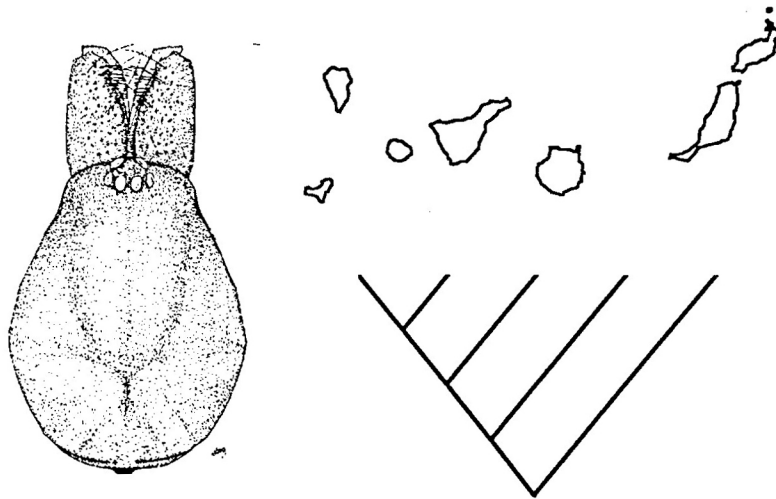


Departament de Biologia Animal
Facultat de Biologia
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Tesi Doctoral

COLONITZACIÓ I RADIACIÓ
DEL GÈNERE *Dysdera* (ARACHNIDA, ARANEAE)
A LES ILLES CANÀRIES



Miquel Àngel Arnedo Lombarte

1998

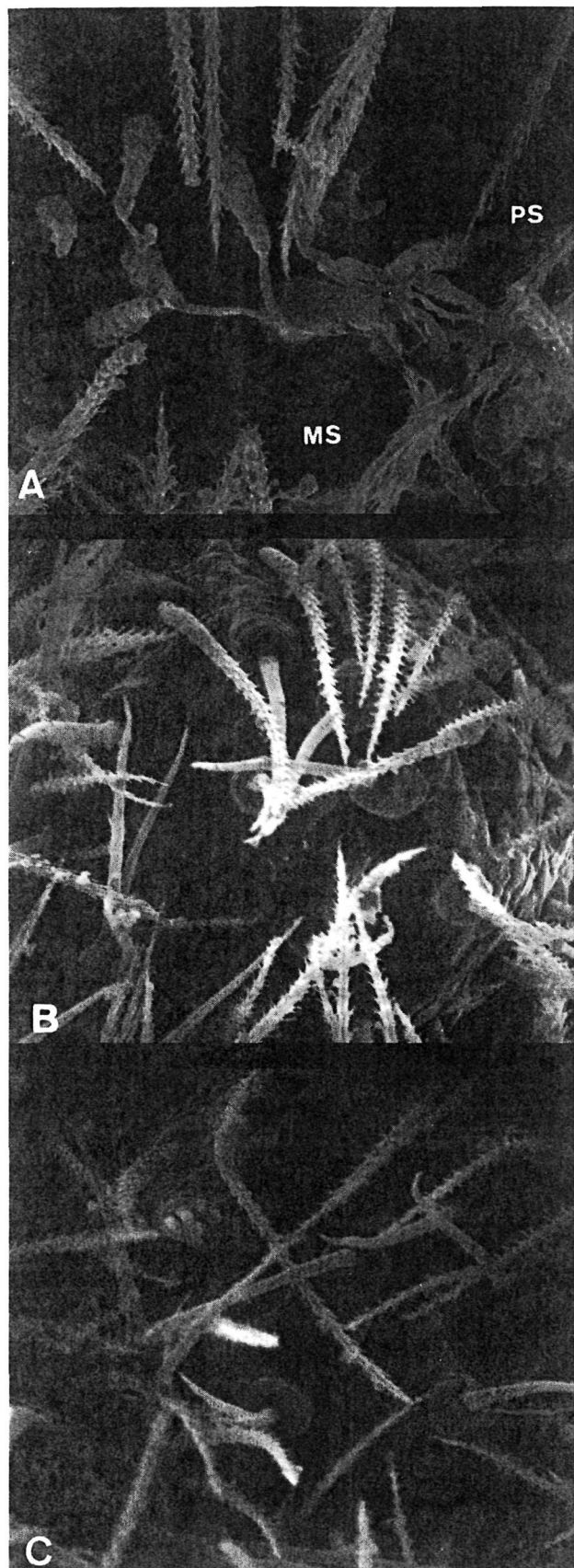


Fig. 10. —A–C. *Dysdera bandamae* Schmidt, 1973; left female spinnerets.—A. ALS.—B. PMS.—C. PLS.

Material examined. *Dysdera crocota*. Arucas: Arucas; 1♀; ?; P. Oromí leg.; 4828 UB. Mogán: Presa de la Cueva de las Niñas; 1♀; ?; P. Oromí leg.; 4831 UB. 1♀; 31/12/93; S. Martín leg.; 3120 UB. Moya: Fontanales; 3 juv.; 6/8/88; F. Catena leg.; 2507 UB. Moya: Tiles de Moya; 1 juv.; 9/2/96; Arnedo, Emerson & Oromí leg.; 2987 UB. San Nicolás de Tolentino: playa de la Aldea; 1 juv.; 15/2/96; Arnedo, Emerson, Fragoso, Juan & Oromí leg.; 3071 UB. *Dysdera verneaui*. Unknown locality; 1♀, 1♂ subad.; 1873; Dr. Verneau leg.; MHNP.

Table II. Intraspecific spination variability of *Dysdera bandamae*

	Proximal	Med.–proximal	Medial–distal	Distal
Tibia 3 dorsal	1.0.0–1	0	0	1.0.0
Tibia 4 dorsal	0.0.1	0	0	0
Tibia 3 ventral	0–1.0–1.0	0	0	0
Tibia 4 ventral	0–1.1–2.0	0	0	0
	Number of rows		Number of spines	
Femur 3 dorsal	0		—	
Femur 4 dorsal	2		0–1/1–2	

Comments. This cosmopolitan species can be easily found in the Canary Islands and is usually associated with places disturbed by human activity. It is considered a recent introduction.

***Dysdera iguanensis* Wunderlich, 1987** (Figs. 11A–F, 12A–E, 13A–C)

Dysdera iguanensis Wunderlich, 1987: 57–58, Figs. 2–6 [5].—Wunderlich, 1991: 294–295, Fig. 41 [?].—Arnedo *et al.*, 1996: Fig. 1F [5].

Dysdera bailadero Wunderlich, 1991: 288–289, Figs. 12–13 [?]; new synonymy.

Dysdera paucisetae Wunderlich, 1991: 303–304, Figs. 77–80 [5]; new synonymy.

Material examined. *D. iguanensis*: 1♂ holotype. Barranco de Ijuana. Santa Cruz de Tenerife, Tenerife, Canary Islands; II, H. Franz leg.; num. 37135, stored at SMF. Gran Canaria: Mogán: Inagua; 1♂, 26♀, 5 juv.; ?; M. Nogales leg.; 2600 MCNT. Tenerife: 1 juv.; -/11/93; Arnedo & Ribera leg.; 4818 UB. El Rosario: Las Raíces; 1♀; -/11/93; Arnedo & Ribera leg.; 4795 UB. Los Realejos: Palo Blanco; 1♀; 18/2/96; Arnedo & Oromí leg.; 3095 UB. 5/3/87; H. Enghoff leg.; 1♂ 2672 ZMK, 1♀ 2644 ZMK. Los Silos: Monte del Agua; 1♂; 11/3/90; A.L. Medina leg.; 2602 MCNT. 30/11/93; M.A. Arnedo leg.; 1♂, 1♀ 2575 UB, 1♂ 2577 UB. Santa Cruz de Tenerife: Barranco de Ijuana; 1♂, 5♀, 2 juv.; 29/9/?; R. García leg.; 2732 UL 3♀; R. García leg.; 2574 J. Wunderlich p. col. 1 juv.; 21/3/85; A. Aguiar leg.; 2619 MCNT. 1 juv.; 25/11/86; A. Aguiar leg.; 2617 MCNT. Cabezo del Tejo; -/11/93; Arnedo & Ribera leg.; 1♀ 4792 UB, 1♀ 4791 UB, 1♂; -/11/95 4789 UB, 1♀ 4835 UB, 1♀ 4836 UB, 1♀ 4788 UB, 1♀ 4790 UB, 1♀ 4793 UB. El Bailadero; 1♂; -/11/93; Arnedo & Ribera leg.; 4786 UB. 2♀; 18/3/90; A.L. Medina leg.; 2603 MCNT. Monte Aguirre; ?/11/93; Arnedo & Ribera leg.; 1♀ 2933 UB, 1♂ 2934 UB, 1♀ 4799 UB, 1♀ 4800 UB, 1♀ 4801 UB, 1♂ 4802 UB, 1♀ 4803 UB, 1♀ 4804 UB, 1♀ 4805 UB, 1♀ 4806 UB. Parque de Anaga; 1♀; 6/2/88; P. Suárez leg.; 2689 UB. Vueltas de Taganana; 1 juv.; 28/11/85; A. Aguiar leg.; 2618 MCNT. *D. bailadero*: El Bailadero (MSS-7). Santa Cruz de Tenerife, Tenerife, Canary Islands; 25/11/89; A.L. Medina leg.; 2586 UL. *D. paucisetae*: 1♂ holotype. Monte de las Mercedes, La Laguna, Tenerife, Canary Islands; II, M. Knösel leg.; 37170 SMF.

Diagnosis. Carapace wrinkled with parallel frontal margins (Fig. 11A). Cheliceral segment completely granulated. Abdominal dorsal hairs very short, stick-like in males; larger, compressed in females. Tibiae 3 and 4 strongly spinated (Table III). T as long as DD (Fig. 11C). LF present and projected (Fig. 12A). P perpendicular to T. DA ventral sclerotization reduced at internal frontal and lateral margins with lateral sheet-like structures present (Fig. 11D). It can be distinguished from Tenerifean species *D. brevispina* Wunderlich, 1991 by cheliceral teeth size and presence of both LF and DA sheet-like structures and from *D. montanetensis* Wunderlich, 1991 and *D. volcania* Ribera, Ferrández and Blasco, 1985 by P shape and L lacking external fold.

Description. **Male** (Figs. 11A–C, 12A–E). Carapace (Fig. 11A) 2.89 mm long; maximum width 2.23 mm; minimum

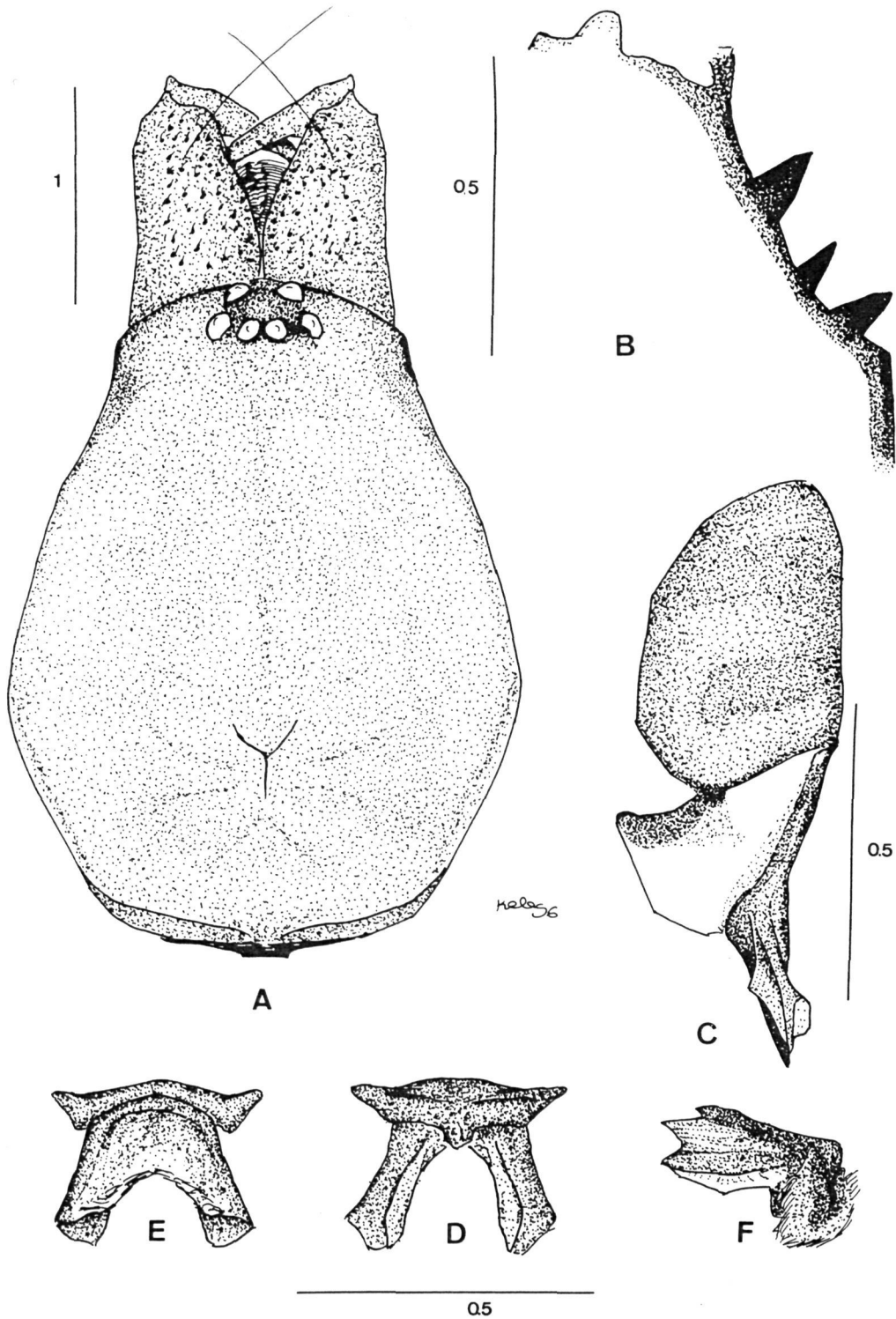


Fig. 11. —A–F. *Dysdera iguanensis* Wunderlich, 1987;—A. Carapace, dorsal.—B. Right chelicera, ventral.—C. Right male bulbus, external.—D. Endogyne, ventral.—E. Endogyne, dorsal.—F. Endogyne, lateral. Scale bars in millimetres.

width 1.4 mm. Brownish orange, darkened at borders; slightly foveate at borders, wrinkled in middle, covered with tiny granulations. Frontal border roughly triangular, less than 1/2 carapace length; lateral borders parallel; rounded at maximum dorsal width point, back lateral borders straight; back margin wide, straight. AME diameter 0.20 mm, PLE 0.16 mm, PME 0.32 mm; AME on edge of frontal border, separated one from another about 2/3 of diameter, close to PLE; PME very close to each other, about 1/3 PME diameter from PLE. Labium

trapezoid-shaped, base wider than distal part; longer than wide at base; with semicircular groove at tip. Sternum brownish orange, darkened on borders; wrinkled; covered in hairs mainly on margin.

Chelicerae (Fig. 11B) 1.16 mm long, about 1/3 of carapace length in dorsal view; fang medium-sized, 0.79 mm; basal segment dorsal and ventral side completely covered with piligerous granulations. Chelicera inner groove short, about 1/3 cheliceral length; armed with three teeth and lamina at base; D largest, B larger than

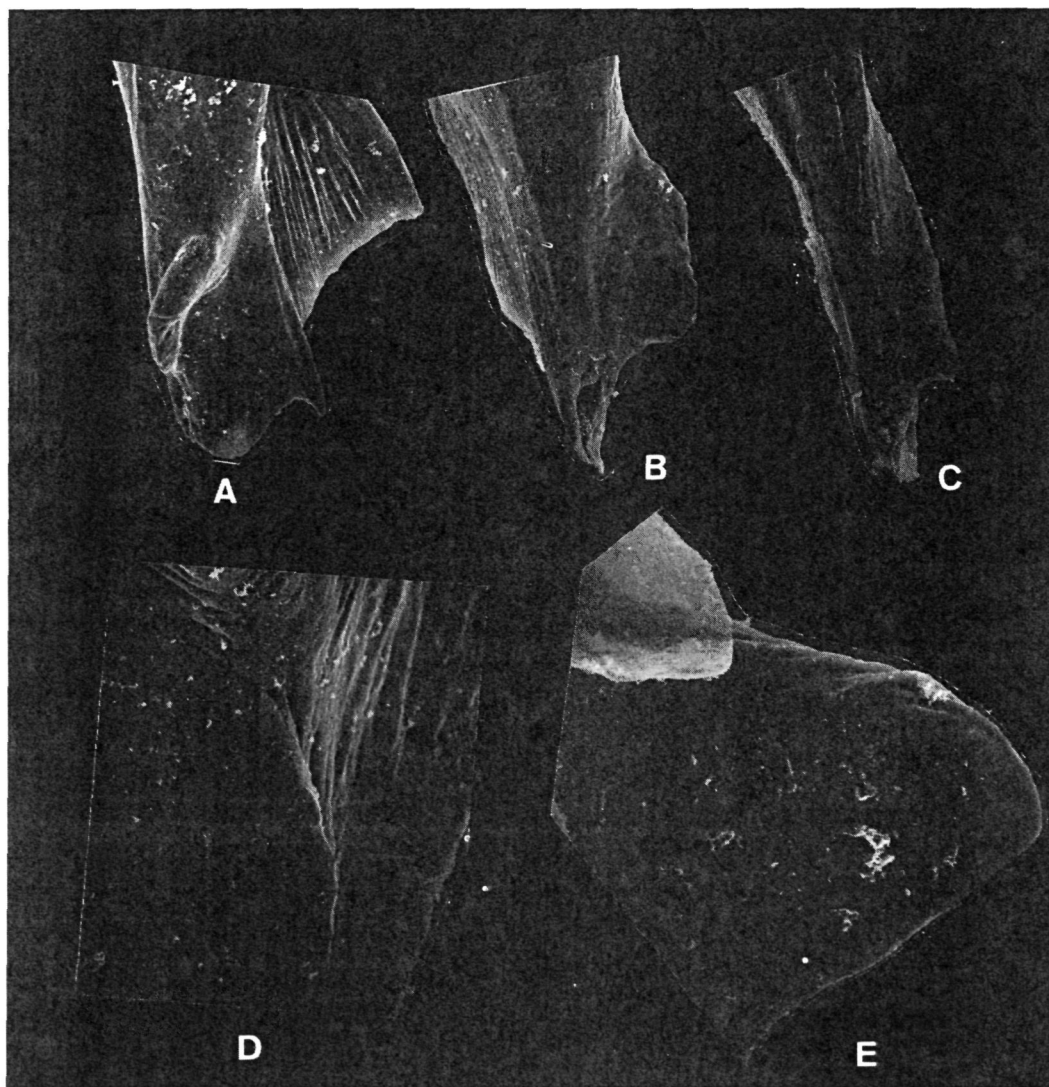


Fig. 12. —A–E. *Dysdera iguanensis* Wunderlich, 1987; left male bulbus.—A. DD, frontal.—B. DD internal, variability.—C. DD, internal.—D. DD, posterior.—E. P, external.

medial (all teeth markedly large); D trapezoid, located at centre of or slightly above groove; B close to basal lamina; M close to B. Frontal legs dark orange and back legs yellow. Lengths of male described above: fe1 2.56 mm (all measurements in mm); pa1 1.63; ti1 2.23; me1 2.23; ta1 0.60; total 9.25; fe2 2.33; pa2 1.21; ti2 2.05; me2 2.05; ta2 0.60; total 8.24; fe3 1.95; pa3 1.02; ti3 1.40; me3 1.91; ta3 0.56; total 6.84; fe4 2.79; pa4 1.4; ti4 2.33; me4 2.75; ta4 0.74; total 10.01; fe Pdp 1.26; pa Pdp 0.74; ti Pdp 0.79; ta Pdp 0.65; total 3.44; relative length: $4 > 1 > 2 > 3$. Spination: palp, leg1, leg2 spineless. Fe3d spineless; pa3 spineless; tb3d spines arranged in three bands: medial-proximal 1.2–1.1; medial-distal 0.1–0.0; distal 1.0.0; tb3v spines arranged in two bands: proximal 1.2.0; distal 1.0.0; with two terminal spines. Fe4d spines in one row: 3–2; pa4 spineless; tb4d spines arranged in three bands: proximal 1.1.1; medial-proximal 1.2.1; distal 1.1.1; tb4v spines arranged in two bands: proximal 1.2.1; distal 1.0.1; with two terminal spines. Dorsal side of forward legs covered with hairs but lacking small grains; ventral side of the pedipalp covered with hairs but lacking small grains. Claws with 10–14 teeth.

Abdomen 3.91 mm long; whitish; cylindrical. Abdominal dorsal hairs 0.01 mm long, medium-sized, straight or

only slightly curved mainly at distal part, not compressed, blunt, tip not enlarged (?); uniformly, slightly distributed.

Male copulatory bulbus (Fig. 11C) T as long as DD; DD slightly bent in lateral view, clearly less than 45° . ES more developed than IS; IS continuous until embolus tip. DD tip (Fig. 12A–D) with upper, lower sheets sticking together; upper sheet not projected over lower one; straight in lateral view. C present; well-developed; located close to tip of the embolus; proximal border sharply decreasing; distal border sloping in its base; upper tip not projected, rounded; external side smooth. AC absent. LF present; distally projected. L well-developed; external border not sclerotized, not folded; distal border divergent, continuous. AL absent; proximal border in posterior view fused with DH. P (Fig. 12E) perpendicular to T in lateral view; fused to T; narrow, reduced to a ridge; lateral length from $1/2$ to $2/3$ T width; slightly toothed, mainly on external side along its upper margin; about 4–6 teeth; not distally projected; back margin not folded.

Female (Figs. 11D–F, 13A–C). All characters as in male except: Carapace 2.90 mm long; maximum width 2.26 mm; minimum width 1.40 mm. AME diameter 0.18 mm, PLE 0.16 mm, PME 0.12 mm; AME separated one from another about half diameter.

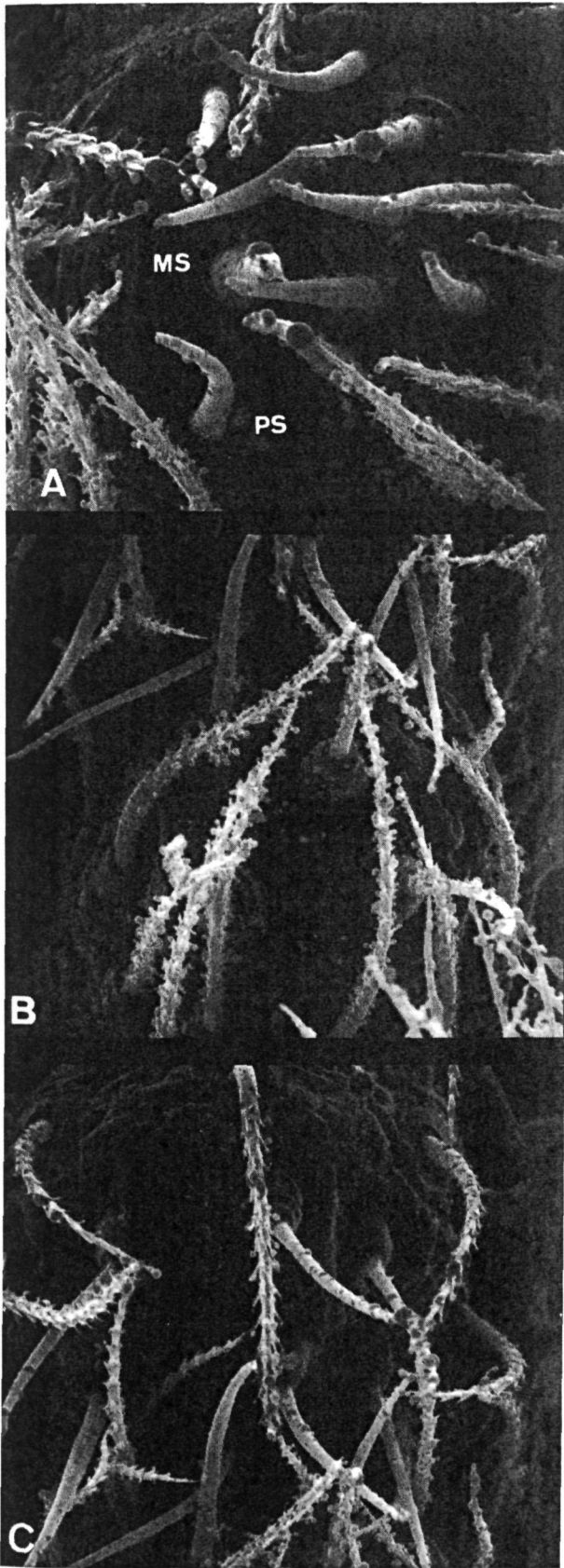


Fig. 13. —A–C. *Dysdera iguanensis* Wunderlich, 1987; right female spinnerets.—A. ALS.—B. PMS.—C. PLS.

Chelicerae 1.26 mm long; fang 0.84 mm. Lengths of female described above: fe1 2.42 mm (all measurements in mm); pa1 1.58; ti1 2.09; me1 2.09; ta1 0.65; total 8.83; fe2 2.19; pa2 1.44; ti2 1.86; me2 1.91; ta2 0.60; total 8.00; fe3 1.95; pa3 1.02; ti3 1.40; me3 1.86; ta3 0.56; total 6.79; fe4

Table III. Intraspecific spination variability of *Dysdera iguanensis*

	Proximal	Med.–proximal	Medial–distal	Distal
Tibia 3 dorsal	0–1.0.0–1	1.1–2.1	0.0–1.0	1.0.0–1
Tibia 4 dorsal	0–1.0–1.0–1	1.1–2.1	0.0–1.0	1.0–1.1
Tibia 3 ventral	1.1–2.0	0	0	1.0.0
Tibia 4 ventral	1.1–2.1	0	0.0–1.0	1.0.1
	Number of rows		Number of spines	
Femur 3 dorsal	0		—	
Femur 4 dorsal	1		1–3	

2.80; pa4 1.49; ti4 2.33; me4 2.75; ta4 0.74; total 10.11; fe Pdp 1.21; pa Pdp 0.65; ti Pdp 0.65; ta Pdp 0.74; total 3.25; relative length 4 > 1 > 2 > 3. Spination: palp, leg1, leg2 spineless. Fe3d spineless; pa3 spineless; tb3d spines arranged in three bands: medial–proximal 1.1.1; medial–distal 0.0–1.0; distal 1.0.0; tb3v spines arranged in two bands: proximal 1.2.0; distal 1.0.0; with two terminal spines. Fe4d spines in one row: 2; pa4 spineless; tb4d spines arranged in four bands: proximal 1.1.1; medial–proximal 1.2.1; medial–distal 0.1.0; distal 1.1.1; tb4v spines arranged in three bands: proximal 1.2.1; medial–distal 0.1.0; distal 1.0.1; with two terminal spines.

Abdomen 3.91 mm long; whitish; cylindrical. Abdominal dorsal hairs 0.10–0.11 mm long, thin, straight or slightly curved mainly at distal part, compressed, blunt, tip not enlarged, uniformly, thickly distributed.

DA (Fig. 11D–F) sclerotized around TB valve attachment as well as in ventral region; both regions fused but distinguishable; DF wide. DA frontal border projected, rounded; lateral margins approximately parallel in dorsal view; as wide as long. Ventral region sclerotization reduced to frontal and lateral borders; sclerotized sheet-like structure present at both sides of S attachment, joined to lateral ventral sclerotization, along its lateral border, as long as dorsal sclerotization of DA, markedly bent toward lateral area. S arms as long as DA; straight; tips dorsally projected; neck as wide as arms. TB usual shape.

ALS (Fig. 13A) with pyriform gland spigot in polar position; remaining pyriform spigots more external than major ampulate gland spigot, arranged in two rows; 10 + 1 pyriform gland spigots; PMS and PLS (Fig. 13B–C) with fewer than 10 aciniform gland spigots.

Intraspecific variation. Male cephalothorax ranges in length from 2.89 mm to 3.17 mm, female from 2.75 mm to 3.56 mm. Dorsal back border of carapace slightly projected. C proximal border continuously decreasing (Fig. 12B). DA frontal border projected and pointed. Changeable S size and S tips projection. Spination variability in Table III.

Distribution. Canarian endemic, known from Tenerife and one single location in Gran Canaria. In Tenerife it is an abundant species, whose distribution is strongly associated with laurel woods (Teno, Palo Blanco, Anaga). The 32 known Gran Canarian specimens were collected together from a single pitfall situated in Inagua pine forest.

Comments. The examination of the *D. bailadero* holotype showed that the specimen was not an adult female, as it was thought to be. Endogyne structures were only very

slightly sclerotized, giving the impression of being markedly different from any other species' endogyne. No morphological character distinguishing it from any specimen of *D. iguanensis* could be found. The only known specimen of *D. paucisetae* was described on the basis of the different shape of the male bulbus, in relation to the otherwise identical *D. iguanensis* specimens. Examination of the holotype confirmed that the shape differences were due to the expansion of the DH in the specimen described as *D. paucisetae*.

***Dysdera insulana* Simon, 1883** (Figs. 14A–F, 15A–D, 16A–C)

Dysdera insulana Simon, 1883: 294–295, Fig. 19 [♂] (♂, non ♀).— Simon 1907: 257–258, Fig. A [♂].— Strand 1911: 190.— Reimoser 1919.— Denis 1941: 108.— Denis 1953: 2.— Schmidt 1973: 360–361.— Wunderlich 1991: 67, 296. Arnedo *et al.* 1996.

Dysdera gibbifera Wunderlich, 1991: 293–294, Figs. 37 and 40 [♀] (♀, non ♂); misidentification.

Material examined. *Dysdera insulana*. Neotype, by present designation 1♂ from La Esperanza, El Rosario, Tenerife; 6/2/88, C.G. Campos leg.; 2691 UB. Gran Canaria: Mogán: Inagua; 1♂; 28/2/85, R. García & Zapata leg.; 2604 MCNT. Tenerife: La Laguna: Guamasa; 1♀; 10/1/83; E. Caverro leg.; 2771 UB. Monte de las Mercedes; 1 juv.; 18/3/90; C.G. Campos leg.; 2778 UL. Santa Cruz de Tenerife: Cabezo del Tejo; 1 juv.; 26/2/96; Oromi & Emerson leg.; 3129 UB. Cruz del Carmen; 1♀; 12/5/96; M. Naranjo leg.; 3152 UB. *Dysdera gibbifera*. Tenerife: Santa Cruz de Tenerife: Cabezo del Tejo; 1♀ (redescription); 21/2/85, P. Oromi leg.; 03933(2708) UL. Monte Aguirre; 1♀; 4/6/86, C.G. Campos leg.; 03857(2736) UL.

Diagnosis. Large-sized *Dysdera*. Smooth carapace, with convergent frontal lateral borders (Fig. 15A). Cheliceral segment smooth with long internal groove, fang long and small-sized teeth, the distal being the smallest (Fig. 14B). Abdominal dorsal hairs compressed and curved, blunt in males, pointed in females. DD markedly bent in relation to T. L with a fold in middle (Fig. 15A). DA ventral sclerotization not reduced, without sheet-like structures (Fig. 14D). This species can be easily distinguished from similar, sympatric Tenerifean species *D. cribellata* Simon, 1883 by its larger size, smooth carapace and tibiae 3 and 4 markedly spinated (Table IV).

Description. *Male* (Figs. 14A–C, 15A–D). Carapace (Fig. 14A) 6.16 mm long; maximum width 5.04 mm; minimum width 3.15 mm. Reddish orange, darkened at borders; slightly foveate at borders, slightly wrinkled with small black grains mainly anterior. Frontal border fairly straight, about 1/2 carapace length; lateral borders convergent; rounded at maximum dorsal width point, back lateral borders straight; back margin wide, straight. AME diameter 0.29 mm, PLE 0.30 mm, PME 0.24 mm; AME on edge of frontal border, separated one from another about one diameter, close to PLE; PME very close to each other, about 2/5 PME diameter from PLE. Labium trapezoid-shaped, base wider than distal part; longer than wide at base; with semicircular groove at tip. Sternum dark orange, frontally darker, becoming lighter towards the back; wrinkled; uniformly covered in slender black hairs.

Chelicerae (Fig. 14B) 3.36 mm long, about 2/5 of carapace length in dorsal view; fang long, 2.73 mm; basal

segment smooth, with no granulations. Chelicera inner groove long, about 1/2 cheliceral length; armed with three teeth and lamina at base; B largest, M larger than D (teeth markedly small); D fairly round, located at centre of or slightly above groove; B close to basal lamina; M close to B. Legs orange. Lengths of male described above: fe1 5.60 mm (all measurements in mm); pa1 3.64; ti1 5.04; me1 4.72; ta1 0.91; total 19.91; fe2 4.9; pa2 3.25; ti2 4.41; me2 4.62; ta2 0.91; total 18.09; fe3 4.06; pa3 2.38; ti3 2.66; me3 3.85; ta3 0.91; total 13.86; fe4 5.11; pa4 2.87; ti4 2.99; me4 5.32; ta4 1.05; total 17.34; fe Pdp 3.22; pa Pdp 1.68; ti Pdp 1.68; ta Pdp 1.57; total 8.15; relative length: 1 > 2 > 4 > 3. Spination: palp, leg1, leg2 spineless. Fe3d spineless; pa3 spineless; tb3d spines arranged in four bands: proximal 1–2.2–1.1; medial–proximal 0.0–2.0; medial–distal 2–0.0.0; distal 2.0.0–1; tb3v spines arranged in two bands: proximal 1–0.3–2.1; distal 1.0.0; with two terminal spines. Fe4d spines in one row: 2–1; pa4 spineless; tb4d spines arranged in four bands: proximal 1–0.0.1–0; medial–proximal 1.2.1; medial–distal 0.1–0.0; distal 1.0.1; tb4v spines arranged in two bands: proximal 1.2.1; distal 1.0.1; with two terminal spines. Dorsal side of forward legs covered with small piligerous grains (diffuse); ventral side of the pedipalp covered with hairs but lacking small grains. Claws with 10–14 teeth.

Abdomen 7.84 mm long; whitish; cylindrical. Abdominal dorsal hairs 0.07–0.11 mm long, medium-sized, straight or only slightly curved mainly at distal part, compressed, blunt, tip not enlarged; uniformly, thickly distributed.

Male copulatory bulbus (Fig. 14C) T slightly smaller than DD; DD bent about 45° in lateral view. ES more developed than IS; IS continuous until embolus tip. DD tip (Fig. 15A–C) with upper, lower sheets sticking together; upper sheet not projected over lower one; straight in lateral view. C present; well-developed; located close to tip of the embolus; proximal border sharply decreasing; distal border stepped; upper tip not projected, rounded; external side excavated. AC present. LF absent. L well-developed; external border not sclerotized, laterally slightly folded; distal border divergent, not continuous, upper sheet slightly folded in middle. AL present, very poorly developed; proximal border in posterior view very slightly toothed. P (Fig. 15D) perpendicular to T in lateral view; fused to T; narrow, reduced to a ridge; lateral length from 2/5 to 1/2 T width; smooth; not distally projected; back margin not folded.

Female (Figs. 14D–F, 16A–C). All characters as in male except: Carapace 6.37 mm long; maximum width 5.25 mm; minimum width 3.36 mm. AME diameter 0.30 mm, PLE 0.30 mm, PME 0.98 mm. Sternum very slightly wrinkled, mainly between legs and frontal border.

Chelicerae 3.29 mm long; fang 2.80 mm. Lengths of female described above: fe1 5.18 mm (all measurements in mm); pa1 3.64; ti1 4.90; me1 4.41; ta1 0.91; total 19.04; fe2 4.69; pa2 3.22; ti2 4.20; me2 4.20; ta2 0.91; total 17.22; fe3 4.06; pa3 2.31; ti3 3.01; me3 3.92; ta3 0.91; total 14.21; fe4 5.25; pa4 2.87; ti4 4.20; me4 5.32; ta4 1.05; total 18.69; fe Pdp 3.01; pa Pdp 1.61; ti Pdp 1.33; ta Pdp 1.82; total 7.77; relative length 1 > 4 > 2 > 3. Spination: palp, leg1, leg2 spineless. Fe3d spineless; pa3 spineless; tb3d spines arranged in two bands: proximal 2.2.1; distal 1–2.0.0–1;

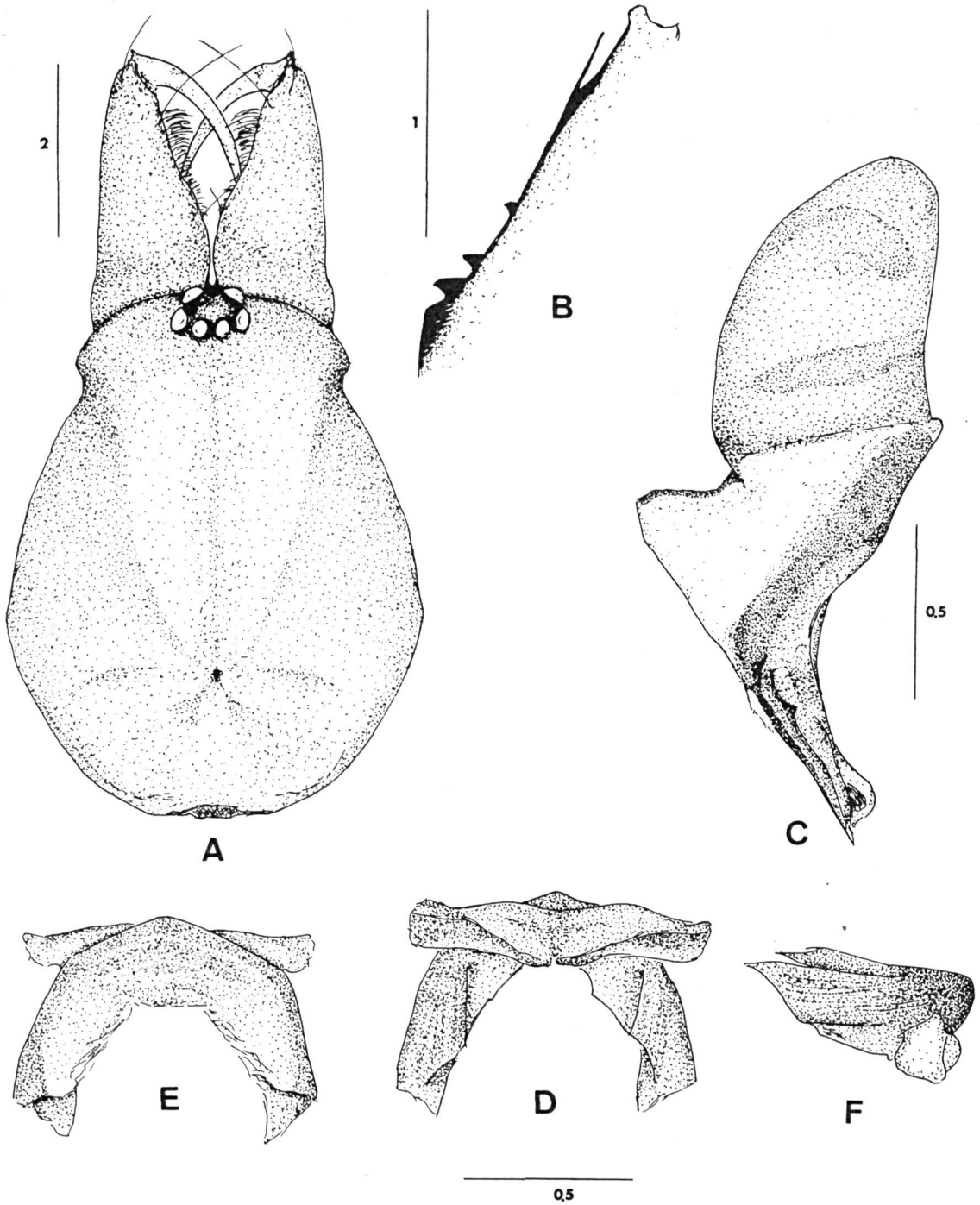


Fig. 14. —A–F. *Dysdera insulana* Simon, 1883;—A. Carapace, dorsal.—B. Left chelicera, ventral.—C. Right male bulbus, external.—D. Endogyne, ventral.—E. Endogyne, dorsal.—F. Endogyne, lateral. Scale bars in millimetres.

tb3v spines arranged in two bands: proximal 1.2.0; distal 1.0.0; with two terminal spines. Fe4d spines in one row: 2–3; pa4 spineless; tb4d spines arranged in three bands: proximal 1.2.1; medial–proximal 1.1–0.1; distal 1.0.1; tb4v spines arranged in three bands: proximal 1.2.1; medial–distal 0.1–2.0; distal 1.0.1; with two terminal spines.

Abdomen 18.97 mm long; whitish; cylindrical. Abdominal dorsal hairs 0.20 mm long, medium-sized, curved, compressed, pointed, uniformly, thickly distributed.

DA (Fig. 14D–F) sclerotized around TB valve attachment as well as in ventral region; both regions completely fused, not distinguishable; DF wide. DA frontal border projected, rounded; lateral margins convergent in dorsal

view; slightly wider than long. Ventral region mostly sclerotized except for back lateral ends; small scale or ridge present at both sides of S attachment. S arms as long as DA; straight; tips dorsally projected. TB usual shape.

ALS with pyriform gland spigot (Fig. 16A) in polar position; remaining pyriform spigots no more external than major ampulate gland spigot, arranged in two rows; 18 + 1 pyriform gland spigots; PMS and PLS (Fig. 16B–C) with more than 20 aciniform gland spigots.

Intraspecific variation. Male cephalothorax ranges in length from 6.16 mm to 6.44 mm, female from 5.77 mm to 6.37 mm. PLE-PME from 1/3 diam. to 2/5 diam.

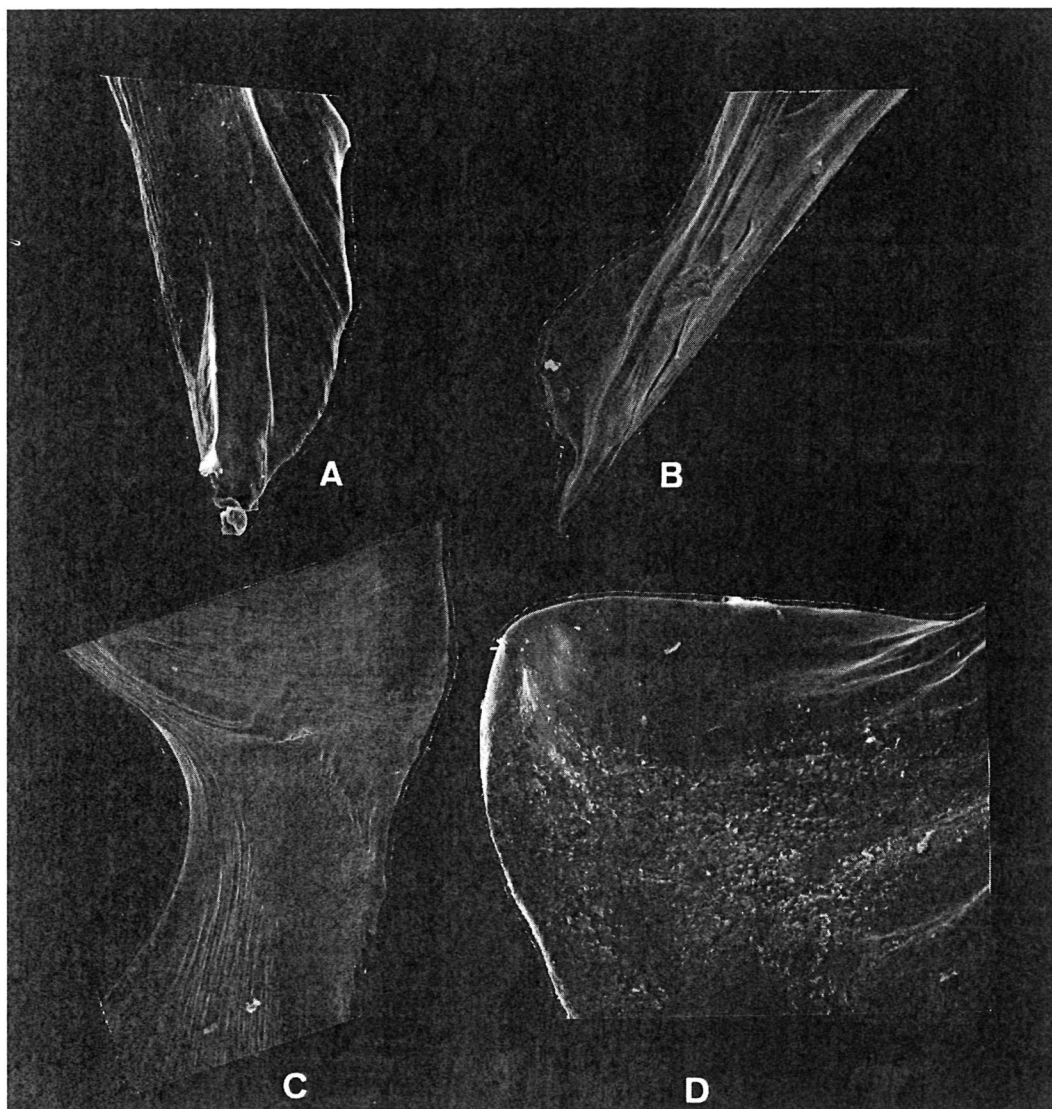


Fig. 15. —A–D. *Dysdera insulana* Simon, 1883; left male bulbus.—A. DD, frontal.—B. DD, external.—C. DD, posterior.—D. P, internal.

Chelicera basal segment granulations reduced towards proximal dorsal area. Chelicera relative size in dorsal view from 1/3 to 2/5 of carapace length. Spination variability in Table IV.

Distribution. Canarian endemic, known from Tenerife and one single location in Gran Canaria. In Tenerife it is a relatively abundant species, whose distribution is strongly associated with eastern laurel woods (Anaga). The only known Gran Canarian specimen was collected in Inagua pine forest. Original description of this species lacked any location. La Palma and Lanzarote were given as species locations after new material determined by the author himself (Simon 1907). Subsequently, *D. insulana* was said to be found in Tenerife (Denis 1953) and El Hierro (Wunderlich 1991). For reasons discussed elsewhere (Arnedo *et al.* 1996), all locations are considered doubtful with the exception of Tenerife.

Comments. Male type material of Canarian *Dysdera* species described by Simon seems to have been lost. In addition, most of the female material does not belong to the same species. In the case of *D. insulana*, the author

himself transferred the female material to a different species (Simon 1907). Moreover, the original description and drawings are not specific enough and correspond to more than one species. The unique combination of characters in the present species (smooth chelicerae, very large size and very bent DD) makes it highly likely that the current specimens analysed do actually belong to *D. insulana*.

Dysdera levipes Wunderlich, 1987

Dysdera levipes Wunderlich, 1987: 59–60, Figs. 19–22 [♂].—Arnedo *et al.*, 1996: 258–261, Figs. 14–16 [♂, ♀].

Dysdera multipilosa Wunderlich, 1991: 301–302, Figs. 68–71 [♀].—Arnedo *et al.*, 1996.

Material examined. *Dysdera levipes*: holotype male from Las Raíces, Tenerife, Canary Islands; IV–VI, J. Wunderlich leg.; num. 37137; Stored at SMF. La Gomera: Hermigua: Pajarito; 1♂; 29/4/95; Oromí & Arnedo leg.; 2909 119 UB. 1♀; 29/4/95; Oromí & Arnedo leg.; 2915 119 UB. 1♀; 29/4/95; Oromí & Arnedo leg.; 2908 119 UB. Vallehermoso: Plain land between Bco. Higuera and Bco. San Juan, road to Ermita de Sta. Clara; 1♀; 30/4/95; Oromí & Arnedo leg.; 4147 (94) Freezer UB. Tenerife: Los Realejos: Palo Blanco; 1F 3087 UB, 1 juv. 3096 UB, 1M 3097 UB, 1M 3099 UB, 1 juv. 3100 UB, 1F 3101 UB, 1 juv. 3102 UB, 1F 3103 UB, 4 juv. 3104 UB, 1 juv. 3119 UB; 18 2 96; Arnedo & Oromí leg. Gran Canaria:

Table IV. Intraspecific spination variability of *Dysdera insulana*

	Proximal	Med.-proximal	Medial-distal	Distal
Tibia 3 dorsal	1-2.1-2.1	0-1.0-2.0	0-2.0.0	1-2.0.0-1
Tibia 4 dorsal	0-1.0.0-1	1.0-3.1	0.0-1.0	1.0-1.1
Tibia 3 ventral	0-1.1-3.0-1	0	0	1.0.0
Tibia 4 ventral	1.2.1	0	0.1-2.0	1.0.1
	Number of rows		Number of spines	
Femur 3 dorsal	0		—	
Femur 4 dorsal	1		1-3	

slightly smaller than Tenerifean ones. PLE-PME distance smaller, less than 1/4 of the PME diam. B larger than M and D, although all quite similar in size. Back border of the frontal ventral sclerotization smooth. Number of pyriform gland spigots slightly reduced (4 vs. 6).

Distribution. Canarian endemic, found in Tenerife, La Gomera and Gran Canaria. The single specimen from Gran Canaria was collected in Inagua pine forest.

***Dysdera paucispinosa* Wunderlich, 1991** (Figs. 17A-E, 18A-E, 19A-C)

Dysdera paucispinosa Wunderlich, 1991: 304, Figs. 81-82 [♀].
Dysdera tamadabaensis Wunderlich, 1991: 308-309, Figs. 108-111 [♂]; new synonymy.

Material examined. *D. paucispinosa*: 1♀ holotype. Pinar de Pajonales (1000 m), Tejeda, Gran Canaria, Canary Islands; 9/1/90, H. Enghoff leg.; num. 2675, stored at ZMK. Mogán: Inagua; 10/2/96; Arnedo, Emerson & Oromí leg.; 1♀ 3009 UB, 1♂ 3012 UB. Degollada de las Brujas, N slope; 1♂; 10/2/96; Arnedo, Emerson & Oromí leg.; 3014 UB. *D. tamadabaensis*: 1♂ holotype. Tamadaba (1300 m), Agaete, Gran Canaria, Canary Islands; ?, J. Wunderlich leg.; num. 2573, stored at J. Wunderlich p. col.

Diagnosis. Small spider. Wrinkled carapace with parallel lateral frontal borders (Fig. 17A). Smooth cheliceral segment, long internal groove. Certain reduction in claw teeth number. Tiny, curved abdominal dorsal hairs, blunt in males, compressed, pointed in females. Leg spination markedly reduced. Easily distinguished from another Canarian dwarf *Dysdera* by smooth cheliceral segment with long internal groove, which differentiates it from *D. minutissima* and *D. andamanae* sp. n., and by hairless carapace with parallel lateral frontal border, not small sized cheliceral segment and presence of spines, which differentiates it from *D. levipes* and *D. gollumi* Ribera & Arnedo, 1994.

Description. *Male* (Figs. 17A-C, 18A-E). Carapace (Fig. 17A) 2.00 mm long; maximum width 1.58 mm; minimum width 1.07 mm. Brownish orange, darkened at borders; slightly foveate at borders, wrinkled in middle, covered with small black grains. Frontal border roughly triangular, about 1/2 carapace length; parallel lateral borders; rounded at maximum dorsal width point, back lateral borders straight; back margin narrow, straight. AME diameter 0.12 mm, PLE 0.11 mm, PME 0.09 mm; AME on edge of frontal border, separated one from another about 2/3 of diameter, close to PLE; PME very close to each other, about 2/5 PME diameter from PLE. Labium trapezoid-shaped, base wider than distal

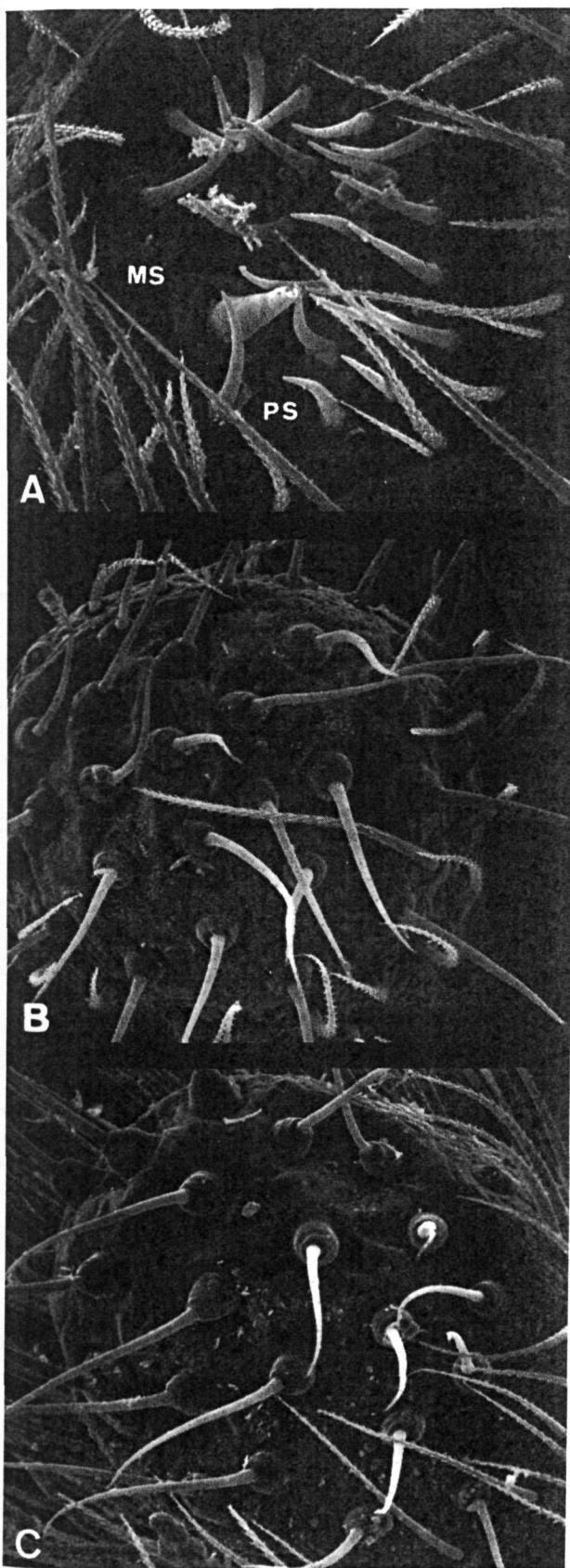


Fig. 16. —A-C. *Dysdera insulana* Simon, 1883; female spinnerets.—A. Right ALS.—B. Left PMS.—C. Right PLS.

Mogán: Inagua; 1♀; 28/2/85; R. García & Zapata leg.; 2780 MCNT.
Dysdera multipilosa: holotype from Barranco del Rio, Tenerife; 26/5-6/85; unknown leg.; num. 00700 P; Stored at UL.

Intraspecific variation. The Grancanarian specimen is

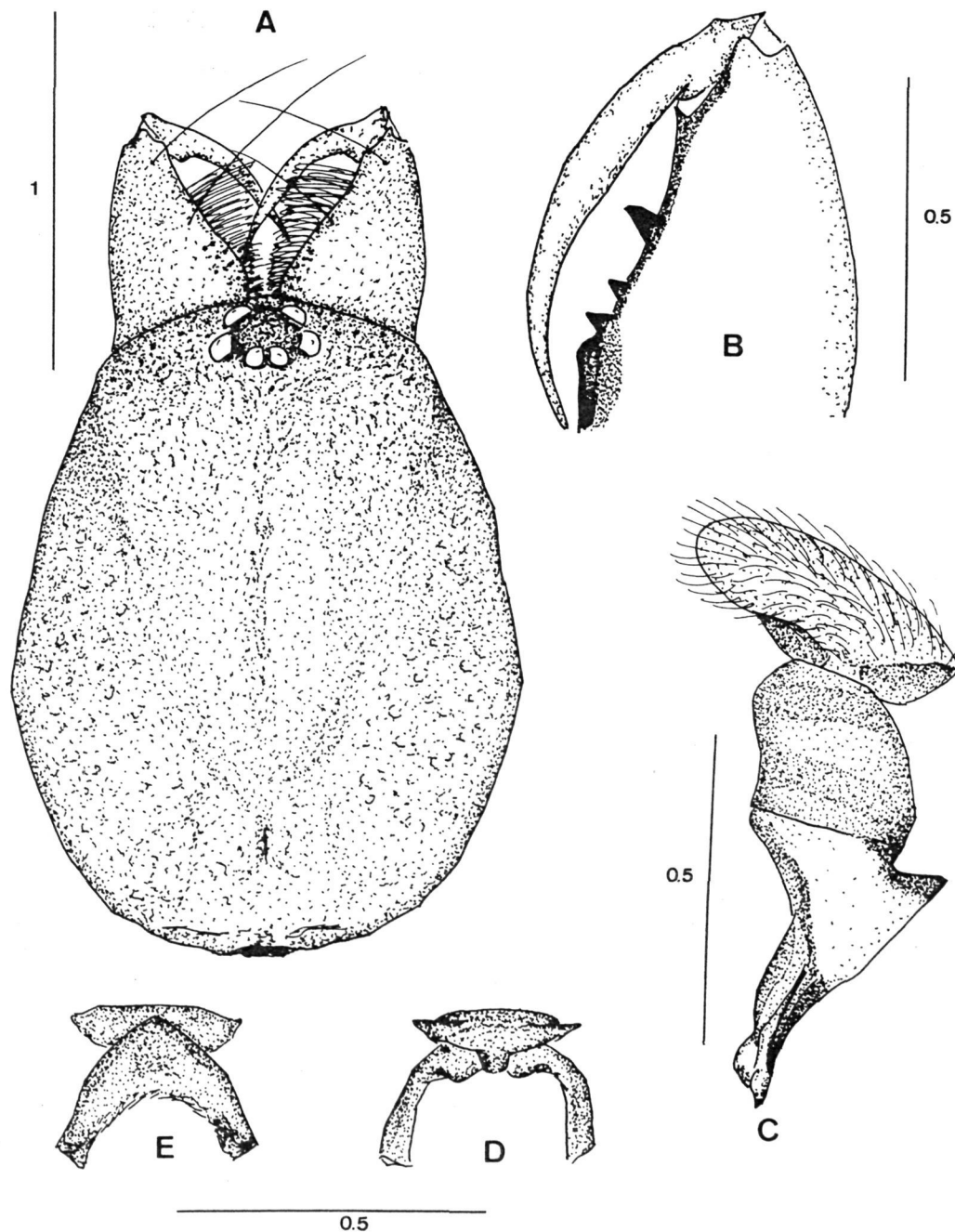


Fig. 17. —A–E. *Dysdera paucispinosa* Wunderlich, 1991;—A. Carapace, dorsal.—B. Left chelicera, ventral.—C. Left male bulbus, external.—D. Endogyne, ventral.—E. Endogyne, dorsal. Scale bars in millimetres.

part; as long as wide at base; with semicircular groove at tip. Sternum dark orange, uniformly distributed; mostly wrinkled, except in middle part; uniformly covered in slender black hairs.

Chelicerae (Fig. 17B) 0.72 mm long, about 1/3 of carapace length in dorsal view; fang medium-sized, 0.60 mm; basal segment smooth, with no granulations. Chelicera inner groove long, about 1/2 cheliceral length; armed with three teeth and lamina at base; D largest, B as large as M; D triangular, located at centre of or slightly above groove; B close to basal lamina; M close to B. Legs yellow. Lengths of male described above: fe1 1.44 mm (all measurements in mm); pa1 0.88; ti1 1.21; me1 1.03; ta1 0.32; total 4.88; fe2 1.17; pa2 0.83; ti2 1.07; me2 0.98; ta2 0.32; total 4.37; fe3 1.03; pa3 0.60; ti3 0.79; me3 0.89; ta3 0.28; total 3.59; fe4 1.30; pa4 0.60; ti4 1.12; me4 1.21; ta4

0.32; total 4.55; fe Pdp 0.60; pa Pdp 0.30; ti Pdp 0.32; ta Pdp 0.32; total 1.54; relative length: $1 > 4 > 2 > 3$. Spination: palp, leg1, leg2 spineless. Fe3d spineless; tb3d spines arranged in two bands: proximal 1.0.0; distal 1.0.0; tb3v spines arranged in one band: proximal 0.1.0; with one terminal spine on the forward margin. Fe4d spineless; pa4 spineless; tb4d spineless; tb4v spines arranged in one band: proximal 0.1–2.0; with one terminal spine on one leg and two on the other one. Dorsal side of forward legs covered with hairs but lacking small grains; ventral side of the pedipalp covered with hairs but lacking small grains. Claws with 8 teeth or less.

Abdomen 2.37 mm long; whitish; cylindrical. Abdominal dorsal hairs 0.03–0.04 mm long, thin, curved, not compressed, blunt, tip not enlarged (?); uniformly, thickly distributed.

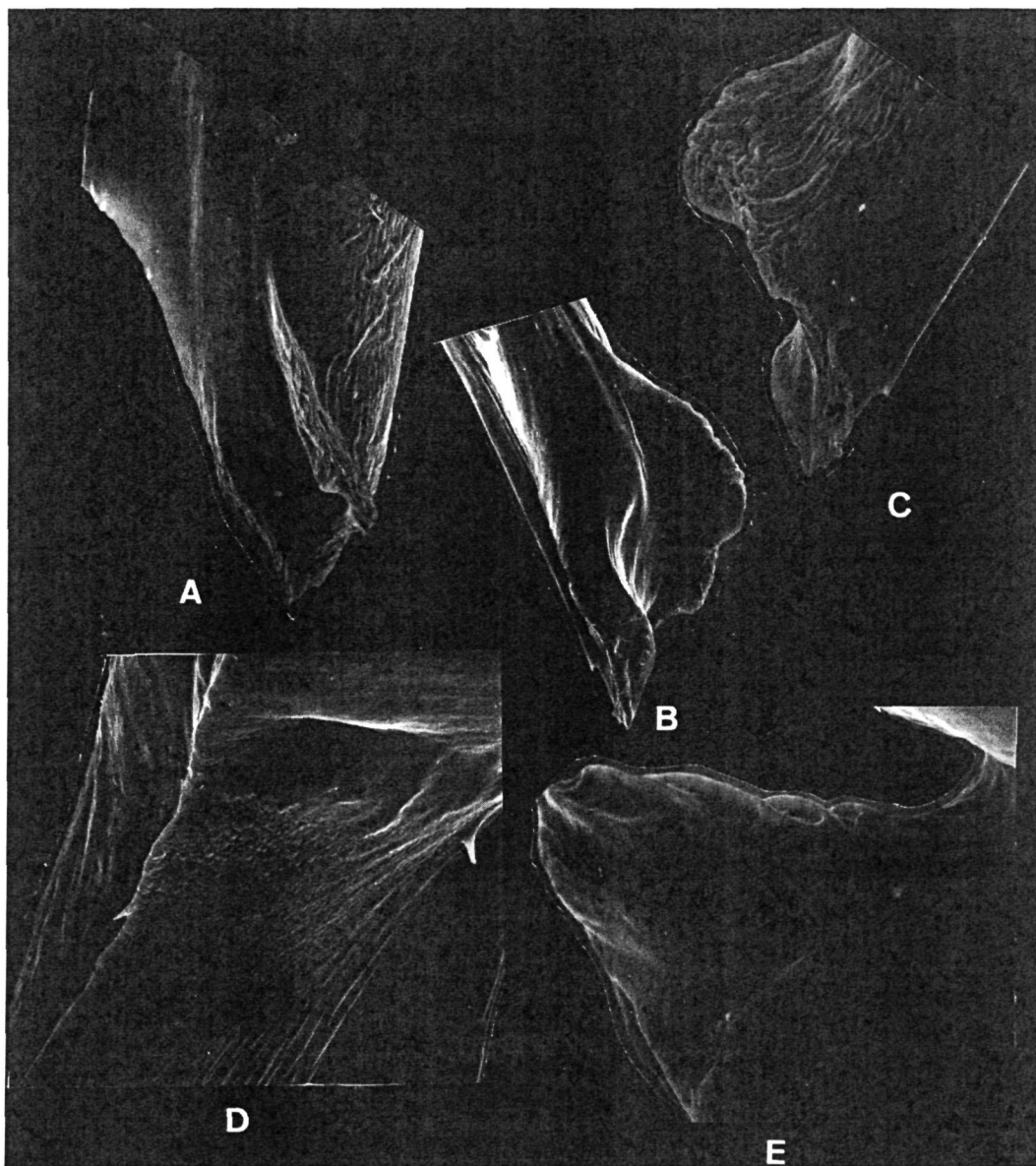


Fig. 18. —A–E. *Dysdera paucispinosa* Wunderlich, 1991; right male bulbus.—A. DD, frontal.—B. DD, external.—C. DD, internal.—D. DD, posterior.—E. P, external.

Male copulatory bulbus (Fig. 17C) T slightly smaller than DD; DD slightly bent in lateral view, clearly less than 45° . DD sclerites equally developed; IS truncated at middle part of haematodoca (not clearly). DD tip (Fig. 18A–D) with upper, lower sheets sticking together; upper sheet not projecting over lower one; sloped towards back in lateral view. C present; well-developed; located close to tip of the embolus; proximal border sharply decreasing; distal border stepped; upper tip not projected, pointed; external side excavated. AC present. LF absent. L well-developed; external border not sclerotized, laterally slightly folded; distal border divergent, continuous. AL present, reduced to a small tooth; proximal border in posterior view fused with DH with a tooth on its most external side. P (Fig. 18E) perpendicular to T in lateral view; fused to T; narrow, reduced to a ridge; lateral length from $2/5$ to $1/2$ T width; markedly toothed on its distal part; few teeth, about 4–6; not distally projected; back margin not folded.

Female (Figs. 17D–E, 19A–C). All characters as in male except: Carapace 2.1 mm long; maximum width 1.61 mm;

minimum width 1.05 mm. Back lateral borders rounded. AME diameter 0.12 mm, PLE 0.76 mm, PME 0.09 mm. PME about $1/3$ diameter from PLE.

Chelicerae 0.74 mm long; fang 0.65 mm. Lengths of female described above: fe1 1.30 mm (all measurements in mm); pa1 0.88; ti1 1.12; me1 0.98; ta1 0.32; total 4.6; fe2 1.21; pa2 0.79; ti2 0.98; me2 0.98; ta2 0.32; total 4.28; fe3 1.03; pa3 0.60; ti3 0.79; me3 0.98; ta3 0.28; total 3.68; fe4 1.30; pa4 0.70; ti4 1.17; me4 1.30; ta4 0.32; total 4.79; fe Pdp 0.74; pa Pdp 0.37; ti Pdp 0.37; ta Pdp 0.46; total 1.94; relative length $4 > 1 > 2 > 3$. Spination: palp, leg1, leg2 spineless. Fe3d spineless; pa3 spineless; tb3d spines arranged in one band: distal 1.0.0; tb3v with one terminal spine on the forward margin. Fe4d spineless; pa4 spineless; tb4d spines arranged in one band: proximal 0.0.0–1; tb4v spines arranged in one band: proximal 0.1.0; with one terminal spine at the forward border.

Abdomen 2.8 mm long; whitish; cylindrical. Abdominal dorsal hairs 0.08 mm long, medium-sized, curved, compressed, pointed, uniformly, thickly distributed.