief. The ceiling yet retained part of a stuccoed-coating of alabaster-imitation. A unique feature of this hypogeum, was the in-relief decoration which covered the long and short sides of the κλίνη-alcove. Indeed, at the centre of its bottom wall, above the funerary κλίνη, was a *pseudo-porta* simulating a traditional ναός of an Egyptianizing-style; to the right, a rigid *cuirass* (armor) with a double-row of πτέρυγες (*pteryges*: a decorative skirt of leather, or otherwise, fabric strips, often worn around the waists of soldiers); to the left, a helmet with raised-cheekpieces, is seen frontally, with a sword and a pair of greaves. On the short wall, to the right of the funerary κλίνη, there was a large round-

shield and two spears; on the left, it was possible on discovery, to recognize a bearded herm. The setting suggests an alcove designed to receive a deceased soldier; such type of featured weaponry, especially the armor, dates the structure to the Ptolemaic period: ca. the second-first century BC.

47.g) A Complex of Hypogea: Henri Riad

In autumn of 1965, a subterranean complex of three hypogea was accidently unearthed during construction works to demolish old warehouses within the area near the ex-Fort Saleh in Gabbari. Subsequent excavations have been carried out by Henri Riad, then director of the Graeco-Roman Museum. The unearthed structures followed a typical axial plan, with a central courtyard opening onto secondary burial-chambers (Leclant 1965: 177; *idem* 1966: 128; Adriani 1966a: 264-65, Pag. 154, Fig. Zb). One chamber had an architectural façade which features a doorway: an entrance flanked by two partially-fluted quarter-columns, and at least, two (for the one on the left side was found missing) pseudo-windows exhibiting a diagonal-grating pattern (Plate CCLXXXI). They were possibly executed separately, then inserted into carved-out, hollow niches on either side of the entrance, to simulate two windows, thus strongly recalling the pseudo-windows of Hypogeum (A) at el-Chatby (site 145). The excavated remnants, reported by Achille Adriani in 1966, are datable to the Ptolemaic period.

47.h) Section of a Hypogeum: Wiktor-Andrzej Daszewski

In the early 1970s, while searching for those remnants unearthed by H. Riad in 1965-1966 (47g), Wiktor-Andrzej Daszewski, a Polish archaeologist (PCMA), encountered the remains of a hypogeum 'the greater part of which has already disappeared, having been quarried' (Daszewski 2003: 659-670). The surviving section of it, was discovered within a deep void partially covered with debris (refuse), on the slope of a mound of rock, on top of which a small settlement was built of various fragments of retained material. On entering the void, a large, rectangular chamber was reachable (4.75 - 5.00 m x 3.25 - 3.50 m), with a κλίνη-alcove cut into the bottom wall. As the case today with Hypogeum (A) at el-Chatby, Daszewski's burial-chamber was found partially-drenched. It actually descended approx. 30 cm below the level of the groundwater. On either side of the chamber, the lateral walls were decorated with Corinthian half-columns, except for two which formed a quarter of a column at the southeast corner (Plates: CCLXXXIIa-b; CCLXXXIIIa-b). At the time of discovery, all columns lacked

their respective capitals; having been cut previously, they were probably, re-utilised as decorative material. Violation of the initial, architectural setting seems to have occurred, however, at a much earlier date. All three walls of the chamber have been severely damaged by successive adjustments to accommodate as many corpses: subsequently, *loculi* were cut wherever possible. Along the side walls, the intercolumnar-space was occupied by pseudo-doors within Doric frames. Whereas, on the bottom wall of the κλίνη-alcove, above the mattress, between the two extant pairs of cushions, was a reddish ὀμφαλός (*omphalos*: a Hellenic, religious symbol of world-centrality), around which a large ἀγαθοδαίμων (*agathodaimon*: serpent as the noble spirit of vineyards) was wrapped, with its bearded head, and upper part of the body, raised upwards, as if being confronted. Overall, the initial architectural setting of the burial-chamber, suggests a possible date at ca. the third century BC; the painted decoration pertains however to a later date, ca. the second century BC. Structural modification, thus the rock-cut *loculi*, postdates the initial construction. Eventually, the hypogeum was re-utilized as a stone-quarry. Daszewski revisited the site later, in 1998, the time by which the surviving remnants of once an elaborate hypogeum, were found to have been buried underneath accumulated layers of modern built-up, awaiting re-excavation (47k: Gabbari Zone C).

47.i) Nécropolis: Gabbari Zone (A): Deutsche Archäologische Institut

In 1974-77, the Deutsche Archäologische Institut (DAI) in Cairo, carried out successive seasons of excavation, directed by Günter Grimm and Michael Sabottka, south of ex-Fort Saleh in Gabbari. Besides (re)investigating the earlier finds of Thiersch and Breccia (47c-d), the mission has unearthed a subterranean complex of contiguous hypogea (A1-11), including that partly excavated by Breccia in 1930; now forming part of the DAI findings, it was labelled Hypogeum (A1) (Leclant 1976: 277; *idem* 1977: 234; Sabottka 1983: 195-203; *idem* 1984-1985: 277-285). The excavated funerary structures from the DAI's Gabbari Zone (A), west of el-Heidara Street (the present-day Abd el-Qader Hamza), pertain to a wide chronological range of use, spanning from ca. the second century BC to the imperial period.

47.j) Nécropolis: Gabbari Zone (B): Centre d'Études Alexandrines

Almost a century after the construction of a roadway connecting the city to the suburban district of el-Max, led to the accidental unearthing of various sections of ancient Nekropolis, mainly within

Gabbari and el-Mafrouza (47b; 48a), another public project, a bridge or flyover to connect the Cairo-Alexandria desert road to the Western Port, was put on hold following the discovery of a series of underground structures, a couple hundred meters from the flyover's northern end (Plates: CCLXXXIVa-c; CCLXXXVa-c) (Empereur 1998a: 176-211; *idem* 1998c: 155-162; *idem* 1998d: 622-630; Abd el-Fattah 2001: 25-41).

Two campaigns were conducted by the Department of Antiquities, in summer 1996 and spring 1997. By June 1997, the local department (i.e. SCA), short of funds towards the end of the Egyptian fiscal year, has asked the Centre d'Études Alexandrines to intervene with a rescue excavation. To the northwest, is the area of the ex-Fort Saleh investigated by Botti, Breccia, and Riad (47b; 47d; 47g); about 300 m to the southwest, three hypogea were accidently discovered in the early 1990s (48d); extending yet west of the flyover, was the complex of hypogea excavated by the German mission, in the 1970s (47i). Further to the west, at el-Mafrouza, another funerary complex, of four hypogea, was discovered in 1960, of which one, Hypogeum (III), is remarkable for its painting schemes (48c). The relative location of the flyover site to earlier funerary encounters at Gabbari and el-Mafrouza, thus seems indicative of intricate sets of subterranean hypogea which, given their find-spots, must have formed together, a dense zone of ancient Nekropolis.

The area of interest (ca. 100 x 30 m) is bordered on the east, by a shantytown, and on the west, by el-Heidara Street. Seventeen tombs have been identified during the 1997 season of excavation. Four of them (B7, B9, B10, and B11) were severely damaged by the placement of concrete pillars. Some tombs (B4, B6, B12, B13, B14, and B15) were inaccessible, hence were not excavated. While others (B1, B2, B3, and B8), especially those of sector (I), were found well preserved (Plate CCLXXXVI). The tombs seem to have been violated already in antiquity, and, with exception to few pertaining to a single chamber in (B1), all the rock-cut *loculi* were disturbed.

(B1), perhaps the most extensive, comprised:: (i) two flights of a staircase situated to the west of the tomb, on an EW-NS axes; (ii) from the second flight of (i), a small access-staircase led down into the partially-excavated (B1.10); (iii) the principal staircase through which the courtyard (B1.3) was reached; (iv) (B1.3) opened onto: *loculus*-chambers (B1.1) and (B1.2) to the north, (B1.4) to the

east, and (B1.5) to the south; (v) five chambers were located on a lower level:: (B1.6): reached via a descending flight of steps which opened onto the lower landing of the tomb's principal staircase (iii); (B1.7): reached via another descending flight of steps within (B1.2), which provided access to (B1.11) located further to the north; (B1.8) was accessible via a staircase within (B1.4); (B1.9) was, in turn, reachable via a staircase in the courtyard (B1.3). Tomb (B2), smaller in size, consisted of:: (i) a vestibule (B2.1); (ii) a *loculus*-chamber (B2.2) accessible via a flight of five steps; (iii) a *loculus*-chamber (B2.3) cut on a slightly higher level to that of (B2.2), with a rock-cut κλίνη-alcove towards the end of the lateral wall. Tomb (B3) comprised:: (i) a principal access-staircase; (ii) a vast *loculus*-chamber (B3.1); (iii) two secondary chambers: (B3.3) dug to the south, beneath the *loculi* of (B3.2) and the westernmost part of (B2); (iv) (B3.4): a secondary chamber dug at the southwestern corner of (B3.1), on the lower levels of *loculi*; (v) a corridor (B3.5) led into two chambers (B3.6) and (B3.7). South of the latter set of tombs, is (B8) with an independent plan of its own: two levels connected through an internal staircase, and a cistern (B8.5) serving as a nucleus for the whole subterranean structure which have been apparently cut in one go (Callot and Nenna 2001: B1: 44-74, B2: 75-83, B3: 84-98, B8: 98-104).

The flyover site, situated about 800 m to the west of the hypothesized urban circuit, was divided into two subterranean zones (Plates: CCLXXXVII; CCLXXXVIII). Zone (I) includes two sectors: (I) and (II); both surveyed, and partially excavated, in 1997-1998. A two-month campaign has taken place in February-March 1998, with the aim to investigate Zone (II) which encompasses four sects: (III), (IV), (V), and (VI). The area of interest has thus extended to reach ca. 250 x 30 m: a narrow strip of land delimited by the halted-bridge from the south, and the buildings adjacent to the port-zone in the north (Empereur 1999a: 29-39; *idem* 1999b: 549-559). Besides those previously explored by the CEAlex, in 1997 (see *supra*), some twenty-five new tombs were identified during the 1998 season of excavation, hence a total of forty-two funerary structures (with three additional ones recovered during future campaigns). In 1999, excavations resumed at (B17), a major subterranean hypogeum constructed in the Ptolemaic period, and remained in use, to ca. the seventh century AD. A new tomb, labelled (B45), has been discovered in sector (III); yet complementary digs were being carried out in sectors (IV; V) and the newly-identified extension (V') (Empereur 2000a: 604-614). A final, two-month campaign

took place on site, until the end of February 2000. The site, which could not have been preserved, was destroyed shortly after, in the spring of the same year, with the construction of the remaining segment of the bridge, reaching to the Western Port (Empereur 2001a: 686-689; *idem* 2003: 3-16, Fig. 7).

Architectural setting, contextual finds, and analogies with other funerary structures elsewhere, all suggest a complex of subterranean hypogea that have undergone several phases of renovation and structural modification, hence reflecting, rather confirming, the extended chronological range well manifested in the archaeological record, from a variety of fragmentary architecture and grave goods pertaining to earlier generations of Hellenic settlers, ca. the second half of the third century to the second century BC (Hadra *hydriai* : imported, Cretan cinerary urns; oil lamps; incense altars; tapering vases of perfumed oil: *unguentaria*; terracotta figurines of women, children, and deities; tableware; painted *loculus*-closing slabs analogous to others found at el-Chatby; painted funerary inscriptions), to material culture signalling site reoccupation by fourth-seventh-century Christians (painted crosses on walls and ceilings; funerary inscriptions in red ochre; terracotta lamps adorned with crosses; stuccoed *stelae* bearing miscellaneous Christian motifs; wine *amphorae*; water flasks from the pilgrimage-sanctuary of St. Menas, located about 50 kilometres southwest of Alexandria).

47.k) Nécropolis: Gabbari Zone (C): Centre d'Études Alexandrines

At ca. 250 m to the west of Zone (B), in the same district of Gabbari, another section of ancient Nekropolis was discovered during a prospection (Rousseau 2003: 671-697). Zone (C): i.e. the areas of interest (ca. 350 x 100 m), almost entirely occupied by buildings, extends adjacent to the Western Port; delimited from the south and east by settlements (47j), and by a football field in the west (Plate CCLXXXIXa-c). Both the eastern and central sectors of the excavated zone, encompass old limestone-quarries which have been constantly destroying the subterranean structures of the city's western *nekropoleis*, as reflected on the pitted terrain. In a setting as such, the sewage disposal system of the settlements was directed towards the excavated pits, hence, in turn, to the quarried hypogea. Excavations within Gabbari Zone (C) have revealed analogies, structural and decorative, with other tombs unearthed earlier, at the nearby zones: (A) and (B) (47i-j). Those identified have reached ca. twenty, labelled (C1 - C20); they were divided into three groups:: (i) eastern sector: (C1) and (C2);

(ii) central sector: (C3 - C14); (iii) western sector: (C15 - C20). Foremost among the finds, was burial-chamber (C3.1) (ca. 7.00 x 4.50 m) visited previously by Daszewski in the 1970s (47h). It has actually formed part of a large hypogeum (C3) that features an access-staircase and three burial-chambers (Plate CCXCa-d). Gabbari Zone (C) provides further evidence of funerary structures in dense clusters, at this sector of ancient Nekropolis, as attest various encounters at the neighbouring el-Mafrouza.

47.l) Agnew's Hypogeum: Southern Gabbari (Gebel el-Zeitoun)

In December 1836, the British archaeologist H.C. Agnew had inspected a hypogeum excavated "exactly upon the summit of a hill of soft stone, in which have been cut numerous catacombs". It is located "within twenty minutes walk of the western gate of Alexandria, between the great canal Mahmoudieh on the east, Lake Mareotis on the south (II. sec. 2.3.5), the new palace and gardens of Ibrahim Pasha on the west, and a small canal on the north": i.e. within the southern belt of Gabbari: the area of Gebel el-Zeitoun, marked "Catacombes" on the maps of Le Père (1798-99, publ. 1817) (Plate CCXCIa), Saint-Genis (1798-99, publ. 1822) (Plate CCXCIb), and Tassos Neroutsos (1888). Agnew's "hill" might have been that shown on the latter, where the label "Hypogée" is added by Neroutsos (Plate CCXCIc) (Agnew 1840: 152-170; Adriani 1966a-b: 186-187, No. 132; Tav. 104, Fig. 355).

Agnew reported his observations, written in January 1838, in a letter sent to Sir Henry Ellis, the K.H., F.R.S., Secretary, on November 19th, 1838. It was read on February 7th, 1839, then published in volume XXVIII of *Archaeologia* (1840). The hypogeum consisted of (Plate CCXCIIa-b):: (i) an access-staircase leading down into a short vestibule. (ii) A quadrangular courtyard (1) (ca. 3.96 x 3.96 m), with two pilasters flanking the main entrance, and eight planned *loculi* traced in two rows, on the back wall; only three of those on the lower row were actually cut into the rock. (iii) A burial-chamber (2) (ca. 3.96 x 3.96 m) opened on the south wall of the courtyard; it had six rock-cut *loculi* arranged in two rows, on all three walls. (iv) A second burial-chamber (3) (ca. 2.75 x 2.90 m): west wall: a pair of Doric false-columns support a pseudo-architrave below a moulded cornice; a rectangular recess (7) cut deep into the wall, probably added at a later phase to receive a sarcophagus; east wall: two pillars support an architrave below a dentilled cornice. (v) A chamberette-like structure (4) opened on the back wall of (3). Likewise, it had a sarcophagus-alcove (6) cut deep into the lateral wall. (vi)

Burial-chamberette (5) dug at the north end of the subterranean structure. As was the case in (4), it had a sarcophagus in white limestone, with shallow-curved lid. The (Late) Ptolemaic origin of the Agnew hypogeum seems inferable considering its architectural decoration (Doric false-columns), the first-style wall painting (imitation of stone blocks) evident within burial-chamber (3), and from the successive layers of plaster coating the walls of *loculus*-chamber (2). Whereas, a second phase of use is signalled, for instance, by funerary inscriptions painted in red ochre, and datable to ca. the Antonine period: the second century AD.

Site 48: Nekropolis: Eastern Sector

Maps: V1; V2; V3; V4

Necropolis: el-Mafrouza [Ptolemaic; Roman; Late Antique]

48.a) Miscellaneous Finds: Giuseppe Botti

Besides various encounters in Gabbari (47b), remnants of funerary structures were brought to surface further west, in the district of el-Mafrouza, during the construction of the road to el-Max. In 1899, Botti reported some of the hypogea destroyed by mining, and quarrying activities, in the course of the last decade of the nineteenth century (Botti 1899b: 37-56). The situation only worsened following the construction work of the Administration of Railways, in winter 1898-1899, as evident on a photograph published by Botti, showing the 'state of collapse' of one of the violated hypogea at el-Mafrouza (Plate CCXCIIIa). Among the encounters, was a large hypogeum already destroyed in 1899, which had an Egyptianizing façade:: from top to bottom: a segmental pediment; denticulated cornice; a frieze with winged solar-disc as a central motif; an architrave supported by two Egyptian-style columns (Plate CCXCIIIb). Analogies seem recognizable with some of the funerary structures at el-Anfushy and Ras el-Tin (sites: 44-45). Botti's recordings at the turn to the twentieth century, were followed shortly by another major discovery (48b).

48.b) Suq (aka Such) el-Wardian Hypogeum: Evaristo Breccia

In 1905, the levelling of the terrain between the coastline and the tramway north of the suburb of Suq el-Wardian, carried out, at the time, by the ex-Administration of the Ports and Lighthouses, and necessitated by the construction of a large quay-structure at the Western Port, has led to the

accidental unearthing, hence partial destruction, of yet another hypogeum in el-Mafrouza (Breccia 1906: 5-7; *idem* 1907c: 63-74; *idem* 1912c: 5-11; *idem* 1914a: 83-84; *idem* 1922: 97-98; *idem* 1932: 40; Adriani 1966a-b: 146-148, No. 93; Tav. 68, Fig. 228, 230-231, Tav. 69, Fig. 232-233, Tav. 70, Fig. 234, Tav. 71, Fig. 236).

The surviving sections of the hypogeum were cut on a single axis, and consisted of:: (i) an access-staircase with several ramps of which the remaining steps were found at the southeast corner of the courtyard; (ii) a courtyard (ca. 4.65 x 4.65 m) with a single passageway (width: 3.00 m) flanked by two pedestals added to receive a pair of miniature sphinxes (?) (sites: 44; 160); the passage (ii') led to a vestibule (iii) (7.15 x 5.20 m; height: 4.80 m) which had: (a) long benches (width: 1.00 m; height: 0.70 m) installed along the side walls; (b) a flight of five steps (total height: ca. 0.82 m) leading up to a doorway (2.55 x 2.15 m) with architectural frame surmounted by shallow-triangular pediment (Plate CCXCIVa-b); (c) a quadrangular, sacrificial altar (base: 0.46 x 0.52 m; height: 0.90 m) positioned at the centre of the vestibule; at the time of discovery, it was found preserving the ashes from the last sacrifice; (d) six *loculi*, and a relatively-small niche, were cut into the right wall; (e) on the back wall, were the remains of plaster-coating imitating the blocks of an isodomic construction; above, was a representation of a bezel, featuring animal figures and stylized floral-motifs, delimited from below, by a band in dark red (0.25 m), above a thin, white thread (0.01 m); (iv) a κλίνη-alcove (ca. 3.20 x 3.50 m) cut into the back wall of (iii); it featured, along with the funerary sarcophagus itself, in-zone decoration:: (a) lateral walls: from bottom to top: a socle (height: 0.10 m) in blue and dark-red colours; orthostats (height: ca. 0.80 m) imitating alabaster; an intermediate band (height: ca. 0.20 m); five rows of brick in *opus isodomum* (height: ca. 1.40 m); a narrow band (height: ca. 0.15 m) of alternating lotus buds and palmettes; on top, ran an Ionic *kyma*; (b) back wall: from bottom to top: rows of brick in *opus isodomum*; at the centre of the painted brick, a shallow niche (ca. 0.55 x 0.50 m) was cut to receive a painted closing-slab or *stela* in limestone or wood; a narrow band of alternating lotus buds and palmettes; a painted, segmental frieze showing griffins with a palmette at the centre, and stylized floral-motifs on either side. The ceiling of (iv) exhibits a pattern of pseudo-coffers with a rosette towards the centre. A couple of *loculi*, originally closed with painted slabs, and surmounted by a projecting cornice, were cut deep into the alcove's lateral walls (Plates: CCXCVa-b; CCXCVIa-b). Judging by ground plan, architectural decoration, and wall painting, the Suq el-Wardian

hypogeum would be labelled 'Ptolemaic': datable to the late-third or perhaps, more likely, second century BC.

48.c) A Complex of Hypogea, Including the *Saqiya*: Henri Riad

In the summer of 1960, during the levelling of the terrain formerly occupied by the warehouses of the Shell Company, in preparation for the installation of a floating drydock at the Western Port, a complex of four subterranean hypogea was accidently unearthed (Riad 1964: 169-172; Adriani 1966a: 159, No. 112; Riad 1967b: 89-96; Venit 2002: 99-118). The encounters were investigated and subsequently reported by Henri Riad, then director of the Graeco-Roman Museum.

Hypogeum (I) (Plate CCXCVIIa-b) comprised:: (i) an access-staircase of nine extant steps, which led to a lower landing having a small bench with stylized, paw-like feet, cut towards the northwestern corner. (ii) A rectangular courtyard accessible from the northern wall, by means of a couple of steps. The eastern wall of the courtyard (ii) features:: from north to south: (a) an entrance to a collapsed compartment; (b) another small bench with a stylized, paw-like feet carved out in high relief; (c) a half-cylindrical, rock-cut horned-altar; (d) a sarcophagus flanked with podiums. (iii) A quadrangular chamber accessible through a doorway flanked by two columns. It opened on the western wall of the courtyard. On either side-wall of the chamber, *loculi* were cut for interments, which probably, postdate the first phase of construction. (iv) A κλίνη-alcove cut into the western wall of the *loculus*-chamber, and accessible through an entrance flanked by two engaged columns. The funerary κλίνη itself, occupied most of the space inside the alcove. It had legs decorated with floral motifs carved in relief. Shallow niches were cut into the bottom wall. One of the side walls, was violated by three *loculi* which, as those in the quadrangular chamber (iii), must have been added at a later date. Riad's rock-cut κλίνη represents an intermediate phase of evolution compared to other funerary κλίναι, such as those encountered within Thiersch's hypogea at Sidi Gaber and Antoniadis (sites: 156; 162), hence the conjectured date for a first phase of construction, at ca. the mid-late-second century BC.

Hypogeum (II) had an axial plan (Plate CCXCVIII). It includes:: (i) an access-staircase; (ii) a courtyard with a rock-cut, sacrificial altar placed at the centre; (iii) a quadrangular chamber reachable thru a

couple of rock-cut pillars fixed at the southern side of the courtyard (ii); (iv) two *loculus*-chambers accessible from the lateral walls of the court (ii): the one to the right was found in ruins; the other, better-preserved, had rows of rock-cut *loculi*, a miniature sacrificial-altar in limestone, and Early-Roman oil lamps which date one phase of reuse, to ca. the late-first century BC - first century AD.

Hypogeum (III) (Plate CCXCIX), found largely destroyed at the time of discovery, is remarkable for its elaborate painting-programme (iv). The surviving sections of the excavated structure include:: (i) A rectangular courtyard (1). (ii) A burial-chamberette (7) with traces of two κλίνη-like sarcophagi carved out of the side walls. (iii) Subsequent modification: (a) a *loculus* cut at the south end of the courtyard's eastern wall, containing skeletal remains; (b) a channel-like cut extending north-south, thru the burial-chamber's right wall, towards the *loculus*-like cut in the court (3); (c) a channel-like cut southeast of the courtyard; (d) a passage thru the bottom wall of the burial-chamber (probably a cut made by tomb-robbers). Other signs of violation were evident on the destroyed, left segment of the courtyard's eastern wall, hence the absence of the architectural frame around the entrance to the burial-chamber (7). (iv) Painted decoration:: the eastern wall of the courtyard: a countryside scene (2) involving a *saqiya* (i.e. traditional waterwheel of the Egyptian χώρα) turned by two oxen plodding counterclockwise. The *saqiya* itself, being fixed to a wooden-arbor, is supported by two posts at either side of the composition (only the right post has survived), and surrounded by leafy vine, while watched by a boy playing the pipes; a pond with plants and water-birds, is represented in the foreground (Plate CCCa-b; scene: maximum width ca. 1.40 m). (4) The north side of the projection of the eastern wall: a rustic version of a bearded herm (of Pan?) rendered within a precinct (Plate CCCc; scene: height: 1.83 m; width: 0.59 m). (5) The west side of the projection of the eastern wall: a herdsman in short χιτών (*chiton*: a form of clothing), tending his flock; the fact he is seen carrying an animal, probably a sheep, of which only an upturned hoof survives, may suggest the Hellenic cultic-image of the κριοφόρος (*kriophoros*: ram-bearer, Christianised later into the Good Shepherd) (Plate CCCd; scene: height: 1.82 m; width: 0.49 m). (6) The south side of the projection of the eastern wall: an in-zone decoration: from bottom to top: coarser space indicating the cutting of a low-bench; a dark-reddish band; wide orthostats painted to simulate alabaster, alternating with narrow orthostats; a white band outlined in black; a third band, painted yellow and red ochre; extant fragment of a frieze with

alternating black and white squares (Plate CCCI). The slabs preserving the painted scenes (2; 4; 5; 6) were cut from the adjoining rock, and put on display at the Graeco-Roman Museum (Inv. No. 27029; maximum height ca. 1.90 m). The western wall of the courtyard: fragment of a painted slab fitted to a rock-cut niche, or have otherwise, formed part of the façade of Riad's 'sarcophagus-alcove' (?). It features an Egyptianizing *ba*-bird in right-profile, perched on a lotus bud. A second *ba*-bird would have appeared on the violated side of the fragmentary slab. Whereas, at the centre, between both birds, an altar is represented with two wrapped-around cobras (Plate CCCIIa). The bottom wall of the burial-chamber: a rather poorly-preserved, painted slab of a male reclining under a shade-tree. He is shown leaning on his left elbow, with the right arm thrown back over his head. Below the latter, was a panel painted to simulate alabaster (Plate CCCIIb). Various interpretations of such an intricate set of scenes seem central to widening the chronological range of use assigned to Riad's Hypogeum (III). In fact, one spanning from the 2nd century BC to the 1st century AD (Late Ptolemaic - Roman): Graeco-Egyptianizing setting signalling phases (I-II) of construction and (re)use (contemporary with hypogea I, II, and IV), and a possible (Early) Christian phase of reuse attested by conjectured biblical scenes, datable ca. the 3rd-4th century AD.

Hypogeum (IV), contiguous with (III) (Plate CCCIII), had two surviving chambers with rows of *loculi* and five sarcophagi: four in pairs, and one occupied an alcove; yet, all were carved out of the rock. This hypogeum seems contemporary with Riad's (II), for one of its rock-cut sarcophagi, decorated in relief, suggests a range of (re)use from ca. the end of the first century BC to the first century AD.

48.d) The Stagni Complex of Hypogea

In May 1989, a subterranean complex of three hypogea was accidently discovered during the construction of a warehouse, on the piece of land formerly owned by the Italian timber-merchant Alfredo Stagni di Giovanni (Abd el-Fattah and Choukri 1998: 35-53; Venit 1999: 641-669; *idem* 2002: 159-165). The site lies a few hundred meters to the south of the ex-warehouses of the Shell Company, where another complex, of four hypogea, was investigated by Henri Riad, in 1960 (site 48c). It is about 300 m southwest of the ex-Gabbari zones, (A) and (B), excavated by the DAI (1974-77) (site 47i) and the CEAlex (1997-2000) (site 47j). The Stagni complex, violated, flooded by the rising groundwater, and partially destroyed, comprised three hypogea (Plate CCCIV). Given its plan and architectural setting,

the first phase of construction would be datable, in general, to the Ptolemaic period, though with subsequent (Roman) additions. Hypogea (I) and (III), conventional in design, had courtyards which open onto burial-chambers with rock-cut *loculi*. Hypogeum (II), the most extensive of the excavated complex, was accessible via a staircase that led down into a large courtyard through which at least, five *loculus*-chambers were reachable. Foremost among the surviving parts of Hypogeum (II) were: (1) a Ptolemaic, funerary κλίνη found in fragments, and (2) an alcove cut to receive a sarcophagus.

The alcove (II.E) was cut into the back wall of one of the burial-chambers which was accessible from the southwest corner of the courtyard. At the time of discovery, the level of the rising water table had already reached almost to the top of the sarcophagus. Accordingly, when the tomb was cut from the adjoining rock during the excavation, it was possible to preserve only the upper part, which was later transferred to the archaeological site of Kom el-Shuqafa (53), where it is today on display (Plate CCCVa-b). The alcove was added to the original Hellenistic setting in the Roman period. Its salvaged parts could be divided into: (i) the architectural façade and (ii) the interior of the alcove.

The architectural façade of the Stagni alcove consists of: (a) two piers flanking the entrance to the alcove. On the exterior face of either pier, a petal-winged Erotes, painted as if decorating the shaft of a *candelabrum*, appear within a double-frame panel (Plate CCCVIa-b). Other figurative scenes include, a guardian Anubis standing frontally on the lateral faces of both piers (Plate CCCVIc), and a pair of Horus-falcons with a central κάλαθος (*kalathos*: i.e. basket-vase headdress) on the exterior and lateral faces of the capitals (Plate CCCVIIa). (b) The entablature is formed of an architrave bearing traces of volutes, a frieze featuring winged-sphinxes (Plate CCCVIIb), atop which a cornice is painted scallop patterns and myrtle leaves. (c) A triangular pediment is surmounted with a disc-*acroterion*. The projecting pediment frames a τύμπανον that exhibits in turn, a winged sun-disc (Plate CCCVIIIa).

The interior of the structure (ca. 2.05 x 1.23 m; preserved height: 1.17 m) has a shallow, vaulted ceiling. A sarcophagus (ca. 1.91 x 1.12 m; preserved height: ca. 22 cm; see *supra*: tomb inundation) occupied most of the inner space. At ca. 12 cm above the top of the sarcophagus, a *loculus* (width: 70 cm; height: 83 cm), framed by two rock-cut pilasters, was cut into the left lateral wall. Cut into the back wall, above the sarcophagus, is a shallow, rectangular niche (77 x 84 cm; depth: ca. 15 cm)

painted to simulate an *aedicula* (miniature shrine) (Plate CCCVIIIb); below, is a stand painted in ochre. An upper, projecting band (ca. 12 cm) of the niche itself, is treated as to give the impression of a frieze of *uraei* (representation of the sacred serpents as an emblem of supreme power). The main panel takes the form of an Egyptian-style ναός within which stands a female deity (Isis-Aphrodite?) flanked by two sphinxes on high pedestals. The architectural and decorative programme at Stagni exemplifies the Graeco-Egyptian(izing) trends often met within the hypogea of Roman Alexandria.

Site 49: Nekropolis: Western Sector

Maps: V2; V4

Necropolis: el-Wardian; el-Max [Late Ptolemaic; Roman]

49.a) The Grand Catacomb

The Grand Catacomb at el-Wardian has been a place of attraction for European travellers, as early as the eighteenth century. Notable visitors include:

Frederik-Ludvig Norden (visit: June 1737): Danish naval-Captain and explorer (Plates: CCCIX; CCCX).

A trente ou quarante pas du bord de la mer et à l'opposite de la pointe de la presqu'isle qui ferme le port on trouve un monument souterrain auquel on donne communément le nom de Temple. On n'y entre que par une petite ouverture sur la pente de la terre élevée qui borde le port de ce côté-là. Nous y entrâmes munis de flambeaux, et nous fûmes obligés de marcher courbés dans une allée fort basse, *qui, au bout d'une vingtaine de pas, nous introduisit dans une salle assez large et quarrée.*

On trouve un souterrain de figure ronde dont le haut est taille en forme de voûte: il a quatre portes, l'une à l'opposite de l'autre. Chacune d'elles est ornée d'un architrave, d'une corniche, et d'un fronton surmonté d'un croissant. Une de ces portes sert d'entrée; les autres forment chacune une espece de niche bien plus basse que le souterrain, et qui ne contient qu'une caisse épargnée sur le roc en creusant, et suffisamment grande pour renfermer un corps mort.

(Norden 1795: 24)

Richard Pococke (visit: September 29th - October 24th, 1737): English anthropologist (Plate CCCXI).

The catacombs extended above a mile to the west, and there are a great number all along by the sea …….. I was in some grottos cut out of the rock, in long narrow galleries running parallel to one another, and some also crossing them at right-angles. These I conjectured, were those magazines in which they embalmed the bodies. The most extraordinary catacombs are towards the further end, and may be reckon'd among the finest that have been discover'd; being beautiful rooms cut out of a rock, and niches in many of them, so as to deposite the bodies in, adorn'd with a sort of Doric pilasters on each side. The round room, and that leading to it, are very beautiful, and so are the four rooms drawn in the plan with niches.

(Pococke 1743: 9)

In December 1799, during the Napoleonic Expedition, the monument has been the subject of an extensive study by Pierre-Dominique Martin, *Ingénieur au Corps Royal des Ponts et Chaussées* (Martin 1818: 7-12; *idem* 1829: 519-530). A detailed, descriptive account of the structure (Plate CCCXIIa-b) is provided by the French engineer who accurately locates the site:

Les accidens du rivage forment, à environ 60 mètres à l'est de ces bains (i.e. Cleopatra's Baths: see infra, site 49d), une petite baie de 26 mètres de largeur, sur 60 mètres de profondeur: l'ouverture en est entièrement fermée par deux gros rochers qui ne laissent qu'une petite passe pour les canots. Au fond de cette baie, le terrain s'élève assez brusquement, et l'on voit au milieu de la pente un petit trou qui forme l'entrée actuelle du monument (i.e. the Grand Catacomb), et par lequel on ne descend qu'avec une grande peine.

(Martin 1818: 8)

Martin's 'petite baie' correlates with the present-day profoundly-modified zone of Bab el-Mina, the main entrance to the Western Port, which forms as well, the coastal outlet of el-Nubareiya Canal to the Mediterranean (Plate CCCXIIIa-b). The subterranean structures documented in *Description de l'Égypte*, are accessible today from the north end of el-Bergouin Street: a strip of land occupied by

timber warehouses. Surviving remnants were rediscovered by Achille Adriani, during an inspection in 1952, when a narrow passage into the catacomb was found buried underneath an accumulation of rubble-and-earth debris (Adriani 1966a-b: 162-171, No. 118; Tav. 86-95). The various components of a symmetrically-arranged hypogeum can be categorized into four groups: (a) sections rediscovered by Adriani in 1952, labelled Ax (x being a variable corresponding to the serial numbers on Adriani's Tav. 86, Fig. 290) (Plate CCCXIVa); (b) sections discovered by Martin, in December 1799, labelled Mx (Plate CCCXIVb); (c) sections conjectured from the symmetrical plan of the Grand Catacomb, labelled Cx (Plate CCCXVa); (d) conjectured-sections pertaining to hypogea contiguous with that in question, labelled Tx (49b) (Plate CCCXVb).

The subterranean structure comprised:: (i) A long, rectangular vestibule (sec. I: C1; sec. II: M1; sec. III: A7) (width: 2.70 m; preserved length of A7: ca. 3.05 m). It gave access to a pair of peristyles of four, quadrangular pillars each (M2 and C2). Whereas, two symmetrical chambers (M3 and C3) were reachable from the preceding peristyles. (ii) Two chamberettes, (A6) (height: ca. 2.10 m) and (A8) (ca. 2.20 x 1.15 m), were cut at either end of a narrow corridor. (A8) had an alcove (A8a) cut into the left wall. At a point on the slope, between (A7) and (A8a), an opening (ca. 2.55 x 1.50 m), found already partially-drenched, seems to have been a tomb-robbers' attempt to break into one of the inaccessible, rather conjectured, compartments of the subterranean structure (C2 and C3). (iii) A peristyle (A1) (ca. 16.45 x 16.05 m) of twelve pillars supporting the walls of a central, square light-shaft cut into the rock (6.50 x 6.50 m). (iv) Two burial-chambers, labelled (A2) and (A4), with at least, three regularly-arranged rows of *loculi* cut into their lateral walls. Two chamberette-like structures, (A3) and (A5), were then cut into the back walls of (A2) and (A4), to receive sarcophagi. (v) Two other chamberettes, (A9) (height: 2.60 m) and (A10) (unfinished: partially excavated), were cut NE. and SE. of the peristyle (iii). (vi) A pair of corridors, (A12) - (A13), to the right, and (A15) - (A16), to the left, extended on a NW-SE. axis. The ceiling of (A16) had a rectangular opening, with two light-shafts created by an intermediate, rock-cut arm. (vii) Two large, symmetrically-arranged chambers opened at either end of both corridors (i.e. A13 and A16): (A17) (ca. 6.00 x 6.05 m) had an opening at the southwestern corner of the ceiling (light-shaft); its back wall was found violated (tomb-robbers), allowing access to an adjacent hypogeum: (AB/M4); (AC/M5); (AE/M6); (AE/M7);

(M8); (M9); (T1). Likewise, burial-chamber (A14) (ca. 6.00 x 6.15 m), which had a large opening at the centre of the ceiling (light-shaft), would have been cut adjacent to structures pertaining to yet another rock-cut hypogeum contiguous with the Grand Catacomb: (T2); (T3); (T4); (T5); (T6); (T7); (T8). This proposition is strengthened by two compartments, (AA) and (AD), discovered by Adriani in 1952, then added to Martin's plan of 1799. (viii) A grand, rectangular hall (A11) (9.10 x 6.70 m) (Plate CCCXVIa) which led to the southernmost compartment. (ix) A domed, circular hall (A18: cupola) (Plate CCCXVIb) opening onto three *triclinium*-like chamberettes: (A19); (A20); (A21).

On the hillside, i.e. right above the Grand Catacomb, surface constructions in limestone blocks, and others cut in the bedrock, were cleared by Adriani, in 1952. The remnants, which followed the NW-SE. orientation of the subterranean structure, include (Plate CCCXVIIa-c):: (i) a portico (No. 6) with a colonnade extending NE-SW. The faintest remains of the interior ambulatory were represented by fragments of a partially-restored, pebbled pavement, as evident on the various pieces of stone: grey granite, alabaster, porphyry, and white veined-marble, found embedded into a thick layer of concrete. Among the other finds on site, were fragments of a stylobate along with some scattered remains of engaged columns. The portico, probably the earliest, is likely to be contemporary with the construction of the hypogeum. (ii) A structure of three tapering-tiers (No. 2), cut into bedrock. (iii) An unidentified structure of which only a fragment of the pavement has survived (No. 3). (iv) A rectangular building with traceable perimeters on all four sides (No. 4):: southeast: the lower parts of a wall; northwest: the portico (No. 6); northeast and southwest: two parallel walls of limestone blocks. (v) Two recesses into the rock: i.e. the negatives of dismantled walls (No. 5). The one on the northwest would have been structurally related to (No. 4). Further to the east, were the remnants of three walls representing the lower or preserved parts of an unidentified structure. (vi) A circular construction (No. 1) has caused a subsequent modification to the adjacent building (No. 2). It had a half-collapsed rotunda carved out of the rock, but partially constructed in stonemasonry. Adriani interpreted the aboveground vestiges as to have once belonged to a Greek ἡρῷον (*heroon*), judging by analogies with other ἡρῷα in mainland Greece, such as the one at Calydon (Aetolia): basically, a shrine erected atop a subterranean hypogeum, and dedicated to funerary cults practiced chiefly in association with the deceased. Greek ἡρῷα often had a peristyle with branching-off structures.

In general, the first phase of surface construction on site, is contemporary with the hypogeum. Whereas, the ground plan and architectural setting of the latter, especially the cupola of its circular hall (A18), suggest a possible date ca. the first-second century AD (analogies: Kom el-Shuqafa: site 53f-g).

49.b) Hypogea Contiguous with the Grand Catacomb

Excavations carried out by Martin and Adriani, within the area of Bab el-Mina (site 49a), indicate that the Grand Catacomb might have formed part of a large complex of subterranean hypogea dug at such dense zone of ancient Nekropolis. In fact, a whole section of what seems to be an adjacent hypogeum, was first detected by Martin, in 1799, then partially (re)discovered by Adriani, in 1952.

The hypogeum in question, comprised two court-spaces, (AE/M6) and (AE/M7), interconnected thru three passages created by four pillars which were arranged in a way as to yield a wide central doorway flanked by narrower ones. Each of the court-spaces has opened onto a pair of *triclinium*-like chamberettes:: east: (M8) and (M9); west: (AB/M4) and (AC/M5). The four, indeed, recall the ones (A19; A20; A21) branching off the domed, circular hall (A18) of the adjacent Grand Catacomb. Furthermore, Adriani's successful clearing of the corners of two other compartments:: northeast: (AA) and southeast: (AD), which are not shown on Martin's plan, would be indicative of a hypogeum a second, contiguous one, following the orientation of the Grand Catacomb (49a). A third hypogeum (T2; T3; T4; T5; T6; T7; T8) is conjectured southwest of the Grand Catacomb, given the symmetrical plan adopted throughout the subterranean complex.

49.c) Hypogea Contiguous with the Grand Catacomb (Cont.)

Another section of the vast subterranean complex at el-Bergouin Street was discovered in 1953. The excavations, which started after Adriani had just left his post as director of the Graeco-Roman Museum, were carried out by his deputy, the new director Victor Ghirghis. Adriani, nevertheless, had the finds published later, in 1966 (Adriani 1966a-b: 172, No. 120; Tav. 85, Fig. 285, 287, 289). Most of the unearthed remains belonged to a largely-collapsed hypogeum accessible via a staircase which led down into an open-air courtyard (Plate CCCXVIII). The *atrium* opened in turn, onto *loculus*-chambers and alcoves cut into the walls to receive sarcophagi of which some had garland decoration in relief.

The sarcophagus-alcoves were flanked by columns. Considering the ground plan of the excavated structures, Adriani drew parallels with Scavo (B) (53c) and the Nebengrab (53g) of Kom el-Shuqafa.

49.d) The So-Called 'Baths of Cleopatra'

About 60 m to the west of the subterranean hypogea encountered at site 49a-c, were structures cut into the natural rock, known among eighteenth-century travellers, as the 'Baths of Cleopatra'. The vestiges (Plates: CCCXIX; CCCXX), already destroyed in the nineteenth century, were described by the French geologist Déodat Gratet de Dolomieu, during the Napoleonic Expedition, ca. 1798-99:

Ces bains diffèrent par leurs dimension; ils devaient aussi différer par leur magnificence et par quelques commodités particulières; mais ils se ressemblaient par le plan principal. Un grand espace carré divisé en quatre cases également carrées, entourées de banquettes, creusées dans le milieu à la profondeur de 4 pieds (ca. 1.22 m), les banquettes couvertes d'un pied ½ (ca. 0.15 m) d'eau; la plupart étaient à ciel ouvert. Ils étaient séparés de la mer par le rocher dans lequel un ou plusieurs canaux creusés perpendiculièrement servaient a introduire l'eau directement par devant, pendant que d'autres canaux faisant un contour pour aboutir sur la face opposée, établissaient un courant qui empêchait l'eau d'être stagnante. On descendait de la côte dans ces bains par des escaliers. Des chambres couvertes étaient placées sur les faces latérales du grand carré et recevaient l'eau par différents canaux.

Les mieux conservés de ces bains portent le nom de Cléopâtre. Ils sont placés directement au sud de la pointe de l'île du Phare, auprès d'une petite anse où les bateaux abordent la côte (in proximity to 49a-c). Trois chambres encore couvertes sont placées sur le flanc ouest du grand carré; au-dessus sont des ruines de briques dans lesquelles on peut remarquer un pavé en mosaïque grossière; auprès sont de grandes catacombes débarassées des sables qui recouvrent leur sol.

(Lacroix and Daressy 1922: 43)

The nature of the remnants in question, is inferable when considering their architectural design and relative location to the neighbouring hypogea: the fact that they were constructed 'at a small

cove where the boats approached the coast'. A sea-bathing facility would have been convenient in a place frequently visited by sailors, fishermen, and mourners. Nevertheless, the site's contextual associates: the three rock-cut chambers west of the structures in question, the ruins in brick, with traces of mosaic pavement, and the adjacent cistern shown in *Description de l'Égypte* (plates *supra*), suggest a form of habitation connected with commercial activities. Perhaps, a fish-farming facility existed by the cove, where a cluster of square recesses has been carved out of the rock to function as ponds. These were enclosed within an artificial haven (Dolomieu's "grand espace carre") which had narrow channels into the rock, for piping-in seawater. In a context as such, rock-cut chambers (for fish processing) and a settlement on the hillside (habitation) would have been complementary. The notion, however, of a sea-bathing facility contextually associated with nearby hypogea (49a-c), should not be eliminated, given the rock-cut benches described as 'surrounding the recesses', and the bath complexes excavated by Henri Riad, in 1964, south of the Kom el-Shuqafa necropolis (55b).

49.e) Bartocci's Hypogeum

One of el-Wardian's hypogea destroyed at the turn to the twentieth century, was recorded by Mariano Bartocci from the GRM service (Plate CCCXXIa-b) (Adriani 1966a-b: 156, No. 105; Tav. 79, Fig. 259-60). It had an access-staircase which led to: (i) a vestibule (No. 1) with a rectangular light-shaft cut into the ceiling, below which a sacrificial-altar of the *taurus*-type was placed; (ii) a *loculus*-chamber (No. 3) opened on the lateral wall of the vestibule; (iii) a relatively-large *loculus*-chamber (No. 2) on the axis of (i); (iv) a sarcophagus-alcove (x) cut into the right wall of the vestibule. Judging by Bartocci's plan (measurements not given), the structure in question, would be datable to the Late Ptolemaic or Early Roman period.

49.f) Two Adjacent Hypogea: Junction of Streets No. 2171 and 2150 (Korret el-Ein)

In December 1932, the remnants of two hypogea datable to the Roman period, were accidently discovered in el-Wardian, while digging foundations for a building, at the NW. corner of the 2171-2150 crossroads (Plate CCCXXII) (Adriani 1934: 34; *idem* 1966a-b: 160, No. 114; Tav. 84, Fig. 280). Hypogeum (A) was accessible via a staircase which led down into:: (i) an *atrium*; (ii) a vaulted sarcophagus-alcove with a stuccoed-façade on which were traces of painting; (iii) two *loculi* cut into the *atrium*'s right

wall; (iv) a largely-collapsed chamber opened on the *atrium*'s lateral wall, where a single rock-cut *loculus* was recognizable. Proceeding westwards, into the partially-excavated *atrium* of Hypogeum (B), two burial-chambers were found:: (i) (No.1) had two rows of three *loculi* each, cut into its back and side walls (18 *loculi*); (ii) (No. 2) had two rows of three *loculi* each, cut into its back wall (6 *loculi*).

49.g) Joussef Mahmoud Hypogeum

In May 1936, the remnants of a hypogeum of the Roman period were accidently unearthed at 'a property of Joussef effendi Mahmoud': a point not far from the timber warehouses of the Stagni Company (site 48d) (Adriani 1940a: 131-132; *idem* 1966a-b: 160, No. 115; Tav. 84, Fig. 281). Severely inundated and filled with rubble-debris, the subterranean structure could not have been fully excavated. In the rock-cut *loculi* marked (1-5) on the general plan, five sarcophagi were found, of which four have been manufactured using a reddish stone (probably porphyry), and one in limestone (Plate CCCXXIII). Above *loculus* (1), the faint traces of a frieze painted floral motifs with festooned garlands and small medallions, were recognizable on discovery.

49.h) Ezbet el-Yousra Hypogeum

In 1983, a rock-cut hypogeum was accidently discovered while digging foundations for a group of dwellings at Ezbet el-Yousra, in proximity to el-Wardian Tramway Station. A salvage excavation (February 25th - March 25th, 1983) has been carried out on site, by the Egyptian Supreme Council of Antiquities (SCA or EAO) (Choukri 2003: 699-705). Following a surface cleaning to reach the bedrock, an access-staircase of nine steps, oriented northwest-southeast, was exposed within a 4.00 x 4.00 m trench dug at the northeastern corner of the area of interest. It led down into the subterranean structure which comprised (Plate CCCXXIVa-b):: (i) vestibule (1), quadrangular in shape, with a shallow-vault ceiling:: southern wall: the main entrance; eastern wall: a *loculus* above a rectangular niche; western wall: a wider doorway giving access to burial-chamber (3); northern wall: a doorway with a segmental lintel, flanked by two carved-out pilasters. The passageway between the vestibule (1) and burial-chamber (2) is marked by a single step (0.18 m). (ii) Burial-chamber (2) (3.50 x 2.90 m), vaulted on a northwest-to-southeast axis, had two regularly-arranged rows of three *loculi* each, cut into the northern and eastern walls. (iii) Burial-chamber (3), 0.55 m above the level of the vestibule,

was reachable via a flight of three steps. It had a vaulted-ceiling, and three sarcophagi within rock-cut *arcosolia* (arched recesses). The sarcophagi were decorated with βουκράνια (*bucrania*: motifs of ox heads) and sun-discs carved out in low-relief. The access-staircase, vestibule (1), and *loculus*-chamber (2), all follow an axial-arrangement, and seem to be datable to the (Late) Ptolemaic period. Whereas, burial-chamber (3), with its rock-cut *arcosolia* and decorated sarcophagi, was added in the Roman period, ca. the first-second century AD.

Overall, the archaeological record of sites clustered east-to-west (46 - 49), from Minet el-Bassal to el-Wardian, echoes the first-century BC narrative of Strabo, on Nekropolis, the City of the Dead:

And then one comes to the suburb Nekropolis, in which are many gardens and graves and halting-places fitted up for the embalming of corpses.

(Strabo, Geōgraphikȅ: XVII. 1.10)

3.3.2) Physical Remnants without Known Historical Reference

3.3.2.1) Civic Edifices

Site 50: Gardens of Saīd Pasha's palace

Maps: V2; V4

Mosaic pavement: Southern Gabbari [Late Ptolemaic; Roman]

In volume III of *Revue Archéologique* (publ. 1846), fragment of a mosaic pavement is reported to have been 'recently discovered at the gardens of Saīd Pasha's palace', i.e. to the west of Agnew's hypogeum (site 47I): a point towards the area of Gebel el-Zeitoun or the southern plateau of Gabbari (Leroux 1846: 189). The rectangular, tessellated panel (ca. 8.00 x 4.00 m: approximate measurement recorded upon discovery) is divided into three sections:: *emblema*: head of a medusa surrounded by serpents within radiating scales (plate CCCXXVa-c); lateral parts: motifs of flowers, fruits, and birds, rendered realistically; borders: simple patterns of bands and meander. It might have decorated a luxurious, suburban building the nature of which would be conjectured given the site of recovery, being within Nekropolis: (i) a *villa suburbana* built by a well-off owner (perhaps, a mortician), or (ii)

a surface-construction associated with funerary cults (ἡρῷον or ground-level chapel): remnants of such constructions, with mosaic pavements, were unearthed in el-Wardian (el-Bergouin catacomb: site 49a) and Kom el-Shuqafa (Botti's Scavo A: site 53b; Hauptgrab and Nebengrab: site 53f-g). By analogy with another medusa floor-panel, one excavated by the Centre d'Études Alexandrines at the site of the former Diana Theater, in the 1990s (el-Ramleh: site 114), the Gabbari mosaic would be datable within the first two centuries AD. Daszewski, however, dates it to the reign of Cleopatra VII, ca. 51-30 BC (Daszewski 1985a: 120-128, Cat. No. 20).

The site in question, seems to have been a well-known point of attraction for European travellers, in the nineteenth century:

Après avoir été préservée tant de siècles grâce aux décombres qui la recouvraient, celte belle mosaïque ne résistera pas longtemps au soleil d'Egypte, si les Arabes (the locals) continuent, sur la demande de chaque visiteur, d'y verser l'eau à pleine outre pour lui rendre momentanément son éclat primitif.

(Leroux 1846: 189)

On the panel's state of preservation in the 1890s, Botti relates:

Pour l'historique de la conservation de ce monument il faut avouer que, sur les ordres de S. A. Saïd Pacha, M. l'ing. Loucovitch érigea sur la mosaïque un petit temple grec, qui s'est conservé jusqu'à nos jours. D'abord c'est à un gaffir (a local guard) que fut confiée la conservation de ce monument: le Vice-Roi étant décédé, son palais abandonné fut loué à M. le chev. Guarino. Le gafir étant mort, c'est sa femme qui garda l'endroit; des cabanes couvrirent le temple grec; le temple fut réduit en étable.

(Botti 1900-01: 520-521)

La celebre mosaique dite "de Medusa" se voit encore au Gabbari, vainement abritee par un petit temple moderne imitant les heroa de la bonne epoque. Une pauvre femme indigene est installee

depuis longtemps dans ce petit temple et la mosaique est aujourd'hui (i.e. towards the end of the nineteenth century), on ne peut plus meconnaissable.

(Botti 1898c: 113, XCVII. Mosaïques. 1)

Il celebre mosaico di Medusa può dichiararsi perduto per sempre.

(Botti 1893: 18, Necropoli Occidentale. Gabbari)

Unsurprisingly, therefore, the medusa mosaic-pavement, as well as Loucovitch's 'temple grec', had severely deteriorated *in situ*, hence the decision taken at the time, by the Archaeological Society of Alexandria, to transport the extant fragments of the panel (see *supra*, plates b-c) to the premises of the Graeco-Roman Museum (Inv. No. 3696) (Schreiber 1908c: 173-174, 176-177, Abb. 112; Breccia 1914a: 211, Sale 14; *idem* 1922: 198, Room 14).

3.4) Western District (WDist.)

3.4.1) Physical Remnants Corresponding to Known Historical Narratives

3.4.1.1) Civic Edifices

Site 51: SW. corner of el-Falaki's circuit

Maps: V1; V2; V4

***Hippodromos*; *circus*: Karmouz [Ptolemaic; Roman]**

During the Napoleonic Expedition, in 1798-1799, an oblong depression has been recorded along the southern slope of the Sarapeion hill (site 52) (Plate CCCXXVI) (Saint-Genis 1818a: 72-6; *idem* 1818b: 49-51; Lacroix and Daressy 1922: 30). It was excavated into the Kom el-Shuqafa plateau, thus yielding its semi-cylindrical form (Plate CCCXXVIIa-c). The remnants seem not to have survived the construction work of the nineteenth century (Gallice's Fort Kom el-Hadid: aka Borg Abu el-Hashem), given the accounts and photographs of Giuseppe Botti and members of Expedition von Sieglin at the turn of the century (Plate CCCXXVIII) (Botti 1893: 18; *idem* 1897a: 50-54; *idem* 1898c: 109; *idem* 1898d: 5; Schreiber et al. 1908b: Taf. X). Its identification with a Roman *circus* for chariot-racing, is based on scant remains of: (a) the *spina* (median divider between lanes) and (b) *in-situ* seats marked (k) on the plan of *Description de l'Egypte*

(Antiquités, Planches, Tome V) (Plate CCCXXIXa-b). The oblong construction, curved at either end, had an overall length of ca. 615 m, with a 560-m long track (McKenzie, Gibson, and Reyes 2004: 103). The location of the *circus* at the SW. corner of the ancient enclosure, echoes Strabo's narrative in *Geōgraphikȅ*:

and, inside (east of) the canal, both to the Sarapium and to other sacred precincts of ancient times, which are now almost abandoned on account of the construction of the new buildings at Nicopolis; for instance, there are an amphitheatre and a stadium at Nicopolis, and the quinquennial games are celebrated there; but the ancient buildings (in Alexandria) have fallen into neglect.

(Strabo, Geōgraphikȅ: XVII. 1.10)

Such a descriptive account suggests the construction of a certain athletic edifice in proximity to the Sarapeion, one which has been almost abandoned on account of the amphitheatre and *stadion* at Nikopolis. More importantly however, as taken ca. 25 BC, at the advent of Augustan rule, Strabo's narrative brings forth the possibilities for a structure, Ptolemaic in origin (perhaps, a ἱππόδρομος: *hippodromos*), which was remodelled into a *circus* in Roman times. Spatial proximity between the *circus* and the Sarapeion seems indicative of two contextually-related constructions: the racecourse is likely to have served as a suitable venue for the grand processions of Philadelphos which passed by the principal sanctuary of the city's syncretic deity Sarapis, hence the proposition of an athletic edifice contemporary with the Sarapeion's earlier phases of construction: third century BC (site 52). This is backed by the fact that Ptolemy Philadelphos has instituted in honour of his deceased father, Ptolemy I Soter, the quinquennial Ptolemaieia (ca. 280-78): "a gymnastic, musical, and equestrian contest to be equal in rank, with the Olympic Games, preserving his (piety) towards the gods, and maintaining his goodwill towards his (ancestors), thus, for this purpose, he is inviting (the Aegean) Islanders and the other Greeks to (vote) that the contest should be equal in rank with the Olympic Games" (Fraser 1972: 224, 230-231; Austin 1981: 359-360, No. 218, source: a decree of the League of Islanders on the acceptance of the Ptolemaieia, ca. 280 BC).

At the time, the city of Alexandria must have had a hippodrome for the hosting of its quinquennial athletic games and Dionysiac processions. Athēnaios Naukratitēs relates in *Deipnosophistaí*:

We will proceed to the shows and processions (of Dionysos) exhibited (in Alexandria). For it passed through the stadium which there is in the city.

(Athēnaios, Deipnosophistaí: V. 27)

Whereas, according to Epiphanius of Salamis, the racecourse in Alexandria was known as Lageion, in memory of Lagos, the father of Ptolemy I Soter. In the late-fourth century AD, the Bishop relates:

The Ptolemies, who were descended from the Rabbit (from Lagos), for whom the racecourse, when built in Alexandria, was called, only in the same Alexandria, the Rabbity (Lageion).

(Epiphanius, On Weights and Measures: 12.53d)

It should be mentioned as well, that Strabo records another *hippodromos* which he locates outside the urban enclosure, beyond the eastern periphery: i.e. the depression identified at el-Ibrahimiya Qibly and Sporting, towards the eastern suburbs (sec. 2.1.2.2.1; sec. 3.9.3.1, J):

and then one comes to the Hippodrome, as it is called, and to the other (streets/villae suburbanae) that lie parallel, extending as far as the Canobic canal. Having passed through the Hippodrome, one comes to Nicopolis, which has a settlement on the sea no smaller than a city.

(Strabo, Geōgraphikȅ: XVII. 1.10)

3.4.1.2) Religious Edifices

Site 52: SW. corner of el-Falaki's circuit

Maps: V1; V2; V4

Sarapeion: Karmouz [Ptolemaic; Roman]

The site of Amud el-Sawari (Karmouz) has been frequently featured in the descriptive memoires of eighteenth-century European travellers (Pococke 1743; Norden 1755), who were naturally attracted to a *colossus* granite column, the so-called Pompey's Pillar, which gave the hill-site its Arabic name. In 1798-1799, during the Napoleonic Expedition, the first scientific study of the column was carried

out by the architect Charles Norry (Plate CCCXXXa-c) (Norry 1818: 1-6). However, the identification of the mound with the Rhakotis acropolis, the historical site of the great sanctuary of Sarapis (the syncretic deity of Graeco-Roman Alexandria), was proposed by the French orientalist A.I.S. de Sacy, in 1810 (De Sacy 1810: 182-183, 230-240; Sabottka 2008: 7, n. 29; Adriani 1966a-b: 90-100, No. 54-55, Fig. F; Tav. 28, Fig. 102, Tav. 29, Fig. 104-105, Tav. 30, Fig. 106-109, Tav. 31, Fig. 110-112). In 1864-1866, foundation walls, fragments of architectural elements, and votive statuary, excavated *in situ* by el-Falaki, have all confirmed de Sacy's identification (Mahmoud-Bey 1872: 53-56). During the latter decade of the nineteenth century, in 1894-1898, Giuseppe Botti, the first director of the Graeco-Roman Museum, investigated the site (Botti 1895; *idem* 1897a; *idem* 1897c). Successive seasons of excavation were carried out, in 1900-1901, and in 1902, under the supervision of members of the Expedition Ernst von Sieglin, namely August and Hermann Thiersch. The results of the Thierschs campaigns have been planned for publication later, in *Ausgrabungen im Königsviertel und im Sarapeion von Alexandria*, i.e. Theodor Schreiber's unpublished Band III of *Expedition Ernst Sieglin: Ausgrabungen in Alexandria* (Introduction, II.e). The unpublished material was collected and re-edited by Michael Sabottka, before its final release in 2008, as volume XV of the IFAO's Études Alexandrines (Sabottka 2008). Intermittent explorations in the first quarter of the twentieth century (1904-1906, 1914-1915, and 1919-1920), pertain mainly to Evaristo Breccia, then director of the Graeco-Roman Museum (Breccia 1906; *idem* 1907d; *idem* 1916; *idem* 1921). Further excavations at the hill were directed by Alan Rowe in 1941-1942 (Rowe 1942b; *idem* 1946; Rowe and Rees 1957). In 1997-1998, accidental discoveries subsequent to maintenance work on site, demanded a co-intervention from the Centre d'Études Alexandrines and the local authorities (Abd el-Fattah 2002: 25-27; Hairy 2002a: 29-37; Bonifay et al. 2002: 39-84; Hairy 2002b: 85-98).

The localisation of the sanctuary in the western district of the ancient city, is based on Strabo's narrative in *Geōgraphikȅ*:

Now outside (west of) the canal, there is still left only a small part of the city; ……. and, inside (east of) the canal, both to the Sarapium and to other sacred precincts of ancient times, which are now almost abandoned on account of the construction of the new buildings at Nicopolis.

(Strabo, Geōgraphikȅ: XVII. 1.10)

The ancient authorities account for the origin of the Hellenized cult-image of the Memphite deity, Osor-Hapi or the Apis bull assimilated to Osiris (Hadrian's dedicatory epitaph and statue: Plate CCCXXXIa-b):

Ptolemy Soter saw in a dream the colossal statue of Pluto (i.e. Ἅδης) in Sinope (a Black-Sea town in present-day Turkey), not knowing nor having ever seen how it looked, and in his dream the statue bade him convey it with all speed to Alexandria.

(Plutarch, Moralia: 28)

On its arrival, two senior priests, Timotheos (Athenian) and Manetho (Egyptian), have "convinced Ptolemy that it was the statue of none other of the gods but Sarapis" (Plate CCCXXXII).

The narrative of Plutarch provides a background for Tacitus, who, in turn, relates:

A temple, befitting the size of the city (of Alexandria), was erected in the quarter called Rhakotis; there had previously been on that spot an ancient shrine dedicated to Sarapis and Isis.

(Tacitus, Histories: IV. 48)

The archaeological evidence from previous excavations (Plates: CCCXXXIII; CCCXXXIV; CCCXXXV; CCCXXXVI) indicates three principal phases of construction for the historical sanctuary:

Phase I: Ptolemaic: First half of the third century BC

(a) Foundations pertaining to structures on either side of the area of the main ναός of Euergetes I. They antedate the Euergetean ναός, and were found off-axis, on a slightly different orientation to el-Falaki's grid. One chamber excavated immediately to the east of the ναός, had a pebbled mosaic pavement (approx. 4.60 x 5.00 m; white pebbles of various sizes: 40 - 10 mm) on which a sacrificial altar (ca. 0.65 x 0.84 m; GRM, Inv. No. 56) of two large limestone blocks well-stuccoed and inscribed with the names of Ptolemy II Philadelphos (reign: 285/82 - 246 BC) and his sister-wife, Arsinoe II, was found *in situ*, on February 16th, 1901 (Plates: CCCXXXVIIa-d; CCCXXXVIIIa-g) (Daszewski 1985a: 114, Cat. No. 8; McKenzie, Gibson, and Reyes 2004: 83-4; Sabottka 2008: 43-66, Abb. 5-7, Taff. 7-9, 11-18; McKenzie 2009: 775):

βασιλέως Πτολεμαί[ου ϰαι Ἀρσινόης Φιλαδέλφου] Θ[ε]ῶ[ν Σωτήρων] (Breccia 1911: 3-4, Cat. No. 6).

(b) Two dedicatory inscriptions to Sarapis and Isis, datable, on palaeographical grounds, either to the Soter-Philadelphos co-regency (ca. 285-283/2) or to the earlier years of the reign of Ptolemy II Philadelphos (ca. 283/2-276) (Fraser 1956: 49-51; *idem* 1972: 267-71). The epitaphs seem to recall Tacitus' account of an ancient shrine dedicated to Sarapis and Isis on the Rhakotis acropolis (Histories: IV. 48).

(c) The so-called T-shaped building which encloses a quadrangular entry to rock-cut, underground passages, and the nearby, so-called south building. In fact, both structures are connected through an L-shaped, secret passage dug at the former's southern wall, to access the latter from its western wall. Foundation trenches excavated into the bedrock, south and west of the structures in question, indicate the presence of a larger complex datable in origin, to construction phase (I) (Plate CCCXXXIX).

Phase II: Ptolemaic: Second half of the third century BC

(a) Epigraphic evidence in the form of foundation plaques in gold, silver, bronze, and yet, greenish-turquoise-glazed terracotta (Plate CCCXLa-c), records a dedication made by Ptolemy III Euergetes I, and his wife, Berenike II, to the syncretic deity. One recto/verso, Greek-hieroglyphic epitaph reads:

ΒΑΣΙΛΕΥΣΠΤΟΛΕΜΑΙΟΣΠΤΟΛΕΜΑΙΟΥ
ΚΑΙΑΡΣΙΝΟΗΣΘΕΩΝΑΔΕΛΦΩΝ
ΣΑΡΑΠΕΙΤΟΝΝΑΟΝΚΑΙΤΟΤΕΜΕΝΟΣ

King Ptolemy, son of Ptolemy and Arsinoe, the Sibling Gods (θεοὶ ἀδελφοί), [dedicated] to Sarapis (in hieroglyphic: Osor-Hapi) the temple (ναός) and the sacred enclosure (τέμενος).

(b) In archaeological terms, the Euergetean phase of construction (II) is documented by foundation deposits and excavated vestiges (rock-cut and in ashlar-masonry). They represent the colonnaded enclosure (τέμενος), the main temple of Sarapis (ναός), and the *oikos*-building. The acropolis itself, was ascended from the eastern slope, by means of a monumental staircase (rock-cut and partially in ashlar-masonry) at the base of which a Nilometer was installed for measuring the water-level of the river's annual flood. Two gateways provided access to the sacred precinct. They were integrated into the east side of the colonnaded enclosure. The sanctuary was approachable from the northern slope, via transversal street R8, which functioned as a δρόμος (a walkway) to the temple (sec. 2.2.3).

(c) Under Ptolemy IV Philopator (reign: 221 - 204 BC), a shrine to Harpocrates (ca. 8.80 x 5.00 m) was added to the east of the main temple (ναός), in fact adjoining it. Its construction is documented by bilingual, Greek-hieroglyphic foundation plaques in gold and bronze, which read (Plate CCCXLIa-b):

ΒΑΣΙΛΕΥΣΠΤΟΛΕΜΑΙΟΣΒΑΣΙΛΕΩΣ
ΠΤΟΛΕΜΑΙΟΥΚΑΙΒΑΣΙΛΙΣΣΗΣΒΕΡΕΝΙΚΗΣ
ΘΕΩΝΕΥΕΡΓΕΤΩΝΑΡΠΟΚΡΑΤΕΙΚΑΤΑ
ΠΡΟΣΤΑΓΜΑΣΑΡΑΠΙΔΟΣΚΑΙΙΣΙΔΟΣ

King Ptolemy, son of King Ptolemy and Queen Berenike, the Beneficent Gods (Θεοί Εὐεργέτης), to Harpocrates by order of Sarapis (in hieroglyphic: Osor-Hapi) and Isis.

The colonnaded enclosure (ca. 173.7 x 77 m) (Plates: CCCXLII; CCCXLIII) (Rowe and Rees 1957: 497) followed the orientation of el-Falaki's grid. Fragmentary architecture, such as Corinthian capitals, fragment of a triglyph, and an Alexandrian cornice, were encountered in 1900-1901, and later moved to the Graeco-Roman Museum. The excavated remnants suggest a structural design that was essentially Greek. The recovered repertoire of decorative material, including Egyptian statuary (prominently, a number of sphinxes), yet hints towards pharaonic artistic (chiefly sculptural) features constantly, rather willingly, employed within a classical architectural setting: an intrinsically-Alexandrian trend.

The Euergetean ναός which appears frequently on Roman coinage dating from the reign of Trajan (AD 98-117) to year 16 of Markus Aurelius (ca. 175/6) (Plate CCCXLIV) (McKenzie, Gibson, and Reyes 2004: 86), seems to have survived to the second century AD, as confirmed by testaments of Early Christian theologians, namely Clement of Alexandria and Jerome, before it was burnt ca. AD 181:

This fire it was that burnt up the temple in Argos together with its priestess Chrysis, and also that of Artemis in Ephesus (the second after the time of the Amazons); and it has often devoured the Capitol at Rome, nor did it spare even the temple of Sarapis in the city of Alexandria.

(Clement of Alexandria, Προτρεπτικὸς πρὸς Ἕλληνας: IV. 47)

(the year) 240th Olympiad (ca. AD 181): the Temple of Serapis at Alexandria burned down.

(Jerome, Chronicon: 240th Olympiad)

The hypothesis of 'a Daughter Library at the Sarapeion' has its origin in Early Christian sources. One of them is Tertullianus, a Carthaginian writer, who in AD 197, records:

And in Ptolemy's library near the temple of Sarapis, among other curiosities are these sacred writings shown to this day.

(Tertullianus, Apologeticum: XVIII. 57)

Furthermore, in a fourth-century treatise on weights and measures, Epiphanius of Salamis relates:

The (Hebrew) Scriptures, when they had been transferred to the Greek language, were placed in the first (Royal) library, which was built in the Bruchium (βασίλεια) …… and there arose in addition to this library, a second up in the Serapeum, called its daughter.

(Epiphanius, On Weights and Measures: 11.53c)

The probable location of the historical, so-called 'Daughter Library' within the sanctuary of Sarapis, is suggested by the Greek sophist and rhetorician Aphthonius of Antioch, who provides a detailed description of the Alexandrian Sarapeion, in the second half of the fourth century AD:

Chambers are built within the colonnades. Some are repositories for the books, open to those who are diligent in philosophy and stirring up the whole city to mastery of wisdom.

(Aphthonius, Progymnasmata: 12)

The narratives of Aphthonius would recall those chamberette-like structures excavated along the western and southern colonnades of the τέμενος. It may be proposed, therefore, that books were deposited in rooms purposely built into the stoa of the central courtyard, to serve as a repository, which was secondary to that at the Royal Quarter: Ptolemaic βασίλεια: Bruccheion (sec. 3.7.3.1, E).

Phase III: Roman: Late-second to late-fourth century AD

The rebuilding of the sanctuary (ca. AD 181 – 215-17) by the Romans, would have commenced under Commodus (ca. AD 180-192) and completed by the time of Caracalla (ca. AD 211-217), with most of the work being carried out during the lengthy reign of Septimius Severus (ca. AD 193-211). By the time Caracalla visited the city and made sacrifices at its principal sanctuary in Rhakotis, the main temple of Sarapis was rebuilt on a larger scale, and the Euergetean enclosure extended well to the east and north (ca. 205.70 x 105.55 m), with a large, square pool added within (Plates: CCCXLV; CCCXLVI). Diocletian's Column, or the so-called Pompey's Pillar, was erected on site, around AD 298. The occasion and commissioner of such *colossus*, situated ca. 1,500 m south of the Tulunid circuit, are recorded by a Greek dedicatory inscribed on its pedestal:

ΤΟΝ[ΟC]ΙΩΤΑΤΟΝΑΥΤΟΚΡΑΤΟΡΑ
ΤΟΝΠΟΛΙΟΥΧCΝΑΛΕΞΑΝΡΕΙΑC
ΔΙΟΚΛΗΤΙΑΝΟΝΤΟΝΑΝΙΚΗΤΟΝ
ΠΟC[ΤΟΥΜ]ΟCΕΠΑΡΧΟCΑΙΓΥΠΤΟΥ

Publius (or Pomponius?), praefectus Aegypti, dedicated this monument to the glory of the most holy emperor, Diocletian Augustus, the tutelary genius of Alexandria.

(Norry 1818: 3; Adriani 1966a: 97, No. 54-55)

The granite *colossus* consists of a pedestal, base, shaft, and capital. A ca. fifth-century mosaic from Σέπφωρις (Tzipori, N. Israel), shows a statue of Diocletian atop the structure, commemorating the emperor's decisive victory over the rebellious usurper Domitius Domitianus (Plate CCCXLVII) (Capponi 2011: 58-59). The third, Roman phase of construction is represented on site, by concrete foundation walls: small, irregular blocks of cemented limestone built in *opus caementicium*. Recent accidental discoveries near the junction of the Amud el-Sawari and Abu Mandur streets, during maintenance work to install a new gateway at the southeastern entrance to the archaeological site, included a cistern, fragment of a mosaic pavement found *in situ*, and an *anta* of a half-column in pink granite (Plate CCCXLVIIIa-e).

Around AD 391, the emperor Theodosius I (379 - 395) ordered all pagan temples across the empire to be closed. Complying with the imperial decree, Theophilus, Patriarch of Alexandria, instructed the termination of the Sarapeion. The event is documented through an illustrated fragment from the Alexandrian World Chronicle: a corpus of fragmentary papyri datable to the fifth-sixth century AD. It shows the triumphant bishop holding a gospel in one hand, while standing atop the ravaged temple where the cult-statue of the city's syncretic deity is portrayed inferior to him (Plate CCCXLIX).

During the second half of the fourth century, shortly before its devastation, the sanctuary was described by Ammianus Marcellinus (*Res Gestae*) then by Aphthonius in detail (*Progymnasmata*):

There are besides in the city (of Alexandria) temples pompous with lofty roofs, conspicuous among them the Serapeum, which, though feeble words merely belittle it, yet is so adorned with extensive columned halls, with almost breathing statues, and a great number of other works of art, that next to the Capitolium, with which revered Rome elevates herself to eternity, the whole world beholds nothing more magnificent.

(Ammian. Marcellin., Res Gestae: XXII. 16.12)

A hill juts out of the ground, rising to a great height, and called an acropolis on both accounts, both because it is raised up on high and because it is placed in the high-point of the city. There are two roads to it, of dissimilar nature. One is a road, the other a way of access. The roads have different names according to their nature. Here it is possible to approach on foot and the road is shared also with those who approach on a wagon; there flights of steps have been cut and there is no passage for wagons. For flight after flight leads higher and higher, not stopping until the hundredth step; for the limit of their number is one which produces a perfect measure.

After the steps is a gateway, shut in with grilled gates of moderate size. And four massive columns rise up, bringing four roads to one entrance. On the columns rises a building with many columns of moderate size in front, not of one colour, but they are fixed to the edifice as an ornament. The building's roof is domed, and round the dome is set a great image of the universe.

As one enters the acropolis itself, a single space is marked out by four sides; the plan of the arrangement is that of a hollow rectangle. There is a court in the centre, surrounded by a colonnade. Other colonnades succeed the court, colonnades divided by equal columns, and their length could not be exceeded. Each colonnade ends in another at right-angles, and a double column divides each colonnade, ending the one and starting the other. Chambers are built within the colonnades. Some are repositories for the books, open to those who are diligent in philosophy and stirring up the whole city to mastery of wisdom. Others are established in honour of the ancient gods. The colonnades are roofed, and the roof is made of gold, and the capitals of the columns are made of bronze overlaid with gold. The decoration of the court is not single. For different parts are differently decorated, and one has the exploits of Perseus. In the middle there rises a column of great height, making the place conspicuous (someone on his way does not know where he is going, unless he uses the pillar as a sign of the direction) and makes the acropolis stand out by land and sea. The beginnings of the universe stand round the capital of the column. Before one comes to the middle of the court there is set an edifice with many entrances, which are named after the ancient gods; and two stone obelisks rise up, and a fountain better than that of the Peisistratids. And the marvel had an incredible number of builders. As one was not sufficient for the making, builders of the whole acropolis were appointed to the number of twelve.

As one comes down from the (Rhakotis) acropolis, here is a flat place resembling a racecourse (circus: hippodromos: site 51), which is what the place is called; and here there is another of similar shape, but not equal in size (a hippodromos in the east: sec. 3.9.3.1, J).

The beauty is unspeakable. If anything has been omitted, it has been bracketed by amazement; what it was not possible to describe has been omitted.

(Aphthonius, Progymnasmata: 12)

On the destruction of the cult-statue and temple, Rufinus of Aquileia records ca. AD 402:

Now as we started to say, when the letter had been read our people were ready to overthrow the author of error, but a rumor had been spread by the pagans that if a human hand touched the

statue, the earth would split open on the spot and crumble into the abyss, while the sky would crash down at once.

This gave the people pause for a moment, until one of the soldiers, armed with faith rather than weapons, seized a double-headed axe, drew himself up, and struck the old fraud on the jaw with all his might. A roar went up from both sides, but the sky did not fall, nor did the earth collapse. Thus with repeated strokes he felled the smoke-grimed deity of rotten wood, which upon being thrown down burned as easily as dry wood when it was kindled.

After this the head was wrenched from the neck, the bushel having been taken down, and dragged off; then the feet and other members were chopped off with axes and dragged apart with ropes attached, and piece by piece, each in a different place, the decrepit dotard was burned to ashes before the eyes of the Alexandria which had worshiped him.

Last of all the torso which was left was put to the torch in the amphitheater, and that was the end of the vain superstition and ancient error of Serapis.

(Rufinus, Historiae Ecclesiasticae: XI. 23)

Rufinus' narratives on the erection of a *martyrium* on one side of the sanctuary's levelled-grounds and a church on the other (Rufinus, Historiae Ecclesiasticae: XI.27), is well reflected in the archaeological record, where remnants of Christian edifices have been excavated immediately to the west of the pagan τέμενος.

3.4.1.3) Funerary Structures

Site 53: SW. corner of el-Falaki's circuit

Maps: V2; V3; V4

Necropolis: Kom el-Shuqafa [Roman; Late Antique]

In the nineteenth century, sporadic discoveries of subterranean funerary structures (53a) were made intermittently, at a semi-cylindrical rocky plateau littered with fragments of ceramics, known

as Kom el-Shuqafa: the Mound of Shards (Plates: CCCL; CCCLI; CCCLII; CCCLIIIa-b). On the east is the district of Karmouz; to the north and northeast are two sites: a *circus*/*hippodromos* (51) and the Sarapeion (52) (Plate CCCLIV). In antiquity, the mound (maximum height: 30 m) would have marked the southern fringe of the Egyptian borough, Rhakotis: the southwest corner of the Graeco-Roman metropolis. Its existence has led cartographers, notably Heinrich Kiepert, and Mahmoud el-Falaki before him, to conjecture a triangular shape for that segment of the urban circuit. A configuration as such, does not tally with the hypothesized course of the Roman periphery, given the distributional patterns of excavated funerary structures datable ca. the first-second and fourth-fifth century AD (Plate CCCLV). Funerary practices at Kom el-Shuqafa, thus seem to have commenced at times during which some of the nearby *nekropoleis* immediately west of the Kibotos canal, were being abandoned, such as Minet el-Bassal for instance. The assigned chronology suggests that the landmark mound, situated on the southwestern fringe and conventionally adapted to defensive purposes under the Ptolemies, as the case in modern times (i.e. Barthélémy Gallice's Fort Kom el-Hadid aka Borg Abu el-Hashem: 1855), was apparently re-utilized at some point in the opening decades of imperial rule, to receive interments, perhaps in response to burial-space economy within the earlier hypogea of suburban Nekropolis: a phenomenon which may explain the subsequent phases of tomb-exploitation to the west of the Kibotos canal, as archaeologically-attested by subterranean galleries of rock-cut *loculi*, seeking to accommodate as many corpses as possible (sites: 46-49).

53.a) Earlier Encounters: Wescher, Pugioli, and Rufini

Around 1855, a subterranean hypogeum was accidently discovered on the northeastern slope of the rocky plateau which was already used then as a stone-quarry, providing Barthélémy Gallice with the raw material needed for fortifying this peripheral sector of Mohamed Ali's revived town:

Ben prima che l'immortale Mohammed Aly rilevasse Alessandria dalle sue rovine, la necessità delle difese contro l'invadente politica europea aveva consigliato la distruzione di questa parte della necropoli (i.e. that of Kom el-Shuqafa), che offriva una cava inesauribile di calcare a buon mercato ed era molto prossima alla città. Di questa distruzione è memoria anche negli annali della grande Spedizione Francese. Fra il 1820 ed il 1830 la distruzione fu spinta alacremente per i bisogni del

materiale a nuove costruzioni. Una parte notevole di queste catacombe apparve nel 1820 e, visitata dal Minutoli, fu tosto ricoperta: il Brocchi, al quale è vergogna che gli italiani d'Egitto non abbiano murata una pietra che lo ricordi a questa generazione floscia ed impotente, altre ne visitò nel 1822 "presso i Granai di recente costrutti dal Bascià" (leggi "Mohammed Aly").

Altro sepolcreto fu ivi visitato e descritto dall'Agnew nel 1836 (47l); un oratorio cristiano (Wescher tomb) singolarissimo vi fu scoperto nel 1858 (ca. 1855), e, benché illustrato dal Wescher nel 1865 e poi dal Neroutzos, fu distrutto perchè dei materiali si avantaggiasse il nuovo molo del porto occidentale.

(Botti 1893: 19-20)

Two years later, in 1857, the German Egyptologist Heinrich-Karl Brugsch has studied such find, before reporting it in 1860 (Brugsch 1860: 3). In the winter of the same year, Tassos Neroutsos made a visit. His recordings however, have not been published until much later (Neroutsos 1875: 29-39; *idem* 1888: 41-53). An illustrative account of the hypogeum was given by Carl Wescher together with the Italian archaeologist Giovanni Battista de Rossi, in 1864-65, following an investigation carried out during the summer of the previous year (Wescher 1864: 190; De Rossi 1864: 88; Wescher and De Rossi 1865: 57-64). By October 1892, when Giuseppe Botti began his surveys at the areas of interest, having in mind the earlier discoveries, the Wescher tomb was no longer in place (Botti 1893: 20).

In structural design, the Wescher tomb seems to have followed the conventions of Alexandrian funerary architecture, while displaying painted themes that is Christian in essence. It exemplifies, as the case with other hypogea with Christian motifs, the frequent (re)use of pagan sepulchres by fourth-sixth-century Christians, adopting and adapting Graeco-Roman artistic themes into biblical narratives. The surviving parts of the tomb are known primarily from the Wescher-Rossi illustrative accounts, and that of Neroutsos (Plate CCCLVIa). It consisted of:: (i) two access-staircases of 24 steps each, beneath a vault-ceiling. (ii) A quadrangular courtyard (6.00 x 4.00 m) with an *exedra* cut into the left wall, featuring a semicircular bench and a half-domed, stuccoed seashell. (iii) A rectangular basin with a cylindrical well found at the northeastern corner of the courtyard (varies in Wescher

from Neroutsos). (iv) A burial-chamber (8.00 x 2.00 m) with twenty-eight *loculi* cut into the lateral walls, and four into the back wall. (v) A *triclinium*-like chamberette (4.00 x 3.50 m) opened on the courtyard's back wall. Wescher recorded two Corinthian capitals coated with a layer of plaster on which were Christian motifs. (vi) Painting decoration: figures of saints, prophets, and angels, were found on all four walls of the courtyard: flanking the entrance to the burial-chambers, the *exedra*, and even the space between both staircases. Prominent among the scenes would be those of the *exedra*:: (1) Saint Mark and Saint John appear on either side of the entrance; (2) inside the *exedra*, above the carved-out bench, was a narrative-frieze exhibiting three allegorical scenes: 'the dogma of the Eucharist and the miracle of the multiplication of the loaves and fish' (centre), 'the marriage at Cana' (left), and 'the sacred ἀγάπη' (*agape*, to the right) (Plate CCCLVIb) (Adriani 1966a: 185, No. 128). Judging by ground plan and architectural setting, the first phase of construction would be datable to the Roman period, suggesting a hypogeum pagan in origin. Whereas, a later phase of (re)use is represented by Christian paintings of ca. the fifth-sixth century.

Around 1870, a subterranean hypogeum was discovered at a site not far from Botti's Scavo (B) (53c). It was inspected by Pietro Pugioli, who had later communicated his observations to Theodor Schreiber (Schreiber 1908c: 167-168, Abb. 101; Adriani 1966a-b: 186, No. 130; Tav. 104, Fig. 352). It consisted of (Plate CCCLVII):: (i) an access-staircase; (ii) an *atrium*; (iii) a vestibule; (iv) a square chamber containing four mobile sarcophagi; (v) a rectangular burial-chamber with thirty-four rock-cut *loculi* arranged in three rows. Further, to the east of the Wescher tomb, "plus près du village arabe de Karmouz", a funerary structure was unearthed ca. 1876, before being destroyed yet shortly after. It is known mainly from Neroutsos' descriptive account published in 1888, however, without a plan (Neroutsos 1888: 53-54; Schreiber 1908d: 21; Adriani 1966a: 186, the latter paragraph of No. 128). The surviving parts were a courtyard opening onto a burial-chamber: both vaulted and dug on the same axis. "L'entrée de la chapelle (tomb) présentait la forme d'un édicule grec, ou romain, avec ornementations en style égyptien": i.e. flanked by pillars with Egyptianizing lotus capitals. The pediment was decorated with a winged solar-disc carved between a pair of *uraei* (rearing cobras). Inscriptions in red ochre, were painted above each of the side pillars:: i.e. on the right: ΡΟΥΦΕΙΝΕ ΕΥΨΥΧΕΙ; on the left: ΡΟΥΦΗΝΑ ΕΥΨΥΧΙ:: be of good cheer (i.e. be cheerful) Ruphine/Ruphina (the deceased). The hypogeum thus

became known as the 'Chapel of Ruphini'. On the grounds of these epitaphs, Neroutsos identified the deceased as Early Christians from the time of Antoninus Pius. The burial-chamber (8.00 x 4.50 m; height: 4.00 m) had fifty-four rock-cut *loculi* regularly-arranged in three rows on all three walls.

53.b) Scavo (A): Giuseppe Botti (1892-93); August Thiersch (1902)

In 1892-1893, Giuseppe Botti excavated a complex of three subterranean hypogea contiguous with one another. It was revisited by the German architect August Thiersch in 1902 (Plate CCCLVIIIa-b) (Botti 1893: 22-25; Schreiber 1908e: 44-56; Adriani 1966a-b: 180-182, No. 124; Tav. 102, Fig. 343, 345). Each of the three hypogea is given a label that corresponds to its constituents: i.e. Hypogeum (ABC) consisted of:: (i) an access-staircase (aa'); (ii) a courtyard (B) (5.65 x 4.15 m; height: 15 m) with a circular well dug at the southwestern corner (b) (diam.: 0.75 m); (iii) a partially-excavated burial-chamber with vaulted-ceiling and rock-cut *loculi*; (iv) a burial-chamber with rock-cut *loculi* regularly-arranged in three rows on either lateral wall (Plate CCCLIXa-b). Hypogeum (HD), excavated on a higher level than (ABC), comprised:: (i) an access-staircase with a vault-ceiling; (ii) a courtyard (H); (iii) a conjectured *triclinium*-like chamberette with three sarcophagi beneath rock-cut *arcosolia*; (iv) a square burial-chamber with a single sarcophagus; (v) a third burial-chamber (D) with thirty-three rock-cut *loculi* arranged in three rows. At ca. 11.40 m above the level of the funerary structure, were the remains of a mosaic pavement, suggesting the presence of surface constructions on site. Hypogeum (EFG) has a plan which varies considerably, in the version drawn by Botti's draftsman E. Bauer, and that of A. Thiersch. Bauer's version: (i) the main access-staircase (G); (ii) a quadrangular courtyard; (iii) a *triclinium*-like chamberette (E) with three sarcophagi under the rock-cut *arcosolia*; (iv) a *loculus*-chamber (F) with twenty-four rock-cut *loculi* arranged in three rows. For Thiersch, Hypogeum (EFG) extends to the south, to join (ABC) at *loculus*-chamber (C), forming an L-shaped, funerary complex. Thiersch yet recorded a surviving section of a fourth hypogeum (I), west of the main staircase (G). To the southeast, two flights of steps, labelled (ee; e'e'): a single staircase (ee') on Thiersch's plan, had a different orientation to the funerary structures. Remnants of a mosaic pavement are shown on Thiersch's plan, at the upper end of the staircase (ee'). The *loculus*-closing slabs found in burial-chamber (D), one with a false-door carved out in relief, suggest a date for (HD), towards the turn to the first century AD. (ABC) and (EFG) would be slightly later, ca. the first half of the first century AD.

53.c) Scavo (B): Giuseppe Botti (1892); August Thiersch (1902)

In 1892, a large hypogeum was excavated by Botti, to the north of Scavo (A) at Kom el-Shuqafa. Thiersch reinvestigated the find in 1902, and as the case with Scavo (A), he produced a plan which varies partially from that of Bauer (Plates: CCCLXa-b; CCCLXI) (Botti 1893: 25-27; Schreiber 1908f: 57-63; Adriani 1966a-b: 182-183, No. 125; Tav. 99, Fig. 335, Tav. 102, Fig. 346). The hypogeum is divided into two sections, considering the distribution of its constituents. Section (I) consists of:: (i) an access-staircase (ee'); (ii) a square *atrium* (H) (6.00 x 6.00 m); (iii) a rectangular alcove-chamber (B) (ca. 21.00 x 5.25 m), with ten symmetrically-arranged sarcophagus-alcoves (ca. 2.10 x 1.50 m) cut into the lateral walls; (iv) a burial-chamberette (A) opened on the east end of (B). At the centre of (A), a sarcophagus in black granite (a) (ca. 2.15 x 1.25 m) was placed. Two alcoves (b and c) cut into the side walls, have received sarcophagi in marble, of which one was decorated with festooned garlands. Towards the innermost part, were three subordinate and irregularly-cut annexes. At one corner, a circular well (p) was dug. Subsequent modification within section (I) includes a *triclinium*-like chamberette (F), and chamberettes (G) and (E). Section (II) comprised:: (i) an intermediate chamber (D) (6.20 x 10.00 m) accessible through the *atrium* (H); (ii) a rectangular *loculus*-chamber (C) (ca. 21.00 x 5.50 m) with ninety rock-cut *loculi* arranged in three rows; (iii) *loculus*-chamberette (f). The constituents of the latter section had faint traces of Graeco-Egyptianizing motifs. Scavo (B) is datable by analogy with other hypogea (sites: 49c; 53g), to ca. the first-second century AD.

53.d) Scavo (C): Giuseppe Botti (1892)

In 1892, a subterranean hypogeum, Botti's Scavo (C), was discovered at Kom el-Shuqafa, to the south of (A) (Plates: CCCLXII; CCCLXIII) (Botti 1893: 27; Schreiber 1908g: 64-67; Adriani 1966a-b: 183, No. 126, Fig. Z; Tav. 102, Fig. 344). This one, as (A), was partially excavated. It comprised:: (i) an *atrium* (D) with walls constructed in stonemasonry (limestone blocks), and coated with a layer of plaster. Three narrow passages (e; f; g) led into inaccessible compartments. OF the latter, a partially-excavated one was reachable through (g). It had two symmetrically-arranged sarcophagus-alcoves of limestone blocks coated with plaster (not on E. Bauer's plan). A conjectured alcove-chamber seems to have opened on the lateral wall of the partially-excavated compartment. Analogies with section (I) of Scavo (B), suggest a gallery running parallel with alcove-chamber (B). The latter is accessible from the *atrium*

(D), via an intermediate vestibule (C) with two recesses cut into the side walls. Alcove-chamber (B) had four sarcophagus-alcoves cut into either side wall, and three mobile sarcophagi found towards the entrance to burial-chamber (A). One in nummulithic limestone, decorated with various motifs including festooned-garlands, pendant-grapes, genies and Βουκράνια (*bucrania* or ox-heads), was later transferred to the Graeco-Roman Museum. Funerary epitaphs painted in black ochre on the plastered pillars of burial-chamber (B), were encountered between the rock-cut alcoves. Analogies with Botti's Scavo (B) (site 53c), indicate a contemporary construction datable to ca. the first-second century AD.

53.e) Scavo (D): Giuseppe Botti (1892; 1897); Alan Rowe (1941-42)

Scavo (D), "cominciato (in 1892), ma smesso per mancanza di mezzi", to quote Giuseppe Botti, resumed in 1897, before it was revisited later by Alan Rowe, in 1941-42 (Botti 1893: 27-28; *idem* 1898d: 15-24; Schreiber 1908h: 68-73; Rowe 1942a: 6-9, 37-9; Adriani 1966a-b: 183-4, No. 127, Fig. Za; Tav. 102, Fig. 344). It was excavated southwest of the Kom el-Shuqafa Hauptgrab (site 53f) (see *supra*, general plan of the site). The hypogeum (Plates: CCCLXIVa-b; CCCLXVa-b) comprised:: (i) an L-shaped access-staircase of 50 steps (cc'), adjoining a corridor (C) into the subterranean structure. Immediately to the left of (cc'), was a vaulted flight of 10 steps (gg'), ending with a large, pedestrian staircase of three steps (i), carved out at the entrance to a rectangular chamber (J) (6.00 x 8.00 m). Besides the pair of pillars installed at the centre, an L-shaped corridor (K) opened on the left wall of (J), to allow communication with neighbouring compartments (inaccessible). To the left of (gg'), an alcove (h) was partially occupied by a bench. Near the southeast corner of the corridor (C), was a ramp (f) which seems to have led up to an adjacent hypogeum on a higher level to Scavo (D). A third staircase (dd') descended towards a rectangular basin (e). (ii) A court (B) communicating with, at least, three or four burial-chambers partially excavated by Rowe. (iii) The only accessible of the latter, was a large, rectangular *loculus*-chamber (A) (ca. 5.00 x 8.50 m) which had twenty-four *loculi* cut into each of its lateral walls, and a sarcophagus-alcove (G) cut into the bottom wall. On either side of the entrance, two sets of four *loculi* were transformed into deep recesses. Whereas, to the left, a rectangular, rock-cut shaft (F) was dug, with four branching-off, narrow recesses. A large pillar in masonry (E), has been installed as a support. Opposite the façade of the sarcophagus-alcove, a pedestal in granite (H), was found.

Scavo (D) would be datable to ca. the first half of the first century AD: i.e. contemporary with the (ABC) and (EFG) hypogea of Scavo (A) (site 53b).

53.f) Hauptgrab: Giuseppe Botti and Expedition Ernst Sieglin (1900-01)

On September 28th, 1900, a number of local stone-quarriers: el-Saïed Aly Goubara, Mohamed Chimi, Ahmed Ibrahim, and Suleïman Ahmed, have accidently broken open the vault of a funerary structure, while working at the Kom el-Shuqafa plateau. After an initial inspection by Silvio Beghé, Botti's assistant, and Abdou Daoud, from the Graeco-Roman Museum, Botti had soon got himself involved on the next day. Subsequent excavations were therefore carried out on site, from October 1900 to June 1901, under the supervision of Giuseppe Botti, the museum's director, working with members of the Expedition Ernst Sieglin: notably, Theodor Schreiber and the Swiss architect Ernst R. Fiechter (Botti 1902c: 6-12; *idem* 1908: 340-342, 347-362; Schreiber and Fiechter 1908a: 77-120; Pagenstecher 1919: 145-146; Adriani 1966a-b: 173-178, No. 122; Tav. 97, Fig. 328-329, Tav. 98, Fig. 330-331, Tav. 99, Fig. 332-334, 336, Tav. 100, Fig. 337-338, Tav. 101, Fig. 340). Botti's Great Catacomb (aka Das Hauptgrab) was excavated ca. 50 m to the west of Gallice's Fort Kom el-Hadid or Borg Abu el-Hashem: almost 30 m northeast of Scavo (D) (see *supra*, the general plan) (Plate CCCLXVIa-b). It comprised:: (i) a ground-level construction; (ii) an access-staircase (spiral and profound); (iii) subterranean-level (I): a short vestibule with two *exedrae*; a rotunda; a large *triclinium*-chamber; a monumental staircase; (iv) subterranean-level (II): a double vestibule; a *triclinium*-like chamberette (i.e. the nucleus of the funerary complex); a vast ambulatory surrounding the main burial-chamberette from three sides (*infra*); *loculi* and *triclinium*-like chamberettes cut into the three walls of the ambulatory, and branching off it; (v) subterranean-level (III) (flooded with groundwater) was initially excavated as a communication gallery between the staircase and the central part of the hypogeum, before it was reutilised to receive interments. The various parts of the funerary complex may be categorized into: (A) structures pertaining to a first phase of construction (late-1st cent. AD) (Plate CCCLXVII); (B) structures added at later phases of construction, thus representing successive modification of the original plan (Plates: CCCLXVIII; CCCLXIX).

Group (A):: (i) Ground-level constructions: fragments of mosaic pavements (cross-sections. Plates: CCCLXXa-b; CCCLXXIa-b) suggesting the presence of a funerary-cult chapel on site (analogies: 49a; 50; 53b).

(ii) An access-staircase (I) comprising: (1) a cylindrical light-shaft excavated into the rock (diameter: 6.00 m; preserved height: 10 m); (2) a spiral flight of steps with a vault-ceiling (width: ca. 1.20 m); (3) a construction of hewn blocks interrupted by a series of arched-windows as openings, forming the inner façade of the light-shaft (diameter: ca. 3.00 m; average size of blocks: ca. 0.30 - 0.50 m).

(iii) Subterranean-level (I):: (1) Entrance: vaulted passage (II) flanked by *exedrae* with semicircular, rock-cut bench, and seashell (Plate CCCLXXIIa-b). (2) Rotunda (III): round ambulatory (vaulted ceiling; diameter: 8.50 m) enclosing a θόλος (*tholos*: a circular structure; diameter: 3.15 m) with a flat cap supported by a ring of six pilasters. (3) *Triclinium*-chamber (IV): a quadrangular, banqueting space (flat ceiling; ca. 8.50 x 9.00 m). The benches (width: ca. 2.00 m) of the *triclinium* itself, were carved out within four large pillars supporting a plain architrave (Plate CCCLXXIII). (4) Monumental staircase (XI) into vestibules (XII-XIII) and funerary-chamberette (XIV), comprising: three broad steps (width: 2.20 m; flat ceiling) followed by eleven narrower ones (sloping ceiling); a seashell engraved at either end; a short landing to two narrow branches descending to the first vestibule (XII) (Plate CCCLXXIVa).

(iv) Subterranean-level (II):: (1) Vestibule (XII): two asymmetrical passages (G; H) to ambulatory (XV). (2) Vestibule (XIII):: a podium-façade with a flight of three steps: two central, composite (Corinthio-Egyptian) columns set up between a pair of Egyptianizing pillars; an entablature: a plain architrave; a frieze featuring an emblem of a winged sun-disc flanked by Horus-falcons; a dentilled cornice; a segmental τύμπανον featuring a solar-disc at the centre; side walls: two ναός-like, rock-cut niches exhibiting the sculpted figures of a couple (d: female; e: male) in a striding pose (Plate CCCLXXVa-b); back wall: a doorway to the main burial-chamberette, above which is a frieze with a large *emblema* of a winged solar-disc, below a cornice of *uraei*; on either side of the entrance, is an ἀγαθοδαίμων carved out on a pedestal, below an *aegis* of a medusa:: the guardians of the tomb (Plate CCCLXXIVb). (3) Main burial-chamberette (XIV):: a *triclinium*-like structure (2.50 x 2.50 m), with three rock-cut sarcophagus-alcoves flanked by engaged piers; front wall: a jackal-headed Anubis is carved out on either side, as a 'Roman legionary' (right) and an 'anguiped' (left) (Plate CCCLXXVIa); the façade of the central sarcophagus: a miniature, female figure reclining upon a mattress, between an apotropaic gorgon and a satyr rendered hanging from festooned garlands (Plate CCCLXXVIb); the façades of the

lateral sarcophagi: a pair of medusas, carved-out within festooned garlands with pendant-grapes, between three Βουκράνια; the sarcophagi, closed with immovable pseudo-lids, are accessible from the short wall on the side of the ambulatory (XV); funerary painting within the central alcove:: back wall: a mummification scene met in the catacombs of Roman Alexandria, featuring a jackal-headed Anubis (centre), an ibis-headed Thoth (right), and the falcon-headed Horus (left); lateral walls: two priests facing male and female figures across altars (Plate CCCLXXVIIa-c); funerary painting within the lateral alcoves:: back wall: an Apis bull on a battered pedestal, between a winged Isis-Ma'at (rear), a male figure as pharaoh, and an altar (front) (Plate CCCLXXVIIIa-b); side walls:: two figures facing one another across an altar:: the right wall of the right alcove: a mummiform-figure with the baboon-headed son of Horus, Hapi; the left wall of the right alcove: the mummiform-figure of Ptah and a male figure as pharaoh; the right wall of the left alcove: the mummiform-figure of Osiris and a male figure as pharaoh; the left wall of the left alcove: a mummiform-figure with the falcon-headed son of Horus, Qebehsenuef (Plates: CCCLXXIXa-b; CCCLXXXa-b). (4) Ambulatory (XV):: a U-shaped structure delimiting the main burial-chamberette (XIV) from all sides but one; segment (XVα): the southwest wall: two rows of rock-cut *loculi*; the southeast wall: four *loculi* in two regular rows; segment (XVγ): the northeast wall: two rows of rock-cut *loculi*; the southeast wall: four *loculi* arranged in two rows, and one sarcophagus-alcove (h); segment (XVβ): the northwest wall: two rows of *loculi* interrupted by a vestibule leading into a *triclinium*-like chamberette (XVI) with sarcophagus-alcoves (γ'; δ'; ε'); at either end, are two alcoves (β'; η') of which one (η') contained a sarcophagus; a total of 78 *loculi* were cut into the walls of the ambulatory, with shallow recesses (f; g) added at the southeast end of (XVα) and (XVγ), for depositing cinerary urns; a long and deep canal (x) (length: 19.50 m; width: 0.57 m; depth: 3.34 m) ran alongside the bottom and lateral walls of the main burial-chamberette (XIV), where rock-cut, narrow passages serve to provide access to its sarcophagus-alcoves (a; b; c).

Group (B):: (i) Subterranean-level (I):: (1) Burial-chambers (V) and (VI): irregularly-cut structures featuring *loculi* and sarcophagus-alcoves. (2) Burial-chamber (VII) (ca. 4.00 x 2.28 m): irregularly-cut structure accessible from the rotunda, through a narrow opening on a block wall (h - i: front wall); eastern wall: a sarcophagus-alcove (g); western wall: a sarcophagus-alcove and three arch-niches; northern wall: a sarcophagus-alcove with two *loculi* (s-t). At the northeast end, a rectangular shaft

led down to a subterranean chamberette (2.00 x 3.00 m) where four skeletons were found. A small well (u) was dug at the lateral wall of a narrow corridor leading into chamber (VIII). In front of the alcove opposite the entrance, a vertical cut into the ground, led down into an underground gallery occupied by four *loculi* with closing-slabs, while extending to the rotunda. (3) Burial-chamber (VIII): a *triclinium*-like structure with three sarcophagus-alcoves, and several rock-cut *loculi* of which two (e; f) opened on the southern wall, next to the entrance; four shallow niches (a; b; c; d) were cut to receive votive offerings; the ceiling is decorated with a central rosette rendered in red. (4) Burial-chamber (IX): as is the case at chamber (VII), the entrance is narrowed by a block wall (k - l); lateral walls: two sarcophagus-alcoves, five *loculi*, and a chamberette; back wall: an unfinished niche, and three rock-cut *loculi*. (5) Burial-chamber (X):: back wall: a sarcophagus-alcove (o); side wall: a large compartment (P) with two sarcophagi and two *loculi*, and an isolated *loculus*. Burial-chambers (IX) and (X) communicate via a rock-cut passage (m).

(ii) Subterranean-level (II):: (1) Burial-chamber (XXIV) (square; 6.25 x 6.25 m): accessible from the principal staircase via (Q-R); it had a flat ceiling and a central pillar. Given the feeding well (S), the remains of hydraulic cement, and the traces of different water-levels recognizable on the walls, it seems to have been initially dug to function as cistern. At a later phase of construction, the cistern was transformed into a burial-chamber:: eastern wall: a sarcophagus-alcove (m) and a *loculus* (t); southern wall: a double sarcophagus-alcove (r), and two overlapping *loculi* (n); an isolated *loculus* (u) violates the (Q-R) passage. (2) A symmetrical compartment of two pairs of burial-chambers (left: XVII-XVIII; right: XIX-XX), accessible via a long, narrow corridor cut on the northwesternmost *loculi* of the ambulatory's (XVα) arm:: either pair of the compartment consists of: a burial-chamber with twelve rock-cut *loculi* into the side walls, and a *triclinium*-like chamberette with three sarcophagus-alcoves; three *loculi* were cut into the back and side walls of two of the three sarcophagus-alcoves of burial-chamber (XX). (3) An irregularly-cut compartment of three burial-chambers violating the sarcophagus-alcove (l) at the southern corner of the ambulatory's (XVα) arm:: burial-chamber(XXI): two sarcophagus-alcoves cut into the side walls; four *loculi* into the back wall; a fifth *loculus* opened above one of the lateral alcoves; burial-chamber (XXII): opens on the lateral wall of burial-chamber (XXI), and comprises an irregularly-cut bench (n) above which three *loculi* were cut; burial-chamber

(XXIII): an irregularly-cut, *triclinium*-like structure with three sarcophagus-alcoves; six *loculi* are cut into the front wall, and two into either side wall; a narrow passage dug between a violated *loculus* of (XXIII) and one of the lateral alcoves of (XXI), was found blocked by means of a stone slab (o - p).

On the grounds of architectural decoration: the sarcophagi of the nucleus funerary chamberette (XIV), and the statues (d; e) of the original owners in vestibule (XIII), the first phase of construction (group A) may be conjectured ca. the second half of the first century AD. Subsequent modification of the initial plan (group B) would be datable, for the most part, to ca. the second century onwards.

53.g) Nebengrab: Giuseppe Botti (1901); Expedition Ernst Sieglin (1902); Alan Rowe (1941)

Early in 1901, a subterranean hypogeum contiguous with the Great Catacomb (Hauptgrab) (53f), was excavated by Giuseppe Botti (hypogée C). It was revisited by the Expedition Ernst Sieglin (Das Nebengrab, 1902), then by Alan Rowe in 1941 (see *supra*, general plan of the Kom el-Shuqafa plateau. Botti 1908: 342, 362-367; Schreiber and Fiechter 1908b: 121-132; Pagenstecher 1919: 149-51; Rowe 1942a: 31-36; Adriani 1966a-b: 178-180, No. 123; Tav. 97, Fig. 329, Tav. 101, Fig. 342, Tav. 104, Fig. 353). As is the case with the Great Catacomb, the constituents of the Nebengrab can be categorized into two groups: a first phase of construction (A), and successive phases of structural modification (B).

Group (A) (Plate CCCLXXXI):: follows an axial plan:: (1) an access-staircase (n') (width: 1.50 m); (2) a quadrangular *atrium* (A) (Plate CCCLXXXII) at the centre of which is a cubic altar (o) (1.35 x 1.55 m) with a recess (1.00 x 1.10 m; depth: ca. 0.45 m) for sacrifices; (3) an intermediate, rectangular hall (B) (ca. 11.00 x 5.00 m) with six sarcophagus-alcoves cut into the lateral walls: the sarcophagi at the extremities (a; b; c; d) are rock-cut; the one of the central alcove on the left wall (e), is mobile and of dark granite; the central alcove on the right wall (f) was violated at a point in time, to create room for burial-chamber (D) (see *infra*, group B); alcove (e) communicated with chambers (IX) and (X) of the adjacent Hauptgrab, via three pits (Z1; Z2; Z3) dug by tomb-robbers; (4) a burial-chamber (C) with 39 rock-cut *loculi* arranged in three rows on the back and lateral walls (Plate CCCLXXXIIIa). Of the *loculi* cut into the back wall, two were exceptional: one (g') contains the skeletal remains of two corpses and a cinerary urn, the other (g) has been closed with a slab painted Egyptianizing figurative motifs

(Plate CCCLXXXIIIb). In 1995, the use of ultraviolet-light has revealed the details of two superimposed registers on the walls of sarcophagus-alcoves (b) and (d) of hall (B) (Guimier-Sorbets and Seif el-Din 1997: 355-410; Guimier-Sorbets, Pelle, and Seif el-Din 2017: UV photographs). Two mythological scenes of death and resurrection are on display: one intrinsically Egyptian, the other explicitly Hellenic. Upper register: the mummification of Osiris in the presence of Anubis, a winged Isis, and Nephthys; at either side, Horus, anthropomorphic and falcon-headed, is seen. Lower register: the abduction of Persephone on the chariot of Hades, in the presence of Artemis, Athena, and Aphrodite (Plate CCCLXXXIVa-b). The scenes, particularly the Egyptian ones of the upper registers, were first identified by Alan Rowe in 1941-42, and reported in volume XXXV of the BSAA (see *supra*, bibliography).

Group (B) (Plate CCCLXXXV):: (1) A descending staircase (n'') at the SW. corner of the *atrium* (A). (2) An irregularly-cut chamber (G) reached via staircase (n''): an extension of the hypogeum on a lower level. (3) Burial-chamber (E), discovered by Botti on March 31st, 1901, opened on the eastern wall of the *atrium*; it has two Egyptianizing sarcophagus-alcoves (h; i) cut into the lateral walls. Alcove (h) (Plate CCCLXXXVIa-b):: side pilasters: a lattice pattern covers the lower part; a striding male figure, and a *ba*-bird, appear on the front and lateral faces of the upper part; triangular pediment: a disc-*acroterion* at the peak; half-disc *acroteria* at the corners; a lotus-bud vessel enclosing a solar-disc, flanked by two winged sphinxes as Nemesis; back wall: Osiris-mummification scene featuring the winged Isis and Nephthys, and two striding male figures holding a sceptre; at the top, are pendant festooned-garlands; lateral walls: enthroned figures; ceiling: a winged-wheel recognizable at the centre; the scant remains of two female figures at either side. Alcove (i) (Plate CCCLXXXVII) preserves the lattice pattern on the side pilasters and a sun-disc carved in relief at the centre of the triangular pediment. A *loculus* (j) is cut next to sarcophagus-alcove (i). Alcoves (h) and (i) of Botti's Nebengrab, belong to a category of Alexandrian tombs with Egyptianizing motifs, exemplified by the so-called 'Sieglin tomb': a *triclinium*-like chamberette with three sarcophagus-alcoves. It was discovered at Gabbari, in 1900, during the first Sieglin Expedition, and is known primarily from a sketch by Ernst R. Fiechter:: central alcove:: back wall: a standing figure of Osiris who is flanked by the winged Isis and Nephthys, two figures holding linen-bandages for mummification and a pair of altars; right wall: a Horus-falcon; façade:: lintel: a large *emblema* of a winged solar-disc; jambs: motifs of Apis bulls,

winged griffins, and *candelabra* (Plate CCCLXXXVIII). (4) Burial-chamber (F) dug on a lower level to (E), has three sarcophagus-alcoves cut into the back (k) and either side wall (l; m) (Plate CCCLXXXIX). The discovery in 1901, of the remains of human and equine bone, led Botti to imagine the Alexandrian knights massacred by Caracalla, in AD 215, fleeing the nearby *circus* (site 51) and taking refuge in the subterranean Nebengrab where the (EF) compartment came to be known as the Hall of Caracalla. (5) Burial-chamber (D) (2.60 x 5.00 m) opens on the back wall of the violated alcove (f) of hall (B). It has three *loculi* cut into the back and right walls (f''); whereas on the left, a short vestibule (f') led into a quadrangular chamberette with two alcoves within which sarcophagi in granite were found.

53.h) Hypogeum NW. of the Hauptgrab: Henri Riad (1959)

In summer 1959, a rock-cut hypogeum was unearthed northwest of the Great Catacomb (53f) at Kom el-Shuqafa (Leclant 1961: 94). Excavations were carried out by Henry Riad, then director of the Graeco-Roman Museum (plans drawn by Badie Abd el-Malek). A staircase led down into an open-air *atrium*. On the side walls of the latter, four rows of shallow, rock-cut *loculi* were added for the depositing of cinerary urns (Plate CCCXC). A well (depth: 5.70 m) was dug at one corner of the *atrium*. The burial-chamber, accessible from the *atrium*, had three regularly-arranged rows of *loculi* cut into the back (nine) and side (twelve) walls. One urn, containing the remains of a cremated corpse, was recovered within the largely-violated hypogeum that seems to have been looted by tomb-robbers.

3.4.2) Physical Remnants without Known Historical Reference

3.4.2.1) Civic Edifices

Site 54.a: East of the Mosque of Thousand Columns

Maps: V4

Cisterns with reused material: Minet el-Bassal; el-Labbane [Arab]

During the Napoleonic Expedition, ca. 1798-99, a grand cistern was recorded by Saint-Genis, to the east of the Mosque of Thousand Columns (56), immediately after crossing the first subterranean aqueduct (Plate CCCXCI). It had a floor in white marble, and forty-seven marble columns supporting the arches. Capitals are shown with crosses in *Description de l'Égypte* (Antiquités, Planches, Tome V, Pl.

36, Fig. 5-8), suggesting a Byzantine origin (Plate CCCXCII) (Saint-Genis 1818a: 85-88). The possibility of an Early Arab construction with perhaps, reused architectural material cannot be excluded therefore. Saint-Genis' 'grand cistern' is an exemplification of similar structures that cluttered the cityscape:

On en voit de semblables en plusieurs endroits de la ville antique, dans sa partie renfermée par l'enceinte Arabe, dans celle qui se trouve hors de cette enceinte, comme on l'observera ci-après, sur le bord du khalyg (bay) dans la campagne, près de la synagogue des Juifs, de la mosquée dite de Saint-Athanase (el-Attarine Mosque: site 61), du fort Crétin (i.e. Kom el-Dikka: a mound of Arab refuse), & c. On en rencontre d'isolées et d'éparses sur plusieurs points, et enfin presque par-tout.

(Saint-Genis 1818a: 85)

Site 54.b: Ibn Battuta Street

Maps: V4

Cistern with reused material: Minet el-Bassal; el-Labbane [Arab]

In 1922, while installing a new sewage system at Ibn Battuta Street, i.e. south of Kom el-Nadura (the site of ex-Fort Caffarelli), the remnants of a cistern were accidently unearthed (Breccia 1924: 7). It had twelve granite columns, capitals in granite and marble, and a vaulted ceiling. As the case at site (54a), the cistern in question, could be either Late Antique or Early Arab with an assortment of reused architectural material.

Site 54.c: el-Bab el-Akhdar

Maps: V4

Cistern el-Gharaba: Minet el-Bassal; el-Labbane [Arab]

In 2000-2001, the Centre d'Études Alexandrines conducted a salvage intervention with the aim of clearing a buried cistern discovered in proximity to Kom el-Nadura (Empereur 2001a: 694-695; *idem* 2002b: 624). The multiple-storey structure incorporated an assortment of reused material: basically, supporting columns. A pavement of hewn blocks of limestone, and a central well equipped with the machinery of a *saqiya* (i.e. waterwheel), were unearthed. A second season of excavation, in 2001, revealed two separate structures, with different access-shafts, partially visible at the street-level.

Site 54.d: Ragab Street

Maps: V2; V3; V4

Cistern (?): el-Labbane [Roman (?); Late Antique (?); Arab (?)]

According to *Al-Ahram* release on April 10th, 1980: "lors de travaux de démolition, rue Ragab, dans le quartier d'el-Labbane, on a mis en évidence un puits d'époque romaine (?)" (Leclant 1982: 51). The 'Roman well', reported in volume 51 of *Orientalia*, could have formed part of a cistern fed via the first or second subterranean aqueducts shown on the plates of Le Père (Planche 84, Etat Moderne, Planches, Tome Deuxième) and Saint-Genis (Planche 31, Antiquités, Planches. Tome Cinquième).

Site 55.a: East of the Mosque of Thousand Columns

Maps: V3; V4

Baths: Minet el-Bassal; el-Labbane [Late Antique]

During the Napoleonic Expedition, ca. 1798-1799, Le Père added the label 'Ruines' on a mound situated 350 m east of the Mosque of Thousand Columns (site 56): the hill-site erroneously labelled 'Serapeum' on Saint-Genis' plate 31 of *Description de l'Égypte*. A common assumption at the time, relates to what Gratien Le Père has described as: "des ruines considérables d'un vaste monument en briques rouges, semblables à celles du palais ruiné (*infra*, site 62a), près et à l'est de la mosquée de Saint-Athanase" ("semblables à celles du palais ruiné": the ruins southeast of el-Attarine Mosque, within the city centre; not to be confused with the 'palais ruiné' of site 7) (Le Père 1813: 320, No. 105). Le Père's 'vast monument in red brick' would have been the remnants of a bathing facility datable, in general, to Late Antiquity (analogies, sites: 20; 62a; 79).

Site 55.b: South of Botti's Scavo (D)

Maps: V2; V4

Baths: Kom el-Shuqafa [Roman]

In 1964, two associated bath complexes were accidently unearthed during the levelling of the terrain heights south-southwest of Botti's Scavo (D) (site 53e): a point located a short distance west of el-Tawfikeia Street (Plate CCCXCIIIa-b) (Riad 1975: 117-122). Complex (A) (23 x 20 m) was built mostly, of red-brick. It featured well-integrated, pool-like structures, and an underground heating system.

Complex (B) was a relatively-large, two-storey structure (20 x 19 m), judging by excavated vestiges of a staircase. Like complex (A), situated about 11.60 m to the east, it had an underground heating system. Their proximity to one another and to the nearby necropolis of Kom el-Shuqafa (site 53a-h), would suggest two contemporary bathing-establishments datable ca. the second-third century AD.

Site 56: Mosque of Thousand Columns

Maps: V4

Mosque with reused material: Minet el-Bassal [Arab]

During the Napoleonic Expedition, ca. 1798-1799, Saint-Genis recorded:

Après être entré par la porte moderne dite des Catacombes (western gate: Bab Gharb), on trouve immédiatement à gauche un édifice carré qui est une mosquée qu'on a désignée sous le nom de "mosquée des mille Colonnes" ou "des Septante". Ce plan, par sa beauté, sa grandeur, sa pureté, a tous les caractères de l'antiquité; de plus, la matière de l'édifice, c'est-à-dire, cette belle forêt de colonnes qu'on y remarque et qui domine sur tout le reste de sa composition, est antique. Le minaret et l'enceinte de la mosquée (Arab reuse: qu'on n'a même élevés peut-être que sur le plan et les fondations de l'ancien bâtiment) ne forment en quelque sorte que l'encadrement de toutes ces antiquités et sont seuls modernes.

(Saint-Genis 1818a: 83-84)

According to tradition, the so-called 'Mosque of Thousand Columns' was built upon the remnants of a Christian edifice often designated the 'Church of Saint-Mark' or the 'Church of Bishop Theonas' (De Vaujany 1885: 104-107; Neroutsos 1888: 62-65; Breccia 1914a: 89). The ground plan, however, published in *Description de l'Égypte* (Antiquités, Planches, Tome V), indicates a building originally constructed as a mosque (Plates: CCCXCIV; CCCXCV). Already partially destroyed in 1798, the extant remains have not survived the urban developments of the nineteenth century. The mosque received its name from the sheer number of columns (granite; porphyry; marble) which decorated its open-air courtyard. The Arabs seem to have retained such elements from the dismantled structures of the ancient city, to be reused in decorating the interior of the building.

Site 57: Junction of Amud el-Sawari with Ibn Tulun and el-Khedeiwi el-Auwal

Maps: V2; V3; V4

Foundations; fragmentary architecture: Bab Sidra [Roman (?); Late Antique (?)]

In 1907, during construction work at the School of the Salesians (the present-day Instituto Don Bosco Alessandria) and the Monastic House (i.e. the intersection of Amud el-Sawari with Ibn Tulun and el-Khedeiwi el-Auwal streets), a corpus of archaeological material was accidently discovered: foundations; column drums; granite basins, and (reused?) sarcophagi (Breccia 1907a: 109; *idem* 1914a: 90; *idem* 1922: 104). The remains were excavated near the northeastern corner of the Arab cemeteries at Bab Sidra, and might have belonged to an ancient edifice built in proximity to the Sarapeion (52).

Site 58: Northern belt of Bab Sidra

Maps: V2; V3; V4

Miscellaneous: Bab Sidra

(i) Interments [Arab]

(ii) Foundations; fragmentary architecture [Roman (?); Late Antique (?)]

In describing the 'land west of Kom el-Demas', Tassos Neroutsos takes account of:

Les ruines de bâtisses antiques qui se trouvent au milieu des jardins situés entre le quartier d'Attarine et celui de Tartoûchy, et où s'élève actuellement l'établissement des pères jésuites et l'orphelinat des soeurs de Saint-Vincent-de-Paul, sont remplis d'hypogées (doubtful) et de sépultures ordinaires, byzantines (doubtful) et même musulmanes avec inscriptions en lettres koufiques de l'époque des kalifs Ommayades et Fatimites.

(Neroutsos 1888: 60)

Considering such a context, being within the enclosure of the ancient city, Neroutsos' "sépultures ordinaires" could not have been but Arab. His identification of some as 'Byzantine', seems due to the ancient architectural elements encountered beneath accumulated layers of Arab interments, while digging foundations within the urban *insula* delimited by el-Khedeiwi el-Auwal (south), Abd el-Moneim (north), Abu el-Dardaa (east), and el-Farahda (west), and intersected by el-Imam Ali and Sidi el-Wasti. Many of these remnants have been reported by Botti and Breccia: debris of columns, few in granite, others in white marble, and, to quote Botti (1898c), some were "ornées d'une croix"

(Botti 1898c: 82-83, 90; Breccia 1907a: 108). They possibly, represent a continuation of the constructions met a few meters to the south, approximately at the intersection of Amud el-Sawari with Ibn Tulun and el-Khedeiwi el-Auwal (site 57).

3.5) Southern District (SDist.)

3.5.1) Physical Remnants without Known Historical Reference

3.5.1.1) Civic Edifices

Site 59 (16): Northern belt of Moharram Bey

Maps: V2; V4

Mosaic pavement: Moharram Bey [Roman]

In 1897, during construction works carried out at the time, by the Administration of Railways, "sur la voie du Caire, près de Moharem-Bey" (northern belt of Moharram Bey), a mosaic pavement was accidently unearthed. It is "en forme de rosace composée de feuilles de lotus", and therefore, could be the panel with a shield of radiating scales, once on display at the Graeco-Roman Museum (Salle 11, Inv. No. 3224; analogies, Gabbari mosaic: site 50) (Botti and Nourrison 1899: 20). Breccia in turn records, "in the middle of the room (11), a mosaic has been placed, which was discovered in the Moharrem Bey quarter of the town" (Breccia 1914a: 190; *idem* 1922: 174; Daszewski 1985a: 63, 127, n. 36).

Site 60: Junction of el-Mohandes Ahmed Ismaīl with el-Fanan Mohamed Hassan

Maps: V3; V4

Miscellaneous: Moharram Bey

(i) Interments [Arab]

(ii) Habitation quarter [Late Antique]

In 1892, during construction works near the Museum of Fine Arts at Menasce Street, south of the railway (approx. the junction of el-Mohandes Ahmed Ismaīl with el-Fanan Mohamed Hassan), Botti reported some accidental finds: "tombe d'epoca cristiana, a tetto, con impronte bizantine e latine (?): ne' dintorni dell'Ospedale Israelitico, in occasione di fognature, apparvero olle ed anfore con marche di Rodi e di Thasos" (Botti 1893: 16). As the case at site (58) (*supra*, Bab Sidra), the reported

remnants would have rather been Early Arab interments of the Lower Necropolis, than Byzantine. These were often excavated with assortments of earlier architectural elements which in few cases, were found bearing Greek and Latin epitaphs and inscribed crosses. This is backed yet, by another accidental discovery, made in 1975, of foundation walls in mortared limestone, which pertain to a habitation quarter, the contextual associates of which, mainly a corpus of recovered ceramics, date the structures in question, to ca. the sixth century AD (Rodziewicz 1984a: 252, n. 16).

3.6) Central District (CDist.)

3.6.1) Physical Remnants without Known Historical Reference

3.6.1.1) Civic Edifices

Site 61 (22): el-Attarine Mosque and Street

Maps: V2; V3; V4

Miscellaneous: el-Attarine

(i) (a) Mosque with reused material [Arab]

(ii) (b) Structures [Roman (?); Late Antique (?)]

(a) During the Napoleonic Expedition, in 1798-1799, Saint-Genis recorded a corpus of architectural material reused in the construction of the old Attarine Mosque (a landmark of the Arab town), on the north side of Tariq Bab Sharq (Fouad I: el-Horreya:: the ancient Via Canopica) (Saint-Genis 1818a: 92-95; De Vaujany 1885: 107-110; Neroutsos 1888: 66-67; Adriani 1966a-b: 69, No. 20; Tav. 10, Fig. 32. Illustrations: Chapter II, site 22: L1). According to tradition, the old mosque was built at the site of the fourth-century Church of Saint Athanasius (AD 370). The Early Arab structure has been restored in 1084, under the Fatimids. Already by 1830, the surviving remnants described by Saint-Genis, had disappeared. The present-day el-Attarine Mosque dates to the second half of the nineteenth century. As is the case with the Mosque of Thousand Columns (56), the inner colonnade at el-Attarine incorporated reused material: column bases and shafts, and capitals of various orders: some in granite, others in marble. Prominent among the ancient relics were: (i) A conglomerate sarcophagus reused as a ritual vessel or a bath-tub, with inscribed hieroglyphics; today, it is on display at the British Museum in London,

as 'Sarcophagus of Nectanebo II' (Inv. No. BM. EA10; Plate CCCXCVI). (ii) A serpentinite block bearing a partially-preserved, Greek inscription which reads: … ΛO … TPA.

(b) el-Attarine Street: at a plot to the left of the Hellenic Community School, during the digging of foundations for a new building replacing a demolished one, vestiges of ancient constructions were accidently unearthed in 1950 (Adriani 1956a: 44-45; *idem* 1966a-b: 89, No. 52; Tav. 23, Fig. 84). They basically include structures of fired-brick held together by a thick layer of lime-mortar, incorporating parts of an earlier edifice, the extant remnants of which (foundation walls and red granite columns) were identified (Plate CCCXCVII). Another column, yet in red granite, has been recorded by Achille Adriani, at the alley which separates the Hellenic Community School from the reported building to the left.

Site 62: NE. section of *insula* L1-L'2-R5-R6

Maps: V3; V4

Miscellaneous: el-Attarine

(i) (a) Bath complex (replacement of the Isis-Sarapis temple (?): site 90) [Late Antique; Arab]

(ii) (b) Inscribed pedestal/case (retained from the *auditoria* of Kom el-Dikka (?): site 20) [Reused]

(a) During the Napoleonic Expedition, in 1798-1799, Le Père recorded considerable ruins 160 m southeast of el-Attarine Mosque (site 61a). These enormous constructions in cemented fired-brick, are labelled 'Palais ruiné' on *planche* 84 of *Description de l'Égypte* (1817, Etat Moderne, Planches, Tome Deuxième) (Plate CCCXCVIIIa-b) (Le Père 1813: 288, n. 27; De Vaujany 1885: 108-109). Vaulted chambers, basins, water reservoirs, waterproof plastered-walls, and analogies with similar brick-structures (site 55a), suggest a bath complex datable, in general, to the Late Roman period, with few traces of successive phases of Byzantine and/or Early Arab (?) renovation. Given its location in the northeastern section of el-Falaki's *insula* L1-L'2-R5-R6, it could have been a westwards-extension of the imperial baths excavated by the Polish Mission (PCMA) in the 1960s, within the Kom el-Dikka archaeological park (site 20).

(b) In 1847, a block of granite (0.445 x 0.40 m; height: 0.265 m) was accidently discovered at the garden of the Consulate General of Prussia: approximate site of Bourse Toussoun (Club Mohamed

Ali: Markaz el-Askandarreiya lel-Ibda), at the intersection of Fouad Street with Sherif Pasha (Salah Salem) (site 90) (Mahmoud-Bey 1872: 53; Botti 1898c: 64-66, XVII. Bibliothèque; Adriani 1966a: 211). On one side, it bears a Greek inscription which reads:: ΔΙΟΣΚΟΥΡΙΔΗΣ Γ ΤΟΜΟΙ:: Dioskourides, III volumes (Plate CCCXCIX) (Kunsthistorisches Museum of Vienna, Inv. No. III 86 L). At the time of discovery, the inscribed case was identified with a 'storage unit' of the Mouseion's library (3.7.3.1, E); presumably, one that held the works of the Greek botanist Pedanios Dioskourides (first cent. AD). This notion became widely rejected, considering the impracticality of storing the Bruccheion library's hundreds of thousands of papyri in such manner. The context of the granite block cannot be established, and it is likely to have been retained in Late Antiquity, from a dismantled edifice, where it served initially as pedestal, to be reused as container at the nearby *auditoria* of the Kom el-Dikka park (site 20), perhaps in storing the works of the botanist from Anazarbus, before being utilized by the Arabs, as building material.

Site 63: South of the L1-R5 junction

Maps: V1; V2; V3; V4

Miscellaneous: el-Attarine; Kom el-Dikka

(i) Interments [Arab]

(ii) Cisterns; baths; debris (associates, sites: 19; 20) [Late Antique]

(iii) Colonnade and structures lining R5 (associates, site 21) [Roman; Late Antique]

(iv) Foundations [Ptolemaic]

In 1874, while digging foundations for two new houses of Cattaouy-Bey, and a third one, along the west side of el-Nebi Daniel Street (approximately, el-Falaki's transversal street R5 with a slight angle), a site opposite to, and northwest of, el-Nebi Daniel Mosque, overturned granite columns, "d'ordre dorique", to quote Neroutsos, were found extending parallel with the street (Neroutsos 1875: 6; *idem* 1888: 7-9, 60). Excavated a few meters to the west, were large, Corinthian columns in marble, and a mosaic pavement. These remnants were buried beneath a rubble-debris, "qui, de leur côté, contenaient des citernes. A côté de ces citernes, on trouva plusieurs caveaux funéraires, bâtis en brique et en pierres calcaire, et d'autres sépultures (Arab?) construites avec des dalles et de forme prismatiques". The reported funerary structures in brick and limestone, of Neroutsos, would have been the remnants of a Late Antique bathing facility met on the recorded-level of the cisterns, all

covered with accumulated layers of Arab interments: i.e. “d'autres sépultures construites avec des dalles et de forme prismatiques”. Whereas, at the lowermost-level of the excavation profile, were marble, Corinthian columns, and a mosaic pavement, representing a (Late) Roman structure lining el-Falaki’s transversal street R5 the colonnade of which has been met at about 6.00 to 7.00 m, while excavating the foundations of the Cattaouy houses along the western side of el-Nabi Daniel Street.

In 1888, Henry de Vaujany maintained:

Or depuis une trentaine d'années que l'on fouille cette partie (central) de la ville en y creusant les fondements de maisons nouvelles (accidental encounters), les plus beaux morceaux d'antiquité de l'époque gréco-égyptienne ont été découverts lors de la construction du Consulat de France (the present-day Institut Français d'Egypte à Alexandrie), de la Bourse Toussoun (site 90: the later Club Mohamed Ali: Markaz el-Askandarreiya lel-Ibda*) et des maisons situées entre ces deux batiments.*

(De Vaujany 1888: 52-53)

The area mentioned by De Vaujany corresponds roughly to the urban block delimited by: L’2: Abd el-Moneim (south), L1: Fouad (north), R5: Nebi Daniel (east), and Ahmed Moursy (west). Vaujany’s descriptive account on the stratification of the excavated sites within this zone, conforms, for the most part, with that of Neroutsos. De Vaujany, however, adds an intermediate *stratum* of rubble-debris, 5-to-6 m deep, mixed with marble-flakes, various pottery, fragments of lamps, *amphorae*, libation vases, and terracotta utensils including: earthenware of brownish or black clay, and small flasks in dark-blue or greenish glass. Neroutsos’ ‘columns of pink granite’ are recorded by Vaujany, amidst another debris where they were found overturned and broken, with “un magnifique bassin de forme allongée, presque demi-cylindrique, creusé dans un monolithe de granite gris ayant plus de trois mètres et demi de longeur”. Two meters below, near the former consulate: the northeast corner of the urban block, towards the junction of el-Nebi Daniel with Fouad, were (i) the remains of a three-meter-thick corner-wall of massive blocks of limestone, and (ii) various fragments of a mosaic pavement “bordé de filets”, upon a thick layer of reddish cement, and on which lay granite columns (broken and overturned), with the largest measuring, when reconstructed, ca. 4.50 m in

height. Vaujany has not shown the stratigraphic relation between (i) and (ii). Analogies with other remains however suggest a column debris and fragmentary mosaic representing the R5 colonnade and structures lining its west side: (Late) Roman constructions that overbuilt massive foundations of a Ptolemaic edifice situated on the south side of the Canopic Way or L1. In general, the areas of interest here, correspond to the eastern section of el-Falaki's *insula* L1-L'2-R5-R6, which contains Le Père's 'Palais ruiné' (site 62a). The latter, frequently featured on old maps of the town, owing to the nearby el-Attarine Mosque (61a), should be viewed as to represent a single phase of the continuous construction associated with the central districts, as evident, for instance, on the excavated ruins within the Kom el-Dikka archaeological park, as well as at several other sites in the vicinity. A case in point would be the granite columns recorded by Giuseppe Botti, shortly after. They were found broken and overturned, at a depth of ca. 7 m, during the digging of foundations for the Franciscan Sisters Convent on the east side of el-Nebi Daniel Street, opposite the Cattaouy houses (Botti 1898c: 87-88, LIX. Colonnes a la Rue Nebi Daniel). Botti's 'colonnes' might have formed part of the R5 colonnade. A few meters to the north, still on the east side of el-Nebi Daniel, at the intersection with Fouad I, the remnants of cisterns were accidently unearthed, while digging foundations for a new building at the property of Baron Charles de Menasce (Adriani 1940a: 63-64, Fig. 30). Within one of the trenches, a section of wall was found. It had a pyramidal form as those excavated at the nearby alley of Sidi el-Bardissi, and on Abd el-Moneim Street (Plate CD) (analogies, sites: 21; 31).

Site 64: NW. section of *insula* L1-L'2-R4-R5

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) (a) Marble pavement [Late Antique]

(ii) (a) Architectural debris; conduit; (b) inscribed pedestal (associates, sites: 93-100) [(Late) Roman]

(iii) (a) Foundations (ext. of the urban unit at site 69c: sector U of the Polish concession) [Ptolemaic; Roman]

(a) In 1895, David G. Hogarth sunk a test-pit at the northeast corner of "a large plot belonging to Prince Toussoun, immediately behind the Tribunal des Indigènes on the north, and the Consulate of France (the present-day Institut Français d'Egypte à Alexandrie) on the east" (Hogarth and Benson 1894-5: 16-17; Adriani 1934: 89, No. 102). At just one foot (0.30 m) below the surface-level, he found a

marble pavement on a thick layer of cement covering most of the north part of the plot. A deposit of architectural elements, including Late Roman stucco, and column drum in limestone, extended for 6 feet (1.83 m) below the marble pavement. At 11 feet (3.35 m), a small conduit ran northeast. Encountered at 15.60 feet (4.75 m), was a 1.80-feet-thick (0.55 m) wall oriented at 314°: i.e. at a definite angle to el-Falaki's grid. The large and finely-hewn limestone blocks forming its single row of elevation, were noticeable. In fact, one measured 2.40 feet (0.73 m) in length. Hogarth has been able to trace this wall over a distance of about 10 feet (3 m) without meeting a return. Cutting thru a layer of much-broken concrete, to the east, Hogarth hit groundwater-level at about 28 feet (8.54 m), where the subfoundations of the wall have been recorded. Contextual associates, according to the excavator, were limited to "indistinctive Roman red". Stratigraphy thus indicates ruins of Late Antique structures represented by a marble pavement laid upon an underlying architectural debris pertaining to earlier, dismantled constructions datable, in general, to ca. the (Late) Roman period. On a lower level, the excavated section of wall of large limestone blocks, with its footing drenched at groundwater-level (8.54 m), belonged to a monumental structure following a solar orientation, datable to the Ptolemaic period, and probably, maintained to the 3rd-4th century AD (69c, sector U).

(b) On the east side of el-Nebi Daniel, a marble statue-base was accidently unearthed while digging foundations for the Lifonti building (Breccia 1911: 63, Cat. No. 92; *idem* 1914a: 65; *idem* 1922: 75; Adriani 1934: 84, No. 80) (Graeco-Roman Museum, Inv. No. 77). Upturned, the pedestal was apparently reused, for the Latin inscription has been engraved over an earlier one. It records a dedication made by a certain Caius Valerius Eusebius (see *infra*), to Valentinianus I (AD 364 - 375) or perhaps, the II (AD 375 - 392), which reads:

AETERNUM IMPERATOREM
VIRTUTE AC PIETATE
PRAESTANTEM
FL(AVIUM) VALENTINIANUM
PERPETUUM AUGUSTUM
CAIUS VALERIUS EUSEBIUS
V(IR) C(LARISSIMUS) COM(ES) ORD(INIS) PRIMI AC PER ORIENTEM.

Site 65: el-Nebi Daniel Mosque

Maps: V3; V4

Cistern: Kom el-Dikka [Late Antique; Arab]

In 1958, responding to a fifteenth-century, local tradition that connects the Mosque of el-Nebi Daniel with the tomb of Alexander the Great (sec. 3.8.3.1,I), the Polish archaeologist K. Michalowski, with the architect L. Dąbrowski, investigated the substructure of the mosque (Adriani 1966a: 84-85, No. 45, 242-245; Fraser 1972: 16-17; Tkaczow 1993: 90, No. 37). At the northeast corner of it, the long-time reported, two-storeyed construction was found to be a Late Antique cistern built mostly of reused material, and later, renovated by the Arabs (Plate CDIa-b). The almost-square structure (2.42 x 2.63 m; depth: 4.25 m; deepest point:: a semicircular well at one corner: + 1.23 m), is built of limestone and fired-brick. Its walls were coated with waterproof plaster. Four pilasters and a central column supported the vault of the main level. The one at the centre with an upturned marble base reused as a capital, is of transparent alabaster, as the other column, with a Corinthian capital, supporting the collapsed, cross-ribbed vault of the upper level. The structure is yet accessible via a descending groove cut into the wall. Michalowski proposed a possible date for the first phase of construction, not earlier than the late-fourth to early-fifth century AD. Arab renovation is rather evident on the polygonal pedestal which served as a base for the column standing at the lower level of the cistern.

Site 66: Enclosure of el-Nebi Daniel Mosque

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Architectural debris; reused material [Late Antique; Arab]

(ii) Structures [Ptolemaic (?); Roman (?)]

In 1929, while investigating the areas of interest, west of Kom el-Dikka (site 21), Evaristo Breccia excavated three test-pits marked (A; B; C), within the enclosure of el-Nebi Daniel Mosque (Plate CDIIa-b) (Breccia 1932: 48-51; Adriani 1966a-b: 84-85, No. 45, Fig. E; Tav. 22, Fig. 77). The museum's excavations were sponsored by the Municipality of Alexandria, in response to local traditions which place the tomb of Alexander the Great at el-Nebi Daniel (site 65). Breccia descended from + 17.698 to groundwater-level at + 0.898 through three pits: (A: 35.20 m^2); (B: 16 m^2); (C: 16.80 m^2). A thick earth-and-sand

layer extending down to almost 14 m (+ 3.698 m), contained considerable amount of "de matières organiques, de cailloux, de petits blocs isolés, de pierre calcaire, de nombreux éclats de marbre, de tessons d'époque byzantine et arabe". Beyond the recorded-level, large foundation walls built of finely-hewn stone blocks, were met within *sondage* (A), immediately northeast of the mosque. These foundations were cleared and followed over a short distance; yet, towards the west corner, "parmi des blocs jetés pêle-mêle, on voyait quelques tronçons de colonnes en calcaire, revêtues de stuc, et une dalle de marbre, mais cette dernière porte quelques restes d'une inscription arabe" (the stratigraphic relation of the quoted finds with the large foundations, is not indicated). Within *sondage* (B), carried out towards the north end of the mosque's enclosure, architectural debris and fragments of mosaics were encountered through earth-and-sand *stratum* (*supra*). A continuation of the large foundations in limestone blocks, was traceable beyond the recorded-level of 14 m or ca. + 3.698 m, along with remnants of cemented basins. *Sondage* (C), performed between (A) and (B), was not much different: descending from + 17.883 m, Breccia encountered at about 12.20 m from the surface-level, "l'embouchure d'un ancien puits", the bottom of which, reached at + 0.683 m, was found filled with ashes and charred-remains "provenant d'un four de verrier": from a glassmaker's oven, to quote Breccia, who seems to have had in mind, the glass-production refuse excavated by Hogarth in 1894-95, mixed with mediaeval ceramic ware, to the north of the mosque (sites: 71; 75).

Site 67: South of the Kom el-Dikka archaeological park

Maps: V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Baths; dwellings (associates, sites: 18; 20) [Late Antique]

(ii) Structures [Roman; Late Roman]

In February 1976, while digging new foundations south of the Kom el-Dikka archaeological park, architectural elements were accidently unearthed at a site delimited by L'2: Abd el-Moneim Street (north), R4 (east), Granville: Ismaïl Fahmy (south), and the Railway Station Square: Midan Mahattet Masr (west). Excavations were carried out by the Polish Mission, in 1976 (a square trench: ca. 490 m^2; depth: ca. 5 to 6 m) and 1978 (an extension of the earlier trench) (Rodziewicz 1979b: 107-138; *idem* 1984a: 313-316; Tkaczow 1993: 82-83, No. 30). Two successive phases of construction were identified on

site. The excavated remnants include: bathing facility (II) represented by a *frigidarium* with a pool, a *caldarium* with five small pools, a sewage disposal system, a *laconicum* (dry sweating room) with two furnaces for heating, an unidentified structure of four chambers, and an underground corridor; habitation quarter (II) in the form of several dwellings built of limestone blocks in mortar, with walls coated in plaster. Earlier structures in stonemasonry (I) were recorded within the opened trenches. Contextual associates, chiefly pottery and oil lamps, date phase (I) to ca. the second-fourth century, and phase (II) to ca. the fifth-sixth century AD.

Site 68: The Kom el-Dikka archaeological park

Maps: V1; V2; V4

Foundations; fragmentary architecture: Kom el-Dikka [Ptolemaic; Roman]

During the 1965-1966 season of excavation at Kom el-Dikka, the Polish Mission unearthed the remains of a building which has been demolished already in antiquity, at a point ca. 17 m southeast of the Late Antique *odeum* (site 69a): on the north side of Abd el-Moneim (L'2) (Kubiak and Makowiecka 1975: 13-15; Rodziewicz 1984a: 53-55; Kołątaj 1992: 41, No. 27; Tkaczow 1993: 85, No. 32). Excavated within the main trench (ME) (10 x 10 m; depth: ca. 4 to 5 m), was a debris of architectural material: section of a wall of limestone blocks in lime-mortar, a column base and shaft in limestone (preserved height: 0.80 m; diameter: 0.70 m), painted in imitation of Aswan granite, and fragment of a pavement in nummulithic limestone. The excavated elements of architecture date the structure in question, to the Late Ptolemaic or more likely, Roman period. Its identification with a dwelling is inferable, given the dimensions of the excavated blocks. One contextual find on site, a hoard of coins found beneath the nummulithic limestone pavement, pertains to the Ptolemaic rulers of Cyrenaica (eastern Libya).

Site 69: The Kom el-Dikka archaeological park

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) (c) Interments [Arab]

(ii) (a; c) *Odeum* and portico [Late Antique]

(iii) (b; c; d; e) Structures; *villae urbanae*; intermediate alleys [Ptolemaic; Roman]

(a) In the summer of 1964, during the digging of foundation pillars southwest of the Kom el-Dikka archaeological park, the extant remains of a Late Antique *odeum* have been accidently unearthed (Kubiak 1967: 63-70, 77-80; Rodziewicz 1969: 133-145; Kubiak and Makowiecka 1975: 7-13, 15-39; Kołątaj 1975: 79-97; Rodziewicz 1984a: 309-312; Tkaczow 1993: 85-87, No. 33). In the areas of interest, having been annexed to the Polish concession following the discovery, systematic excavation and reconstruction works were carried out between 1964-1968; conservation and restoration resumed in 1985. The *odeum* at Kom el-Dikka is a semicircular structure facing west (Plates: CDIII; CDIV). It consists of: an orchestra where a debris of brick-arches seems indicative of a domed construction which collapsed in place; seats in marble (mostly of reused fragments of decoration); niches of which two are reconstructed within the central part of the crown; a row of reused columns around the crown; an outer wall of limestone; a tripartite vestibule decorated with black-and-white floor-mosaics and sets of reused columns. The *odeum* itself, opened onto a colonnaded portico running on a north-south axis, with a limestone pavement uncovered over a distance of ca. 45 m. A debris of fragmentary architecture: column shafts and capitals, constituted a leveling-*stratum* extending beneath the pavement of the portico. Several vestiges of unidentified structures adjoining the main building, were recorded to the north and south. In general, the *odeum* and its colonnaded portico were built, for the most part, of reused material, following the levelling of the terrain within the central *insulae*, in preparation for new constructions. Its successive phases of use date from the fifth to the seventh century when the building fell into disuse. By the late-eighth century, accumulate layers of debris (i.e. refuse of Early Arab habitation), then interments of the Lower-to-Upper necropolises (the ninth-thirteenth century), gradually formed the hill-site atop which the French had built their Fort de l'Observatoire (Fort Crétin) towards the end of the eighteenth century. The area was levelled in the latter decades of the nineteenth century, on occasion of the extensive rebuilding programme initiated at the time, in the aftermath of the British bombardment of the city in summer 1882.

(b) In 1972-1974, the ruins of a *villa urbana*: Majcherek's structure (A) (see *infra*, d), were excavated under the solid pavement of the *odeum*'s portico, within trench (MX) (Rodziewicz 1976: 261-263; *idem* 1978: 384-385; *idem* 1984a: 33-39; Tkaczow 1993: 87-88, No. 34 and 34A). The remnants include (Plate CDVa-b): a vestibule with a black-and-white, geometric mosaic framed by an *opus barbaricum*, and partially-

preserved walls painted in the first-Pompeian style; a chamberette with a second floor-mosaic in *opus barbaricum*, and a conduit running underneath; a colonnaded courtyard, partially-excavated, extended eastwards, i.e. under the adjacent *odeum* (a). A corpus of fragmentary architecture found within the fill: column drums in fine stucco, dentilled cornices, and a mosaic of irregularly-cut chips pressed into a waterproof plaster, indicates that the building has been ravaged, as the case at the nearby *villae* (alpha; *beta*; *gamma; delta*) (site 18) which seem contemporary with the (MA) building, given the latter's geometric mosaics and painted walls. By analogy, it can be dated ca. the first-third century AD. Destruction took place in the mid-late third century. A century later, following a brief phase of habitation, the area was levelled for the construction of the *odeum* and its portico, which partially overrun the Early Roman structures. On one side of the *villa*, a narrow alley, running E-W, was uncovered over a short distance. Its limestone pavement measured 3 m in breadth. A possible continuation of it, was excavated in 1962, by, then former director of the Graeco-Roman Museum, Victor Ghirghis, during construction works south of el-Nebi Daniel Mosque (65), to the west of the Kom el-Dikka archaeological park. It had almost the same width, and limestone pavement, as the one discovered in the 1970s, and would hence represent yet another intermediate alley like those unearthed at sectors (W_1N) (site 18), (L) (site 19), and (U) (*infra*, 69c) within the Polish concession, and elsewhere: Breccia's street L'α excavated in the 1920s at the Latin Quarter (sec. 2.2.2.10 and 2.2.2.13).

(c) In 1980-81, within *sondage* (U), excavated to the west of the bath complex (20): the northwestern sector of the Polish concession, a northwards-continuation of the *odeum*'s portico (b) was revealed, as is evident on the remains of a stylobate and its overturned columns lying *in situ* (Rodziewicz 1984b: 241-242; *idem* 1991: 75-76, 84-85; Tkaczow 1993: 100-101, No. 45). The excavated corpus pertains to material (re)used in the construction of the stylobate and its colonnade: fluted column drums in limestone; fragments of Corinthian capitals in marble; columns of Aswan granite. They belonged basically to the western colonnade of the *odeum*'s portico. Remnants of an unidentified structure were found at the northeastern part of the *sondage*: a dentilled cornice (painted); limestone blocks; elements of decoration. In the northwest, a confined section of stone pavement of an inner alley running at oblique angle to el-Falaki's grid: following a geographical orientation, was uncovered (Plates: CDVIa-c; CDVIIa-b). Contextual finds (fragmentary architecture inscribed and decorative, and statuary) bore

traces of destruction by fire, represented by a debris-*stratum* of earth-and-ashes separating them from Arab burials of the Lower Necropolis unearthed further west. Stratigraphy on site, indicates: (1) Late Ptolemaic-Roman (inner alley; structures recalling Hogarth's foundations at the Toussoun plot a few meters to the west) (site 64a); (2) Late Antique (northwards-continuation of the *odeum*'s portico: remains of the stylobate and colonnade); (3) overlying, Arab interments of the late-eighth to ca. tenth century, dug into a buffer-debris of earth-and-ashes subsequent to destruction by fire.

(d) During the 1993-1994 season of excavation, trench (MX) has extended to ca. 100 m^2 (Majcherek 1995a: 11-14). Domestic structures were identified on either side of the profile (Plate CDVIII). Structure (A) occupied the eastern section, and had a square *oikos* (originally ca. 6 x 6 m) partially-destroyed by the wall of the neighbouring *odeum* (a). It was accessible from the north via a tripartite entrance; inside, a group of half-columns has created a pseudo-peristyle arrangement. Multi-coloured marble tiles forming geometrical motifs (squares; triangles; lozenges), and irregularly-hewn pieces of stone in *opus signinum*, were employed in the solid pavement of the hall. A rectangular pedestal has been excavated next to the courtyard. Its function can be conjectured from the several nearby *ex-votos*. Below the pavement of the courtyard, were the remnants of a vaulted cistern in red-brick, towards which ran a drainage conduit from one corner of the courtyard. Overall, the architectural vestiges excavated here, indicate a *villa urbana* built at ca. the end of the first century BC, or the beginning of the first century AD, thus contemporary with *villa* (FD) excavated beneath the northeast corner of the great cistern (site 19, sector 'L'; site 70: sector 'F'). Structure (B) was partially excavated along the west side of the trench. It had small chamberettes, with the largest not exceeding 3.50 x 2.60 m. A staircase excavated at one corner of the latter, would be indicative of a multiple-storey building or otherwise, of the presence of a roof-terrace. Parts of structure (B) were destroyed by the stylobate of the *odeum*'s portico. It extends westwards however, beyond the limits of the excavation profile. Vertical cracks in the walls back the hypothesis of a destructive earthquake. Ceramics recovered on site, show that after a brief pause, structure (A) was (re)occupied to serve as a workshop, towards the end of the third century or perhaps, the beginning of the fourth, before its final abandonment at a point within the second half of the fourth century, and the subsequent levelling of the terrain in preparation for new constructions of the fifth-seventh century (see *supra*, a).

(e) During the 1992-1993 season of excavation, a trench (MXV) was opened at the *odeum*'s outer-wall. The prime aim was to verify the stratigraphy and chronology of the structure (a) (Majcherek 1994: 18-20). At 7 m below surface-level, an accumulation of architectural debris included: fragments of polychrome cornices, capitals, and few stuccoed elements of decoration. Encountered immediately underneath, were the remains of a relatively-preserved structure comprising a 0.45 m wall in *opus quadratum*, and two limestone columns standing at ca. 2.25 m apart, as they flanked the entrance to a room, as indicated by door-sockets, doorposts, and a welcoming mosaic-panel displaying the epigraph: ΚΑΛωCΗΚΕΙC (καλῶς ἦκεις). Inside the room, a section of a multi-coloured floor-mosaic was excavated: the *opus tessellatum* measures about 2.00 x 1.70 m; the *emblema* is cruciform filled with a band of double guilloche, and contained within strictly-geometrical motifs (mainly squares, lozenges, and trapezes). A band of diagonally-arranged squares frames the floor-panel (Plate CDIX). Other sections of the excavated room, and the area opposite its entrance, were paved with pieces of marble, porphyry, and alabaster. The welcoming inscription on the threshold suggests an *oikos* of a partially-excavated *villa urbana* overbuilt with the Late Antique *odeum* (69a). Contextual finds, lamps and pottery, are datable to the late-third - early-fourth century AD. Burnt timberwork, and a layer of ashes found scattered directly on the mosaic pavement, are indicative of violent destruction (campaigns of the turbulent second half of the third century) or a natural disaster (earthquake and fire in consequence to the events of summer AD 365). The structure itself, labelled (MC), is datable by analogy with other Roman constructions on site, to ca. the first-third/fourth century.

Site 70: The Kom el-Dikka archaeological park

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Interments [Arab]

(ii) Structures [Late Antique]

(iii) *Villae urbanae* [Roman]

(iv) Foundations [Ptolemaic]

The zone between the imperial bath complex and the cistern has been subject of investigation intermittently, in 1962-63, 1968, 1971, 1976-78/9, and in 1986. The main trench, labelled (F), was

opened during the 1962-1963 season of excavation, followed by a southwards-extension in 1968, i.e. the so-called (68) (Lipińska 1966: 192-199; Lipińska and Riad 1966: 99-108; Kołątaj 1971: 147-167; Rodziewicz 1983b: 249-256; *idem* 1984a: 270-278; Tkaczow 1993: 95-97, No. 43). Excavation was carried out towards the east end of the southern passage of the bath complex, at a point N-NE. of the cistern: on the west side of transversal street R4. Within (F), south of an 8-m-high wall of limestone blocks, constituting a westward-branch of the aqueduct running alongside R4 (site 19), at + 5.40 m above sea-level, two rooms with mosaic pavements were excavated: one in *opus barbaricum*, the other, a polychrome displaying geometric motifs (Plate CDXa). Below these vestiges, were traceable foundations signalling earlier constructions. Whereas, late structures are met within the area under investigation, on the same level of the great cistern and the adjacent aqueduct (Plate CDXb). As the case at the nearby sites of the archaeological park, the upper *strata* represented several phases of Arab interment: a sector of the mediaeval necropolis overlying remnants of Byzantine and Early Arab structures. The earlier excavations conducted by the Polish Mission within (F), thus show a first-third-century *villa urbana* with floor-mosaics, utilizing Ptolemaic remnants as subfoundations, for all being set in conformity with el-Falaki's grid. Late Antique structures, datable ca. the fifth-sixth century, i.e. contemporary with the great cistern and the adjacent aqueduct of sector (L), seem to have overbuilt, in turn, the Early Roman *villa*.

In 1993/94-1996-97, further excavations were carried out in sector (F) of the Polish concession (Majcherek 1995a: 14-20; *idem* 1996: 13-20; *idem* 1997: 19-31; *idem* 1998: 25-34). Distinction between various phases of construction became evident on the excavated complex of *villae urbanae*, labelled (FA), (FB), and (FC) (Chapter II, Plates: CXL; CXLI) (this group of Early Roman *villae*, includes house 'FD' excavated at the NE. corner of the cistern: site 19). The largest, (FA) (see *supra*, earlier excavations) (Plates: CDXIa-b; CDXIIa-b), is represented by two phases of use: (1) 1st-3rd century; (2) late-3rd - mid-4th century. (FA) replaced a Ptolemaic building, possibly of a similar domestic nature, the ruins of which had served as ready foundations for the urban *villae*. Pertaining to the Ptolemaic phase was a fragment of wall of large limestone blocks, built in *opus isodomum*. The layers beneath the accompanying floor of tamped-earth, clay, and lime, yielded Late Hellenistic material (basically, ceramic ware). House (FA), which followed the ground plan of the preceding building, had a courtyard with pairs of half-columns at

regular-intervals along the walls, hence its pseudo-peristyle arrangement. Two sets of rooms have branched off the courtyard: (i) domestic and (ii) commercial. An upper floor, perhaps a roof-terrace, was indicated by a staircase accessible from the southwest corner of the court. Immediately west of the latter, was the main hall. Phase (I) ends with the house suffering extensive destruction, ca. the second half of the third century AD. Considerable changes mark the second phase of use, with the original walls rebuilt, structures added, and new techniques employed, such as brick-vaulting and domes. The residential character of the building seems to fade away at this stage of use (II), as suggested by *amphorae*-storerooms. Finds from the destruction layer, date the abandonment of the building to the mid-fourth century. Shortly after, a *stratum* of slag and lime-kiln refuse, signals the construction of the nearby bathing facility (20). In structural design and chronological sequence, the remnants excavated within sector (F), strongly recall those unearthed at the *odeum*'s portico, within trench (MX) (site 69d), thus strengthening the notion of Late Antique constructions chiefly not exclusively, of public use, having overbuilt *villae urbanae* of the first-third century AD, which were constructed in turn, upon foundations of Ptolemaic edifices of possibly, a similar domestic nature, and orientation: conforming with el-Falaki's grid (sector U is one exception). Two prominent finds relate to sector (F):: house (FA), within the main trench: in a debris forming up the most of a small baulk, at the eastern section of the building's courtyard, a marble head of Alexander the Great has been recovered (Conclusion, III); within trench (FIV), between the great cistern (19) and the wall of the aqueduct running along the west side of el-Falaki's street R4: in architectural debris pertaining to the Late Roman levelling-*stratum*, a well-preserved game counter, with an inscription on one side and a representation of a city-gate on the other, was encountered together with several fragments of architectural elements and limestone blocks of earlier, dismantled structures (thesis' cover-page).

Site 71: West of the Fire Department

Maps: V3; V4

Miscellaneous: Kom el-Dikka

(i) Industrial refuse [Late Arab; Mameluke]

(ii) Interments [Arab]

(iii) Structures [Late Antique]

In 1944-1948, the British archaeologist Alan J.B. Wace excavated six trenches down the slopes of Kom el-Dikka. Wace's unpublished report is communicated by the Polish architect L. Dąbrowski, in bulletin XIV of the Faculty of Arts, University of Alexandria (Dąbrowski 1960 in Adriani 1966a-b: 88-89, No. 49; Tav. 23, Fig. 83; Tkaczow 1993: 88-89, No. 35). Wace's trenches (B: W2) and (C: W3), excavated on the western and northern slopes of the mound, revealed a debris of ceramic ware and glass vessels. On the south, within the area delimited by the *odeum* and the Fire Department, north of L'2: Abd el-Moneim Street, four trenches were opened:: (A: W1): fragment of a pavement stuccoed in red and white, and remnants of walls, all underlying a debris of glass-production refuse; (D1: W4) and (D2: W5): Arab interments; (E: W6): a tamped floor on the same level of el-Falaki's street L'2, walls of irregularly-cut limestone blocks, and a latrine. Wace's excavations seem to conform, in general, with the stratification of the artificial *kom*:: (i) Ptolemaic (to ca. the 1st century BC): subfoundations of limestone blocks; Roman (ca. 1st - 3rd/4th century AD): *villae urbanae* with floor-mosaics; Late Antique (ca. 4th - 7th century): Wace's *sondages* (A: W1; E: W6): habitation quarters, workshops, and public buildings (baths; cisterns; *auditoria*; latrines); Early Arab (ca. mid-7th - late-8th century): habitation, and refuse dumps; Arab-Late Arab (ca. 9th - 13th century): Wace's *sondages* (D1: W4; D2: W5): burials of the Lower, Middle, and Upper Necropolis. Wace, and Adriani after him, labelled the pottery and glass-production refuse: Wace's *sondages* (A: W1; B: W2; C: W3): 'Late Mediaeval': ca. the 12th/13th - 15th century: Ayyubid and Mameluke (see *infra*, excavations of D.G. Hogarth: site 75).

Site 72: The Alexandria Opera House, and west of it

Maps: V1; V2; V3; V4

Miscellaneous (associates, sites: 73, 93-100): el-Messallah Gharb

(i) (b) Structure [Late Antique]

(ii) (b) Structure [Roman]

(iii) (a) Statuary [Roman]

(iv) (b) Foundations [Ptolemaic]

(a) A statue of Markus Aurelius, in white marble, was accidently unearthed during the digging of foundations for the ex-Zizinia Theater (Mohamed Aly: Sayed Darwish: the present-day Alexandria Opera House) (Graeco-Roman Museum, Inv. No. 3250) (Plate CDXIIIa) (Botti 1898c: 128, No. 33; Breccia 1914a: 65,

82, 207, Fig. 16; *idem* 1922: 75, 95, 193, Fig. 38; Adriani 1934: 83, No. 76). The find, which was donated to the Graeco-Roman Museum by Menandro Zizinia (owner of the plot), should be considered in relation to that structure, with a spacious peristyle and imperial statuary, excavated in 1880, a few meters to the north of the theatre, at the Old Greek Hospital (site 73). In fact, both sites lie within el-Falaki's *insula* L1-L2-R4-R5: the presumed premises of the Forum Romanum, and perhaps, its antecedent, the Hellenistic agora (3.7.3.1, F).

(b) In 1895, D.G. Hogarth proceeded with another *sondage*, immediately to the west of the former Zizinia Theatre, 'upon a plot belonging to Baron J. de Menasce', about 170 feet (52 m) from Fouad Street (Hogarth and Benson 1894-5: 12-13; Adriani 1934: 83, No. 75). Several layers were identifiable within the 17 x 11.50 feet (5.18 x 3.50 m) test-pit: (1) an upper levelling-*stratum* of earth mixed with stone and "rough red pottery" (coarse ware); (2) at 7 feet (2.13 m), a concrete pavement was found laid upon crushed-brick in lime-mortar; on the surface of the 1.80 feet (0.55 m) *stratum*, was a circular depression measuring 3 feet (0.90 m) in diameter, interpreted by Hogarth, as "the bed of a column base uprooted and removed"; (3) at 12.50 feet (3.81 m), a section of wall of small stone in mortar, seemed traceable: i.e. "two courses of elevation 3 feet (0.90 m) thick, and two courses also of a wall returning south, but in this case only 2 feet (0.60 m) thick"; fragments of wall-stucco in red, yellow, and blue, were found within the debris; a drain ran below the level of the lowest elevation course; (4) "foundation courses of little better than rubble", encountered towards the bottom which was reached at 17 feet (5.18 m) where Hogarth has cut 6 inches (0.15 m) into "virgin yellow sand nearly as hard as rock". Three phases of construction are distinguishable here: (i) a Late Antique structure of which a fragment of a concrete pavement has survived; (ii) an earlier (Roman) building probably of secular nature, seems inferable, judging by the excavated stuccoed sections of wall, and by the underlying drain; (iii) foundation walls of a dismantled (Ptolemaic) edifice, traceable to virgin soil.

Site 73: The Old Greek Hospital

Maps: V2; V4

Structure with peristyle and statuary (associates, sites: 72, 93-100): el-Messallah Gharb [Roman]

In 1880, while digging foundations for the old Greek Hospital, at a point on the southern edge of the street carrying the same name (a westwards-extension of el-Sultan Hussein: Istanbul: Salah Mustapha: i.e. south of el-Falaki's street L2), massive foundations have been accidently unearthed (Neroutsos 1888: 21, 96-98; Adriani 1934: 83, No. 73). Excavated on site, was the pavement of one spacious peristyle with twenty broken columns in porphyry (granite?). Within the columns, were the remains of marble pedestals and fragmentary sculptures of third-century emperors. One pedestal in white marble, is bearing a Greek inscription recording a dedication made by a certain Aurelius Nemesion to Aurelius Sabeinianus (senior financier: government official), suggesting that the excavated ruins could have belonged to a public edifice of secular nature. The epitaph reads:

ΑΥΡ- CΑΒΕΙΝΙΑΝΟΝ

ΤΟΝ ΚΡΑΤΙCΤΟΝ

ΕΠΙΤѠΝ ΚΑΘΟΛΟΥΛΟΓѠΝ

ΑΥΡ- ΝΕΜΕCΙѠΝ

ΕΝΑΡΧ- ΥΠΟΜΝΗΜΑΤΟΓΡΑΦΟC

Site 74: Church of San Saba; ex-Greek-Orthodox Patriarchate; Antonius

Maps: V1; V2; V3; V4

Miscellaneous: el-Messallah Gharb and Sharq

(i) (b) Hydraulic installations; reused material [Roman]

(ii) (a) Subfoundations [Late Antique]

(iii) (a) Statuary [Ptolemaic; reused in Late Antiquity]

(iv) (c) Inscribed pedestal [Ptolemaic]

(a) In 1898, Giuseppe Botti maintained that: "l'actuelle Eglise de St. Saba semble avoir succédée à une basilique de l'empire, ornée en statues de calcaire numismale, parmi les quelles une statue de Niobe" (Botti 1898c: 116; Adriani 1934: 88-89, No. 100). Successive phases of rebuilding the Orthodox Church of San Saba, southeast of the old Greek Hospital (73), would suggest an edifice overbuilding earlier ruins which were utilized as ready foundations for the latest phase of construction, including an assortment of reused architectural material (structural and decorative). Adriani thought Botti's

'statue de Niobe' to be the funerary one in nummulithic limestone, representing a woman and her child, who were often identified with Berenike II, wife of Ptolemy III Euergetes I (246-221 BC), and her daughter. Other interpretations, however, have connected it with Νιόβη (Graeco-Roman Museum, Inv. No. 14942) (Plate CDXIIIb). The Hellenistic statue in question, relates to a canon of the third century BC; therefore, if Botti's claimed provenance is valid, it would have been relocated from its original context, to complement the inner decoration of the Christian edifice: an assimilation to the Virgin?

(b) Between 1999 and 2004, the Centre d'Études Alexandrines has carried out salvage excavation at the site of the ex-Greek-Orthodox Patriarchate, south of the Church of San Saba (*supra*, a): on the northern side of Fouad Street (el-Falaki's L1) (Empereur 2000a: 615; *idem* 2001: 689-90; *idem* 2002b: 620-1). An area of ca. 420 m^2 was investigated at the northern sector of the plot where a garage has been built in the 1930s, replacing the old garden. Cutting thru the upper layers of modern and Ottoman debris, vestiges of mediaeval and ancient hydraulic installations were encountered: three cisterns (Roman and mediaeval), access-shafts, and basins connected with underlying network of conduits. A pavement of reused marble slabs, exemplifies the constant recovery of structural and decorative elements of architecture from Roman occupational levels. Pertaining to the latter, were a second-century mosaic *emblema* of a bird, and a floor-mosaic with a black-and-white, geometric pattern. Contextual finds include: a fragment of the base of a Hellenistic brazier; a second-century (Roman) oil-lamp featuring a wounded Amazon in relief; a second-century jasper intaglio; faïence objects; glazed ceramics (mediaeval); a clay-pipe with ribbed decoration (Ottoman).

(c) A partially-preserved statue base in Aswan granite, has been reported by Evaristo Breccia, in 1905, near the Pandelides building at the intersection of Antonius (Fawzi Fahmy) with Gessi Pasha (presently Aisha el-Taymoureiya) (Breccia 1911: 8-9, No. 16; *idem* 1914a: 87; *idem* 1922: 101; Adriani 1934: 82, No. 70). The inscribed pedestal (height: 0.325; width: 0.640 m) (Graeco-Roman Museum, Inv. No. 53) was used repeatedly, judging by the different footprints found on either side. It bears three epigraphs, two hammered out, and one partially-destroyed. The latter, readable on discovery, is a dedicatory commissioned under Ptolemy III Euergetes I (reign: 246-221 BC), in honour of the king's physician. It reads:

[βασιλεὺς Πτολεμαῖος Πτολε]μαίου
[καὶ Ἀρσινόης θεῶν] ἀδελφῶν
Ξε̣[νόφαν]τ̣ο̣ν Σωσικράτους Ἡρακλεῖον
τὸν αὐτοῦ ἰατρόν.

Site 75: South edge of Fouad Street, south of the Alexandria Opera House

Maps: V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Structures; industrial refuse [Mediaeval]

(ii) Interments [Arab]

(iii) Structures; reused material [Late Antique]

(iv) Fragments of mosaic pavements [Roman]

In 1895, David George Hogarth chose to make a sounding at a plot owned by de Zogheb family, on the northwestern slope of the now-levelled Kom el-Dikka: a point "opposite to, but a little west of, the Zizinia Theatre (southwest of the site of the ex-Mohamed Ali or present-day Sayed Darwish Theatre)". The site is on the northwestern limit of el-Falaki's *insula* L1-L'2-R4-R5 (Hogarth and Benson 1894-5: 14-16; Adriani 1934: 89, No. 101). Through a test-pit (31 x 19 feet: 9.45 x 5.80 m), six stratigraphic layers were identifiable (Plate CDXIVa):: (1) industrial occupation: refuse of worked-bone, and below, at 3 feet (0.91 m), a wall of poor quality, and vitrified slag (a glass-production indicator); (2) burials appeared at 6.50 feet (2.00 m), ca. 1.80 feet (0.55 m) apart, and covered with slabs; (3) a debris of earth and stone lying loosely, and mixed with potsherds; (4) two parallel walls in mortar, and with traces of plaster on their inner faces, were encountered at 14.50 feet (4.42 m); (5) at 20 feet (6.10 m), fragment of a mosaic pavement (square; 4.80 feet: 1.46 m) decorated with a floral border (1.4 feet: 0.42 m wide), was found upon a layer of soft lime-mortar with crushed-brick (Plate CDXIVb); a fragment of a relatively-small panel survived to the north, where Hogarth recognized "a bird's head and two flowers", and nearby, "fallen blocks" lying on the pavement; a *substratum* of "hard sand", ashes, cement, and earth, then followed; (6) below the level of concrete, were potsherds: basically, "plain black glazed mixed among indistinctive red and buff unglazed", yet without "any structures of good masonry", down to groundwater-level at 30 feet (9.14 m). The succession of stratigraphic

layers, as the case elsewhere at Kom el-Dikka, is indicative of urban units with constant occupation: (1) Mediaeval-Late Mediaeval, industrial occupation represented on site, by modest constructions and refuse; (2) Arab interments; (3) and (4) remnants of buildings, and debris of reused architectural elements pertaining to Late Roman and Byzantine structures; (5) fragments of mosaic pavements of a 1st-3rd-century AD *villa urbana*: Hogarth's 'bird's head and floral motifs' seem to recall similar patterns of contemporary pavements unearthed at sector (W_1N) of the Polish concession (site 18).

Site 76: South edge of Fouad Street, SW. of the junction with Safia Zaghloul

Maps: V1; V2; V4

Miscellaneous: Kom el-Dikka

(i) (b) Marble statue [Late Ptolemaic; Early Roman]

(ii) (a) Foundations (associates, sites: 17ii-iii; 77) [Ptolemaic]

(a) In 1898, Giuseppe Botti reported: "entre le fort de Kom-el-Dikkeh et l'avenue de Porte Rosette, vis-à-vis du palais de M. le Comte Antoine de Zogheb, à l'occasion du creusement des fondations d'une nouvelle maison on a trouvé des fondations énormes": west of Cinema Amir or 20th century Fox (Chapter II, site 17) (Botti 1898a: 55; Adriani 1934: 88, No. 99). Of the excavated blocks of Mex limestone, some were found bearing stonecutters' marks painted in red. The wall ran on the side of Kom el-Dikka, eastwards, parallel with Fouad Street, before it stopped abruptly, at the western periphery of Botti's "Dromos Tycheum": approximately, south of el-Falaki's L1-R4 junction. Given such brief account, the foundations in question, would pertain perhaps, to a Ptolemaic monumental edifice, contextually associated with other vestiges excavated nearby (sites: 17; 77), judging by the material employed, mode of construction, and context of recovery. This chronology is rather hypothetical.

(b) In 1866, a statue of a seated Herakles carved in white marble, was accidently unearthed during the digging of foundations for the ex-Boustros building, south of the Fouad-San Saba intersection: a few meters west of (a) (Botti 1898c: 125, No. 13; Breccia 1914a: 65, 286-287, Fig. 17; *idem* 1922: 96, 287-288, Fig. 39; Adriani 1934: 83, No. 77) (Graeco-Roman Museum, Inv. No. 11216) (Plate CDXV). The partially-preserved, headless statue, representing 'Herakles Epitrapezios', with a wrapped mantle across the shoulder

and left arm, and a characteristic lion-skin draped over the knees, is datable ca. the second half of the first century BC.

Site 77: South edge of Fouad Street, SE. corner of the junction with Safia Zaghloul

Maps: V1; V4

Stylobate of a Doric colonnade (stoa?) (associates, sites: 17ii-iii; 76a): Kom el-Dikka [Ptolemaic]

In January 1960, during the digging of foundations for the National Insurance Co. of Egypt (the Eastern Cotton Co.), at the southeast corner of the junction of Fouad with Safia Zaghloul, the ruins of an exceptional construction were accidently unearthed (Adriani 1966a: 88, No. 48; Riad 1967a: 85-88; Tkaczow 1993: 107-8, No. 54). The remnants in question, encountered at + 5.46 m above sea-level, were largely destroyed by the foundations of earlier, nineteenth-century buildings erected on site. The director of the Graeco-Roman Museum at the time, Henry Riad, identified two extant sections of the stylobate of a colonnade, and fragment of the pavement (Plate CDXVIa-f). These were built upon the bedrock, at 7.45 m below surface-level, parallel with one another and perpendicular to Fouad: el-Falaki's L1. Large, finely-hewn limestone blocks were employed in the stylobate. The pavement was constructed of rectangular limestone slabs. The extant parts of the stylobate, ca. 6.50 m apart, had a preserved height of ca. 2.50 m. Three columns survived *in situ*: two, spaced ca. 2.50 m apart, on the stylobate closer to transversal street R4, and one on the stylobate excavated a few meters to the east. The columns of Mex limestone covered with a thick layer of stucco, measured ca. 0.85 m in diameter, and had a preserved height of 1.7 m (the tops reached at 3 m below the surface-level). The lack of bases, and the wide shallow flutings, would all suggest a construction in the Doric order. Perhaps, the columns belonged to the Doric colonnade of a monumental stoa (or portico) datable to the earlier kings: 3rd century BC. Architectural order, structural design, orientation, and find-spot of this public Ptolemaic edifice, seem to recall Strabo's narrative on the Gymnasium (sec. 3.6.2.1, A).

Site 78: North of the Sidi el-Khiashi-Safia Zaghloul junction

Maps: V3; V4

Complex of houses and workshops: Kom el-Dikka [Late Antique]

(contemporaries: sector (W_1N): site 18; orientation: sector (U): sites 69c and 64a)

In 1933, on the occasion of digging foundations for a new building of Kelada Antoun (No. 16, Safia Zaghloul Street), between Sidi el-Khiashi and the Kom el-Dikka archaeological park, fragment of a column in red granite, was recorded by Achille Adriani, in one of the trenches (Adriani 1940a: 63-64). Adriani's find might have belonged to the colonnade of el-Falaki's nearby, (Late) Roman street R4. In 1976, during the demolition of buildings, hence the subsequent levelling of the area, accidental discoveries were made on the site of plot (No. 15) (Rodziewicz 1979a: 79-89; *idem* 1984a: 252-256; Tkaczow 1993: 111, No. 56). The foundation trenches, inspected by the Polish Mission, have yielded remnants of irregularly-hewn limestone blocks, representing a group of houses and workshops which cannot be studied in isolation from those unearthed ca. 36 m to the west, within sector (W_1N) of the Polish concession (Chapter II, site 18). This district, however, had an orientation which is different from that of el-Falaki's grid, and subsequently, from such nearby complexes of similar nature. The recovered pottery dates the ruins to the fifth-seventh century, backing the notion of a cluster of houses and workshops that formed part of an urban unit (including W_1N) of domestic and commercial nature.

Site 79: South edge of Fouad Street, south of the Alexandria Water Co.

Maps: V3; V4

Structure with bathing facility (associates, sites: 20; 55a; 62a): Kom el-Dikka [Late Antique]

In 1978, during the digging of foundations for a building on the south edge of Fouad, at a point south of the Alexandria Water Co., the remnants of a structure of domestic nature were accidently unearthed (Rodziewicz 1984a: 252, 317-329; Tkaczow 1993: 111, No. 57). The excavated trench was inspected by the Polish Mission which records several chambers branching off a bathing facility. Architectural setting is indicative of a private property. Elements of decoration in the fill, for instance, fragment of a slab displaying an encircled cross in relief, suggest a fifth-seventh-century date for the structure.

Site 80: South edge of Fouad Street, opposite the ex-Municipality of Alexandria

Maps: V4

Cistern Sarkoug el-Saghir: Kom el-Dikka [Arab]

In 1899, Giuseppe Botti reported a cistern known as 'Sarkoug el-Saghir', on the south edge of Fouad Street, opposite the former site of the Municipality of Alexandria (presently a parking area)

(Botti 1899a: 23, 4me série, Pl. A; Adriani 1934: 88, No. 98). The cistern was accessible by means of a 3.40 m shaft the top of which is met at 2.10 m below the street-level. The main structure is therefore cut into the bedrock at 5.50 m below the street-level (Plate CDXVII). It was probably fed through one of the aqueducts seen on plates 84 (Etat Moderne II) and 31 (Antiquities V) of *Description de l'Égypte*.

Site 81: The ex-Municipality of Alexandria

Maps: V3; V4

Structure: el-Messallah Sharq [Late Antique]

In 1876, during the digging of foundations for the École-Monument (site of the ex-Municipality of Alexandria: presently a parking area), the remnants of a Late Antique structure were accidently discovered (Neroutsos 1888: 71-73; Botti 1898c: 92; Adriani 1934: 83, No. 74). Neroutsos, who reported the finds, believed the excavated substructures to have belonged to the Church of Saint-Michael. His identification is based on fragments of cruciform ornamentation, and "des hypogées" with almost erased inscriptions in Greek and in Coptic. As is the case at other sites with analogous finds, which have been reported by Neroutsos and Botti, the remnants in question, would rather pertain to the ruins of a dismantled, Byzantine structure reutilized by the Arabs, as a quarry of building material.

Site 82: East of the Graeco-Roman Museum

Maps: V1; V4

Structure: el-Messallah Sharq [Ptolemaic (?)]

In 1898-1899, Ferdinand Noack excavated four test-pits (H1; H2; H3; H4) within the urban block delimited by the Abbasids (north), el-Faraana (south), Cerisy or Hussein Hassab (east), and Gerber or Mahmoud Mokhtar (west) (Noack 1900: 223-224; Adriani 1934: 82, No. 66-69). Three of the pits, reaching + 10.36 m, + 3.00 m, and + 4.20 m above sea-level, revealed no finds. In the fourth, (H3) or Adriani's (68), at + 1.00 m above sea-level, blocks of an unidentified structure, found partially immersed in groundwater, have been recorded. Stratigraphy thus seems to indicate a 'Ptolemaic' construction. In 1934, however, no finds were reported during the digging of foundations for a property of Abd el-Fattah el-Safuri: the new building which occupied the site at the time, investigated shortly after, by the GRM director Achille Adriani.

Site 83: Gerber Street, ex-Villa Menasce, the American Cultural Centre

Maps: V1; V2; V4

Miscellaneous: el-Messallah Sharq

(i) (b) *Villa urbana* (associates, sites: 18; 19; 20; 69b, d, e; 70) [Roman]

(ii) (a) Inscribed pedestal: reused as building material [Ptolemaic]

(a) In 1905, Baron Menasce donated a rectangular statue base, in nummulithic limestone, to the Graeco-Roman Museum (Breccia 1905b: 120-122; *idem* 1907e: 7; *idem* 1911: 85, No. 144; Adriani 1934: 84-85, No. 83) (Graeco-Roman Museum, Inv. No. 52). The pedestal, once stood at the entrance of Villa Menasce, on Gerber (Mahmoud Mokhtar) Street, bears a Greek inscription which records the commissioning of a statue in honour of a certain court-official, i.e. the son of Asklepiades, by the members of the society of "Aphrodite Laumreous". The inscription is datable to the reign of Ptolemy IV Philopator (221 - 204/3 BC), or perhaps, more likely, to that of Ptolemy V Epiphanes (204/3 - 181 BC). It reads:

[— — —]ον Ἀσκληπιάδου τὸν συ[γγενῆ]
καὶ διοι̣[κ]ητὴν οἱ νέμ[ον]τος σῦν α]ὐτῷ τὴν τῆς Ἀφρ[οδίτης ...]α[...]μρεους σύνοδον
ἀρετῆς ἕνεκε[ν καὶ μεγ]αλομερε̣ίας ἧς ἔχων διατ[ελεῖ] πρὸς [τὴν] π̣όλ̣ι[ν].

(b) In 1983, a test-pit was sunk at the garden of the American Cultural Centre, east of the Graeco-Roman Museum (Rodziewicz and Daoud 1991: 151-168; Tkaczow 1993: 113-114, No. 61). The excavated ruins include stonemasonry and a layer of dark-bulbous mud, suggesting a building of domestic nature. Perhaps, a *villa urbana* with cultivated, open-air courtyard. Contextual finds, chiefly ceramics, date the structure in question, to ca. the first-third century AD (contemporaries, sites: 18; 19; 20; 69b, d, e; 70).

Site 84: East of the ex-Municipality of Alexandria

Maps: V4

Blocks: el-Messallah Sharq [n.d.]

In 1890, Giuseppe Botti recorded massive blocks of Mex limestone east of the former site of the Municipality of Alexandria, immediately south of the American Cultural Centre (83b), at a point on the north edge of Fouad Street. Other blocks of nummulithic limestone were reported as well. He

adds "Pietro Makri me parlait en 1892 d'inscriptions en caractères hiéroglyphiques que l'on aurait retrouvées en ce lieu. Mais j'en ignore" (Botti 1898c: 92; Adriani 1934: 87-88, No. 96). Hence, considering the material employed in construction, and the reported dimensions, the remnants would pertain to ancient structure(s) incorporating inscribed elements of architectural decoration, or otherwise, a set of out-of-context, fragmentary blocks from dismantled edifices, reutilized as building material.

Site 85: NE. corner of el-Faraana-Fatimids junction

Maps: V1; V2; V4

Structures: el-Messallah Sharq [Ptolemaic; Roman]

In 1899, Giuseppe Botti maintained that: 'a discovery of much importance, has just been made at a property of Benedetto Tilche': approximately, the northeast corner of the junction of el-Faraana with the Fatimids (presently, Abd el-Moneim Khalil) (Botti and Simond 1899: 64; Botti 1900-01: 534; Adriani 1934: 88, No. 97; Tkaczow 1993: 212, obj. 60). Botti identified the excavated layers as follows:

0 m: niveau de la rue des Fatimites.
5 m: restes de constructions romaines.
7 m: constructions du déclin de l'époque ptolémaïque.
8.50 m: constructions de la première époque ptolémaïque.
(bedrock reached at 9 m)

Pertaining to the earliest *stratum*, at 8.50 m, was a fragment of mosaic pavement which had "une large bordure en blanc uni, d'un travail quelque peu sommaire (?); mais parallèlement à la pseudo-canopique, dans un rectangle il y eut des figures, dont une seule restait encore. C'était un hermès portant une tête de Vénus ornée de la *stéphane* (Στέφανος: an arc-wreath). Les teintes étaient bien harmonisées et le dessin en était assez correct". The mosaic has extended towards the main street (the Fatimids) where sections of Doric columns, possibly contemporary with the excavated panel, have been found. In his *Catalogue des Monuments Exposés au Musée Gréco-Romain d'Alexandrie*, Botti records that item No. 67 (GRM, Inv. No. 3858), on display at *salle* 15, a limestone capital decorated with an ivy-scroll motif, come from the site of the Casa Tilche. The latter find would be datable to

the Late Ptolemaic-Early Roman period: Botti's "constructions du déclin de l'époque ptolémaïque". Whereas, the mosaic and Doric columns seem vestiges of a third-century BC, Ptolemaic structure.

Site 86: West side of el-Batalsa, between the Abbasids and el-Faraana

Maps: V3; V4

Column debris: el-Messallah Sharq [Late Antique]

In 1914, Evaristo Breccia reported several marble columns of considerable dimensions, bearing Christian symbols (engraved), "le long de la rue des Ptolémées, en face de la villa Salvago": a point opposite the present-day Russian Cultural Centre (Breccia 1914a: 87; *idem* 1922: 101; Adriani 1934: 84, No. 82). Given their find-spot, the columns might have belonged to a Late Antique structure lining the west side of el-Falaki's transversal street R2.

Site 87: North side of Fouad, between el-Batalsa and Goussio

Maps: V3; V4

Structures: Latin Quarter [Late Antique]

In 1894-5, David G. Hogarth maintained that: "by the great kindness of Mons. Pandeli Salvago, (I) was permitted to dig in the plot which intervenes between his brother's house and the (Rosetta) Boulevard, and (which) was occupied at the time of my visit, only by a ruined Arab house": a point located at the middle of the urban block delimited by Fouad (south), Goussio/Noah Effendi (east), el-Faraana (north), and el-Batalsa (west) (Hogarth and Benson 1894-95: 6-8; Adriani 1934: 82, No. 71). At a distance of 125 feet (38 m) from the fence on the north edge of Fouad, Hogarth had sunk his first test-pit. Descending through dry-and-loose surface-debris, "one course of a wall one-stone thick", was found resting on earth, at 3 feet (0.91 m). The debris-*stratum* extending downwards, includes potsherds and fragments of a marble pavement. At 11 feet (3.35 m), Hogarth had hit the top of a large wall of small stone held with mortar containing sand-and-crushed-brick. The excavated part of it, measured ca. 8.60 feet (2.62 m), with a preserved height of ca. 4 feet (1.22 m). On the south side of the pit, the wall was uncovered over 17 feet (5.18 m); then after a break, another fragment continued, "whose western face had been stripped to a depth of 3.00 feet (0.91 m)". Meanwhile, "a much-ruined wall originally at least 6 feet (1.83 m) thick, returned eastwards, starting from the

break in the first wall". It had "so many of its stones abstracted". While enlarging the pit, Hogarth cut through two layers of "very coarse concrete" at 5.50 feet (1.67 m) and 8.00 feet (2.43 m) below surface-level, to encounter "two rough walls resting on loose earth, running 2 feet (0.60 m) apart, westwards from the line of the big wall". Outside the latter, i.e. on the west, was a coarse layer of concrete, 3 inches (ca. 0.0762 m) thick, below which a deep drain of small stone ran westwards. In it, an unglazed *ampulla* was found bearing the stamp ΑΓΙΟΥΜΗΝΑ round a cross on one side, and the figure of Saint-Menas standing between two kneeling camels (?) on the other. Contextual finds within the debris towards the wall, include: "an egg-shaped bead of speckled diorite, a very coarse lamp, some fragments of bone handles, and a seated statuette in late and coarse blue-glazed ware, perished almost beyond recognition". Hogarth, cutting thru the concrete, descended 15 feet (4.60 m) through a debris-*stratum* of rough stone and loose earth, until groundwater was reached at 30 feet (9.14 m) below surface-level. A second, smaller pit has been sunk at just 20 feet (6.10 m) from Fouad Street, where traces of the ruined wall were recorded. Both stratigraphy and the contextual associates of the excavated architecture, suggest a Late Roman construction on the north side of el-Falaki's L1 (Canopic Way), one which was dismantled at some point already in Late Antiquity, and yet, following the levelling of the terrain, habitation resumed on site, ca. the sixth-seventh century.

Site 88: North of ex-Bab Sharq: the Rosetta Gate

Maps: V2; V3; V4

Column debris: el-Shallalat Gardens [Roman; Late Antique]

In 1914, Evaristo Breccia maintained that: "tout près de l'ancienne porte Rosette, à une grande profondeur, on a vu quantité de colonnes en granit"(Breccia 1914a: 87; *idem* 1922: 102; Adriani 1934: 87, No. 93). Given the reported context of recovery, a few meters to the north of the Abu Qir Road, at the section of it south of el-Shallalat Gardens, the finds would have belonged to the colonnade of el-Falaki's streets R1 and/or L1: the πλατείες of the ancient city (sites: R1: 10-12; 139ii; 140c. L1: 22-23).

Site 89: el-Shallalat fortifications

Maps: V1; V4

Inscribed pedestal: el-Shallalat Gardens [Ptolemaic]

In 1911, Evaristo Breccia published a Greek inscription carved on a red-granite base of a statue commissioned by the Chiefs of the Royal Guard, in honour of Ptolemy V Epiphanes (204/3-181 BC) and his deceased predecessors, Ptolemy IV Philopator and Arsinoe III, the Θεοὶ φιλοπάτορες (Botti 1902d: 94-95; Breccia 1911: 15-16, No. 31; *idem* 1914a: 87; *idem* 1922: 101; Adriani 1934: 86, No. 91) (Graeco-Roman Museum, Inv. No. 54). Reported earlier however, by Giuseppe Botti, in volume IV of the *Bulletin de la Société Archéologique d'Alexandrie* (1902), the pedestal itself, has been recovered at the surviving segment of the Shallalat fortifications (Chapter II, site 1). Already partially-damaged on the inscribed side, it would have served as building material (reused), in the construction of the mediaeval circuit-walls, especially when considering its relative location to fortification-point (α). The epitaph reads:

[βασιλέα Π]τολεμαῖον θεὸν Ἐπιφανῆ καὶ Εὐχάριστο[ν]
[καὶ] τούτου γονεῖς βασιλέα Πτολεμαῖον ϙαὶ
[βασίλ]ισσαν Ἀρσινόην, θεοὺς Φιλοπάτορας,
[. . . .]ώτης Ὥρου καὶ Τεαρόως ἀδελφός, <ἰ>λάρχαι {<ἀλ>άρχαι?} {λαάρχαι}
[κ]αὶ ἡγεμόνες τῶν περὶ αὐ<λ>ὴν ἐπιλέκτων
μαχίμων εὐεργεσίας ἕνεκεν τῆς εἰς αὐτοὺς
καὶ τοὺς οἰκείους.

3.6.1.2) Religious Edifices

Site 90: South edge of Fouad, at the junction with Sherif Pasha

Maps: V1; V4

Temple to Sarapis and Isis, the θεοὶ Σωτῆρες: el-Attarine [Ptolemaic]

In 1885, while digging foundations for a new stock-exchange within Daïrrette Toussoun Pasha, hence the name Bourse Toussoun (i.e. the later Club Mohamed Ali; 1962: Kasr Thakafit el-Horreya; 2001: Markaz el-Askandarreiya lel-Ibda), the foundations of a third-century BC, Ptolemaic temple were accidently unearthed on the south side of Fouad (el-Horreya) Street, at the intersection with Sherif Pasha (i.e. Salah Salem) and Ahmed Moursy (Plate CDXVIII) (Maspero 1886: 140-141; Neroutsos 1888: 21-22). Lumbroso, who was responsible for the construction of the new Bourse, found underneath one of the cornerstones, a set of five foundation plaques, in gold, silver, copper, and two in faïence.

Evident on the better-preserved, gold plaque, were scant traces of a bilingual, Greek-hieroglyphic inscription commemorating the dedication of the temple to Sarapis and Isis as the Saviour Gods or the θεοὶ Σωτῆρες (assimilation to Ptolemy I Soter and Berenike I?), and to the reigning Ptolemy IV Philopator, and his wife, Arsinoe III. Other traces were recognizable on the less-preserved plaques. The Greek dedicatory reads:

ΣΑΡΑΠΙΔΟΣ Χ(Κ)Α*Ι*(Ι) ΙΣ[Ι]ΔΟΣ ΘΞ(Ε)ΩΝ ΣΩΤΗΡΩΝ
ΚΑΙ ΒΑΣΙΛΕΩΣ ΠΤΟΛΕΜΑΙΟΥ ΚΑΙ ΒΑΣΙΛΙΣΣΗΣ
ΑΡΣΙΝΟΗΣ ΘΞ(Ε)ΩΝ ΦΙΛΟΠΑΤΟΡΩΝ*

*mistakes in the Greek text (corrected) are indicative of perhaps, an Egyptian inscriber.

(to) Sarapis and Isis (= assimilation?), the θεοὶ Σωτῆρες (Saviour Gods: the divinized Ptolemy I Soter and Berenike I assimilated to Sarapis and Isis?), and (to the reigning) King Ptolemy (IV Philopator) and Queen Arsinoe (III), the Θεοὶ φιλοπάτορες (the Father-Loving Gods).

In 1915, Prince Omar Toussoun donated, along several other pieces from his private collection, two Corinthian capitals to the Graeco-Roman Museum (Inv. No. 20939: nummulithic limestone, Corinthian of the Alexandrian type-I, 0.58 m; Inv. No. 20940: nummulithic limestone with traces of polychrome, 0.56 x 0.55 m) (Plate CDXIX) (Breccia 1916: 7; Ronczewski 1927: 13-14; Awad and Escoffey 2008: 71, Cat. No. 460-461; Savvopoulos, Bianchi, and Hussein 2013: 198, No. 406-407). The capitals were excavated during construction work near Bourse Toussoun. Breccia, then director of the museum, thought they belonged to the remains of the temple unearthed by Lumbroso in 1885, and reported shortly after, by Gaston Maspero.

Site 91: el-Nebi Daniel Street, between Zangarol and the Greek Hospital
Maps: V2; V4
Temple to Isis Plousia (?): el-Messallah Gharb [Roman]

In 1872, during the digging of foundations for a new house of Joseph de Zogheb, at a point on the west edge of el-Nebi Daniel Street: the section of it, between the junctions with Zangarol (the present-day Nazmy Boutros) and the Greek Hospital (a westwards-extension of el-Sultan Hussein:

Istanbul: Salah Mustapha), a corpus of architectural elements was accidently unearthed and later, reported by Tassos Neroutsos (Neroutsos 1875: 5-6; *idem* 1888: 5-6; Breccia 1911: 52, Cat. No. 71; Adriani 1934: 82, No. 72). One drum has been found bearing a Greek inscription indicating that the column would have served as pedestal for the cult-statue dedicated to "the great goddess Isis of abundance" or "Θεᾶι Μεγίστηι Ἴσιδι Πλουσίᾳ": commissioned on August 26th, AD 158: the year 21 of the emperor Antoninus Pius, by Tiberius Iulius Alexander, commander of the *cohors I Flavia*, who was in charge of the grain-supply of Quarter Beta. The epitaph thus provides hints on the possible location of a temple to the cult of 'Isis Plousia', and on the premises of Philo's Quarter Beta (Philo, In Flaccum: VIII. 55). Nevertheless, the validity of these assumptions depends primarily, on whether the column in question, has been found *in situ* or within a secondary deposit of fragmentary architecture (reused). The dedicatory (Graeco-Roman Museum, Inv. No. 158) reads:

Θεᾶι Μεγίστηι Ἴσιδι Πλουσίᾳ | Τιβ[έριος] Ἰούλιος Ἀλέξανδρος | γενάμενος ἔπαρχος σπείρης ᾱ | Φλαουίας τῶν ἠγορανομηκότων || ὁ ἐπὶ τῆς εὐθηνίας τοῦ β γράμματο[ς] τὸν ἀνδριάντα σύν τῆι βάσει ἀνέθηκε | ἔτους κά Αὐτοκράτορος Καίσαρος Τίτου Αἰλίου | Ἀδριανοῦ Ἀντωνείνου Σεβαστοῦ Εὐσεβοῦς | Μεσορὴ ἐπαγομένων γ.

Site 92: SE. of the Kom el-Dikka Archaeological Park

Maps: V1; V2; V4

Temple to Bastet; workshop (?): Kom el-Dikka [Ptolemaic; Roman]

From November 2009 until January 2010, salvage excavations were carried out by the Supreme Council of Antiquities, at a plot of the Ministry of Interior (Central Security Barracks), between the streets of Suleīman Yousri (former el-Amir Abd el-Qader: an eastward-extension of Ismaīl Mahanna: Abd el-Moneim: el-Falaki's L'2) and Granville (Plate CDXXa-b) (Abd el-Maksoud, Abd el-Fattah, and Seif el-Din 2012: 427-446; Abd el-Fattah, Abd el-Maksoud, and Carrez-Maratray 2014: 149-177; Abd el-Maksoud, Abd el-Fattah, and Seif el-Din 2015: 133-53; *idem* 2016: 34-37). The two-month campaign has yielded foundations of large limestone blocks, with contextual associates signalling an edifice dedicated to the cult of the local deity Bastet (i.e. cat-goddess of domesticity in Lower Egypt) (Plate CDXXIa-b). Vestiges of architectural elements, in limestone, Aswan granite, and marble, have been recorded. Contextual finds include five deposits of which one relates to 'the construction of the building'; the others represent votive

offerings (Plate CDXXII). First deposit:: more than 400 figurines of cats, in terracotta and in limestone; a dozen statuettes of children; ceramic ware: vases and plates. Second deposit (Plate CDXXIII):: more than a hundred limestone statuettes of cats; almost thirty statuettes of children; ceramics: locally-produced plates; bones of cats and birds. Third deposit:: thirteen large limestone statuettes of cats; limestone statuettes of children. Foundation deposit:: six plaques: five in red-altered-in-green and blue-green glass, and one in faïence, bearing Greek and hieroglyphic inscriptions. They record the dedication of a ναός (temple), βομος (altar), and τέμενος (a sacred enclosure), by Berenike II, wife of Ptolemy III Euergetes I (reign: 246-221 BC), to the goddess Bastet. Near the foundation plaques, were thirty small ceramic vases for perfumed oil. One of the cat statuettes exemplifies the *ex-votos* on site: ΦΙΛΙΞΩ ΒΟΥΒΑCΤΙ ΕΥΧΗΝ ΕΠΙΤΥΧΟΥCΑ: "Philixo dedicates (i.e. this statuette) to Boubastis (Hellenized form), in thanks for the realization of the wish". The corpus of statuettes representing infants, emphasizes an intrinsic attribute of such deity as a protector of the new-born and women.

The excavated vestiges reflect a wide chronological range of varied use. In the northwest part, at a level above that of the Ptolemaic-Roman temple, a cistern was found, dug into the rock, with communicating channels. Quadrangular in plan, it comprises a storage-space, and a well connected by means of a corridor. The walls of the tank were covered with hydraulic coating; whereas, those of the well, were hollowed with notches to allow access to the interior of the structure. Closer to the foundations of the temple, was a rectangular well in masonry, which might have belonged to a *saqiya* (waterwheel). Within the south part of the plot, the foundations of the above-mentioned building were discovered. These were partially excavated, for they extend southwards, underneath the inaccessible Granville (Ismaïl Fahmy) Street. The temple's second phase of construction seems contemporary with that of the Sarapeion (site 52.II), considering the dedicatory epitaph of Berenike II, encountered within the foundation deposit. At a point in antiquity, the building was destroyed, and contextual *ex-votos* were dumped in clusters of which four have been unearthed in 2009-10, during the levelling of the area. Other structures excavated on site (see *supra*), such as a cistern, wells, and conduits, are indicative of the reutilization of the plot in Late Antiquity, and hence, should be considered within a wider context of Late Roman - Byzantine exploitation of earlier constructions, attested, for instance, at the archaeological park of Kom el-Dikka, and elsewhere (sites: 34; 35; 52; 62a).

Two Greek inscriptions serve to shed light on the nature and function of the site in its principal phases of extended use. The first, a dedication by a Κοινόν (an association of soldiers), to a certain Megamedes, is datable to the reign of Ptolemy IV Philopator (221 - 204/3 BC) (on Aswan granite):

[ἀπ]ὸ τῆς Λιβύης Μάσυλ[ω]ν σὺν αὐτοῖς προσκειμένωξ,
[καὶ τῶ]ν Περσῶν καὶ Κυρηναί[ω]ν συν<σ>τρατευομένων,
[α][ρετῆς ἕνεκεν καὶ εὐν[οι]]ας εἰς βασιλέα Πτολεμαῖον
καὶ βασίλισσαν Ἀρσινόην, θεοὺς Φιλοπάτορας,
καὶ τοὺς υἱοὺς αὐτῶν καὶ τοὺς υἱωνοὺς καὶ τὰ
πράγματα αὐτῶν καὶ τὸ κοινὸν, ἀψεγέως
καὶ φιλοτιμίαι.

Megamedes, (from) the premier companions, (was honoured by) the association of the Trales of Thrace, the Masyles, who, having come from Libya, have been assigned with them, Persians and Cyrenaicans, their brothers in arms, for his esteem and solicitude for King Ptolemy (IV) and Queen Arsinoe (III), the Θεοὶ φιλοπάτορες, for their sons and grandsons, for their interests, and for the association, (because he acted) without having incurred blame, and for the sake of honour.

The second, a dedication by an Alexandrian family, made on behalf of the emperor Antoninus Pius (AD 138-161), of a statue of the lord Sarapammon, to Artemis Φωσφόρος, Boubastis (i.e. was often assimilated to Artemis), and a third (erased) deity (on three contiguous fragments of basalt):

[Ὑπὲρ Αὐ]τοκράτορος Καίσαρος Τίτου
[Αἰλίου] Ἀδριανοῦ Ἀντωνείνου Σεβαστοῦ
[καὶ το]ῦ σύμπαντος αὐτοῦ οἴκου
[Ἀρτέμιδι Φ]ωσφόρωι καὶ Βουβάστει καὶ
[……..Δι]ονύσιος καὶ
[.....]μείου ΦΙΛΑ...[..].....σὺν τοῖς
[παῖσι Ἰσ]ιάδι τῆι καὶ Ἀσκληπιαδι, καὶ Δωρίωνι,

[καὶ ...]ώπωι, καὶ Ἀμμωνίωι, καὶ Δωρίωνι τῶι καὶ
[....ἀνδρι]άντα τοῦ κυρίου Σαραπάμμωνος σὺν
[τῆι βάσει καὶ τη]ὶ ψηφίνηι ……. ὑποβάσει ἀνέθηκ[αν]
[καὶ ……..] …ικος ἔπαρχος σπ[είρης(?)]

For emperor Caesar Titus Aelius Hadrianus Antoninus Augustus (Antoninus Pius), and all his family, to Artemis Phosphoros, to Boubastis, and to (…..), (…..) Dionysios, and (…..), daughter of (Hermias? …….), with their children, Isias, also called Asklepias, Dorion, (...)opos, Ammonios, and Dorion, also called (...), have dedicated a statue of Lord Sarapammon, with (his base?) and his mosaic pedestal, as well as (……..)icos, prefect (of cohort?).

3.6.2) Literary Accounts Pending Physical Evidence

3.6.2.1) Civic Edifices

A) Gymnasium (γυμνάσιον) and Dikasterion (διχαστήριον)

The localisation of the Gymnasium and Dikasterion (Court of Justice) within the central district, is based on the descriptive narratives of Strabo:

In short, the city is full of public and sacred structures; but the most beautiful is the Gymnasium, which has porticoes more than a stadium (approx. 165 m) in length. And in the middle (of the city) are both the Court of Justice and the groves.

(Strabo, Geōgraphikὲ: XVII. 1.10)

The Gymnasium, maintained through royal-patronage, was among the principal public edifices of Ptolemaic Alexandria (Fraser 1972: 29-30; Burkhalter 1992: 345-373). It stood adjacent to the main avenue (πλατεία: street L1) which extended lengthwise thru the city, from Nekropolis to the Canopic Gate:

The broad street (Canopic Way: L1: Fouad) that runs lengthwise extends from Necropolis (western suburbs) past the Gymnasium (city centre) to the Canobic (eastern) Gate.

(Strabo, Geōgraphikὲ: XVII. 1.10)

3.6.2.2) Religious Edifices

B) Temple to Pan (Πάνειον)

In *Geōgraphikȅ*, Strabo records:

Here, too, (i.e. at the central district), is the Paneium, a height, as it were, which was made by the hand of man; it has the shape of a fir-cone, resembles a rocky hill, and is ascended by a spiral road; and from the summit, one can see the whole of the city lying below it on all sides.

(Strabo, Geōgraphikȅ: XVII. 1.10)

According to Strabo, the central district encompassed a temple to Πάν (Pan: Greek deity of nature, the wild, and rustic music). Given its central location, Strabo's 'height' is often identified with Kom el-Dikka, the mound upon which stood the Napoleonic ex-Fort de l'Observatoire (aka Fort Crétin), at a height of about 30 m: an identification proven wrong, for the artificial *kom*, which was levelled in the course of successive works of construction, has been formed for the most part, in mediaeval times, by means of accumulated deposits of Arab habitation and interment, and industrial refuse.

Representations of Pan within Alexandria, include a partially-preserved statue in white marble, found ca. 1910-11, during the digging of foundations for a new house on Fouad Street (Plate CDXXIV) (Graeco-Roman Museum, Inv. No. 11917) (Breccia 1912c: 13, Pl. VIII, Fig. 2; *idem* 1914a: 209, No. 4; *idem* 1922: 195, No. 4; Tkaczow 1993: 192, obj. 18; Savvopoulos and Bianchi 2012: 106, No. 31). Its exact find-spot is 'unknown'. The fragmentary statuette (preserved height: ca. 0.57 m) is datable to the second-first century BC. In 1985, a foot of a hoofed creature (perhaps a Faunus?), forming the fragment of another marble statuette, has been recovered by the Polish Mission at the Kom el-Dikka archaeological park, while excavating the *frigidarium* of the imperial baths, and el-Falaki's transversal street R4 (20). Whereas, the marble head of a φαῦνος (Faunus: Roman counterpart of Pan) was accidently unearthed during construction work carried out in 1905, to the south of the Government Hospital Hill (site 125a). These encounters, although not necessarily indicative of the location of Strabo's sanctuary, do however, attest the popularity of the cult of Pan and the Roman-assimilated Faunus, among the inhabitants of Graeco-Roman Alexandria.

3.7) Northern District (NDist.)

3.7.1) Physical Remnants Corresponding to Known Historical Narratives

3.7.1.1) Religious Edifices

Site 93: Le Hotel Métropole, and west of it

Maps: V2; V4

Obelisks: el-Ramleh [dynastic, relocated to Alexandria]

In Book XXXVI of *Natural History*, Pliny the Elder records:

Et alii duo sunt Alexandreae ad portum in Caesaris templo, quos excidit Mesphres rex (Tuthmosis III), quadragenum binum cubitorum.

(Pliny, Natural History: XXXVI. 14.69)

There are two other obelisks (from Heliopolis), which were in Caesar's Temple at Alexandria, near the (Great: eastern) harbour there, forty-two cubits in height, and originally hewn by order of King Mesphres (Tuthmosis III).

(Pliny, Natural History: XXXVI. 14.333)

The hieroglyphic inscriptions carved on Pliny's obelisks, indicate that they were commissioned by Tuthmosis III (1479-25 BC), with later epitaphs added under Ramses II (1279-13 BC), as dedicatory to Re and Atum, the sun gods of Heliopolis, almost fourteen centuries before being re-located to Alexandria (Plate CDXXV). The event is recorded by a bilingual, Greek-Latin inscription carved on one of two bronze crabs, currently on display at the Metropolitan Museum of Art in New York (Inv. No. 81.2.1 and 81.2.2), which belong to a set of four originally used by the Romans, as supporters for the broken corners of one obelisk (Neroutsos 1878: 175-180) (Plate CDXXVIa-c). The bilingual inscription reads:

L IH ΚΑΙΣΑΡΟΣ
ΒΑΡΒΑΡΟΣ ΑΝΕΘΗΚΕ
ΑΡΧΙΤΕΚΤΟΝ ΟΥΝΤΟΣ
ΠΟΝΤΙΟΥ

ANNO XVIII CAESARIS
BARBARVS PRAEF
AEGYPTI POSVIT
ARCHITECTANTE PONTIO

In the eighteenth year of (Augustus) Caesar (ca. 13-12 BC), (Publius Rubrius) Barbarus, praefectus Aegypti, erected [it: the obelisk]; [done by] Pontius, the architect.

Hence, at the advent of Roman dominion, these obelisks were brought from their original context in Heliopolis, to be placed on either side of the pylon of Caesar's temple: a façade which could not have been much different from that at the entrance to the contemporary Isiac temple on Lochias (Plate CDXXVII) (site 142). Both obelisks thus serve as points of reference for the localisation of Caesar's temple, the Caesareum: a major cultic-edifice of the city, under the Augustan Principality (94-100).

Unlike the temple, the Heliopolis obelisks survived Late Antiquity and the Middle Ages, into the nineteenth century: one yet standing (east: New York), the other (west: London), overturned and half-buried (illustrations: Chapter II, site 6). They would become widely known among earlier travellers as 'Cleopatra's Needles'. After a first, unsuccessful attempt to remove it as a spoil of war, in 1801, the British had finally gained possession of the prone obelisk, however, peacefully, as a 'gift' from Mohamed Ali Pasha, then *Wāli* of Egypt, to the newly crowned King George IV, in 1820. The actual removal took place at a later date though, in August-September 1877, to be re-erected at Victoria Embankment in London, on September 12th, 1878 (Plate CDXXVIII). The other obelisk, still-standing, was conceded in 1869, by Ismaīl Pasha, *Khedive* of Egypt, to the United States: removed between December 1879 and March 1880 (Plates: CDXXIXa-b; CDXXXa-b), to be eventually erected at New York's Central Park, on January 22nd, 1881 (Plate CDXXXI) (Gorringe 1885: 1-76, 96-109).

The approximate site of the (New York) obelisk is inferable, given Gorringe's photograph taken on December 6th, 1879 (Plate CDXXXII), where the adjacent building, then under construction, stands today to the west of Le Hotel Métropole (Plate CDXXXIII). The prone obelisk was located about 60 m

further west: i.e. the site of the building immediately west of that shown in Gorringe's photograph. Both obelisks, placed on the same alignment, neither follow the orientation of el-Falaki's grid nor a geographical orientation, suggesting an oblique orientation for the cultic-edifice they decorated. Moreover, the remains of a monumental structure excavated in the 1990s by the Centre d'Études Alexandrines, ca. 60 m south of the obelisks (site 95), had an orientation still different from el-Falaki's grid and structures following a geographical orientation (2; 52.I; 64a; 69c; 78; 131.2b; 134; 138; 139; 140a; 141; 147) (Plate CDXXXIV). On such oblique orientation of the edifice in question, J.-L. Arnaud maintains:

Compte tenu du mode de composition des édifices - l'orthogonalité et la symétrie - qui domine alors, il est difficilement envisageable que le rachat de la difference d'orientation entre le réseau viaire et les obélisques fût assuré par les volumes construits. Ce sont plutôt les vides, la cour qui occupait l'espace entre les portiques et le temple, les bosquets peut-être, qui absorbaient les multiples décalages géométriques. Suivant cette hypothèse, une édifice suivant l'orientation de celui du Majestic (site 95), situé entre la ligne des obélisques et la rue L2 (approximately, the Greek Hospital Street: a westwards-extension of el-Sultan Hussein), trouverait effectivement sa place au sein d'un Césaréum, composé non pas comme une pièce unique, mais par la juxtaposition d' édifices différents tels ceux qui organisent l'agora de Thasos par example.

(Arnaud 2002a: 187-188)

It seems prerequisite, therefore, to examine the archaeological evidence within the Caesareum's τέμενος (94-100): approx. the present-day urban block delimited by Safia Zaghloul (east), the Greek Hospital (south), Saad Zaghloul (north), and el-Nebi Daniel (west), in order to attain a clearer view of the juxtaposition of various structural components which form up together the cultic-complex.

Site 94: Zahar-Debbane

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) Cannon-balls [Post-Mediaeval]

(ii) Crypts [Late Antique: Byzantine]

(iii) Inscribed tablet [Roman]

(iv) Foundations [Late Ptolemaic; Roman]

At the end of 1874, during the digging of foundations for the Zahar-Debbane building, situated between Synagogue Eliyahu Hanavi (98) and the London prone obelisk (93), on el-Ramleh Boulevard (Saad Zaghloul Street), the workers have accidently unearthed: "d'énormes maçonneries en blocs de pierre calcaire et de grès, et dont quelques-unes étaient marquées d'entailles (i.e. stonecutters' marks) formant les figures (m) ou (m^{v})" (Neroutsos 1888: 10-14; Adriani 1934: 89-90, No. 104). The reported stonemasonry represents two foundation walls: one longitudinal (3.50 m), running SW-NE, parallel with el-Ramleh Boulevard and accordingly, the line of the obelisks; the other transversal (2.50 m), extending NW-SE, from the boulevard towards the synagogue, thus forming a right-angle with the first wall. They constitute the northwestern corner of a monumental building oriented slightly off el-Falaki's grid. The scale of such monumental building is inferable, given the size of the excavated blocks, and the thickness of either wall, as reported by Tassos Neroutsos. Found within the debris, near the subterranean conduit which passes next to the foundations of the western wall, is a tablet in white marble, bearing a Greek dedicatory inscription that reads:

ΔƐΚΑΝѠΝ ΤѠΝ ƐΝ CΤΟΛѠ ΠΡΑΙΤѠΡΙѠ [ΤΟ ΠΡΟCΚΥΝΗΜΑ]

ΘƐѠΝ ΚΑΙCΑΡѠΝ ƐΝ ΤΗΔƐ ΤΗ CΤΗΛΗ [ΑΝΑΓΕΓΡΑΠΤΑΙ]

ΚΑΙCΑΡΟC Λ . ΑΥΡΗΛΙΟΥ ΟΥΗΡΟΥ CƐΒΑC

ΤΟΥ ƐΚΤѠ [ƐΤƐΙ]

On behalf of the decuriones (Roman cavalry officers) of the Praetorian Squadron (elite forces), an act of veneration to the divine Caesars, is inscribed on this stele; [commissioned] in the sixth year of [the reign of] Caesar Lucius Aurelius Verus Augustus (AD 161-169).

The epigraph, datable ca. AD 166 - 167, is indicative of a second-century, Roman edifice associated with an imperial-cult. It represents a successive phase of use, judging by the mode of construction of the foundation walls (*supra*), which antedates the Julio-Claudians. An initial phase of construction

cannot be later than ca. the first century BC, if not earlier (in case of the reutilization of dismantled structures as ready foundations for the building in question). In the upper layers, above the earlier foundations, below the current street-level, Neroutsos reports vaults which he labels "sépultures chrétiennes" (probably crypts pertaining to a Christian replacement within the demolished pagan complex), and "des amas de gros boulets en pierre dure". The vaults and cannon-balls of Neroutsos, seem to signal the successive phases of Late Antique, mediaeval, and post-mediaeval occupation at the Caesareum, as shown at nearby, contextually-related sites excavated by the CEAlex (95; 99; 100).

Site 95: Cinema Majestic

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) (e) Structures; porcelain; coinage [Modern: 19th century]

(ii) (d) Ceramic ware; coinage [Late Mediaeval: Mameluke]

(iii) (b-c) Bath complex; cisterns; structure; ceramics; coinage [Late Antique]

(iv) (a-a') Foundation walls; ceramic ware; coinage [Late Ptolemaic; Roman]

Successive excavations have been carried out by the Centre d'Études Alexandrines, immediately next to the ex-Zahar-Debbane, at the site of Cinema Majestic, from September 16th till December 17th, 1992, and from May 20th till June 27th, 1993 (Empereur, Hesse, and Picard 1994: 504-507, 512-519; Empereur 2016: 40-41; *idem* 2017: 1-11; Rifa-Abou el-Nil 2017: 15-24).

Geophysical resistivity surveying of the plot (60 x 40 m) allowed the performing of *sondages* at areas of high anomalies, and hence, the unearthing of structures of various nature, pertaining to a wide chronological range of construction and/or occupation (Plate CDXXXVa-c). Three zones were studied:

Zone (I): north of the plot:

(e) Five successive levels of nineteenth-century occupation; the earliest is datable to the 1850s, on the grounds of monetary finds.

(d) A thick layer of fill containing a variety of Mediaeval (Arab and Mameluke), glazed pottery: an indicator of activities taking place on site to the end of the fourteenth century. Structural remains were not detected thru.

(a-c) A Late Roman *stratum* overlying Early Roman remnants with architectural blocks in place.

(x) Groundwater-level reached at 5.50 m.

At the north:

(c) A Byzantine occupational-level of the seventh century, featuring a modest structure with walls built of small stone, a pavement of stone slabs, and a column in Marmara marble.

At the centre:

(d) A fourteenth-century Mameluke debris of glazed pottery.

At the south:

(a) A Late Ptolemaic-Early Roman occupational-level of ca. the second half of the first century BC, containing Eastern Sigillata.

Zone (II): centre of the plot: main trench (20 x 10 m):

(b-d) Late Roman bathing establishment, with the remains of the *caldarium* (heater and bathtubs); three cisterns found in association with the baths, filled with a debris of Mameluke, glazed pottery (an assemblage datable till the end of the fourteenth century), must have served as dumps during the Late Mediaeval period.

(a) Below the Late Roman baths, yet towards the east, were the imposing remains of a massive wall over one metre in width, formed of large blocks (Plate CDXXXVI). Along the south side of it, extended a thick layer of ashes, datable, on the grounds of contextual ceramic and numismatic finds, to the

second half of the fourth century AD. On the north side of the wall, a thick layer of Late Ptolemaic-Early Roman occupation of ca. the second half of the first century BC, has yielded an abundance of Eastern Sigillata. The massive wall unearthed over 2.34 m and labelled (MR34), was oriented 45^{o} off el-Falaki's grid. The rising water table prevented further excavations from reaching the footing to determine the date of initial construction. (MR34) adjoined a perpendicular and contemporary wall (MR115) at right-angles. A successive phase of construction is signalled with the reinforcement of (MR115) using rubble-stone to yield (MR114), and a cistern (CI4) overbuilding (MR34) (Plate CDXXXVII).

Zone (III): south of the plot:

(e) Nineteenth-century occupational-levels.

(d) A layer of fill pertaining to the Mediaeval period.

(c) A thick layer of Late Antique occupation: ca. the fifth-seventh century.

(x) Groundwater-level reached at 5.50 m.

Numismatics:

(a-e) About eight hundred coins (modern, mediaeval, and ancient) were recovered on site.

Ceramics:

(e) Nineteenth-century porcelain.

(d) Mediaeval ware: locally-produced, glazed pottery; imported celadons and ceramics.

(a-c) Classical and Late Antiquity: ceramics, worked-bone, glass, and faïence.

Four principal phases of construction and/or occupation seem inferable given the stratigraphy of the Cinema Majestic site. (e) A nineteenth-century occupation intensifying towards the 1840s, and thus reflecting the urban development of Mohamed Ali's revived town. Belonging to the latter phase is the Zahar-Debbane building itself (94). (d) Accumulated fill containing locally-produced and imported ware, indicating a minor-habitation zone at the NE. corner of the Arab town, judging by

the absence of structural remains within areas possibly utilized as refuse dumps under Mameluke rule. (b-c) Late Roman and Byzantine occupation of the late-fourth to seventh century, represented by a bathing facility, cisterns, and a coarse building which bears analogies with contemporaries at several sites in Alexandria. (a) A Late Ptolemaic to Early Roman phase commencing ca. the second half of the first century BC, on the grounds of the excavated repertoire of Eastern Sigillata (ES), which shows continuous occupation through the Principality, as backed by signs of destruction by fire at some point in the second half of the fourth century (layer of ashes pertaining to a chronologically-established context). Considering such find-spot and the established-chronology, the structure in question, could be associated with the imperial cultic-complex: the Caesareum which was violently terminated, and subsequently, converted into a Christian edifice. The constructions of this phase, attested through a wall (MR34) unearthed over 2.34 m, were already in place towards the advent of Roman rule. Although their Hellenistic origin is nearly ascertained, yet the fact that the bedrock was not reachable during the CEA excavations due to the rising water table, develops uncertainties regarding whether the structural constituents of the Caesareum have been founded on virgin soil or upon a levelling-*stratum* subsequent to the demolishing of earlier, public edifices which would have served as subfoundations for the new cultic-complex initiated under Cleopatra VII (51 - 30 BC), to commemorate the deification of the deceased Julius Caesar as Divus Iulius, and to honour Markus Antonius, before it was renovated later, under Octavianus as Caesar. Another issue is the off-grid orientation of the walls (MR34; MR114-115). They neither follow the orientation of el-Falaki's grid nor structures with geographical orientation in the Bruccheion. Their proximity to, and association with, the vestiges excavated at Zahar-Debbane, however, back the validity of Neroutsos' reporting. It is possible that the complex encompassed within its τέμενος, structures with a slightly different orientation to the urban grid, yet conformed as a unit, with the line of the obelisks which decorated their façade. If this is the case, the cultic-complex must have been uniquely oriented off el-Falaki's grid, with a façade opposite the harbour passageways. Whether this was done intentionally during the rebuilding programme of Cleopatra VII, or earlier, under her predecessors, is open to question.

Site 96: East and SE. of the Safia Zaghloul-Saad Zaghloul junction

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) (a) Cisterns (associates, site 35); reused material [Late Antique; Arab]

(ii) (a) Structure (associates, site 34) [Late Ptolemaic; Roman]

(iii) (b) Inscribed pedestal [Late Ptolemaic]

(a) In 1892, during construction work at el-Ramleh Central Station, ancient remnants have been accidently unearthed, and later reported by Giuseppe Botti: scant remains of a "mosaico bianco", column drums in limestone, with some in granite, capitals bearing letters from the Greek alphabet, cisterns, and yet "più sotto, l'angolo di un grande edifizio a grossi blocchi". According to Botti, the remnants extended southwards, in the direction of the Government Hospital Street (Botti 1893: 15; *idem* 1898b: 81; Adriani 1934: 74, No. 41). Botti's 'fragmentary architecture' would rather be a secondary deposit of reused material, considering its proximity to either site of the quarried Caesareum and the Tulunid circuit-walls which ran immediately to the east. The cisterns, described as 'enormous' and 'imposing' by Botti, and the "grande edifizio a grossi blocchi", recall the 'grandiose structures' reported by him, further north: i.e. to the south of the so-called 'Tower of the Romans' (sites: 34; 35).

(b) In 1866, a rectangular statue base in granite, was accidently found during construction work at el-Ramleh Central Station (Breccia 1911: 24, No. 42; *idem* 1914a: 78; *idem* 1922: 92; Adriani 1934: 74, No. 40). The pedestal bears a Greek inscription that records a dedication issued on December 28th, 34/33 BC, by a certain Parasitos from Aphrodisias, to Markus Antonius (Graeco-Roman Museum, Inv. No. 10). It reads:

Ἀντώνιον μέγαν
ἀμίμητον ἀφροδισίοις
Π[αρ]άσιτος τὸν ἑαυτοῦ θεὸν
καὶ εὐεργέτην, (ἔτους) ιθ' τοῦ καὶ δ'
…… Χοῖαχ κθ'.

Site 97: Around the Safia Zaghloul-GHS junction

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) Cistern [Late Antique: Byzantine]

(ii) Structure with baths; fragmentary architecture; pedestal [Roman]

In 1892, Giuseppe Botti recorded a column in white marble, four-meters long, which was found, with two capitals, in the foundation trenches of a new building at the Zouro plot, northwest of the Hassan Fadali - Safia Zaghloul junction (Botti 1893: 15-16; Adriani 1934: 92, No. 112). A few meters to the east, he encountered the remains of a Byzantine cistern which overbuilt an earlier edifice datable ca. the second-third century AD. The latter had a peristyle with fragment of a polychrome mosaic. Fragmentary architecture includes sections of walls bearing traces of Pompeian painting, capitals, bases, and columns in grey granite. Botti recognized vestiges of a *tepidarium*, and an inscribed jet of a *frigidarium*. Among the finds, was the lower part of a marble base of statue commissioned for a certain Gymnasiarch, and dated by Botti, to the second century AD. The edifice in question, could have been Roman with a bathing establishment, overbuilt with a Late Antique cistern. Its contextual relation to the marble finds on the nearby Zouro plot, and the second-century marble pedestal, is uncertain, given the brief account of Botti.

Site 98: Synagogue Eliyahu Hanavi

Maps: V2; V4

Inscribed pedestal: el-Ramleh [Roman]

In 1907, during the digging of foundations for the synagogue of Eliyahu Hanavi, at the northern part of it, an inscribed pedestal of a statue was accidently unearthed (Breccia 1911: 33-34, No. 50; Adriani 1934: 89, Cat. No. 103). It bears a Greek dedicatory commissioned on February 15th, AD 14, by a certain Λεύκιος Τοννήιος Ἀντέρως, yet invoking divine protection on a vessel, Νικαστάχτης (Graeco-Roman Museum, Inv. No. 234). Considering the find's location within the τέμενος of Caesar's temple, and its date of issue: year 43rd of Augustus, it might be associated with the cultic-complex being a centre of the veneration of Augustus Epibaterios: Augustus, the patron of navigators (Fraser 1972: 24). The Greek inscription reads:

Λεύκιος Τοννήιος Ἀντέρως
Εὐπλοίᾳ ὑπὲρ πλοίου
Νικαστάχτης (ἔτους) μγ Καίσαρος Μεχὶρ κᾱ.

Site 99: Billiard Palace

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) (b) Structures; ceramics; coinage [Late Roman]

(ii) (a') Inscriptions: *ex-votos* [Roman]

(iii) (a-a') Terraces; structures; cisterns; ceramics; coinage [Late Ptolemaic; Roman]

Salvage excavations have been carried out by the Centre d'Études Alexandrines, at the site of the ex-Billiard Palace (400 m^2: the excavated section of the plot: ca. a hundred meters southeast of Cinema Majestic), from September to December 1993 (Empereur, Hesse, and Picard 1994: 508-12, 518-9; Demougin and Empereur 2002: 149-156; Empereur 2016: 40-41).

The morphology of the natural bedrock revealed the terraced layout of the Billiard Palace site. Within a distance of about 25 m, north-south, the difference in elevation exceeded seven meters. The lowermost, Hellenistic *strata* were just 3 m deep towards the south end of the plot, compared to a depth of more than 11 m at the north end (Plate CDXXXVIII). On either side, a dune of sandstone consolidated the development of these terraces, on the east and west (elevation: 10 m). At the NW. corner, one terrace cut into the bedrock at 11 m from the surface-level, reached the groundwater-level. A partially-rock-cut, partially-built structure had multiple access-points on the east, including a doorway in marble, with jambs and engaged pilasters. At the northwest corner of the construction, an *arcosolium* yet retained its polychrome. Prominent among other finds, was a corpus of ceramics datable ca. the fourth century AD, and eight inscriptions of which one records a dedication to the Procurator of the Caesars: Publius Aelius Panopaeus, while mentioning the εικόνες των Σεβαστών: those of the Caesars and of Faustina the Younger (wife of Markus Aurelius; empress: AD 161-175); the latter is designated: Φαρία σωσίστολος, a title associated with the attributes of Isis Pharia (of Pharos): Isis Pelagia (of the Sea): Isis Euploia (of Save Navigation) (Plate CDXXXIX). An assimilation as such, is unsurprising, for the Caesareum or Sebasteum was a temple approached chiefly by sailors, as is indicated, for instance, by the Eliyahu-Hanavi dedicatory unearthed in 1907 (site 98). Whereas, the Greek inscription at the Billiard Palace, inscribed on a cylindrical half-column in marble, reads (Plates: CDXL; CDXLI; CDXLII):

Π-ΑΙΛΙΟΝΠΑΝΟΠΕΙΟΝ
ΤΑ
ΕΠΙΤΡΟΠΕΥΣΑΝΤΩΝΚΥΡΙΩΝ
ΣΕΒΑΣΤΩΝ ~ ΤΗΣΕΙΣΤΟΝΟΙΚΟΝ
ΑΥΤΩΝΕΥΝΟΙΑΣ ~ ΟΙΑΠΟΣΥΣ
ΣΕΙΤΙΟΥΣΕΒΑΣΤΩΝ ~ ΕΙΚΟΝΩΝ
ΚΑΙΦΑΥΣΤΕΙΝΗΣΦΑΡΙΑΣΣΩΣΙΣΤΟΛΟΥ ~
ΝΕΑΣΣΕΒΑΣΤΗΣ
~ ΤΟΝΣΥΣΣΕΙΤΟΝ *hedera* (ivy)

Other encounters on site, were two rock-cut cisterns. One, datable to the first century BC, had an oblong shape (10 x 3 m; height: ca. 2.00 m; vol. 60 m^3), with two central pillars carved out of the bedrock. It was accessible by means of a rock-cut shaft (width: ca. 0.60 m); two meters to the east, a rectangular well descended to the level of the water table. Overall, more than 900 coins have been recovered. A few pertained to the reign of Cleopatra VII (51-30 BC), while the majority came from fourth-century *strata*, which is justified in the context of Diocletian's installation of the Alexandria mint towards the enclosure of the cultic-complex.

The stratigraphy of the Billiard Palace site echoes therefore, that of Cinema Majestic (95). Four principal phases of construction and/or occupation seem identifiable. (a) Late Ptolemaic-to-Early Roman structures datable to ca. the second half of the first century BC, as indicated by contextual ceramics and coinage of Cleopatra VII. (a') A period of intensive use during the course of the first three centuries of the Common Era, is signalled by the absence of structural modification. (b) This is followed by a profound remodelling phase datable to ca. AD 350-450, as evident on a thick layer of backfill, an abundance of contextual ceramics, and over 700 coins. (d) A mediaeval phase without structural remnants till the end of the fourteenth century (Mameluke ware). Then a total absence of material from the 16th to the 18th century: a phenomenon justified by the fact that the Ottoman village has developed on the silted-up isthmus which formed at either side of the ex-Heptastadion. (e) A nineteenth-century resume-of-occupation taking place at the time of Mohamed Ali (1805-49).

Site 100: Garage Lux and Cinema Park

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) (e) Structures [Modern]

(ii) (d) Cisterns; reused material [Arab]

(iii) (c) Structures; interments (analogies, sites: 35; 114) [Byzantine]

(iv) (b) Cistern [Late Roman]

(v) (a') Renovation; cuirass-statue [Roman]

(vi) (a) Structures [Late Ptolemaic; Roman]

Between 2000 and 2002, the Centre d'Études Alexandrines carried out salvage excavations at the site of the ex-Garage Lux and ex-Cinema Park, west-northwest of the ex-Billiard Palace (site 99), east of Synagogue Eliyahu Hanavi (site 98), and southeast of Cinema Majestic and the Zahar-Debbane (sites: 94; 95) (Empereur 2001a: 690-693; *idem* 2002b: 621-623; Seif el-Din 2009: 119-133; Empereur 2016: 40-41).

The disturbed layers of the excavated zone mark the exploitation of the areas of interest as a quarry of building material as early as Late Antiquity, with the bulldozers of the modern developers destroying almost a quarter of the total surface area (approximately 650 m^2 of 2,900 m^2) prior to the CEAlex intervention. In the uppermost *strata*, antedating the demolished garage and cinema, were modest structures of rubble-stone, associated with craft-activity, judging by the abundance of fish bone and scale (e). Extensive quarrying on site, is yet attested by an assortment of recovered ceramics pertaining to various chronological phases: nineteenth-century porcelain together with mediaeval and Roman pottery. Cutting through an extended layer of fill (d), ca. three meters deep, a cluster of six cisterns partially preserved and built mostly of reused material, is met. Further down, was a Christian necropolis comprising successive interments (orientation: head to the east; feet to the west). Crosses carved on stone, and skeletons carrying iron-crosses, suggest a ca. sixth-seventh century, Byzantine intramural-cemetery possibly linked to the Christian edifice (*martyrium*?) which replaced the Caesareum. Contextual finds include worked-bone datable to the seventh century. A third period of use is represented by coarse, adobe-and-clay structures (c). The developments of the fourth century, and the re-utilization of the pagan site, seem related to the construction of a rock-cut, oblong cistern (4.00 x 0.80 m), with buckets of noria found in the fill (b). The destruction-layers have yielded a large quantity of egg-and dart stuccoes, as well as floral motifs decorating a coffered ceiling. Prominent among other finds from destruction-layers, were fragments of a statue in white marble, depicting a Roman emperor identifiable with Septimius Severus (AD 193-211), on

the grounds of the featured cuirass (an armour consisting of a breastplate and backplate fastened together) and his characteristic forked beard of which traces survive on the neck. Severus' statue, found partially-preserved from the calf to the top of the neck, might have been commissioned on the occasion of the emperor's visit to Alexandria around AD 199-201 (Plate CDXLIIIa-c). An earlier phase of construction is attested through a hypostyle hall with marble pilasters and stuccoed decoration datable to the first century BC (a), followed by renovation work taking place under the Principate, where limestone pilasters have been added (a'). The earlier phases, and their contextual associates, especially Septimius Severus' cuirass-statue exemplifying the 'εικόνες των Σεβαστών' recorded by the Billiard Palace dedicatory (site 99), echo Philo's contemporary account on the constituents and extent of the imperial cultic-complex:

For there is no sacred precinct of such magnitude as that which is called the Grove of Augustus (93), and the temple erected in honour of the disembarkation of Caesar, which is raised to a great height, of great size, and of the most conspicuous beauty, opposite the best harbour (the eastern harbour); being such an one as is not to be seen in any other city, and full of offerings (sites: 94; 96b; 98; 99), in pictures, and statues (site 100); and decorated all around with silver and gold; being a very extensive space, ornamented in the most magnificent and sumptuous manner with porticoes, and libraries, and men's chambers, and groves, and propylaea, and wide, open terraces (site 99), and court-yards in the open air, and with everything that could contribute to use or beauty; being a hope and beacon of safety to all who set sail, or who came into harbour.

(Philo, Legatio ad Gaium: XXII. 151)

3.7.2) Physical Remnants without Known Historical Reference

3.7.2.1) Civic Edifices

Site 101: South of Mohamed Ali Square

Maps: V4

Cistern: el-Mansheiya [Arab]

An underground cistern has been reported by Richard Pococke, at the southwest tower of the Arab gate known as Bab el-Bahr (aka Porte de la Marine): the point marked (C) on Wilkinson's 1843

plan (B: Kom el-Nadura; C-D: Bab el-Bahr: one of the northern gateways into the mediaeval town) (Introduction, II.c; Chapter II, site 5) (Pococke 1743: 4; Wilkinson 1843: 165-166). Its location suggests a structure associated with the second subterranean aqueduct running nearby (see *supra*, pl. 84, Etat Moderne II).

Site 102: East of Mohamed Ali Square

Maps: V2; V3; V4

Baths: el-Mansheiya [Roman; Late Antique]

In 1841, the British Egyptologist Sir J.G. Wilkinson recorded "large columns, and extensive brick substructions, as well as stone vaults ... about 1400 feet (approx. 427 m) to the east of the Saracenic tower (flanking one end of Bab el-Bahr: points C-D on his plan)" (Wilkinson 1843: 156-157). Wilkinson's observations could be explained in the context of vestiges of a bathing establishment recognizable towards the mid-nineteenth century, within the vicinity of the Square of the Consuls or Mohamed Ali Square: the areas corresponding roughly to the ancient coastline, now concealed beneath the silted-up isthmus of el-Mansheiya (site 5; sec. 2.3.1).

Site 103: Saint Mark's Coptic-Orthodox Patriarchate

Maps: V3; V4

Miscellaneous: el-Ramleh

(i) Foundations [Modern: 19th century]

(ii) Ceramics [Byzantine; Mediaeval; Modern]

Between June 21st and July 7th, 1994, the Centre d'Études Alexandrines carried out a salvage excavation at Saint Mark's Coptic-Orthodox Patriarchate: on the west side of el-Nebi Daniel Street, at the section adjacent to Synagogue Eliyahu Hanavi (Empereur 1995: 756). Coring reports have shown the natural bedrock at 15 m below the surface-level. Both *sondages* (Plate CDXLIV) performed north of the Patriarchate, reached the groundwater-level at + 1.80 m above the sea-level: ca. 6.00 m from the surface-level. The ancient occupational-levels being immersed, could not have been reached. Cutting thru the upper layers, revealed the deep foundations of nineteenth-century, now-levelled constructions, and the assortment of modern material mixed with mediaeval (chiefly, Mameluke) and Byzantine ceramics. Stratigraphy thus bears the effects of the extensive rebuilding programme

of Mohamed Ali's revived city and yet, the reutilization of this zone as a quarry of building material as early as Late Antiquity, yielding a backfill of at least, six meters, let alone the further constraints associated with the rising water table.

Site 104: West of the 'Tower of the Romans'

Maps: V2; V3; V4

Foundations; fragmentary architecture: el-Ramleh [Late Ptolemaic; Roman; Late Antique; Arab]

(a) In 1893, Giuseppe Botti traced a row of large blocks of Aswan granite along the seashore, over ca. 24 m, west of the 'Tower of the Romans' (Botti 1894: 3-4; *idem* 1898c: 66-69; Adriani 1934: 91, No. 108). On eighteen of the blocks, he noticed hieroglyphic inscriptions and a figure of the local deity Ptah, which made him believe that the temple to Ptah at Tanis (Djanet: NE. Nile Delta), built or restored by Ramses II, has been dismantled, either by Cleopatra VII or the *praefecti*, for its components to be reused in the construction of the Caesareum (93-100). Botti yet adds, "entre la rangée granitique et la Tour Romaine nous avons reconnu des ruines fort antiques (?)". Within a distance of 6.65 m into the sea (35.80 m from the row of granite blocks), a recovered corpus of architectural material includes: column drums in limestone; Corinthian capitals; column bases (few in marble, others in nummulithic limestone); a dedicatory inscription to the emperor Caracalla; two Byzantine capitals. Considering the proximity of the reported remnants to the Heliopolis obelisks (site 93), hence to the historical site of the Caesareum, and the inscriptions associated with some of the finds, Botti might have encountered fragments of architecture reused successively, in the building of the renowned imperial temple, and in replacement-constructions datable to Late Antiquity and the Middle Ages.

(b) A few meters to the northwest of the 'Tower of the Romans', already into the sea (considering the nineteenth-century coastline configuration), Henry de Vaujany recorded, "les restes de fortes murailles en calcaire et en grès (?), que nous avons reconnues à une profondeur de trois à quatres mètres sous l'eau" (De Vaujany 1888: 10-13; Adriani 1934: 90, No. 105). Other relics were found scattered along the shore: granite blocks (some bearing hieroglyphic inscriptions); column bases and capitals; intact pedestals; fragments of cornices in white marble. A massive foundation wall measuring ca. 3 m in width, running SE., has been accidently unearthed while digging foundations for a neighboring

house. Vestiges of another submerged wall were yet traceable under water, over a distance of ca. 120 m from the old shoreline, at a point near the 'Tower of the Romans'. De Vaujany's observations thus conform with those reported later by Botti (a) and Noack (c), in the 1890s.

(c) In 1898-99, Ferdinand Noack has briefly recorded massive cornices of nummulithic limestone, sections of column shafts, and various architectural remains, at a point on the shore, a few meters to the west of (a) and (b) (Noack 1900: 217, n. 2; Adriani 1934: 90, No. 106).

(d) In 1864-66, el-Falaki recorded that at a distance of a hundred meters from the standing obelisk, on the extension of longitudinal street L3 (a point into the sea, NW. of the 'Tower of the Romans'), a column seems recognizable under water, standing almost in a vertical position (Mahmoud-Bey 1872: 43-44; Adriani 1934: 92, No. 110).

The reported remnants would represent reused (structural and decorative) material employed in the Caesareum or in waterfront constructions, before being reutilized during urban adjustments of Late Antiquity and the Mediaeval period. The find-spots, recorded prior to the construction of the Corniche, were either 'along the course of the old shoreline' or 'into the sea'. Today, these sites are located onshore, at several points on the pseudo-coastal belt of the eastern harbour:: (a) and (b): the Italian Consulate; (c): Saad Zaghloul Square, opposite Hotel Le Métropole; (d): the Corniche. In antiquity, despite changes in coastline configuration compared to present-day setting, the sites were as well onshore, on the northern belt of the Caesareum: the subsided shores of Megas Limen, between (J11), the mole below Antirrhodos (east) (2.3.3), and Strabo's ἐμπόριον (west) (3.7.3.1, G).

Site 105: East of the 'Tower of the Romans'

Maps: V1; V4

Inscribed pedestal: el-Ramleh [Ptolemaic]

Around 1890, a pedestal in marble, with fixing holes on its upper side, was found to the east of the 'Tower of the Roman', and later donated, along with a bust of Psamtikos II (26th dynasty, sixth century BC: probably, a reused material relocated to Alexandria), by Zouro, the owner of the plot,

to the Graeco-Roman Museum (Inv. No. 5). The pedestal itself, datable to the third century BC, has a Greek inscription which records the dedication made by a certain Ammonarion, son of Herodes, to θεᾷ καλῇ ἐν Πανδοίτῃ: the beautiful goddess in Pandytis, together with her 'divine associates': συννάοις θεοῖς (Botti 1893: 15; Breccia 1911: 72-73, No. 117; Adriani 1934: 91-92, No. 109). It reads:

θεᾷ καλῇ ἐν Πανδοίτ[ῃ]
καὶ συννάοις
θεοῖς Ἀμμωνάριν Ἡρώδου ἀστὴ
ἀνέθηκεν.

Site 106: SW. of the Pereira-GHS junction

Maps: V2; V4

R4 colonnade (?): el-Ramleh [Roman; Late Roman]

In 1892, during the digging of foundations for a new building at the southwestern corner of the junction of Pereira Street (the present-day Mohamed Rafat) with the Government Hospital Street (the present-day Faculty of Medicine Street), several columns in granite were accidently unearthed (Botti 1893: 17; Adriani 1934: 74, No. 42). Given the recorded find-spot, the fragmentary columns would have belonged to the colonnade of el-Falaki's transversal street R4.

Site 107: South edge of the GHS, between Pereira and Amin Fikri

Maps: V2; V3; V4

Fragmentary architecture: el-Ramleh [Late Ptolemaic; Roman; Late Antique; Arab]

In 1907, during construction works carried out on the south edge of the Government Hospital Street (Faculty of Medicine): within the section of it, between Pereira (Mohamed Rafat) and Amin Pasha Fikri, a corpus of fragmentary architecture, chiefly in limestone, with traces of polychrome, has been recorded by Evaristo Breccia, at a point near the wall of the Coptic-Catholic Patriarchate (Breccia 1908b: 231; Adriani 1934: 76: No. 45). Among the recovered material were fragments of mosaics, and a glass shard bearing a Greek inscription: ΜΕΝΔΗΣΙΟΝ (Mendysion). The context of recovery,

and the nature of the finds, suggest a debris of reused material retained from demolished edifices of probably Late Ptolemaic-Roman origin, to be utilised in Late Antique and/or Arab constructions.

Site 108: West of Amin Fikri, between Adham Wali and the GHS

Maps: V3; V4

Crypts and cistern; well and pond; fragmentary architecture: el-Ramleh [Late Antique]

In 1896, while digging foundations for the Coptic-Catholic Patriarchate of Alexandria, on a plot west of Amin Pasha Fikri Street: the section of it, delimited by Adham Wali Street (south) and the Government Hospital Street (Faculty of Medicine) (North), ancient remnants have been accidently discovered (Kyrillos II 1900: 329-354; Adriani 1934: 74-76, No. 44). The finds, reported by Patriarch Kyrillos II, in a conference held on January 20th, 1900, to the Khedivial Society of Geography, include two crypts cut into the rock. One, accessible via a circular-shaft equipped with steps, comprised: (i) a corridor (6 x 3 m); (ii) a chamber (8 x 5 m) reachable through an opening opposite the entrance to the crypt. Both access-points were found blocked by means of a massive bulk. The circular-shaft was connected to a cistern filled with debris (sand, broken pottery, stone shards). Three days before the conference, the workmen discovered a second crypt similarly accessible via a circular-shaft. It was connected to the first, and formed of five intercommunicated chambers with the vaults supported by four pillars. Encountered not far from the circular-shafts and crypts, were *unguentaria*, as well as funerary lamps bearing “les marques du christianisme”, to quote the Patriarch. A hoard of coins was found engraved with crosses. On the fragmentary architecture recorded on site, Kyrillos II adds:

C'est tout à fait au-dessus et autour des deux cryptes qu'ont été trouvés ces blocs énormes qu'on voit encore sur le chantier à droite et à gauche des deux souterrains, cette gigantesque colonne, ayant un mètre et quart de diamètre, ce chapiteau d'une grandeur étonnante et du travail le plus exquis, ces superbes colonnes de marbre mesurant près de soixante centimètres de diamètre, cette colonne de granit rose encore couchée à l'entrée de la crypte du nord, et cette autre colonne de granit rose encore debout, juste en face de la seconde crypte, à l'ouest de la propriété enfin cette prodigieuse variété de colonnes en beau marbre et en belle pierre du style ancien le plus élégant.

Among the other finds, were fragments of mosaics of which one was on display, at Salle 16 of the Graeco-Roman Museum (ca. 0.27 x 0.29 m) (Botti 1900-01: 584, No. 470), and yet, another, a fragment of *emblema vermiculatum* (ca. 0.060 x 0.048 m), dated by W.-A. Daszewski, to "the middle of the first century BC or slightly later" (Graeco-Roman Museum, Inv. No. 8254) (Daszewski 1985a: 129-130, Cat. No. 22). Furthermore, encountered while stirring the floor of the cathedral's enclosure, was "un nombre considérable de pierres vertes que les joailliers réputent précieuses". They have excavated as well, "un puits contenant une eau douce dont les ouvriers ont bu aussitôt après sa découverte". It was probably used to feed an unearthed pond which might have served as a sacred (baptismal?) pool. Four columns, described by Patriarch Kyrillos as "encore plantées en terre", running obliquely, one after the other, show that the structure in question, was oriented NW-SE, thus in conformity with el-Falaki's grid. In 1907, blocks of granite and limestone, pieces of marble, and capitals, with some bearing Christian motifs, have been accidently encountered during construction works within that area (Breccia 1907a: 107). The excavated crypts, well and pond, fragmentary architecture, contextual finds, and numismatics, all indicate a Late Antique edifice, possibly of religious character, partially built of reused material from earlier, dismantled structures, either on site (mosaics *supra*), serving as subfoundations, or otherwise, in the vicinity (107). Its orientation and Christian associates suggest a building datable, in general, to ca. the fifth-seventh century AD. The construction of such religious edifice in the neighbourhood of the ex-Caesareum, sheds light on the urban adjustments occurring within el-Falaki's *insulae* L1-L3-R3-R5, following the imperial decree of Theodosius I, ca. AD 391 (52).

Site 109: West of Amin Fikri, between el-Nahrowani and Adham Wali

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) (b) Fragmentary architecture; ceramics [Late Antique]

(ii) (a) Subterranean complex; (b) mosaic [Roman]

(iii) (b) Colonnaded hall: peristyle (?) [Ptolemaic]

(a) In 1917, during construction work carried out at the courtyard of the Scottish School (presently, el-Manar School), a site delimited by the streets of Amin Pasha Fikri (east), el-Nahrowani (south), Adham Wali (north), and Pereira (Mohamed Rafat: west), the remnants of a subterranean complex

have been accidently unearthed. The excavated vestiges were interpreted by Étienne Combe, then director of the Graeco-Roman Museum, as water reservoirs on the grounds of analyses of deposits from within the chambers (I-V on Bartocci's plan) (Plate CDXLVa-b) (Combe 1919: 6-8; Adriani 1934: 76, No. 47).

(b) In 1921, a few meters southeast of (a), on the occasion of levelling works commissioned at the time by the school management, fragment of a mosaic panel was found at two meters below the surface-level (Plate CDXLVIa) (Breccia 1923b: 10-12; Adriani 1934: 85, No. 87). It exhibits geometric patterns, and was constructed upon a thick layer of rubble-fill, underneath which, at four meters below the surface-level, were the remnants of an unidentified edifice decorated with double, ivy-leaf-shaped columns of which a fragment of a fluted shaft has survived *in situ*, marking one corner of perhaps, a peristyle (Plate CDXLVIb-c). Architectural finds from the upper layers, include a fragment of an Ionic capital, and a large, Corinthian capital in white marble, featuring a cross in relief, on one side, and an eagle on the other.

The stratigraphy of (b) shows a Ptolemaic edifice with colonnaded hall (peristyle?), dismantled at a point, and overbuilt with a Roman structure decorated with a geometric-mosaic pavement of ca. the first-third century, upon a buffer-debris *stratum* (fill). In the upper layers, recorded finds of architectural material suggest a Late Antique rebuilding phase subsequent to the destruction of the Roman structure in question, as evident on a recovered repertoire of ceramics datable, in general, to the 4th-7th century. Thus, given its structural design, especially the round chamber (V), Combe's 'complex' at (a), should be considered in association with a successive phase of construction at (b).

Site 110: NE. of el-Sultan Hussein-Pereira junction

Maps: V3; V4

Miscellaneous: el-Ramleh

(i) (a) Structure [n.d.]

(ii) (b) Cisterns [Late Antique]

(a) In 1899, during construction work carried out northeast of the intersection of el-Sultan Hussein (Salah Mustapha: approx. el-Falaki's L2) with Pereira (Mohamed Rafat: approx. el-Falaki's R4), the

foundations of an ancient structure were accidently unearthed at the site of the ex-German School (Pelizäus Heim: the present-day Safia Zaghloul School) (Noack 1900: 217, n. 3; Adriani 1934: 76, No. 48). A general plan pertaining to the excavated remnants, drafted on discovery by Henri Bindernagel, a founding member of the Archaeological Society of Alexandria, was lost, hence preventing a further study of the reported finds.

(b) In 1983, during the digging of foundations at the school's courtyard, the remains of two cisterns set ca. 30 m apart, were accidently unearthed (Daszewski 1985b: 177-185; Tkaczow 1993: 143-44, No. 103A). The larger (5.50 x 4.30 m; height: ca. 6.60 m), vaulted and two-storeyed, was built of small limestone blocks held by a layer of sand in lime-mortar. Four columns supported the vaults, two on each level. These were retained from dismantled buildings, considering the use of bases as capitals, with one employed capital bearing signs of wear. It was accessible on the southwest corner via a semicircular shaft equipped with side-steps. Whereas, an opening cut at the northwest corner, served as a drain. About thirty meters to the west, a smaller cistern (1.80 x 1.00 m), with two vaulted chamberettes, was built of limestone blocks, and had a layer of plaster coating its walls (waterproof) (Plate CDXLVIIa-b). Reused architecture on site, suggests hydraulic installations datable in general, to Late Antiquity.

Site 111: NW. of el-Sultan Hussein-Pereira junction
Maps: V2; V3; V4
Miscellaneous: el-Ramleh
(i) Fragmentary architecture; ceramics [Late Antique]
(ii) Foundations [Roman (?)]

In 1899, during the digging of foundations for a new house at the Demotzando plot, northwest of the junction of Pereira (Mohamed Rafat) with el-Sultan Hussein, ancient remains were accidently unearthed (Arvanitakis 1899: 11-14; Adriani 1934: 73-74: No. 39). The upper layers yielded many *ampullae* bearing dedicatory inscriptions to St. Menas. At four meters below the surface-level, the remnants of walls were encountered. They continued however beyond the limits of the foundation trenches. Two large columns were recorded on site, one in white marble, the other, in granite, found broken into three pieces. The latter was decorated with a Byzantine cross carved in relief. Other columns,

much-smaller ones, were said to have been recovered. It should be mentioned that G. Arvanitakis, who reported these finds in a letter to the director of the Graeco-Roman Museum, Giuseppe Botti, published in bulletin II of the Société Archéologique d'Alexandrie, has not come into contact with the excavated material, but were communicated to him, perhaps with exception to the St. Menas *ampullae* of which he counted 'a hundred'. Stratigraphy here, as is reported by Arvanitakis, would recall the nearby site (109b). Accordingly, the ruins met at 4 m below the street-level, might pertain to earlier constructions. Contextual associates from surface-layers, signal Late Antique habitation on site. A rather precise dating of the excavated architecture is not possible within such a context.

Site 112: Coastal zone, between Safia Zaghloul and Champollion

Maps: V1; V2; V4

Miscellaneous: el-Ramleh; el-Mazarita

(i) Bathing establishments: group (b) [Roman]

(ii) Waterfront constructions: group (a) (northwards-ext. of el-Khaledin enclosure? site 134) [Ptolemaic]

In 1798-99, during the Napoleonic Expedition, Saint-Genis maintained:

En suivant et examinant en détail le rivage, après le Caesarium (93-100) et la tour dite des Romains (Chapter II, site 6), on trouve d'abord un sol plat, qui n'offre point de masses remarquables de ruines et n'indique l'existence d'aucun édifice antique; mais on rencontre ensuite une première et petite presqu'île que forme la côte en cet endroit. Elle est chargée de ruines, et présente à son extrémité des espèces d'îlots qui annoncent qu'elle a pu se prolonger davantage autrefois, comme nous le verrons tout-à-l'heure.

(Saint-Genis 1818a: 47)

Saint-Genis' "petite presqu'île" is located immediately to the north of the present-day el-Khaledin Garden, west of the WHO building. Prior to the construction of the Corniche, the ruins in question, extending into the sea, formed part of the nineteenth-century shoreline. Today, they are partially buried beneath the pseudo-coastal belt of the eastern harbour (see *supra*, sec. 2.3.1 and 2.3.3). The site lies within the littoral zone which corresponds to the subsided waterfront of the ancient city:: the

section of it, between Champollion and Safia Zaghloul streets:: the silted-up belt flanked on either end, by 'mole ruiné' (site 8) (east end: a point opposite the Poseidion headland) (sec. 2.3.3.4) and the 'Tower of the Romans' (site 6) (west end: approximately the site of the present-day Italian Consulate).

On the topographical configuration of this particular zone, el-Falaki relates:

2) Les restes des rochers d'une 'île ayant la forme d'un fer à cheval, distante de trois à quattre cents mètres du port des rois et de deux à trois cents mètres du quai; cette île est de 3 à 4 mètres au dessous des flots; les eaux qui l'environnent ont 6 à 7 mètres de profondeur presque partout. Ce ne peut être que l'île d'Antirrhodus, d'autant plus, qu'il y a les restes des fondations d'une grande construction qui doit marquer la maison royale qu'elle renfermait, au dire de Strabon, et qu'elle forme par ses deux bras, l'emplacement du petit port dont il parle dans un passage que je citerai plus bas.

3) Une éminence, sous les eaux partant du continent à environ 650 mètres du port des rois et rentrant dans le port, comme un bras de 200 mètres de long; elle est encore prolongée, mais en maçonnerie de 300 mètres dans une direction à peu près parallele à l'Hèptastade; elle se termine par un plateau assez large en maçonnerie également; ce plateau se trouve à 550 mètres de distance de l'obélisque (that in New York) et dans la direction de la rue transversale R5. L'éminence du bras, la chaussée de prolongation (esplanade), et le plateau sont à 2, 3, ou 4 mètres au dessous de l'eau: ce sont indubitablement, les restes du Posidium, de la chaussé d'Antoine, et de son Timonium.

(Mahmoud-Bey 1872: 43, No. 2-3)

As did Saint-Genis and G. Le Père before him, el-Falaki, having the descriptive narratives of Strabo in mind, confused the submerged remnants of Poseidion with those of Antirrhodos. In N^{o} 2, given the recorded distances to his "port des rois" (a reference point marked at the foot of Cape Lochias: the eastern side of the inner-port Y: J1), his "île" and "grande construction" would correspond to a detected section of the Poseidion headland and its Timoneion (sec. 2.3.3.4, site 39). Likewise, in N^{o} 3, the reported relics are those of the subsided waterfront, moles (J11), (J12), (J13), and perhaps, (J10), and the three contiguous arms (B1; B2; B3) of the T-shaped Antirrhodos islet (sec. 2.3.3.2 and 2.3.3.5).

In 1888, Henry de Vaujany specified the two forms of constructions encountered within this zone: (a) foundation walls of massive blocks of nummulithic limestone; (b) structures of cemented-brick:

En quittant l'emplacement du Caesareum et en longeant le rivage au pied de la falaise, on trouve encore debout, sur quatre à cinq mètres de hauteur, des massifs de maçonnerie (see infra) en pierres nummulites et briques reliées par un mortier rougeâtre très dur; ce sont des pans de mur enduits d'une forte couche de ciment, paraissant avoir appartenu à des citernes; on y remarque des trous pratiqués dans les parois et disposés en échelons pour permettre de descendre à l'intérieur.

(De Vaujany 1888: 14)

Belonging to group (a) are those remains recorded by Saint-Genis, at a point north of the present-day el-Khaledin Garden, and described in detail, by De Vaujany: 'ca. 300 m east of the Caesareum, were vestiges of massive walls (2.80 m wide) running about 30 m into the sea'; while at 80 m from the shoreline, foundation walls seemed recognizable at 4.00 - 4.50 m below water-surface, where fragments of two statuettes have been found, one of the lioness-deity Pakhet, the other, depicted Isis. These were recovered within an architectural debris of granite and marble columns, Corinthian capitals, friezes, and dentilled cornices (De Vaujany 1888: 15-18). The limestone walls, jutting out into the sea, would have been constructed along the subsided waterfront of the Royal Quarter, before they were partially concealed beneath the pseudo-coastal belt of the Corniche (2.3.1) beyond which the substructures at the furthest points of the subsided coastline were detected during the IEASM surveys, together with the submerged remnants of Poseidion, the islet of Antirrhodos, and its Isiac sanctuary to which the 'architectural debris' and 'statuettes' of De Vaujany, would have belonged.

Group (b) is represented, for instance, by those ruins reported by Giuseppe Botti, in 1897, around 'des bains Zouro': a point close to the present-day Patisserie Athineos (site 26) (see *supra*, De Vaujany's account on *briques reliées par un mortier rougeâtre très dur*). Further to the east, yet towards the north end of Champollion Street, immediately south of the Misr Petroleum Station, were vaulted structures of a bathing complex where the masonry is made of fired-brick and mortar, the walls coated with a thick layer of waterproof-plaster, and the pavement constructed using "de béton en cailloutis de

briques très compact" (De Vaujany 1888: 23-27). The structures intercommunicated through passages of which one has survived till the time of discovery, in the 1880s. The lower parts overlooking the sea, which had few running conduits, did not advance into the water. Instead, they stretched well along the shore, in an easterly direction. Remnants of foundations encountered by Vaujany, at the neighbouring reservoirs of the tanneries, testify to the significance of such bathing establishment.

Site 113: Opposite the Mosque of el-Qaid Ibrahim Pasha

Maps: V2; V4

Bath complex: el-Ramleh; el-Mazarita [Roman]

During the construction of the Corniche in 1905, Eng. Camiz from the Italian Almagià Company, recorded the ruins of a bathing establishment at 'a point near a rocky promontory that exists along the shores of the eastern harbour, opposite the (new) British Consulate, west of Victoria College': approximately, the southern sector of the present-day el-Khaledin Garden. In 1907, Camiz reported the Almagià encounters along the old shoreline, in a letter to Evaristo Breccia, then director of the Graeco-Roman Museum, who published it in bull. XVIII of the Société Archéologique d'Alexandrie (Camiz 1921: 61-62; Breccia 1914a: 50, 77-78; *idem* 1922: 60, 91; Adriani 1934: 70-71, No. 34). These ruins, known among seventeenth-to-nineteenth-century travellers as Cleopatra's Palace or Baths, were built of limestone blocks and baked-brick. They comprised two storeys: the lower, cut into the natural rock, had traces of numerous furnaces. Whereas, on the upper level, the tiled pavement of a basin was met above the furnaces, with several conduits running towards the basin (Plate CDXLVIIIa-b). The ruins should be considered within a wider context of Roman, bathing establishments littered along the shores of the eastern harbour: approximately, from Saad Zaghloul Square to el-Silsileh and beyond (sites: 2; 7a; 26; 112b; 138; 139; 140).

Site 114: Diana Theater: NW. of the GHS-Pereira junction

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Interments (analogies, sites: 35; 100); ceramics [Mediaeval]

(ii) Retained material [Arab]

(iii) Craft-activity zone [Late Antique]

(iv) Houses with mosaics; sewer; traces of R4 [Roman]

(v) Foundations; sewers [Ptolemaic]

Between 1994 and 1997, the Centre d'Études Alexandrines carried out salvage excavations at the Diana Theater, on the northwestern corner of the Government Hospital (Faculty of Medicine)-Pereira (Mohamed Rafat) intersection (Empereur 1995: 743-47; *idem* 1996: 959-63; *idem* 1997: 837-38; *idem* 1998d: 617-618; Guimier-Sorbets 1998b: 115-139; Rifa-Abou el-Nil 2016: 32-33; Dubourg 2016: 26-29). Five principal phases of construction and/or occupation were identified within the opened trenches.

(i) Mediaeval interments dug into a layer of fill with embedded Fatimid glazed ceramics, providing a *terminus post quem* at ca. the tenth-eleventh century for the cemetery in question. Mixed burials encountered at + 9.50 - 8.50 m above the sea-level (skeleton oriented east-to-west), and funerary associates, indicate successive phases of interment pertaining to a mediaeval, Christian community (Roman-Orthodox or Coptic). The extramural burials lie just outside the enclosure of the Arab town.

(ii) Intensive recovery of architectural material from earlier constructions at ca. the ninth century, a process contemporary with the erection of Ibn Tulun's circuit-walls round a tapered area of the ancient metropolis: 267 Hijri: ca. AD 881.

(iii) A craft-activity zone recognizable merely by a defining surface of beaten-earth. The dismantled walls reflect constant quarrying on site. Its identification as an artisan quarter is due the contextual finds: worked-bone; platelets engraved with floral motifs or figurative scenes; decorative coffers; pins and dice; glass beads; coral, amber and semi-precious gemstone; a number of settling basins. The main chronological indicator however, was the Phocaean and Cypriot *sigillata*, specifying the end of these Justinian levels, at ca. AD 550.

(iv) A Roman habitation quarter comprising three spacious buildings with walls largely-dismantled and wells dug at the corners. One sumptuous house (approx. 150 m^2), featuring a central courtyard decorated with a small basin, had its *triclinium* (dining room: ca. 25 m^2) paved with various mosaic

panels (5.50 x 5.20 m) divided into: a U-shaped bichrome (black-and-white) with geometric pattern (i.e. hexagons and stars) in *opus tessellatum*, and an L-shaped composed of four polychrome panels of which three display geometric and floral motifs in *opus tessellatum*; whereas, the fourth features a polychrome shield of radiating scales around a central *emblema* in *opus vermiculatum*, exhibiting the head of a medusa (Plates: CDXLIXa-c; CDL). The latter is datable to about the first half of the second century AD. Abandonment took place towards the second half of the third century. Earlier phases of habitation datable to the 1st century BC - 1st century AD, are represented on site, by small rooms (approx. 3-4 m^2) set adjacent to an inner courtyard, and a drainage system. The successive phases of occupation have yielded a variety of contextual finds: culinary dishes; fine ceramics; *amphorae*; lamps; bone utensils; metal objects; gems; statuettes. The various structures of the Roman habitat incorporated material from earlier, Ptolemaic edifices: composite capitals; fragments of columns; bases; cornices; Doric triglyphs; pedestals. At the southeastern sector of the plot, remnants of two gable-roof sewers were cleared, with the earlier containing ceramic-deposits dating the phase of abandonment to the first century BC. The second sewer thus signals the Roman phase of el-Falaki's transversal street R4 which correlates with the present-day Pereira running immediately to the east of the ex-Diana Theater. R4 was reachable at the higher, Late Roman levels, without being able to descend to the Hellenistic layers. (v) At the western sector of the plot, remnants of a wall oriented N-S, were met at + 2.80 m above the sea-level. Given the wall's stratigraphic level and dimensions, it would have formed part of a Ptolemaic structure lining the western side of a wider phase of street R4, one pertaining to the Hellenistic period, as indicated by a second-first-century BC, large sewer excavated along the west side of the Diana terrain (sec. 2.2.3: the hypothesized multi-phase grid). An E-W street extending to the north, sheds further light on the internal division of urban *insulae* through the construction of intermediate thoroughfares (sec. 2.2.2.13; Kom el-Dikka: 18; 19; 69; sites: 29; 122c; 127).

Site 115: Chantier Abd el-Hamid Pasha

Maps: V1; V2; V4

Miscellaneous: el-Ramleh

(i) Pavement of L3 or R4 (?) [Roman; Late Roman: phase (II)]

(ii) Foundations [Ptolemaic: phase (I); successive renovation: phase (II)]

In May 1935, while digging foundations for a new building of Suleīman Abd el-Hamid Pasha, on Alexander the Great Street (Omar Lotfy: el-Tram; plot No. 47), remnants of an ancient edifice have been accidently unearthed (Adriani 1940a: 37-38; *idem* 1966a: 79, No. 38, Fig. D). Foundations built of large limestone blocks were identifiable at three different locations within the plot. The longest section of wall, ran NNW-SSE. It was preserved up to the seventh row of blocks (length: ca. 1.60 m; height: 2.60 m; blocks: ca. 0.80 x 0.45 m). Traces of stonecutters' marks were found by Adriani, on one of the blocks (Plate CDLI). The wall was met at ca. 4.08 m below the level of Alexander the Great Street. Another section of wall, uncovered over ca. 1.25 m, has been encountered not far from the latter. It was built upon a layer of limestone flakes, as was construction No. 14 at Chantier Finney (site 120). Within the backfill, were blocks of black basalt pertaining to a street pavement. These would have belonged to el-Falaki's L3 (approximately, on the line of Alexander the Great: Omar Lotfy: el-Tram).

Site 116: Chantier Moustaki

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Structures of coarse masonry [Late Antique: phase (III)]

(ii) Foundations [Ptolemaic: phase (I); successive renovation: phase (II)]

In 1935, the Graeco-Roman Museum has carried out excavations at a plot of Armand Moustaki, delimited by Ali Ibrahim Ramez (east), Alexander the Great (Omar Lotfy: el-Tram: L3) (north), and Pereira (Mohamed Rafat) (west), prior to the digging of foundations for a new building near Ismaīl Square (el-Ramleh Central Station) (Adriani 1940a: 35-37; *idem* 1966a-b: 79, No. 38; Tav. 20, Fig. 69). Adriani sunk nine test-pits in total (Plate CDLII). Within (1), he encountered a coarse wall built of irregularly-hewn blocks, stone chips, and earth. Oriented NW-SE, it had overbuilt much-earlier structures of large limestone blocks (1.60 x 0.85 x 0.60 m), which were laid directly upon bedrock and preserved up to the fourth row of blocks. At the southeastern corner, a small, circular well of finely-hewn and regularly-arranged, smaller blocks of limestone (blocks: 0.22 x 0.28 m; depth: 6 m; diameter: 0.88 m) seemed contemporary with the initial phase of construction, judging by building technique. To the east, within pit (4), were vestiges of another wall of phase (I), with four preserved rows of blocks (height: 2.40 m), and a quadrangular bulk of two massive blocks of limestone, juxtaposed. Analogy

with a similar construction within the neighbouring pit (1), and with No. 16 at the nearby Chantier Finney (120), suggests a section of a large pillar (Plate CDLIIIa-b). At some point, coarser constructions have partially overbuilt the limestone wall of phase (I). Another section of a contemporary wall was met within (5), preserved up to the third row of blocks (height: 1.80 m). Towards the eastern limit of the plot, within (6), a deeper, rectangular reservoir was found cut into the bedrock (Plate CDLIIIc). Its walls were yet coated with a curtain of smaller blocks of limestone carefully-hewn and arranged into regular rows (2.65 x 1.30 m; depth: 7.70 m; variable-size of blocks:: 0.43 x 0.35 m, 0.22 x 0.35 m, 0.22 x 0.18 m, 0.18 x 0.18 m). The building technique here, where a row of small, square blocks, alternates with another of small, elongated ones, with an adhesive, earthen paste of clay serving as mortar in the stonemasonry, recalls some of the walls of Hypogeum (II) at the funerary complex of Mustapha Pasha (site 160). Towards the middle of (6), an arcade seems to have been added at a later date (phase III), as a reinforcement. Other constructions of phase (II), excavated at one side, towards the south, were the ruins of a basin in stone covered with hydraulic coating, suggesting a structure antedating the reinforcement-arcade (possibly, part of a Roman renovation). As in other *chantiers* excavated nearby, coarse structures such as No. 9 (phase III), were frequently encountered on site, sometimes partially superimposed upon earlier subfoundations of construction phase (I): (1; 3; 4).

Site 117: Chantier Politi: Cinema Radio

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Structures of coarse masonry [Late Antique: phase (III)]

(ii) Foundations; conduits [Ptolemaic: phase (I); successive renovation: phase (II)]

At the beginning of 1952, while digging foundations for Cinema Radio of the Politi brothers, at a site delimited by the streets of Amin Pasha Fikri (east), Alexander the Great: aka el-Tram (north), and Aly Ibrahim Ramez (west), the remnants of an ancient edifice have been accidently unearthed (Adriani 1956a: 10-16; *idem* 1966a-b: 77, No. 33; Tav. 15, Fig. 50, Tav. 17, Fig. 54, 56, Tav. 22, Fig. 78-80). Identifiable within several *sondages* on site (Plate CDLIV), were: (a) large pillars resting directly upon the bedrock, and built of roughly-hewn blocks of limestone held without mortar (marked 19, 22, 29, 34, 35, 48, and 87 on the excavation plan. Plate CDLVa); (b) ruins of foundation walls built with a similar technique, but using

smaller blocks of unequal sizes, irregularly arranged into rows (the smaller blocks were arranged in such a way, to reach the height of larger, contiguous ones). Two sections of wall pertaining to type (b), were found on the same alignment, and thus, must have belonged to the same foundation wall (marked 23 and SM on the excavation plan. Plate CDLVb-e). Judging by building technique, the 23-SM section of wall seems to have been maintained probably, over a considerable period of time. Its pyramidal form echoes other analogous constructions with extended lifespan (Chapter II, sites: 21 and 31; Chapter III, site 63). Remnants of conduits with a covering-slab, were unearthed over short distances (test-pits 44 and 55 on the excavation plan. Plate CDLVIa); besides a circular well built with regularly-arranged blocks, recalling those excavated at the adjacent *chantiers*, Moustaki and Finney (sites: 116; 120) (marked 48a on the general plan. Plate CDLVIb). Late walls of coarse constructions were encountered intermittently, either on a level much higher than (a) and (b), or otherwise, superimposed upon them. Within one pit, fragment of a stuccoed-polychrome cornice (length: 0.335 m) painted Ionic and Lesbian *kyma*, was recovered. It bears analogies with similar finds at the nearby Chantier Finney (test-pit 32 on the excavation plan. Plate CDLVIc).

Site 118: South of Cinema Radio

Maps: V1; V2; V4

Fragmentary architecture: el-Ramleh [dynastic, relocated to Alexandria]

Between April and July 1994, the Centre d'Études Alexandrines carried out salvage excavations at a plot located immediately to the south of Cinema Radio (site 117), on the east side of Ali Ibrahim Ramez Street (Empereur 1995: 753-756). The reverse stratigraphy of the site seemed subsequent to a cone of depression, whereby the Hellenistic layers lie above Arab ones. This would justify the four-metre difference with other, contemporary occupational-levels at the nearby ex-Diana Theater, ca. 70 m to the west (site 114), thus bringing forth the notion of a terraced-layout between Amin Fekry and Pereira (el-Falaki's R4). The water table within this zone lies below the natural bedrock, which allowed a thorough investigation of the various stratigraphic phases. Cutting thru the fill, the first Hellenistic layer was reachable at 5 m below the surface-level. After 0.70 m, appeared the bedrock at + 3.30 m above the sea-level: ca. 5.70 m. Successive quarrying of building material to be utilized in later constructions, is evident on the bedrock and through the fill where two columns in granite

have been recovered along with a lintel bearing a cartouche of Ramses II. The latter would pertain to the *Aegyptiaca* corpus of relocated architectural elements from dismantled, pharaonic edifices in the inland, especially those at Heliopolis (sites: 43; 93).

Site 119: Chantier Heikal

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Structures of coarse masonry [Late Antique: phase (III)]

(ii) Foundations [Ptolemaic: phase (I); successive renovation: phase (II)]

Between April 24th and June 5th, 1937, the Graeco-Roman Museum has carried out excavations at a plot of Heikal Pasha, southeast of the intersection of Amin Pasha Fikry with Alexander the Great (Omar Lotfy: el-Tram: approx. L3), prior to and during the digging of foundations for a new building on site (Adriani 1940a: 33-35; *idem* 1966a-b: 79-80, No. 39; Tav. 20, Fig. 70). Adriani's *sondages* revealed (Plate CDLVII): ruins of a foundation wall of large blocks of limestone finely-hewn and regularly-arranged, built upon virgin soil, as the case at other *chantiers* with similar constructions (sites: 115; 116; 117; 120); a late wall of small blocks, stone shards, and earth, overbuilding the earlier remnant of wall (marked 1 on the general plan). Another section of wall in the same technique as (1), was oriented N-S; perhaps, it formed a right-angle with wall (1) (marked 2 on the plan). Imposing late walls at Heikal, incorporated reused material such as a fragment of a Corinthian capital in limestone, found bearing traces of a polychrome, and several sections of fluted columns in limestone. Within the foundation trenches, a continuation of the massive constructions of limestone blocks became evident. Towards the east end of the plot, sections of another wall, oriented N-S, were built directly upon the bedrock. In part, they reached up to eleven preserved rows of blocks (marked 3 on the general plan). Building technique indicates that all the detected sections have presumably, belonged to one massive wall extending over a distance of ca. 23 m. Partially unearthed along the east side, the width could not have been determined. Its absence however, within other test-pits excavated ca. 1.50 m to the west, suggests a wall not exceeding 1.30 - 1.40 m. It had a maximum preserved height of ca. 5 - 6 m. Towards the northern limits of the plot, along Alexander the Great (el-Tram), nine test-pits were sunk, of which four have revealed the remnants of another wall, oriented E-W. Within the easternmost *sondage*,

Adriani met the junction of this wall (marked 4 on the general plan) with wall (3), revealing the NE. corner of the building in question. The maximum preserved height of wall (4) has reached up to 10 rows of blocks: 5.00 m. One section of it, ran N-S, perpendicular to the others, bringing forth the possibility of a northwards extension. Along the western limit, wall (5) was found preserved up to 6 rows of blocks: 2.30 m. Oriented N-S, it might have formed the NW. corner with wall (4). Other sections of walls include:: No. (6): oriented N-S, and preserved up to two rows of blocks (length: 2.50 m); No. (7): parallel with (5) and (14), with three preserved rows of blocks (length: 9.50 m); No. (8): oriented E-W, with nine preserved rows of blocks (length: 2.50 m); No. (9): perpendicular to (3) and (7), with four preserved rows of blocks (length: 2.00 m); No. (10): ran near the SE. corner, and preserved up to two rows of blocks (length: 1.50 m); No. (11): oriented E-W, with three preserved rows of blocks (length: ca. 2.00 m); No. (12): perpendicular to (11), and had nine preserved rows of blocks (length: 2.60 m); No. (13): parallel with (12), and preserved up to nine rows of blocks (length: 2.50 m); No. (14): parallel with (5) and (7), and had three preserved rows of blocks (length: 2.65 m). Overall, the earlier remnants have been reutilized at a point in antiquity, perhaps ca. the fifth-seventh century AD, as ready foundations for much coarser constructions of earth and rubble (not plotted on the plan).

Site 120: Chantier Finney

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Structures of coarse masonry [Late Antique: phase (III)]

(ii) Foundations; mosaics [Ptolemaic: phase (I); successive renovation: phase (II)]

In the summer of 1935, the leveling of a plot owned by Oswald Finney, at the southwest corner of the junction of the street of Alexander the Great (Omar Lotfy: el-Tram or el-Falaki's L3) with the British Consulate, has brought ancient remnants to surface. Subsequent excavations were carried out on site, under the supervision of Achille Adriani, then director of the Graeco-Roman Museum, from the beginning of 1936 till March 1937 (Adriani 1940a: I. Chantier Finney, 24-33 and 45-53; *idem* 1966a-b: 75-77, No. 31-32; Tav. 14, Fig. 45, Tav. 16, Fig. 51, Tav. 17, Fig. 52-53, 55, Tav. 18, Fig. 57, 59-60, Tav. 19, Fig. 62-64). Several phases of construction (phases I and III) and structural alteration (phase II) were identified within the excavated trenches.

Phase (I) is represented by foundation walls and pillars. Whereas, a complex of coarse structures seems datable to a much later period: phase (III) (Plate CDLVIIIa-d).

No. (1) (Plate CDLIXa-b):: approx. direction: NE-SW; large and hewn blocks of limestone of varied size, arranged in regular rows; partially preserved up to four rows of blocks:: max. height: 1.50 m; max. breadth: 1.10 m. The blocks of the lower rows were coarser compared to those of the upper ones. Traces of stonecutters' marks have been recorded on the southern face of some of the blocks. Late walls of small, roughly-hewn blocks of limestone in a layer of earth, overbuilt construction No. (1).

No. (2):: approx. direction: NW-SE; remains of just one preserved row of blocks, ran perpendicular to wall No. (1).

No. (3):: parallel with wall No. (2); segment (a) towards wall No. (1), was partially overbuilt with late constructions, formed of a single row of large, rectangular blocks; segment (b) beyond wall No. (6), had four rows of blocks with a maximum preserved height of 1.20 m.

No. (4) (Plate CDLXa-b):: a platform of foundations contained within walls (1), (3), and (5): 10 - 30 cm from (1) and (5). The largest segments consist of three to four rows; in places, the blocks of a fifth row were found preserved. Stuccoed and polished blocks indicate possible renovation: phase (II).

No. (5):: approx. direction: NW-SE; at the segment opposite wall (4), was a first row of blocks and the remains of a second; proceeding northwards, five rows of blocks were recorded. At the north end of the excavation profile, a posterior construction of large and roughly-hewn blocks, shards of stone, small blocks, and earth, overbuilt this segment of wall (5). A late construction, equally rough and irregular, has overbuilt in turn, the preserved first row of wall No. (5), south of the point where it meets wall No. (1).

No. (6):: approx. direction: NE-SW; in the first segment, east of wall (5), two rows were preserved, with several blocks of the third and fourth rows. In the segment beyond wall (3), two rows of large

blocks have been overbuilt with a much-coarser, posterior wall of earth mixed with shards of stone and small, irregularly-cut blocks. At the level of another posterior wall, perpendicular to the latter, wall (6) was found preserved up to the fourth row of blocks, reaching a maximum height of 1.35 m.

No. (7-9):: proceeding southwards, Adriani met an area of ruins which pertain almost exclusively, to a late period. There were, however, a group of large and hewn blocks towards the eastern limit of the profile, representing the remnants of wall (7) which was on the alignment of contemporary constructions running NW-SE, to the south: No. (11) (*infra*). To the west of the blocks, towards the middle of the profile, were two isolated and hewn blocks of wall (8). They might have belonged to a large pillar contemporary with similar constructions met further south (see *infra*, No. 16). Northwest of these two blocks, were regular blocks of wall No. (9) found overbuilt with a cluster of late walls, and running NE-SW.

No. (10-13) (Plate CDLXIa-b):: wall (10): approx. direction: NW-SE; at several points, it was preserved up to the seventh row (maximum height: 2.45 m). To the north, Adriani met large, irregular blocks of the first two rows, which were arranged differently from those of the upper ones. Wall (11) was built of large and hewn blocks. Its irregular course, and the fact it was leaning against the west side of wall (10), may be indicative of structural alteration within the same building. Walls (12) and (13), encountered southwest of wall (10), seem contemporary with wall (11), judging by their mode of construction. Wall (13), of which a single row has survived *in situ*, was overbuilt with a late wall of small stone blocks and earth. A fragment of a cornice was reused in the first row of this wall, towards the east end. Immediately west of the (11)-(12) junction, a section of pavement constructed chiefly of pebbles pressed into rammed earth (α), was uncovered, upon which late walls have been built.

No. (14) (Plate CDLXIIa-c): a rectangular chamberette with threshold of an entrance on the southeast, and the remnants of two parallel walls on the northeast and southwest. A late construction running NE-SW, partially of reused material, has overbuilt the chamberette of phase (I). A conduit in stone, approaching from the south, ran alongside the western wall, thus must have headed northwards. The latter wall was constructed upon a fine layer of earth containing limestone flakes. It consisted

of two blocks at the bottom, two in the second row, and a single block in the third. On the opposite side, the chamberette's eastern wall had only three blocks preserved: two at the bottom, and one in the second row. On the south, three blocks formed up the first row: one large block in the middle, and two small ones on either side. One block from the second row was found towards the junction with the western wall. The massive block at the middle represented the threshold of an entrance. A few finely-hewn and carefully-polished blocks were either littered near the walls, or incorporated into the adjacent late constructions. Originally, they would have belonged to the earlier phase, as indicated by a block encountered near the threshold, representing one corner of the chamberette.

No. (15):: the remnants of a construction of large and hewn blocks, running north of No. (14), and of another segment of it, excavated on the same alignment, to the northeast of No. (14). The latter segment of (15) had a preserved first row of blocks, with just few blocks recorded from the second.

No. (16) (Plate CDLXIIIa-b):: a set of five large pillars built of finely-hewn blocks of limestone. Between the fourth and fifth pillar, there was room for another one which has disappeared in consequence to the construction of a late wall running NW-SE, between wall No. (17) (*infra*) and a late wall parallel with it, to the north. The coarse constructions seem contemporary, with one overbuilding wall (17). The lowest of the five pillars was preserved up to the third row of blocks, the highest, to the seventh (height: 1.30 - 2.40 m). The first rows are formed up basically of a pair of blocks placed alternately, in two different directions. At the upper sections, a large, rectangular block was placed lengthwise.

No. (17) (Plate CDLXIVa-b):: approx. direction: NE-SW; a massive wall with the best-preserved segment to the west, reaching up to the seventh row of blocks (height: 2.53 m); while elsewhere, remained the first to second rows of blocks. As the case with other walls on site, the blocks of the lower rows were arranged differently from those of the upper ones. The mode of construction recorded here, recalls that met at the sites of the nearby Government Hospital Hill (14; 129; 131). Next to wall (17), to the south, Adriani excavated fragments of mosaic panels without a context, for they were found within a layer of debris. Their random arrangement suggests vestiges of frieze-panels of an upper storey, largely violated during the demolishing of the building complex in question. Two recovered

pieces show a running-centaur and a stag; a third one, displays two rows of geometric ornaments (Graeco-Roman Museum, Inv. No. 25659 and 25660) (Plate CDLXVa-b). These were dated by W.-A. Daszewski, to ca. 250-225 BC (Daszewski 1985a: 111-114, Cat. No. 5-7).

To the south of wall No. (17), towards the southwestern limit of the excavation profile, was a small, circular well, the upper part of which was formed of reused material. Adriani recorded eighteen of such wells within the main trench. They were partially rock-cut, with few sections built in masonry. In general, they seem to pertain to various phases of construction and/or renovation, as indicated by the range of building techniques evident on site (Plate CDLXVI).

Beyond wall No. (17), towards the southern limit of the excavation profile, there were only very coarse structures pertaining to a late period. Adriani's plan of 1940 shows this form of construction to dominate the trench excavated southwest of the British Consulate-Alexander the Great junction. These were built in part, of reused architectural material which seems to have been retained from earlier constructions on site, or otherwise, from nearby, dismantled edifices. The ruins south of No. (17), for instance, were built of small, irregular blocks and stone shards held together by means of a thick layer of earth. Architectural fragments were frequently found embedded within the walls: reused cornices, capitals, and several column drums. The nature and chronology of this late phase of construction cannot be inferred from Adriani's plan, especially in the absence of conclusive finds. The mode of construction however suggests modest structures overbuilding a Ptolemaic complex which has undergone successive phases of renovation and/or structural alteration already, in the Ptolemaic period, and later, during the Augustan Principality, before its final destruction at a point in antiquity: possibly, the third or fourth century AD. Accordingly, the coarse remnants excavated on site, would pertain to the latest phase of habitation following the second abandonment of the northern districts in the aftermath of the tsunami of AD 365: a Late Antique phase datable ca. the fifth-seventh century (analogies, site 137a).

Site 121: Garden of the ex-British Consulate

Maps: V1; V4

Residential quarter: el-Ramleh; el-Mazarita [Ptolemaic]

In 1994 and 1996-1997, the Centre d'Études Alexandrines has carried out a salvage excavation at the premises of the ex-British Consulate, southeast of Adriani's *chantiers* on Alexander the Great Street (Omar Lotfy: el-Tram) (sites: 115; 116; 117; 119; 120), 250 m east of Diana Theatre (site 114), north of the Cricket Playground (site 122), west of the Government (el-Miri) Hospital (sites: 14; 129; 131; 132) (Empereur 1995: 747-750; *idem* 1997: 838-841; *idem* 1998d: 619; *idem* 2002a: 928-930; Dubourg 2016: 26-29).

Prior to the CEAlex intervention, the bulldozers of the developers have destroyed the remnants thru the uppermost levels (disturbance: ca. 4-6 m), revealing the underlying, Hellenistic *strata*. A sumptuous residential quarter pertaining to at least, three successive phases of habitation, seems to have occupied an urban *insula* located on the southwestern slopes of the mound (i.e. the GHH) overlooking the Royal edifices and Megas Limen. The most-recent of the identifiable phases would be datable to the end of the second century BC. Whereas, the earliest, with structures laid directly upon the bedrock, is associated with the first generation of Macedonian settlers: possibly, a senior-officials-and-aristocrats, late-fourth-second-century BC habitat situated in part, near the enclosure of the Ptolemaic βασίλεια, in proximity to the southern belt of Cape Lochias. Each of the principal phases incorporates about two or three sub phases of internal modification: addition of partitions; alteration of surface area; partial abandonment. A single orientation is retained however, through the various phases of (re)construction and/or renovation.

The remnants of four houses were recorded. Their modes of construction, of two distinct types, emphasize the division of the *insula* into two sectors, a separation manifested by two contiguous walls oriented east-west. The walls of the first installation were built of roughly-hewn stone bound by a layer of adhesive clay. Subsequent constructions are characterized by large limestone blocks. The partitions had foundations of roughly-hewn limestone upon which mud-brick was set in regular rows (Plate CDLXVII). Clay-mortar has served as adhesive paste by the stonemasons, as is the case at other neighbouring sites with Ptolemaic vestiges: Chantier Moustaki (116); Cricket Playground (122). Pavements of beaten-earth were dominant. In one case, the surface was constructed of tile-shards and *tesserae* (1 cm) embedded into a layer of mortar. Perhaps, the most prominent encounter is an ἀνδρών (banqueting room for men) featuring a pebbled floor-mosaic (315-290 BC) reminiscent of

Pellaean panels, with a lozenge pattern marking the threshold, a central rosette-medallion, and a red strip of *tesserae* defining the space preserved for the reclining-κλίναι (couches) (Plate CDLXVIIIa-b). As its style and mode of construction affirm the Macedonian character of the district, the contextual finds: a hoard of coins predating the monetary reforms of Ptolemy's satrapy (introduced ca. 315 BC), associate the initial phase of occupation with the earlier settlers of the late-fourth century BC. The domestic nature of the habitat is rather strengthened by the unearthing of ovens in clay and brick: finds that may be considered in relation with the fine ceramics, cooking pots, and dishes recovered on site, besides a repertoire of *amphorae* and λάγυνοι of the third and second centuries BC. These houses are connected with a complex hydraulic system: several wells and an intricate network of conduits (gable-roofs and slab-covers) coated with waterproof plaster. It could have belonged to the supply-and-drainage system excavated in part, at other neighbouring sites on the Government Hospital Hill (14; 122c; 131). Among the finds, has been an inscribed plaque in white marble, datable to the second century BC. It records a dedication made by a certain individual, along with his wife and children, to Isis, Sarapis, and Hermes. To the left of the epigraph, an Ibis is represented posing upon a beribboned κηρύκειον (Hermes' staff), thus emphasizing the Graeco-Egyptian assimilation of Hermes to Thoth: Ἑρμῆς ὁ Τρισμέγιστος (Plate CDLXIX).

Site 122: ex-Cricket Playground

Maps: V1; V2; V3; V4

Miscellaneous: el-Mazarita

(i) Structures [Late Antique]

(ii) Structures [Roman]

(iii) Structures [Ptolemaic]

(a) In 1970-1971, excavations directed by Samy Shenouda (University of Alexandria), were carried out at the northeastern sector of the ex-Cricket Playground, south of the former British Consulate, within an urban block situated immediately, to the west of the Government Hospital Hill (Shenouda 1973: 193-205) (Plate CDLXX). As the case at nearby sites excavated on the slopes of the neighbouring hill (sites: 14; 129; 131) and within el-Khaledin Garden (site 134), the level of the bedrock was relatively high, with the earliest relics of Ptolemaic edifices buried underneath accumulated layers of debris

yielded by Late Roman and Byzantine occupation. In the upper *strata* of the debris, Shenouda met the remains of a structure of fired-brick and small blocks of limestone, founded upon a thick layer of rubble-and-mortar: a buffer-*stratum* between the latter and earlier constructions of limestone blocks. The recovered fragmentary architecture includes column drums, capitals, and architraves. Some of the foundation walls were built directly upon bedrock, at 5.00 m below the surface-level. The earlier relics, excavated underneath the buffer-debris *strata*, would pertain to various phases of construction (Plate CDLXXI). A comparative study of three partially-preserved, tessellated mosaic pavements from buildings (A) and (2) on site, against other panels from chronologically-established contexts in Alexandria and elsewhere (Delos; Cyrene; Solunt; Pompeii; Rome), allowed Daszewski to propose a chronological range for the complex in question, ca. the mid-second - first century BC. Successive building activities on site, can be categorized accordingly, into 4 groups: (i) a Ptolemaic well (perhaps the earliest), buildings (B), (3), and (1); (ii) building (4); (iii) buildings (2: phase I) and (A); (iv) buildings (2: phase II), (5), and (6) (Daszewski 1983: 55-59; *idem* 1985a: 115-118, A: No. 13-14, 2: No. 15, No. 12: without a context; panels datable to the early 1st c. BC) (Plate CDLXXIIa-b). Fragmentary architecture such as a fragment of a stuccoed frieze featuring a Lesbian *kyma*, analogous to those encountered by Adriani at the neighbouring Chantier Finney (site 120), antedate Daszewski's range. Coming from the upper layers however, these finds might have been retained from nearby, dismantled edifices: either from the GHH immediately to the east, or Adriani's *chantiers* on Alexander the Great Street.

Stratigraphy here recalls the site investigated in 1976, by W.-A. Daszewski and K. Kamiński, on the southern slope of the Government Hospital Hill (site 131), where earlier structures of Ptolemaic and Early Roman provenance were concealed beneath an accumulated debris of rubble containing fragments of architecture probably reemployed in Late Antique constructions, as those excavated by Alan Wace in 1944-1945, southeast of the hill (site 127). The building technique and stratigraphic level of Shenouda's structure of small blocks of limestone and fired-brick, suggest a Late Roman or Byzantine date for this late phase of construction.

(b) In 1980, construction works carried out at the southern sector of the Cricket Playground, have brought ancient relics to the surface. The unearthed remnants were investigated and recorded by

W.-A. Daszewski and M. Barański (architect) from the Polish Centre of Mediterranean Archaeology (PCMA) (Daszewski 1983: 63-69). Within a rectangular area measuring approximately 74.30 x 25.30 m, seventeen test-pits/trenches were excavated by the developers, for a new building of the Faculty of Medicine (Plate CDLXXIII).

Surface-layers (i.e. prior to the levelling of the terrain): about 3.50 m from the level of the Cricket Playground: 4.70 m from the street-level of Abd el-Wahed el-Wakil:

(i) Coarse structures:

A largely-destroyed wall of brick, built upon a substructure of small and irregular limestone blocks.
A large wall built of brick and small limestone blocks held by a thick layer of lime-mortar, adjoining a pavement of stone slabs.
A north-south wall built of limestone blocks and occasionally employed brick, held by a thick layer of lime-mortar.
Two double walls of limestone blocks, running east-west, parallel with one another.
A rectangular basin coated with a layer of waterproof plaster.

(ii) Fragmentary architecture:

A Corinthian capital in white-greyish marble, and column base.

Seventeen test-pits and trenches descending below the upper (levelled) *strata*, of which nine have reached the groundwater-level at 9.80 m from the top of the sunk pits and trenches: 13.30 m from the level of the ex-Cricket Playground: 14.50 m from the street-level (prior to levelling). The listed-below depths were recorded from the levelled-surface of the plot: the top of the pits and trenches:

Test-pit (1)
Southern section:
4 m: a large wall of limestone blocks, running north-south.

6 m: an occupational-level covering a thick layer of loose-fill, below which virgin soil extended to the groundwater-level.

Test-pit (2)

Northern section:

Near the surface: a wall of small limestone blocks and brick in mortar, adjoined by a canal running east-west.

1.80 m: footing of the wall.

2.20 - 2.70 m: two parallel walls of irregular limestone blocks, running north-south.

Western section:

1.30 m: a north-south wall of finely-hewn blocks in lime-mortar, bearing traces of reddish plaster.

Southern section, near the SE. corner:

5 m: a north-south foundation wall of limestone blocks.

8 m: bedrock: footing of the wall; a canal with convex-roofing.

9.10 m: groundwater-level.

Southern section, near the SW. corner:

4.60 m: three walls built of limestone blocks: two oriented east-west, adjoined the third, from the west. Above the walls, at 4.30 m, extends a 0.30 m thick layer of ashes: an indicator of destruction by fire, upon which successive layers, chiefly of earth, clay, and lime-mortar, signal the levelling of the terrain in preparation for subsequent building-activity.

Test-pit (3)

Southern section:

7.00 m: a rectangular well of finely-hewn, limestone blocks, cut into the bedrock, and descending slightly, below the groundwater-level.

Successive layers of fill containing rubble, earth, and mortar-residues, ascend to the surface-level.

NW. corner:

A cut through the fill, was detected.

Test-pit (4)

Northern section:

2.30 m: a wall of limestone blocks.

6.50 m: bedrock: footing of the wall.

9.80 m: groundwater-level.

SW. corner:

A vertical trench, ca. 3.00 m deep, cuts through the earth-fill, below which extends a levelling layer of earth.

4.40 - 8.40 m: a 4.00 m thick layer of rubble (debris), bearing traces of fire: almost on the same level of the layer of ashes of test-pit (2). Levelling of the terrain is signalled by a one-meter-thick layer of earth. At the upper part of the layer with burnt rubble, was a large foundation wall visible through the southern section of the pit.

8.40 m: bedrock: burnt stone.

Test-pit (5)

SE. corner:

Near the surface: a wall of limestone blocks.

Debris-*strata* extending thru.

Bedrock: reached below the groundwater-level.

Test-pit (6)

Eastern section:

1.10 m: the top of a basin coated with plaster.

3.00 m: bottom of the basin.

Western section:

A foundation layer of small stone in lime-mortar mixed with gravel, seems contemporary with the basin.

Debris-*strata* extending below the groundwater-level.

Bedrock: not detected.

Test-pit (7)

An uppermost layer, ca. 2.00 m thick, of earth-and-rubble.

Successive layers of fill reaching the level of the bedrock, at 7.00 m.

Test-Pit (8)

Successive layers of fill reaching the bottom of the excavated pit, at 5.00 m.

Test-Pit (9)

SE. corner:

4.50 m: a north-south wall of finely-hewn limestone blocks, with a footing built upon the bedrock.

Bedrock: reached at 6.80 m: 3.00 m above the groundwater-level.

9.80 m: groundwater-level.

Test-pit (10)

Successive layers of fill reaching the groundwater-level.

Test-pit (11) – shallow

Almost at the surface-level: ca. 0.80 m: a north-south wall of limestone blocks coated with plaster on the west side, adjoined from the west, by two blocks of limestone. Extending to the west, was an uncovered section of pavement in pinkish-mortar (waterproof).

Test-pit (12) – shallow

0.50 m: the lower courses of a wall of limestone blocks.

1.00 m: a circular well of small limestone blocks, encountered immediately east of the wall, almost adjoining it.

Test-pit (13)

0.30 m: several walls of small limestone blocks in lime-mortar, and a large basin.

0.80 m: an oblong basin coated with waterproof-plaster, built upon a mosaic pavement composed of chips of various stone: alabaster, granite, and marble, all embedded into a layer of lime-mortar. Finds: fragmentary architecture and ceramic sherds including the handle of a Late Roman *amphora*. Immediately below the mosaic pavement were accumulated layers of fill.

Southern and northern sections:

4.20 m: the upper part of a foundation wall.

5.90 m: bedrock: footing of the wall.

9.80 m: groundwater-level.

Adjacent to the wall were two layers of whitish mortar: upper layer at 4 m; lower layer at 4.50 m. Above the upper layer of mortar were levelling-*strata* of earth-fill, upon which extends a layer of debris underlying the hydraulic structures with mosaic pavement (*supra*).

Southern and (in part) western sections:

0.80 m: a wall of small limestone blocks, reaching to 4.20 m.

Test-pits (14) and (15), and trench (16) – shallow

A layer of fill reached to the bottom, at 2.00 m.

Trench (17)

4-5 m: below an extended debris-*stratum* of earth-and-rubble, a foundation wall of large, roughly-hewn blocks of limestone held without mortar, ran northwards (width: 0.70 m; preserved height: 1.50 m). The uppermost segment was met at 4.50 m. It was exposed down to 6.50 m, and seemed to descend further, beyond the excavation profile. The large wall was joined at the north end, by another foundation wall running eastwards. On the same level, along the north side of the opened trench, was a foundation wall built in the same technique (width: 1.30 m; preserved height: 1 m). Traces of red-brownish markings (ochre?) were recognizable on the faces of two blocks pertaining to these walls (probably stonecutters' marks). Three massive blocks of limestone were placed at a regular-interval of ca. 0.80 m across the excavated foundations (pillars?). Whereas, above the level of the blocks was a 0.20 m thick layer of mortar, upon which earth-fill ascended to the surface-level.

NW. corner:

A well, rectangular in cross-section, built of finely-hewn limestone blocks. It was partially exposed over a depth of 1.60 m, towards the bottom of the trench, yet seemed to have descended deeper. Bedrock and groundwater-level were not reached.

Stratigraphy shows successive phases of construction and/or renovation on site. Structures (I) built upon the bedrock (1; 2; 4; 9; 13; 17), of which some were found partially drenched below the groundwater-level: basically, due to land subsidence (Chapter II, sec. 2.3.1). These earlier remnants are datable, in general, to the Hellenistic period. Variations in the recorded levels seem subsequent to successive phases of Ptolemaic building-activity, and to differences in rock morphology at this part of the northern districts. Building techniques employed in the foundations, canals, and wells, recall those of Adriani's *chantiers* on Alexander the Great Street, and Chantier Djanikian on the southern slope of the Government Hospital Hill. Whereas, the use, probably at a later phase, of an adhesive paste of clay serving as mortar, echoes a similar mode of construction evident at Chantier Moustaki. The results from test-pit (13) are of particular interest, for they show several activities (II) of Roman (perhaps, even Late Ptolemaic) renovation and/or dismantling of earlier constructions, datable to ca. the first century BC-fourth century AD. Traces of destruction by fire (2; 4), and the thick levelling-*strata* encountered as well, at other neighbouring sites southwest of the GHH (122a), would explain the absence of direct communication between the edifices from phases (I-II) and (III): no evidence of reutilising earlier, dismantled buildings as ready foundations. This phenomenon suggests a time gap at the fourth century, one justified by the second abandonment of the Royal Quarter, following the tsunami of AD 365. Habitation on site, seems to have resumed ca. the turn to the fifth century, as represented by coarse, rather modest structures (III) of domestic and commercial character: a form already met in fifth-seventh-century contexts (upper layers of the levelled Playground; 2; 5; 6; 11; 12; 13). The excavations of Wace southeast of the Government Hospital Hill, in 1944-45 (127), shed further light on the nature of such late constructions of small stone and fired-brick in a layer of lime-mortar found, in some cases, containing stone-shards mixed with sand and crushed-brick. Pertaining to this latter phase, is the Late Antique structure excavated by Shenouda in 1970-1971, at the northeastern sector of the Cricket Playground (122a).

(c) In 1994 and 1996-97, the Centre d'Études Alexandrines (CEAlex) carried out salvage excavations at the site of the ex-Cricket Playground (Empereur 1995: 750-753; *idem* 1997: 841-842; *idem* 1998d: 619-621; Silhouette 2011: 364-377; Dubourg 2016: 26-29; Silhouette 2016: 30-31). The absence of post-Roman remains is due the extensive levelling-works of the nineteenth century, and the disturbance caused by the bulldozers of the developers prior to the CEAlex intervention (to ca. 4.00 m from the surface-level). Among the few extant vestiges of the Roman period, was a large bathing establishment and basins coated with hydraulic cement. Three phases of Ptolemaic occupation seem identifiable within the area southwest of the Government Hospital Hill. (I) Late-fourth - early-third century BC: an earlier habitat represented by foundation walls built upon the bedrock, with fragments of pavements of broken-tile. (II) Third century BC: two houses developed north of an east-west, longitudinal street uncovered over 5.20 m; a third, inner house was accessible via an intermediate alley perpendicular to the principal thoroughfare to the south (Plate CDLXXIV). A conduit ran alongside the alley, draining the wastewater towards the street. The house to the west had a monumental façade built of large, rectangular blocks of limestone (Plate CDLXXV). Northeast of the complex, a staircase was cleared. It signalled the terraced layout of the terrain, which had to be accommodated with the construction of terrace-walls, as was the case at the ex-Billiard Palace (site 99) (Plate CDLXXVIa-b). The morphology of the bedrock here, indicates a 4.00 m difference between either end of the excavated cricket-lot. The interior walls of all three houses were coated with a fine white mortar. Pavements varied from sand and beaten-earth to broken-tile. One oblong chamber (10.56 x 4.42 m) of the inner house had a red-painted mosaic pavement of small flakes of white marble, embedded into a layer of broken-tile-mortar laid in turn, upon underlying bed of yellowish loam. (III) Second century BC: a residential complex of both domestic and commercial character (raised 50 cm). The house to the east is now accessible from the principal street, via a flight of two steps (slabs). At the back, was a set of rooms around a central courtyard with a rectangular basin coated with broken-tile mortar. An assortment of fragmentary architectural material (column bases, fluted shafts, and cornices) has been reused in the constructions of this latter phase, and were thus retained from earlier, dismantled buildings on site. A number of iron and bronze arrowheads, stone-balls, and successive ovens, found within the occupational and abandonment levels of a large building (ca. 500 m^2) to the west of the shops lining the street, suggest a commercial property associated with arms-trade. Of particular interest,

however, is the group of interconnected wells, cisterns, and conduits discovered at the ex-Cricket Playground. Their proximity to the hydraulic installations excavated at the nearby premises of the ex-British Consulate (site 121), and the Government Hospital Hill (sites: 14; 131), provides hints on the dynamics of water-supply and drainage in the Ptolemaic city and its Graeco-Macedonian Quarter.

Site 123: el-Sultan Hussein-the Museum junction

Maps: V1; V2; V4

Miscellaneous: el-Mazarita

(i) Foundations; hydraulic installations [Roman]

(ii) Longitudinal street [Ptolemaic phase of an intermediate thoroughfare]

(iii) Structures with a peristyle and floor-mosaics (associates, site 15a) [Ptolemaic]

In winter 1992-1993, salvage excavations directed by Mieczysław Rodziewicz, were carried out around el-Sultan Hussein-the Museum junction, at a point southeast of the ex-Cricket Playground (Rodziewicz 1995: 229, 232). At + 9.30 m and 10.00 m above the subterranean-water-level, the remains of two mosaic pavements in *opus tessellatum*, were encountered. The panels, originally about six meters wide, with traces of white-pinkish limestone *tesserae*, and lead pieces, seem to have been dismantled at the time the houses they once decorated, were abandoned towards the end of the second century BC. Between the pavements, a construction-free layer of dark-bulbous, Nile mud, indicates a cultivated area: probably, a central courtyard surrounded with porticos, thus signalling a peristyle-type of domestic residences on the southern fringe of the Graeco-Macedonian Quarter. The building in question, might have been contemporary with the constructions of phases (II-III) at the ex-Cricket Playground (site 122c). Excavations on site, show these were bordered by a street of beaten-earth uncovered over ca. 6.00 m. Running parallel with el-Falaki's longitudinal street L2, it bears analogies with the one partially excavated by the CEAlex shortly after, delimiting successive phases of Ptolemaic habitat to the north. The unearthed structures at both sites would pertain to urban *insulae* planned on either side of Hellenistic *viae terrenae* of a surface as that uncovered in 1983, at the site of el-Khaledin Garden (site 134). An overlying, thick *stratum* of yellowish loam and grey mud, suggests a cultivated zone within which Roman structures of ca. the second century AD, are evident. Their remnants were met at + 11.50 m above the sea-level, and consisted of hydraulic

installations (basin; cistern; conduit), a walkway of marble-slab pavement, and a foundation wall of limestone blocks held firmly with large quantities of ash-mortar.

Site 124: el-Sultan Hussein-the Museum junction

Maps: V1; V3; V4

Miscellaneous: el-Mazarita

(i) (a) Large blocks of granite [Ptolemaic; Arab reuse]

(ii) (b) Fragmentary architecture [Late Antique; Arab reuse]

(a) In 1892, during the demolition of the Arab fortifications, the section of it, north of the junction of the Museum Street with el-Sultan Hussein (SW. of the R3-L2 junction), Giuseppe Botti recorded:

Presso al fossato dell' Ospedale, a poca distanza dalla Scuola Menasce, apparvero grossi blocchi di granito; ma avendo ivi certi operai, per imprevidenza loro, trovato la morte, lo sterratore non profondò più gli sterri, che, com'erano sull'area del Palazzo de' Tolomei, dovevano essere largamente rimuneratori.

(Botti 1893: 16)

Botti's 'large blocks of granite' were located within an area where the Arab circuit deviates slightly off course (Plate CDLXXVII). The blocks briefly reported here, are to be considered in conjunction with the dense concentration of remains excavated around the R3-L2 junction: south of the Government Hospital Hill, and southwest, at the premises of the ex-Cricket Playground and ex-British Consulate (14; 15a-b; 121; 122a-c; 123; 124). Excavations at several of these sites, show el-Falaki's transversal street R3 cutting through earlier constructions on a monumental scale, suggesting a cluster of Ptolemaic, public edifices between the Graeco-Macedonian residential quarter and the royal palaces, where the foundations of the southernmost of such a cluster would have forced the Arab planners in the 9th century, to detour the area while proceeding eastwards, to fortification-point (α) at el-Shallalat.

(b) In 1905, Evaristo Breccia maintained that during the digging of foundations for the Casa Rolo, near the southeastern corner of the Cricket Playground, the workers have accidently unearthed a

number of ancient relics: two large Byzantine capitals in marble (reused); a marble statuette carved with crosses, representing a warrior; the bottom of a grooved crater made of black granite. At the northwestern corner of el-Sultan Hussein-the Museum junction, several fragments of polychrome architecture including composite, Corinthio-Egyptian capitals of Mex limestone, were encountered in the foundation trenches of the Levi and Francis house (Breccia 1905a: 73; Adriani 1934: 76, No. 49, 85, No. 88). The finds pertain mainly, to the area above-mentioned (124a), where the reported fragments of reused architecture are justified by a late phase of habitation evident at nearby sites (122a-b; 127).

Site 125: South and SE. of the Government Hospital Hill

Maps: V1; V4

Miscellaneous: el-Mazarita

(i) (a) Cistern; polychrome architecture; marble head of Faunus [n.d.]

(ii) (b) Marble seats: κλίμακες [Ptolemaic; Arab reuse]

(iii) (a) Foundations of large blocks [Ptolemaic; Arab reuse]

(a) In 1905, during construction works carried out to the south of the Government Hospital block, ancient remnants have been accidently unearthed, and briefly reported then, by Evaristo Breccia:

Nei lavori per erigere il nuovo muro dell'ospedale indigeno in Via d'Allemagne (el-Sultan Hussein) si rinvennero una cisterna, potenti blocchi di fondazioni, resti architettonici policromi, una testa di fauno in marmo.

(Breccia 1905b: 129)

The reported "potenti blocchi di fondazioni" seem to signal an eastwards continuation of the same monumental construction met at several sites around the R3-L2 junction, within an area bypassed by the Arabs, in planning the course of their circuit-walls (site 124a). Given Breccia's note, however, the contextual relation between these foundations and other encounters (cistern and polychrome architecture) is not quite clear. One interesting find on site, would be the marble head of a Faunus: a bipedal mythological creature having the legs of a goat and yet, the torso of a horned man. The recovery of a fragment of a statuette representing the Roman counterpart of the Greek Πάν (Pan:

deity of nature, the wild, and rustic music), south of the Government Hospital, within an area where the level of the bedrock is considerably high compared to other parts of the town, as indicated by excavations carried out on the hill's slopes (sites: 14; 129; 131), and southwest of it (sites: 121; 122a-c), would question Strabo's first-century BC localisation of the Πάνειον (temple to Pan) at the central district where the only known *kom* has been formed in mediaeval times, of accumulated deposits of Arab and Mameluke refuse. Such find, although minor and fragmentary, puts forth the enquiry: was a Πάνειον erected in the vicinity of the Government Hospital? a site dominant over the ancient cityscape considering the bedrock morphology (3.6.2.2, B: other finds recorded at Fouad and Kom el-Dikka).

(b) In 1892, during the dismantling of the Arab fortifications, the section of it (Tabiat el-Yahoudieh), southeast of the Government Hospital Hill (west of Champollion Street), Giuseppe Botti recorded other relics of antiquity:

Je me souviens qu'en 1892, à l'occasion de la démolition des fortifications et au lieu que je viens d'indiquer [à la colline de l'Hôpital du Gouvernement (Tabiat el-Yahoudieh: i.e. Batterie des juifs)] on retrouva des restes d'escaliers en hémicycle taillés en marbre grec et marqués par des lettres d'assemblage. C'étaient les restes des scalae (κλίμακες: seats) d'un cuneus (audience) du théâtre grec. Le théâtre qui servit longtemps aux représentations des chefs-d'oeuvres de Ménandre fut transformé en castrum (camp) et fortifié par César. J'ignore si Cléopâtre VII le releva de ses ruines: sous Caligula il était en bon état. Les juifs du moyen âge en arrachèrent les blocs de fondation qui étaient en calcaire numismale, à fin d'en faire des monuments funéraires (see infra). C'est pourquoi les inscriptions en hebreu du moyen-âge abondent près de l'hôpital du Gouvernement.

(Botti 1898c: CXL. 136-137)

Two key issues ought to be tackled when considering this find. (1) Botti does not indicate whether the semicircular seats in marble, which he associates with those of Alexandria's Dionysiac theatre, have been found *in situ*, or within a secondary deposit of reused material. Having in mind Caesar's account on the Alexandrian theatre being dominant over the Great Harbour, would make the hill most convenient for locating the historical edifice. The probability, however, of an out-of-context

find should not be excluded, with frequent encounters of fragmentary architecture reused in late constructions at neighbouring sites (122; 127; 131). Even in this case, the reported κλίμακες are likely to have been retained from a nearby context. (2) In 1934, Achille Adriani located Botti's 'seats' on the north side of el-Sultan Hussein (L2): a point south of the present-day Faculty of Pharmacy. His localisation does not tally with Botti's narrative: a section of the Arab fortifications on the hospital hill: the site of Tabiat el-Yahoudieh (Fort of the Jew: a later complement to the Tulunid circuit, south of Tabiat el-Menchereih) (Plate CDLXXVIII). This would place Botti's marble κλίμακες rather southeast of the hill: the section excavated by Alan Wace in the 1940s (site 127). On the uncertainty of locating the find, Adriani himself relates: "(the mark on his *pianta*) indica approssimativamente (mancano anche qui elementi per una precisa e sicura ubicazione) il sito dalla scoperta (b) segnalata dal Botti" (Adriani 1934: 78-79, No. 53). The presence of a mediaeval ghetto within this area might justify Botti's account on the Jewish exploitation of foundation blocks of nummulithic limestone, while building their funerary monuments down the hill (Plate CDLXXIX).

Site 126: South of the Government Hospital Hill

Maps: V1; V2; V3; V4

Fragmentary architecture: el-Mazarita [Ptolemaic; Roman; Late Antique; Arab reuse]

In 1888, Henry de Vaujany maintained that within the areas south of the Government Hospital Hill (*insula* L1-L2-R2-R3), between the Arab fortifications and the Rosetta Road (Fouad: el-Horreya), at a depth of 4 - 5 m, were found among other monumental relics of antiquity, overturned columns, and Corinthian capitals in basalt, formed of two perfectly-matched pieces superimposed upon one another to form yet a single monolith (De Vaujany 1888: 30). Four years later, Giuseppe Botti reported one of De Vaujany's columns (height: 10.54 m; diameter: ca. 0.984 - 1.038 m), well-preserved, at a property of Baron Jacques de Menasce, between Casa Olivier and the Israelite School of Menasce: a point south of el-Sultan Hussein Street, the section of it, delimited by Hussein Hassab (east) and Gerber or Mahmoud Mokhtar (west) (Botti 1898c: 87; Botti and Nourrison 1899: 35-36; Adriani 1934: 81, No. 63). The column, datable, in general, to the Roman period, was donated by Baron Menasce to the ex-Society of Athenaeum. After the foundation of Alexandria's Graeco-Roman Museum in autumn of the same year, the committee of the museum, being in possession of the column, had accepted

the offer of Johannes Schiess to erect the column at Saīd Square renamed at the time, el-Khartoum Square, in commemoration of the Sudan Campaign (1896-99). An immense, two-piece Corinthian capital datable to the third century BC, served to crown the monument which was assembled under the supervision of the architect Antonio Lasciac (Plate CDLXXX). The capital, recovered from the same site as the column, has been donated By Baron Menasce to the Municipality. Both the capital and the column have possibly belonged to the corpus of architectural material recorded by De Vaujany in the 1880s, to the south of the Government Hospital Hill: approx. el-Falaki's *insula* L1-L2-R2-R3.

In a monograph published in 1898, Botti adds:

La colonne de Trieste, retrouvée près de l'École Menasce, n'était pas seule. On sait que deux autres colonnes, tout à *fait semblables* à *celle qu'on va dresser entre l'Hôpital et la Municipalité, gisent encore in situ.*

(Botti 1898c: 87, LVIII.)

Botti's account emphasizes the dense concentration of fragmentary architecture found in clusters, south of the Government Hospital Hill (124; 125). Considering the extended chronological range of such repertoire of miscellaneous finds (Ptolemaic; Roman; Late Antique), and its proximity to the Tulunid circuit-walls, secondary deposits of structural and/or decorative material might have been intended for reuse in the fortifications of the Arab town. Excavations within the vicinity of the R3-L2 junction reveal the dismantled edifices of antiquity from which these fragments were retained.

Site 127: SE. of the Government Hospital Hill

Maps: V2; V3; V4

Miscellaneous: el-Mazarita

(i) Jewish interments [Late and Post-Mediaeval]

(ii) Bath complex; subterranean tunnels [Late Roman; Byzantine]

(iii) Pavement of an intermediate street (Roman; Late Roman]

In 1944-45, excavations commissioned by the Alexandria University were carried out southeast of the Government Hospital Hill, at the site of the mediaeval bastion known as Tabiat el-Yahoudieh,

and north of it, under the directorship of Alan J.B. Wace (Wace 1949: 151-156). The upper layers have yielded remains of Jewish interments datable to ca. the fifteenth-sixteenth century (site 126). Wace identified two forms of construction within the excavation profile. (1) An intricate maze of vaulted tunnels largely blocked by accumulated deposits of debris. The points-of-access were determined at two places where scant traces of hinges have been detected. Few shallow niches into the walls, seem purposely cut to receive oil lamps (light). Contextual ceramics and coinage date such network to the Byzantine period. (2) A brick-structure featuring rooms paved with marble slabs and coloured stone flakes. The latter were found embedded into a layer of mortar laid upon limestone slabs. Its identification with a bathing facility is rather strengthened by the unearthing of a couple of brick-furnaces. Recovered fragments of worked-bone, Egyptian Red Slip (A), Early Christian lamps, glass slats, and handles of Late Roman *amphorae*, indicate a third-fourth-century date for the complex in question. Chronology is backed by the pavement of stone chips into mortar, a technique met in a Late Roman, hydraulic setting at the nearby Cricket Playground (122b: test-pit 13). Within the lower *strata*, towards the groundwater-level, Wace encountered imported *terra sigillata*: chiefly, Samian and Pergamene ware which is probably, Ptolemaic in date. By analogy with neighbouring sites, the Late Roman bathing facility predates the tsunami of AD 365, and in turn, the second abandonment of the Royal Quarter. Wace's enigmatic tunnels would represent the resume of habitation on site, during the fifth-seventh century.

On accidental discoveries at this part of the hill, ca. 1950-51, Achille Adriani relates:

Sulla collina dell'Ospedale governativo, durante opere di scavo per l'erezione di nuovi padiglioni nel settore orientale, si trovarono vestigia di costruzioni antiche tra cui i poveri resti di un lastricato a blocchi di calcare e di basalto.

(Adriani 1956a: 46)

Adriani's 'pavement of basalt and limestone blocks' might have belonged to an intermediate alley running within el-Falaki's *insula* L2-L3-R2-R3. Evidence of internal thoroughfares dividing the urban blocks of the Roman orthogonal grid, has been recorded at other parts of the city (sec. 2.2.2.13), but

especially, within the Polish concession at Kom el-Dikka (sites: 18; 19; 69b-d; and elsewhere within the city: 27-29; 32-36; 114; 122c; 123).

Site 128: East and SE. of the Government Hospital Hill

Maps: V1; V4

Miscellaneous: el-Mazarita

(i) (a; d) Limestone blocks; (a-f) fragmentary architecture [Ptolemaic]

(ii) (a) Structures with floor-mosaic [Ptolemaic]

(a) In 1906, during canalization works at Joussef Ezzeddine Street (el-Khartoum: Champollion?), in front of the second building delimiting it, opposite the present-day Faculty of Dentistry, a number of rectangular, finely-hewn blocks of limestone, and fragmentary columns in marble, were recorded through a layer of fill about five meters deep, below which vestiges of small chambers in masonry, have been discovered (Breccia 1907e: 6; *idem* 1907a: 105-6, Fig. 22; *idem* 1914a: 77, 284-85; *idem* 1922: 90, 281; *idem* 1923a: 165; *idem* 1923b: 9; Adriani 1934: 69, No. 30, 80, No. 59; Daszewski 1985a: 101-103, Cat. No. 1).

Unearthed in one chamber is a mosaic pavement (2.19 x 1.64 m) made chiefly of pebbles with few *tesserae* filled-in (Graeco-Roman Museum, Inv. No. 11125) (Plate CDLXXXI). Only the left part of such panel has survived destruction. At some point already in antiquity, *tesserae* have been used in repairing and filling-in parts of the pavement. The technique employed in this latter phase would recall the mosaics from Shenouda's excavations at the Cricket Playground (site 122a), hence dating renovation to ca. the turn to the first century BC. Whereas, the chronology of the initial phase of construction seems inferable from the intrinsically-Macedonian iconography of the pebbled pavement, and its technique which attests an early Alexandrian attempt to reproduce Pellaean panels. The *emblema* shows a nude warrior with a round-shield, throwing a lance. Framing the partially-preserved hunt-scene on three sides, is a wide band of recurring, mythological and real creatures: basically, griffins and panthers. Considering its composition and technique of execution, the pebbled mosaic, indeed reminiscent of Pellaean panels, would be datable to ca. 320 - 300 BC: among the earliest, excavated remnants of the late-fourth-century BC city of the Macedonian foundation: i.e. contemporary with Ptolemy's satrapy (sec. 1.4).

(b) Within the foundation trenches of another building on Joussef Ezzeddine, Breccia recorded a large, Corinthian capital in nummulithic limestone, datable to the third century BC (Breccia 1907e: 6; *idem* 1907a: 105-106; *idem* 1914a: 76-77; *idem* 1922: 89-90; Adriani 1934: 85, No. 85) (Graeco-Roman Museum, Inv. No. 17855) (Plate CDLXXXII).

(c) Northwards: northeast of the Champollion-Alexander the Great junction, five pieces of fluted columns in Aswan granite (height: 5 - 6 m; diameter: 0.60 - 0.80 m), were encountered during the digging of foundations for the new Sursock house. A large, Corinthian capital in veined marble, was recorded on one side of the building, opposite the tramway on Alexander the Great or Omar Lotfy (Breccia 1907e: 6; *idem* 1907a: 106; *idem* 1914a: 76; *idem* 1922: 89; Adriani 1934: 63-64, No. 26).

(d) North of the Sursock building (c), Breccia recorded the accidental discovery of a large block of serpentine limestone, along with two Corinthian capitals in marble (Breccia 1907a: 107; *idem* 1914a: 76; *idem* 1922: 89; Adriani 1934: 85, No. 84).

(e) In 1898-99, at the southwest corner of the Champollion-Alexander the Great junction, Noack excavated "zweiseitiger architrav aus blaulichem marmor (0.34 x 2.28 m)" (Noack 1900: 218-219, n. 3, 223, test-pit E; Adriani 1934: 79, No. 57).

(f) In 1961, during the digging of foundations for a building southeast of the junction of Alexander the Great (Omar Lotfy: el-Tram) with Champollion, a Doric capital in nummulithic limestone, with a fragment of a fluted column shaft, has been accidently unearthed (Hoepfner 1971: 59-60, 66, Tafel 17b; Tkaczow 1993: 220, obj. 89). This fragmentary find (1.10 x 1.10 m; preserved height: 0.50 m) is datable to the third century BC (Plate CDLXXXIII) (Graeco-Roman Museum, Inv. No. 27063).

Site 129: The Government Hospital Hill

Maps: V1; V4

Fragmentary architecture: el-Mazarita [Ptolemaic]

In 1922-1923, during construction works on Alexander the Great Street (Omar Lotfy or el-Tram: approximately, on el-Falaki's L3), a corpus of large blocks of nummulithic limestone of which three belonged to the cornice of a monumental construction, were accidently unearthed down the slope of the Government Hospital Hill (Plate CDLXXXIV), a few meters to the east of the foundations (A-B) excavated by Achille Adriani in 1932, at Chantier Djanikian (site 14) (Breccia 1924: 6, Tav. II; Adriani 1934: 72-73, No. 36, Fig. 21). Breccia's blocks of a massive cornice, which recall the fragmentary architecture recorded by Borchardt in 1905, opposite Chantier Heikal (sites: 119; 133b), were identified by Adriani, with some of the architectural material on display at the premises of the Graeco-Roman Museum. As the case at the neighbouring Djanikian, the remnants here, seem to have been overrun at some point in antiquity, by el-Falaki's longitudinal street L3.

Site 130: The Government Hospital Hill, or the old shoreline west of el-Silsileh (?)

Maps: V2; V4

Inscribed column: el-Mazarita [Roman]

In 1898, Giuseppe Botti reported a fragmentary column shaft found bearing a Latin inscription commissioned around AD 185, in honour of *praefectus Aegypti*, Longatus Rufus (Botti 1898b: 80; *idem* 1898c: 86; Breccia 1911: 92-93, No. 161; Adriani 1934: 93, No. 115). The provenance of this find varies in the monographs issued in the same year:: 1898b: the column shaft was found by Botti in 1895, on the Alexandria-Ramleh tramway, at the foot (down the slope) of the Government Hospital Hill; 1898c: It was Madame Simond-Bey who in 1895, had communicated to Botti, the column shaft found half-buried between the old Jewish cemetery and the seashore, to the left (i.e. north of) the Alexandria-Ramleh tramway. In 1911, Evaristo Breccia maintained that it was rather Simond-Bey himself, who had communicated to Botti, however in 1894, a column found buried on the shores of the eastern harbour. Adriani, in keeping with the 1898b version, has placed the column approx. on the course of el-Falaki's longitudinal street L3, east of the junction with transversal street R3. In all cases, the granite column (Graeco-Roman Museum, Inv. No. 17832) pertains to the coastal zone north of Alexander the Great Street (Omar Lotfy: el-Tram), within the section of it, west of el-Silsileh. The epitaph reads:

T. LONGATO RVFO

PRAEF. AEG. PRAEF. PRAET.

EMINENTISSIMO. VIRO

T. VOCONIUS. A. F. PRAEF

LEG. II. TR. FORT. G.

Site 131: The Government Hospital Hill

Maps: V1; V4

Miscellaneous: el-Mazarita

(i) (2) Fragmentary architecture [Late Antique]

(ii) (1) Large blocks; (2a-c) foundations; (2b) canal [Ptolemaic]

In the summer of 1976, within foundation trenches for new buildings of the Faculty of Medicine, on the southern slope of the Government Hospital Hill, the remains of ancient constructions were accidently unearthed (Daszewski 1979: 92-105). These finds were investigated and recorded by Wiktor-Andrzej Daszewski, and Krzysztof Kamiński, from the Polish Centre of Mediterranean Archaeology (PCMA). Two concentrations of architecture have been encountered south of Alexander the Great Street (Omar Lotfy: el-Tram: approx. L3), between the ex-British Consulate and Adriani's Chantier Finney (120; 121) (west) and Champollion Street (east): the Daszewski-Kamiński plots (1) and (2a-c).

Plot (1) (40 x 25 m): towards the northeastern corner of the Consulate's block, at ca. 10 m south of Alexander the Great Street, the workers unearthed roughly-hewn limestone blocks (re)utilised in the foundations of the building under construction. One of the large blocks was still in place when Daszewski inspected the site (Plate CDLXXXV). In size and stone-dressing technique, it recalls the rustic blocks of Adriani's foundation wall (A) excavated in 1932, at Chantier Djanikian (site 14), a few meters to the east of the Daszewski-Kamiński plot (1).

Plot (2) (70 x 60 m): approximately 140 m east of (1): 100 m west of Champollion Street: down the slope of the Government Hospital Hill, south of Alexander the Great (el-Tram) Street, three clusters of finds were identified. In the lower layers of the surface debris: about 13 m of refuse and rubble, at the southeast corner of the plot, fragment of a limestone column (diameter: ca. 0.46 m; height:

1.45 m) would have belonged to the Late Antique structures excavated by Wace in 1944-45, to the southeast of the hill, around the demolished Arab fortifications (site 127) (Plate CDLXXXVIa-b). (a) At 19 m from Alexander the Great Street, was a solid wall of large, finely-hewn limestone blocks (1.45 x 0.60 m - 1.50 x 0.60 m). It measured ca. 3.00 m in width, with the upper parts reaching almost to the street-level. The unearthed section indicates a NW-SE orientation. (b) At 50 m from the street, within a southwards-extension trench (diameter: 3.50 m) descending to groundwater-level at 6.80 m (ca. 20 m from the summit of the *kom*), to the south, was a massive wall of roughly-hewn blocks, running NE-SW (Plate CDLXXXVIIa-b). It cuts through one branch of a major canal, the earliest on site. The trench has partially uncovered the canal, revealing two branches joining one another at right-angles: one ran northwards, the other, westwards: a geographical orientation (Plate CDLXXXVIIIa-c). It was cut directly into the bedrock; in fact, with no masonry employed: an almond-shaped in cross-section (ca. 1.65 - 1.25 m in width; height: 1.65 m), coated with two layers of lime-plaster. Applied directly upon the bedrock, was a four-centimetre-thick layer of lime, sand, and a small quantity of crushed-brick, yet with a second layer (four-centimetre-thick at the bottom, 0.70 cm, at the sides), white-pink-brown in colour, composed of lime, crushed-brick, and a reduced quantity of very fine sand. Immediately, after the northwards-detour, the canal widens, forming a sort of a rectangular pocket with rounded corners (height: 1.65 m; width: 2.00 m; preserved length: 3.00 m). At a point, the massive wall has cut through this section of the canal, filling the pocket and the mouth of the northern branch with rubble. In the middle of the pocket, one large pillar (ca. 1.35 x 0.83 m; height: 1.65 m) was carved out of the rock to ca. 1.35 m, with its upper part, formed of limestone masonry, supporting the vault. The walls of the pocket were covered with a waterproof coating of the same type of the western branch. During the construction of the wall, the southern corner of the pocket, which must have functioned as reservoir, and a portion of the western branch, were destroyed by the deep trench buttressing the wall itself. The space between the wall, the reservoir, and the rest of the canal, was subsequently, filled with small limestone rubble. The footing of the wall was met at 6.50 m below the current street-level: ca. 0.30 m above groundwater-level: ca. 2 cm above the bottom of the canal. At the western section of the wall, where it widens towards the north, forming a projection of ca. 0.65 m, the preserved rows of blocks reached 3.55 m in height; to the south, four rows of blocks reached 1.86 m. The topmost of the preserved section of the wall was recorded at

ca. 3 m from the level of Alexander the Great Street, with the upper (missing) parts being dismantled already in antiquity. Its width is unknown, given the limited exposure of the excavation profile. In building technique, it recalls other constructions excavated by Achille Adriani, at Chantier Djanikian (A-B) (14), and foundation walls No. (1) and (17) at Chantier Finney (120). (c) At 12 m to the east of (b), was part of a rectangular structure of limestone blocks (ca. 1.10 x 1.22 m), on the alignment of the wall at (b), and seems to represent an eastern counterpart to the widening at the western segment of it, suggesting that both parts at (b) and (c) belonged to the same construction, which Daszewski identified with the stylobate of a colonnade. It should be mentioned that on the western segment of the construction in question, along the upper edge, was a 5-cm slot forming a degree. Other finds on plot (2), were limited to an isolated stone-ball (cannon-ball?) encountered within trench (a), near Alexander the Great Street, at ca. 2-3 m below the street-level.

The above-mentioned, partially-uncovered canal would antedate the one excavated by Adriani, a few meters to the west, at Chantier Djanikian. At some point, already in the Ptolemaic period, it was partially destroyed by a massive wall running NE-SW, which served apparently, as the stylobate of a colonnade pertaining to a monumental edifice. Accumulated layers of debris, about 13 m thick, forming an artificial *kom*, contained fragmentary architecture (possibly reused) datable, in general, to Late Antiquity (sites: 122a-b; 124b; 127).

Site 132: Around the ex-Coast Guard and ex-Victoria College

Maps: V1; V4

Foundations; fragmentary architecture: el-Mazarita [Ptolemaic]

(a) In 1905, Evaristo Breccia reported that foundations of an ancient edifice, fragment of a colossal entablature, columns, marble blocks and statuary, were accidently unearthed during construction works next to the barracks of the ex-Coast Guard: a site east of the present-day Mosque of el-Qaid Ibrahim Pasha, south of Mohamed Abd el-Wahab Theatre (Breccia 1905a: 73-74; *idem* 1914a: 76, 226-227; *idem* 1922: 89, 212-215; Adriani 1934: 69, No. 32). Recovered sculpture on site, included four fragmentary in white marble (Graeco-Roman Museum: Inv. No. 3923, height: 0.80 m; Inv. No. 3924, height: 0.90 m; Inv. No. 3925, height: 0.52; Inv. No. 3928, height: 0.75 m).

(b) A few meters southeast of (a), during the levelling of the terrain, to the west of the ex-Jannakis plot, on the north side of Alexander the Great Street (Omar Lotfy: el-Tram: el-Falaki's L3), massive foundations of limestone blocks, reminiscent of those excavated at the nearby Chantier Djanikian (site 14), were accidently discovered in 1929, and later communicated to the director of the Graeco-Roman Museum, Achille Adriani, by Giovanni Peruto, the museum inspector who was in charge of site-surveillance on discovery (Adriani 1934: 73, No. 37).

(c) In 1907, during construction work on the Alexandria-Ramleh tramway, south of the ex-Victoria College, few blocks of nummulithic limestone belonging to the entablature of an ancient building, and an Ionic capital of the same material, were accidently unearthed a short distance to the east of (b): i.e. on the north side of Alexander the Great Street (Breccia 1907a: 107; Adriani 1934: 69, No. 33). The Ionic capital (Graeco-Roman Museum, Inv. No. G.288) strongly echoes those reported by Giuseppe Botti, in 1902, south of the present-day WHO building (site 133a).

Site 133: Coastal zone, between Cinema Radio and Champollion

Maps: V1; V4

Fragmentary architecture: el-Mazarita [Ptolemaic]

(a) In 1902, during the construction of the Corniche, "à droite des Bains Zouro, et vis-à-vis de la maison des Gardes-Côtes, des blocs énormes ont été trouvés, jetés pêle-mèle dans le terreau du terre-plein des anciennes fortifications arabes" (Botti 1902e: 120-121; Borchardt 1905: 1-6, Blätt. 1-5, Abb. 1-16; Breccia 1924: 6, Tav. III-V; Adriani 1934: 67-69, No. 29, 31; Fragaki 2013: 11-22). The vestiges reported by Botti, were located south of the WHO building, at a point NE. of the present-day Mosque of el-Qaid Ibrahim Pasha, southwest of Tabiat el-Menchérieh (7a). Associated with Botti's 'blocs énormes' is a repertoire of fragmentary architecture: eight Ionic capitals of nummulithic limestone (Graeco-Roman Museum, Inv. No. 11221, 11276: G.352, G.287, 11287: G.79, G.80, 11249: G.81, 11274: G.82, 231, 248) (Tkaczow 1993: 218-220, obj. 79-87); "une quantité de blocs arrachés à la trabéation de l'édifice (measuring 2.75, 1.82, 1.20 m x 0.74, 0.85, 0.60 m)"; "plusieurs chapiteaux coloriés"; "la moitié d'un grand cadran solaire"; "un torse de statue pharaonique (reused?)"; "un pied bien travaillé"; "une tête en marbre, d'école alexandrine (?)"; "une très-belle base de colonne en marbre blanc"; "quatorze mètres d'un grand

entablement dorique" (*infra*, b); "un grand chapiteau corinthien" (Graeco-Roman Museum, Inv. No. 17511) (Tkaczow 1993: 220-221, obj. 90); a hoard of silver tetradrachms pertaining to Ptolemy VIII Physcon and his successors.

(b) In 1905, Ludwig Borchardt reported a corpus of fragmentary architecture analogous to those of Botti. It was encountered ca. 1902-04, during the construction works of the Almagià Company, opposite Chantier Heikal (site 119): northeast of Chantier Politi/Cinema Radio (site 117) (Borchardt 1905: 1-6, Blätt. 1-5, Abb. 1-16). The fragmentary finds belonged to the entablature of a monumental edifice: friezes and cornices of nummulithic limestone, in the Doric and Ionic orders (Graeco-Roman Museum, Inv. No. G.397, G.387, G.380, G.386, G.182, G.787, G.788, G.1568) (Tkaczow 1993: 215-216, obj. 73). Borchardt has recorded traces of stonecutters' marks basically, from the Greek alphabet (A; B; Θ; Ψ), on some of the recovered blocks: part of a Doric frieze with alternating triglyphs and metopes (Plate CDLXXXIXa-d). In 1924, Evaristo Breccia published photographs of massive foundations of nummulithic limestone, and architectural elements: an Ionic capital, and fragment of a Doric entablature (Plates: CDXC; CDXCI; CDXCII). These remnants were excavated during the construction of the Corniche, in 1902-04, along the coastal zone between Cinema Radio and Champollion Street, thus possibly, include some of the encounters communicated by Botti (a) and Borchardt (b), which bear analogies with neighbouring constructions of Ptolemaic provenance (sites: 7a-d; 14; 15a-b; 115-120; 121-123; 125; 128-129; 131-132; 134).

Site 134: el-Khaledin Garden

Maps: V1; V4

Fortification-point (*δ*) (enclosure); thoroughfare (δρόμος?) (cont. 112a?): el-Mazarita [Ptolemaic]

In summer 1983, prior to the construction of an underground car-park near the Central Station of el-Ramleh, archaeological prospection of the areas of interest took place at el-Khaledin Garden: a point immediately west of the WHO building, between Alexander the Great (Omar Lotfy: el-Tram) and the Corniche, opposite the ex-British Consulate (site 121) (Rodziewicz and Abd el-Fattah 1991: 131-150). Within the opened trenches, below a surface-debris *stratum* of about 1 - 2 m (a: a cultivation layer formed of mud; b: modern debris subsequent to the construction of the Corniche; c: a 20-cm layer of earth with embedded potsherds datable to the second-first century BC), the remnants of three

walls running east-west, were recorded (Plates: CDXCIII; CDXCIV). The upper part of wall (1) was formed of double rows of large blocks of limestone (ca. 1.05 m x 0.40 - 0.60 m x 0.40 m), with some bearing stonecutters' marks. The layout of the upper part does not conform with the lower of single blocks, thus signalling two phases of construction. Whereas, the absence of dense clusters of architecture north of the foundation wall, brings forth the notion of a massive enclosure. Wall (2), 1.70 m south of (1), was built of mud-brick (0.40 m x 0.28 m x 0.90 m) (dry masonry). The largely-damaged section of it, measured ca. 0.50 - 0.90 m in breadth. The fill between (1) and (2) was of earth, eroded stone, clay-pieces, and Ptolemaic pottery: (e) and (f). The southernmost wall had a lower part of five rows of dry-brick (3a), and an upper part formed of two rows of limestone blocks (3) which were slightly smaller and less-regular than those of (1). The space between (2) and (3-3a) was filled with a hard-pressed layer of "earth containing mostly coarse sand (*substratum*: g), thin layers of clay (8 - 10 cm), and a small number of artifacts, mostly pottery-sherds and roof-tiles (f)": a *via terrena* construction? It was bordered on either side, by the dry-brick walls (2 and 3a) with a preserved height of 0.55 m. Beneath the earth-beaten pavement was a levelling-*stratum* of earth-and-potsherds (f and g) which extended southwards, beyond wall (3-3a).

The stratigraphy and mode of construction associated with el-Khaledin site at el-Mazarita, are of utmost importance in studying the layout of the Ptolemaic city. In general, two principal phases of construction seem inferable. Phase (I), one of the earliest, and perhaps, even contemporary with the foundation, is represented on site, by the lower segment of wall (1) and the (f-g) debris of earth and embedded potsherds, signalling the demolishing of an earlier structure built directly upon the bedrock (d). Contemporary with el-Khaledin (I), are the structures of Noack's phase (a) (15; 24). At a point already in the Ptolemaic period, the area was levelled for the construction of the excavated street of earth-beaten surface (2-3.3a), and the rebuilding of the enclosure (1): phase (II). Contextual associates (potsherds: layer c) date the end of (II) at the first century BC: perhaps, during the reign of Cleopatra VII, a period marked by an extensive (re)building programme subsequent to Caesar's Alexandrian War (48-47 BC), hence the leveling-*stratum* (c) of which only the lowermost section of ca. 20 cm, had survived the construction of the Corniche, as evident on the overlying surface layer of modern debris (b: ca. 1-2 m) which replaced the layers of successive (Roman) habitation datable

from the 1st century BC to the abandonment of the βασίλεια's coastal zone ca. the 3rd-4th century AD. More importantly, is the fact that these remnants provide one of the rare cases in Alexandria, where a thoroughfare predating the 2nd-1st century BC, seems recognizable within the sequence. The uncovered segment between (2) and (3-3a) backs the notion of Hellenistic *viae terrenae* which antedate the first century BC (2.2.3). Another key feature at el-Khaledin, is that all three walls were found to have followed a solar orientation, i.e. in accordance with Egyptian tradition, rather than the Hellenic, Hippodamian grid-pattern identified with almost all excavated structures postdating the first century BC (exceptions at central district: 64a; 69c; 78), thus backing the chronology of el-Falaki's grid of *viae munitae*, with its principal phases of construction (ca. the 1st century BC to 1st century AD) and restoration (ca. the 3rd-5th century). This may explain the phenomenon of solar constructions datable to ca. the late-fourth-second century BC, at the βασίλεια, the central district, and Rhakotis (sites: 2; 52.I; 64a; 69c; 78; 131.2b; 138; 139; 140a; 141; 147).

All three walls ran parallel with one another (Plate CDXCV). The enclosure and street headed towards the L3-R3 intersection, suggesting a δρόμος to the Government Hospital Hill: an area cluttered with Ptolemaic architectural remains. The excavated structures at el-Khaledin Garden should therefore be considered within a wider context of analogous constructions: on this section of Alexander the Great Street (Omar Lotfy: el-Tram), opposite the Mosque of el-Qaid Ibrahim (132; 133), on the GHH (14; 129; 131), eastwards (royal residences: 7; 12; 28; 138-39; 140-41), and westwards (elite quarter: 115-123).

Site 135: NW. of the Dinokrates-Alexander the Great junction

Maps: V4

Fragmentary architecture: el-Mazarita [n.d.]

In 1934, while digging foundations for the property of K. Orfali, at the northwest corner of the junction of Dinokrates Street with Alexander the Great (Omar Lotfy: el-Tram), three fragments of columns in Aswan granite, were recorded ca. 5 m below the street-level (Graeco-Roman Museum, Inv. No. 23899; height: 3.00 m; diameter: 0.70 m), with fragment of an Ionic capital in marble, belonging to a column of ca. 0.64 m in diameter. No masonry has been detected to groundwater-level, suggesting the presence on site, of a secondary deposit of reused architectural material (Adriani 1934: 61, No. 19).

Site 136: Nubar Pasha's Gardens

Maps: V4

Cistern el-Nabih: el-Mazarita [Arab]

One of the few preserved of the 308 cisterns recorded during the Napoleonic Expedition (1798-99), and of the 700 identified by el-Falaki (1864-66), is that known today, as el-Nabih: situated at the southeast corner of Nubar Pasha's Gardens, delimited by el-Sultan Hussein (south), Constantin Sinadino/Mohamed Motauwaei (east), Riad Pasha/Hosni Hammad/Jewish Cemetery (north), and Saīd/el-Khartoum Square (west) (Botti 1899a: 19, No. 77; Breccia 1914a: 69; *idem* 1922: 81, Figs. 28-30; Adriani 1934: 81, No. 62). It is a massive (13 x 11.50 x 12 m; vol. 1000 m^3) three-storey, subterranean structure with numerous columns (reused architecture) supporting groin and barrel vaults (Plate CDXCVIa-c). Stonemasonry is coated with hydraulic plaster (waterproofing). The earliest architectural material employed, is a Corinthian capital datable ca. the second half of the sixth century AD, suggesting an Arab construction incorporating an assortment of earlier remnants. A Byzantine origin of perhaps, a rebuilding phase cannot be excluded. Its proximity to the Tulunid circuit, which ran a few meters to the north, would put forth the possibility of a ca. ninth-century (re)construction complementary to the fortifications. The cistern, maintained in mediaeval times, might have been fed through the subterranean aqueduct shown on plates 84 (Etat Moderne II) and 31 (Antiquities V) of *Description de l'Égypte*, branching off the Canal of Alexandria, a short distance to the east of the 3rd *pont* (10).

Site 137: N.-NW. sector of el-Shallalat Gardens

Maps: V1; V2; V3; V4

Miscellaneous: el-Shallalat Gardens

(i) (a) Structures of coarse masonry [Late Antique: phase (III)]

(ii) (a) Pavement of L2; conduit; (b) statuary [Roman; Late Roman]

(iii) (a) Foundations; statuary [Ptolemaic: phase (I); successive renovation: phase (II)]

(a) In 2007-10 and 2015-18, the Hellenic Research Institute of the Alexandrian Civilization (HRIAC) carried out successive excavations at the northwestern sector of el-Shallalat Park (Limneos-Papakosta 2007-2010; *idem* 2015-2018). Cutting through 5 - 6 m of modern fill, and underlying debris-*strata* with an assortment of ceramics, the remnants of modest structures built with small blocks of limestone,

and section of a pavement (1.80 x 1.00 m) laid upon a bed of mortar, were met at ca. 7.00 m below the surface-level. A thoroughfare paved with polygonal stone blocks, was partially uncovered over 24 m. It correlates, according to el-Falaki's grid, with longitudinal street L2. Other constructions in mortar, include: dark-reddish fired-brick; finely-hewn blocks of limestone; gravel, and unwrought pieces of alabaster (reused); compact lime-breccia (often ca. 7.00 - 9.10 m; in part, the debris-*strata* extended down to 10.20 m). The earliest occupational levels on site, are represented by enormous limestone slabs (1.00 x 0.60 x 0.50 m) of a pavement, and sections of walls of large limestone blocks (1.15 x 0.60 x 0.60 m) (Plates: CDXCVIIa-b; CDXCVIIIa-b). The ruins pertain to a monumental construction which has been demolished already in antiquity, with some of its dismantled material retained for reuse in successive phases of renovation and/or rebuilding, as evident on later structures excavated on site. A southwards extension of the trench shows that the foundations of the earliest structures (ca. 10 m; virgin soil: 10.70 m) were utilized in late constructions of coarse masonry (Plate CDXCIXa-b).

The stratigraphy of el-Shallalat bears analogies with Adriani's *chantiers* at el-Ramleh (115-120). It indicates the existence of a Ptolemaic construction of monumental character, towards the southern fringe of the Royal Quarter, one which seems to have undergone successive phases of renovation, dismantling, and rebuilding, over a considerable period of time, before eventually being overbuilt with coarser structures of Late Antiquity, datable to ca. the fifth-seventh century. The chronology of perhaps, the earliest habitat on site, seems inferable given a repertoire of recovered associates, including an Early Hellenistic oil lamp which was found beneath a remnant of wall at the SE. corner of the 2016 trench, stamped-handles of *amphorae*, and a variety of ceramics. Prominent among the finds from Hellenistic layers, is a fragmentary marble statue (0.80 m; encountered at 8.00 m below the surface-level) of a naked youth in *contrapposto*: currently, on display at the National Museum of Alexandria (Plate Da-d). Judging by its stylistic features and proportions, the statue is reminiscent of the Lysippan canon of the fourth century BC. Whereas, a recent encounter, a marble hand holding a lance (or *thyrsus*?), might have belonged to the statue in question.

(b) In 1905, during the demolition of a remaining segment of the Arab fortifications, at el-Shallalat Gardens, a group of statues in marble, representing Dionysos and a satyr, was discovered (Plate DI)

(Graeco-Roman Museum, Inv. No. 10694-10695) (Breccia 1905b: 128; *idem* 1914a: 87; *idem* 1922: 101; Adriani 1934: 86, No. 90; Savvopoulos and Bianchi 2012: 94-95, Cat. No. 26). The fragmentary pair, datable to ca. the second century AD, seems likely to have been utilized as buttresses in the construction of the Arab circuit-walls, as suggested by their missing heads and limbs. Although probably unrelated chronologically and contextually, the recovery of Dionysiac statuary, even if reused, within the reported find-spot, should be considered in association with the Ptolemaic remnants excavated recently by the HRIAC (*supra*, a), especially with the recovered statue of a youth portrayed in the nude: a warriour wearing both the Dionysiac and regal diadems while holding a lance/*thyrsus*, thus mimicking the deity and yet, signalling a kingship.

Site 138: Southern belt of el-Silsileh

Maps: V1; V2; V3; V4

Miscellaneous: el-Mazarita; el-Chatby

(i) Subterranean structures [Roman: reservoirs; Late Antique: funerary reuse]

(ii) Structures: dwellings and baths [Roman]

(iii) Waterfront constructions [Ptolemaic]

In 1841, Sir J.G. Wilkinson maintained:

and just to the W. (west) of the Port Lochias (i.e. el-Silsileh), are ruins at the water's edge; and some way beyond the mouth of the canal (which ran at the time, west of el-Silsileh headland), are remains of buildings, reservoirs, solid masonry, and broken granite columns (see infra, De Vaujany's account). It was here that I found the small statue of Harpocrates, now in the British Museum.

(Wilkinson 1843: 157)

In 1888, Henry de Vaujany reported remnants of brick-vaults close to the shore, at the NW. corner of the old Lazzaretto: approximately, the junction of Ptolemy Soter (Ali Mustapha Musharrafa) with Port-Saïd (Dr. Abd el-Hameed Sayed). A little further, were the remains of "maçonnerie informes" emerging a few meters from the coast. These were traced by De Vaujany, over 60 m into the sea. Beyond the NE. corner of Lazzaretto, at the foot of el-Silsileh, one of the trenches revealed sections of walls of brick and irregularly-hewn limestone: a point at the plaza of the present-day Bibliotheca Alexandrina (De Vaujany 1888: 35-36; Adriani 1934: 57-58, No. 5-7). In March 1976, sections of walls of brick

and limestone were accidently unearthed during the digging of new foundations opposite el-Silsileh (Rodziewicz 1984a: 31, note 51). The walls had an average thickness of ca. 0.50 m, and were contextually associated with an assortment of Roman ceramics, hence backing the notion of dwellings and bath complexes of the first-third/fourth century, replacing some of the waterfront constructions along the coastal zone of the former Ptolemaic βασίλεια (site 112, group a and b). Late Antique exploitation of earlier, dismantled or abandoned edifices may be glimpsed from De Vaujany's account in 1888:

Depuis les deux bastions (Tabiat el-Menchérieh and el-Yahoudieh) reliés par la courtine (west of the present-day Champollion Street) dans laquelle est pratiquée la tranchée du chemin de fer (i.e. the Alexandria-Ramleh tramway), jusqu'au fossé du village de Chatby, qui marque la partie la plus enfoncée du vallon, on trouve des colonnes, des blocs de granit rectilignes, unis ou à listeaux, des morceaux détachés taillés en forme de vasque ou de piédestal, épars sur le sable ou mêlés aux décombres et aux pierrailles qui recouvrent des restes de sépultures byzantines souterraines (hinting towards subterranean structures within the premises of the former βασίλεια*: reservoirs associated with Roman baths, reutilized to receive interments in Late Antiquity?: possible associate: structure No. 2 at Chantier el-Silsileh: 141) qui, après avoir été forcées par les Arabes espérant y découvrir des trésors, ont servi pendant longtemps d'habitations à des familles de pêcheurs et de contrebandiers.*

(De Vaujany 1888: 29-30)

Site 139: Chantier Bibliotheca Alexandrina

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Hydraulic installations: basin (3) [Roman; Late Roman: phase (IIIb)]

(ii) Foundations (4-5); R1 pavement; aqueduct (6) (10-12; 140c) [Late Ptolemaic-Roman: phase (IIIa)]

(iii) Gateway (1); foundations (2); floor-mosaics and roof-tiles (not plotted) [Ptolemaic: phase (II)]

(iv) Foundations (not plotted) [Ptolemaic: phase (I)]

In 1992-93, during the digging of foundations for the new Bibliotheca Alexandrina, ancient ruins were accidently unearthed (Rodziewicz 1995: 229-30; Guimier-Sorbets 1998a: 263-90; *idem* 2004a: 15-34). The excavated structures pertained to three principal phases of construction. At ca. 80 m north of the R1-L4 junction, on the east side of R1, remnants of structures: foundation walls of large limestone

blocks (parallel with and perpendicular to R1) and an aqueduct running NW-SE (bordering R1), have been found adjacent to the foundations of a monumental gateway (1.90 m wide) across el-Falaki's street R1 (Plate DIIa-b). A hundred meters to the north, section of a massive wall has cut through the transversal course of R1. Unlike the excavated remnants to the south, oriented in conformity with el-Falaki's grid, this wall followed a solar orientation, thus pertained to the constructions of phase (I), which were dismantled and overbuilt ca. the 2nd century BC at the latest, judging by subsequent buildings with chronologically-established mosaic pavements in *opus vermiculatum*: one features an *emblema* of a dog seated on its hind legs next to an upturned ἀσκός (or οἰνοχόη?) with a wooden handle. The other panel, found partially-preserved, involves two interracial nude wrestles in action (Plate DIIc-d) (BA Antiquities Museum: Inv. No. 32044, BAAM Serial No. 0859; Inv. No. 32045, BAAM Serial No. 0858). Roman occupation on site (phase III), is represented by the ruins of hydraulic installations: a basin overlying the negative of one dismantled wall of Ptolemaic date (phase II) (see *supra*, excavation plan).

The Bibliotheca Alexandrina site provides another example of buildings following a geographical orientation (2; 52.I; 64a; 69c; 78; 131; 134; 138; 140a-1; 147), of which a surviving section of wall excavated north of the gate, seems to antedate phase (I) of the urban grid (ca. 250-200 BC). Whereas, the gate signals an enclosure which apparently served as a physical boundary between Strabo's inner palaces and the neighbouring monumental edifices of the βασίλεια. The 2nd-century floor-mosaics are to be considered in conjunction with those excavated by Noack and Breccia, on either side of the R1-L4 junction (Chapter II, site 12), and at the Royal Institute of Hydrobiology (Chapter II, site 3). Prominent among the finds on site, were roof-tiles of locally-produced and imported clay, similar to the ones discovered at el-Khaledin Garden (site 134), indicating Ptolemaic buildings with probably, red steep-roofs. The Late Ptolemaic - Roman (re)utilization of the southern belt of Lochias (ca. 1st cent. BC - 4th cent. AD) is attested by the R1 pavement (10-12; 140c) and civic constructions (4-5) (2; 7a; 26; 112b; 113; 138) to which the excavated hydraulic installations (aqueduct: 6; basin: 3) seem complementary.

Site 140: el-Silsileh

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) (c) Pavement of R1 (associates, sites: 10-12; 139.ii) [Roman]

(ii) (c) Mosaic pavement [Roman]

(iii) (c) Hydraulic installations: canals and cisterns [Roman]

(iv) (a) Fortification-point (ζ) (enclosure); (b-c) foundations [Ptolemaic]

(a) Remnants of massive blocks of nummulithic limestone jutting out into the sea in a N-S direction, were recorded by Le Père, Saint-Genis, Dolomieu, el-Falaki, and De Vaujany, at a point west of the demolished Tower of el-Silsileh (Le Père 1813: 319, No. 99; Saint-Genis 1818a: 51-53; Lacroix and Daressy 1922: 36-37, No. 8; Mahmoud-Bey 1872: 43, No. 1; De Vaujany 1888: 37; Adriani 1934: 57, No. 4). They were recognizable in calm conditions, extending towards the western corner of the old Lazaretto. The walls were built directly upon bedrock, with one preserved section measuring up to 3.40 m in thickness. According to the IEASM surveys, in antiquity, the partially-submerged remnants would have been on land, for these were constructed on the subsided sector of Cape Lochias, hence are likely to have belonged to the western enclosure of Strabo's 'inner palaces' clustered at the foot of the Lochias promontory. In general, stonework and building technique recall the enclosure wall of nummulithic limestone, recorded by Achille Adriani in 1950, to the east of el-Silsileh (site 2).

(b) In 1895, David G. Hogarth recorded a "single foundation course of fine masonry let into the rock on the western side of the isthmus (a partially-submerged one which connected the Silsileh Tower to Fort Pharillon at the time), at about the present mean tide-level" (Hogarth and Benson 1894-95: 4-5; Adriani 1934: 61, No. 18). Considering the find-spot and building technique, Hogarth's foundation wall would have formed part of Strabo's 'inner palaces' built within the southern sector of Cape Lochias.

(c) In 1898-99, Ferdinand Noack had sunk his test-pit (K2) at a point east of the Silsileh Tower (Noack 1900: 224; Adriani 1934: 60-61: No. 17). A section of pavement pertaining to a northwards-extension of el-Falaki's street R1, was met at + 5.20 m above sea-level. Below the latter, were remnants of canals and cisterns. Two test-pits sunk to the west and northwest, revealed the remains of Roman mosaic pavement made using agate and other stones, at + 4.50 - 5.00 m above the sea-level. Within a fourth pit, to the southwest, rows of hewn blocks joined without mortar, were encountered at sea-level, beneath masonry work of a late period (Byzantine/Arab?). Noack's finds at el-Silsileh, thus provide further evidence of Roman structures with mosaic pavements (perhaps a cluster of *villae urbanae*), and bath complexes, overbuilding the monumental residences of the Ptolemaic βασίλεια (3.7.3.1, C).

Site 141: Chantier el-Silsileh

Maps: V1; V4

Miscellaneous: el-Chatby

(i) (3) Cistern [Arab]

(ii) (1) Structure with a reservoir [Arab]

(iii) (2) Subterranean structure (associates, site 138i?) [n.d.]

(iv) (3) Foundations; fragmentary architecture [Ptolemaic]

Between January and March 1938, the Graeco-Roman Museum had sunk a number of test-pits on el-Silsileh (Adriani 1940a: 38, Fig. 12; *idem* 1966a-b: 81, No. 41; Tav. 20, Fig. 72) (Plates: DIII; DIVa-b). Adriani's *sondages* (45 in total) revealed vestiges pertaining to various phases of construction. A foundation wall of large blocks of limestone (No. 3), found partially drenched in groundwater, was running in an ENE-SSW direction. It did not conform, therefore, with el-Falaki's grid, nor did strictly follow a geographical orientation as is the case with other foundation walls of large nummulithic limestone blocks, bearing a mode of construction characteristic of the Hellenistic period (2; 134; 138-39; 140a). A miniature cistern that has partially overbuilt the remnants of the foundation wall (3), is datable to a much late period (see *supra*, 140c). Structure (No. 1) encountered east-northeast of the foundation wall, represents the ruins of a demolished Arab building. At the middle of the chamber facing north, was the mouth of a large, rectangular reservoir in masonry, with a vaulted roof (ca. 4.00 x 7.30 m; height: 3.00 m). A subterranean structure (No. 2), accessible via a staircase, was unearthed a short distance to the north of (1-3). It comprised: a central courtyard with a quadrangular, rock-cut pillar; a chamberette cut into the back wall of the courtyard; an elongated, rectangular chamber opening on the western wall of the courtyard. Shallow niches were cut into the latter's side walls: four on the right, and one on the left. Two underground passages led into the central court, of which one was followed over 36 m. The chambers and passages of the subterranean structure in question (2), were partially immersed in groundwater. Among the fragmentary architecture recovered on site, was a Doric capital in nummulithic limestone, with an attached fragment of a fluted column shaft, datable to the third century BC (Plate DVa-b) (Graeco-Roman Museum, Inv. No. 25658) (Adriani 1940a: 53-54, Fig. 23; Tkaczow 1993: 213, obj. 66). Given the reported find-spot, the architectural remnant would have belonged to the Ptolemaic inner palaces within the southern sector of the promontory of Lochias.

Site 142: East of el-Silsileh

Maps: V2; V3; V4

Miscellaneous: el-Chatby

(i) Shipwrecks [Late Antique (Hass-6); Mediaeval (Hass-6)]

(ii) Fragmentary architecture [Late Ptolemaic (Chat-1); Roman (Chat-1); Late Antique (Chat-2)]

Between 1998 and 2016-7, the Hellenic Institute of Ancient and Mediaeval Alexandrian Studies (HIAMAS) has carried out a series of underwater archaeological surveys within the coastal zone east of el-Silsileh, from el-Chatby to Sidi Bishr: ca. 10 km of littoral: up till 900 m off the coast (sites: 151; 163) (Tzalas 2013: 1-7; *idem* 2015: 347-364). Of the eight registered (sub)sites, three (el-Chatby-1 and 2; el-Hassan-6) are in proximity to the present-day headland of el-Silsileh (Plate DVI). el-Chatby (1) and (2) are of particular interest, for they correlate with the submerged sector of ancient Cape Lochias: a traditional premise of Strabo's palaces on the promontory, an Isiac temple, and the Mausoleum of Cleopatra VII (Plate DVII).

The repertoire of fragmentary, structural and decorative material encountered by the HIAMAS, on the seabed off el-Silsileh, includes: a number of large blocks of granite and quartzite, with some bearing hieroglyphic inscriptions (Plate DVIIIa-c); capitals and columns (Plate DIXa-b); granite seats and rock-cut stairs; catapult projectiles; several unidentified pieces. Prominent among the finds, were vestiges in Aswan red granite, of monumental edifices: the tower of a monolithic diminutive pylon (weight: over 7 tons) (Plate DX); the threshold of a gateway (weight: ca. 11 tons) (Plate DXI); a massive base (height: over 2.00 m) (Plate DXII) (localisation of the finds east of el-Silsileh: see *supra*, general plan of site).

Considering their dimensions and weight, the encounters would rather pertain to monumental constructions on the subsided sector of ancient Cape Lochias, than to a corpus of reused material which has been constantly dumped since Late Antiquity, but especially, during mediaeval and post-mediaeval times, in attempts to protect the already partially-submerged headland (the harbour's natural bulwark) against sea swell and tidal waves. The identification of the recovered material as pertaining to edifices of monumental nature, is based on several testaments datable to the Roman Principate, ca. the first-second century AD.

In his biography of Markus Antonius, Plutarch relates:

Now that she (Cleopatra VII) had a tomb and monument built surpassingly lofty and beautiful, which she had erected near the temple of Isis, (she) collected there the most valuable of the royal treasures, gold, silver, emeralds, pearls, ebony, ivory, and cinnamon; and besides all this, she put there, great quantities of torch-wood and tow.

(Plutarch, Lives, Antonius: LXXIV)

The proximity of Cleopatra's mausoleum to the Isiac temple on Lochias, as is recorded by Plutarch, is archaeologically attested, given the distance of ca. fifty meters between the encountered pylon and threshold. Such a pylon would have formed part of the temple's Egyptian-style façade, as was the entrance to the Caesareum (site 93). The threshold is likely to have belonged to a monumental gateway of ca. 6 m in height, one leading to a royal residence, or otherwise, to a funerary structure. More important is the dominant pharaonic character of the recovered architecture: a pylon-tower which seems reminiscent of that at Edfu (Upper Egypt), hieroglyphic inscriptions evident on many of the recovered blocks, and representations in relief, of pharaohs, all providing hints on the city's architectural fabric in the Late Ptolemaic and Roman period (see *supra*, the *Aegyptiaca* corpus at site 43).

At ca. 550 m northeast of the tip of el-Silsileh, ca. 1100 m off el-Chatby, lies the now-submerged reef-site known as el-Hassan (6). In antiquity, as well as in mediaeval times, it would have been one of the most treacherous shoals for sailors to navigate on their way to the eastern port (sec. 2.3.3.3). Unsurprisingly perhaps, *amphorae* fragments, potsherds, anchors, and stone debris found on the contours of the reef at a depth of 14-17 m: the topmost recorded at 12 m below the water-surface, signal the remnants of ships which wrecked on site. One iron-anchor datable to Late Antiquity (ca. 4th-7th century), and another of stone, pertaining to a mediaeval wreckage, emphasize the danger imposed by the cluttered reefs around the principal fairways to the city's Great (eastern) Harbour.

Site 143: East of the ex-municipal stables

Maps: V4

Column debris: el-Chatby [n.d.]

In 1914, Evaristo Breccia reported "l'énorme quantité de troncs de colonnes découverts à l'est des écuries municipales", during levelling work to the southeast of el-Silsileh (Breccia 1914a: 76; *idem* 1922: 89; Adriani 1934: 84, No. 78). Breccia's column debris was found at the present-day site of el-Chatby University Hospital, immediately to the east of the Bibliotheca Alexandrina. It recalls De Vaujany's narrative on the fragmentary architecture littered on the coastal zone, between the Arab bastions of el-Menchereih and el-Yahoudieh (west) and el-Chatby (east) (site 138). The 'enormous quantity' of Breccia would however suggest a secondary deposit of material retained from dismantled edifices.

Site 144: Jewish Cemetery: the Menasce monument

Maps: V1; V2; V4

Mosaic pavement: el-Chatby [n.d.]

In 1898, Giuseppe Botti reported:

Une mosaïque à figures existe dans le cimetière des Juifs, hors de porte Rosette (outside the Arab enclosure: the cemetery at el-Chatby), au dessous du caveau de la famille des barons de Menasce.

(Botti 1898c: 113, XCVII. 2)

According to Botti's narrative, the figural mosaic is located in the northeastern sector of el-Chatby cemeteries, a few meters south of Alexander the Great Street (Omar Lotfy: el-Tram). Its proximity to the building complex with floor-mosaics at the Royal Institute of Hydrobiology (the present-day site of the Association of Muslim Youths) (site 3), may hint towards a possible Ptolemaic provenance. A contextual association between either site, remains hypothetical in the absence of any conclusive evidence. Likewise, the mosaic in question, could have pertained to one of the *villae urbanae* built during the Principality, east of el-Falaki's transversal street $R2^{bis}$ (approximately, Suez Canal Road), as part of the Roman urbanization of the necropolitan hills extending NW-SE, on the eastern fringe of town. This is archaeologically attested at several sites, in el-Chatby, el-Hadra, and el-Ibrahimiya (32a-c; 148; 149a; 167).

3.7.3) Literary Accounts Pending Physical Evidence

3.7.3.1) Civic Edifices

C) Royal Residences

The ancient sources document 'a seafront of palaces and public institutions'. Diodorus Siculus, for instance, maintains:

Alexander gave orders to build a palace notable for its size and massiveness. And not only Alexander, but those who after him ruled Egypt down to our own time (first century BC), with few exceptions, have enlarged this with lavish additions.

(Diodorus, Bibliotheca Historica: XVII. 52.4)

Strabo in turn, relates:

In the Great Harbour, at the entrance, on the right hand, are the island and the tower Pharos, and on the other hand, are the reefs and also the promontory Lochias, with a royal palace upon it; and on sailing into the harbour, one comes, on the left, to the inner royal palaces, which are continuous with those on Lochias and have groves and numerous lodges painted in various colours.

(Strabo, Geōgraphikȅ: XVII. 1.9)

On the extent of the Royal Quarter, the Greek geographer adds:

The royal palaces (a term used by Strabo, to denote the neighbourhood of the Ptolemaic βασίλεια: the Royal Quarter, than the royal precincts or residences in strict sense) which constitute one-fourth or even one-third of the whole circuit of the city; for just as each of the kings, from love of splendour, was wont to add some adornment to the public monuments so also he would invest himself at his own expense with a residence, in addition to those already built, so that now, to quote the words of the poet, "there is building upon building" (a Homeric quote from the Odyssey).

(Strabo, Geōgraphikȅ: XVII. 1.8)

The first-century BC testaments of Diodorus Siculus and Strabo seem archaeologically attested by foundations in nummulithic and Mex limestone, and fragmentary architecture excavated at various sites, within an area delimited by the Suez Canal Road (east), el-Sultan Hussein Street (south), and Safia Zaghloul Street (west). The concentration of vestiges and their distributional patterns across the designated area, attest a number of monumental edifices pertaining to the Ptolemaic Βασίλεια, as has been described repeatedly by several writers of antiquity. In this context, two royal structures illustrated in great detail by Kallixeinos of Rhodes, whose descriptive narrative is preserved in the *Δειπνοσοφισταί* (*Deipnosophistaí*) of Athēnaios Naukratitēs (ca. second-third century AD), serve to exemplify the flamboyant constructions of the Royal Quarter during the reigns of the first Ptolemies.

Banqueting Tent of Ptolemy II Philadelphos

(A certain) Masurius brought forward Callixenus the Rhodian, who in the fourth book of his History of Alexandria (source), has given an account of a spectacle and procession which was exhibited by that most admirable of all monarchy Ptolemy Philadelphus. And he says — "But before I begin, I will give a description of the tent which was prepared within the circuit of the citadel, apart from the place provided for the reception of the soldiers, and artisans, and foreigners. For it was wonderfully beautiful, and worth hearing about. Its size was such as to be able to hold a hundred and thirty couches placed in a circle, and it was furnished in the following manner: — There were wooden pillars at intervals, five on each side of the tent longwise, fifty cubits high, and something less than one cubit broad. And on these pillars at the top was a capital, of square figure, carefully fitted, supporting the whole weight of the roof of the banqueting room. And over this was spread in the middle a scarlet veil with a white fringe, like a canopy; and on each side it had beams covered over with turreted veils, with white centres, on which canopies embroidered all over the centre were placed. And of the pillars four were made to resemble palm-trees, and they had in the centre a representation of thyrsi. And on the outside of these a portico ran, adorned with a peristyle on three sides, with a vaulted roof. And in this place it was intended that the company of the feasters should sit down. And the interior of it was surrounded with scarlet curtains. But in the middle of the space there were strange hides of beasts, strange both as to their variegated colour and their size, suspended. And the part which surrounded this portico in the open air was

shaded by myrtle-trees and daphnes, and other suitable shrubs. And the whole floor was strewed with flowers of every description".

(Athēnaios, Deipnosophistaí: V. 25)

Θαλαμηγός: Thalamegos of Ptolemy IV Philopator

"Philopator also built a vessel for the river which he called Thalamegus, or the Carrier of his Bed-chamber, in length half a stadium, and in width at the broadest part thirty cubits; and the height together with the frame for the awning was little short of forty cubits. And its appearance was not exactly like ships of war, nor merchant vessels either, but it was something different from both, on account of the necessity imposed by the depth of the river. For below it was flat and broad; but in its main hull it was high. And the parts at the extremity, and especially at the head, extended a sufficient length, so as to exhibit a very pretty and elegant sweep. This ship also had two heads and two sterns. And it rose to a considerable height above the water, as was necessary, because the waves in the river often rise very high. And in the middle of its hull were constructed banqueting rooms and sleeping-rooms, and everything else which may be convenient for living in. And round the ship were double corridors running about three sides, each of which was not less than five plethra in circumference. And the arrangement of the lower one was like a peristyle, and that in the upper part was covered in, and surrounded with walls and windows on all sides. And when you first came into the vessel by the stern your eye was met by a colonnade, open in front, and surrounded by pillars. And opposite to it in the bow of the vessel there was a sort of propylaeum constructed, made of ivory and most expensive woods. And after you had passed through that, then you came to something like a proscenium, covered in overhead. And again in the same way in the middle of the vessel was another colonnade, open behind, and an entrance of four folding-doors led to it. And both on the right hand and on the left there were windows, admitting a pleasant breeze.

To these was joined a room of very large size, and that was adorned with pillars all round, and it was capable of containing twenty couches. And the greater part of it was made of split cedar, and of Milesian cypress. And the doors which were round it, being twenty in number, were put

together with beams of citron wood, having ivory ornaments. And all the nails and fastenings which were visible were made of red brass, which had taken a polish like that of gold from the fire. And of the pillars the bodies were of cypress-wood, but the capitals were of Corinthian workmanship, adorned with ivory and gold. The whole of the capitals of the pillars were of gold; and there was a sort of girdle on them having figures of animals beautifully carved in ivory, more than a cubit high, of which the workmanship was not so conspicuous as the exquisite beauty of the materials. There was a beautiful roof to the banqueting-room, square, and made of cypress wood. And its ornaments were all carved, having a golden face. Next to this banqueting-chamber was a sleeping-chamber holding seven couches; and to that there was joined a narrow passage, which separated the woman's chamber from this one by the width of the hold. And by the passage was a banqueting-room holding nine couches, very like the large one in the sumptuousness of its furniture; and a bed-chamber holding five couches. As to the rooms then on the first deck this was the general appearance presented.

But when you had ascended by the stairs which were close to the before-mentioned sleeping chamber, there was another chamber capable of containing five couches, having a vaulted oblong roof. And near to it was a temple of Venus, in form like a rotunda, in which was a marble statue of the goddess. And opposite to this was another banqueting-room, very sumptuous, adorned all round with columns: for the columns were all made of Indian stone. And near to this banqueting-room were more sleeping-chambers, with furniture and appointments corresponding to what has been already mentioned. And as you went on towards the head of the vessel was another apartment dedicated to Bacchus, capable of holding thirteen couches, surrounded with pillars, having its cornices all gilt as far down as the epistyle which ran round the room, but the roof corresponded to the character of the god. And in it there was on the right hand a large cave constructed, the colour of which was stone, for in fact it was made of real stone and gold; and in it images were placed of all the relations of the king, made of the stone called lychnites. And there was another banqueting-room, very pleasant, above the roof of the greatest apartment, having an arrangement like that of a tent, so that some of it had no actual roof; but there were arched and vaulted beams running along the top at intervals, along which purple curtains were stretched

whenever the vessel was in motion. And after this there was an open chamber occupying the same room above that was occupied by the portico before mentioned as being below. And a winding ladder joined on to it, leading to the secret walk, and a banqueting-room capable of containing nine couches, constructed and furnished in the Egyptian style. For round pillars were run up in it, with alternate tambours of white and black, all placed in parallel lines. And their heads were of round shape; and the whole of the figures round them were engraved like roses a little expanded. And round that part which is called the basket there were not tendrils and rough leaves, as is the case in Grecian pillars, but calyxes of the river-lotus, and the fruit of newly budding dates. And sometimes many other kinds of flowers were also represented. And under the roof of the capital which lies upon the tambour, where it joins on to the head, there were ornaments like the flower leaves of the Egyptian bean intertwined together. This then is the way in which the Egyptians construct and ornament their pillars, and this is the way in which they variegate their walls with black and white bricks: and sometimes also they employ the stone which is called alabaster. And there were many other ornaments all over the main hull of the vessel, and over the centre, and many other chambers and divisions in every part of it.

And the mast of this vessel was seventy cubits in height, and it had a linen sail, adorned with a purple fringe. And the whole of the wealth which had been so carefully preserved by king Philadelphus was dissipated by the last Ptolemy, who also excited the war against Gabinius, who was not a man, but a mere flute-player and conjuror".

(Athēnaios, Deipnosophistaí: V. 38-39)

Palatial Fountain-Nymphaeion of Arsinoe II or III

A third-century BC epigram documented on a papyrus preserved today at the Egyptian Museum in Cairo (Inv. No. P. Cair. 65445; lines 140-154), records a dedication of a fountain-kiosk to Arsinoe II or III (Fraser 1972: 609-11). The semicircular, Ionic structure of white Parian marble and Aswan red granite, was decorated with marble statues of Arsinoe and the Nymphs placed around a fountain of running water. Its luxurious character as a show-piece, echoes Strabo's narratives on the extravagancy of the monumental constructions of the Ptolemaic Βασίλεια along the southern belt of Cape Lochias.

D) Theatre, Stadion, and Palaestra

The construction of a Dionysiac θέατρον (*théatron*) in Alexandria relates to the prominence of the deity's cult within the Ptolemaic, political and cultural milieu of the third century BC. Perhaps, the most illustrative account involving some of the public buildings of the Royal Quarter, including the theatre, is that in Book XV of Polybios' *Ἱστορίαι* (*Historíai*), where the second-century BC, Greek historian narrates the turbulent events of the revolt against Agathokles, which broke out early in the reign of Ptolemy V Epiphanes, ca. 203 BC:

The men had already decided on a revolution, but now that in each house the rage of the women was added to their own, the hatred of the usurper blazed up twice as violent. When day again gave place to night, the whole town was full of disturbance and torches and movement. For some collected in the stadium shouting, some were encouraging each other, others running in different directions took refuge in houses and places not likely to be suspected.

The open spaces round the palace, the stadium, and the great square were now filled with a mixed multitude, including all the crowd of supernumerary performers in the theatre of Dionysus, and Agathocles (supra), when he heard what was occurring, aroused himself from his drunken slumber, having broken up the banquet a short time previously, and taking all his relatives except Philo, went to the king. After lamenting his ill-fortune to the boy (i.e. king) in a few words, he took him by the hand and went up to the gallery (σύριγξ: a passage) between the Maeander and the palaestra, leading to the entrance to the theatre. After this, having made fast the first two doors, he retired to the third, with a few of the bodyguard, the king, and his own relatives. The doors were of pen lattice-work (site 53g), and one could see through them, and they were each secured by two bolts. Meanwhile the populace were assembling from every part of the city, so that not only level spaces but the roofs and steps were full of people, and there was a confused hubbub and clamour, women and children being mixed with the men. For in Carthage, and also in Alexandria, the children play no less a part in such tumults than the men.

(Polybios, Histories: XV. 30.1-10)

Polybios' narrative is indicative of the proximity of some of the city's athletic institutions: a *stadion* and *palaestra* (wrestling school), to the Dionysiac theatre and the royal residences, as is suggested by the σύριγξ interconnecting such edifices. Whereas, the localisation of the theatre on the slopes of the Government Hospital Hill, is justified in the final part of Caesar's *Civil Wars* (1st century BC):

In eo tractu oppida pars erat regiae exigua, in quam ipse habitandi causa initio erat inductus, et theatrum coniunctum domui quod arcis tenebat locum aditusque habebat ad portum et ad reliqua navalia. Has munitiones insequentibus auxit diebus, ut pro muro obiectas haberet neu dimicare invitus cogeretur.

In this region of the town (Royal Quarter) there was a small part of the palace to which he (Caesar) had been at first conducted for his personal residence, and a theatre was attached to the house which took the place of a citadel, and had approaches to the (eastern) port and to the other docks. These defences he increased on subsequent days, so that they might take the place of a wall as a barrier against the foe, and that he might not be obliged to fight against his will.

(Caesar, Civil Wars: III. 112)

Two decades later, in *Geōgraphikȅ*, Strabo maintains:

Above the artificial (royal) harbour (i.e. the eastern sector of the Great Harbour: southwest of Cape Lochias) lies the theatre.

(Strabo, Geōgraphikȅ: XVII. 1.9)

On the interconnectivity glimpsed from Polybios' narrative, he affirms:

All (the public monuments of the ex-Royal Quarter), however, are connected with one another and the (Great: eastern) harbour, even those that lie outside the harbour (i.e. on and at the foot of Cape Lochias).

(Strabo, Geōgraphikȅ: XVII. 1.8)

E) Mouseion and Library

The Mouseion of Alexandria (Μουσεῖον τῆς Ἀλεξανδρείας) was a major intellectual institution dedicated to the nine Muses (Μοῦσαι): the stimulus deities of science, literature, and the arts, for providing inspiration to scholars. Its development is usually attributed to Ptolemy II Philadelphos. The initial establishment however, might have taken place under Ptolemy I Soter (Bagnall 2002: 349).

On the location and structure of the Mouseion, Strabo relates:

The Museum is also a part of the royal palaces (Royal Quarter: βασίλεια*); it has a public walk, an exedra (a semicircular-recess) with seats, and a large house, in which is the common mess-hall of the men of learning who share the Museum. This group of men not only hold property in common, but also have a priest in charge of the Museum, who formerly, was appointed by the (Ptolemaic) kings, but is now (ca. 25 BC) appointed by (Augustus) Caesar.*

(Strabo, Geōgraphikȅ: XVII. 1.8)

In structural design therefore, the renowned institution was based on Aristotle's Lyceum in Athens: it encompassed a colonnaded walkway (*peripatos* - after which the Peripatetic philosophers were named), enclosed groves, an altar, an *exedra* with seats, and adjoining domain which encompassed a banqueting room for scholars. Accordingly, it seems liable to find the peripatetic affiliation of the Mouseion so evident, for its creation is held to have been inspired by Demetrios of Phaleron: one of the first Athenian Peripatetics and a senior member of the Ptolemaic royal-court (el-Abbadi 1990: 88-89). His status as adviser to Soter, was key to conferring the Aristotelian tradition from the very beginning on Ptolemaic cultural life.

An institution of intellectual activities would have required the establishment of an integrated library for scholarly research. The notion of a repository of knowledge thus, ensued from the very principal function of the Mouseion as a scholarly institution. Towards the end of the fourth century AD, Epiphanius, the Bishop of Cypriot Salamis, relates:

The Ptolemy called Philadelphos, as has already been said, was a lover of the beautiful and a lover of learning. He established a library in the same city of Alexander, in the (royal) district called the Bruchium.

(Epiphanius, On Weights and Measures: 9.52b)

Royal patronage, especially at the time of the first four Ptolemies (i.e. the third century BC), was central to the acquisition of an immense corpus of papyri and parchment scrolls as to be deposited in the Mouseion's library. Philadelphos and Euergetes I have assigned a large sum of money to this end. Either are known to have generously financed on an unprecedented scale, all possible means for the purchasing and transcription of thousands of papyri illuminating on various fields of study: geography, mathematics, astronomy, medicine, and philosophy. Epiphanius maintains:

He (Ptolemy II Philadelphos) had put in charge of the library, a certain Demetrios, from Phaleron, commanding him to collect the books that were in every part of the world. And he wrote letters and made request of every king and prince on earth, to take the trouble to send those that were in his kingdom or principality.

(Epiphanius, On Weights and Measures: 9.52b)

F) Ptolemaic Agora and Forum Romanum

The Alexandrian ἀγορά (*agora*), as in other Greek cities, served as a focal point for civic life, as well as being a market-centre; though the commercial aspect of the Hellenistic αγορές seems much pervasive compared to those of the Classical city-states (Green 1986: 141). According to tradition, as recorded in Arrian's *Anabasis Alexandri*, it was Alexander himself, who supervised its ground plan (Chapter I, sec. 1.2). Its exact location is in dispute. It would have occupied, however, that same area as its imperial successor, the Forum Romanum, known primarily, from the ancient authorities, to have been situated to the south of the Caesareum: approximately, within el-Falaki's *insula* L1-L2-R4-R5 (Pliny, Natural History: XXXVI. 14.13-17). The localisation of the 'Ptolemaic ἀγορά' is based on the assumption that it would be unlikely to relocate the centre of civic life in a constricted metropolis, which had experienced continuous habitation through the extended course of Classical Antiquity.

G) Emporion (ἐμπόριον)

The ἐμπόριον (*emporion*) was the commercial market-place of the ancient city. As a trading-hub for imported merchandise, it had direct access to the Great Harbour (Megas Limen). Its localisation is based on Strabo's descriptive, east-to-west account on those constructions met along the shores of the harbour:

Then one comes to the Caesarium and the Emporium and the warehouses; and after these, to the ship-houses (sheds), which extend as far as the Heptastadium. So much for the Great Harbour and its surroundings.

(Strabo, Geōgraphikȅ: XVII. 1.9)

Strabo's narrative on "the greatest *emporion* in the inhabited world", indicates that it was located to the west of the Caesareum. Hence, it would have occupied the area north of longitudinal street L2, west of transversal street R5. Extending east-to-west, from the ἐμπόριον to the Heptastadion, were the warehouses (αποστάσεις) and the shipyards (νεώρια) respectively.

3.7.3.2) Religious Edifices

H) Royal-Cult Temples

In Alexandria, the state-worship of kings has developed during the lengthy reign of Ptolemy II Philadelphos (Bevan 1927: 127). Shrines were thus erected in honour of Ptolemy I Soter and his wife, Berenike I, both of whom were venerated as θεοὶ Σωτῆρες: the Saviour Gods. This is attested, for instance, by such epitaph allegedly inscribed on the Pharos Lighthouse (site 43). Royal-cult temples to Philadelphos' deified antecedents (Σωτῆρες) had sacrificial altars and were presumably filled with incense. Among these was the Berenikeion: a shrine dedicated to the deceased Berenike I, whose ἀποθέωσις is commemorated by the contemporary court-poet Theocritos, in *Panegyric of Ptolemy*:

κάλλει ἀριστευούσα θεάων πότν Ἀφροδίτα, σοὶ τήνα μεμέλητο. σέθεν δ ἕνεκεν Βερενίκα εὐειδὴς Ἀχέροντα πολύστονον οὐκ ἐπέρασεν, ἀλλά μιν ἁρπάξασα, πάροιθ ἐπὶ νᾶα κατελθεῖν κυανέαν

καὶ στυγνὸν ἀεὶ πορθμῆα καμόντων, ἐς ναὸν κατέθηκας, ἐὰς δ ἀπεδάσσαο τιμάς. πᾶσιν δ ἵπιος ἄδε βροτοῖς μαλακοὺς μὲν ἔρωτας προσπνείει, κούφας δὲ διδοῖ ποθέοντι μερίμνας.

O Lady Aphrodite, chiefest beauty of the Goddesses, as 'twas thou that hadst made her to be such, so 'twas of thee that he fair Berenike passed not sad lamentable Acheron, but or e'er she reached the murky ship and that ever-sullen shipman the ferrier of the departed, was rapt away to be a Goddess in a temple, where now participating in thy great prerogatives, with a gentle breath she both inspires all mankind unto soft desires and lightens the cares of him that hath loved and lost.

(Theocritos, Panegyric of Ptolemy: Idyll XVII. 34)

The state-worship of the θεοὶ Σωτῆρες was complemented through the institution of a penteteric festival, a quinquennial Ptolemaieia held every five years in memory of the divinized, royal couple (site 51).

In the fourteenth year of Philadelphos, ca. 272-1 BC, shortly before the death of Arsinoe II, the Ptolemaic court introduced a royal decree by which the reigning king and his sister-wife were to be revered in their lifetime (Hölbl 2001: 90-97). A new cult of the living was therefore established. The royal couple were venerated as θεοὶ ἀδελφοί (the Sibling Gods), within the τέμενος of a sanctuary recorded in the first mime of Herodas:

Κεῖ δ ἐστὶν οἶκος τῆς θεοῦ (Ἴσις?). τὰ γὰρ πάντα, ὅσσ ἔστι κου καὶ γίνετ, ἔστ ἐν Αἰγύπτῳ. πλοῦτος, παλαίστρη, δύναμις, εὐδίη, δόξα, θέαι, φιλόσοφοι, χρυσίον, νεηνίσκοι, θῶων ἀδελφῶν τέμενος, ὁ βασιλεὺς χρηστός, Μουσῆον, οἶνος, ἀγαθὰ πάνθ ὅσ ἂν χρήΐζῃς.

It is the very home of the goddess (Isis?); for all that exists and is produced in the world, is in Egypt: wealth, wrestling grounds, might, peace, renown, shows, philosophers, money, young men, the domain (sacred enclosure) of the θεοὶ ἀδελφοί, the king a good one, the museum, wine, all good things one can desire.

(Herodas, Mime: I. 26-32)

After the death of Arsinoe II (270), her ἀποθέωσις was manifested in eponymous street-names: the Street of Arsinoe the Consummator; the Street of Arsinoe of Victory; the Street of Arsinoe of the Brazen House; the Street of Arsinoe of Eleusis; the Street of Arsinoe, Our Saviour (Fraser 1972: 35). Whereas, a major temple known as the Arsinoeion, was constructed in her memory. Extravagancy is attested in Pliny's account on the sacred shrine (first century AD):

The architect Timochares had begun to use lodestone for constructing the vaulting in the Temple of Arsinoe at Alexandria, so that the iron statue contained in it might have the appearance of being suspended in mid-air; but the project was interrupted by his own death and that of King Ptolemy, who had ordered the work to be done in honour of his sister.

(Pliny, Natural History: XXXIV. 42.148)

A rather hypothetical localisation of Timochares' unfinished structure, is inferable from Pliny's reference work on obelisks:

Ptolemaeus (II) Philadelphus had one (obelisk) erected at Alexandria, eighty cubits high, which had been prepared by order of King Necthebis (Hellenized form of Nectanebo I: 380-362 BC, or? II: 360 -343 BC) ……. this obelisk was placed by the king abovementioned in the Arsinoeum, in testimony of his affection for his wife and sister Arsinoe (II). At a later period (ca. AD 12-14), as it was found to be an inconvenience to the docks, Maximus, the then praefectus of Egypt, had it transferred to the Forum (Romanum) there, after removing the summit for the purpose of substituting a gilded point; an intention which was ultimately abandoned.

(Pliny, Natural History: XXXVI. 14.13-17)

Given the recorded height of eighty cubits, approx. thirty-six meters (overestimated), the obelisk's standpoint would have been most inconvenient next to the dockyards (νεώρια). It is unsurprising, therefore, that it was later relocated to the Forum Romanum: approx. el-Falaki's *insula* L1-L2-R4-R5 (sec. 3.7.3.1, F), to the south of the Caesareum, by the *praefectus Alexandrae et Aegypti*, Quintus Magnus Maximus, ca. AD 12-14: i.e. towards the end of the lengthy rule of Augustus as *imperator*.

With regards to the chronology and localisation of the Arsinoeion, it may be necessary to consider Callimachos' *Ἐκθέωσις Ἀρσινόης* (*deification of Arsinoe*):

Ἀγέτω θεός, οὐ γὰρ ἐγὼ δίχα τῶνδ' ἀείδειν Ἔκ / θέωσις Ἀρσινόης φησὶν δὲ αὐτὴν ἀνηρπάς / θαι ὑπὸ τῶν Διοσκούρων καὶ βωμὸν καὶ τέ / μενος αὐτῆς καθιδρῦσθαι πρὸς τῷ Ἐμπορίῳ.

(Callimachos, Ἐκθέωσις Ἀρσινόης: fr. 228 Pf)

The main theme here is quite gloomy, as the court-poet relates the abduction of Arsinoe II by the Dioskouroi (Castor and Pollux), her ascension to heaven, and the establishment of a sanctuary in her honour, near the ἐμπόριον of Alexandria (sec. 3.7.3.1, G).

Arsinoe's death on July 9th, 270 BC, provides a *terminus post quem* for Callimachos' poem, and subsequently, the construction of the Arsinoeion. More importantly is that the text verifies Pliny's narrative on the relative location of the temple to the dockyards and harbour. This would be the case when Strabo's localisation of the docks to the ἐμπόριον is considered. Pliny's account seems consistent enough to corroborate hypothetical localisations of the royal-cult sanctuary within the vicinity of the ancient market-centre. Accordingly, the Arsinoeion of Philadelphos might have been situated in proximity to the shores of the eastern harbour, at any point between el-Falaki's streets R4 and R8. Nevertheless, a rather precise localisation can be conjectured within *insulae* L2-L3-R4-R6, considering a possible association between the ἐμπόριον of a trade-oriented metropolis and a temple dedicated to the veneration of its rulers, thus justifying the notion of a Caesareum (93-100) as a replacement of a Lagid-cult temple which earlier succeeded Philadelphos' unfinished Arsinoeion.

3.8) Eastern District (EDist.)

3.8.1) Physical Remnants Corresponding to Known Historical Narratives

3.8.1.1) Funerary Structures

Site 145: el-Chatby

Maps: V1; V4

Necropolis: el-Chatby [Ptolemaic]

(a) Earlier Encounters: Giuseppe Botti (1892-93)

On the funerary character of the coastal zone between el-Falaki's street R3^{bis} (approx. Aflaton: Selim Hassan) and the site of the Roman *castrum* at Mustapha Pasha (165), T. Neroutsos maintains:

Toute la bande étroite de terrain élevé, situé entre le rivage de la mer et les terres basses de l'ancien faubourg d'Éleusis jusqu'à Nicopolis, est criblée d'hypogées et d'autres sépultures, juives, païennes et chrétiennes, appartenant à tous les temps, depuis l'époque macédonienne et romaine, jusqu'à l'époque byzantine.

C'était le lieu où l'on enterrait les morts des quartiers voisins, comme celui des juifs qui était tout près, puis les étrangers civils ou militaires au service des Ptolémées, et enfin, sous les empereurs romains et byzantins, les habitants païens et chrétiens des oppida d'Éleusis et de Nicopolis.

(Neroutsos 1888: 80)

Neroutsos' narrative in his 1888 monograph, perhaps, sums up the probable geographical extent, and chronology of the eastern *nekropoleis*, and the ethnicities of those interred there. His account seems subsequent to the accidental discoveries made during the 1870s-80s, at the urban districts of el-Hadra and el-Ibrahimiya (sites: 146; 150b-c). Yet, the first phase of interment beyond Lochias is archaeologically attested immediately to the east of el-Falaki's R3^{bis}, at the hypothesized periphery of the Ptolemaic Royal Quarter (C2-C3) (sec. 2.1.2.2.2). The earliest encounters at the district known today as el-Chatby, date to the 1890s, the time they were intermittently reported by Giuseppe Botti (Botti 1893: 14; *idem* 1898a: 54; *idem* 1898b: 95-98; *idem* 1898c: 28-30, 75-76; Botti and Nourrison 1899: 43). Hence, in 1892, M. de Zogheb explored the area, and following the unearthing of "pozzi funerarii", Greek paintings were recognizable "sotto l'intonaco di una cella". The *loculi* were decorated with festoons and garlands. Other finds include three *ossarii* labelled 'Jewish' by G. Botti, of which two bore the inscribed name of the deceased. In 1893, a certain Ioannides, in search of the 'tomb' of Alexander the Great, has accidently "pénétrait dans les hypogées de Chatby". G. Botti, who represented the newly-established Graeco-Roman Museum on site, had first identified a surface cemetery of *cippi* (inscribed funerary-posts) aligned in certain regularity. Whereas, a painted limestone *stela* served to mark an *aedicula*. Funerary epigraphs recording the name and homeland of the deceased, were

either painted or engraved. Inhumation was dominant among such burials: the deceased lies in a rock-cut *fossa*, beneath a layer of very fine sand. Grave goods included terracotta statuettes, vials, plates, vases decorated with black-and-red varnishes, and various pieces in alabaster. Cremation is presented by the remains of a καύστρα (*ustrinum*), and few prismatic tombs containing cinerary urns. A common feature among the interments is that in most cases the deceased were found to be foreigners. Between the *cippi*, at a regular-interval of ca. 6.00 m, light-shafts were cut into the rock, signaling the underlying hypogea which G. Botti locates within "cette bande de terrain qui va du santon de Chatby aux lignes françaises": the areas of the eastern hills extending NW-SE, shown on Saint-Genis' *planche* 31 of *Description de l'Égypte* (Antiquités Tome V, Imperial Edition, 1822) (Plate DXIII).

The subterranean structures, Hellenistic in date, were often cut into the natural rock, beneath a surface cluster of intrinsically-Macedonian sepulchres: Botti's "nécropoles en plein air", whence they were accessed via a vertical rock-cut shaft serving as a descending staircase. Violated already in antiquity by Roman urbanization (archaeological record of *villae urbanae*, sewage systems, and thoroughfares) and Jewish interments, ca. the first three centuries of the Common Era, the extant remnants were destroyed by the French in 1800-01, while setting up their line of defenses on the eastern mounds, with the rest constantly quarried or levelled during the course of the nineteenth century, the time Mohamed Ali's revived city, as the Roman metropolis, was expanding eastwards. Therefore, when Evaristo Breccia carried out his excavations in the opening decade of the twentieth century, a complex of two hypogea and clusters of surface interments were recorded, representing a confined, surviving section of the eastern *nekropoleis* of Ptolemaic Alexandria (*infra*) (Plate DXIVa-b).

(b) Main Excavations: Evaristo Breccia (1904-10)

In 1904-10, Evaristo Breccia, the second director of the Graeco-Roman Museum, has carried out excavations at the necropolitan areas of interest, investigated earlier by Giuseppe Botti (see *supra*, a) (Breccia 1912a-b: Testo: I-LVI, 1-191; Tavole: A, I-LXXXII; Adriani 1966a-b: 109-110, No. 59, 124-126, No. 79, 126-127, No. 80; Tav. 34, Fig. 122, Tav. 43, Fig. 164-66, Tav. 44-46, Fig. 167-72). el-Chatby surface necropolis comprised five principal forms of burial. (a-b) Fosse-graves with single or double interment: these are basically rectangular, and more often, trapezoidal-in-shape pits cut directly into the bedrock (Plate DXVa-d).

(c) Shaft-graves: vertical, rock-cut pits enclosed with limestone slabs, as were the much-shallower types (a-b) (Plate DXVI). (d-e) Shaft-and-chamber tombs: with and without masonry and a vestibule; unlike types (a-c), the burial space here, is accessible from the side via a flight of steps leading down to the grave; yet, in some cases, a narrow vestibule served as an intermediary-space between the access-staircase and the actual interment (Plate DXVIIa-d). The latter (a-e) were reserved mainly, for the more dominant form of burial: inhumation. Cremation is however evident on site, through four types of disposition. (a) The cinerary urn, one or more, is placed, as were other grave-goods, next to the corpse (*supra*, a-e). (b-c) Shallow pits dug intentionally to receive a single or multiple cinerary urn(s) (Plate DXVIII). (d) Cinerary urns buried in association with funerary monuments of which three types can be identified. (a-b) A stepped-pedestal surmounted by a funerary *stela* or otherwise, a stone-post: Botti's *cippi*, with a stepped-crown atop a moulded cornice (Plate DXIXa-b). (c) Stepped-altars, apparently 'ceremonial' (not connected with interments), found often centrally-positioned upon levelled-grounds (Plate DXIXc). In the absence of monuments in Mex limestone, several burials seem to have been covered with low-*tumuli*: miniature mounds of accumulated earth and rubble.

The surface necropolis at el-Chatby (Plates: DXXa-b; DXXIa-c), datable to about 325 - 250 BC, yields, perhaps with el-Hadra (site 146), the earliest-known forms of interment in Alexandria, which pertain to the first generation of Graeco-Macedonian settlers, who buried their dead in funerary structures reminiscent of those in the homeland. This notion is evident on Breccia's corpus of painted *stelae*, where few intrinsically-Macedonian sepulchral scenes are on display (Plates: DXXIIa-b; DXXIIIa-c). More important though, are the encountered forms of above-ground interment. Indeed, if the simplest fosse and shaft graves exemplify the first phase of burial immediately to the east of the Ptolemaic periphery (C3), the shaft-and-chamber tombs represent an intermediate phase of evolution towards a commonly-excavated type of funerary structures in the suburbs: i.e. the subterranean hypogea.

The subterranean complex excavated by Breccia, encompasses two hypogea (Plate DXXIVa). (A), to start with, includes (Plates: DXXIVb; DXXIVc):: (a) An access-staircase leading into a long, rectangular vestibule (b-b'). *Loculus*-chamber (c) (2.9 x 5.2 m; max. height: 2.40 m; vaulted ceiling) opens onto the vestibule's east wall. It has eight *loculi*, five cut into one side wall, and three into the back wall.

The north wall has collapsed; presumably, it had five rock-cut *loculi*, as is the case with its southern counterpart. Antechamber (d) (8.20 x 2.25 m; height: 3.10 m) (Plate DXXVa-b) featured two pseudo-peristyles: Doric engaged colonnades carved out of the rock, along the north and south walls. One largely destroyed (S), the other (N) partially preserved at the time of Breccia's excavations. Within the pseudo-intercolumnars flanking the entrance, four false-windows were imitated, with shallow, rectangular recesses, recalling those found at one of Henri Riad's hypogea unearthed in 1965, near the ex-Fort Saleh, in Gabbari (site 47g). These walls have been coated with a double-layer of plaster and stucco, on which scant traces of the original polychrome seemed 'recognizable' on discovery. *Loculus*-chamber (e) (2.12 x 7.25 m; max. height: ca. 2.15 m; vaulted ceiling) (Plate DXXVIa-b) has eight *loculi* cut into the north wall, five into the south wall, and three into the back wall. The *loculi* were closed with slabs exhibiting false-doors with illusionistic details characteristic of early Alexandrian sepulchres. One slab, on the right wall, bearing the painted epitaph: ..ΦΙΛΟΤΕΚΝΕΧΑΙΡΕ, is among the foremost within Alexandrian funerary contexts. On the back wall, adorning one *loculus*, was an architectural framing consisting of: a pseudo-Corinthian *anta* surmounted by a Doric entablature, with a triangular pediment atop alternating triglyphs and metopes (a reused feature) (Plate DXXVII). Successive layers of plaster-coating with fainting traces of painted scenes and inscriptions, suggest a burial-chamber that had undergone several phases of renovation. Not much has remained from the open-air *atrium* (f) (6.75 x 8.20 m) (Plate DXXVIII). The remnants of walls preserved on discovery, partially built in masonry, judging by the limestone blocks recorded by Breccia, indicate a pseudo-peristyle court in the Doric order, such as the case at Mustapha Pasha (1) (site 160). This conjecture is backed by Breccia's record of a large, sacrificial round-altar on the axis of the entrance to the main burial-chamber (g). The latter (4.75 x 3.25 m; vaulted ceiling) (Plate DXXIXa-b) features pseudo-Ionic porticos, the half-columns of which, already partially-drenched in the rising groundwater, seem to have double-bases with smooth surfaces. The back wall served as a façade for burial-chamberette (g'): a pseudo-colonnade surmounted by a triangular pediment, with two false-windows carved on the intercolumnar-walls flanking the entrance. The κλίνη-alcove (g') (ca. 4.30 x 2.80 m; max. height: ca. 2.30 m; vaulted ceiling) (Plate DXXX) is the nucleus of Hypogeum (A). It has two κλίνη-sarcophagi carved out of its back and right walls (2.80 x 1.45 m each; they are divided longitudinally, into two compartments). Accessible on the opposite side of the *atrium* (f), is chamberette (h) (Plate DXXXIa-c)

(1.80 x 2.70 m; max. height: ca. 2.20 m). It has six *loculi* in total, two into each of its walls (none of those appear on Breccia's 1912 plan).

Three principal phases of construction seem inferable from the structural design of Hypogeum (A). Phase (I) pertains to a complex following an axial-arrangement: access-staircase (a); vestibule (b); antechamber (d); *atrium* (f); nucleus for interment (destroyed?). (g-g') and (h) then open onto the *atrium*'s side walls, violating its pseudo-peristyle (II). This is followed by a westwards extension (b') of vestibule (b), and the opening of *loculus*-chambers (c; e) of which one (e) avoids the adjacent *loculi* of the pre-existing chamberette (h) (III). When considering the Hadra *hydria* found in a recess cut into one *loculus* of (h), phase (II) would be datable accordingly, ca. the second half of the third century BC, thus providing a *terminus ante quem* for the initial phase of construction at ca. 260 BC. The (g-g') segment of the hypogeum bears clear analogies with Daszewski's "lost burial-chamber" (C3.1) rediscovered by the CEAlex, at Gabbari Zone (C) (47h, k). This indicates therefore, that κλίνη-alcoves, with their pseudo-peristyle antechambers, were in use by the Hellenic settlers, as early as the second half of the third century, on either necropolitan-suburb of the Alexandrian metropolis. Whereas, structural modification (chambers c and e; violation of g-g') due to burial-space economy, is evident at Hypogeum (A), already by the turn to the second century: ca. 200-180 BC: phase (III).

Hypogeum (B) (Plate DXXXII) comprised: An access-staircase (i) leading into an *atrium* (ii) with a light-shaft. (iii) A large *loculus*-chamber (4.15 x 2.50 m) opened onto the west wall of the *atrium* (ii). The *loculi* are arranged in two overlapping rows on either lateral wall, and closed by means of slabs painted false-doors. One slab has however exhibited a conventional Macedonian scene: a deceased lying on a funerary κλίνη, while accompanied by a young man. Three niches were cut into the rock, next to one another, above the main entrance. A Hadra *hydria* was found *in situ*, within each of the shallow recesses intended to receive cinerary urns of cremated remains (Plate DXXXIII). Chamberette (iv), with low-celling, is smaller than *loculus*-chamber (iii), and had a bench carved out of the rock. The *in-situ*, Cretan-produced Hadra *hydriai*, in-use within Alexandria between ca. 260 and 180 BC, would provide a *terminus ante quem* for Hypogeum (B), around the opening decades of the second century BC. Nonetheless, an earlier date, i.e. within the second half of the third century, cannot be

excluded. Its relative position to the adjacent Hypogeum (A), suggests a construction necessitated by burial-space economy: a contiguous, westwards extension which would be contemporary with phase (II) or perhaps, phase (III) of Hypogeum (A). This chronology applies to the structure as was excavated by Breccia. However, if the *loculus*-chamber and the *hydria*-niches were to be omitted from Breccia's plan, the *atrium* (ii) becomes an intermediary vestibule to a grave, violated at a point by (iii): a developed form of the shaft-and-chamber tomb, with a first phase of construction datable to the first half of the third century BC: contemporary with phase (I) of Hypogeum (A), if not earlier.

(c) Later Encounters: Achille Adriani (1950-51); Youssef el-Gheriani (1982-83)

In 1950-51, during construction work carried out along the Corniche, a number of fosse-graves were accidently unearthed at two sites (Adriani 1956a: 33-35). The first group, about thirty pits, were encountered a few hundred meters east of Casino el-Chatby, while installing 'new bathing-cabins by the Municipality of Alexandria' (Plate DXXXIV). Another group was discovered 'during the digging of foundations' at the so-called 'Cantiere Hamsa', just before the bathing establishments of Camp Caesar (Plate DXXXVa-b). Contextual finds included: oil lamps, achromatic jars, Hadra *hydriai* (vases), ceramics with a black varnish, and terracotta figurines of the Tanagra-type (Graeco-Roman Museum, Inv. No. 25.807-814) (Plate DXXXVIa-b). The accidental encounters are crucial, for they shed further light on the geographical extent of Breccia's surface necropolis east of Selim Hassan: Aflaton, which, given the recorded find-spots, would have extended in an easterly direction, towards Camp Caesar and, in turn, el-Ibrahimiya (site 150).

In 1982-83, the Graeco-Roman Museum under the directorship of Youssef el-Gheriani, carried out a salvage excavation 'prior to the construction of a new building' between Collège Saint-Marc and the Corniche, at el-Chatby. Jean Leclant briefly reports: "on a exhumé des *loculi*, dont certains, inviolés, ont livré des céramiques et une belle scène peinte" (Leclant 1984: 351, n. 4a). The finds seem adjacent to Breccia's hypogea (A) and (B) excavated immediately, north of the site of the present-day Collège Saint-Marc. Accordingly, they would have formed part of a wider complex of funerary structures, featuring: pit-graves, chamber-tombs, κλίνη-alcoves, *loculi* with painted closing-slabs, and cinerary urns, all signalling an earlier phase of interment east of the Ptolemaic enclosure (C3).

Site 146: el-Hadra

Maps: V1; V3; V4

Necropolis: el-Hadra [Ptolemaic; Late Antique]

(a) Earlier Encounters: Tassos Neroutsos (1875; 1883-84); Giuseppe Botti (1893-94)

In 1875, during the construction of the Railway to Cairo, the levelling of terrain heights between Wabour el-Meyah and the village of el-Hadra, has revealed thick layers of broken pottery of various shapes and colours, interspersed with other deposits of: ashes-and-bones, slag, vitrified material, and debris of rubble. Yet, towards the lower *strata*, approaching the bedrock, were found skeletal remains, cinerary urns of various types, *amphorae*, and large jugs (terracotta). Two forms of burial had been recorded: (a) "des cercueils en terre cuite, longs d'un mètre et demi à deux mètres, formés de deux jarres ou tonneaux d'argile, qui avaient la forme d'un cône tronqué et aplati, et étaient joints par leurs ouvertures larges, de telle façon que leurs bords s'adaptaient l'un à l'autre, tandis qu'une couche de plâtre couvrait extérieurement la jointure"; and yet, there were (b) "des caisses mortuaires rectangulaires en terre cuite, fermées par un couvercle plat de la même matière". In such setting, the burials were arranged horizontally, either in a single row or otherwise, in multiple rows superimposed (orientation: head to the west and feet to the east). Accompanying grave-goods included: vials and flasks of red-purplish or black-coloured clay, several flasks in green-bluish glass, and contextual coinage of Ptolemaic date. A number of cinerary urns and elongated jugs contained the carbonized remains of cremated corpses. Recovered handles of *amphorae*, and various broken vessels, carried the stamps and seals of foreign workshops and eponymous magistrates of Rhodes, Knidos, and Thasos, as well as other cities, in Greece, Syria, and Italy. Other vessels were, however, locally-produced. These, datable to the Ptolemaic period, would have been used in libation rituals and funerary banquets before being deposited next to the deceased.

The accidental finds subsequent to the construction of the Railway to Cairo, have been recorded by Tassos Neroutsos (Neroutsos 1875: 17-23; *idem* 1888: 26-30, 110-116). They mark the initial stage of an extended investigation into the possible extent of the Ptolemaic eastern *nekropoleis*, a section of them, which could be subdivided into two zones: (i) el-Hadra el-Bahareiya, between Abu Qir Road and the Railway to Cairo, and (ii) the village of el-Hadra Qibly, south-southeast of the Railway track:

Sous les monticules isolés du faubourg d'Éleusis proprement dite, situé près du canal Canopique (Strab., XVII, 800), et appelé aujourd'hui Khâdrah; au nord de cette localité et en face du nouveau lac qui couvre une partie de la vallée jadis existant entre Éleusis et Nicopolis, on a mis au jour, en 1883 et 1884 (supra), des hypogées anciens du temps des Ptolémées et creusés dans le roc. Qu'on se figure un dédale de chambres souterraines, avec des niches contenant des urnes funéraires et des objets d'art (associates), parmi lesquels un grand nombre de statuettes en terres cuites coloriées, de figurines de petits garçons et de fillettes, d'un air gai et mutin; de statuettes de jeunes femmes pleines d'expression, aux mouvements souples et aux attitudes gracieuses; tel était le spectacle qu'offraient les catacombes nouvellement découvertes.

(Neroutsos 1888: 81)

In 1893-94, further encounters during the widening of the Railway track, were briefly reported by Giuseppe Botti (Botti 1898b: 102-104; *idem* 1898c: 76-78). Hence, beneath the layers of mediaeval and Late Antique interments, a funerary structure of at least, three chambers and an access-staircase, was partially excavated. One vaulted chamber measuring ca. 3 x 2 m, had cinerary urns, plates, jars, terracotta vessels of the lacrymatory-type (used in funerary rituals), a sparrowhawk in limestone, two sphinxes, and vases painted blackish-figures on a red background (labelled Seleucid by Botti). Traces of polychrome decoration on the walls, and few epitaphs, were recognizable on discovery. Other accidental finds of funerary structures constantly violated in the course of the construction work, reflect the extent of destruction inflicted on this sector of the Ptolemaic eastern *nekropoleis*, the archaeological significance of which is emphasized with successive discoveries made by Breccia and Adriani (directors of the Graeco-Roman Museum), in the first half of the twentieth century (c).

(b) Earlier Encounters: E.F. Benson (1894-95); Expedition Sieglin (1900-01)

In 1894-95, E.F. Benson has carried out excavations "at a convenient spot close to the (railway) station" (Hogarth and Benson 1894-5: 28-30). Encountered at 20 ft. (about 6.10 m) from the surface-level, were the remains of a vaulted structure (A) built of "soft white stone thickly mortared between the joints, and stuccoed in the same manner over its inner surface". Burial spaces (B and C), containing skeletal remains, opened onto the front and eastern walls. One (C: a *loculi*?) was found closed with

"a thin stone-slab still *in situ*". On the western side, ascended three stone-steps which led up into a perpendicular shaft with descending steps cut into either side, whence two spaces for interment were accessible at a depth of 18 ft. (5.50 m). The latter had lead coffins containing skeletal remains, and two earthenware of the *aryballi*-type, dated by Benson, ca. the first century BC. A third burial-space was inaccessible, for it almost reached the groundwater-level. Other finds include two large *amphorae* towards the mouth of the shaft, both labelled 'Roman' by Benson. On the southern side, a chamber in masonry (D), containing skeletal remains, adjoined the vaulted structure at a slightly higher level (Plate DXXXVIIa-b). Other funerary structures were encountered at yet a higher level, 12 ft. (ca. 3.65 m), "in one of which were found seven Roman, or Graeco-Roman, jars containing ashes (cinerary urns?)". Belonging to this structure were a gilt-bronze chaplet of leaves and berries, and a small, gold plaque stamped in repoussé, "a horse and horseman carrying an emblem resembling the Sceptre of Bes". Benson's encounters in the 1890s, provide further evidence for the sepulchral character of the area under investigation.

In 1900-1901, during the second Expedition von Sieglin, the first methodical attempt was made to setting up a typology for the excavated funerary structures at el-Hadra, where a rather developed form of the shaft-and-chamber tombs (see *supra*, site 145b) has been labelled 'Typus ℵ' (Plate DXXXVIIIa-b) (Schreiber 1908c: 172-173, Abb. 107-108; *idem* 1908i: 183-184, Abb. 116). It comprised: an access-staircase leading into an *atrium* with light-shaft (L). On the latter's back wall, the grave-alcove of a shaft-and-chamber tomb was violated at a point, by a *loculus*-chamber: three *loculi* cut into either side wall; a bench, carved out at the rare wall, is decorated with a curtain of veined marble, and above which, two rock-cut *loculi* are closed with slabs painted false-windows. Schreiber's 'Typus ℵ', and perhaps, Breccia's Hypogeum (B) at el-Chatby (145b), seem to exemplify a transitional phase from the shaft-and-chamber tomb towards a collective-burial with rock-cut bench (the nucleus of an initial setting): a prelude to the κλίνη-sarcophagus, utilized as offering-stand or banquet-couch, in association with successive phases of *loculus*-interment evident on the back (primary) and lateral (secondary) walls.

The Expedition Sieglin was followed by an intense excavation programme initiated at the time, by Evaristo Breccia, hence bringing to light an array of funerary architecture of which the 'Typus ℵ' represents a transitional form.

(C) Main Excavations: Miscellaneous (first half of the twentieth century)

During the first half of the twentieth century, an extensive programme of excavation has been carried out at el-Hadra (Plates: DXXXIX; DXL): A. Evaristo Breccia (1905-1906; 1908; 1912; 1925-1932); Sinadino-Salvago (1913-1914); Cols. James-Tubby (1916); Achille Adriani (1933-1940; 1950-1951) (Breccia 1907a:100-101; *idem* 1909: 278-288; *idem* 1913: 15-33; *idem* 1930: 99-132; *idem* 1932: 23-27; *idem* 1933: 9-21; Adriani 1934: 28-32; *idem* 1940a: 65-122, 128-130; *idem* 1940b: 1-56; *idem* 1952: 1-27; *idem* 1956a: 37-39; *idem* 1966a-b: 110-112, No. 60-67, 120-121, No. 70-72, 122-123, No. 73A-74, 123-124, No. 77-78; Tav. 34, Fig. 123, Tav. 35, Fig. 124-127, Tav. 36, Fig. 128-130, Tav. 41, Fig. 154-156, 158-159, Tav. 42, Fig. 161, 163).

Localisation of sites:

(1) South of the Abu Qir Road, between el-Madafin and Masged el-Mouasat streets; (2) Cozzika/Gamal Abdel-Nasser Hospital; (3) Fouad I/el-Mouasat Hospital; (4-6) Ezbet el-Makhlouf; (7) el-Manara Cemetery; (8) Diaconesses/Fever (?) or el-Hadra University (?) or the Italian aka General Military (?) Hospital; (9) Faculty of Engineering (see *supra*, plates).

(1-2) In 1932-33, Achille Adriani carried out excavations on the slopes of a vast plateau extending southwards, in the direction of the village of el-Hadra: the site of the Cozzika/Gamal Abdel-Nasser Hospital, on the south edge of the Abu Qir Road, between the Medical Research Institute (east) and el-Manara Cemetery (west): opposite the Faculty of Engineering (sector 9). Excavating thru el-Hadra el-Bahareiya plateau yielded funerary structures of various types (Plates: DXLI; DXLII). (1) Fosse-graves dug into the rock, and covered with limestone slabs. (2) Fosse-graves as type-(1), yet, surmounted by funerary monuments recalling those at el-Chatby (site 145) (Plate DXLIIIa-b). (3) *Loculus*-galleries cut into the rock at a certain depth, and preceded by a vestibule (light-shaft) rectangular or square in shape. (4) Shaft-and-chamber tombs accessible by means of a descending staircase: the *loculi* cut into the walls, signal subsequent-phases-of-interment. (5) A variation of Schreiber's 'Typus ϰ': an access-staircase leading down into an intermediary vestibule with a vaulted *loculus* cut almost at the ground-level, into either side wall. A quadrangular alcove (2.20 x 2.50 m) opened onto the back wall of the vestibule. It was occupied by a funerary bench for dispositioning the deceased. Into the alcove's left wall, a niche has been cut as to receive votive offerings. The structure was surmounted by a monument in masonry: a stepped-pedestal and cubic-bulk of hewn blocks coated with a fine layer of plaster; around, were scant remnants of a fence enclosing the whole sepulchre (Plate DXLIV).

(2-3) In 1925-6 and 1931-2, Evaristo Breccia carried out excavations at the site of the present-day el-Mouasat and Cozzika (Gamal Abdel-Nasser) hospitals, delimited by el-Mouasat Mosque and the Medical Research Institute (east), the Railway track (south), Abu Qir Street (north), and el-Manara Cemetery (west). The urban *insula* correlates with the mounds of el-Hadra el-Bahareiya. As the case at el-Chatby (site 145), there were clusters of fosse-graves (surface-interment) found often marked with funerary monuments (*supra*, sectors 1-2). Other types of excavated structures include: shaft-and-chamber tombs preceded by an intermediary vestibule, Schreiber's 'Typus $\varkappa$', and *loculus*-galleries: subterranean corridors featuring multiple rows of *loculi* due to space economy. Several limestone blocks signal a vaulted structure with plastered walls, partially rock-cut, partially built in masonry, which seems analogous to that excavated by Benson, a few meters from this site (146b). Inhumation and cremation are both evident. The deceased were chiefly, Greek, as indicated by the inscriptions recorded on the *loculus*-closing slabs. Semitic names confirm the Jewish presence on site. Whereas, a certain Pedios represents a rare Etruscan interment. Three principal phases for sectors (2-3) were inferable from the record. (I) Early-third century BC: an initial phase pertaining to the fosse-graves and their monumental associates. (II) Second century BC: the most-recent phase of the Ptolemaic necropolis with developed forms of architecture. (III) ca. First-third century AD: Roman habitation evident on the remnants of a building with bathing establishment and wells, built upon the funerary vestiges of the Hellenistic period. Interments however reappear on site, from ca. the fourth century AD: Christian reutilization? (*infra*, sectors 8-9).

(4-6) In 1933-39, A. Adriani carried out excavations at Ezbet el-Makhlouf, south of the Railway track (Plate DXLV). Besides the simple fosse-graves and several narrow and elongated galleries irregularly-cut into the rock, with successive rows of *loculi*, there was the less-frequent type of rock-cut *loculi* recorded earlier by Breccia, in 1931-32, where funerary monuments rather unusually, are erected not upon pit-graves, but contiguous with the *loculus* itself (Plate DXLVIa-c). Other excavated hypogea comprised single or multiple burial-chambers, and rock-cut *loculi* of which some were found closed with slabs painted false-doors (Plates: DXLVII; DXLVIII). One hypogeum, discovered in July 1933, to the west of the municipal garages, exemplifies the multiple-chamber type: (i) an access-staircase led to two burial-chambers, partially rock-cut, partially built in masonry; (ii) the quadrangular nucleus of

the initial setting (2.1 x 2.1 m) had three pairs of rectangular *loculi* cut into the side and back walls; (iii) a second *loculus*-chamberette was opened probably, at a later stage, to receive interments. The decorative elements of (ii) include a finely-worked Doric doorframe painted and surmounted by a large crown painted a hanging-festoon as if fixed to the wall with four nails. Few traces of a stucco-coating in zones, were recognizable on discovery: light-blue in the plinth; yellow in the orthostats; brown-black in the intermediate band; white in the uppermost part. Unique among those funerary structures excavated at Ezbet el-Makhlouf, were two hypogea with a circular plan. One (Plate DXLIX) contained (i) a short access-staircase at the end of which an intermediate vestibule (ii) opened onto (iii) a circular burial-chamber (diameter: ca. 4.50 m; flat ceiling). Six rectangular *loculi* were cut into the walls, following a radial-arrangement at a certain level from the ground. Underneath the third *loculi* on the left, another one has been cut: apparently, an addition to the initial setting. A cinerary urn of the Hadra-type (145), was found *in situ*, in a shallow pit dug into the ground. Whereas, a niche irregularly cut into the left wall of the staircase, seems to have been added to receive *ex-votos* or perhaps, a cinerary urn. An analogous circular tomb (Plate DL) had a similar plan but was a bit wider (diameter: 5.30 m; flat ceiling). Variations from the latter include a round bench carved out of the rock, along the perimeter of the rotunda. A thin, oblique band connected the chamber's flat ceiling to the walls. Eight rectangular *loculi* were cut in a similar radial-arrangement. Both tombs represent a circular-variant of funerary architecture not commonly encountered in Alexandria. In plan, they recall the mercenaries' *columbarium* of cinerary urns excavated in 1884, at el-Ibrahimiya (site 150b), with which the Ezbet el-Makhlouf circular tombs may be contemporary: the late-third century BC, judging by the recovered Hadra *hydriai* and other contextual finds of Ptolemaic provenance, within the rock-cut *loculi*.

(7) In spring 1940, A. Adriani carried out excavations at el-Manara Cemetery, immediately west of el-Mouasat and Cozzika (Gamal Abdel-Nasser) hospitals. Within the surveyed area of interest, four sections were identified (A; B; C; D), yielding six types of funerary architecture (Plates: DLI; DLII; DLIII; DLIV). (1) Fosse-graves dug into the rock, were closed by limestone slabs, and concealed underneath low-*tumuli*: mounds of earth-and-rubble. (2) Fosse-graves dug at greater depths, and surmounted by funerary monuments (stepped-pedestals built in masonry). (3) Rectangular pit-graves of varied

depths and widths, few were covered with limestone slabs, others were accessible via a staircase: a less-developed form of the shaft-and-chamber tombs. (4) Quadrangular chamberettes with their access-staircase and *loculi* cut into the walls. (5) *Loculi* cut deep into a rock-façade, and yet, closed with slabs painted false-doors. (6) Burials in terracotta containers (basically, of enfants). Forms of disposition on site, included inhumation (skeletal remains) and cremation (cinerary urns). Circular pits coated with rows of rubble, were dug at several spots: apparently, for cult purposes. Adriani's 1940 excavation at el-Hadra, commenced, as is shown in his handwritten-records, on March 28th, before it halted abruptly, on June 5th, for his first term as director of the Graeco-Roman Museum, was about to end.

(8) In 1908, Evaristo Breccia investigated a Christian hypogeum at the courtyard of the Diaconesses Hospital, opposite the Hadra judicial prison, south of the railway track. It comprised (Plate DLV): (i) a large, quadrangular courtyard (P) (7.60 x 6.50 m; height: 4 m). (ii) A long, flat-roof *loculus*-gallery (A-B; length: 8.00 m) accessible from one corner of (P), by means of a quadrangular entrance (2.30 x 2.30 m). (iii) A second *loculus*-gallery (B-C; length: 9.50 m) running off (ii), at an acute angle. (iv) A third *loculus*-gallery, a bit wider than (ii-iii) (C-D; width: 3.30 m; length: 10 m), with three branching-off passages: one (E) communicating with the courtyard (P), the other two (F; G), with inaccessible spaces. Along the left wall of all three galleries (A-D), were *loculi* cut at an almost-regular-interval, below the floor-level, hence accessible via an intermediary pit one metre in depth, dug in front of each *loculus*. In total, thirty-four of these pits have been recorded. A unique feature was an alcove (a) cut above the level of *loculus*-pit (34). It had a rectangular recess (1.80 x 1.17 m; height: 2.30 m), at the bottom of which an arch has been carved out of the rock (18 cm). Traces of engraved crosses were recognizable on discovery, on the rock-cut pillars flanking the alcove. Other crosses, inscribed or painted, with funerary inscriptions, were recorded by Breccia, at various parts of the hypogeum, attesting the Late Roman, Christian (re)utilization of the Hadra plateau, in the course of the fourth to sixth century, to receive interments, following a period of Roman, civic urbanization taking place during the Augustan Principality, at the necropolitan, eastern suburbs of the Ptolemaic metropolis: the areas south of the Abu Qir Road, on either side of the Railway to Cairo: the present-day districts of Wabour el-Meyah (in part), el-Hadra el-Bahareiya, and el-Hadra Qibly.

(9) In 1950-51, the digging of foundations for the new Faculty of Engineering, has brought to surface accidental finds which shed further light on either chronological phase of use (Hellenistic and Late Antique) identifiable at el-Hadra section of the eastern *nekropoleis*. The site is located on the north side of the Abu Qir Road, opposite the earlier discoveries made south of the main avenue (sect. 1-8). Within the foundation trenches, at a depth of about 10-11 m from the current street-level, Adriani recorded a large group of fosse-graves, and burial-chamberettes with rock-cut *loculi* (probably, a subsequent addition), of an early Hellenistic date (ca. late-fourth to mid-third century BC), signalling an earlier, Graeco-Macedonian exploitation of el-Hadra el-Bahareiya mounds simultaneously with those at el-Chatby. In the upper layers, prior to encountering the Hellenistic necropolis, a miniature, Christian hypogeum has been partially excavated (Plate DLVIa-b). The surviving section of it, includes a quadrangular burial-chamber (1.75 x 1.60 m) with four *loculi* cut into either lateral wall (B; D), and one, rather shallow, into the back wall (A). On the latter's lunette, a preserved fragment of stucco-coating has displayed a Christian motif: a cross, with the Greek letters (A) and (ω) painted on either side of the vertical arm, accompanied by a pair of palm-twigs, and enclosed within a laurel-wreath flanked by two *candelabra* (Plate DLVIIa). A couple of *loculi* into the left wall, retained two, partially-preserved, funerary epitaphs, with scant traces of floral motifs painted in ochre (Plate DLVIIb-c). One epitaph was surmounted by a cross inscribed within a circle: a motif which together with the above-mentioned monogram, indicate a Byzantine structure postdating Breccia's 1908 hypogeum (sect. 8): posterior to the fourth century: a chronology extending the Christian use of el-Hadra el-Bahareiya plateau into Late Antiquity: ca. the fifth-sixth century. The better-preserved of both epitaphs reads:

ΕΚΟΙΜΗΘΗΟΜ[ΑΚΑΡΙΟC…..
ΗΦΙCΤΙΩΝ (sic) Α[ΔΕΛΦΟC…..
ΜΝΗCΘΗΤΙΑΥ[ΤΟΥ…..
ΤΗCΑΝ[ΑΠΑΥCΕωC…..]

(d) Later Encounters: Youssef Shehata and Labib Habachi (1971); Dorreya Saïd (1987)

In 1971, a subterranean hypogeum, datable ca. the third-second century BC, was excavated at Ezbet el-Makhlouf (4-6) during a GRM mission directed by Youssef Hanna Shehata (Leclant 1972: 250;

idem 1973: 394, No. 1b). It had forty-five *loculi* of which many have retained closing-slabs painted false-doors (Plates: DLVIIIa-b; DLIXa-b). Contextual material included: "trois sarcophages en plomb de forme anthropoïde, plusieurs statuettes de terre cuite (style de Tanagra et grotesques: i.e. figurines), des urnes cinéraires, des lampes, des vases et plats, deux grandes amphores, quelques amulettes de faïence et de bronze, quatre pièces de monnaies". In 1987, the GRM, then under the directorship of Dorreya Saīd, carried out excavations at el-Hadra (Leclant and Clerc 1988: 310, No. 5c). The six-month campaign yielded "un hypogée collectif était fermé par une pierre tombale de forme triangulaire, gravée d'un relief peint, de style grec, montrant l'image de la défunte assise". Recovered material included two cinerary urns for the depositing of cremated remains. While excavating a contiguous hypogeum with rock-cut *loculi*, the mission recorded: receptacles, oil lamps, faïence vase, necklace, knife, and alabaster plate. Other encounters on site, "cinq cercueils du IVe siècle après J-C", conform with the inferred phases of sepulchral use at el-Hadra: Hellenistic (ca. the third-second century BC) and Late Antique (ca. the fourth-sixth century AD).

Site 147: Latin Cemeteries

Maps: V1; V4

Alabaster tomb: el-Chatby [Ptolemaic]

In 1907, during the levelling of the terrain at el-Chatby's Latin Cemeteries (Terra-Santa), "deux grandes parois en albâtre oriental et le linteau d'une belle porte" were accidently unearthed. The finds encountered towards the northern periphery of the Terra-Santa, immediately south of Minos and the Greek-Orthodox Cemeteries, have been briefly reported by Evaristo Breccia, in 1908, then 1921 (Plates: DLX; DLXI; DLXII) (Breccia 1908a: 7; *idem* 1908b: 230; *idem* 1921: 70, Tav. XI). On discovery, the blocks were found at one corner of a vast, trapezoidal περίβολος delimited by the remnants of a massive wall of blocks of limestone (enclosure?), which was demolished at the time. In 1936, the Cemetery Administration decided to clear the grounds of the old burials. Consequently, Achille Adriani, then director of the Graeco-Roman Museum, intervened, with six test-pits (C1-6) sunk west of the blocks, in an attempt to conjecturing the structure(s) to which these monoliths have belonged (Plate DLXIII). A large, rectangular well (B_1) dug into the rock (3.00 x 3.70 m; depth: 11 m), communicated with a rock-cut canal (B) running NW-SE (width: 0.40 m; height: 0.60 m; length of exposed section: 25 m).

The canal diverted slightly towards the south, after feeding a miniature, circular well labelled (B_2). A few meters to the west (C), Adriani reached the bedrock at 3 - 4 m from the surface-level, having cut thru a layer of earth-and-rubble "très pauvre en tessons et autres vestiges d'antiquités" (Adriani 1940a: 15-23; *idem* 1966a-b: 140-143, No. 89; Tav. 61-63, Fig. 211-218). Hence, a context for such blocks could not be established, given the outcome of Adriani's excavations restricted back then, to the western environs (south: burials; east: plant-nursery; north: Minos Alley and Greek-Orthodox Cemeteries).

A reconstruction of the dismantled structure would however, provide hints about the nature of the edifice of which it once formed part. At the time of Adriani's investigation, the pavement and the western wall yet stood *in situ*. The large block of the ceiling, already broken into two pieces, had slipped into a cavity to the north. The eastern wall and what has remained from the southern wall and its gateway, suffered an outwards-collapse (Plates: DLXIV; DLXV). The various fragments were then (re)assembled: the product is a rectangular chamber (2.63 x 3.45 m; height: ca. 2.70 m; flat ceiling) opened on the north. At the centre of the southern wall, a Doric gateway (ca. 0.93 x 2.05 m) might have led into the nucleus of a structure comprising at least, three spaces designed on the same axis, and oriented north-south: geographical orientation (Plates: DLXVIa-b; DLXVIIa-b). This notion is backed by the marks left on the north end of either lateral wall: at the top, two deep, square cuts probably intended for the fixing of elements of architecture complementary to the reconstructed chamber. Halfway to the top, the visible traces of what seems to be rectangular cleats, are evident on either lateral face where they have been fixed approximately, at the same level. The joints are indicative of a preceding space giving access to an intermediary vestibule or chamber. The pavement is formed by a massive monolithic-block of alabaster flanked by two rows of limestone blocks upon which the lateral walls rest (western wall: length: 3.65 m, thickness: 0.70 - 0.87 m; eastern wall: length: 4.25 m, thickness: 0.70 - 0.75 m). The structure is built upon a bed of earth-and-shards, with an adjoined ceiling made of another monolithic-block of alabaster (4.62 x 3.00 m; thickness: 0.70 m). The back wall features the partially-restored Doric gateway (leading into an alcove?) formed by three blocks, one horizontal and two vertical: lintel and jambs.

Construction material (use of alabaster) and technique (built, not rock-cut), architectural order (Doric), and design (*oikos*-type), suggest an Early Hellenistic, funerary structure of which Adriani's

reconstructed product formed part: the antechamber to a burial-alcove, preceded by a courtyard. Whereas, such a striking contrast between the smooth interior and rough exterior, rather suggests a sepulchre intended to be concealed beneath a *tumulus* of earth-and-rubble, thus emphasizing the Macedonian character of the conjectured burial-complex. Overall, the alabaster tomb bears clear analogies with Manolis Andronikos' Royal Tombs discovered in 1977-1978, at Vergina: the site of ancient Αἰγαί, the first capital of Macedon (Plate DLXVIII) (Andronikos 1984). Its uniqueness among the Alexandrian sepulchres excavated to date, would indicate a possible royal-affiliation. Perhaps, one surviving section of the historical Soma: Σῶμα (sec. 3.8.3.1, I), towards the southeastern fringe of the Ptolemaic βασίλεια: Royal Quarter, yet, in proximity to the necropolitan mounds of el-Chatby and el-Hadra el-Bahareiya (sites: 145; 146), and to el-Falaki's L1-R1 junction: the segment of Fouad Street between el-Shallalat and el-Khandak el-Qibly parks, west of Saet el-Zohour Square where a statue of the city's historical founder stands today.

3.8.2) Physical Remnants without Known Historical Reference

3.8.2.1) Civic Edifices

Site 148: West of Collège Saint-Marc

Maps: V2; V4

Mosaic pavement (possible associates, site 144): el-Chatby [Roman]

In 1893, a mosaic pavement was accidently unearthed between el-Chatby Jewish Cemetery and the seashore (Breccia 1914a: 274-275; *idem* 1922: 269-270; *idem* 1923b: 11; Adriani 1966a: 109, No. 59; Daszewski 1985a: 45, note 124). It is composed of an *emblema* featuring an oversized flower with radiating petals and embedded scrolls of ivy. Convergent volutes, and yet four goblets at each corner, occupy the space between the central *emblema* and a black-and-white frame. On either side, the polychrome of black, white, yellow, and reddish-brown *tesserae*, is bordered with broad bands that display a meander pattern (Graeco-Roman Museum, Inv. No. 10200). Judging by the technique of construction, and style, the panel is datable, in general, to the Roman period: the first-third century AD, and is likely to have belonged to a *villa urbana* contemporary with analogous buildings east of el-Falaki's street R2^{bis}: approximately, the areas extending to the east of the Suez Canal Road (sites: 32; 144; 149a; 167).

Site 149: Latin and Greek-Orthodox Cemeteries

Maps: V1; V2; V3; V4

Miscellaneous: el-Chatby [Ptolemaic; Roman; Late Antique]

(a) In 1987-88, the Graeco-Roman Museum, then under the directorship of Dorreya Saīd, carried out excavations at Anubis Street, which constitutes the western periphery of the Latin and Greek-Orthodox Cemeteries (Leclant and Clerc 1990: 339, No. 6d; Rodziewicz 1995: 231-232, note 39). Unearthed on site, was an extensive, Late Roman construction with a public latrine and intricate sewage-system. Judging by its large scale, and proximity to L1, the edifice in question, oriented in accordance with el-Falaki's street-grid, is likely to have been a public one contemporary with the baths and cisterns excavated by the Polish Mission at Kom el-Dikka. The find-spot, recorded on Anubis Street, attests a Roman-Late Roman occupation in the designated areas, east of el-Falaki's $R2^{bis}$. Perhaps, as the case at Kom el-Dikka, a fourth-to-fifth-century resume of habitation following brief abandonments.

(b) In 1998-1999, a team from the University of Patras conducted a detailed geophysical survey at el-Chatby's Latin and Greek-Orthodox Cemeteries, in search of the Royal Burial-Complex of the Ptolemies known primarily from the literary sources (sec. 3.8.3.1, I) (Plates: DLXIX; DLXX) (Papamarinopoulos et al. 2003: 193-211). Various scientific methods: frequency-domain conductivity, electrical-imaging, ground-penetrating radar, seismic refraction, gravity and seismic tomography, have been applied on an area of ca. 10,000 m^2: flanked by the transversal streets of Anubis (west) and Aflaton (east), and intersected by Minos Alley; a short distance to the south, extends the Abu Qir Road (Plate DLXXI). Geophysical anomalies relating to subterranean cavities, corroborated earlier recordings from an electrical-resistivity exploration that triggered excavations at three different locations on site: two (points 1 and 2) on the longitudinal course of Minos Alley, and one (point 3) opposite the Alabaster tomb (site 147). The excavations, directed by Fawzi el-Fakharani from the University of Alexandria, yielded stonemasonry at 3.00 m from the current street-level of Minos. Adjacent to the Alabaster tomb, other vestiges were encountered at a depth of 3-4 m, with no finds recorded down to 7-8 m (groundwater-level reached at 9-10 m).

(c) In autumn 2002, the Centre d'Études Alexandrines carried out a number of *sondages* in the vicinity of the Alabaster tomb (Empereur 2002a: 931-33). A recovered repertoire of ceramics indicates

a Hellenistic occupation on site, datable as early as the late-fourth century BC. No structures had, however, survived the quarrying activities of the past couple of centuries, as evident on the marks left on the excavated sections of the bedrock (Plate DLXXII). Whereas, a cluster of circular wells dug into the rock, serves to confirm the presence of hydraulic installations within the investigated area (Plate DLXXIII). The latter, encountered in the vicinity of Adriani's reconstructed antechamber, seems contextually associated with the structures excavated by the GRM, in 1936 and 1987-88 (147; 149a).

3.8.3) Literary Accounts Pending Physical Evidence

3.8.3.1) Funerary Structures

I) The Soma (Σῶμα)

(a) Localisation

In Book XVII of *Geōgraphikȅ*, Strabo, describing the public monuments of the former βασίλεια, mentions a mausoleum for which he gives the term Σῆμα:

The Sema also, as it is called, is a part of the royal palaces (quarter). This was the enclosure which contained the burial-places of the (Ptolemaic) kings and that of Alexander.

(Strabo, Geōgraphikȅ: XVII. 1.8)

The notion of Egypt, or rather Alexandria, being the resting-place of Alexander the Great, variously featured in few of the historical narratives of the Augustan Principate, seems to have diverged over time, from earlier sources including that of Diodorus Siculus who, ca. 60-59 BC, describes, in Book XVIII of *Bibliotheca Historica*, in great detail, "the transportation of the body of the deceased king and the preparation of the vehicle (or catafalque) that was to carry the body to Ammon (i.e. Siwa)", a process assigned to Arrhiddaeus (not to be confused with Philip Arrhiddaeus: sec. 1.4) (Diodorus, Bibliotheca Historica: XVIII. 3.5, 26-27, 28.1-2). On the journey to the resting-place, he adds:

When Arrhidaeus had spent nearly two years in making ready this work, he brought the body of the king from Babylon to Egypt. Ptolemy, moreover, doing honour to Alexander, went to meet it with an army as far as Syria, and, receiving the body, deemed it worthy of the greatest consideration.

He decided for the present not to send it to Ammon (Siwa), but to entomb it in the city that had been founded by Alexander himself, which lacked little of being the most renowned of the cities of the inhabited earth. There he prepared a precinct worthy the glory of Alexander in size and construction. Entombing him in this, and honouring him with sacrifices such as are paid to demigods, and with magnificent games, he won fair requital, not only from men, but also from the gods.

(Diodorus, Bibliotheca Historica: XVIII. 28.2-4)

About thirty-five years later, writing at the advent of Rome's dominion over Egypt, now *Provincia Aegypti*, following the end of Lagid rule, Strabo gives a different version of Diodorus' story:

For Ptolemy (I Soter), the son of Lagus, forestalled Perdiccas (the regent of Alexander's kingdom), by taking the body away from him when he was bringing it down from Babylon (to Aἰγαί, Macedon) and was turning aside towards Aegypt, moved by greed and a desire to make that country his own …….. and the body of Alexander was carried off by Ptolemy, and given sepulture in Alexandria, where it still now lies (ca. 25 BC) – not, however, in the same sarcophagus as before, for the present one is made of glass, whereas the one wherein Ptolemy laid it, was made of gold. The latter was plundered by the Ptolemy nicknamed "Cocces" and " Pareisactus", who came over from Syria, but was immediately expelled, so that his plunder proved unprofitable to him.

(Strabo, Geōgraphikȅ: XVII. 1.8)

In Ἑλλάδος Περιήγησις (the 2nd century AD), Pausanias maintains that Alexander was first interred by Ptolemy Soter, at Memphis, then taken to Alexandria during the reign of Ptolemy Philadelphos:

After passing into Egypt, he (Ptolemy I) put to death Cleomenes, the satrap of Egypt appointed by Alexander, because he believed him to be favourable to Perdiccas, and therefore, not faithful to himself. He prevailed on the Macedonians, who were charged with the conveyance of Alexander's body to Aegae (Aἰγαί), to deliver it to himself, and he buried it in Macedonian fashion, at Memphis.

(Pausanias, Ἑλλάδος Περιήγησις: I. 6.3)

It was Ptolemy (II Philadelphos) who brought down the body of Alexander from Memphis (i.e. to the kingdom's capital, Alexandria).

(Pausanias, Ἑλλάδος Περιήγησις: I. 7.1)

Whereas, pseudo-Callisthenes' *Alexander Romance* (the 3rd-4th century AD) seems to consolidate the earlier narratives into another:

(in consonance with the divine oracle at Babylon), Ptlomeos took him to Egypt and made a leaden slab for him and poured upon him mnesiotas honey and hipatic aloe; and the body was embalmed with incense and oil, and put upon a mule cart, and taken to Egypt. And when they reached Pellas, the Memnians came forth with trumpeters, to meet at the altars, in their accustomed way. And they took him to Memphis near Sesonchousis, the world-conquering demigod. A voice issued forth saying: "Take him to his city (Alexandria) which he himself built. For wherever that man's body be, that place shall have no surcease from war and from turmoil, for he is a child of war".

(rejected), Ptlomeos made a grave for him in Alexandria, which is still called Alexander's Body (the Σῶμα). And he put him there with splendid honor, since Alexander had requested that this be done. For the city was called by his name, and is destined to rule all others.

(Pseudo-Callisthenes, Alexander Romance: 282-284)

Although late and contradictory, the surviving testimonies from Classical Antiquity point towards Alexandria as the 'final resting-place of Alexander the Great'. Nevertheless, it should be taken into consideration the fact that these accounts were written centuries after the events, copying earlier, unknown Hellenistic sources constantly infiltrated with biased, fourth-century contemporaries of the Macedonian Afro-Asiatic campaigns, and rethought-reshaped histories developing within the milieu of the oral tradition, to become entrenched over time, in the folk memory, hence Alexander the Great of Plutarch and Arrian (the first-second century AD: sec. 1.2), whose relevance to the historical figure seems debatable. On the other hand, the possibility of Alexander's Σῶμα being in Alexandria, is maintained through several testimonies datable from ca. the first century BC to third century AD, of Julius Caesar and Roman *imperatores* visiting the mausoleum while in the city:

First-known: Julius Caesar, ca. 48-47 BC; recorded by Lucan, in *De Bello Civili* (the first century AD). Last-known: Caracalla, ca. AD 215; recorded by Herodian, in *History of the Roman Empire* (the third century AD).

(b) Localisation within Alexandria

In seeking the whereabouts of the Σῶμα in Alexandria, two sources of antiquity are of particular importance: Strabo's *Geōgraphikὲ* (1st century BC) (*supra*) and Zenobius' *Proverbia* (2nd century AD):

Ἔτι δὲ μᾶλλον ἀπὸ Πτολεμαίου τοῦ Φιλοπάτορος τὴν γάρ μητέρα Βερενίκην καθείρξας ἐν μεγάροις, καὶ παραδοὺς Σωσιβίῳ φυλάσσειν, ἡνίκα ἐκείνη οὐ φέρουσα τὴν κόλασιν ἔπιε θανάσιμον βοτάνην καὶ τὸ φάρμαχον πιοῦσα ἀπέθανε, διὰ τὰς ἀπ' αὐτῶν τῶν ὀνείρων ταραχὰς ἐν μέσῃ τῇ πόλει μνῆμα οἰκοδομήσας, ὃ νῦν Σῆμα καλεῖται, πάντας ἐκεῖ τοὺς προπάτορας σὺν αὐτῇ κατέθετο, καὶ Ἀλέξανδρον τὸν Μακεδόνα. Καὶ ἐπὶ τῶν αἰγιαλῶν δὲ ἱερὸν αὐτῇ ἱδρύσαντο, ὃ ἐκάλουν Βερενίκης σωζούσης.

(Zenobius, Proverbia: III. 94.11-20)

The Greek sophist's localisation of the μνῆμα (tomb) 'ἐν μέσῃ τῇ πόλει' (in the middle of the city), was central to the development of a Late Mediaeval (Mameluke period) tradition which connected the Late Antique, rock-cut cistern of el-Nebi Daniel Mosque with the tomb of Alexander the Great (site 65). The site of the mosque however, almost at the crossroads of the Arab town: i.e. the junction of Tariq Bab Sharq (Fouad I: el-Horreya: el-Falaki's L1) with el-Nebi Daniel Street (approx. R5), does not correspond to the centre of the Alexandrian metropolis in the second century AD. At the time of Zenobius, the city had already extended eastwards, reaching approximately, the eastern belt of el-Chatby and el-Hadra el-Bahareiya. Zenobius' 'μέσῃ τῇ πόλει' would have been therefore, around that segment of Fouad Street delimited by el-Shallalat and el-Khandak el-Qibly parks: a localisation supported by the intersection of the πλατείες (L1-R1) of the Roman grid, as indicated by the 1864-1866 excavations of Mahmoud el-Falaki (sec. 2.2.1). For Strabo though, writing much earlier, ca. 25 BC, the vicinity of the present-day site of Saet el-Zohour Square, would have corresponded to the southern-southeastern fringe of the Ptolemaic Royal Quarter.

(c) Structure

Perhaps, one principal source that describes briefly the architecture of the historical Σῶμα, is Lucan's anti-Lagid epic-poem widely known as *De Bello Civili* or *Pharsalia* (the 1st century AD):

Tum voltu semper celante pavorem
Intrepidus superum sedes et templa vetusti
Numinis antiquas Macetum testantia vires
Circumit, et nulla captus dulcedine rerum,
Non auro cultuque deum, non moenibus urbis,
Effossum tumulis cupide descendit in antrum.
Illic Pellaei proles vaesana Philippi,
Felix praedo, iacet terrarum vindice fato
Raptus: sacratis totum spargenda per orbem
Membra viri posuere adytis.

Then undaunted, with looks that ever masked his fears, he (Julius Caesar) visited the temples of the gods, and the ancient shrines of divinity which attest the former might of Macedonia. No thing of beauty attracted him, neither the gold and ornaments of the gods, nor the city-walls; but in eager haste, he went down into the (subterranean) vault hewn out for a tomb. There lies the mad son of Macedonian Philip, that fortunate freebooter, cut off by a death that avenged the world. The limbs that should have been scattered over the whole earth, they laid in a hallowed shrine.

(Lucan, De Bello Civili: X. 14-23)

Ultima Lageae stirpis perituraque proles,
Degener, incestae sceptris cessure sorori,
Cum tibi sacrato Macedon servetur in antro
Et regum cineres extructo monte quiescant,
Cum Ptolemaeorum manes seriemque pudendam
Pyramides claudant indignaque Mausolea.

Last scion of the line of Lagus, doomed and degenerate king; who must surrender your crown to your incestuous sister, though you preserve the Macedonian (king: Alexander) in consecrated vault and the ashes of the Pharaohs rest beneath a mountain of masonry, though the dead Ptolemies and their unworthy dynasty are covered by pyramids and mausoleums too good for them.

(Lucan, De Bello Civili: VIII. 692-697)

According to the verses of Lucan, the Σῶμα seems to have been a subterranean funerary-complex of monumental character, concealed beneath a *tumulus*. An affiliation to the fourth-century canons of Macedonian sepulchres, is therefore evident (analogies: Andronikos' Royal Tombs at Vergina, N. Greece). One candidate provided by the archaeological record within the vicinity of Saet el-Zohour Square, is the Alabaster tomb (147). Considering the material and mode of construction, oikos-type design, and find-spot, the reconstructed product of Adriani (hypothesis: Adriani 2000) could have possibly been the antechamber to an alcove forming the nucleus of one section of the Ptolemaic mausoleum: a notion which recalls the vast, trapezoidal περίβολος reported by Breccia, in the earlier *rapports* of the museum. There at one corner, the alabaster blocks were excavated in an area partially delimited by the remnants of a wall of massive blocks of limestone. Nonetheless, in the absence of conclusive evidence from a chronologically-established context, the association of these alabaster blocks with the historical Σῶμα, remains rather hypothetical. Even if proven, the possibility of the section of the mausoleum to which the presumed antechamber belonged, being that where Alexander's corpse has been put on display within the collective complex of Ptolemy IV Philopator, cannot be assessed in such text-and-iconography-free context.

(d) Fate

Towards the end of the fourth century AD, St. John Chrysostom (ca. 349 - 407), the Archbishop of Constantinople, puts forth the rhetorical question:

Tell me, where is the tomb of Alexander?
shew it me, and tell me the day on which he died.
But of the servants of Christ the very tombs are glorious, seeing they have taken possession of the most royal city; and their days are well known, making festivals for the world.
And his tomb (Alexander's) even his own people know not, but this man's (i.e. St. Paul's tomb) the very barbarians know. And the tombs of the servants of the Crucified are more splendid than the palaces of kings; not for the size and beauty of the buildings (yet, even in this, they surpass them), but, what is far more, in the zeal of those who frequent them.

(John Chrysostom, Homily XXVI: 5)

The archbishop's rhetorical lays emphasis on the futility of earthly power to the heavenly glory of the Christian martyrs, whose tombs, unlike that of the renowned Macedonian conqueror, are yet known and frequently visited. Whereas, the site of Alexander's tomb is not known anymore, even to his own people. It seems therefore, that by the time St. John Chrysostom wrote his *Homilies*, ca. AD 398-404, the site of the historical Σῶμα was already lost from the memory of the Alexandrians. However, this was not the case in AD 215, when Caracalla visited the city:

When he entered the city, accompanied by his entire army, Caracalla went first into the temple, where he sacrificed many hecatombs of cattle and heaped the altars with frankincense. Leaving the temple for the tomb of Alexander, he removed there his purple robe, his finger rings set with precious gems, together with his belts and anything else of value on his person, and placed them upon the tomb.

(Herodian, History of the Roman Empire: IV. 8.9)

Caracalla's visit to the mausoleum, recorded by Herodian, is the last known of an *imperator*, which implies that possible violation would have occurred in the course of the third-fourth century. The proposed range seems justified by contemporary historical events: (a) the sacking of the city, first by Aurelian (272), then Diocletian (297); (b) the destructive earthquake, and subsequent tsunami, of AD 365. Accordingly, given the tomb's presumed location, and the probability of it not surviving the turbulent transition to Late Antiquity, the rhetorical question of Constantinople's Archbishop may not come as a surprise.

3.9) Eastern Suburbs (ESubs.)

3.9.1) Physical Remnants Corresponding to Known Historical Narratives

3.9.1.1) Funerary Structures

Site 150: Miscellaneous

Maps: V1; V2; V3; V4; V5

Necropolis: Camp Caesar; el-Ibrahimiya [Ptolemaic; Roman; Late Antique]

(a) Sepulchres: Department of Antiquities (2011-2015)

Since 2011, salvage excavations subsequent to accidental discoveries, were carried out by the Egyptian Department of Antiquities at Camp Caesar and el-Ibrahimiya, where funerary structures of various epochs were recorded intermittently (Abd el-Maguid 2016: 64-67). (1) Camp Caesar-1: south of the tramline: remnants of partially-preserved, Byzantine sepulchres built of small stone in lime-mortar, and fired-brick, with coated walls bearing Christian funerary epitaphs and motifs: painted crosses. The relative proximity of the finds to the premises of the Faculty of Engineering (ca. 800 m to the south-southwest) where Adriani had excavated in the 1950s, a funerary structure of the fifth-sixth century (146c-9), emphasizes the Christian exploitation of the Hellenistic necropolitan mounds east of el-Falaki's transversal streets R3^{bis} and R4^{bis} (Aflaton and Ahmed Lotfy el-Sayed respectively). (2) Tanis (or Zakariya Ghonaim): the simple fosse and cist-graves, a cinerary urn, and a gilded-wood sarcophagus. (3) el-Abd Theater: a Hellenistic, rock-cut hypogeum of which remained one funerary κλίνη carved-out and painted (Plate DLXXIV). Next to it, was a cist-grave (ca. 1.00 x 0.60 m) dug into the rock, to receive four cinerary urns. On the east side of the plot, *loculus*-chambers, vaulted and rectangular, built in masonry (stone and fired-brick), are datable to the Roman period (Plate DLXXV).

(4) el-Ibrahimiya-1: hypogea signalling successive phases of development. The better-preserved, Hellenistic in date, consisted of a number of chambers branching off a pseudo-peristyle courtyard with sacrificial altar at the centre (Plate DLXXVI) (analogies: Mustapha Pasha I and II, site 160). One chamber had two niches cut into its *anta*: one received an infant-interment, the other, a cinerary urn of the Hadra-type (Plate DLXXVII). On the closing-slab of the latter, the name of the cremated deceased was inscribed: Kleitarchos, son of Timesitheos. Funerary structures excavated south of the hypogeum, exemplify the developments of the Roman period. A case in point would be one cuboid tomb with plastered walls, yielding a marble *stela* on which the name of a certain Neola, daughter of Sarapia, and of her son, Dioskoros, are inscribed in Greek. The sites (2; 3; 4), ca. 600 - 1200 m east of Breccia's encounters at el-Chatby (145b), seem to expose the geographical extent of the eastern *nekropoleis* in Hellenistic times, and the Roman retainment of the sepulchral character of the suburban region extending to the east of Ahmed Lotfy el-Sayed or approximately, el-Falaki's transversal street R4^{bis}.

(b) Mercenaries' *Columbarium*: Tassos Neroutsos (1885)

In 1885, a *columbarium* cut into the rock, was accidently unearthed within the coastal sector of el-Ibrahimiya (Neroutsos 1888: 81-82, 102-110; Botti 1898b: 98-99). About a hundred cuboid *loculi* were cut into the walls of a circular, rather conoidal structure with an ellipsoid-vault ceiling and light-shaft. The niches were arranged in five superimposed rows, parallel with one another. On discovery, some had yet retained their closing-slabs painted intrinsically-Macedonian sepulchral scenes, of which six are today on display at the New York Metropolitan Museum of Art (Inv. No. 04.17.1-6) (Plates: DLXXVIIIa-b; DLXXIXa-d). Inside the closed ones, were cinerary urns of the-Hadra type, containing the cremated remains of the deceased. Contextual information recorded on either the terracotta *hydriai* or the limestone *stelae*, reveals the chronology of the Ibrahimiya *columbarium*, and the identity of those whose ashes are deposited within. Indeed, the funerary epigraphs on site, show that the deceased were mercenaries from mainland Greece, the Aegean, Crete, Thrace, Galatia, Asia Minor, and the Levant: Menekles (Cretan, cavalry officer: under Ptolemy IV Philopator); Philotas (cavalry captain: in 214 BC); Attalos (Acheronian: under Ptolemy VI Philometor); Archedemos; Telemachos (Cretan, cavalry soldier); Aglokles (Theban, Boeotia); Aristanor (Hysiae); Sarapon (Syrian, Levant); Phykion (Aetolian); Pythostratos; Kallon; Philotas (Asos); Anasson (the Cyclades, Aegean); Agnas (Thracian); Philista (wife of a Galatian soldier); Aedearotos; Archagathos. Epigraphy and the recovered Hadra *hydriai* thus date the rock-cut *columbarium* to 221 - 180-70 BC. It was probably a funerary structure intended to receive the cremated remains of foreign, basically, Greek mercenaries garrisoned east of Alexandria, on the coastal plateau, beyond the Ptolemaic βασίλεια and the Jewish Quarter (Δ). Its discovery corroborates the ancient narratives with regards to the well-established tradition of deploying mercenaries by Late Dynastic and Hellenistic rules in Egypt: a phenomenon attested as early as the seventh century BC, the time the Saïtic kings had deployed Hellenic mercenaries from Ionia and Caria in attempting to counter the Neo-Babylonian threat (Thompson and Buraselis 2013: 3). Polybios, who was appointed envoy to Alexandria ca. 181 BC: contemporary with the *columbarium*, categorised the inhabitants of the city into three classes of people:

First, (is inhabited by) the native Egyptians, an acute and civilized race; secondly (inhabited) by the mercenaries, a numerous rough and uncultivated set (as) it being an ancient practice there (in Egypt)

to maintain a foreign armed force which owing to the weakness of the kings, had learnt rather to rule than to obey; thirdly, there were the Alexandrians themselves, a people not genuinely civilized for the same reason, but still superior to the mercenaries, for though they are mongrels, they came from a Greek stock and had not forgotten Greek customs.

(Polybios, Histories: XXXIV. 14.3)

(c) Jewish Interments: Tassos Neroutsos (1870s); Evaristo Breccia (1905-07)

Jewish burials encountered at el-Ibrahimiya in the 1870s, were briefly reported at the time, by Tassos Neroutsos (Neroutsos 1888: 82-84). These were distinguishable from Greek sepulchres by their austere setting, where there was an almost absolute lack of ornamentation and painting. Intrinsic to Jewish sepulchres at el-Ibrahimiya were two features: (1) the ossuaries: miniature, rectangular coffins/funerary boxes in limestone, covered with prismatic or semi-cylindrical lids, and placed in relatively-shallow niches cut into the tomb's walls; (2) the *menorah* or biblical, seven-*candelabrum* lampstand, a traditional constituent of the Temple in Jerusalem.

In 1905-07, on behalf of Almas Pasha Sabri, Evaristo Breccia (GRM) carried out excavations "sulle colline tra i cimiteri europei e il sobborgo de l'Ibrahimieh (the western belt of el-Ibrahimiya) … un centinaio di metri a mezzogiorno della linea tranviaria Alessandria-Ramle" (Breccia 1907f: 35-86; *idem* 1908a: 4-7). Funerary monuments recalling those excavated at the nearby el-Chatby (site 145b), shed further light on the geographical extent of the surface *nekropoleis* pertaining to the earlier settlers. Besides the latter, narrow galleries were found cut directly into the rock, with several rows of *loculi* of which few had retained their limestone painted *stelae* (closing-slabs). Among the predominant Greek ones, Aramaic inscriptions in red ochre, were encountered (Plate DLXXXa). In one case, a *stela* painted false-door surmounted by a pediment, had four Semitic signs (Plate DLXXXb). On a lower row, an epitaph read: 'Aqabiah son of Elyo'ênaī (written in Greek). The recorded inscriptions thus signal a burial-complex where Greek and Jewish interments coexisted. In a multi-ethnic context as such, the presence of Hellenized Jews may not come as a surprise: one painted *stela* closing the resting-place of a woman, displayed, in ochre, a Hellenized-Jewish name inscribed next to a Greek proper: Ἰωάννα Εὐφροσύνη. Breccia's encounters at el-Ibrahimiya confirm the Jewish element within the

interments of Alexandria's eastern *nekropoleis*, hence corroborating the first-century AD narratives of Philo and Flavius Josephus on the localisation of Quarter Δ in proximity to Cape Lochias, towards the eastern fringe of town (sec. 2.1.2.2.2.1).

Site 151: North of Sporting Club

Maps: V5

Hypogea: el-Ibrahimiya; Sporting [Ptolemaic; Roman]

Since 1998, the Hellenic Institute of Ancient and Mediaeval Alexandrian Studies (HIAMAS) has been investigating the coastal zone at el-Ibrahimiya and Sporting (Tzalas 2012: 130-131; *idem* 2013: 3-4; *idem* 2015: 352-355). At two sites, labelled el-Ibrahimiya (4) and Sporting (5), the remains of rock-cut hypogea were identified within the shallows, bearing signs of extensive stone-quarrying activities. Both sites have been affected recently by the widening of the Corniche to make room for parking-areas. The extant vestiges of large, rock-cut structures jutting out into the sea, were rather evident at the less-violated Sporting (5). On the maps of Neroutsos (1888) and Bartocci (1914) (Introduction, sec. e-f), the area north of the present-day Sporting Club is associated with 'hypogées Ptolémaïques et Romains'. Perhaps, the remnants in question, are a continuation of funerary structures cut into the rocky plateau of the suburban coastline, towards the *oppidum Romanorum*: Nikopolis (152-161).

Site 152: NE. of Sporting Club

Maps: V5

Hypogeum: Sporting; Cleopatra [Roman]

In 1914, during the digging of foundations for a new building north of the tramway, the section of it between Sporting Grand Station and Cleopatra-les-Bains (aka el-Hammamat), the remnants of a subterranean hypogeum were accidently unearthed (Breccia 1914c: 53-56). A surviving part formed a *triclinium*-like chamberette featuring three sarcophagus-alcoves cut into the lateral and bottom walls, as in the Wardian Grand Catacomb (site 49a) and Kom el-Shuqafa's Hauptgrab (site 53f). Either of these alcoves is flanked by pilasters originally decorated with figural motifs of which faint traces have been recorded on discovery, as is the case with the alcoves' lateral and back walls where the chamberette's Graeco-Egyptianizing decoration is on display: sacrificial scenes involving local (Isis

and Osiris) deities; birds and floral motifs; a mummification scene (of Osiris?) involving Anubis; other local deities such as the ibis-headed Thoth and the falcon-headed Horus, are depicted while holding an *ankh*. The sarcophagi had round handles in relief, and were painted figural motifs and funerary *stelae*. On discovery, an extant fragment of a Greek epitaph (ΣΑΠΦΩ) was identified on the façade of one of the sarcophagi. Considering the structural and decorative analogies with nearby hypogea of the Roman period, the Sporting hypogeum, contiguous with that excavated at Tigrane (site 153), would be datable to ca. the first-second century AD. Subsequent modification is signalled by *loculi* cut into the back walls of the chamberette's sarcophagus-alcoves.

Site 153: Tigrane Pasha (Port-Saīd) Street

Maps: V5

Hypogeum: Cleopatra [Roman]

In March 1952, during the digging of foundations for a new building at Tigrane Pasha Street, a rock-cut hypogeum was accidently unearthed (Adriani 1956b: 63-86; *idem* 1966a-b: 145-46, No. 91; Tav. 66, Fig. 223-224, Tav. 67, Fig. 226-227, Tav. 72, Fig. 239). The GRM Excavations were directed by Achille Adriani assisted by Victor Ghirghis (the conservator) and Badie Abd el-Malek (draughtsman). The hypogeum partially-dismantled and reconstructed at Kom el-Shuqafa (site 53), for conservation *in situ* was not possible, comprised (Plates: DLXXXI; DLXXXII): (i) an access-staircase which lead into a narrow corridor. Two burial-spaces opened at either end of the corridor: (ii) on the left, a partially-excavated, almost-rectangular *loculus*-chamber (ca. 3.50 x 2.30 m); (iii) opposite (ii), a better-preserved *triclinium*-like chamberette (2.20 x 2.25 m). The latter had three alcoves cut into its back and side walls, each with a funerary sarcophagus partially carved out of the rock. A Graeco-Egyptianizing setting is enhanced by the chamberette's illustrative painting programme evidently on display: vegetal motifs; *uraeus* serpents; winged solar-discs; sphinxes; local deities (Horus and Anubis); four pilasters with Ionized capitals, marking the corners (Plate DLXXXIIIa-b). Whereas, mythological scenes on the back wall of all three alcoves, exhibit an in-sequence narrative of the resurrection and apotheosis of Osiris (Plates: DLXXXIV; DLXXXVa-b). The ceiling at Tigrane Pasha features one of the medusas excavated in Alexandria so far (sites: 50; 53f; 114). The gorgon here, appears within an *emblema* surrounded by intricate sets of volutes branching off four principal stems which emerge in turn, from the Ionized pseudo-pillars

at each of the chamberette's corners. Inserted among the entwined volutes, are *cervidae*, felines, and eagles, symmetrically arranged (Plate DLXXXVIa-b).

The structural design of the Tigrane *triclinium*-like chamberette (analogies, sites: 49a; 53f; 152; 157b), its sarcophagi of the ληνός-type (a developed form of the Hellenistic κλίνη-sarcophagus), and the predominant Graeco-Egyptianizing setting, suggest a possible construction date within ca. the first two centuries of the Principality. The GRM salvage campaign in 1952, shows the partially-excavated, funerary structure to have formed part of a large complex of subterranean hypogea already violated at the time by the bulldozers of the developers. The hypogeum at Tigrane Pasha is to be considered therefore, in a wider context which includes contemporaries encountered on the coastal belt, from Sporting to Sidi Gaber: approximately, the zone within the seashore and the tramline (152; 154; 157).

Site 154: "Terrena di Cleopatra"

Maps: V5

Hypogeum: Cleopatra [Roman]

Around 1912, a subterranean hypogeum was accidently unearthed along with the remnants of other funerary structures, at the "terrena di Cleopatra, fra l'accampamento di Mustafa Pasha (165) e il cimitero musulmano di Sidi Gaber" (Breccia 1912d: 222-228; Adriani 1966a-b: 146, No. 92; Tav. 67, Fig. 225). The partially-excavated hypogeum, in part built in masonry, comprised (Plate DLXXXVII): (1) A *loculus*-chamber (4.00 x 1.90 m; height: 2.70 m; vaulted ceiling), with the entrance formed by a horizontal architrave (width: 1.5 m) on two pillars (height: 3.3 m). It had two rows of rock-cut *loculi* on either side wall: those of the lower row were partially cut below the floor-level. *Loculus*-chamber (1) was constructed of finely-hewn blocks of limestone coated with a layer of plaster. On discovery, painted decoration (Isis next to a mummified body; festoons) and epigraphs (inscribed in Greek and Latin) were recognizable on the *loculus*-closing slabs. (2) A second *loculus*-chamber (4.10 x 1.90; height: 2.10 m; vaulted ceiling) had three rock-cut *loculi*, two into the back wall, and one into the right wall. (3) A largely-collapsed chamber, accessible through an arched-passageway, opened on a wall built entirely in masonry. Whereas, a multi-storey structure is indicated by the remnant of a very steep stairway (1') communicating with underlying environments. Judging by the mode of construction,

epigraphy, and the Egyptianizing, decorative features, this surviving section of a violated complex of hypogea seems datable to the Roman period. Adriani specifies the second century as a possible date of construction, laying emphasis on analogies with Hermann Thiersch's Gabbari Grab (I) (47c).

Site 155: ex-Casino Maxim, Farouk I Street

Maps: V5

Hypogea: Cleopatra [Ptolemaic]

In February 1938, during construction work carried out at the time, by the Technical Services of the Municipality, another complex of at least four subterranean hypogea, was accidently discovered at the ex-Casino Maxim on Farouk Street: a point on the seashore (Adriani 1940a: 124-126; *idem* 1966a-b: 121-122, No. 73 and 127-128, No. 82; Tav. 41, Fig. 157, Tav. 47, Fig. 177). Hypogeum (I), the better-preserved of the largely-collapsed complex (Plate DLXXXVIII), comprised: (i) an access-staircase; (ii) a rectangular vestibule (1) with two *loculi* cut into the lateral wall, a rock-cut bench, and a shallow niche cut into the bottom wall; a central courtyard (2) accessible from (1), via a wide passageway flanked by two partially-preserved, Doric half-columns. Two burial-spaces opened on the courtyard's left and back walls: *loculus*-chamber (3) had nineteen *loculi* cut into the walls, and a rock-cut bench as that met in the vestibule; chamber (4) with an extant *loculus*, was partially excavated. Of Hypogeum (II), only a rectangular *loculus*-chamber had survived. The remaining section of Hypogeum (III) (Plate DLXXXIX) included: (i) a long access-staircase; (ii) a vestibule with an apse-like recess cut into the bottom wall, where the mouth of a small well is opened; (iii) a *loculus*-chamber featuring fifteen rock-cut *loculi*. A fourth, conjectured hypogeum is inferable, given a row of excavated *loculi* partially immersed in the seawater, next to the vestibule (1) and courtyard (2) of Hypogeum (I).

Contextual associates recovered from several *loculi*, basically oil lamps and terracotta figurines of the Tanagra-type, date the collective complex to the Ptolemaic period. The assigned chronology is strengthened by the use of the Doric order in the passageway from the vestibule to the courtyard, and the ground plan of Hypogeum (I). It should be mentioned that the funerary complex in question, is contiguous with that reported by Hermann Thiersch in 1904, at Sidi Gaber (site 156), suggesting a

cluster of Hellenistic hypogea excavated into the suburban coastal plateau, towards the seashore, at Cleopatra, Sidi Gaber, Mustapha Pasha (site 160), and Stanley (site 161).

Site 156: "Am meer"

Maps: V5

Hypogeum (associates, sites: 150b; 155): Sidi Gaber [Ptolemaic]

In May 1901, during the second Expedition von Sieglin, Hermann Thiersch recorded a rock-cut hypogeum "anderthalb stunden östlich von Alexandria, hart am meer" ... reachable in 20 minutes, "wenn man von Sidi-Gaber, einer der ersten Stationen der Ramlehbahn, sich nordwärts wendet (V5), westlich von der großen, halb verlassenen Kaserne Mustafa, in einer kleinen bucht, halb versteckt hinter dem hohen ufer" (Plate DXCa-b) (Thiersch 1904: 1-6, Tafeln I-III; Adriani 1966a-b: 138-140, No. 88, Figs. P, Q, R; Tav. 59, Fig. 206, Tav. 60, Fig. 209-210). Already partially-submerged at the time of Thiersch's visits, the hypogeum, in fact, one last remnant of it, seemed recognizable to Achille Adriani, in 1938 (155). It comprised (Plate DXCIa-b): initial setting: three spaces (I-III) designed on the same axis, and cut into a cliff atop which stood "ein Posten der Küstenwache". (I) A less-preserved, open-air *atrium* (5.10 x 6.15 m) led into (II) a rectangular antechamber (3.10 x 5.02 m), via a one-meter-wide passageway. Chamber (II) had stuccoed low-benches carved out of the rock, and painted light-blue. Its walls were decorated in zones: a pseudo-plinth concealed beneath the rock-cut benches; orthostats imitating alabaster in dark-yellow, grey, and green; intermediate band in black; main band in red; projecting cornice; upper band in turquoise; a crown of silver-grey tendrils on a purplish band, below an Ionic *kyma* in black-and-white (Plate DXCII). Four niches have been cut into the front and lateral walls: two, slightly-wider, flanked the entrance, and a tapering one (0.38 m deep) into either side wall, within a frame of purple-and-white bands, with the interior, perhaps, featuring figurative motifs, painted Ionic pilasters at the corners. The vaulted ceiling was painted false-drawers in yellow, grey, violet, and reddish-brown. The nucleus (III) of the hypogeum was reachable through a Doric passageway flanked by partially-fluted, engaged columns in stucco, with smooth lower-parts (Plate DXCIII). (III) A κλίνη-alcove (1.35 x 3.00 m) decorated, as the antechamber, in zones: white band reaching above the level of the cushions; festooned garlands on a wide turquoise band delimited by an Ionic *kymai*, and flanked by Ionic pilasters (Plate DXCIV). At the centre, a rock-cut *loculus*-niche is well decorated

with garlands in *taeniae*. A golden round-shield and a helmet with high-crest on either side of the niche (not reproduced in August Thiersch's *tafeln II-III*, given their status of preservation), indicate a military-affiliated deceased. The vaulted ceiling exhibited a sail represented as if swollen by the wind. On the largely-deteriorated façade of the κλίνη, Hermann Thiersch noted the faint traces of a figurative, probably soldierly scene involving anthropomorphic figures and oval shields: warriors (Persian or Amazons: Thiersch's conjecture). Giuseppe Botti, who first reported the frieze in 1893, following a brief inspection made a year earlier, relates: "presso il Campo de' Cesari (Sidi Gaber), al mare, e la barbarica distruzione di un dipinto figurante il combattimento delle Amazoni nel fregio del sarcofago della cella principale" (Botti 1893: 14). Overall, the decorative scheme of such a unique κλίνη-alcove seems allusive in essence: i.e. the bottom wall: a balustrade; the ceiling: a *baldacchino*.

Thiersch's hypogeum, not isolated, would have formed part of a larger complex of contiguous, rock-cut sepulchres, judging by the extant remnants represented on Thiersch's plan: (VI) and (VII) (the latter label is added by the author). Of a similar axial-arrangement is another section (I-IV-V) of the conjectured funerary complex. Structural design thus indicates an initial phase of construction datable ca. the late-third to early-second century BC. The deceased might have been a senior military officer under Ptolemy Philopator or Ptolemy Epiphanes (150b). Subsequent modification is attested by the *loculi* added into the lateral walls of all four chambers (II; III; IV; V). This group is contextually associated with the funerary complex excavated by Achille Adriani in 1938, at Casino Maxim (155).

Site 157: (a) Sidi Gaber Avenue; (b) "fra Maréchal French e Hatassou"

Maps: V5

Hypogea: Sidi Gaber [Roman]

(a) In March 1937, while digging foundations for a new building (No. 47) at the Sidi Gaber Avenue, the remnants of a subterranean hypogeum were accidently unearthed (Adriani 1940a: 123, Fig. 57). It included two burial-chambers (2.50 x 3.50 m; 2.50 x 4.50 m) with their walls occupied by rock-cut *loculi* regularly arranged in two rows. Traces of the plaster-coating were recognizable on discovery, as well as a richly-moulded dentilled cornice represented in relief. The funerary structure, already largely deteriorated, had one of its chambers completely collapsed. Contextual finds on site: glass

vials, clay vases, terracotta lamps and figurines, and three miniature altars of the horned-type, yet in terracotta (Plate DXCV), date the Roman hypogeum in question, to ca. the first-second century AD.

(b) In 1951-52, a complex of subterranean hypogea was accidently discovered at Sidi Gaber, "fra la Rue du Maréchal French e la Rue Hatassou" (Adriani 1956a: 40-41). Of the much-violated complex, one hypogeum (II) featured a *triclinium*-like chamberette comprising three funerary alcoves. Each was found almost entirely occupied by a sarcophagus of the ληνός-type: a bathtub (Plate DXCVIa-b) (analogies, *triclinium*-like chamberettes: 49a; 53f; 152. Sarcophagi of ληνός-type: 153). The overall architectural setting thus indicates a complex of subterranean hypogea contemporary with analogous remnants excavated at Sporting (152), Cleopatra (153; 154), and Sidi Gaber (157a).

Site 158: (a) ex-Abu el-Nawatir; (b) SG. Mosque and Tram Station; (c) Tiba St.

Maps: V5

Sepulchres: (a) Kafr Abdo; (b) Sidi Gaber; (c) Cleopatra [Roman]

(a) In the 1920s, a number of sepulchres were accidently unearthed during levelling works carried out at the Peghini property, on the southern slope of the Abu el-Nawatir mounds: the present-day district of Kafr Abdo, south of Abu Qir Road (Breccia 1932: 20-23). The finds were basically, fragments of limestone sarcophagi imitating an *opus isodomum*, and *stelae* bearing funerary epitaphs (Plates: DXCVIIa-d). Contextual information acquired through the inscriptions (engraved and painted), shows the deceased as indigenous-Greeks and Hellenized-Jews. The numismatics recovered on site, and other terracotta associates (oil lamps and lanterns), date these interments to ca. the second-third century AD (Antonius Pius, Commodus, and Caracalla). Considering the morphology of the terrain (now levelled), and the proximity of the find-spots to Nikopolis, it is possible that the mounds south of the coastal settlement, would have been utilised in imperial times (the 1st-4th cent.), to receive interments (see *infra*, b). Two funerary epigraphs attest the presence of Hellenized-Jews or perhaps, Early Christians among the reported burials at Abu el-Nawatir (biblical names: Μαριάμη; Ἰώσεφος):

MAPIAMH	IωCƐΦƐ AωPƐ
XPHCTHXAI	XAIPƐ L I
Y	AΘVP [.] H

PELΛΓKIAP
ω

During the recent salvage excavations carried out by the local department of antiquities, several forms of burial were recorded at Abu el-Nawatir: ossuaries (most probably, associated with Jewish interments); cinerary urns (cremation); tombs built of fired-brick, with semicircular-vaults. At the site of Khalil el-Khayat, labelled Kafr Abdo (1), the Greek practice of *enchytrismos* is rather evident: the skeletal remains of at least, twenty infants have been buried in Late Roman, Gazan *amphorae* datable to the late-fourth - early-fifth century (Plate DXCVIII) (Sabah 2012: 253-274; Abd el-Maguid 2016: 66).

(b) A number of Latin epitaphs inscribed on funerary monuments, were occasionally recovered at Sidi Gaber, in the vicinity of the mosque and tram station of el-Sheikh, since the nineteenth century (Neroutsos 1875: 50-51; *idem* 1888: 85-86, 119, No. 46-47, 121-122, No. 49; Botti 1898b: 115-118). Datable to ca. the first-fourth century AD, the epitaphs provide evidence for a military cemetery contiguous with the *castrum Romanum* before Nikopolis. The majority of those interred west of the camp, were in fact, members of the Legio II Traiana Fortis stationed east of Alexandria (site 165):

DIS . M . LABERIVS
FORTVNTVS . M.
LEG . II . T . RO . COH IIII
AST . PRI . MIL A . XXIII
EQVINVS POMPEIANVS
OPTIO . SECVNDVS ERES
B E M . M . F . ECI.
(Funerary *stela* in white marble; Legio II Traiana Fortis, Cohorts IIII; discovery date: 1873; ca. the third century AD)

Other examples include:

Q. VALERIO.
TRIBVNVS MILITVM
VIXIT ANNIS XXXVIII

MILIT . ANN . XVII

FLAVIVS M . DONATVS

POSVIT.

(epitaph painted in red ochre; context of discovery: hypogeum; discovery date: 1880; ca. the first-second century AD)

C . DAMIANO BAZILIVS ET EREDES PER PROCVRATORES EIVS

(inscribed *cippus*; context of discovery: hypogeum; discovery date: 1880; ca. the fourth century AD)

(c) Recently, the salvage excavations of the local department of antiquities at Tiba (Thebes) Street, have revealed three forms of Roman burials (Abd el-Maguid 2016: 66). Besides the shaft-and-chamber tombs, and cylindrical containers intended for infant-interment, there were fosse-graves dug into the rock, and covered with stone-slabs. In one case, a funerary *stela*, reused as a closing-slab, had a Roman legionnaire represented in relief, while making his libation (Plate DXCIX). The five engraved lines at the base, show the depicted figure as member of the Legio II Traiana Fortis, thus providing further evidence for the existence of a military cemetery west of Nikopolis.

Site 159: East of SG el-Sheikh Tram Station; Rodosli Street, off SG Avenue

Maps: V5

Sarcophagi: Cleopatra; Sidi Gaber; Mustapha Pasha [Roman]

In May 1936, during the construction of municipal garages for the Alexandria-Ramleh tramline at Mustapha Pasha, a marble sarcophagus was accidently discovered ca. 1.50 m below the street-level (Adriani 1940a: 127). On the façade, three garlands with pendant grapes, are supported by four dancing figures: two *potti* in the middle; two satyrs in a περίζωμα at either end. Within the central garland, a γοργών appears; the laterals display a satyr and a maenad in profile. On the short sides, are two female heads carved out in profile, within garlands supported by semi-Βουκράνια (Plate DC). The posterior was not worked, suggesting a sarcophagus intended to be placed against a wall. No traces of associated constructions were encountered though. The sarcophagus (height: ca. 1.30 m, 0.85 m without the lid; length: 2.22 m; width: 1.05 m) would have been recovered therefore, from a dismantled or quarried hypogeum. The find itself, is datable, judging by the decorative elements

on display, not later than the mid-second century AD. It seems analogous to another sarcophagus in marble, with a similar garland-decoration pattern (height: 1.80 m; length: 2.21 m; width: 1.07 m) (Graeco-Roman Museum, Inv. No. 23897) (Plate DCI) (Adriani 1934: 33-34). The latter, accidently discovered ca. 500 m to the west, at Rodosli Street, off the Sidi Gaber Avenue, while digging foundations for a new building, pertains to the Roman sarcophagi excavated sporadically within Cleopatra and Sidi Gaber.

Site 160: el-Moaskar el-Romani

Maps: V5

Necropolis: Mustapha Pasha [Ptolemaic]

A Complex of Hypogea: Achille Adriani (1933-35); EAO (1983-85; 1994; 2003)

In 1933-35, during levelling work in preparation for the construction of a military football field adjacent to the British barracks, the summit of a Doric architrave (part of the pseudo-peristyle of a hypogeum: Adriani's I) (*infra*: I-VII) was accidently unearthed (Adriani 1936: hypogea: 11-66, architecture: 67-132, topography: 133-134, finds: 135-168, conclusion: 169-176; *idem* 1966a-b: 128-138, No. 83-87; Tavv. 48-59). Excavations (September 1933 - July 1934; restoration: until May 1935) were subsequently carried out on site, under the supervision of Achille Adriani, then director of the Graeco-Roman Museum, assisted by Giovanni Peruto (chief-on-field), Banoub Habachi (museum service), and Orazio Abate (draughtsman). The outcome was a complex of at least, seven partially-preserved hypogea, along the west edge of el-Moaskar el-Romani (Roman Camp) Street, the section of it immediately south of the present-day TOLIP Hotel Alexandria (Plates: DCII; DCIII; DCIV). The vertical 'arm' of the L-shaped complex (labelled: III-VII) was excavated during the construction of the transversal street intended to link Lord Kitchener (Ahmed Shawqi - Ahmed Kamal) to the Corniche. The remnants of the seven hypogea investigated at the time by Adriani (Plate DCV), would have formed part of a larger complex which might have extended well to Ruffer (Syria) Street and beyond, towards Ceccaldi's analogous monument at Stanley Bay (site 161). Levelling works carried out to the south of hypogea (I) and (II), down to Lord Kitchener, indicate a hypogeum-free area of Roman hydraulic installations probably, in association with the *castrum Romanum* before Nikopolis (site 165) (see general plan of site: 8-17). The better-preserved of the hypogea (I-IV), antedate such installations. In fact, they are datable to ca. 250-150 BC: (I) and (III): the second half of the third century; (II): ca. the first quarter of the second

century, thus more or less contemporary with Thiersch's nearby hypogeum at Sidi Gaber (site 156). The distributional patterns of these structures (Plate DCVI), from el-Ibrahimiya (site 150a-c) to Stanley, past Cleopatra (site 155), Sidi Gaber, and Mustapha Pasha, emphasize the exploitation of the coastal plateau east of the city, to receive interments, in the Ptolemaic period and yet, during the Augustan Principality (utilization of the coastal plateau in the Roman period, sites: 150a; 152; 153; 154; 157a-b; 158b-c; 159).

It must be mentioned that the architectural setting seen today at the Mustapha Pasha funerary complex, is to a large extent, the product of an extensive restoration work carried out in 1934-35, under the supervision of Adriani, who has decided to give the excavated ruins, as the case with the Alabaster Tomb (1936) (147) and the Abu Sir tower (1937-39) (43), a rather glamorous appearance:

A propos des restaurations exécutées, des explications ne seront pas inutiles pour les amateurs acharnés de ruines qui nous reprocheront, peut-être, d'avoir trop restauré, d'avoir profané l'ancien avec le béton et même avec le béton armé! Voilà donc les deux raisons qui nous ont guidé dans nos travaux de restauration: I) conservation et protection des monuments; II) opportunité de leur rendre, là où les vestiges nous permettaient de le faire sans travailler de fantaisie, leur aspect originaire. Les deux raisons sont si intimement liées entre elles que je voudrais dire que la deuxième est une conséquence nécessaire de la première. Protéger c'est enforcer, c'est remplacer les parties écroulées, c'est couvrir.

(Adriani 1936: 12)

Hypogeum (I) (Plate DCVIIa-e) comprised: a large courtyard with ten branching-off chambers. An access-staircase of two branches and an intermediate landing (B1: length: 4.50 m; width: 1.59 m; B2: length: 1.46 m; width: 1.05 m; vaulted ceiling). Around the passage to B2, a deep incision into the stuccoed wall, signals the interlock of a doorframe. (1) The courtyard (access: NW. corner, via the Ionic doorframe of B2 (Plate DCVIIIa-b); 6.45 x 7.25 m; preserved height: 5.70 m) features a Doric pseudo-peristyle (a 4 x 4 colonnade of partially-fluted, plastered columns with smooth lower-parts; corners marked by the heart-shaped type). The floor is formed by a layer of beaten-earth (50 cm) laid upon the bedrock. At the centre of the courtyard, a sacrificial-altar, in masonry (quadrangular

in section: 0.96 x 1.05 m; height: 0.84 m; with adjacent footboard), had traces of the last act (ashes and burnt ossicles) as noted on discovery. Courtyard's south wall: a richly-decorated architectural façade, in polychrome, formed by three tapering intercolumnar-passages: two pilasters (capitals: a yellowish oval within a red box, surmounted by a projecting, triple-frieze cornice: Doric, Ionic, and Lesbian) supported a plain architrave on which rested a supressed Doric frieze of red *taeniae* and blue *guttae*, crowned with a moulded, triple-frieze cornice (Doric, Ionic, and Lesbian) as that of the pilasters. Whereas, the space between the passages and the engaged Doric columns is painted red (Plates: DCIXa-c; DCXa-c). Between the triple-frieze cornices of the side-passageways and the façade's plain architrave, are two rectangular openings flanking a central frieze atop the main entrance to the vestibule (8) (Plate DCXI). The painted fresco here, recalls in concept and style, but not in subject, the lion-hunt frieze of Manolis Andronikos' Tomb (II) at Vergina (Plate DCXII). In Mustapha Pasha (I), the theme is sepulchral in essence: three cavalrymen in Macedonian costume, are accompanied by two standing women, all turning towards an altar that constitutes, along with the mounted figure at the centre (most probably the deceased himself), the focal point of a graceful scene. Above, a Doric entablature comprises: a plain architrave, a frieze of alternating triglyphs and metopes, below a projecting cornice. Oddly, perhaps expectedly, instead of the triangular pediment, an Attic wall, partially built in masonry, atop the structure, features a set of jutting bands. The local element is attested by the six miniature sphinxes placed on upright bases on either side of the intercolumnar-passages (analogies, site 44: el-Anfushy Hypogeum II). They, among other elements of decoration, pertain rather to subsequent phases of alteration, than to an initial, exclusively-Hellenic setting. The court's west wall (Plate DCXIIIa-b): an Ionic doorway as access-point; two *loculi* cut at ground-level (violated; the left one is preceded by a low-quay). East wall (Plate DCXIV): three quadrangular alcoves (5; 6; 7). North wall (Plate DCXVa-d):: lateral intercolumniation: two irregularly-cut chamberettes (2; 4); at the centre: an alcove (3) preceded by a basin coated with a plaster layer (1.50 x 1.75 m; depth: 0.40 m).

Chamberette (2) (4.80 x 2.16 m; height: 4.00 m; vaulted ceiling with light-shaft: 0.90 x 0.70 m) is accessible via the northwest intercolumniation which had two protruding pilasters. The walls are partially decorated in zones: a plinth in red (0.16 m); white orthostats with a yellow-framing (0.96 m); an intermediate band of rectangular false-plates in red, delimited by engraved lines (0.22 m);

a wider band in white, bordered by a thin frame (1 m); a second band in white (1 m), within which six niches were opened at the same height, above the cornice:: five small ones (0.73 x 0.44 to 0.47 m; depth: 0.25 m): three cut into the north wall (Ionic framing), and two into the south wall (Doric framing); a larger one into the western wall (0.95 x 0.66 to 0.68 m; depth: 0.25; Doric framing). On the south wall, a large bird with spread-wings, represented in dark blue, seemed recognizable on discovery. Other faint traces of figurative motifs were recorded within one of the niches (Plate DCXVI). At the innermost part of the chamber, a low-platform is occupied by a deep well dug into the rock (0.90 x 0.80 m; depth: 7.00 m), with descending-recesses into its walls, and a plastered parapet in masonry, on either side of its mouth (only the one to the left is preserved) (Plate DCXVII). Associated with the well is a miniature basin at the end of the north wall, connected, via a terracotta conduit, to the pair of basins in the neighbouring alcove (i.e. 3), which communicate, in turn, with the one installed outside, at the courtyard (Plate DCXVIII). The hydraulic system pertaining to this section of the hypogeum indicates a cultic function for chamberettes (2, 3, and 4) in association with libation. At some point, however, three *loculi* were added onto the north wall of chamberette (2), violating the plaster coating of the initial setting.

Alcove (3) (1.60 x 2.20 m; height: 2.50 m; an irregularly-flattened, rock-cut ceiling) seems to have been originally analogous to the alcoves of the east wall (5, 6, and 7) judging by its plan. Modification includes a considerably-raised floor: ca. 0.95 m higher than the court's. At the same level, are the two mentioned-above basins, below which two contiguous niches (depth: 3.02 m) opened almost at the level of the courtyard. These would have served as deposits for objects in the enactment of funerary rituals, as is suggested by the recovered terracotta pots with burnt surfaces. On the east wall, a painted θόλος represents a surviving vestige of the alcove's figurative decoration (Plate DCXIX). A large, rock-cut *loculus* was opened at the centre of the alcove's back wall, to receive interments.

Chamberette (4) (3.15 x 2.12 m; height: 3.52 - 4.15 m; irregularly-cut, sloping ceiling) is accessible via a doorway installed at the NE. intercolumniation. The walls are decorated in zones: a red plinth (0.12 m); orthostats in ivory-white (in imitation of marble), with a yellow-framing (0.92 m); a black strip (0.16 m); a second band in ivory-white (0.73 m); a stuccoed cornice; an upper band in white.

Two *loculi* cut into the back wall, violated its painting decoration. One yet retained its closing-slab at the time of excavation. Moulded into a false-gateway around what was apparently, a figurative scene, the stuccoed *loculus*-closing slab is an explicit testament of architectural illusionism within Alexandrian sepulchres (Plate DCXX). On the same wall, above the latter, traces of a head in profile, and a sailing boat, seemed barely recognizable (Plate DCXXI), as were other drawings on the east wall.

Alcoves (5; 6; 7) (a homogeneous set: 1.30 x 1.45 m) installed within the intercolumniation of the court's east wall, to serve as vestibules to three large *loculi* cut into their back walls. The *loculi* had sloping roofs, and rectangular openings once closed with tapering false-doors. Fine stucco of a richer, rather lively polychrome was applied to decorate the walls in zones. Alcove (6): a plinth in red; orthostats in blue; a bluish-black band; a wide band in dark-red speckled to imitate porphyry; a cornice in white; an upper band in white, terminating with a red strip (Plate DCXXII). Alcove (7): a plinth in red; polychrome orthostats with false-slabs in relief, imitating marble; a narrow band in brownish-black; an intermediate band in yellowish-gold; a cornice in white; a wide band in white, terminating with a red strip (Plate DCXXIII). At a point, the floor of all three alcoves (5; 6; 7) has been slightly raised, and covered with a conglomerate pavement.

Vestibule (8) (9.18 x 3.04 m; height: 3.90 m; vaulted ceiling) is accessible via the intercolumnar-passages of the court's south wall. Its in-zone decoration is almost identical to that of chamberette (2) (see *supra*). The architectural framing of the three passages seems absent on the vestibule's north wall (Plate DCXXIVa-b). On the opposite side, the south wall served as a façade of a κλίνη-alcove (10) (the nucleus of the hypogeum) with an asymmetrically-arranged, Doric doorway cut at either side, below a miniature window-opening (Plates: DCXXV; DCXXVIa-b). A number of rock-cut *loculi* were added subsequently: four into the west wall, one into the east wall, and two at the west end of the north wall (Adriani's 1936 plan however shows at least, three *loculi* into the east wall). Whereas, benches in masonry, were built in front of the rock-cut *loculi* of the lower row at either end of the vestibule.

Chamberette (9) (2.60 x 3.40 m) was already largely destroyed on discovery. Traces of a *loculus* are evident on the east wall. Κλίνη-alcove (10), hypothetically-reconstructed, is inferred from the

general plan of the hypogeum. Its remnants include: two Corinthian pillars flanking the entrance; fragments of the west wall, with the faint traces of painted decoration; a platform at the threshold; the leftovers of stucco painted in zones, of which only a red plinth, light-green orthostats, and an upper band in yellow, were recognizable on discovery. Chamberette (11) (3.05 x 3.00 m) had *loculi* cut into the south and west walls. Onto the stuccoed left wall of the entrance, Greek names listed in two vertical lines, are engraved (Plate DCXXVIIa-b).

Hypogeum (II), of an axial-arrangement (Plate DCXXVIIIa-b), comprised: an access-staircase (8.00 x 1.55 m; height: 3.20 m; vaulted ceiling) leading into a rectangular landing (2.47 x 1.53 m) to a short, westwards branch of three steps, which, in turn, ends on a Doric doorway (Plate DCXXIXa-b). (1) the courtyard (6.25 x 6.70 m) has an architectural façade on the south side, represented by two Doric columns between a pair of pillars marking the NE. and NW. corners of an intermediate portico (2). Above the façade, the Doric frieze (plain architrave; alternating triglyphs and metopes; projecting cornice), set below a curtain of blocks, extends along the other sides of the courtyard. A sacrificial altar built in masonry (1.04 x 0.89 m; height: 1.09), off-axis (placed slightly towards the east), had the remains of the last act (burnt animal bone) yet preserved on discovery. South of the altar is a footboard in masonry (0.68 x 0.48 m; height: ca. 0.50 m) (Plate DCXXXa-b). (2) An intermediate portico (6.25 x 3.20 m; height: 4.50 m; vaulted ceiling) with two pairs of Doric columns (diameter of north pair: 0.56 m; diameter of south pair: 0.66 m; height: 3.59 m; partially-fluted: smooth lower-parts; stylobate: ca. 0.10 m) (Plate DCXXXIa-b). Rock-cut *loculi* were later added on either side: two into the east wall, and one into the west wall. (3) An antechamber (5.40 x 5.30 m; height: ca. 5.25 m; vaulted ceiling) featuring two plastered benches (4.70 x 0.97 m; height: ca. 0.44 m) painted in polychrome, false-marble-slabs, at either side where *loculi* have been irregularly-arranged on the lateral walls: nine into the east wall, and on the opposite side, four were still recognizable among other partially-collapsed ones. In front of the alcove opening onto the back wall, a *trapeza* (1.40 x 0.70 m; height: 0.67 m) has been built in masonry coated with stucco in imitation of alabaster (Plate DCXXXIIa-b). (4) A largely-collapsed κλίνη-alcove (ca. 2.50 x 1.30 m; est. height: 3.50 m; vaulted ceiling) is accessible via a passageway flanked by two pillars (the height of the better-preserved: 2.73 m) quadrangular in section, crowned with Corinthian capitals, and painted a layer of stucco in imitation of alabaster.

Above, a dentilled cornice extends atop a double-lintel. The alcove itself, is occupied, for the most part, by the funerary κλίνη of which only the lower fragment survived. Whereas, on the upper part of the plastered walls, are faint traces of a band painted floral or animal motifs. (5) Another κλίνη-alcove (3.25 x 2.15 m; height: ca. 2.50 m; vaulted ceiling), opened at the courtyard's SW. corner, is accessible through a passageway flanked by two partially-preserved half-columns (smooth) leaning against the side pillars. Inside, a κλίνη-sarcophagus (1.05 x 2.11 m; height: 1.75 m; façade: 2.75 x 1.22 m) is decorated with mattresses and cushions imitated in polychrome, and a frieze of ἔρωτες and ψυχαὶ (Plate DCXXXIIIa-d). On the alcove's walls, were the faint traces of a painted pilaster. (6) A rock-cut annex (1.45 x 1.10 m; quadrangular in section) encloses the mouth of a well (depth: 5.50 m) dug into the rock, with walls coated with rows of stone blocks (partially-built in masonry). Onto the north wall, a chamber (7) (5.00 x 4.15 m), already largely-collapsed on discovery, was opened. Remnants of two coarsely-constructed high-benches were evident on either side of the chamber. Whereas, terracotta pots bearing signs of regular fire-exposure, and other charred remains found scattered on one bench, indicate a space intended possibly for ritual ceremonies: the preparation of funerary meals which were more likely consumed at the opposite end, within the antechamber (3) of the κλίνη-alcove (4): the section of Hypogeum (II) constituting the nucleus of its initial setting.

Hypogeum (III), of an axial-arrangement (Plate DCXXXIVa-b), comprised: an access-staircase of ten steps (4.60 x 1.10 m), leading into a landing followed by a shorter-branch of four steps, which ends on a passageway. (1) A courtyard (9.17 x 9.06 m; max. preserved height: 3.27 m) larger than usual, with excavated shallow-trenches bounded by limestone slabs, hence the possibility of a spacious, open-air garden (Plate DCXXXVa-b). On the southwest, a bench has been built near the main entrance. Miniature staircases, cut at either side, enabled communication between the courtyard and ante-chamber (6), via two L-shaped corridors (5-5'). An arched-opening with a parapet, gave access to a confined space (1.30 x 0.90 m; height: 1.50) coated with a plaster layer: perhaps, a water-reservoir installed at the NW. corner of the court. (2-3) Onto the south wall of the courtyard, a semicircular-recess opened. It is accessible via two successive passageways already largely collapsed. Of the first, remained two pillars supposedly supporting an architrave, painted to imitate alabaster. The other pair of pillars in polychrome, imitated marble featuring red patterns, above which, a plastered lintel

in white, was decorated with a Doric *kyma* in yellow, red, and blue (Plate DCXXXVIa-b). Between both passageways, two intermediate annexes cut into the lateral walls, were occupied by benches built in masonry, with a pseudo-construction in *opus isodomum* painted on their plastered walls. In the innermost section, the curved bench of an *exedra* (height: 0.55 m) was coated to imitate variegated marble: yellow-brownish veins and three depicted gazelles (Plate DCXXXVII). The wall rising above the bench is painted in zones: a plinth in red; orthostats imitating alabaster; an intermediate band in red; an upper band in white. Towards the centre of the apse itself, slightly to the left, two shallow-niches were cut, probably to receive *ex-votos* (Plate DCXXXVIIIa-b). The one at the centre (1.27 x 0.70 m; height: depth: 0.75 m) had a frame executed separately in limestone, then inserted. Traces of the original paint within the niche were recognizable on discovery. In fact, the ceiling represented a small carpet (Plate DCXXXIX). A projecting cornice ran along the upper part of the apse-wall. (4) The largely-collapsed architectural façade on the courtyard's north side (8.80 x 1.90 m; height: 1.50 m; set upon a podium) presented a pseudo-Doric colonnade with five intercolumnar-passageways of which the two at either end, were painted false-doors (Plate DCXLa-c). All six engaged-columns were partially-fluted, with smooth lower-parts. The outermost ones were reduced to quarter-columns. Above, a Doric entablature constituting a plain architrave, alternating triglyphs and metopes, and a projecting cornice, is conjectured. Traces of polychrome painting were recorded on the stuccoed façade; geometric motifs seem evident on the false-doors. A pair of staircases (0.66 x 3.00 m; 1.65 m) led, through narrow corridors (5-5'), up to the raised section of the hypogeum (4, 6, and 7). Ante-chamber (6) (4.25 x 5.00 m), with a sacrificial-altar (1.18 x 1.18 m; height: 0.56 m) and a footboard in masonry, was, as the architectural façade, conjectured from the extant fragments encountered on discovery. Through a wider passageway onto the back wall (only the pilasters were preserved), an alcove (7) (3.10 x 2.00 m) has been accessible. The latter is almost entirely occupied by a κλίνη-sarcophagus (3.00 x 1.16 m; height: 1.25 m) on a low-platform, and preceded by a miniature stool (Plate DCXLIa-c). On discovery, traces of polychrome painting were recognizable on the alcove's walls, on the cushions and mattress of the κλίνη-sarcophagus, and on the decorative (floral and figurative) bands extending lengthwise, between the worked legs of the sarcophagus.

Hypogeum (IV) (Plate DCXLII) to the north of (III), comprised: an access-staircase leading into an L-shaped ambulatory (1) (Plate DCXLIIIa). (2) A quadrangular (ca. 5.10 x 5.10 m), Doric peristyle with four corner-pillars (Plate DCXLIIIb-c) (analogies, site 161: a funerary monument further east, at Stanley Bay). The partially-fluted columns had smooth lower-parts. Within the intercolumniation were remnants of walls built of irregularly-hewn stone in clay-and-sand mortar. Almost at the centre of the peristyle a sacrificial-altar (ca. 0.90 x 0.90 m; height: 0.70 m) in masonry, has been placed next to a footboard to the south. About two meters to the north, was a circular-altar in limestone (diameter: 0.41 m; height: 0.48 m). Whereas, a rock-cut conduit ran from the staircase-landing towards the SE. corner of the peristyle. (3) A rectangular *loculus*-chamber (ca. 5.80 x 3.10) south of the peristyle, features thirteen irregularly-arranged *loculi* onto its walls (Plate DCXLIIId). Two *fossés* were dug into the floor: one contained a cylinder-shaped sarcophagus-jar in terracotta (infant-interment?). Another burial, as well *in situ*, is recorded within a pair of sarcophagus-jars, in the central *loculus* of the west wall. (4) West of the peristyle were the remains of a quadrangular basin in masonry (ca. 1.18 x 0.95 m; height: 0.80 m; with drainage-hole), installed against the SW. corner-pillar to serve as a drain. (5) At the north end of the hypogeum, a largely-destroyed chamber (5.90 x 3.10 m) seems to have been built on the axis of the other constituents: the peristyle (2) and the *loculus*-chamber (3), suggesting an axial plan for the funerary structure. Hypogea contiguous with Adriani's partially-excavated (IV), are glimpsed at the NE. corner where a passageway (probably dug by tomb-robbers) has led to an adjacent environment already violated (see *infra*, Hypogeum V).

Proceeding northwards, Adriani encountered "un grand fossé rectangulaire" bounded, on the north, by a large barrier carved out of the rock (preserved height: 5.50 m). At one end, the remnants of a wall in masonry, were recorded (Plate DCXLIV). Accordingly, a hypogeum, labelled (V), has been conjectured immediately north of (IV), in an area extensively exploited by stone-quarriers, yielding Adriani's "grand fossé rectangulaire". At about seven meters north of the above-mentioned barrier, a *sondage* revealed the scant vestiges of yet another hypogeum, labelled (VI) (Plate DCXLV), attested by: (i) the traces of a wall running E-W, with thresholds; (ii) a section of an access-staircase ending with a passageway on the alignment of a largely-collapsed wall; (iii) the capital of a stuccoed Doric column analogous to those of the neighbouring hypogea (I-IV). A possible limit for the complex in

question, would be proposed to the north of (VI), given the negative results from Adriani's *sondage* (α) (see *supra*, general plan of site). Hypogeum (VII): basically, the upper (surviving) parts of a rectangular chamber featuring regularly-arranged rows of *loculi*, west of (III), has remained, for the most part, inaccessible, being within the contiguous enclosure of the ex-British barracks at Mustapha Pasha.

In 1983, during the construction of a military residential-compound to the west of el-Moaskar el-Romani Street, the remnants of a hypogeum analogous to Adriani's, were accidently unearthed immediately to the southwest of hypogea (I) and (II) (Leclant and Clerc 1985: 339, No. 4b; Rodziewicz 1995: 229, 232, note 33; Adriani 2000: Tav. XXV-XXVI.1-2; Bonacasa and Minà 2015: 155-175). Excavations were carried out intermittently, by the Egyptian Antiquities Organization (EAO: presently the SCA: 1983-1985), Mieczysław Rodziewicz (PCMA, Warsaw: 1994), and the Italian Archaeological Mission in Alexandria (University of Palermo: 2003). The partially-excavated hypogeum comprises a large Doric pseudo-peristyle (a 6 x 6 colonnade; use of corner-pillars) around a spacious courtyard of ca. 140 m^2, with branching-off funerary chambers (Plates: DCXLVI; DCXLVIIa-b). Its plan, architectural setting, and find-spot, indicate a Hellenistic hypogeum that forms an integral part of Adriani's third-second-century BC complex (hypogea I-VII), hence the assigned label (VIII): aka the Great Peristyle Tomb for its court.

Site 161: Stanley Bay

Maps: V5

Funerary monument: Stanley [Ptolemaic]

On the eastern environs of Alexandria, Colonna-Ceccaldi reported in August 1868:

En marchant en avant (i.e. eastwards), le long de la mer, on atteint bientôt un monticule de terres couvrant probablement aussi des ruines. Ce tertre nous cache l'extrémité d'un cap. Gravissons-le. Nous dominons les restes d'un petit temple dorique, entièrement déblayé et surplombant presque les flots. Il est séparé par une baie d'un autre promontoire (opposite side of Stanley Bay) où ne se voit aucun vestige de construction et d'où la vue du sacellum (a miniature shrine) qui nous occupe a été prise.

(Ceccaldi 1869: 268-272)

Ceccaldi's "*sacellum*: un petit temple dorique", which was first reported in 1865, by J. Friedländer, became associated among nineteenth-century scholars, with relevant, cultic as well as sepulchral monuments known primarily, from literary sources: (1) the promontory of Zephyrium, the site of a shrine to Aphrodite-Arsinoe; (2) the tomb of Stratonike, the mistress of Ptolemy II Philadelphos:

After the canal which leads to Schedia, one's next voyage, to Canobus, is parallel to that part of the coast-line which extends from Pharos to the Canobic mouth; for a narrow ribbon-like strip of land extends between the sea and the canal, and on this, after Nicopolis, lies the Little Taposeiris, as also the Zephyrium, a promontory which contains a shrine of Aphrodite-Arsinoe (1).

(Strabo, Geōgraphikȅ: XVII. 1.16)

And the second king of Egypt, Ptolemy Philadelphus by name, as Ptolemy Euergetes relates in the third book of his Commentaries, had a great many mistresses,—namely, Didyma, who was a native of the country, and very beautiful; and Bilisticha; and, besides them, Agathoclea, and Stratonice, who had a great monument on the sea-shore (2), near Eleusis (suburban settlement); and Myrtium, and a great many more; as he was a man excessively addicted to amatory pleasures.

(Athēnaios, Deipnosophistaí: XIII. 37)

The remnants described by Friedländer, and Ceccaldi after him, are basically the leftovers of a Doric peristyle (10.92 x 7.30 m; 4 x 6 columns; height: 5.00 m; diameter: 0.70 - 0.80 m at the base; intercolumniation:: length – six columns: 1.15 m, breadth – four columns: 1.17 m) (Plates: DCXLVIIIa-b; DCXLIXa-b) (Mahmoud-Bey 1872: 66-67; Neroutsos 1888: 87-90; Botti 1898c: 74-75; Botti and Simond 1899: 57-60; Adriani 1936: 68-70; *idem* 1966a-b: 127, No. 81; Tav. 47, Fig. 176, 178-180). Partially-fluted, as they had smooth lower-parts, the columns, except for two lateral ones which rested on a limestone bulk, stood on a stylobate-step about 0.10 m higher than the ground-level. Marking each corner, was yet a heart-shaped column. Within the peristyle, Friedländer recognized the remains of a sacrificial-altar upon which the bones of the last act were preserved. Analogies (general plan; architectural setting) with the nearby complex of Mustapha Pasha (site 160), suggest a Doric peristyle: a central courtyard with branching-off burial-chambers signalled by rock-cut grooves partially filled with accumulated earth

(*loculi*; Friedländer), and wells in masonry (funerary-cult associate; Ceccaldi and Simond), recorded at short distances from the Doric colonnade. Its proximity to the Mustapha Pasha hypogea indicates a contemporary structure of ca. the third-to-second century BC: perhaps, an eastwards-extension.

Site 162: Antoniadis Gardens

Maps: V5

Hypogeum: Smouha [Ptolemaic]

In 1904, Hermann Thiersch reported:

Im schönsten Garten Alexandriens, im Park des verstorbenen Sir John Antoniadis (owner), liegt ganz hinten, ebenfalls in stiller Verlassenheit ein anderes antikes Grab. Man erreicht es, wenn man den Palmenhain, der weiter zurück hinter der Villa liegt, nach links hin durch wandert und zwischen den Bananen unter der Pergola hinschreitend zu dem Oleandergebüsch gekommen ist, das seine Nähe verbirgt. Denn dies Grab liegt ziemlich tief unter dem Boden, ein schräger Felsentunnel mit vielen Stufen führt hinab zu einem nach oben offenen Mittelraum oder Atrium, um welches sich wie beim antiken Haus die anderen Säle gruppieren, der prächtigste Raum mit den Hauptgräbern dem Eintretenden gerade gegenüber … <<Das Grab Adams und Evas>> nennt das Volk heute den düstern Ort in diesem sonst so paradiesischen Garten.

(Thiersch 1904: 6)

The Antoniadis hypogeum was investigated and recorded by Hermann Thiersch during the Second Expedition von Sieglin (1900-02), but discovered a few years earlier (Thiersch 1904: 6-17; Adriani 1966a-b: 143-144, No. 90; Tav. 64-65, Fig. 219-222). It consisted of (Plate DCLa-b): an access-staircase of forty-four steps (vaulted ceiling) ending on a landing (length: 1.82 m), into the courtyard (A) (5.20 x 5.20 m): east and north: an architectural façade with a pair of pillars flanking the central entrance to (B) and (F); west: a wider passageway (vaulted ceiling; moulded jambs) to (D); south: three asymmetrically-arranged openings into alcove (C), the landing of the staircase, and a vaulted annex (probably cut to enclose a miniature well). As in Mustapha Pasha (I) and (II) (site 160), a Doric frieze of alternating triglyphs and metopes, ran above a plain architrave. (B) A *loculus*-chamber (3.36 x 5.30 m; vaulted

ceiling) accessible via three intercolumnar-passages formed by four smooth pillars, with the central intercolumniation being wider than the laterals. Rock-cut *loculi* are arranged in three rows: some, with traceable perimeters on the wall, were not cut; two, enlarged, served as burial-chamberettes. (C) An alcove (ca. 2.25 x 1.92 m; main structure: vaulted ceiling; passageway and niches: flat ceiling) accessible through a rectangular entrance with two pairs of pillars, had three rock-cut niches: one into the back wall, and two into the side walls. These were occupied by low-benches carved out of the rock. (D) A *loculus*-chamber (4.17 x 4.60 m; vaulted ceiling) analogous to (B) (Plate DCLI). (E) An irregularly-cut *loculus*-chamber (5.50 x 4.40) added to the north of chamber (D). (F) A rectangular-vestibule (5.40 x 2.00 m; vaulted ceiling) accessible thru three intercolumnar-passages of a façade analogous to that of (B), yet with a κλίνη-alcove into the back wall, dictating a much-wider, central intercolumniation for a view, hence the supressed laterals (Plate DCLIIa-b). The vestibule's back wall is a richly-decorated architectural façade of a rectangular passage into an alcove, with two smooth pillars supporting a plain architrave. Between the latter and a projecting cornice extending around the vestibule, are traces of several holes intended to receive nails for the suspension of festooned garlands. On either side of the entrance to the alcove (G), a *loculus* with a flat ceiling and stuccoed cornice, is cut at the floor-level. Above, a pseudo-*aedicula*: an illusionistic representation in relief, contained a large circular-shield. A double-pillar at each corner of the vestibule, served to support its projecting cornice. Whereas, seven rock-cut *loculi* were added at a point, onto the lateral walls. (G) The κλίνη-alcove itself, is decorated with double corner-pillars supporting an architrave below a dentilled cornice. A funerary κλίνη with a pair of mattresses in polychrome, is carved out of the back wall, where a large, on-alert ἀγαθοδαίμων is seen upon a cushion painted pink, red, and blue bands (Plate DCLIII). On the curtain between the legs of the κλίνη, were faint traces in polychrome, of marble-imitation. A motif of a large circular-shield, like that within the pseudo-*aediculae*, reoccurs here, on the lateral walls. As in the vestibule, five rock-cut *loculi*: three into the back wall, and one into either lateral wall, seem to have violated the initial setting of the κλίνη-alcove (G): the nucleus of the hypogeum.

At least, two principal phases of construction are inferable considering the hypogeum's general plan and architectural setting: (I) a descending staircase into a central courtyard with a well and a

banqueting/recess-space on one side (cultic), and the antechamber of a κλίνη-alcove on the other (burial), all following an axial-arrangement; (II) three *loculus*-chambers (B; D; E) are added off-axis, to accommodate more corpses, with twelve *loculi* violating the hypogeum's nucleus (F; G): the pair of *loculi* cut below the vestibule's pseudo-*aediculae*, pertain rather to phase (I) or otherwise, to an intermediate phase. A possible date ca. the second century BC, is proposed for construction phase (I) at Antoniadis. Given its find-spot, the funerary structure in question, might have been associated with the suburban settlement of Eleusis conventionally located southeast of the ancient metropolis.

Site 163: Bir Masoud; el-Dahab; Gabr el-Khur (aka Miami)

Plate: DCLXIV

Hypogea: Sidi Bishr [Ptolemaic; Roman]

In 2008-10, the Hellenic Institute of Ancient and Mediaeval Alexandrian Studies (HIAMAS) has surveyed the promontory known today as Bir Masoud, at Sidi Bishr, and two islets NW. (el-Dahab) and NE. (Gabr el-Khur) of it (Tzalas 2012: 131-143; *idem* 2013: 4; *idem* 2015: 356-360). As is the case with the promontory of el-Montazah further to the east: the approximate site of Taposiris Parva (164), this headland has been severely affected since antiquity, by natural (coastal erosion; subsidence) and artificial (stone-quarrying; breakwaters) phenomena, as is evident on the rock morphology within the surveyed zones of interest. The present-day configuration shows the eroded semicircular-cliff jutting into the sea, north of Khaled Ibn el-Walid Street. Offshore, are two rock-features breaking the water-surface (Plate DCLIV). The main promontory takes its name from a rock-cut 'well'. In fact, it is the light-shaft of an intricate set of partially-submerged, subterranean galleries accessible from an irregularly-cut orifice ca. 30 m north of the fenced 'well' (Plate DCLVa-b). The galleries would have formed part of a rock-cut hypogeum, the greater parts of which were being eroded constantly, by wave action, with the remnants already quarried, as indicated by the marks left on the cliff, above the orifice, and yet, by others evident on the seabed, on the axis of the submerged galleries, for at least, 30 m northwards, into the sea. Other remnants of the hypogeum in question, were traceable within a cove (ca. 80 x 40 m) between Bir Masoud and the neighbouring miniature promontory of the Automobile Club: one vaulted gallery with lateral cuts signalling the location of possible *loculi*. Rock-cuts extend as well, to the Automobile headland where they are circular and elliptic in form,

or forming, otherwise, a staircase of twelve steps. The reefs and shoals cluttered northeast of the main promontory, ca. 1.50 m above the water-surface, seem to have connected Bir Masoud to the islet of Gabr el-Khur in antiquity. The latter, about 180 m offshore, is an oblong rock-feature of ca. 220 x 60 m, with a recorded max. height at five meters (Plate DCLVIa-b). During the HIAMAS surveys, rock-cut structures have been identified on the islet: a relatively-well-preserved hypogeum of two chambers (A) (Plates: DCLVII; DCLVIII; DCLIXa-b). Its location at the heart of el-Khur islet is indeed central to its survival, unlike other unrecognizable structures constantly subjected to waves and currents. Violation on site, relates however, to the (re)use of *loculi* as lime-furnaces, hence the Arabic name Geziret Gabr el-Khur: the islet of sepulchral furnaces. An access-staircase of nine steps (ca. 2.99 x 1.47 m; height: ca. 3.31 m) led into an irregularly-cut antechamber (north wall: 4.04 m; south wall: 3.94 m; east wall: 2.22 m; west wall: 3.71 m) with an annex cut at one corner (1.00 x 1.30 m; depth: 0.75 m; enclosing a well?), and two shallow niches for cinerary urns or *ex-votos* (?) (widths: 0.80 m; 0.30 m; depths: 0.30 m; 0.15 m). An irregularly-cut chamber (west wall: 1.65 m; east wall: 1.88 m; back wall: 1.73 m) is accessible through an opening made on the antechamber's lateral wall. It had a *loculus* cut at one corner (0.57 x 1.00 m; depth: 1.75 m). Further to the east of Hypogeum (A) is a levelled-space (B) measuring ca. 45 x 30 m, delimited from the north, east, and south, by rock-cut walls varying from 2.50 to 4.00 m in height (Plate DCLX). Few corridors filled with seawater (C1-C4), are cut into the rock, north and west of the hypogeum (Plate DCLXI). Towards the southern shore, a rectangular basin (D) (1.15 x 1.67 - 1.90 m; preserved height: ca. 2.05 - 2.44 m) is cut into the rock (Plates: DCLXII; DCLXIIIa-b). Deep, narrow ridges were recorded on the walls of the basin (width: ca. 0.10 to 0.15 m; depth: ca. 0.07 to 0.18 m). Ceramic finds recovered within the basin, include potsherds, broken glass, and porcelain: these are basically fragments of ancient utensils mixed with mediaeval *amphorae*, modern ware, glass shards, and porcelain, suggesting an extended range of (re)use for the nearby funerary structure (Hypogeum A).

At 700 m west of Bir Masoud, another islet, known today as el-Dahab, breaks the water-surface (ca. 30 x 100 m; max. height: 2.00 m; ca. 360 m from the nearest point on the littoral). Apart from a deep groove at the northern side of the islet, subsequent to stone-quarrying activities, no vestiges have been recorded during the surveys.

The subsided zone surveyed by the HIAMAS, including the extensively-quarried promontory of Bir Masoud and the offshore islets of Gabr el-Khur and el-Dahab, would have formed a protruding headland of the coastal plateau in antiquity. The rocky cliffs in this region: 10 km east of Alexandria: 3 km west of Taposiris Parva, were probably utilised to receive interments, by the inhabitants of the rural estates (site 168) clustered on the narrow, calcareous ridge connecting Alexandria to Canopus, delimited by the sea (north) and the now-desiccated Abu Qir Lake (el-Maadiya: south) (Plate DCLXIV). Strabo relates:

After the canal which leads to Schedia, one's next voyage, to Canobus, is parallel to that part of the coastline which extends from Pharos to the Canobic mouth; for a narrow, ribbon-like strip of land extends between the sea and the (Canopic) canal, and on this, after Nicopolis, lies the Little Taposeiris (164), as also the Zephyrium, a promontory which contains a shrine of Aphrodite-Arsinoe.

(Strabo, Geōgraphikȅ: XVII. 1.16)

Site 164: el-Montazah Bay

Plate: DCLXVIa-b

Hypogea: el-Montazah [Ptolemaic]

In 1926, Evaristo Breccia reported:

Sulla costa retrostante all'isoletta (tea islet), presso la sponda occidentale della baia (el-Montazah) (Plate DCLXVa-b), (in 1925), esistono tuttora alcuni ipogei scavati nella roccia, i quali per quanto violati da tempo e spogli d'ogni decorazione e forse in parte rimaneggiati in età posteriore, per la pianta e per il tipo sono varianti degli ipogei d'Anfusci (site 44), di Suk-el-Wardian (site 48b) e di altre simili tombe di età ellenistica.

(Breccia 1926: 83-84)

The hypogea are located at present-day el-Montazah traditionally identified with Taposiris Parva: a small settlement beyond Nikopolis, on the roadway to Canopus or Abu Qir (Plate DCLXVIa-b). Given the plans drafted by M. Bartocci, the GRM draftsman, in 1925 (Plate DCLXVIIa-b), the structures seem

to follow an axial-arrangement: an access-staircase that leads down into a rectangular *atrium* (H1: ca. 5.25 x 3.50 m) with low-benches carved out of the rock, and an annex opened immediately to the left of the main entrance. In (H1), a semicircular niche preceded by a *podiŏlum*, is cut into the left wall (probably to receive *ex-votos*). A large apse on a higher level, is added onto the back wall, with six *loculi* in a radial pattern. In (H2), however, the *exedra* is replaced by a rectangular chamber with irregularly-arranged *loculi*. At the end of the lateral wall, a chamber violates the initial setting. Analogies with the rock-cut hypogea of the Pharian *nekropoleis* (44; 45), and that of Suq el-Wardian (48b), suggest a possible date for construction phase (I) at ca. the second-first century BC.

3.9.1.2) Military Edifices

Site 165: MP military residential-complex

Maps: V5

***Castrum*: Mustapha Pasha [Roman]**

Remnants of a *castrum Romanum* at the present-day district of Mustapha Pasha were reported by travellers as early as the eighteenth century. Richard Pococke relates in 1737:

Towards the sea (within the eastern suburbs), it is an uneven, high ground all the way to Nicopolis, on which there are many ruins (150-161); but about the site of Nicopolis, there are remains of a very extraordinary building, which is commonly called the Theatre (tradition), and I imagine to have been something in the nature of a Roman castrum (camp); it was built with an entrance in on every side, and six semicircular towers, and a square one at each corner, according to the plan I have given of it in Plate V (Fig. E) (Plate DCLXVIII).

By the manner in which the ground lies, there seems to have been some buildings within: It is built of small hewn-stone, there being three teers (tiers) of brick at the distance of every four feet and a half (1.371 m); the mortar is very thick, which made me conjecture that it was built towards the time of the lower Empire; the walls are not any where entire, but could not be less than twenty feet (6.096 m) high.

(Pococke 1743: 11)

In 1798-99, during the Napoleonic Expedition, Gratien Le Père recorded:

Parmi les ruines de la côte à l'est, on ne trouve plus que celles d'une vaste enceinte fermée par des murs de 7.00 à 8.00 mètres d'élévation; ouverts en quelques parties, les côtés de cette enceinte quadrangulaire, flanquée de tourelles, peuvent avoir 120 à 140 mètres de longueur. Les murailles de ces ruines considérables, qu'on nomme dans le pays Qasr Kyasserah (infra), c'est-à-dire, le château des Césars, sont d'une grande épaisseur; leur construction, en pierre blanchâtre d'espèce calcaire, et en briques rouges de grandes dimensions, présent l'appareil distinct de couches horizontales et séparées, de diverses hauteurs, à la manière des fabriques Romaines. C'est sur les hauteurs qui environnent les ruines de ce château, situé à 4350 mètres [2231^{t} 5^{d}] au nord-est (NE) de la porte de Rosette (Bab Sharq), que se donna la bataille sanglante du 30 ventôse an 9 (i.e. of the Revolution) [21 mars 1801], entre l'armée Française et l'armée Anglo-Turque.

(Le Père 1813: 292-293, No. 38)

The reported remnants of a *castrum Romanum* (the 18th-19th-century Qasr el-Kyasserah) before Nikopolis, had already disappeared by 1871 (Adriani 1966a: 101-102, Fig. H). Pocock's 1737 Plan shows a quadrangular structure, with four corner-towers, and six small ones of three quarters of a circle, integrated into each side, where a passage has been installed at the centre. Within the enclosure, were the remains of constructions in limestone and fired-brick. A Dionysiac mosaic, featuring the deity's attributes: a *thyrsus* and bunches of grapes, found signed by the mosaicist: ΣΗΜΠΡΟΝΙΟC, is one prominent encounter along with: a *praetorium* (headquarters); baths; statuary (a dedicatory issued by the Legio II Traiana Fortis in honour of Antoninus Pius: AD 157; Graeco-Roman Museum, Inv. No. 25771); epitaphs in Greek and Latin, inscribed on pedestals (Neroutsos 1888: 118, No. 45, 119-121, No. 48). Considering such corpus, a Latin epitaph records on October 26th, AD 174, a centurion of the Legio II Traiana Fortis had *praesidium vetustate collapsum* (Breccia 1911: 54, Cat. No. 73). Perhaps, expectedly, immediately to the west of the *castrum*, in present-day Sidi Gaber, funerary inscriptions attest a Roman, military cemetery. Interred there, were members of the above-mentioned legion stationed before the *oppidum Romanorum* (site 158b-c). Other associates include the suburban road identified by Botti and Noack (37; 38). The centurion epitaph (Graeco-Roman Museum, Inv. No. 216) reads:

Imp(eratoris) Caesaris M(arci) Aureli | Antonini Aug(usti) praesidi|um vetustate collapsum, renova|vit sub C(aium) Calvisium Statianum || praef(ectum) Aeg(ypti) per Valerium Maximum (centurio) | Leg(ionis) II Tr(aianae) Fort(is) VII kal(endas) nov(embris) Flacco | et Gallo co(n)s(ulibus) Anno XV.

3.9.1.3) Religious Edifices

Site 166: Between Fawzi Moaz and Tut-Ankh-Amun

Maps: V5

Sanctuary: Smouha [Ptolemaic]

In a letter sent on March 20th, 1843, to the Société de Géographie de Paris, Gauttier d'Arc, the Consul General of France in Egypt, reports:

Vous savez qu'il existe à I'est de cette ville, et sur la droite de la route de Rosette, un petit lac (the ex-Lake el-Hadra, now desiccated), qui n'est séparé du lac Mariout que par le canal de Mahmoudié. Ses eaux viennent presque baigner l'enceinte de l'ancienne ville. En se retirant dernièrement, elles ont laissé à découvert, tout auprès d'une chaussée antique que vous aurez remarquée, et à 500 mètres environ de la route de Rosette, les vestiges fort apparents d'un temple soutenu par des colonnes de granit et de deux statues colossales de la même matière, dont l'exécution m'a paru fort soignée. C'est à M. le colonel Galice-Bey (Barthélémy Gallice), directeur général du génie en Égypte, que je dois l'indication de ces restes précieux. Cet officier supérieur, auquel la nature de ses travaux a permis d'étudier plus spécialement les localités, a remarqué que l'emplacement de ce temple correspondait exactement avec l'issue de l'une des larges voies (the longitudinal ones) qui sillonnaient Alexandrie.

Ce temple (infra) avait 30 mètres de longueur. On retrouve encore sur l'emplacement même les fûts granitiques de 14 colonnes; mais le plus long de ces débris n'a guère que 4 mètres.

Les dimensions des statues (infra) sont les suivantes: coiffure, 1 mètre 60 centimètres; longueur du visage depuis les sommités frontales jusqu'au menton, 80 centimètres; profondeur de la statue à

la poitrine, 1 mètre 20 centimètres. II est à regretter que le monolithe dans lequel elles avaient été taillées soit aujourd'hui brisé en sept ou huit fragments épars.

(D'Arc 1843: 326-327)

Two years earlier, during his visit to Alexandria, Sir J.G. Wilkinson maintained:

He (Richard Pococke; visit: autumn 1737) also mentions the ruins of an ancient temple under the water (of el-Hadra Lake), about two miles from Alexandria (3 km east of Bab Sharq: ca. 3.42 km), which he conjectures to have belonged to Zephyrium, or some other place on the road to Nicopolis (hence the localisation within the eastern suburbs). He saw some columns there, 3 ft. (ca. 0.914 m) in diameter, three broken sphinxes about 7 ft. (ca. 2.1336 m) long, of yellow marble, and a female statue of red granite, 12 ft. (ca. 3.657 m) in length, with a fragment of the colossus of a man of very large dimensions (those reported by D'Arc?). Near this, were apparently, the remains of a portico, and a little to the south, a number of red-granite columns, which from their position, seemed to have belonged to a circular temple. They were mostly grooved, 3 ft. 3 in. (one meter) in diameter; and, of course, of Roman or Ptolemaic time. Other remains were also visible, and the rocks below the water's edge were cut into a form at once indicating the site of some very large edifice.

(Wilkinson 1843: 169)

The remains described by Pococke, Wilkinson, and D'Arc, seem to belong to the same edifice, one which appears on both maps of the ancient and modern city, issued by el-Falaki in 1865 and 1866 (Plate DCLXIXa-b) (Introduction, sec. d). The court-astronomer records:

Certains savants croient que cette vallée faisait anciennement partie du lac Maréotis; je le crois aussi; mais ce ne pût être qu'avant la fondation d'Alexandrie ou, au moins, avant le creusement du canal, par les premiers Ptolémées; car, étant complètement séparé par le canal navigable, ce lac aurait été desséché par l'évaporation ou par la main des hommes dans un but sanitaire. Du reste, le grand temple dont on voit encore les restes dans l'eau au fond de la vallée prouve par sa situation qu'il ne devait y avoir là aucune eau stagnante, aucun étang qui pût compromettre la

santé des prètres du temple et répandre l'infection par les miasmes que la chaleur du soleil, en dégagerait en été.

Ce temple se trouve à 180 mètres environ au Nord-Ouest du point situé, sur la prolongation de la rue canopique, à 700 mètres hors de la porte (i.e. his Canopic gate). Il a quatre plèthres environ de largeur (4 plethra: 110 m) sur un stade de longueur (a stadion: 165 m) parallèlement à la direction des rues longitudinales; on y voit, encore aujourd'hui, une quantité de socles à leur place primitive, de chapiteaux, de tronçons de colonnes brisées et de fûts entiers, le tout en granit rouge. Mais ce qui y attire l'attention des visiteurs ce sont les deux statues colossales dont on reconnait une pour celle de Cléopatre quoique brisée en trois morceaux comme l'autre' qu'on croit celle d'Antoine.

(Mahmoud-Bey 1872: 66-67)

On the grounds of the above-mentioned testimonies, it seems that the desiccation of Lake el-Hadra through the course of the eighteenth and nineteenth centuries, has allowed the identification of the remnants of an edifice of monumental nature, located about 3,420 m east of el-Shallalat Park: Rosetta Gate, within the urban block delimited by the streets of Fawzi Moaz and Tut-Ankh-Amun, in Smouha. The structure in question, is likely to have had portico(es), the fragmentary columns of which were repeatedly, communicated by the authors, together with fragments of Egyptian-style statuary in Aswan granite: a group of sphinxes and at least, four pieces belonging to a *colossus* of a royal couple in assimilation to Isis and Osiris: (1) the bust of a female figure; (2) two clasped hands; (3) the head, and (4) part of the left leg of a male figure (Plates: DCLXXa-b; DCLXXIa-b; DCLXXIIa-b). (1-2), once a property of Baron Raoul Warocqué, are kept at the Musée Royal de Mariemont in Belgium, since 1912. (3-4) were transported to the premises of the Graeco-Roman Museum of Alexandria, before 1907. When the museum was closed for renovation, the male head has been relocated to the archaeological park of Kom el-Shuqafa (site 53) where it remains today. As proposed by el-Falaki, the royal couple became widely identified with Cleopatra VII and Markus Antonius (or Caesarion?), suggesting a Ptolemaic, royal-cult temple at Eleusis, the suburban settlement mentioned by several writers in antiquity. Strabo, for instance, relates in the first century BC:

On the right of the Canobic Gate, as one goes out, one comes to the canal which is connected with the lake (Mareotis) and leads to Canobus (Abu Qir); and it is by this canal that one sails, not only to Schedia, that is, to the great river (the Nile), but also to Canobus, though first to Eleusis. Eleusis is a settlement near both Alexandria and Nicopolis, is situated on the Canobic canal itself, and has lodging-places and commanding views for those who wish to engage in revelry, i.e. both men and women, and is a beginning, as it were, of the "Canobic" life and the shamelessness there current.

(Strabo, Geōgraphikȅ: XVII. 1.16)

Strabo's descriptive account seems to hint towards a possible correlation between the Eleusinian settlement and the modern district of Smouha, including the Nozha-Antoniadis Park immediately north of the Mahmoudiya Canal (Plate DCLXXIIIa-b). In antiquity, Eleusis, where the renowned court-poet Callimachos and the Athenian priest Timotheos lived, was usually associated with a sanctuary of Demeter, the Greek goddess of agriculture and harvest, and her daughter, Kore (or Persephone) (Fraser 1972: 200-201, the πανήγυρις of Demeter). The reported remnants, being in the very same district, would, accordingly, bring forth the possibilities of an Eleusinian sanctuary where Ptolemaic queens were assimilated to the Greek deity and perhaps, to the Egyptian Isis. Southeast, the remnants of a second temple appear on the 1888 map of Tassos Neroutsos, suggesting an alternative site, one much closer to the canal (Plate DCLXXIV).

In 2008-2012, the Musée Royal de Mariemont (Belgium) and the Centre d'Études Alexandrines, in cooperation with the Egyptian Ministry of Antiquities, have carried out excavations on site, with the aim to 'investigate the nature of the monument in question' (Bruwier 2014: 21-33; Monchamp 2014: 35-97; Bruwier 2016: 38-39). The recent joint-excavations, directed by Francis Choël, had revealed the remains of two colonnades parallel with one another, and possibly forming together, the portico of a temple (Plate DCLXXVa-e). Prominent among the recovered corpus of ceramics, is one fragment of a lamp bearing a representation of Isis-βασίλειον while wearing the wheat-ears, hence assimilating a (late?) Ptolemaic queen to Isis-Demeter. The latter encounter would shed further light on the cult-practices within an Eleusinian τέμενος encompassing the portraits of Ptolemaic rulers in pharaonic guise (see *supra*, fragments pertaining to the *colossus* of a royal couple).

3.9.2) Physical Remnants without Known Historical Reference

3.9.2.1) Civic Edifices

Site 167: Falanga-Autofage; Sarkissian

Maps: V2; V4; V5

Mosaics: Camp Caesar; el-Ibrahimiya [Roman]

In 1893, Giuseppe Botti briefly reported a "mosaico romano, bianco e nero, nei terreni Falanga e Autofage" (Botti 1893: 14, Necropoli dell'Est (a); *idem* 1898c: 113, No. 7). The find was unearthed, in 1892, near "Café de l'Ibrahimieh, sous la villa Autofage". In 1924, Evaristo Breccia reported polychrome, tessellated mosaics displaying geometric motifs, accidently discovered during construction works at the Sarkissian property, next to Casino Esperia, between Camp Caesar and el-Ibrahimiya (Breccia 1924: 6-7, plate VI; Daszewski 1985a: 44, n. 112, 45, n. 124). Considering the find-spots, as recorded by Botti and Breccia, such encounters would have belonged to *villae suburbanae* cluttered along the coast, in the vicinity of the roadway connecting Alexandria to the *oppidum Romanorum*, Nikopolis (37; 38).

3.9.2.2) Religious Edifices

Site 168: Ras el-Soda, relocated to the Latin Cemeteries

Plates: DCLXXVI; DCLXXVII; DCLXXXVIa

Sanctuary: Sidi Bishr Qibly, relocated to el-Chatby [Roman]

In October 1936, the remnants of a sanctuary were accidently unearthed within a sand-quarry at el-Ras el-Soda, Sidi Bishr Qibly (Plates: DCLXXVI; DCLXXVII) (Adriani 1940a: 136-148; *idem* 1966a-b: 100-101, No. 56; Tav. 32, Fig. 113-115). The surviving parts consist of an Ionic tetrastyle temple built on a podium, and approached via a flight of steps leading up to a colonnade (Plate DCLXXVIIIa-b). Placed within the central intercolumniation is a foot carved in marble, and set upon a pillar: a votive offering bearing a Greek dedicatory commissioned by a certain Isidoros to the saviours, for healing his injured foot after a chariot accident on the road. The epitaph reads (Plate DCLXXIX):

Ῥιφθεὶς ἐξ ἵππων ἀπ ὀχήματος ἔνθ Ἰσίδωρος
σωθεὶς ἀντὶ ποδῶν θῆκεν ἴχνος μάκαρι

Beyond the colonnaded façade, a πρόναος (1), opened on either side, led through a wide gateway, into the ναός (2), which features a secondary-access on the eastern wall, apparently connected to a partially-preserved staircase of which only the first steps were traced on discovery, immediately to the east of the vestibule (Plate DCLXXXa-b). Alongside the bottom wall, is a low-bench in masonry, on which five marble statuaries were found, not on their respective pedestals, but leaning against the wall: from left to right (Plate DCLXXXIa-b): (a) Isis; (b-c) Canopic figures of Osiris-Hydreios (site 42); (d) Hermanubis; (e) Harpocrates (Plates: DCLXXXIIa-b; DCLXXXIIIa-b; DCLXXXIVa-b). Opposite the bench, a sacrificial-altar has been carved upon a marble-pillar. Other finds include two miniature sphinxes in black granite (length: 0.60 m; 0.47 m) (Plate DCLXXXVa-b). On either side of the ναός, a marble belt ran between the entrance and the low-bench. Two largely-collapsed chambers (3 and 4) were on the same axis, yet on a higher level than (1 and 2). The floor of (4) was paved with marble-splinters into a bed of mortar. Encountered within the same chamber were the remains of a *biclinium* in masonry. Other vestiges excavated to the east-northeast, some with hydraulic installations, are considered annexes to the main complex. At ca. 6.55 m south of the staircase to the votive foot, the remnants of an enclosure in coarse masonry, ran towards the southwest, away from the sanctuary. In 1995, the Egyptian Supreme Council of Antiquities conducted a salvage operation, dismantling the Ionic tetrastyle podium to be relocated to el-Chatby's Latin Cemeteries (147; 149), on the north side of the Abu Qir Road (Plate DCLXXXVIa-b).

The dedicatory inscription and statuaries recovered on site, seem to suggest an Isiac sanctuary. Perhaps, one associated with a *villa rustica* (a property of the salvaged Isidoros? *venerātus* of the local deity) situated in the countryside, south of the roadway connecting Alexandria and Nikopolis to the urban settlements in the east, such as Taposiris Parva (el-Montazah) and Canopus (Abu Qir). It is datable, in general, to the Roman period. The contextual associates indicate a narrower range within ca. the second-third century. Isidoros' rural-estate in the southern part of Strabo's "narrow, ribbon-like strip of land, between the sea and the canal (to Canopus)", closer to the shores of the Abu Qir Lake (el-Maadiya: now desiccated), might have belonged to the luxurious country-houses of the Canopic region, decorated with splendid statuary in marble, as those accidently discovered in 1973, at the nearby district of el-Mehammara, north of el-Ras el-Soda, including a reclining figure

of Nilus: a personification of the River Nile in association with the prosperity brought by the flood, to a leisured community of the countryside (Plate DCLXXXVII).

3.9.3) Literary Accounts Pending Physical Evidence

3.9.3.1) Civic Edifices

J) Hippodrome (ἱππόδρομος)

One of the literary sources which record a *hippodromos* in Alexandria (site 51), is the Book of III Maccabees, where the author, probably an Alexandrian Jew, narrates the prosecution of the Jews under Ptolemy IV Philopator, in the years that followed the Battle of Raphia (217 BC):

When these men (the Jewish captives), therefore, had been carried thus unto the port called Schedia (Chapter II, sec. 2.3.5), and the journey by water (through the Nile) was ended, according to the king's former decree; he gave further orders to put them into the Hippodrome, which was before the city, a place of vast circuit, and very fit for exposing them to the view of all who entered into the city, or who went out thence into the country to sojourn: that they might hold no communication with his forces, nor might have the favour of walls to enclose them (i.e. might not be honoured as to be admitted within the city walls).

(Maccabees: III. 4.11)

The narrative shows a hippodrome outside the city walls, yet without indicating its exact location. Having 'the canopic port of Schedia' in context, suggests that the Jewish captives would have been transported, via the canal, either to the Rhakotis hippodrome southwest of the city, or otherwise, to the one constructed outside the eastern periphery. Nevertheless, the notion of "exposing them to the view of all who entered into the city, or who went out thence into the country", is indicative of a structure on the roadway to the (Eleusinian-Canopic) suburbs. Accordingly, the 'hippodrome' mentioned in the Book of III Maccabees, seems to be that of Strabo (first century BC) and Plutarch (first-second century AD):

and then one comes to the Hippodrome, as it is called, and to the other (streets/villae suburbanae) that lie parallel, extending as far as the Canobic canal. Having passed through the Hippodrome, one comes to Nicopolis, which has a settlement on the sea no smaller than a city.

(Strabo, Geōgraphikȅ: XVII. 1.10)

But when Caesar (Octavianus) had taken up position near the hippodromos (having advanced with his army westwards, across the Nile Delta, i.e. from Pelusium to the eastern suburbs of Alexandria), Antonius sallied forth against him, and fought brilliantly and routed his cavalry, and pursued them as far as their camp.

(Plutarch, Lives, Antonius: LXXIV)

Whereas, the account of the Greek rhetorician Aphthonius of Antioch, in *Progymnasmata* (written ca. the fourth century AD), serves to reinforce the notion of two hippodromes in ancient Alexandria.

As one comes down from the (Rhakotis) acropolis (the Sarapeion: site 52), here is a flat place resembling a race-course (the hippodromos-circus: site 51), which is what the place is called; and here (in Alexandria), there is another of similar shape, but not equal in size (an athletic structure on a large scale, at the depression of el-Ibrahimiya Qibly-Sporting) (morphology of the terrain: sec. 2.1.2.2.1).

(Aphthonius, Progymnasmata: 12)

Conclusion

I. Urban Layout: Chapter II

(a) City Walls

In the current study, six criteria have been used to infer possible routes for the circuit-walls of the ancient city:

(i) Literary sources from antiquity and the Renaissance: terrain morphology.
(ii) Plates 31 (Antiquities V) and 84 (Etat Moderne II) of *Description de l'Égypte*: terrain morphology.
(iii) Excavations of Mahmoud el-Falaki (1864-66): remnants of ancient circuit in the NE. and south.
(iv) Excavations of funerary structures: chronology of use, and approximate geographical extent.
(v) Excavations of non-funerary structures on the urban fringe: relative location to (iv).
(vi) Course of the navigable Kibotos canal in the west, in relation to the urban circuit: sinuosity.

Eastern Peripheries

The importance of either plate of Le Père (1817) and Saint-Genis (1822), is utmost in glimpsing the urban and suburban terrain of antiquity, since they provide the first-detailed and last views of Alexandria and its environs prior to such profound changes in local topography, caused by modern urbanization thru the nineteenth and twentieth centuries. With exception to the areas within the Arab enclosure and the silted-up isthmus of the Ottoman village, habitation in Late Antiquity and the Middle Ages would have left minimum impact on the terrain elsewhere. It seems reasonable, therefore, to assume the configuration as depicted by the French cartographers around 1798-99, outside the Arab circuit, to have not been much different in antiquity: an assumption backed by the fact that almost all funerary structures west of el-Ibrahimiya (sites: 145; 146) were excavated at the mounds of el-Chatby and el-Hadra el-Bahareiya evident on the maps of *Description de l'Égypte* and on that of el-Falaki (maximum height: 20-30 m; now levelled). The patterns of distribution of sites cluttered within Wabour el-Meyah and Aflaton/Selim Hassan (west) and el-Ibrahimiya Qibly (east), and their chronology of use, indicate that these mounds were utilized by the Graeco-Macedonian settlers, ca. the late-fourth - second century BC, to receive interments (Plate DCLXXXVIII). Accordingly,

the eastern defences of the Alexandrian metropolis would have been fixed at the time, somewhere between the easternmost, contemporary civic edifices and the westernmost funerary structures.

The hypothesized course of the Ptolemaic periphery in the east (C3), varies from that proposed by el-Falaki for the Alexandrian metropolis during the Principality. An earlier line of defences, datable to the late-fourth - second century BC, would have ran north-south, about 500 m east of Bab Sharq (the eastern gate of the Arab town): 1,400 m west of el-Falaki's points (C) and (D) at el-Ibrahimiya Qibly: somewhere between transversal streets R2^{bis} (Suez Canal) and R3^{bis} (Aflaton/Selim Hassan). If two hypothetical contours, marked (C1) and (C2) on the featured maps (V1; V4), are extended in an easterly direction, from fortification-points (δ) and (ε), which correspond to the enclosure walls excavated at el-Khaledin Garden (site 134) and east of el-Silsileh (site 2), the first shall intersect with el-Falaki's L1, at the section of it within *insulae* L2-L'2-R2^{bis}-R3^{bis}. When a third contour (C3), running NW-SE, in conformity with el-Falaki's orthogonal grid, is extended from the L1-C1 junction, it joins the defensive line (C2) immediately west of the necropolitan mounds of el-Chatby where remnants of the earliest-known interments of the Ptolemaic city were encountered (site 145) (Plates: DCLXXXIX; DCXC). The extrapolated contour marked (C3), correlates with the inferred course of the Ptolemaic defences between transversal streets R2^{bis} and R3^{bis}, ca. 500 m east of the mediaeval Rosetta Gate. The geographical orientation of the defences (C1) and (C2) puts forth the possibility of a Ptolemaic βασίλεια rather independent at least, to a certain extent, from the dominant orthogonality of the grid plan within the urban enclosure (see *infra*, I.b). This notion is strengthened by various remnants found off el-Falaki's grid, mainly within el-Mazarita and el-Chatby: the areas corresponding to the Royal Quarter of Ptolemaic Alexandria where solar orientation is archaeologically evident (βασίλεια: 2; 131; 134; 138-9; 140a-1; 147). The presence of civic and defensive edifices following a solar orientation in accordance with Egyptian dynastic tradition, especially at the premises of the Ptolemaic βασίλεια, may be explained in the light of a priestly-adaptation at Buto, of the Greek toponym 'Αλεξάνδρεια', as recorded on the Satrap Stela, datable ca. 311 BC (sec. 1.4): the fortress of the King of Upper and Lower Egypt, the Son of Re, Alexandros. The designation of the historical founder of the city as the son of the local sun-god, provides a justification for a royal ideology which was central to planning a restricted quarter at Cape Lochias (el-Silsileh) with solar constructions off the city's Hippodamian

plan. In this context, religious and civic buildings, and streets (Karmouz: 52.I; Kom el-Dikka: 64a; 69c; 78), oriented obliquely within el-Falaki's grid, yet in conformity with the vestiges of the early βασίλεια, would have been symbolic in signalling a royal-affiliation. Whereas, the δρόμος excavated parallel with el-Khaledin enclosure, served to connect the solar βασίλεια to the Hippodamian metropolis.

Establishing a chronology of use for the eastern necropolises of ancient Alexandria, shows that the funerary structures west of Camp Caesar, el-Ibrahimiya, and el-Ibrahimiya Qibly (sites: 145; 146), were gradually abandoned in the course of the first century BC. This phenomenon, well reflected in the archaeological record, seems subsequent to living-space economy within the urban enclosure of the Macedonian founders. It is natural, therefore, to find the metropolis of the first century BC expanding in the only direction where urban development is possible, i.e. towards the east; north: Mediterranean; south: Lake Mareotis; west: Nekropolis. Habitation east of el-Falaki's $R2^{bis}$: approx. the Suez Canal Road, is archaeologically attested at the time of the Roman Principate, ca. the first-third century AD, judging by excavated remnants of dwellings (*villae urbanae*), sewers and canals, and thoroughfares, almost reaching Ahmed Lotfy el-Sayed: approximately street $R4^{bis}$ (sites: 32; 144; 148; 149a). These discoveries suggest that the areas between the Suez Canal Road (west) and Ahmed Lotfy el-Sayed (east) have been annexed in the Late Ptolemaic and Early Roman period. At the time, the construction of a new line of defences in the east, must have become a necessity. On his *carte*, el-Falaki presents a hypothetical contour for this second periphery (A - E), on the basis of surveying and excavations (A - B; B - C) on site, with one segment conjectured from local testimonies (C - D), and another extrapolated (D - E) (sec. 2.1.2.1). Perhaps, with exception to the (A - B), littoral segment (300 m), el-Falaki's periphery should be reconsidered in accordance with the terrain heights shown on the plates of Le Père and Saint-Genis. The (B - C) segment, to start with, where ruins of defences have been encountered, yet intermittently, over ca. two kilometres, to quote el-Falaki, cannot have reached beyond the east end of longitudinal street L4 (beyond ca. 1,050 m from point B), for as the case at the (C - D), conjectured segment (ca. 700 m), excavation in the subsided zone of el-Ibrahimiya Qibly must have been impossible. Instead, an alternative path, one favoured by the terrain, would have followed the steep slopes of the eastern mounds (those of el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly), to reach at el-Falaki's point (E), hence bypassing a depression suitable for the construction of a hippodrome on the urban fringe (contour C4) (Plates: DCXCI; DCXCII) (site 51; 3.9.3.1, J).

The mode of construction, as recorded by el-Falaki at the excavated, northeastern segment of the second periphery, denotes the Roman-developed *opus caementicium*: a technique introduced in the course of the first century BC (Vitruvius' lime-*pozzolana*), to become rather predominant by ca. the mid-first century AD. An initial phase of construction for a circuit accommodating the new frontiers, would have pertained, accordingly, to the time of the Julio-Claudians, around 27 BC - AD 68. In his biography of Markus Antonius, Plutarch narrates the events taking place during the final days of Lagid rule, as the forces of Octavianus (Augustus) approach the city from the east:

At daybreak (August 1st, 30 BC), Antonius in person, posted his infantry on the hills in front of the city, and watched his ships as they put out and attacked those of the enemy; and as he expected to see something great accomplished by them, he remained quiet … and after being defeated with his infantry he retired into the city.

(Plutarch, Lives, Antonius: LXXVI)

Plutarch's account shows that on the eve of the Augustan conquest, the mounds of el-Chatby and el-Hadra el-Bahareiya were yet not contained within the urban enclosure, but 'in front of the city', where Antonius had 'posted his infantry' against 'Caesar (Octavianus), who had taken up position near the hippodrome' (i.e. at the depression of Sporting and el-Ibrahimiya Qibly) (sec. 3.9.3.1, J). Being defeated, Antonius 'retired into the city'. The events as narrated by Plutarch, thus strengthen the notion of a second line of defences constructed further east, beyond the Ptolemaic periphery, in the opening decades of the Roman Principate. Its destruction is inferable from the fourth-century account of Ammianus Marcellinus (sec. 2.1.2.2.1), and could be dated accordingly, to the second half of the third century AD: the repressions of Aurelian and Diocletian. In the fourth and fifth centuries, the re-urbanisation which marked the transition to Late Antiquity, exemplified by the remnants at the Kom el-Dikka archaeological park (el-Falaki's *insula* L1-L'2-R4-R5), seems to have readjusted to the Ptolemaic frontier: a phenomenon which would explain the Christian reutilization of el-Hadra mounds for interment (site 146c.8-9, d). Contemporary works, such as Marcellinus' *Res Gestae* (380s), and Epiphanius' treatise *On Weights and Measures* (compiled ca. 392), describe Alexandria as having "lost the greater part of the district called Bruchion (the former βασίλεια)", which "is a quarter of

the city today (fourth century AD) lying waste". It is possible, therefore, that the Arab planners in the ninth century, were retracing, in part, the Late Antique circuit, while omitting the district which provided access to the abandoned shores of Lake Mareotis, hence the arm of the mediaeval town.

Southern Periphery

The development of the Alexandrian metropolis on a calcareous ridge, between Lake Mareotis and the Mediterranean, would have determined and maintained its vertical extent since the time of the Macedonian foundation to the abandonment of the Mareotic shores under Arab rule. In a defensive setting as such, where the circuit-wall runs close to the littoral, at either side of the urban enclosure, possible attacks become restricted to a single front, thus preventing an encirclement of the city. The southern defences, partially encountered at five test-pits (E; F; G; H; I) excavated by el-Falaki in 1865 (sec. 2.1.3.1), seem to have been constructed along a series of mounds extending NE-SW, near the mediaeval gate of Bab Sidra (Plate DCXCIII). The advantages of the terrain heights in the south were yet acknowledged in the nineteenth century, as evident on the fortifications designed by Barthélémy Gallice. At either end of the southern periphery lie the hills of el-Hadra Qibly (east) and Kom el-Shuqafa (west), hence the sinuosity seen at the SE. and SW. corners of the urban circuit, on the maps of Saint Genis and el-Falaki (Plate DCXCIVa-b). In the southwest, the late utilization of the *kom* for interment under Roman rule (ca. 1st century: a family complex; 2nd-3rd century: collective use; 4th-6th century: Christian reutilization) (site 53), would suggest a Ptolemaic exploitation of the strategic mound overlooking the navigable tributary to the Kibotos, for defensive purposes, as was the case with Gallice's Fort Kom el-Hadid (Borg Abu el-Hashem). The site of the Roman-developed *circus* dug into the rocky plateau, and possibly utilized as *hippodromos* as early as the third century BC (51), relative to Botti's *scavi* (A-D) (site 53d-e), is indicative of an urban circuit running immediately on the perimeter of the athletic edifice. At the other end, the terrain heights of el-Hadra Qibly were not exploited as a line of defence until the first century BC - first century AD, given their chronology of use by the Graeco-Macedonian settlers as burials places (site 146). With the Roman urbanisation of the Hellenistic necropolitan areas, the mounds would have formed the southeastern corner of the urban enclosure during the Principality, hence verifying the sinuosity of the contour as plotted on Saint-Genis' map, in contrary to el-Falaki's conjecture of the SE. and SW. segments of the circuit.

Western Periphery

A determination of the course of the Kibotos canal is indeed prerequisite to inferring a possible route for the urban periphery in the west. On the 1866 *carte* of el-Falaki, the canal is seen breaching the enclosure of the ancient metropolis, at the southwestern segment of it, to head north, towards the Kibotos: an artificial outlet to Eunostos conventionally located, given the narratives of Strabo, within the urban enclosure, immediately west of the Heptastadion. The coastal terrain as it appears on the maps of the 15th to 18th century (Veduta d'Alessandria, 1472; Razaud, 1687; Norden, 1737; Le Père and Saint-Genis, 1798-99), has a different setting: a depression at the east end of the rocky plateau is schematically plotted as if flooded with seawater on the maps of Comminelli and Norden. It reappears on Le Père's (1817), and is recorded by Saint-Genis in *Description de l'Égypte* (Antiquités II, Descriptions, Imperial Edition, 1818a) (2.1.3.2.2; 2.3.5). The depression, apparently natural judging by the morphology of the coastal plateau (artificially developed into a basin: an outlet), is situated outside the mediaeval enclosure, next to the western segment of the defences, which deviates towards the interior, between Bab Gharb and Fort triangulaire. The deviation in the Arab circuit is only justified by its relative location to the adjacent depression, as is the case in the east, at el-Ibrahimiya Qibly. Considering the Arab retrace of the ancient circuit where possible, archaeologically attested in the designated area (4) and elsewhere (5; 6; 7), a deviation as such, dictated by the relief, would date back to antiquity, hence the hypothesized localisation of the Kibotos beyond the urban circuit, not the Heptastadion: a proposal backed by the conventions of defence in antiquity, where the outlet of a navigable waterway would have been in the range of the urban defences, in fact, almost contained within the strongholds on either end of the deviated-segment of the circuit, without breaching the line of defences, into the city. Therefore, if the Kibotos was situated immediately west of the circuit-wall, then the course of the canal is to be reconsidered accordingly. In such setting, the canal would have bypassed the southern mounds of Minet el-Bassal, to head northwards, to its Mediterranean outlet, yielding a crescent-shaped curve comparable with that of the present-day el-Mahmoudiya Canal. The latter, formed in the early nineteenth century when the revived waterway of Mohamed Ali adjusted to its original path after having been diverted towards the mediaeval town, strengthens the localisation of the ancient Kibotos approximately at the present-day site of the canal's outlet to the Port of Alexandria: the north-northwestern sector of Minet el-Bassal.

Unlike the mounds of el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly, the terrain heights in the west, seem to have not been utilized in defence. The presence of a water-barrier before the urban circuit at the less-threatened front, would have altered the use of the mounds at Minet el-Bassal and Gabbari exclusively to receive interments. An earlier phase of the historical Nekropolis is evident immediately west of el-Mahmoudiya Canal, where in 1950-1951, the construction works of the Société Générale de Pressage et de Dépôts have unearthed the remains of a vast necropolis, the earlier-known section of which, labelled (A) by Adriani, is datable ca. the third-second century BC (site 46). The location of Minet el-Bassal necropolis, its chronology of use, and geographical extent, question Strabo's account on the western fringe of the Alexandrian metropolis: "now outside (west) of) the canal there is still left only a small part of the city". Instead, Adriani's encounters conform with the hypothesized course of the Kibotos canal in antiquity, as being a first line of defence before the circuit-walls which after bypassing the hippodrome (51) at the southwestern corner of the enclosure, would have had to accommodate such crescent-shaped curve of the navigable waterway, dictated by the Minet el-Bassal mounds as a natural obstacle, as the case with the Kibotos depression in the north, hence the inward-deviations in the inferred route of the western circuit-walls (Plate DCXCVa-b).

Northern Periphery

The coastline configuration in antiquity was indeed central to planning the course of the urban defences to accommodate the sinuosities of the Alexandrian littoral which can be segmented into two sectors: (a) eastern: from el-Silsileh to Saad Zaghloul Square; (b) western: from Hotel Cecil to Minet el-Bassal. The subsided (eastern) sector of the littoral zone has been surveyed and mapped by the IEASM in the 1990s (sec. 2.3.3.1). It is however, partially concealed beneath a pseudo-coastal belt (50 - 250 m) which was formed early in the twentieth century, following the construction of the Corniche (sec. 2.3.1). The detected sections of the littoral show a configuration quite different from that narrated by Strabo. Remnants of waterfront constructions (sites: 7; 8; 9; 112) suggest a periphery extending E-W, from Cape Lochias to the west end of the βασίλεια, past the submerged headland of Poseidion, and Antirrhodos. Beyond Hotel Cecil, the ancient coastline is concealed beneath the silted-up isthmus that accumulated on either side of the Heptastadion since antiquity (2.3.2), yielding the marshy grounds of el-Mansheiya: toponym derived from the Coptic *mànsheei* (marsh or pool).

Whereas, a possible course for the northern periphery along the western sector of the littoral, from el-Ramleh (6) to Minet el-Bassal (4), is inferable considering the line of mediaeval defences running across el-Mansheiya and el-Labbane (5), where the archaeologically-attested, Arab (re)trace of the ancient circuit through the (re)utilization of extant remnants, serves to justify the exclusion of the silting-up isthmus (the future site of the Ottoman village) from the Arab enclosure (Plate DCXCVIa-b).

(b) Grid Plan (archaeological and literary evidence for the multi-phase evolution hypothesis: sec. 2.2.3)

On the 1866 *carte* of Mahmoud el-Falaki (introduction, sec. II.d), an orthogonal grid of longitudinal and transversal streets, partially reconstructed on the basis of excavation work, is shown (sec. 2.2.1). Archaeological investigation (sec. 2.2.2) indicates a Roman - Late Roman date (ca. the first century BC to fourth-fifth century AD) for the excavated sections of stone pavement: a grid of *viae munitae*. On a lower level, the remnants of wider streets with earth-beaten and gravelled surfaces datable ca. the mid-third to mid-first century BC, were encountered almost on the same alignment, suggesting a Hellenistic origin for the grid plan reconstructed by Mahmoud el-Falaki in the nineteenth century. The hypothesized chronology is backed by thoroughfares of el-Falaki's grid cutting through earlier foundations of the late-fourth to third century BC. The origins of the Hippodamian grid is, however, archaeologically and historically traceable as early as the Macedonian foundation (ca. 331 BC). At least, four streets from el-Falaki's grid could be labelled 'Early Hellenistic': i.e. antedate the turn to the second century BC: (1) and (2) the πλατείες or L1 and R1; (3) R9, including its Pharian extension: the Heptastadion; (4) R8: the δρόμος to the Ptolemaic Sarapeion. Other contemporary streets are inferable from the excavations of Ferdinand Noack, in 1898-99, during the first Sieglin Expedition, north of el-Sultan Hussein (B1; B2), and at Nubar Pasha's Gardens east of el-Khartoum Square (J), where the earliest structures, of Noack's phases (a) and (b), unearthed on either side of el-Falaki's R3 and L2, hint towards Hellenistic thoroughfares much wider (ca. 10 - 14 m) than their Roman and Late Antique successors (3.50 - 9.50 m). In fact, the former run approximately on the alignment of the latter within Noack's trenches, as was the case with the excavated section of street R4 at Kom el-Dikka (L and W_1N of the Polish concession). The gravelled (Hellenistic) and paved (Roman) phases of these streets (R3; R4; L2), recognizable within the sequence unlike the Hellenistic *viae terrenae*, cut through some of the earliest Ptolemaic constructions unearthed in clusters, around el-Falaki's

R3-L2 junction, on the slopes of the Government Hospital Hill (Adriani's Chantier Djanikian), and at Cinema Amir (Fouad) a few meters north of (L) and (W_1N) at Kom el-Dikka. The overrun remnants, datable ca. the late-fourth to third century BC, provide a *terminus post quem* for construction phase (I) of el-Falaki's orthogonal grid, ca. 250-200 BC. The proposed date is fixed within the second half of the third century (during the reigns of Euergetes I and Philopator), considering the earliest-known edifices with chronologically-established contexts, on the alignment of el-Falaki's grid: the second phases of the Ptolemaic Sarapeion (site 52.II) and the Boubasteion (site 92): both dated primarily, on the basis of foundation plaques found *in situ*. The hypothesized range is backed by the orientation of remnants pertaining to the Sarapeion's first phase of construction (the first quarter of the third century BC), where the excavated structures, including a chamber with a pebbled mosaic pavement, have been found off the axes of the Euergetean ναός (site 52.I).

The accidental discovery made in 1960, during construction works carried out at Kom el-Dikka, for the National Insurance Co. of Egypt, and reported by Henri Riad (GRM director), is of particular importance (site 77). At the time, remnants of the stylobate of a Doric colonnade (perhaps, a stoa?) were encountered upon the bedrock, ca. 7.45 m below the surface-level, parallel with one another, and perpendicular to Fouad Street (construction material: large, finely-hewn blocks of limestone). These foundations, among the earliest excavated, are datable, in general, to the third century BC, judging by construction material and mode, architectural order, and stratigraphic level. They serve as an evidence for the existence of a longitudinal πλατεία or el-Falaki's L1: Tariq Bab Sharq: Fouad: el-Horreya, as early as the reigns of the first Ptolemies, if not constructed already, under Kleomenes or Ptolemy's satrapy. The existence of a πλατεία from the very beginning confirms the orthogonality of the historically-attested, Macedonian layout of the foundation (Chapter I), of which, at least, three arteries are identifiable: a principal, east-to-west thoroughfare (el-Falaki's L1), with two transversal streets running north-to-south, at either end of the urban enclosure (el-Falaki's R1 and R9). At some point already in the third century (the second half of it), the Hippodamian layout of the foundation developed into a grid of *viae terrenae/glareatae* overrunning earlier edifices where necessary. By the first century BC, streets in stone pavement (*viae munitae*) were constructed on the alignment of their earthen and gravelled antecedents and in turn, restored at the transition to Late Antiquity.

The orthogonality of the Hippodamian system of urban planning is archaeologically attested in Alexandria (sec. 2.2.1; sec. 2.2.2). Excavations within the urban districts of el-Mazarita and el-Chatby: the areas corresponding approximately to the Ptolemaic Royal Quarter, yet reveal structures which follow a geographical orientation. These remnants, oblique to el-Falaki's grid, were unearthed at el-Khaledin Park/WHO building (site 134), the Bibliotheca Alexandrina (139), el-Silsileh (138; 140a; 141), west of Casino el-Chatby (site 2), and the Latin Cemeteries (site 147). The massive enclosure excavated at el-Khaledin, and the *via-terrena* δρόμος running parallel with it, predate the first century BC, with subfoundations signalling demolished structures datable as early as the foundation. A few meters west of Casino el-Chatby, Adriani recorded in 1950, foundations of a defensive structure following, as the case at el-Khaledin, a solar orientation. Given the approximate extent of the subsided, eastern belt of Cape Lochias, the nummulithic wall in question, could be well associated with the defences of the ancient promontory. Geographical orientation is evident at the royal premises: on el-Silsileh and its southern belt (the present-day site of the Bibliotheca Alexandrina: Strabo's 'inner palaces'). Considering the *akra*, the foundation wall excavated by Adriani in 1938, already partially-drenched and overbuilt with a miniature, Arab cistern, did not strictly follow a geographical orientation, but ran ENE-SSW. Its discovery, however, is indicative of Ptolemaic constructions on Lochias, oriented off grid. A short distance to the south, during the construction of the new Bibliotheca Alexandrina, in 1993, a massive foundation wall following a geographical orientation, was found cutting through the transversal course of street R1, approximately, 180 m north of the R1-L4 junction. Two mosaics pertaining to the second phase of construction on site, serve to provide a *terminus ante quem* for the dismantling of the presumed monumental building to which the wall belonged, ca. the second century BC, thus backing the Euergetean and Philopatorian origin of the developed orthogonal grid. These finds are crucial, for emphasizing the notion of an early Royal Quarter independent at least, to a certain extent, from the orthogonality of the city's Hippodamian grid, to 250-200 BC. A setting as such, tallies with the geographical orientation of the hypothesized peripheries (C1 and C2) of the Royal Quarter, of which (C1) joins the πλατεία (C1-L1 junction: Ptolemaic gate) ca. 160 m south of the Alabaster tomb (site 147). Overall, the archaeological record of the Early Hellenistic Royal Quarter seems to denote a *βασίλεια ad Alexandrēam*. However, *in Alexandrēā*, almost at the centre of the urban grid, at the northwestern sector of the Polish concession, labelled (U), in 1980-81, a section

of an inner alley was uncovered next to the remains of modest structures built at oblique angle to el-Falaki's orthogonal grid which dominates the Late Antique constructions excavated through the concession (64a; 69c). The chronological range of the remnants following a geographical orientation at (U), extends from ca. the second-first century BC, if not earlier, to ca. the third-fourth century AD. Besides providing an evidence for the presence of off-grid buildings and thoroughfares outside the enclosure of the Royal Quarter, i.e. within the city itself, where phase (I) of the Ptolemaic Sarapeion at Rhakotis (52.I), is another case in point, these vestiges show that successive rebuilding of earlier, dismantled structures in the course of the Principality, would have preserved, perhaps, in few cases, the Hellenistic ground plan, hence the retaining of a secondary, geographical orientation yet within the Roman grid, until the repressions of Aurelian and Diocletian during the second half of the third century, the time which marked a profound break from previous urban trends, as archaeologically evident on the post-tsunami cityscape of Late Antiquity: the fifth to seventh century (exception: 78).

(c) Waterways and Harbour-Infrastructure

As is the case with the navigable canal of the Kibotos in the west (sec. 2.1.3.2.2; sec. 2.3.5; *see supra*, 'Western Periphery') (Strabo, Geōgraphikȅ: XVII. 1.10), the other waterways of Alexandria and its environs were described by Strabo, ca. 25 BC:

On the right of the Canobic Gate, as one goes out, one comes to the canal which is connected with the lake (συνάπτουσα τῇ λίμνῃ: connected with the lake indirectly, via a short tributary southwest of the city) and leads to Canobus; and it is by this canal that one sails, not only to Schedia, that is, to the great river (the Nile), but also to Canobus, though first to Eleusis.

On proceeding a slight distance from Eleusis, and on the right, one comes to the canal which leads up (southwards) to Schedia. Schedia is four schoeni (circa 160 stadia; σχοίνος: 40 stadia) distant from Alexandria; it is a settlement of the city, and contains the station of the cabin-boats on which the praefects sail to Upper Aegypt (to the south). And at Schedia is also the station for paying duty on the goods brought down from above it (i.e. to Alexandria) and brought up from below it (to inland Egypt); and for this purpose, also, a schedia (σχεδία: a raft or pontoon bridge) has been laid across the river, from which the place has its name (for being a controlled-passage off the Canopic arm).

(Strabo, Geōgraphikȅ: XVII. 1.16)

The narrative of Strabo shows the Alexandrian metropolis as being connected to its hinterland, by means of a principal waterway labelled Κανωβικῆς διώρυγος or Canopic Canal by the geographer, and of which four segments seem identifiable (Plate DCXCVII):: (i) Schedia-Eleusis: Schedian Canal; (ii) Eleusis-Canopus: an eastward-branch off (i): Canal of Canopus; (iii) Eleusis-Alexandria: a westward-branch off (i): Canal of Alexandria: indirectly connected to Lake Mareotis and its port (Phyale), via a tributary dug southwest of the city; (iv) Mareotis-Eunostos: Strabo's canal and its Kibotos outlet to the Mediterranean (artificial, box-shaped basin). Through (i), (iii) and (iv), the city of Alexandria and its harbour-amenities (sec. 2.3.3; sec. 2.3.4) were accessible from the Canopic branch of the Nile, hence the Strabonic label. On the provincial network of trade, Schedia and the Lake-Port were of particular importance, serving as transit-points for mooring vessels, and customs-paying hubs for merchandise trade between Alexandria and inland Egypt.

Although the Canopic waterway appears in the historical known-record ca. the first century BC, its existence is prerequisite to a metropolitan habitation on the Mareotic ridge. Its establishment, as an artery of life, would be datable, therefore, to the foundation of the city: perhaps, as early as the time of Kleomenes (331-23/2 BC) (sec. 1.4). Besides its principal role in conveying fresh water to the city via subterranean aqueducts, the Canal of Alexandria, as that connecting Lake Mareotis to Eunostos, seems to have been navigable already by the time of Strabo, around 25 BC, if not earlier:

But to balance all this, is the crowd of revellers who go down from Alexandria by the canal, to the public festivals (in Canopus); for every day and every night, (the waterway) is crowded with people on the boats who play the flute and dance without restraint and with extreme licentiousness, both men and women, and also with the people of Canobus itself, who have resorts situated close to the canal and adapted to relaxation and merry-making of this kind.

(Strabo, Geōgraphikȅ: XVII. 1.17)

Strabo's narrative suggests that both arteries branching off the Schedian Canal, were navigable at the advent of Rome's dominion in Egypt. Navigating the Alexandrian hinterland, however, was not

all-year-round, which would explain the archaeologically-attested maintenance of the waterways under the Julio-Claudians and their Flavian successors during the first century AD:

(a) Limestone *stela* bearing bilingual, Greek-Latin inscription, discovered in Alexandria, ca. the late-nineteenth century (Plate DCXCVIII; Kunsthistorisches Museum Wien, Inv. No. ANSA III 783):

The emperor Caesar, son of the divine (Julius) Caesar, Augustus, Pontifex Maximus, has brought the River Augustus (the canal), from Schedia, to gush all over the city (of Alexandria); (done) under the praefectus Aegypti C. Iulius Aquila; the year XXXX (40) of (Augustus) Caesar (ca. AD 10/11).

(b) Limestone *cippe* bearing bilingual, Greek-Latin inscription, discovered in Alexandria (the district of Minet el-Bassal), in 1904 (Plate DCXCIX; Graeco-Roman Museum; text: see *supra*, a).

(c) Limestone *stela* bearing Greek inscription, discovered at Kom el-Giza (Schedia) (Plate DCC; former collection of Ernst von Sieglin):

In the third year (ca. AD 80/81) of the emperor Titus Caesar Vespasianus Augustus, when C. Tettius Africanus Cassianus Priscus was praefectus Aegypti, the Agathos Daimon River (alternative label) was dug into the rock, in all three dimensions, and restored to its previous state; fourteen engraved plaques were placed alongside it.

(d) Limestone *stela* bearing bilingual, Greek-Latin inscription, discovered at Kom el-Giza (Schedia) (Plate DCCI; Graeco-Roman Museum):

In the year VI (ca. AD 86/87) of the emperor (Titus Flavius) Domitianus Caesar Augustus, when C. Septimius Vegetus was praefectus Aegypti, the River Philagrianos (alternative label) was dug into the rock, in all three dimensions.

The widening and constant maintenance of the navigable canal under the Principality would have been necessitated by the status of *Provincia Aegypti* as the principal grain-supplier to Rome, hence the development of the harbour-infrastructure and the construction of the granaries of Neapolis.

The IEASM geophysical surveys in today's eastern harbour: Μέγας Λιμήν of ancient Alexandria, revealed an extensive programme of renovation work and rebuilding, initiated under Roman rule, to develop the port-facilities (sec. 2.3.3). In the Hellenistic period, the eastern sector of the harbour seems to have been reserved for royal use and naval fleet-mooring: inner basins (X; Y; Z). Whereas, the commercial-infrastructure of the western sector is inferable, given Strabo's descriptive account on the coastal terrain, from the Caesareum westwards, reaching far as the Heptastadion: a trading-post (ἐμπόριον) (sec. 3.7.3.1, G), the warehouses (αποστάσεις), and shipyards (νεώρια) respectively. Nonetheless, with the Roman annexation of the Ptolemaic Kingdom in 30 BC, and the subsequent establishment of *Provincia Aegypti*, the amenities of the Great Harbour became fully exploited to one end: increasing the overall capacity, and ensuring the regularity of commercial traffic-flow in either direction, between the Roman-controlled, Mediterranean hubs and the exotic merchandise of the Orient, thus gaining access to Arabian and Indian markets.

II. Cityscape: Chapter III

When the available archaeological evidence is considered in conjunction with a critical study of the ancient literary sources, urban change becomes rather justifiable and accordingly, chronological phases of development seem inferable. In this study, urban transition, from one norm to another, has allowed the identification of four broad phases of cityscape development: (i) the Macedonian foundation (331 BC) – Caesar's Alexandrian War (48-47 BC); (ii) the reign of Cleopatra VII (51-30 BC) – the repressions of Aurelian and Diocletian (AD 272, 297); (iii) a transitional phase to Late Antiquity (to the late-fourth century); (iv) the tsunami of AD 365 – the Arab conquest in the seventh century.

The archaeological repertoire of excavated remnants antedating 100 BC, backs the notion of a *βασίλεια ad Alexandrēam*: a Royal Quarter northeast of the city (Plate DCCIIa-b). When correlated with the map of the present-day metropolis, the βασίλεια seems to have extended E-W, approximately, from the Suez Canal Road to el-Khaledin, and N-S, from the southeast shores of the eastern harbour, and el-Silsileh, reaching the πλατεία (Abu Qir) at ca. 590 m east of R1. The distributional patterns of contemporary, third-second-century BC buildings within that range, show clusters of monumental constructions of luxurious character, along the southern belt of el-Silsileh and on the slopes of the

Government Hospital Hill (within el-Mazarita) (12; 14; 112; 123; 125; 128; 129; 131; 132; 133; 134; 137; 138; 139; 140; 141). These remnants echo the ancient literary narratives on the urban constituents of the Royal Quarter (sec. 3.7.3.1, C-E, H). Immediately to the west, at the sites of the ex-Cricket Playground, the ex-British Consulate, and el-Ramleh, the remains of a residential district on the western fringe of the Ptolemaic βασίλεια, indicate an area of elite, Graeco-Macedonian habitation (sites: 115-123). At the other end of the Royal Quarter (i.e. beyond Lochias), the likely presence of a garrison before the royal residences, at the most-threatened front, would provide a possible context for Breccia's complex on the Suez Canal Road (the Royal Institute of Hydrobiology: the present-day Association of Muslim Youths), ca. 240 m from the hypothesized eastern periphery marked (C3). In such context, the unearthing of a mosaic pavement in 1921, displaying a conventional Macedonian hunt-scene, might not come as a surprise (site 3). Given the estimated area of the Royal Quarter, public edifices would have extended southwards, alongside the colonnades of the πλατεία (site 77): a setting that is glimpsed in Book XV of Polybios' *Ἱστορίαι* (sec. 3.7.3.1, D), and from the first-century BC account of Diodorus Siculus: "(the πλατεία) is bordered throughout its length with rich façades of houses and temples (site 90)" (Diodorus, Bibliotheca Historica: XVII. 52.3). South of Fouad I Street, at the Kom el-Dikka archaeological park, scant remnants of second-first-century BC, Hellenistic habitation, underlying the Roman and Late Antique *strata*, shed further light on the domestic-and-commercial character of the urban areas south of the πλατεία: apparently, inhabited by Greek commoners and artisans, living and working in the vicinity of the recently-excavated Boubasteion (92). Towards the west, the Egyptian borough, Rhakotis, extends north-south, between the Graeco-Macedonian district (east) and Strabo's navigable waterway to Eunostos (west), where the construction of a major sanctuary to the city's syncretic deity (52) would have been convenient, considering the socio-political milieu of the newly-established Ptolemaic Kingdom. Whereas, at the eastern end of the urban enclosure, clusters of ethnic minorities (Jews, Levantines, etc.) seem to have triggered an expansion towards the necropolitan suburbs of el-Chatby and el-Hadra, archaeologically attested ca. the first century BC (145; 146). By 47 BC, Julius Caesar's Bellum Alexandrinum had caused a major destruction to the urban infrastructure and principal edifices (sec. 2.2.3; sec. 2.3.2; sec. 3.7.3.1, D), and, subsequently, the initiation of an extensive rebuilding programme, ca. 41 - 31 BC, under Cleopatra VII, which yielded the cast iron bases for moulding the cityscape of the Augustan Principate.

In Book XXII of *Res Gestae*, Ammianus Marcellinus relates in the fourth century AD:

Cleopatra devised a lofty-tower in the harbour, which, from its situation, is called the Pharos, and furnishes the means of showing lights to ships by night … This same queen built the Heptastadium, remarkable alike for its great size, and for the incredible speed with which it was constructed, for a well-known and sufficient reason.

(Ammian. Marcellin., Res Gestae: XXII. 16.9-10)

Controversial as it may seem today, knowing that the first phase of construction of the Lighthouse (site 43) and the Heptastadion (sec. 2.3.2) antedated the reign of Cleopatra VII by over two centuries, Marcellinus' Late Roman account reveals the fourth-century perception of Cleopatra's (re)building programme, the extensiveness of which, especially at the devastated Pharian district and its mole (Caesar, Alexandrian War: 17-22), became well engraved in the folk memory that by the time Ammianus Marcellinus wrote *Res Gestae*, it was traditionally accepted that both constructions were initiated by the renowned Ptolemaic queen. One characteristic of Cleopatra's rebuilt Alexandria, however, is the prominence of the Egyptian element (site 142), although part of the urban fabric already in the third-second century BC (civic: 43; religious: 52; funerary: 160). Integrating the local into a classical setting is intrinsically Alexandrian, as evident on contemporary sepulchres on Pharos (sites: 44; 45): a trend explicitly developed under imperial rule (site 53). Among the edifices of the Augustan cityscape which are Late Hellenistic in origin, is the Caesareum or Sebasteum (after Julius Caesar and Sebastos or Augustus) (sites: 93-100). Its orientation off el-Falaki's orthogonal grid plan, and the fact that it does not follow a geographical orientation, but had oblique axes, with the façade facing the passages to the Great Harbour, seems justified by the nature of such cultic-complex, "being a hope and beacon of safety to all who set sail, or who came into harbour" (Philo, Legatio ad Gaium: XXII. 151).

On the subdivision of Alexandria, ca. the opening decades of the Principate, Philo Judaeus relates:

There are five districts in the city, named after the first five letters of the written (Greek) alphabet (A: Alpha; B: Beta; Γ: Gamma; Δ: Delta; E: Epsilon).

(Philo, In Flaccum: VIII. 55)

Quarter Δ, to start with, is correlated with the Jewish district, given Flavius Josephus' first-century AD narrative in the *Jewish War*:

These soldiers rushed violently into that part of the city that was called Delta, where the Jewish people lived together, and did as they were bidden.

(Josephus, Bellum Iudaicum: II. 18.8)

The localisation of Quarter Δ on the eastern fringe of the city is based, in turn, on the treatises of Philo and Josephus against Flaccus and Apion (sec. 2.1.2.2.2.1: *In Flaccum*; *Contra Apionem*). A dedicatory inscription dating to AD 158 (site 91) and a Ptolemaic papyrus datable around 221 BC (Fraser 1972: 34), suggest an association between the central and northern districts (including the annexed βασίλεια) with Philo's quarters (A) and (B). It would be reasonable therefore to associate the Mareotic Quarter (southern district) and the Egyptian borough, Rhakotis (western district), with quarters (Γ) and (E).

Under Roman rule, habitation continued at the central districts, as archaeologically evident on remnants of *villae urbanae* excavated at the Kom el-Dikka Park (W_1N: 18; F: 19, 70; A: 20; MX: 69b, d; U: 69c; MXV: 69e). In the north, bathing-establishments seem to have cluttered the coastal areas of the former βασίλεια (sites: 2; 7a; 26; 112b; 113; 138-9; 140). Dwellings, thoroughfares, sewers and conduits, attest an urban expansion towards the abandoned necropolitan suburbs of el-Chatby and el-Hadra (32; 144; 148; 149a; 167), a development which would have necessitated the construction of a second periphery in the east (sec. 2.1.2.2.1; see *supra*, I.a: 'Eastern Peripheries'). At Rhakotis, near the urban fringe, the Ptolemaic sanctuary of Sarapis went through a third phase of construction in the late-second to early-third century AD (site 52.III). Two centuries earlier, interments began at Kom el-Shuqafa (53b), perhaps, in response to burial-space economy within the earlier cemeteries of Nekropolis (46; 47). The moulded cityscape of the Principality, as reflected in the archaeological record, is glimpsed in Book V of Achilles Tatius' *τὰ κατὰ Λευκίππην καὶ Κλειτοφῶντα* (datable ca. the late-third century):

I entered it (the city of Alexandria), by the Sun Gate, as it is called, and was instantly, struck by the splendid beauty of the city, which filled my eyes with delight. From the Sun (i.e. eastern) Gate to the Moon (western) Gate - these are the guardian divinities of the entrances - led a straight double row

of columns (the colonnade of the πλατεία), about the middle of which lies the open part of the town, and in it so many streets that walking in them you would fancy yourself abroad while still at home. Going a few hundred yards further, I came to the quarter called after Alexander, where I saw a second town; the splendour of this was cut into squares (urban insulae: el-Falaki's orthogonal grid), for there was a row of columns intersected by another as long at right-angles.

(Achilles Tatius, τὰ κατὰ Λευκίππην καὶ Κλειτοφῶντα: V. 1.1-4)

Stratigraphy at several sites (18; 19; 20; 31; 69b-e; 122b) indicates that parts of the central district, and the former Royal Quarter, have been devastated in the second half of the third century AD. Layers of ashes pertaining to excavated structures such as *villae urbanae*, signal a possible destruction by fire, which, given the chronological context, is attributed to the violent campaigns of Aurelian (272) and Diocletian (297). The fourth century therefore marks a period of transition to the cityscape of Late Antiquity, following the first abandonment of the Royal Quarter. Two events of the transition seem to have prompted urban change towards the turn of the century: (i) the tsunami of 365; (ii) the imperial decree of Theodosius I (391). The former led eventually, to the second abandonment of the coastal districts (sec. 2.3.1); whereas, the latter paved the way for Theophilus, then Patriarch of Alexandria, to terminate the major temples of the pagan city (sites: 52; 90; 91; 92; 93-100).

Urban change in the cityscape of Late Antiquity might be best illustrated through the rhetoric of Constantinople's archbishop (ca. the turn to the fifth century) on the whereabouts of Alexander's tomb, once a landmark of the city (sec. 3.8.3.1, I.d). The archaeological record provides hints on the urban fabric of the fifth to seventh century AD. At the Kom el-Dikka park, for instance, the remnants of the Principality are overbuilt with a number of public edifices (a bath complex; latrines; cisterns; *odeum*), houses, and workshops (sites: 18; 19; 20; 21; 26; 31; 69; 70). Of these constructions, a series of twenty-two *auditoria* excavated at the Polish concession, attest the prominence of intellectual life in Late Antique Alexandria, where cultural continuity seems strengthened by the recent discovery at el-Sultan Hussein, of fragmentary mosaic displaying mythology scene: Ἀνδρομέδα and Περσεύς (Plate DCCIIIa-b) (Rezq 2016: 69). Datable ca. the sixth century, it sheds light on the decorative schemes employed in Alexandria, yet, afore two successive invasions of which the latter was meant to last.

III. A Holistic Approach to Topographical Reconstruction

The history of the city of Alexandria is connected in many ways with two figures, Alexander the Great (356-323 BC) and Mohamed Ali Pasha (1769-1849) (Plate DCCIVa-b). The former marched into Egypt, in autumn 332 BC, during the Macedonian Afro-Asiatic campaigns of the fourth century. A few months later, ca. 331 BC, a city was founded on the Mediterranean coast of Egypt: *Alexandrea ad Aegyptum*. Likewise, from 1805 onwards, the modern city of Alexandria developed throughout the course of the nineteenth century and into the first half of the twentieth, under the progressive policies of the Ottoman *Wāli* of Egypt Mohamed Ali Pasha (1805-49) and his Alawite successors who ruled until 1952-3. It is interesting to find that both the founder and reviver of Alexandria have come from northern Greece, one from Pella (capital of the ancient Kingdom of Macedon), the other from Kavala. The revival of the Alexandrian metropolis under the Alawite dynasty, has led to a disruption in the archaeological record of the ancient city. Traces of Graeco-Roman Alexandria progressively disappeared in the hassle of continuous rebuilding-activities and enthusiastic stone-pillagers. This would explain the reason why most discoveries are accidental, as being subsequent to construction works. In the 1880s, an extensive (re)building programme had been instigated in the aftermath of the British bombardment of the city in July 1882. By the twentieth century, a crowded metropolis was already in place. The modern city has spread over the areas of the ancient one, its necropolitan suburbs, the silted-up isthmus of the Heptastadion, and the now-adjoined island of Pharos. In the nineteenth century, therefore, el-Falaki had the advantage of investigating sufficient areas of the developing town, and to carry out limited excavations where possible. A wide-range survey as such, has become increasingly impractical overtime with continuous urban expansion and demographic growth. The application of geophysical methods within municipal areas where actual digging is no longer possible, may thus be a non-destructive alternative in exploring the past in Alexandria, yet, besides the salvage excavations which are carried out intermittently, in the compact city of today. In this context, a topographical reconstruction of ancient Alexandria is held as one major challenge facing those involved in studying the urban trends of antiquity. Little evidence has however survived to verify such laudatory narratives of the ancient authorities, a fact that stresses the importance of archaeological inference in conjunction with a critical study of the relevant literary accounts, hence the holistic approach adopted in attempting to solve the jigsaw puzzle of 'Alexandria in antiquity'.

Bibliography

I. Primary Sources

- "III Maccabees". In Cotton, H. (ed.) 1832. *The Five Books of Maccabees in English*. Oxford: Oxford University Press.

- Achilles Tatius. τὰ κατὰ Λευκίππην καὶ Κλειτοφῶντα. Trans. Gaselee, S. 1969. *Achilles Tatius: Leucippe and Clitophon*. The Loeb Classical Library. Cambridge, MA: Harvard University Press.

- Ammianus Marcellinus. "Res Gestae". In Rolfe, J.C. (ed.) 1940. *The Roman History of Ammianus Marcellinus*. Vol. II. The Loeb Classical Library. Cambridge, MA: Harvard University Press.

- Aphthonius. "Progymnasmata". In Kennedy, G.A. (ed.) 2003. *Progymnasmata: Greek Textbooks of Prose Composition and Rhetoric*. Atlanta: Society of Biblical Literature.

- Aristeas. "Letter of Aristeas". Trans. Thackeray, H.S$_T$.J. 1904. *The Letter of Aristeas*. London: Macmillan and Co., Limited.

- Arrian. *Anabasis Alexandri: Books I – IV*. Trans. Iliff Robson, E. 1967. The Loeb Classical Library. Vol. I. Cambridge, MA: Harvard University Press.

- Athēnaios Naukratitēs. *Deipnosophistaí*. Trans. Yonge, C.D. 1854. Bohn's Classical Library. Vol. I. London: Henry G. Bohn.

- Athēnaios Naukratitēs. *Deipnosophistaí*. Trans. Yonge, C.D. 1854. Bohn's Classical Library. Vol. III. London: Henry G. Bohn.

- Caesar. “Alexandrian War”. Trans. Way, A.G. In Page, T.E. et al. (eds.) 1955. *Caesar: Alexandrian, African and Spanish Wars*. The Loeb Classical Library. London. William Heinemann LTD.

- Caesar. “Civil Wars”. Trans. Peskett, A.G. In Page, T.E., Capps, E., and Rouse, W.H.D. (eds.) 1928. *Caesar: The Civil Wars*. The Loeb Classical Library. London. William Heinemann.

- Callimachos. “ἐκθέωσις ἀρσινόης”. In Pfeiffer, R. (ed.) 1949. *Fragmenta*. Oxford: The Clarendon Press.

- Clement, “Προτρεπτικὸς πρὸς Ἕλληνας”. Trans. Butterworth, G.W. 1919. *Clement of Alexandria*. London. William Heinemann.

- Diodorus Siculus. *Bibliotheca Historica: Books XVI (cont.) – XVII*. Trans. Bradford Welles, C. 1963. The Loeb Classical Library. Vol. VIII. Cambridge, MA: Harvard University Press.

- Diodorus Siculus. *Bibliotheca Historica: Books XVIII – XIX (to be cont.)*. Trans. Geer, R.M. 1947. The Loeb Classical Library. Vol. IX. Cambridge, MA: Harvard University Press.

- Diodorus Siculus. *Bibliotheca Historica: Books XIX (cont.) – XX*. Trans. Geer, R.M. 1954. The Loeb Classical Library. Vol. X. Cambridge, MA: Harvard University Press.

- Epiphanius. “On Weights and Measures”. In Dean, J.E. 1935. *Epiphanius’ Treatise on Weights and Measures: The Syriac Version*. Illinois: The University of Chicago Press.

- Herodas. “Mime”. In Knox, A.D. (ed.) 1922. *The Mimes and Fragments*. Cambridge: Cambridge University Press.

- Herodian. “History of the Roman Empire”. Trans. Echols, E.C. 1961. *History of the Roman Empire from the Death of Marcus Aurelius to the Accession of Gordian III*. Berkeley and Los Angeles: University of California Press.

- Homer. “The Odyssey”. Trans. Palmer, G.H. 1891. *The Odyssey of Homer*. Boston and New York: Houghton, Mifflin and Company.

- Jerome. “Chronicon”. In Fotheringham, J.K. (ed.) 1905. *The Bodleian Manuscript of Jerome's Version of the Chronicle of Eusebius*. Reproduced in Collotype. Oxford. The Clarendon Press.

- John Chrysostom. “Homily XXVI”. Trans. Ashworth, J. 1848. *The Homilies of S. John of Chrysostom, Archbishop of Constantinople, on the Second Epistle of St. Paul the Apostle to the Corinthians*. Oxford: John Henry Parker.

- Josephus. “Bellum Iudaicum”. Trans. Haverkamp, S. 1908. *Complete Works of Josephus*. Vol. III. New York: Bigelow, Brown & Co., Inc.

- Josephus. “Contra Apionem”. Trans. Haverkamp, S. 1908. *Complete Works of Josephus*. Vol. IV. New York: Bigelow, Brown & Co., Inc.

- Lucan. “De Bello Civili”. Trans. Duff, J.D. 1962. *Lucan: The Civil War, Books I-X (Pharsalia)*. The Loeb Classical Library. London: William Heinemann LTD; Cambridge, MA: Harvard University Press.

- Lucian. “Πῶς δεῖ Ἱστορίαν συγγράφειν”. Trans. Kilburn, K. 1959. *Lucian: In Eight Volumes*. Vol. VI. The Loeb Classical Library. London: William Heinemann LTD; Cambridge, MA: Harvard University Press.

- Oribasius. "Ἰατρικαὶ Συναγωγαί". In Fraser, P.M. 1961. "The ΔΙΟΛΚΟΣ of Alexandria". *JEA* 147: 134 – 138.

- Philo. "In Flaccum". Trans. Yonge, C.D. 1855. *The Works of Philo Judaeus*. Vol. IV. London: Henry G. Bohn.

- Philo. "Legatio ad Gaium". Trans. Yonge, C.D. 1855. *The Works of Philo Judaeus*. Vol. IV. London. Henry G. Bohn.

- Pliny the Elder. "Natural History". In Bostock, J. and Riley, H.T. (eds.) 1857. *The Natural History of Pliny*. Vol. VI. Books XXXII – XXXVII. London: Henry G. Bohn.

- Pliny the Elder. "Natural History". In Ianus, L. (ed.) 1860. *C. Plini Secundi: Naturalis Historiae. Libri XXXVII*. Vol. V. Libb. XXXIII – XXXVII. Leipzig: Teubner.

- Pliny the Elder. *Natural History: Books III – VII*. Vol. II. Trans. Rackham, H. 1942. The Loeb Classical Library. Cambridge, MA: Harvard University Press.

- Pliny the Elder. *Natural History: Books XXXIII – XXXV*. Vol. IX. Trans. Rackham, H. 1952. The Loeb Classical Library. Cambridge, MA: Harvard University Press.

- Plutarch. *Lives: Demetrius and Antony, Pyrrhus and Gaius Marius*. Trans. Perrin, B. 1920. The Loeb Classical Library. Vol. IX. London: William Heinemann.

- Plutarch. *Lives: Demosthenes and Cicero, Alexander and Caesar*. Trans. Perrin, B. 1967. The Loeb Classical Library. Vol. VII. Cambridge, MA: Harvard University Press.

- Plutarch. *Moralia: Isis and Osiris*. Trans. Babbitt, F.C. 1936. The Loeb Classical Library. Cambridge, MA: Harvard University Press.

- Polybios. *The Histories: Fragments of Books IX – XV*. Trans. Paton, W.R. 1925. The Loeb Classical Library. Vol. IV. Cambridge, MA: Harvard University Press.

- Polybios. *The Histories: Fragments of Books XXVIII – XXXIX*. Trans. Paton, W.R. 1968. The Loeb Classical Library. Vol. VI. Cambridge, MA: Harvard University Press.

- Posidippos. "Epigram 115 AB". In Fantuzzi, M. and Hunter, R. (eds.) 2002. *Tradition and Innovation in Hellenistic Poetry*. Cambridge: Cambridge University Press.

- Pseudo-Callisthenes. "Alexander Romance". Trans. Wolohojian, A.M. 1969. *The Romance of Alexander the Great*. New York and London: Columbia University Press.

- Ptolemy. "Γεωγραφικὴ Ὑφήγησις". In Stevenson, E.L. 1932. *Geography of Claudius Ptolemy*. New York: The New York Public Library.

- Quintus Curtius Rufus. "Historiae Alexandri Magni". In Crosby, W.H. (ed.) 1854. *Life and Exploits of Alexander the Great*. New York: D. Appleton and Company.

- Rufinus, "Historiae Ecclesiasticae". Trans. Amidon, P.R. 1997. *The Church History of Rufinus of Aquileia*. Books 10 and 11. Oxford and New York: Oxford University Press.

- Strabo. *Geōgraphikὲ: Book XVII*. Trans. Jones, H.L. 1967. The Loeb Classical Library. Vol. VIII. Cambridge, MA: Harvard University Press.

- Tacitus. *The Histories: Books IV – V*. Trans. Moore, C.H. 1931. The Loeb Classical Library. Vol. II. Cambridge, MA: Harvard University Press.

- Tertullianus. *Apologeticum*. Trans. Reeve, W.M. 1889. The Ancient and Modern Library of Theological Literature. Vol. XXXI. London and Sydney: Newberry House.

- Theocritos. “The Panegyric of Ptolemy, Idyll XVII”. In Edmonds, J.M. (ed.) 1912. *Greek Bucolic Poets*. The Loeb Classical Library. Cambridge, MA: Harvard University Press.

- Titus Livius. “Ab Urbe Condita”. In Roberts, C. (ed.) 1912. *Livy: History of Rome*. New York: E.P. Dutton and Co.

- Vitruvius. “De Architectura”. Trans. Morgan, M.H. In Howard, A.A. (ed.) 1914. *Vitruvius: The Ten Books on Architecture*. The Loeb Classical Library. Cambridge, MA. Harvard University Press.

- Zenobius. “Proverbia”. In von Leutsch, E.L. and Schneidewin, F.G. (eds.) 1839. *Epitome Collectionum Lucilli Tarrhaei et Didymi: Corpus Paroemiographorum Graecorum*. Vol. I. Goettingen: Vandenhoeck and Ruprecht.

II. References

- Abd el-Aziz, M. et al. 2016 "Le Phare. Un Site Immergé". In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 24 – 25.

- Abd el-Fattah, A. 2001. “Fouilles du Service des Antiquités sur le Site de la Nécropole de Gabbari (1996-1997)”. In Empereur, J.-Y. and Nenna, M.-D. (eds.). *Nécropolis 1*: 25 – 41. Etudes Alexandrines 5. Cairo: IFAO.

- Abd el-Fattah, A. 2002. “Une Fouille Récente au Sarapéion d’Alexandrie”. In Empereur, J.-Y. (ed.). *Alexandrina 2*: 25 – 27. Etudes Alexandrines 6. Cairo: IFAO.

- Abd el-Fattah, A. and Choukri, S.A. 1998. "Un Noveau Groupe de Tombeaux de la Nécropole Ouest d'Alexandrie". In Empereur, J.-Y. (ed.). *Alexandrina 1*: 35 – 53. Etudes Alexandrines 1. Cairo: IFAO.

- Abd el-Fattah, A., Abd el-Maksoud, M., and Carrez-Maratray, J.-Y. 2014. “Deux Inscriptions Grecques du Boubasteion d’Alexandrie”. *Ancient Society* 44: 149 – 177.

- Abd el-Maguid, M. 2016. "Les Découvertes Récentes du Service des Antiquités". In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 64 – 69.

- Abd el-Maksoud, M., Abd el-Fattah, A., and Seif el-Din, M. 2012. “La Fouille du Boubasteion d’Alexandrie: Présentation Préliminaire”. In Hermary, A. and Dubois, C. (eds.). *L’Enfant et la Mort dans l’Antiquité III: Le Matériel Associé aux Tombes d’Enfants*: 427 – 446. Bibliothèque d’Archéologie Méditerranéenne et Africaine – 12. Aix-en-Provence: Centre Camille Jullian.

- Abd el-Maksoud, M., Abd el-Fattah, A., and Seif el-Din, M. 2015. “Foundation Deposit Plaques from the Boubasteion”. *BSAA* 49: 133 – 153.

- Abd el-Maksoud, M., Abd el-Fattah, A., and Seif el-Din, M. 2016. “Le Boubasteion: Un Lieu de Culte Populaire”. In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 34 – 37.

- Adriani, A. 1934. *Annuario del Museo Greco-Romano (1932-33)*. Alexandria: Whitehead Morris Limited.

- Adriani, A. 1936. *Annuaire du Musée Gréco-Romain (1933-1935): La Nécropole de Moustafa Pasha*. Alexandria: Whitehead House Limited.

- Adriani, A. 1940a. *Annuaire du Musée Gréco-Romain (1935-1939)*. Alexandria: Imprimerie de la Société de Publications Égyptiennes.

- Adriani, A. 1940b. *Fouilles dans la Nécropole de Hadra 28/3/1940 – 5/6/1940*. Alexandria: Manuscript.

- Adriani, A. 1952. *Annuaire du Musée Gréco-Romain (1940-1950)*. Alexandria: Imprimerie de la Société de Publications Égyptiennes, S.A.E.

- Adriani, A. 1956a. "Scavi e Scoperte Alessandrine (1949-1952)". *BSAA* 41: 1 – 48.

- Adriani, A. 1956b. "Ipogeo Dipinto della Via Tigrane Pascià". *BSAA* 41: 63 – 86.

- Adriani, A. 1966a. *Repertorio d'Arte dell'Egitto Greco-Romano*. Serie C. Alessandria: Architettura e Topografia. Vol. I (testo). Palermo: Fondazione 'Ignazio Mormino' del Banco di Sicilia.

- Adriani, A. 1966b. *Repertorio d'Arte dell'Egitto Greco-Romano*. Serie C. Alessandria: Architettura e Topografia. Vol. II (tavole). Palermo: Fondazione 'Ignazio Mormino' del Banco di Sicilia.

- Adriani, A. 1972. *Lezioni Sull'Arte Alessandrina*. Naples: Libreria Scientifica Editrice.

- Adriani, A. 2000. *La Tomb di Alessandro. Realtà, Ipotesi e Fantasie*. Eds. Bonacasa, N. and Minà, P. Documenti e Recherche d'Arte Alessandrina VI. Rome: L'Erma di Bretschneider.

- Agnew, H.C. 1840. "Remarks on Some Remains of Ancient Greek Writings". *Archaeologia* 28: 152 – 170.

- Allen, D.H. 2014. *How Mechanics Shaped the Modern World*. Cham, Heidelberg, New York, Dordrecht, and London: Springer.

- Andronikos, M. 1984. *Vergina: The Royal Tombs and the Ancient City*. Trans. Turner, L. Athens: Ekdotike Athenon.

- Arnaud, J.-L. 1997. "Nouvelles Données sur la Topographie d'Alexandrie Antique". *BCH* 121 (2): 721 – 737.

- Arnaud, J.-L. 2002a. "Sources et Méthodes de Restitution: Les Obélisques et le Césaréum d'Alexandrie". In Empereur, J.-Y. (ed.). *Alexandrina 2*: 177 – 190. Etudes Alexandrines 6. Cairo: IFAO.

- Arnaud, J.-L. 2002b. "Un Outil Cartographique: Le Cadastre Informatisé d'Alexandrie". In Empereur, J.-Y. (ed.). *Alexandrina 2*: 159 – 175. Etudes Alexandrines 6. Cairo: IFAO.

- Arnaud, J.-L. 2009. "La Restitution d'un Réseau Viaire Antique à l'Épreuve du Dessin Informatisé, Alexandrie". In Empereur, J.-Y. (ed.). *Alexandrina 3*: 373 – 400. Etudes Alexandrines 18. Cairo: IFAO.

- Arvanitakis, G. 1899. "Notes Épigraphiques". *BSAA* 2: 9 – 14.

- Ashton, S.-A. 2004. "Ptolemaic Alexandria and the Egyptian Tradition". In Hirst, A. and Silk, M. (eds.). *Alexandria: Real and Imagined*: 15 – 40. London: Centre for Hellenic Studies, King's College London.

- Austin, M.M. 1981. *The Hellenistic World from Alexander to the Roman Conquest: A Selection of Ancient Sources in Translation*. Cambridge: Cambridge University Press.

- Awad, M. and Escoffey, C. 2008. *Prince Omar Toussoun and His Archaeological Legacy.* Alexandria: Bibliotheca Alexandrina – Alex-Med.

- Baedeker, K. 1877. *Aegypten: Handbuch für Reisende*. Erster Theil: Unter-Aegypten bis zum Fayûm und die Sinai-Halbinsel. Leipzig: Verlag von Karl Baedeker.

- Baedeker, K. 1897. *Aegypten: Handbuch für Reisende*. Vierte Auflage. Leipzig: Verlag von Karl Baedeker.

- Bagnall, R.S. 1979. "The Date of the Foundation of Alexandria". *AJAH* 4: 46 – 49.

- Bagnall, R.S. 2002. "Alexandria: Library of Dreams". *PAPS* 146: 348 – 362.

- Babraj, K. and Szymańska, H. 2010. "Marea or Philoxenite? Polish Excavations in the Mareotic Region". In Blue, L. (ed.). *Lake Mareotis: Reconstructing the Past*: 75 – 86. Assist. Khalil, E. Proceedings of the International Conference on the Archaeology of the Mareotic Region held at Alexandria University, Egypt, 5th-6th April 2008. University of Southampton Series in Archaeology 2. BAR International Series 2113. Oxford: Archaeopress.

- Bellin, J.-N. 1764. *Le Petit Atlas Maritime: Recueil de Cartes et Plans des Quatre Parties du Monde*. Tome III. Paris: Par Ordre de M. le Duc de Choiseul.

- Belon, P. 1553. *Les Observations de Plusieurs Singularitez et Choses Mémorables Trouvées en Grèce, Asie, Judée, Égypte, Arabie et Autres Pays Estranges, Rédigées en Trois Livres*. Paris: Gilles Corrozet.

- Benech, C. 2009. "Recherches sur le Tracé des Murailles Antiques d'Alexandrie". In Empereur, J.-Y. (ed.). *Alexandrina 3*: 401 – 446. Etudes Alexandrines 18. Cairo: IFAO.

- Bergmann, M., Heinzelmann, M., and Martin, A. 2010. "Schedia, Alexandria's Harbour on the Canopic Nile. Interim Report on the German Mission at Kom el-Giza/Beheira (2003-2008)". In Blue, L. (ed.). *Lake Mareotis: Reconstructing the Past*: 107 – 118. Assist. Khalil, E. Proceedings of the International Conference on the Archaeology of the Mareotic Region

held at Alexandria University, Egypt, 5th-6th April 2008. University of Southampton Series in Archaeology 2. BAR International Series 2113. Oxford: Archaeopress.

- Bevan, E.R. 1927. *The House of Ptolemy: A History of Hellenistic Egypt under the Ptolemaic Dynasty*. London: Methuen Publishing.

- Billows, R. 2005. "Cities". In Erskine, A. (ed.) 2005. *A Companion to the Hellenistic World*: 196 – 215. Oxford: Blackwell Publishing.

- Bingen, J. and Bagnall, R.S. 2007. *Hellenistic Egypt: Monarchy, Society, Economy, Culture*. Berkeley and Los Angeles: The University of California Press.

- Blue, L. 2010. "Lake Mareotis Research Project". In *Lake Mareotis: Reconstructing the Past*: 25 – 34. Assist. Khalil, E. Proceedings of the International Conference on the Archaeology of the Mareotic Region held at Alexandria University, Egypt, 5th-6th April 2008. University of Southampton Series in Archaeology 2. BAR International Series 2113. Oxford: Archaeopress.

- Bonacasa, N. and Minà, P. 2015. "The 'Great Peristyle Tomb' in the Mustapha Pasha Necropolis". *BSAA* 49: 155 – 175.

- Bonamy, P.-N. 1731. "Description de la Ville d'Alexandrie, Telle qu'elle Estoit du Temps de Strabon". In Académie des Inscriptions et Belles-Lettres (ed.) 1736. *Histoire de l'Academie des Inscriptions et Belles-Lettres*: 416 – 431. Tome IX. Paris: Imprimerie Royale.

- Bonifay, M. et al. 2002. "Les Céramiques du Remplissage de la Citerne du Sarapéion à Alexandrie". In Empereur, J.-Y. (ed.). *Alexandrina 2*: 39 – 84. Etudes Alexandrines 6. Cairo: IFAO.

- Borchardt, L. 1905. “Von einer Alexandrinischen Baustelle”. *BSAA* 8: 1 – 6.

- Botti, G. 1893. *Il Museo di Alessandria: E Gli Scavi Nell'Anno 1892*. Alexandria: V. Penasson.

- Botti, G. 1894. *Rapport sur les Fouilles Pratiquées et à Pratiquer à Alexandrie*. Présenté au Comité de la Société Archéologique d'Alexandrie. Alexandria: V. Penasson.

- Botti, G. 1895. *L'Acropole d'Alexandrie et le Sérapeum d'Après Aphtonius et les Fouilles*. Alexandria: Imprimerie Générale L. Carrière.

- Botti, G. 1897a. *Fouilles à la Colonne Théodosienne (1896)*. Alexandria: Imprimerie Générale L. Carrière.

- Botti, G. 1897b. *La Côte Alexandrine dans l'Antiquit.* Fascicule I. Cairo: Imprimerie Nationale.

- Botti, G. 1897c. *Plan du Quartier "Rhakotis" dans l'Alexandrie Romaine*. Alexandria: Imprimerie Générale L. Carrière.

- Botti, G. 1898a. “Additions au Plan de la Ville d’Alexandrie etc.”. *BSAA* 1: 49 – 68.

- Botti, G. 1898b. *La Côte Alexandrine dans l'Antiquit.* Fascicule II. Cairo: Imprimerie Nationale.

- Botti, G. 1898c. *Plan de la Ville d'Alexandrie a l'Époque Ptolémaique; Monuments et Localités de l'Ancienne Alexandrie d'Apres les Écrivain et les Fouilles*. Mémoire Présenté a la Société Archéologique. Alexandria: Imprimerie Générale L. Carrière.

- Botti, G. 1898d. “Fouilles dans la Céramique d’Alexandrie en 1898”. *BSAA* 1: 5 – 24.

- Botti, G. 1899a. “Les Citernes d’Alexandrie”. *BSAA* 2: 15 – 26.

- Botti, G. 1899b. “Etudes Topographiques dans la Nécropole de Gabbari”. *BSAA* 2: 37 – 56.

- Botti, G. 1899c. “L’Apis de l’Empereur Adrien: Trouvé dans le Sérapeum d’Alexandrie”. *BSAA* 2: 27 – 36.

- Botti, G. 1900-01. *Catalogue des Monuments Exposés au Musée Gréco-Romain d’Alexandrie*. Alexandria: Imprimerie Générale A. Mourès & C^{ie}.

- Botti, G. 1902a. "Premiere Visite à la Nécropole d'Anfuchy a Alexandrie". *BSAA* 4: 13 – 15.

- Botti, G. 1902b. “Description Sommaire de la Necropole d'Anfouchy”. *BSAA* 4: 16 – 36.

- Botti, G. 1902c. *Le Musée Gréco-Romain d’Alexandrie en 1900 et 1901*. Alexandria: Imprimerie Générale A. Mourès & C^{ie}.

- Botti, G. 1902d. “Bulletin Épigraphique". *BSAA* 4: 85 – 107.

- Botti, G. 1902e. “L’Ancien Théâtre d’Alexandrie”. *BSAA* 4: 119 – 121.

- Botti, G. 1908. “Mémoire sur les Catacombes de Kom-el-Chougafa”. Teil VII: Dokumente. Kapitel XXI. In Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa: 321 – 367. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Botti, G. and Nourrison, V. 1899. *Rapports sur la Bibliothèque Municipale en 1898, et sur le Musée Gréco-Romain*. Alexandria: Imprimerie Générale L. Carrière.

- Botti, G. and Simond, E. 1899. “Additions au Plan d’Alexandrie”. *BSAA* 2: 57 – 64.

- Bourguignon d'Anville, J.-B. 1766. *Mémoires sur l'Égypte Ancienne et Moderne*. Paris: Imprimerie Royale.

- Boussac, M.-F. and El Amouri, M. 2010. “The Lake Structures at Taposiris”. In Blue, L. (ed.). *Lake Mareotis: Reconstructing the Past*: 87 – 106. Assist. Khalil, E. Proceedings of the International Conference on the Archaeology of the Mareotic Region held at Alexandria University, Egypt, 5th-6th April 2008. University of Southampton Series in Archaeology 2. BAR International Series 2113. Oxford: Archaeopress.

- Braun, G. and Hogenberg, F. 1575. *Civitates Orbis Terrarum*. Vol. II. Cologne: Coloniae Agrippinae.

- Breccia, E. 1905a. “Cronaca del Museo e Degli Scavi e Ritrovamenti nel Territorio d’Alessandria”. *BSAA* 7: 58 – 81.

- Breccia, E. 1905b. “Cronaca del Museo e Degli Scavi e Ritrovamenti nel Territorio d’Alessandria”. *BSAA* 8: 118 – 132.

- Breccia, E. 1906. *Rapports sur la Marche du Musée et de la Bibliothèque Pendant l’Année 1904-1905*. Alexandria: Société de Publications Égyptiennes.

- Breccia, E. 1907a. “Cronaca del Museo e Degli Scavi e Ritrovamenti nel Territorio d’Alessandria”. *BSAA* 9: 97 – 114.

- Breccia, E. 1907b. *Guide de la Ville et du Musée d’Alexandrie*. Alexandria: Imprimerie Générale A. Mourès & C^{ie}.

- Breccia, E. 1907c. “La Tomba Dipinti di Such el-Wardian”. In Maspero, G. (ed.). *Le Musée Égyptien: Recueil de Monuments et de Notices sur les Fouilles d’Égypte*: 63 – 74. Tome Second. Cairo: Imprimerie de l’Institut Francais d’Archeologie Orientale.

- Breccia, E. 1907d. “Le Fouilles dans le Serapeum d’Alexandrie en 1905-1906”. Premier Rapport. *ASAE* 8: 62 – 76.

- Breccia, E. 1907e. *Rapport sur la Marche du Service du Musée Pendant l'Année 1906*. Alexandria: Société de Publications Égyptiennes.

- Breccia, E. 1907f. “La Necropoli de l’Ibrahimieh”. *BSAA* 9: 35 – 86.

- Breccia, E. 1908a. *Rapport sur la Marche du Service du Musée Pendant l'Année 1907*. Alexandria: Société de Publications Égyptiennes.

- Breccia, E. 1908b. "Cronaca del Museo e Degli Scavi e Ritrovamenti Nel Territorio de Alessandria". *BSAA* 10: 224 – 234.

- Breccia, E. 1909. “Un Ipogeo Cristiano ad Hadra”. *BSAA* 11: 278 – 288.

- Breccia, E. 1911. *Iscrizioni Greche e Latine*. Service des Antiquités de l'Egypte. Catalogue Général des Antiquités Égyptiennes du Musée d'Alexandrie. No. 1-568. Cairo: Imprimerie de l’Institut Francais d’Archeologie Orientale.

- Breccia, E. 1912a. *La Necropoli di Sciatbi*. Volume Primo (Testo). Catalogue Général des Antiquités Égyptiennes (Musée d’Alexandrie). Cairo: Imprimerie de l’Institut Francais d’Archeologie Orientale.

- Breccia, E. 1912b. *La Necropoli di Sciatbi*. Volume Secondo (Tavole). Catalogue Général des Antiquités Égyptiennes (Musée d'Alexandrie). Cairo: Imprimerie de l'Institut Francais d'Archeologie Orientale.

- Breccia, E. 1912c. *Rapport sur la Marche du Service du Musée Pendant les Années 1910-1911*. Alexandria: Société de Publications Égyptiennes.

- Breccia, E. 1912d. "Di Una Tomba Romana Presso Alessandria". *BSAA* 14: 222 – 228.

- Breccia, E. 1913. *Rapport sur la Marche du Service du Musée en 1912*. Alexandria: Société de Publications Égyptiennes.

- Breccia, E. 1914a. *Alexandrea ad Aegyptum: Guide de la Ville Ancienne et Moderne et du Musée Gréco-Romain*. Bergamo: Istituto Italiano d'Arti Grafiche.

- Breccia, E. 1914b. *Rapport sur la Marche du Service du Musée en 1913*. Alexandria: Société de Publications Égyptiennes.

- Breccia, E. 1914c. "Notiziario. 1) Tombe Greco-Egiziane dell'Età Romana a Ramleh (Sporting Club)". *BSAA* 15: 53 – 56.

- Breccia, E. 1916. *Rapport Sur la Marche du Service du Musée Pendant l'Exercice 1914-1915*. Alexandria: Société de Publications Égyptiennes.

- Breccia, E. 1921. *Rapport sur la Marche du Service du Musée Gréco-Romain Pendant l'Exercice 1919-1920*. Alexandria: Société de Publications Égyptiennes.

- Breccia, E. 1922. *Alexandrea ad Aegyptum: A Guide to the Ancient and Modern Town, and to Its Graeco-Roman Museum*. Bergamo: Istituto Italiano d'Arti Grafiche.

- Breccia, E. 1923a. “La Mosaïque de Chatby”. *BSAA* 19: 158 – 165.

- Breccia, E. 1923b. *Rapport sur la Marche du Service du Musée Gréco-Romain d'Alexandrie Pendant l'Exercice 1921-1922*. Alexandria: Société de Publications Égyptiennes.

- Breccia, E. 1924. *Le Musée Gréco-Romain au Cours de l’Année 1922-23*. Alexandria: Imprimerie de la Societa Editrice E. di Pompeo & Co.

- Breccia, E. 1926. *Monuments de l’Égypte Gréco-Romaine*. Tome Premier. Bergamo: Officine dell’Istituto Italiano d’Arti Grafiche.

- Breccia, E. 1930. “Nuovi Scavi Nelle Necropoli di Hadra”. *BSAA* 25: 99 – 132.

- Breccia, E. 1932. *Le Musée Gréco-Romain (1925-31)*. Bergamo: Istituto Italiano d'Arti Grafiche.

- Breccia, E. 1933. *Le Musée Gréco-Romain (1931-32)*. Bergamo: Istituto Italiano d'Arti Grafiche.

- Brugsch, H. 1860. “Vorläufiger Bericht über Meine Zweite Wissenschaftliche Reise nach Aegypten im Winter 1857-58”. *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 14: 1 – 14.

- Bruwier, M.-C. 2014. "Recherches Archéologiques à Smouha Alexandrie". In Empereur, J.-Y. (ed.). *Alexandrina 4*: 21 – 33. Études Alexandrines 32. Alexandria: Centre d'Études Alexandrines.

- Bruwier, M.-C. 2016. "Sur les Traces de l'Éleusis d'Alexandrie". In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 38 – 39.

- Burkhalter, F. 1992. “Le Gymnase d’Alexandrie: Centre Administratif de la Province Romaine d’Égypte”. *BCH* 116: 345 – 373.

- Callot, O. and Nenna, M.-D. 2001. “L’Architecture des Tombes”. In Empereur, J.-Y. and Nenna, M.-D. (eds.). *Nécropolis 1*: 43 – 160. Etudes Alexandrines 5. Cairo: IFAO.

- Camiz, R. 1921. “Documents et Nouvelles”. *BSAA* 18: 61 – 62.

- Camp II, J.M. and Dinsmoor Jr., W.B. 1984. *Ancient Athenian Building Methods*. The American School of Classical Studies at Athens. Lunenburg: The Stinehour Press.

- Capponi, L. 2011. *Roman Egypt*. London and New York: Bristol Classical Press.

- Cassas, L.-F. 1799. *Voyage Pittoresque de la Syrie, de la Phénicie, de la Palestine et de la Basse Égypte*. Vol. III. Paris: Imprimerie de la République.

- Ceccaldi, G.-C. 1869. “Le Temple de Vénus Arsinoé au Cap Zéphyrium (Environs d’Alexandrie d’ Égypte)”. *REV. ARCH.* 19: 268 – 272.

- Chamoux, F. 2002. *Hellenistic Civilization*. Trans. Roussel, M. Oxford: Blackwell Publishing.

- Chaussard, P.-J.-B. 1802. *Histoire des Expéditions d'Alexandre, par Flave Arrien de* Nicomédie. Traduction Nouvelle. Tome Premiere. Paris: Imprimerie de Charles Pougens.

- Choukri, S. 2003. “Un Hypogée Découvert à Ezbet el-Yousra dans le Quartier de Wardian à Alexandrie”. In Empereur, J.-Y. and Nenna, M.-D. (eds.) 2003b. *Nécropolis 2*: 699 – 705. Etudes Alexandrines 7. Cairo: IFAO.

- Combe, É. 1919. *Rapport sur la Marche du Service du Musée Gréco-Romain Pendant l'Exercice 1917-1918*. Alexandria: Société de Publications Égyptiennes.

- Cooper, F.A. 1996. *The Temple of Apollo Bassitas I: The Architecture*. Contr. Kelly, N.J. Princeton: The American School of Classical Studies at Athens.

- D'Arc, G. 1843. "Nouvelle d'Égypte. Lettre du Consul Général de France à M. Jomard". *BSG* 19: 326 – 327.

- Dapper, O. 1668. *Naukeurige Beschrijvinge der Afrikaensche Gewesten*. Amsterdam: Jacob van Meurs.

- Daszewski, W.-A. 1979. "Nouvelles Découvertes dans le Quartier des Basileia en Alexandrie". *ÉtTrav.* 11: 92 – 105.

- Daszewski, W.-A. 1983. "Notes on Topography of Ptolemaic Alexandria". In Bonacasa, N. and Di Vita, A. (eds.) 1992. *Alessandria e il Mondo Ellenistico-Romano: Studi in Onore di A. Adriani*: 54 – 69. Vol. I. Studi e Materiali 4. Istituto di Archeologia. Università di Palermo. Rome: L'Erma di Bretschneider.

- Daszewski, W.-A. 1985a. *Corpus of Mosaics from Egypt I: Hellenistic and Early Roman Period*. Aegyptiaca Treverensia 3. Mainz am Rhein: Verlag Philipp von Zabern.

- Daszewski, W.-A. 1985b. "Alexandriaca I: Les Citernes et les Chapiteaux". In Posener-Kriéger, P. (ed.). *Mélanges Gamal Eddin Mokhtar*: 177 – 185. Vol. I. Cairo: IFAO.

- Daszewski, W.-A. 1994. "Notes sur la Trame Urbaine de l'Ancienne Alexandrie (Note d'Information)". *CRAI* 138 (2): 423 – 429.

- Daszewski, W.-A. 2003. "Le Tombeau Perdu de Gabbari". In Empereur, J.-Y. and Nenna, M.-D. (eds.) 2003b. *Nécropolis 2*: 659 – 670. Etudes Alexandrines 7. Cairo: IFAO.

- De Bellefonds, L. 1872-1873. *Mémoires sur les Principaux Travaux d'Utilité Publique, Exécutés en Égypte*. Paris: Arthus Bertrand.

- De Bruijn, C. 1698. *Reizen van Cornelis de Bruyn door de Vermaardste Deelen van Klein Asia, etc*. In Gaspar, R.J.G.A.A. (ed.) 2015. The Hague: dbnl.

- De Cosson, A. 1935. *Mareotis: Being a Short Account of the History and Ancient Monuments of the North-Western Desert of Egypt and of Lake Mareotis*. London: Country Life LTD.

- De Graauw, A. 1998. "A 20th Century Engineer's Viewpoint of the Eastern Harbour of Alexandria". In Goddio, F. et al. (eds.). *Alexandria: The Submerged Royal Quarters*: 53 – 58. London: Periplus Publishing.

- De Rossi, G.B. 1864. "Notizie. Alessandria d'Egitto. Catacombe Cristiane". *Bullettino di Archeologia Cristina* 2 (11): 88.

- De Sacy, A.I.S. 1810. *Relation de l'Égypte par Abd-Allatif, Médecin Arabe de Bagdad*. Paris: Imprimerie Imperial.

- De Vaujany, H. 1885. *Alexandrie et la Basse-Égypte*. Description de l'Égypte. Deuxième Partie. Paris: Librairie Plon.

- De Vaujany, H. 1888. *Recherches sur les Anciens Monuments Situé sur le Grand-Port d'Alexandrie*. Alexandria: V. Penasson. Paris: Maisonneuve F^{res} & C^{ie}.

- Demougin, S. and Empereur, J.-Y. 2002. "Inscriptions d'Alexandrie I: Un Nouveau Procurateur Alexandrin". In Empereur. J.-Y. (ed.). *Alexandrina 2*: 149 – 158. Études Alexandrines 6. Cairo: IFAO.

- Dinsmoor, W.B. 1950. *The Architecture of Ancient Greece: An Account of Its Development*. New York: Biblo and Tannen.

- Direction des Cartes, Plans et Archives, et de la Statistique Graphique (Ministére des Travaux Publics) 1887. *Atlas des Ports Étrangers*. Troisième Livraison. Paris: Imprimerie Nationale.

- Dixon, M.D. 2014. *Late Classical and Early Hellenistic Corinth, 338-196 B.C*. London and New York: Routledge.

- Dubourg, S. 2016. "L'Architecture des Riches Demeures d'Alexandrie". In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 26 – 29.

- Dzierzbicka, D. 2010. “Wineries of the Mareotic Region”. In Blue, L. (ed.). *Lake Mareotis: Reconstructing the Past*: 127 – 134. Assist. Khalil, E. Proceedings of the International Conference on the Archaeology of the Mareotic Region held at Alexandria University, Egypt, 5th-6th April 2008. University of Southampton Series in Archaeology 2. BAR International Series 2113. Oxford: Archaeopress.

- El-Abbadi, M. 1990. *Life and Fate of the Ancient Library of Alexandria*. Paris: UNESCO.

- El-Abbadi, M. 2000. “The Greatest Emporium in the Inhabited World”. In Mostafa, M.H., Grimal, N., and Nakashima, D. (eds.). *Underwater Archaeology and Coastal Management: Focus on Alexandria*: 17 – 21. Coastal Management Sourcebooks 2. Paris: UNESCO.

- El-Fakharani, F.A. 1983. “Recent Excavation at Marea in Egypt”. In Grimm, G., Heinen, H., and Winter, E. (eds.). *Das Römisch-Byzantinische Ägypten: Akten des Internationalen Symposiums, 26.-30. September 1978 in Trier: 175 – 186.* Aegyptiaca Treverensia 2. Mainz: Philipp von Zabern.

- Ellis, W.M. 2005. *Ptolemy of Egypt*. Edition of the Taylor and Francis e-Library. London and New York: Routledge.

- Empereur, J.-Y. 1995. "Alexandrie (Égypte)". *BCH* 119 (2): 743 – 760.

- Empereur, J.-Y. 1996. "Alexandrie (Égypte)". *BCH* 120 (2): 959 – 970.

- Empereur, J.-Y. 1997. "Alexandrie (Égypte)". *BCH* 121 (2): 831 – 847.

- Empereur, J.-Y. 1998a. *Alexandria Rediscovered*. London: The British Museum Press.

- Empereur, J.-Y. 1998b. *Le Phare d'Alexandrie: La Merveille Retrouvée*. Paris: Éditions Gallimard.

- Empereur, J.-Y. 1998c. "La Nécropole de Gabbari à Alexandrie". *CRAI* 142 (1): 155 – 162.

- Empereur, J.-Y. 1998d. "Alexandrie (Égypte)". *BCH* 122 (2): 611 – 638.

- Empereur, J.-Y. 1999a. "Travaux Récents dans la Capitale des Ptolémées". In Leclant, J. and Vian des Rives, R. (eds.). *Alexandrie: Une Megapole Cosmopolite*: 25 – 39. Cahiers de la Villa Kerylos. Vol. IX. Paris: Academie des Inscriptions et Belles-Lettres.

- Empereur, J.-Y. 1999b. "Alexandrie (Égypte)". *BCH* 123 (2): 545 – 568.

- Empereur, J.-Y. 2000a. "Alexandrie (Égypte)". *BCH* 124 (2): 595 – 619.

- Empereur, J.-Y. 2000b. "Underwater Archaeological Survey of Alexandria's Eastern Harbour". In Mostafa, M.H., Grimal, N., and Nakashima, D. (eds.). *Underwater Archaeology*

and Coastal Management: Focus on Alexandria: 54 – 59. Coastal Management Sourcebooks 2. Paris: UNESCO.

- Empereur, J.-Y. 2001a. “Alexandrie (Égypte)”. *BCH* 125 (2): 679 – 700.

- Empereur, J.-Y. 2001b. “Introduction”. In Empereur, J.-Y. and Nenna, M.-D. (eds.) 2001. *Nécropolis 1*: 1 – 23. Etudes Alexandrines 5. Cairo: IFAO.

- Empereur, J.-Y. 2002a. “Du Nouveau sur la Topographie d'Alexandrie (Note d’Information)”. *CRAI* 146 (3): 921 – 933.

- Empereur, J.-Y. 2002b. “Alexandrie (Égypte)”. *BCH* 126 (2): 615 – 626.

- Empereur, J.-Y. 2003. “La Publication de la Fouille du Pont de la Nécropolis”. In Empereur, J.-Y. and Nenna, M.-D. (eds.) 2003a. *Nécropolis 2*: 1 – 16. Etudes Alexandrines 7. Cairo: IFAO.

- Empereur, J.-Y. 2016. "Un Temple pour César, le Césaréum". In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 40 – 41.

- Empereur, J.-Y. 2017. “Alexandrie. Le Césaréum et la Fouille du Cinéma Majestic”. In *idem* (ed.). *Alexandrie, Césaréum. Les Fouilles du Cinéma Majestic*: 1 – 11. Études Alexandrines 38. Alexandria: Centre d'Études Alexandrines.

- Empereur, J.-Y. and Grimal, N. 1997. “Les Fouilles Sous-Marines du Phare d’Alexandrie”. *CRAI* 141 (3): 693 – 713.

- Empereur, J.-Y., Hesse, A., and Picard, O. 1994. “Alexandrie (Égypte)”. *BCH* 118 (2): 503 – 519.

- Empereur, J.-Y. and Nenna, M.-D. 2001. *Nécropolis 1*. Etudes Alexandrines 5. Cairo: IFAO.

- Empereur, J.-Y. and Nenna, M.-D. 2003a. *Nécropolis 2*. Vol. I. Etudes Alexandrines 7. Cairo: IFAO.

- Empereur, J.-Y. and Nenna, M.-D. 2003b. *Nécropolis 2*. Vol. II. Etudes Alexandrines 7. Cairo: IFAO.

- Empereur, J.-Y. and Picon, M. 1998. "Les Ateliers d'Amphores du Lac Mariout". In Empereur, J.-Y. (ed.). *Commerce et Artisanat dans l'Alexandrie Hellenistique et Romaine: Actes du Colloque d'Athènes Organisé par le CNRS, le Laboratoire de Céramologie de Lyon et l'École Française d'Athènes: 11-12 Décembre 1988*: 75 – 91. BCH Supplément 33. Athens: l'École Française d'Athènes.

- Fabre, D. and Goddio, F. 2010. "The Development and Operation of Portus Magnus in Alexandria: An Overview". In Robinson, D. and Wilson, A. (eds.). *Alexandria and the North-Western Delta*: 53 – 74. Joint Conference Proceedings of Alexandria: City and Harbour (Oxford 2004) and the Trade and the Topography of Egypt North-West Delta, 8th Century BC – 8th Century AD (Berlin 2006). OCMA. Monograph 5. Oxford: Oxbow Books.

- Fior, M. et al. 2008. "La Forteresse du Sultan Qaitbay à Alexandrie". In Décobert, C. and Empereur, J.-Y. (eds.). *Alexandrie Médiévale* 3: 313 – 345. Études Alexandrines 16. Cairo: IFAO.

- Forster, E.M. 1922. "Alexandria: A History and a Guide". In Allott, M. (ed.) 2004. *Alexandria: A History and a Guide (1922), and Pharos and Pharillon (1923)*: 1 – 179. The Abinger Edition. Cairo: The American University in Cairo Press.

- Forster, E.M. 1923. "Pharos and Pharillon". In Allott, M. (ed.) 2004. *Alexandria: A History and a Guide (1922), and Pharos and Pharillon (1923)*: 180 – 250. The Abinger Edition. Cairo: The American University in Cairo Press.

- Fragaki, H. 2013. *Un Edifice Inachevé du Quartier Royal à Alexandrie*. Études Alexandrines 31. Alexandria: Centre d'Études Alexandrines.

- Fraser, P.M. 1956. "A Ptolemaic Inscription in Alexandria Museum". *BSAA* 41: 49 – 55.

- Fraser, P.M. 1961. "The ΔΙΟΛΚΟΣ of Alexandria". *JEA* 147: 134 – 138.

- Fraser, P.M. 1972. *Ptolemaic Alexandria*. Vol. I. Oxford: The Clarendon Press.

- Frost, H. 1975. "The Pharos Site, Alexandria, Egypt". *IJNA* 4: 126 – 130.

- Frost, H. 2000. "From Byblos to Pharos: Some Archaeological Consideration". In Mostafa, M.H., Grimal, N., and Nakashima, D. (eds.). *Underwater Archaeology and Coastal Management: Focus on Alexandria*: 64 – 68. Coastal Management Sourcebooks 2. Paris: UNESCO.

- Goddio, F. 2000. "Underwater Archaeological Investigation of the Ancient Pharos". In Mostafa, M.H., Grimal, N., and Nakashima, D. (eds.). *Underwater Archaeology and Coastal Management: Focus on Alexandria*: 60 – 63. Coastal Management Sourcebooks 2. Paris: UNESCO.

- Goddio, F. 2011. "Heracleion-Thonis and Alexandria, Two Ancient Egyptian Emporia". In Robinson, D. and Wilson, A. (eds.). *Maritime Archaeology and Ancient Trade in the Mediterranean*: 121 – 137. OCMA. Monograph 6. Oxford: Oxbow Books.

- Goddio, F. and Bernard, A. 2004. *Sunken Egypt: Alexandria*. London: Periplus Publishing.

- Goddio, F. and Darwish, I. 1998. "The Topography of the Submerged Royal Quarters of the Eastern Harbour of Alexandria". In Goddio, F. et al. (eds.). *Alexandria: The Submerged Royal Quarters*: 1 – 52. London: Periplus Publishing.

- Goiran, J.-P. et al. 2000. "Évolution des Rivages d'Alexandrie à l'Holocène Récent, Marge Occidentale du Delta du Nil, Égypte". *Méditerranée* 94 (1.2): 83 – 90.

- Goiran, J.-P. et al. 2005. "Évolution Géomorphologique de la Façade Maritime d'Alexandrie (Égypte) au Cours des Six Derniers Millénaires". *Méditerranée* 104 (1.2): 61 – 64.

- Goiran, J.-P. et al. 2014. "Géoarchéologie du Port Maritime d'Alexandrie, Égypte". *Géochronique* 130: 26 – 29.

- Gorringe, H.H. 1885. *Egyptian Obelisks*. London: John C. Nimmo.

- Graham, A. 1902. *Roman Africa: An Outline of the History of the Roman Occupation of North Africa*. London, New York, and Bombay: Longmans, Green, and Co.

- Green, P. 1986. "The New Urban Culture: Alexandria, Antioch, Pergamon". *Grand Street* 5 (2): 140 – 152.

- Grimm, G. 1996. "City Planning?". In Hamma, K. (ed.) 1996. *Alexandria and Alexandrianism*: 55 – 74. Malibu: The J. Paul Getty Museum.

- Guimier-Sorbets, A.-M. 1998a. "Alexandrie: Les Mosaïques Hellénistiques Découvertes sur le Terrain de la Nouvelle Bibliotheca Alexandrina". *REV. ARCH.* Fasc. 2: 263 – 290.

- Guimier-Sorbets, A.-M. 1998b. "Le Pavement du Triclinium à la Méduse dans une Maison d'Époque Impériale à Alexandrie (Terrain du Théâtre Diana)". In Empereur, J.-Y. (ed.). *Alexandrina 1*: 115 – 139. Etudes Alexandrines 1. Cairo: IFAO.

- Guimier-Sorbets, A.-M. 2004a. "La Mosaïque aux Lutteurs de la Bibliotheca Alexandrina: Techniques Picturales et Mosaïstiques dans les Palais d'Alexandrie". *Musiva & Sectilia* 1: 15 – 34.

- Guimier-Sorbets, A.-M. 2004b. “Mosaics of Alexandria”. In Hirst, A. and Silk, M. (eds.). *Alexandria: Real and Imagined*: 67 – 77. London: Centre for Hellenic Studies, King’s College London.

- Guimier-Sorbets, A.-M. and Seif el-Din, M. 1997. “Les Deux Tombes de Perséphone dans la Nécropole de Kom el-Chougafa à Alexandrie”. *BCH* 121 (1): 355 – 410.

- Guimier-Sorbets, A.-M., Pelle, A., and Seif el-Din, M. 2017. *Resurrection in Alexandria: The Painted Graeco-Roman Tombs of Kom al-Shuqafa*. Antiquités Alexandrines 1. Alexandria: Centre d'Études Alexandrines.

- Haag, M. 2008. *Vintage Alexandria: Photographs of the City 1860 – 1960*. Cairo and New York: The American University in Cairo Press.

- Haas, C. 1997. *Alexandria in Late Antiquity: Topography and Social Conflict*. Baltimore and London: The John Hopkins University Press.

- Habachi, B. 1937. “Two Tombs of the Roman Epoch Recently Discovered at Gabbary”. *BSAA* 31: 270 – 285.

- Hairy, I. 1998. “Les Méthodes Développées au Cours de l’Opération Archéologique”. In Empereur, J.-Y. (ed.). *Le Phare d’Alexandrie: La Merveille Retrouvée*: 96 – 103. Paris: Éditions Gallimard.

- Hairy, I. 2002a. “Une Nouvelle Citerne sur le Site du Sarapéion”. In Empereur, J.-Y. (ed.). *Alexandrina 2*: 29 – 37. Etudes Alexandrines 6. Cairo: IFAO.

- Hairy, I. 2002b. “Analyse de Pieces Architecturales d’une Colonnade sur le Site du Sarapéion”. In Empereur, J.-Y. (ed.). *Alexandrina 2*: 85 – 98. Etudes Alexandrines 6. Cairo: IFAO.

- Hairy, I. 2007. “Pharos, l’Égypte et Platon”. In Massa-Pairault, F.-H. and Sauron, G. (eds.). *Images et Modernité Hellénistiques: Appropriation et Représentation du Monde d’Alexandre à César*: 61 – 89. Collection de l’École Française de Rome 390. Rome: l’École Française de Rome.

- Hairy, I. 2008. “Alexandrie Médiévale: La Question de l’Eau”. In Décobert, C. and Empereur, J.-Y. (eds.). *Alexandrie Médiévale* 3: 263 – 277. Études Alexandrines 16. Cairo: IFAO.

- Hairy, I. 2009. “Site Sous-Marin de Qaitbay: Méthodes de Fouilles et Dernières Découvertes". *BSAA* 48: 113 – 132.

- Hairy, I. 2013. *The Underwater Site of Qaitbay: New Procedures for Studying the Sunken Elements*. An Interim Report on the 2012-2013 Season. London: The Honor Frost Foundation.

- Hairy, I. 2016a. "L'Eau dans la Ville". In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 14 – 17.

- Hairy, I. 2016b. "Le Phare: Lumière d'un Empire sur le Monde". In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 18 – 23.

- Hairy, I. and Sennoune, O. 2011. “Le Canal d’Alexandrie: La Course du Nil”. In Hairy, I. (ed.). *Du Nil à Alexandrie, Histoires d'Eau: Catalogue d'Exposition*: 140 – 161. Alexandria: Centre d'Études Alexandrines.

- Halim, H. 2000. “Kamel Abul-Saadat: A Pioneer in Alexandrian Underwater Archaeology”. In Mostafa, M.H., Grimal, N., and Nakashima, D. (eds.). *Underwater Archaeology and Coastal Management: Focus on Alexandria*: 46 – 53. Coastal Management Sourcebooks 2. Paris: UNESCO.

- Helffrich, J. 1582. *Kurtzer & Warhafftiger Bericht von der Reis aus Venedig nach Hierusalem, von Dannen in Aegypten, auff den Berg Sinai, und Folgends Widerumb gen Venedig*. Leipzig: Berwaldt.

- Hesse, A. 1998. “Arguments pour une Nouvelle Hypothèse de Localisation de l’Heptastade d’Alexandrie”. In Empereur, J.-Y. (ed.). *Alexandrina 1*: 21 – 33. Etudes Alexandrines 1. Cairo: IFAO.

- Hesse, A. et al. 2002. “L’Heptastade d’Alexandrie (Égypte)”. In Empereur, J.-Y. (ed.). *Alexandrina 2*: 191 – 273. Etudes Alexandrines 6. Cairo: IFAO.

- Hoepfner, W. 1971. *Zwei Ptolemaierbauten: Das Ptolemaierweihgeschenk in Olympia und ein Bauvorhabe in Alexandria*. Mitteilungen des Deutschen Archäologischen Instituts. Athenische Abteilung. Beiheft 1. Berlin: Gebr. Mann Verlag.

- Hoepfner, W. and Schwandner, E.-L. 1994. “IX. Alexandria: Beginn einer Neuen Ära; mit einem Beitrag von Gunnar Brands”. In *idem*. *Haus und Stadt im Klassischen Griechenland*: 235 – 256. Wohnen in der Klassishen Polis. Band I. Second Edition. Munich: Deutscher Kunstverlag.

- Hogarth, D.G. and Benson, E.F. 1894-5. *Report on Prospects of Research in Alexandria*. London: MacMillan and Co.

- Hölbl, G. 2001. *A History of the Ptolemaic Empire*. Trans. Saavedra, T. London and New York: Routledge.

- Hopkinson, D. 2010. "The Results of a Preliminary Survey at Mareotis Island". In Blue, L. (ed.). *Lake Mareotis: Reconstructing the Past*: 35 – 46. Assist. Khalil, E. Proceedings of the International Conference on the Archaeology of the Mareotic Region held at Alexandria University, Egypt, 5th-6th April 2008. University of Southampton Series in Archaeology 2. BAR International Series 2113. Oxford: Archaeopress.

- Hornblower, S. et al. (eds.). 2014. *The Oxford Companion to Classical Civilization*. Second Edition. Oxford: Oxford University Press.

- Jondet, G. 1916. *Les Ports Submergés de l'Ancienne Île de Pharos*. Mémoires de l'Institut Égyptien. Vol. IX. Cairo: Au Siege de l'Institut Égyptien.

- Jondet, G. 1921. *Atlas Historique de la Ville et des Ports de l'Alexandrie*. Mémoires Présentés à la Sociéte Sultanieh de Géographie. Vol. II. Cairo: Imprimerie de l'Institut Francais d'Archeologie Orientale.

- Kiepert, H. 1872. "Zur Topographie des Alten Alexandria. Nach Mahmud Beg's Entdeckungen". In *Zeitschrift der Gesellschaft für Erdkunde zu Berlin*: 337 – 349. Vol. VII. Berlin: Verlag von Dietrich Reimer.

- Kołątaj, W. 1971. "Les Fouilles Polonaise à Kom el Dikka (Alexandrie) en 1968 et 1969". *ÉtTrav.* 5: 147 – 167.

- Kołątaj, W. 1992. *Alexandrie VI: Imperial Baths at Kom el-Dikka*. Warsaw: PWN - Éditions Scientifiques de Pologne.

- Kołątaj, W. and Kołątaj, T. 1975. "Polish Excavations at Kom el Dikka in Alexandria, 1967. Report on the Reconstruction of the "Theatre"". *BSAA* 43: 79 – 97.

- Kubiak, W. 1967. “Les Fouilles Polonaises à Kom el Dick en 1963 et 1964”. BSAA 42: 63 – 70, 77 – 80.

- Kubiak, W. and Makowiecka, E. 1975. “Polish Excavations at Kom el Dikka in 1965-1966. Preliminary Report”. *Africana Bulletin* 22: 7 – 13, 13 – 15, 15 – 39.

- Kyrillos II 1900. “Le Temple du Césareum et l'Église Patriarcale d'Alexandrie”. *BSKG* 5 (6): 329 – 354.

- Lacroix, A. and Daressy, G. 1922. *Dolomieu en Égypte: 30 Juin 1798 – 10 Mars 1799*. Mémoires Présentes à l'Institut d'Égypte. Vol. VIII. No. 3. Cairo: Imprimerie de l'Institut Français d'Archéologie Orientale.

- Le Père, G. 1813. “Mémoire sur la Ville d'Alexandrie“. In *Description de l'Égypte*. Etat Moderne. Tome Second, IIe Partie: 269 – 323. Imperial Edition. Paris: Imprimerie Royale.

- Lebedinsky, V.V. 2003. “The Potential of Egyptian-Russian Cooperation in Underwater Archaeology: An Historical Perspective”. In Hawass, Z. (ed.). *Egyptology at the Dawn of the Twenty-First Century I: Archaeology*: 289 – 294. Collab. Pinch Brock, L. Proceedings of the Eighth International Congress of Egyptologists, Cairo, 2000. Cairo and New York: The American University in Cairo Press.

- Leclant, J. 1961. “Fouilles et Travaux en Égypte, 1957-1960 (Première Partie)”. *Orientalia* 30: 91 – 110.

- Leclant, J. 1965. “Fouilles et Travaux en Égypte et au Soudan, 1963-1964”. *Orientalia* 34: 175 – 232.

- Leclant, J. 1966. “Fouilles et Travaux en Égypte et au Soudan, 1964-1965”. *Orientalia* 35: 127 – 178.

- Leclant, J. 1969. “Fouilles et Travaux en Égypte et au Soudan, 1967-1968”. *Orientalia*: 38: 240 – 307.

- Leclant, J. 1972. “Fouilles et Travaux en Égypte et au Soudan, 1970-1971”. *Orientalia* 41: 249 – 291.

- Leclant, J. 1973. “Fouilles et Travaux en Égypte et au Soudan, 1971-1972”. *Orientalia*: 42: 393 – 440.

- Leclant, J. 1976. “Fouilles et Travaux en Égypte et au Soudan, 1974-1975”. *Orientalia* 45: 275 – 318.

- Leclant, J. 1977. “Fouilles et Travaux en Égypte et au Soudan, 1975-1976”. *Orientalia* 46: 233 – 299.

- Leclant, J. 1979. “Fouilles et Travaux en Égypte et au Soudan, 1977-1978”. *Orientalia* 48: 340 – 412.

- Leclant, J. 1982. “Fouilles et Travaux en Égypte et au Soudan, 1979-1980”. *Orientalia* 51: 49 – 122.

- Leclant, J. 1984. “Fouilles et Travaux en Égypte et au Soudan, 1982-1983”. *Orientalia* 53: 350 – 416.

- Leclant, J. and Clerc, G. 1985. “Fouilles et Travaux en Égypte et au Soudan, 1983-1984”. *Orientalia* 54: 337 – 415.

- Leclant, J. and Clerc, G. 1988. “Fouilles et Travaux en Égypte et au Soudan, 1986-1987”. *Orientalia* 57: 307 – 404.

- Leclant, J. and Clerc, G. 1990. “Fouilles et Travaux en Égypte et au Soudan, 1988-1989”. *Orientalia* 59: 335 – 439.

- Leclant, J. and Clerc, G. 1997. “Fouilles et Travaux en Égypte et au Soudan, 1995-1996”. *Orientalia* 66: 222 – 363.

- Leclant, J. and Clerc, G. 1998. “Fouilles et Travaux en Égypte et au Soudan, 1996-1997”. *Orientalia* 67: 315 – 444.

- Leroux, E. (ed.) 1846. “Mosaïque Trouvée en Egypte”. *Revue Archéologique* 3 (1): 189.

- Limneos-Papakosta, C. 2007. *Shallalat 2007 Final Report*. Athens: HRIAC.

- Limneos-Papakosta, C. 2008. *Shallalat 2008 Final Report*. Athens: HRIAC.

- Limneos-Papakosta, C. 2009. *Shallalat 2009 Excavation Report*. Athens: HRIAC.

- Limneos-Papakosta, C. 2010. *Shallalat 2010 Excavation Report*. Athens: HRIAC.

- Limneos-Papakosta, C. 2015. *Shallalat 2015 Excavation Report*. Athens: HRIAC.

- Limneos-Papakosta, C. 2016a-b. *Shallalat 2016 (1st-2nd) Excavation Reports*. Athens: HRIAC.

- Limneos-Papakosta, C. 2017. *Shallalat 2017 Excavation Report*. Athens: HRIAC.

- Limneos-Papakosta, C. 2018. *Shallalat 2018 Excavation Report*. Athens: HRIAC.

- Lipińska, J. 1966. “Polish Excavations at Kom el-Dikka in Alexandria”, *ÉtTrav.* 1: 181 – 199.

- Lipińska, J. and Riad, H. 1966. “Trial Pits at Kom el Dikka in Alexandria”. *ASAE* 59: 99 – 108.

- Mahmoud-Bey 1872. *Mémoire sur l'Antique Alexandrie: Ses Faubourgs et Environs Découverts, par les Fouilles, Sondages, Nivellements et Autres Recherches*. Copenhagen: Imprimerie de Bianco Luno.

- Majcherek, G. 1990. "Excavations at Kom el-Dikka in Alexandria in the 1989 Season". In Koliński, R. (ed.). *PAM I: Reports 1988-1989*. Warsaw: PCMA.

- Majcherek, G. 1991. "Excavations in Alexandria in 1989-90". In Gawlikowski, M. and Daszewski, W.-A. (eds.). *PAM II: Reports 1989-1990*. Warsaw: PCMA.

- Majcherek, G. 1992. "Excavations in Alexandria in 1990-91". In Gawlikowski, M. and Daszewski, W.-A. (eds.). *PAM III: Reports 1991*. Warsaw: PCMA.

- Majcherek, G. 1993. "Excavations in Alexandria in 1991-1992". In Gawlikowski, M. and Daszewski, W.-A. (eds.). *PAM IV: Reports 1992*. Warsaw: PCMA.

- Majcherek, G. 1994. "Excavations in Alexandria, 1992-93". In Gawlikowski, M. and Daszewski, W.-A. (eds.). *PAM V: Reports 1993*. Warsaw: PCMA.

- Majcherek, G. 1995a. "Alexandria 1994: Archaeological Excavations". In Gawlikowski, M. and Daszewski, W.-A. (eds.). *PAM VI: Reports 1994*. Warsaw: PCMA.

- Majcherek, G. 1995b. "Notes on Alexandrian Habitat. Roman and Byzantine Houses from Kom el-Dikka". *Topoi* 5 (1): 133 – 150.

- Majcherek, G. 1996. "Alexandria: Excavations at Kom el-Dikka 1995". In Gawlikowski, M. and Daszewski, W.-A. (eds.). *PAM VII: Reports 1995*. Warsaw: PCMA.

- Majcherek, G. 1997. “Alexandria: Kom el-Dikka Excavations 1995-1996”. In Gawlikowski, M. and Daszewski, W.-A. (eds.). *PAM VIII: Reports 1996*. Warsaw: PCMA.

- Majcherek, G. 1998. “Alexandria: Kom el-Dikka Excavations 1997”. In Gawlikowski, M. and Daszewski, W.-A. (eds.). *PAM IX: Reports 1997*. Warsaw: PCMA.

- Marchettini, C. 1890. *Plan de la Ville d’Alexandrie et du Marché de Minet-el-Bassal*. Paris: Bibliothèque Nationale de France.

- Marlowe, J. 1971. *The Golden Age of Alexandria: From its Foundation by Alexander the Great in 331 BC to its Capture by the Arabs in 642 AD*. London: Victor Gollancz Limited.

- Martin, P. 1818. “Notice sur un Grand Monument Souterrain, a l’Ouest de la Ville d’Alexandrie”. In *Description de l'Égypte*. Antiquités, Descriptions. Tome Second: 7 – 12. Imperial Edition. Paris: Imprimerie Royale.

- Martin, P. 1829. “Notice sur un Grand Monument Souterrain, a l’Ouest de la Ville d’Alexandrie”. In *Description de l'Égypte*. Antiquités, Descriptions. Tome Cinquième: 519 – 530. Panckoucke Edition. Paris: Imprimerie de C. L. F. Panckoucke.

- Martin, R. 1965. *Manuel d'Architecture Grecque I: Matériaux et Techniques*. Paris: A. et J. Picard et C^{ie}.

- Maspero, G. 1886. “Sur une Plaque d'or Portant la Dédicace d’un Temple”. In *idem* (ed.). *Recueil de Travaux Relatifs a la Philologie et a l’Archéologie Égyptiennes et Assyriennes: Pour Servir de Bulletin a la Mission Française du Caire*: 140 – 141. Vol. VII. Liv. 1. Septième Année. Paris: F. Vieweg, Libraire- Éditeur.

- Matthews, R. and Römer, C. 2003. "Introduction: The Worlds of Ancient Egypt – Aspects, Sources, Interactions". In *Ancient Perspectives on Egypt*: 1 – 20. London: The UCL Press.

- Maurice, J.F. 1887. *Military History of the Campaign of 1882 in Egypt*. London: Harrison and Sons.

- Mayer, L. 1804. *Views in Egypt from the Original Drawings in the Possession of Sir Robert Ainslie*. London: R. Bowyer & T. Bensley.

- McCalpin, J.P. and Nelson, A.R. 2009. "Introduction to Paleoseismology". In McCalpin, J.P. (ed.). *Paleoseismology*: 1 – 28. Second Edition. International Geophysics. Burlington, San Diego, and London: Academic Press (Elsevier).

- McKenzie, J. 2003. "Glimpsing Alexandria from Archaeological Evidence". *JRA* 16: 35 – 63.

- McKenzie, J. 2007. *The Architecture of Alexandria and Egypt, 300 BC – AD 700*. New Haven and London: Yale University Press.

- McKenzie, J.S. 2009. "The Serapeum of Alexandria: Its Destruction and Reconstruction". *JRA* 22: 773 – 782.

- McKenzie, J.S., Gibson, S., and Reyes, A.T. 2004. "Reconstructing the Serapeum in Alexandria from the Archaeological Evidence". *JRS* 94: 73 – 121.

- Millet, B. and Goiran, J.-P. 2007. "Impacts of Alexandria's Heptastadion on Coastal Hydro-Sedimentary Dynamics During the Hellenistic Period: A Numerical Modelling Approach". *IJNA* 36 (1): 167 – 176.

- Milne, J.G. 2013. *A History of Egypt 5: Under Roman Rule*. Vol. 5. Cambridge: Cambridge University Press.

- Monchamp, J. 2014. "Céramiques de Smouha, Alexandrie, Égypte. Époques Romaine et Romaine Tardive". In Empereur, J.-Y. (ed.). *Alexandrina 4*: 35 – 97. Études Alexandrines 32. Alexandria: Centre d'Études Alexandrines.

- Morcos, S.A. 2000. "Early Discoveries of Submarine Archaeological Sites in Alexandria". In Mostafa, M.H., Grimal, N., and Nakashima, D. (eds.). *Underwater Archaeology and Coastal Management: Focus on Alexandria*: 33 – 45. Coastal Management Sourcebooks 2. Paris: UNESCO.

- Morcos et al. 2003. *Towards Integrated Management of Alexandria's Coastal Heritage*. Paris: UNESCO.

- Mueller, K. 2006. *Settlements of the Ptolemies: City Foundations and New Settlement in the Hellenistic World*. Studia Hellenistica 43. Leuven, Paris, and Dudley, MA: Peeters.

- Nenna, M.-D. (ed.) 2016. *Dossiers d'Archéologie*. No. 374 (March-April, 2016).

- Neroutsos, T.D. 1875. *Notice sur les Fouilles Récentes Exécutées a Alexandrie (1874-1875)*. Alexandria: Imprimerie Française A. Mourés.

- Neroutsos, T.D. 1878. "Notice sur les Deux Obélisques Qui Étaient Placés Devant le Césaréum à Alexandrie". *BCH* 2: 175 – 180.

- Neroutsos, T.D. 1888. *L'Ancienne Alexandrie: Étude Archéologique et Topographique*. Paris: Ernest Leroux.

- Noack, F. 1900. "Neue Untersuchungen in Alexandrien". *AthMitt* 25: 215 – 279.

- Norden, F.-L. 1795. *Voyage d'Égypte et de Nubie*. Tome Premier. Paris: Imprimerie de Pierre Didot l'Aîné.

- Norry, C. 1818. “Description de la Colonne Dite de Pompée, à Alexandrie”. In *Description de l'Égypte*. Antiquités, Descriptions. Tome Second: 1 – 6. Imperial Edition. Paris: Imprimerie Royale.

- Nur, A. 2010. “Destructive Earthquakes in Alexandria and Aboukir Bay?”. In Robinson, D. and Wilson, A. (eds.). *Alexandria and the North-Western Delta*: 127 – 137. Joint Conference Proceedings of Alexandria: City and Harbour (Oxford 2004) and the Trade and the Topography of Egypt North-West Delta, 8th Century BC – 8th Century AD (Berlin 2006). OCMA. Monograph 5. Oxford: Oxbow Books.

- Ortelius, A. 1587. *Theatrum Orbis Terrarum*. Antwerp: Gilles Coppens de Diest.

- Owens, E.J. 1992. *The City in the Greek and Roman World*. London and New York: Routledge.

- Pagenstecher, R. 1919. *Nekropolis: Untersuchungen über Gestalt und Entwicklung der Alexandrinischen Grabenlagen und Ihrer Malerien*. Leipzig: Giesecke & Devrient.

- Papamarinopoulos, St.P. et al. 2003. “In Search of the Royal Ptolemaic Cemetery in Central Alexandria, Egypt - the First Contact”. *Archaeol. Prospect.* 10: 193 – 211.

- Papatheodorou, G. et al. 2015. "Hellenistic Alexandria: A Palaeogeographic Reconstruction Based on Marine Geophysical Data". In Soukiassian, G. (ed.). *Alexandria Under the Mediterranean: Archaeological Studies in Memory of Honor Frost*: 27 – 61. Études Alexandrines 36. Alexandria: Centre d'Études Alexandrines.

- Parsons, E.A. 1952. *The Alexandrian Library: Its Rise, Antiquities, and Destructions*. Glory of the Hellenic World. London: Cleaver-Hume Press Ltd.

- Pfaff, C.A. 2003. “Archaic Corinthian Architecture, ca. 600 to 480 B.C.”. In Williams II, C.K. and Bookidis, N. (eds.). *Corinth, the Centenary: 1896-1996*: 95 – 140. Corinth XX. Princeton: The American School of Classical Studies at Athens.

- Pfeiffer, S. 2005. “Entstehung und Entwicklung einer Multikulturellen Gesellschaft im Griechisch-Römischen Ägypten”. In *Jahrbuch der Historischen Forschung in der Bundesrepublik Deutschland 2004*: 15 – 24. Munich: Oldenbourg Wissenschaftsverlag GmbH.

- Pfrommer, M. 1999. *Alexandria: Im Schatten der Pyramiden*. Mainz am Rhein: Verlag Philipp von Zabern.

- Pirazzoli, P.A. 1991. *World Atlas of Holocene Sea-Level Changes*. Assist. Pluet, J. Elsevier Oceanography Series 58. Amsterdam: Elsevier.

- Piri, A.M. 1525. *Kitāb-ı Baḥrīye*. Istanbul: Manuscript.

- Pococke, R. 1743. *A Description of the East, and Some Other Countries*. Vol. I. London: W. Bowyer.

- Quilici, L. 2008. “Land Transport, Part 1: Roads and Bridges”. In Oleson, J.P. (ed.). *The Oxford Handbook of Engineering and Technology in the Classical World*: 551 – 579. Oxford: Oxford University Press.

- Reed, C.M. 2003. *Maritime Traders in the Ancient Greek World*. Cambridge: Cambridge University Press.

- Rezq, M. 2016. "Une Nouvelle Mosaïque a Décor Mythologique". In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 69.

- Rhone, A. 1877. *L'Égypte a Petites Journees: Etudes et Souvenirs: Le Kaire et ses Environs*. Paris: Ernest Leroux.

- Riad, H. 1964. “Tomb Paintings from the Necropolis of Alexandria”. *Archaeology* 17: 169 – 172.

- Riad, H. 1967a. “Vestiges d'un Édifice Ptolémaïque en Bordure de la Voie Canopique à Alexandrie”. *BSAA* 42: 85 – 88.

- Riad, H. 1967b. “Quatre Tombeaux de la Nécropole Ouest d’Alexandrie”. *BSAA* 42: 89 – 96.

- Riad, H. 1975. “Ancient Bains d’Alexandrie”. *BSAA* 43: 113 – 122.

- Rifa-Abou el-Nil, P. 2016. "Les Maisons Romaines du Théâtre Diana". In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 32 – 33.

- Rifa-Abou el-Nil, P. 2017. “Alexandrie. Présentation de la Fouille du Cinéma Majestic”. In Empereur, J.-Y. (ed.). *Alexandrie, Césaréum. Les Fouilles du Cinéma Majestic*: 15 – 24. Études Alexandrines 38. Alexandria: Centre d'Études Alexandrines.

- Rodziewicz, M. 1969. “Stratigraphie du Sondage MXVI, I dans le Partie Sud de Kom el Dikka, Alexandrie”. *ÉtTrav.* 3: 133 – 145.

- Rodziewicz, M. 1976. “Alexandrie 1972-1973”. *ÉtTrav.* 9: 261 – 263.

- Rodziewicz, M. 1978. “Alexandrie 1974”. *ÉtTrav.* 10: 384 – 385.

- Rodziewicz, M. 1979a. “Nouvelles Données sur le Quartier de Kopron à Alexandrie”. *ÉtTrav.* 11: 79 – 89.

- Rodziewicz, M. 1979b. “Thermes Romains Prés de la Gare Centrale d’Alexandrie”. *ÉtTrav.* 11: 107 – 138.

- Rodziewicz, M. 1983a. “Alexandria and District of Mareotis”. *Graeco-Arabica* 2: 199 – 216.

- Rodziewicz, M. 1983b. “Alexandrie 1976”. *ÉtTrav.* 12: 241 – 261.

- Rodziewicz, M. 1984a. *Alexandrie III: Les Habitations Romaines Tardives d'Alexandrie à la Lumière des Fouilles Polonaises à Kom el-Dikka*. Warsaw: PWN - Éditions Scientifiques de Pologne.

- Rodziewicz, M. 1984b. "Excavations at Kom el-Dikka in Alexandria 1980-1981: Preliminary Report". *ASAE* 70: 232 – 245.

- Rodziewicz, M. 1987. "Le Débat sur la Topographie de la Ville Antique". *ROMM* 46: 38 – 48.

- Rodziewicz, M. 1990. "La Stratigraphie de l'Antique Alexandrie à la Lumière des Fouilles de Kôm el-Dikka". *ÉtTrav.* 14: 145 – 151.

- Rodziewicz, M. 1991. "Excavations at Kom el-Dikka". *BSAA* 44: 71 – 118.

- Rodziewicz, M. 1995. "Ptolemaic Street Directions in Basilea (Alexandria)". In Bonacasa, N., Naro, C., and Portale, E.C. (eds.). *Alessandria e il Mondo Ellenistico-Romano: I Centenario del Museo Greco-Romano: Alessandria, 23-27 Novembre 1992; Atti del II Congresso Internazionale Italo-Egiziano*: 227 – 235. Rome: L'Erma di Bretschneider.

- Rodziewicz, M. 1998. "From Alexandria to the West by Land and by Waterways". In Empereur, J.-Y. (ed.). *Commerce et Artisanat dans l'Alexandrie Hellenistique et Romaine: Actes du Colloque d'Athènes Organisé par le CNRS, le Laboratoire de Céramologie de Lyon et l'École Française d'Athènes: 11-12 Décembre 1988*: 93 – 103. BCH Supplément 33. Athens: l'École Française d'Athènes.

- Rodziewicz, M. 2002. "Mareotic Harbours". In Décobert, C. and Empereur, J.-Y. (eds.). *Alexandrie Médiévale 2*: 1 – 22. Etudes Alexandrines 8. Cairo: IFAO.

- Rodziewicz, M.D. 2010. "On Interpretations of Archaeological Evidence Concerning Marea and Philoxenite". In Blue, L. (ed.). *Lake Mareotis: Reconstructing the Past*: 67 – 74. Assist.

Khalil, E. Proceedings of the International Conference on the Archaeology of the Mareotic Region held at Alexandria University, Egypt, 5th-6th April 2008. University of Southampton Series in Archaeology 2. BAR International Series 2113. Oxford: Archaeopress.

- Rodziewicz, M. and Abd el-Fattah, A. 1991. "Recent Discoveries in the Royal Quarter of Alexandria". *BSAA* 44: 131 – 150.

- Rodziewicz, M. and Daoud, D.A. 1991. "Investigation of a Trench near the Via Canopica in Alexandria". *BSAA 44*: 151 – 168.

- Roller, D.W. 2010. *Cleopatra: A Biography*. Oxford: Oxford University Press.

- Ronczewski, K. 1927. "Description des Chapiteaux et Variés du Musée Gréco-Romain d'Alexandrie". *BSAA* suppl. du Fasc. 22: 3 – 36.

- Rousseau, S. 2003. "Les Hypogées de La Zone C: Nécropolis d'Alexandrie". In Empereur, J.-Y. and Nenna, M.-D. (eds.) 2003b. *Nécropolis 2*: 671 – 697. Etudes Alexandrines 7. Cairo: IFAO.

- Roux, J. 1804. *Recueil de 163 des Principaux Plans des Ports et Rades de la Mer Mediterrane*. Extended Edition. Gènes: Yves Gravier.

- Rowe, A. 1942a. "Kom el-Shukafa, in the Light of the Excavations of the Graeco-Roman Museum during the Season 1941-1942". *BSAA* 35: 3 – 45.

- Rowe, A. 1942b. "Short Report on Excavations of the Graeco-Roman Museum Made during the Season 1942 at Pompey's Pillar: Site of the Temple of Serapis and the Ancient Roman University of Alexandria". *BSAA* 35: 124 – 161.

- Rowe, A. 1946. “Discovery of the Famous Temple and Enclosure of Serapis at Alexandria; with an Explanation of the Enigmatical Inscriptions of the Serapeum Plaques of Ptolemy IV by Étienne Drioton”. Supplement aux *ASAE*, Cahier No. 2: 1 – 96, 97 – 115.

- Rowe, A. and Rees, B.R. 1957. “A Contribution to the Archaeology of the Western Desert: IV. The Great Serapeum of Alexandria”. *BullJRylandsLib* 39 (2): 485 – 520.

- Sabah, A. 2012. "Burials of the Khalil el-Khayat Site, Kafr Abdou District, East Alexandria". In Nenna, M.-D. (ed.). *L'Enfant et la Mort dans l'Antiquité II: Types de Tombes et Traitement du Corps des Enfants dans l’Antiquité Gréco-Romaine*: 253 – 274. Actes de la Table Ronde Internationale Organisée à Alexandrie. Centre d’Études Alexandrines. 12-14 Novembre 2009. Etudes Alexandrines 26. Alexandria: Centre d'Études Alexandrines.

- Sabottka, M. 1983. "Ausgrabungen in der West-Nekropole Alexandrias (Gabbari)". In Grimm, G., Heinen, H., and Winter, E. (eds.). *Das Römisch-Byzantinische Ägypten: Akten des Internationalen Symposiums, 26.-30. September 1978 in Trier. Aegyptiaca Treverensia* 2: 195 – 203. Mainz: Philipp von Zabern.

- Sabottka, M. 1985-1985. "Gabbari 1975-1977 (Vorbericht)”. *ASAE* 70: 277 – 285.

- Sabottka, M. 2008. *Das Serapeum in Alexandria: Untersuchungen zur Architektur und Baugeschichte des Heiligtums von der Frühen Ptolemäischen Zeit bis zur Zerstörung 391 n.Chr*. Études Alexandrines 15. Cairo: IFAO.

- Saint-Genis, A. 1818a. “Description des Antiquités d’Alexandrie et de Ses Environs”. In *Description de l'Égypte*. Antiquités, Descriptions. Tome Second: 1 – 95. Imperial Edition. Paris: Imprimerie Royale.

- Saint-Genis, A. 1818b. “Appendice a la Description des Antiquités d’Alexandrie et de Ses Environs”. In *Description de l'Égypte*. Antiquités, Descriptions. Tome Second: 1 – 63. Imperial Edition. Paris: Imprimerie Royale.

- Saint-Genis, A. 1829a. “Description des Antiquités d’Alexandrie et de Ses Environs”. In *Description de l'Égypte*. Antiquités, Descriptions. Tome Cinquième: 181 – 376. Panckoucke Edition. Paris: Imprimerie de C. L. F. Panckoucke.

- Saint-Genis, A. 1829b. “Appendice a la Description des Antiquités d’Alexandrie et de Ses Environs”. In *Description de l'Égypte*. Antiquités, Descriptions. Tome Cinquième: 377 – 507. Panckoucke Edition. Paris: Imprimerie de C. L. F. Panckoucke.

- Sauer, C.O. 1925. “The Morphology of Landscape”. In Agnew, J., Livingstone, D., and Rodgers, A. (eds.) 1996. *Human Geography: An Essential Anthology*: 296 – 315. Oxford: Blackwell Publishing.

- Savvopoulos, K. and Bianchi, R.S. 2012. *Alexandrian Sculpture in the Graeco-Roman Museum*. Graeco-Roman Museum Series 1. Alexandria: Bibliotheca Alexandrina – Alex-Med.

- Savvopoulos, K., Bianchi, R.S., and Hussein, Y. 2013. *The Omar Toussoun Collection in the Graeco-Roman Museum*. Graeco-Roman Museum Series 2. Alexandria: Bibliotheca Alexandrina – Alex-Med.

- Schedel, H. 1493. *Liber Chronicarum*. Nuremberg: Anton Koberger.

- Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Schreiber, T. et al. (eds.) 1908b. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa. Tafelband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Schreiber, T. 1908c. "Die Gräbertypen der Nekropole von Kom-Esch-Schukafa. Lichtschacht und Klagesaal in Ihrer Bedeutung für den Alexandrinischen Gräberbau. Die Oberirdischen Grabkapellen". Teil V. Kapitel XV. In Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa: 160 – 177. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Schreiber, T. 1908d. "Erste Beschreibungen der Katakomben von Kom-Esch-Schukafa. Ausgrabungen und Funde vor Botti. Die Katakombe Weschers". Teil II. Kapitel IV. In Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa: 18 – 29. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Schreiber, T. 1908e. "Scavo A. 1892 – 1893 Botti, 1902 August Thiersch". Teil II. Kapitel VII. In Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa: 44 – 56. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Schreiber, T. 1908f. "Scavo B. 1892 Botti, 1902 August Thiersch". Teil II. Kapitel VIII. In Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa: 57 – 63. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Schreiber, T. 1908g. "Scavo C. 1892 Botti". Teil II. Kapitel IX. In Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa: 64 – 67. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Schreiber, T. 1908h. “Scavo D. 1897 Botti”. Teil II. Kapitel X. In Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa: 68 – 73. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Schreiber, T. 1908i. “Die Formen der Alexandrinischen Leichenbehälter”. Teil V. Kapitel XVI. In Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa: 178 – 212. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Schreiber, T. and Fiechter, E.R. 1908a. “Das Hauptgrab vom Jahre 1900”. Teil III. Kapitel XII. In Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa: 77 – 120. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Schreiber, T. and Fiechter, E.R. 1908b. “Das Nebengrab vom Jahre 1902”. Teil III. Kapitel XIII. In Schreiber, T. et al. (eds.) 1908a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band I. Die Nekropole von Kom-Esch-Schukafa: 121 – 132. Textband. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Sear, F. 1983. *Roman Architecture*. Ithaca, NY: Cornell University Press.

- Seif El-Din, M. 2009. "Une Statue Cuirassée d'Alexandrie". In Empereur. J.-Y. (ed.). *Alexandrina 3*: 119 – 133. Études Alexandrines 18. Cairo: IFAO.

- Shenouda, S. 1973. “Alexandria University Excavations on the Cricket Playgrounds in Alexandria”. *Opuscula Romana* 9: 193 – 205.

- Shipley, D.G.J. and Hansen, M.H. 2006. “The *Polis* and Federalism”. In Bugh, G.R. (ed.). *The Cambridge Companion to the Hellenistic World*: 52 – 72. Cambridge: Cambridge University Press.

- Silhouette, H. 2011. “Le Cricket Ground: Approvisionnement en Eau d’un Quartier Greco-Romain d’Alexandrie”. In Hairy, I. (ed.). *Du Nil à Alexandrie, Histoires d'Eau: Catalogue d'Exposition*: 364 – 377. Alexandria: Centre d'Études Alexandrines.

- Silhouette, H. 2016. "Les Maisons Hellénistiques du Cricket Ground". In Nenna, M.-D. (ed.). *Dossiers d'Archéologie* 374 (March-April): 30 – 31.

- Simpson, W.-K. (ed.) 2003. *The Literature of Ancient Egypt*. Third Edition. New Haven and London: Yale University Press.

- Smith, W. (ed.) 1859. *Dictionary of Greek and Roman Antiquities*. Second Edition. Boston: Little, Brown, and Company.

- Southern, P. 2015. *The Roman Empire from Severus to Constantine*. Second Edition. London and New York: Routledge.

- Stanley, J.-D. 2005. “Submergence and Burial of Ancient Coastal Sites on the Subsiding Nile Delta Margin, Egypt”. *Méditerranée* 104 (1.2): 65 – 73.

- Stanley, J.-D. and Bernasconi, M. P. 2006. “Holocene Depositional Patterns and Evolution in Alexandria’s Eastern Harbor, Egypt”. *JCR* 22 (2): 283 – 297.

- Stanley, J.-D. and Landau, E.A. 2010. “Early Human Activity (pre-332 BC) in Alexandria, Egypt: New Findings in Sediment Cores from the Eastern Harbour”. In Robinson, D. and Wilson, A. (eds.). *Alexandria and the North-Western Delta*: 35 – 52. Joint Conference Proceedings of Alexandria: City and Harbour (Oxford 2004) and the Trade and the Topography of Egypt North-West Delta, 8th Century BC – 8th Century AD (Berlin 2006). OCMA. Monograph 5. Oxford: Oxbow Books.

- Stanley, J.-D. et al. 2007. “Alexandria, Egypt, before Alexander the Great: A Multidisciplinary Approach Yields Rich Discoveries”. *GSA Today* 17 (8): 4 – 10.

- Thiersch, H. 1900. "Zwei Gräber der Römischen Kaiserzeit in Gabbari". *BSAA* 3: 7 – 36.

- Thiersch, H. 1904. *Zwei Antike Grabanlagen bei Alexandria*. Berlin: Druck und Verlag von Georg Reimer.

- Thiersch, H. 1909. *Pharos: Antike, Islam und Occident. Ein Beitrag zur Architekturgeschichte*. Leipzig and Berlin: Druck und Verlag von B.G. Teubner.

- Thompson, D.J. and Buraselis, K. 2013. "Introduction". In Buraselis, K., Stefanou, M., and Thompson, D.J. (eds.). *The Ptolemies, the Sea and the Nile: Studies in Waterborne Power*: 1 – 18. Cambridge: Cambridge University Press.

- Tkaczow, B. 1993. *The Topography of Ancient Alexandria: An Archaeological Map*. Trans. Zych, I. Travaux du Centre d'Archéologie Méditerréenne de l'Académie Polonaise des Sciences. Tome 32. Warsaw: Maison Wydawnictwo.

- Tkaczow, B. 2000. "The Historical Topography of Kom el-Dikka. Notes on Plans XII–XV". In Kiss, Z. et al. (eds.). *Alexandrie VII: Fouilles Polonaises à Kôm el-Dikka (1986-1987)*: 131 – 143. Vol.I (Texte). Warsaw: Zaklad Archeologii Srodziemnomorskiej Polskiej Akademii Nauk.

- Tkaczow, B. 2013. "Historical Topography of Ancient Alexandria". *ÉtTrav.* 26 (2): 686 – 697.

- Tzalas, H.E. 2000. "The Two Ports of Alexandria: Plans and Maps from the 14th century to the Time of Mohamed Ali". In Mostafa, M.H., Grimal, N., and Nakashima, D. (eds.). *Underwater Archaeology and Coastal Management: Focus on Alexandria*: 22 – 32. Coastal Management Sourcebooks 2. Paris: UNESCO.

- Tzalas, H.E. 2012. "The Underwater Archaeological Survey of the Greek Mission at the Submerged Necropolis of Sidi Bishr, Alexandria, Egypt". *ΕΝΑΛΙΑ* 11: 130 – 145.

- Tzalas, H.E. 2013. *25th Underwater Archaeological Survey of the Greek Mission in Alexandria, April-May 2013*. Athens: Hellenic Institute of Ancient and Mediaeval Alexandrian Studies.

- Tzalas, H.E. 2015. "The Underwater Archaeological Survey Conducted by the Greek Mission in Alexandria, Egypt (1998-2010)". In Tripathi, S. (ed.). *Shipwrecks Around the World: Revelations of the Past: Shipwrecks from 15th Century Onwards*: 347 – 364. New Delhi: Prestige Books.

- Valentia, G.V. 1809. V*oyages and Travels to India, Ceylon, the Red Sea, Abyssinia, and Egypt, in the Years 1802-1806*. Vol. III. London: W. Bulmer and Co.

- Venit, M.S. 1999. "The Stagni Tomb: Cultural Interchange and Gender Representation in Roman Alexandria". *AJA* 103: 641 – 669.

- Venit, M.S. 2002. *Monumental Tombs of Ancient Alexandria: The Theater of the Dead*. Cambridge: Cambridge University Press.

- Wace, A.J.B. 1949. "Excavations on the Government Hospital Site, Alexandria: Preliminary Report". *Bulletin of the Faculty of Arts, Farouk I University* 5: 151 – 156.

- Walbank. F.W. 1986. *The Hellenistic World*. Glasgow: Fontana History of the Ancient World.

- Walsh, T. 1803. *Journal of the Late Campaign in Egypt*. London: Luke Hansard.

- Ward-Perkins, J.B. 1974. *Cities of Ancient Greece and Italy: Planning in Classical Antiquity*. New York: George Braziller.

- Warne, A.G. and Stanley, J.-D. 1993. "Late Quaternary Evolution of the Northwest Nile Delta and Adjacent Coast in the Alexandria Region, Egypt". *JCR* 9 (1): 26 – 64.

- Watson, A. 2003. *Aurelian and the Third Century*. The Taylor and Francis e-Library. London and New York: Routledge.

- Watts, E.J. 2006. *City and School in Late Antique Athens and Alexandria*. Berkeley, Los Angeles, and London: The University of California Press.

- Watzinger, C. et al. (eds.) 1927a. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band II. Die Griechisch-Ägyptische Sammlung Ernst von Sieglin. 1B. Malerei und Plastik. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Watzinger, C. et al. (eds.) 1927b. *Expedition Ernst Sieglin: Ausgrabungen in Alexandria*. Band II. Die Griechisch-Ägyptische Sammlung Ernst von Sieglin. 1B. Malerei und Plastik. Tafeln. Leipzig: Druck und Verlag von Giesecke & Devrient.

- Wescher, C. 1864. "Rapport sur la Mission Accomplie en Égypt". *Archives des Missions Scientifiques et Litteraires*: 179 – 191. Tome Premier. Deuxième Série. Paris: Imprimerie Impériale.

- Wescher, C. and De Rossi, G.B. 1865. "Notice sur une Catacombe Chrétienne à Alexandrie (Égypte)". *Bullettino di Archeologia Cristiana* 3 (8): 57 – 64.

- Wilkinson, J.G. 1843. *Modern Egypt and Thebes: Being a Description of Egypt; Including the Information Required for Travellers in That County*. Vol. I. London: John Murray.

- Witcher, R. 2013. "(Sub)urban Surroundings". In Erdkamp, P. (ed.). *The Cambridge Companion to Ancient Rome*: 205 – 228. Cambridge: Cambridge University Press.

- Worthington, I. 2016. *Ptolemy I: King and Pharaoh of Egypt*. Oxford: Oxford University Press.

- Wycherley, R.E. 1951. "Hellenistic Cities". *Town Plan. Rev.* 22 (3): 177 – 205.

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