ANNEXES

ANNEX 1. CÀLCUL DE LES LONGITUDS RETROCALCULADES DELS CIPRÍNIDS MÉS COMUNS EN ELS RIUS DE CATALUNYA

A1.1. Càlcul de les longituds retrocalculades del barb comú (*Barbus graellsi*)

Barbus graellsi Femelles 85 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -7.978542 + 3.526088 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9840761 NUMERO DE EJEMPLARES = 38
L.FURCAL = -9.288318 + 3.208982 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9812511 NUMERO DE EJEMPLARES = 38

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9
9	3		45.02	81.21	116.12	147.41	172.68	195.32	214.56	230.23	242.23
			1.26	2.80	3.23	3.66	2.67	4.10	5.11	3.34	4.53
8	1		47.93	88.92	118.74	152.28	178.37	197.00	215.64	226.82	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	4		44.83	80.98	113.48	140.85	164.15	183.03	198.26		
			5.77	6.15	6.24	9.94	8.38	6.87	5.38		
6	3		42.09	81.71	114.32	143.43	167.89	187.61			
			1.74	4.13	5.83	7.45	6.05	3.97			
5	6		45.74	81.73	113.08	140.26	164.52				
			2.25	3.02	5.82	7.34	9.97				
4	8		42.96	78.35	105.82	133.89					
			2.29	4.64	8.04	6.37					
3	1		45.93	85.47	110.62						
			0.00	0.00	0.00						
2	5		45.07	77.55							
			3.12	3.10							
1	7		47.13								
			1.40								
TOTAL			44.95	80.39	111.52	140.04	167.28	188.90	206.55	229.38	242.23
			3.18	4.73	7.44	8.72	8.76	7.50	9.64	3.25	4.53

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8	9
9	3		39.41	72.66	104.74	133.49	156.70	177.48	195.15	209.56	220.57
			1.36	2.84	3.40	3.94	2.88	2.99	3.84	2.14	3.19
8	1		41.46	78.67	105.74	136.19	159.87	176.79	193.70	203.85	
				0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	4		39.10	72.19	101.95	127.03	148.35	165.62	179.56		
			5.68	6.32	6.66	10.26	9.06	7.94	6.81		
6	3		35.89	71.63	101.05	127.32	149.38	167.18			
			1.46	3.53	5.02	6.45	4.98	2.94			
5	6		39.22	71.72	100.04	124.60	146.52				
			2.18	3.15	5.84	7.45	9.91				
4	8		37.11	69.35	94.37	119.92					
			2.21	4.64	7.74	5.91					
3	1		39.48	75.24	98.00						
			0.00	0.00	0.00						
2	5		38.72	68.10							
			3.02	3.01							
1	7		41.34								
			1.43								
TOTAL			38.91	71.01	99.39	125.35	150.04	170.30	187.17	208.13	220.57
			3.13	4.60	7.17	8.44	8.86	7.50	9.32	3.09	3.19

Barbus graellsi Mascles 85 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 6.322322 + 3.123351 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9506592 NUMERO DE EJEMPLARES = 35
L.FURCAL = 3.869685 + 2.835854 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9517822 NUMERO DE EJEMPLARES = 35

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	2	61.81	99.96	132.84	156.98	174.32	189.85	200.26
			2.24	3.79	3.38	0.90	1.60	0.50	0.92
	6	6	55.93	89.51	117.56	142.31	161.98	177.34	
			4.84	8.20	9.38	11.50	10.25	10.48	
	5	13	51.64	84.40	110.70	133.28	150.18		
			2.79	4.07	5.09	5.79	6.80		
	4	7	53.05	84.99	112.21	132.57			
			4.00	6.02	9.00	9.31			
	3	2	50.46	84.28	110.76				
			0.38	0.80	0.57				
	1	4	51.15						
			6.37						
TOTAL			53.16	86.59	113.90	136.73	155.85	180.47	200.26
			4.80	6.84	8.99	10.56	11.05	10.57	0.92

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7
	7	2	54.82	89.86	120.05	142.23	158.15	172.43	181.98
			1.85	3.13	2.64	0.27	0.84	0.23	0.13
	6	6	48.63	78.97	104.25	126.61	144.38	158.27	
			3.99	7.18	7.61	9.50	8.38	8.94	
	5	13	45.09	74.86	98.80	119.33	134.68		
			2.74	3.65	5.22	5.69	6.41		
	4	7	46.34	75.37	100.10	118.60			
			3.52	5.29	7.87	8.09			
	3	2	43.54	73.95	97.76				
			0.25	0.88	0.73				
	1	4	44.67						
			5.38						
TOTAL			46.40	76.74	101.54	122.34	139.69	161.81	181.98
			4.29	6.18	8.21	9.52	9.99	9.88	0.13

Barbus graellsi Total 85 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -4.144889 + 3.396639 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9690787 NUMERO DE EJEMPLARES = 71
L.FURCAL = -5.883831 + 3.090972 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9672556 NUMERO DE EJEMPLARES = 71

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9
	9	3	48.07	83.72	118.11	148.94	173.83	196.14	215.09	230.54	242.35
			1.24	2.75	3.16	3.58	2.61	4.07	5.07	3.33	4.51
	8	1	50.89	91.25	120.60	153.62	179.30	197.64	215.99	226.99	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	7	6	49.91	86.96	119.78	146.17	167.52	185.33	198.95		
			5.71	7.54	8.43	9.86	7.69	6.10	4.44		
	6	9	47.21	83.84	114.29	141.27	163.14	180.42			
			4.45	7.26	8.56	10.71	9.86	10.31			
	5	19	45.58	80.64	109.55	134.46	154.30				
			3.36	4.41	6.40	7.83	10.73				
	4	15	45.79	80.22	108.16	132.97					
			3.27	5.40	8.68	8.09					
	3	3	45.32	82.65	110.00						
			2.07	2.92	0.99						
	2	5	46.93	78.21							
			2.94	3.04							
	1	9	48.63								
			5.01								
TOTAL			46.86	81.85	111.71	137.70	160.68	185.36	205.50	229.65	242.35
			4.13	5.93	8.41	10.20	11.93	10.13	9.16	3.26	4.51

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8	9
	9	3	42.12	74.89	106.51	134.85	157.72	178.21	195.62	209.83	220.69
			1.33	2.80	3.34	3.87	2.82	2.96	3.80	2.14	3.17
	8	1	44.09	80.74	107.39	137.37	160.69	177.35	194.01	204.01	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	7	6	43.71	77.69	107.79	132.01	151.57	167.90	180.38		
			5.50	7.31	8.27	9.92	8.12	6.93	5.60		
	6	9	40.51	73.63	101.12	125.50	145.28	160.92			
			3.73	6.35	7.02	8.95	8.15	8.82			
	5	19	39.28	71.12	97.40	120.02	138.03				
			3.11	3.95	6.16	7.35	9.78				
	4	15	39.60	70.97	96.42	119.01					
			2.96	5.01	7.94	7.22					
	3	3	38.77	72.47	97.16						
			1.94	2.81	1.15						
	2	5	40.38	68.69							
			2.85	2.93							
	1	9	42.53								
			4.34								
TOTAL			40.55	72.31	99.50	123.19	144.04	166.72	186.32	208.37	220.69
			3.81	5.50	7.84	9.46	11.14	9.83	8.73	3.13	3.17

Barbus graellsii Femelles 86 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -12.99515 + 3.644605 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9461973 NUMERO DE EJEMPLARES = 57
L.FURCAL = -16.41247 + 3.372871 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9472156 NUMERO DE EJEMPLARES = 57

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9	10	11
11	1.00		45.60	85.89	118.85	148.15	177.45	199.43	221.40	236.05	250.70	261.69	272.68
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	1.00		41.80	78.34	107.56	136.79	169.67	195.24	217.16	235.43	253.69		
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
8	5.00		47.12	85.46	122.32	153.31	182.03	206.65	223.26	236.94			
			3.83	4.85	6.95	6.46	6.56	5.16	3.57	3.05			
7	12.00		43.83	80.30	114.64	145.66	172.84	193.38	209.47				
			3.04	4.94	7.56	8.04	8.65	9.31	8.89				
6	11.00		39.43	76.77	109.63	138.42	160.72	177.33					
			3.55	4.91	6.53	8.88	8.89	9.82					
5	10.00		38.33	76.84	107.68	133.06	154.40						
			4.89	6.44	6.85	6.10	4.89						
4	6.00		40.10	78.50	114.50	135.68							
			1.86	5.03	7.43	6.53							
3	5.00		41.94	80.03	115.16								
			3.15	5.81	7.84								
2	4.00		39.92	74.01									
			1.27	2.66									
1	1.00		40.48										
			0.00										
TOTAL			41.37	78.82	112.93	140.58	166.08	189.97	214.13	236.60	252.20	261.69	272.68
			4.33	5.91	8.26	9.81	12.11	13.71	9.61	2.64	1.50	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8	9	10	11
11	1		38.87	76.88	107.97	135.61	163.26	lij3.99	264.72	218.54	232.36	242.72	253.09
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	1		34.87	69.06	96.41	123.76	154.53	178.46	198.97	216.07	233.16		
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
8	5		38.96	74.28	108.23	136.78	163.24	185.92	201.22	213.82			
			3.43	4.37	6.30	5.96	6.11	4.98	3.59	2.73			
7	12		36.09	69.77	101.49	130.15	155.27	174.24	189.11				
			2.90	4.44	6.85	7.33	7.96	8.59	8.36				
6	11		32.20	66.83	97.31	123.98	144.66	160.05					
			3.28	4.68	6.28	8.22	8.23	8.80					
5	10		31.10	66.74	95.29	118.80	138.54						
			4.49	5.92	6.36	5.80	4.49						
4	6		32.35	67.59	100.65	120.09							
			1.76	4.53	6.59	5.62							
3	5		34.16	69.23	101.57								
			2.68	5.05	6.83								
2	4		33.30	65.33									
			1.11	2.62									
1	1		34.07										
			0.00										
TOTAL			33.91	68.55	99.97	125.60	149.35	171.45	193.64	214.82	232.76	242.72	253.09
			3.96	5.34	7.48	9.02	11.08	12.43	9.14	2.87	0.41	0.00	0.00

Barbus graelsii Mascles 86 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 6.279541 + 3.145249 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9569872 NUMERO DE EJEMPLARES = 52
L.FURCAL = 3.611037 + 2.878013 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9572334 NUMERO DE EJEMPLARES = 52

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9
9	1		53.54	88.21	116.56	144.92	166.98	185.89	201.64	214.25	223.70
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1		57.50	91.65	118.97	142.87	159.95	177.02	194.10	207.76	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	5		55.87	89.93	117.41	143.76	164.34	181.28	193.13		
			3.28	6.53	5.22	5.24	4.09	4.22	5.77		
6	10		56.39	86.96	120.38	146.55	165.82	178.61			
			1.98	10.85	6.89	7.42	6.69	7.45			
5	16		53.56	85.49	113.89	136.33	152.89				
			3.06	4.73	6.32	6.26	5.88				
4	9		52.30	83.62	111.16	131.59					
			2.28	3.95	4.26	5.14					
3	4		52.56	84.87	112.95						
			5.31	7.39	9.84						
2	3		49.91	79.00							
			1.03	1.72							
1	2		65.38								
			1.01								
TOTAL			54.36	85.63	115.24	138.99	159.18	179.73	194.49	211.00	223.70
			4.05	7.06	7.08	8.30	8.44	6.48	5.69	3.25	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8	9
9	1		46.79	78.46	104.37	130.27	150.43	167.70	182.09	193.61	202.24
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1		50.64	81.99	107.08	129.02	144.70	160.38	176.05	188.59	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	5		48.66	79.59	104.57	128.50	147.20	162.59	173.36		
			2.90	5.79	4.61	4.54	3.58	3.61	5.02		
6	10		49.65	77.68	108.43	132.49	150.18	161.92			
			1.22	9.37	5.46	5.82	4.32	4.94			
5	16		47.02	76.33	102.42	123.04	138.25				
			2.88	4.38	6.12	6.39	6.59				
4	9		45.55	74.09	99.18	117.80					
			2.01	3.34	3.46	4.11					
3	4		45.31	74.44	99.74						
			4.28	5.65	7.43						
2	3		43.82	70.63							
			1.39	2.32							
1	2		58.41								
			0.78								
TOTAL			47.63	76.18	103.24	125.13	143.79	162.37	174.99	191.10	202.24
			3.72	6.16	6.32	7.62	7.68	4.50	5.22	2.51	0.00

Barbus graellsii Total 86 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -8.278936 + 3.501751 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9454119 NUMERO DE EJEMPLARES = 108
L.FURCAL = -10.87285 + 3.22308 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9459938 NUMERO DE EJEMPLARES = 108

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10	11
11	1	49.38	89.02	121.45	150.27	179.10	200.72	222.34	236.76	251.17	261.98	272.79
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	2	43.82	80.23	109.69	139.16	167.06	189.69	208.86	224.54	238.55		
		1.76	1.25	0.51	0.23	4.18	6.68	9.06	11.32	15.27		
8	6	50.03	87.48	122.50	152.11	178.65	201.83	218.46	232.09			
		3.78	4.80	7.76	8.67	11.74	13.20	12.08	11.54			
7	17	46.68	82.64	115.07	144.84	170.14	189.69	204.55				
		3.36	5.62	7.44	8.16	9.46	10.43	11.35				
6	21	44.30	79.11	113.10	141.28	162.59	177.67					
		3.23	8.74	6.98	8.40	7.93	8.67					
5	26	42.72	78.61	109.25	133.84	152.96						
		3.99	5.56	6.68	6.34	5.75						
4	15	42.90	78.62	110.89	132.69							
		2.18	4.70	6.81	6.27							
3	9	44.24	80.78	113.62								
		4.42	6.68	9.12								
2	7	42.47	75.65									
		1.25	2.58									
1	3	56.61										
		10.25										
TOTAL		44.68	80.00	112.72	139.10	162.59	186.10	208.78	230.93	242.76	261.98	272.79
		4.70	6.67	7.91	9.44	11.59	13.05	12.83	11.45	13.81	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4	5	6	7	8	9	10	11
11	1	43.30	80.55	111.02	138.11	165.19	185.51	205.83	219.37	232.91	243.07	253.23
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	2	37.33	71.01	98.27	125.52	151.36	172.32	190.06	204.59	217.57		
		1.97	1.74	1.24	0.75	5.02	7.47	9.80	12.00	15.74		
8	6	42.62	76.98	109.11	136.28	160.62	181.89	197.15	209.65			
		3.33	4.23	6.86	7.70	10.44	11.76	10.68	10.05			
7	17	39.55	72.53	102.28	129.60	152.81	170.75	184.39				
		3.16	5.06	6.80	7.53	8.87	9.80	10.76				
6	21	37.65	69.74	101.14	127.14	146.79	160.69					
		2.86	7.74	6.21	7.40	6.69	7.10					
5	26	36.17	69.27	97.54	120.24	137.88						
		3.71	5.09	6.35	6.28	5.99						
4	15	36.00	68.70	98.24	118.20							
		1.96	4.02	5.69	5.05							
3	9	37.00	70.32	100.25								
		3.66	5.45	7.45								
2	7	36.32	67.19									
		1.29	2.72									
1	3	49.93										
		9.85										
TOTAL		37.89	70.35	100.38	124.76	146.53	168.06	188.60	209.61	222.69	243.07	253.23
		4.38	5.92	7.07	8.63	10.55	11.66	12.23	10.75	14.74	0.00	0.00

Barbus graellsi Femelles 87 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = .1014189 + 3.467965 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .897767 NUMERO DE EJEMPLARES = 34
L.FURCAL = -1.504294 + 3.152237 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .8973586 NUMERO DE EJEMPLARES = 34

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	1	56.33	97.56	127.55	161.29	187.53	210.02	225.02	243.76	255.01	266.25
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	1	51.00	88.33	115.48	142.62	166.38	190.13	217.28	234.25	247.82	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	6	58.74	99.85	134.65	163.58	186.65	205.14	221.22	233.95		
		3.98	6.29	8.85	11.49	11.59	9.17	8.96	7.93		
7	12	51.00	88.39	122.14	151.40	173.61	190.33	203.97			
		2.82	3.44	3.58	2.83	4.81	5.93	7.25			
6	6	51.84	86.14	117.61	143.49	164.27	179.97				
		3.74	4.80	5.61	8.19	7.24	6.82				
5	4	52.77	88.74	119.49	144.07	163.36					
		1.68	2.56	4.66	5.35	6.10					
3	4	48.05	82.09	108.32							
		3.95	3.48	4.60							
TOTAL		52.53	89.58	121.57	151.32	173.21	192.11	210.86	235.22	251.41	266.25
		4.56	6.87	9.24	10.10	11.18	11.55	11.33	7.59	3.59	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	1	49.85	87.51	114.90	145.71	169.68	190.22	203.92	221.03	231.31	241.58
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	1	44.78	78.72	103.41	128.09	149.69	171.29	195.97	211.40	223.74	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	6	51.74	89.05	120.64	146.91	167.86	184.68	199.28	210.86		
		3.33	4.99	7.00	9.29	9.16	7.08	6.64	6.01		
7	12	44.89	78.99	109.76	136.43	156.65	171.90	184.33			
		2.54	3.31	3.69	2.98	3.96	5.03	6.39			
6	6	45.08	75.98	104.32	127.62	146.36	160.52				
		2.75	3.48	3.67	5.66	4.97	4.46				
5	4	46.45	79.20	107.19	129.57	147.13					
		1.60	2.49	4.33	4.99	5.51					
3	4	42.20	73.24	97.15							
		3.66	3.46	4.42							
TOTAL		46.14	79.83	108.90	135.88	155.77	172.90	190.38	212.20	227.52	241.58
		4.00	6.11	8.19	8.90	9.84	10.36	9.70	6.19	3.78	0.00

Barbus graellsi Mascles 87 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 15.04374 + 2.996794 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9406504 NUMERO DE EJEMPLARES = 33
L.FURCAL = 13.9735 + 2.685439 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .936893 NUMERO DE EJEMPLARES = 33

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	2	63.96	98.64	125.39	148.90	166.29	178.90	193.04
			2.94	3.91	3.08	1.00	1.07	1.42	0.23
	6	12	61.52	93.30	120.99	145.65	165.28	181.10	
			3.53	5.06	5.71	6.10	6.81	5.67	
	5	10	62.38	94.58	121.63	144.30	161.75		
			2.37	3.27	5.40	5.24	3.68		
	4	5	57.70	88.40	112.84	134.96			
			0.53	1.23	2.57	4.54			
	3	2	59.39	91.90	112.63				
			0.23	2.56	3.45				
	2	2	56.75	87.19					
			2.23	1.09					
TOTAL			60.93	92.81	119.63	143.56	163.90	180.78	193.04
			3.35	4.71	6.26	6.73	5.68	5.33	0.23

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7
	7	2	57.84	88.93	112.91	133.95	149.55	160.85	173.52
			3.04	4.19	3.67	0.21	2.21	2.63	1.69
	6	12	55.58	84.04	108.84	130.91	148.49	162.64	
			3.21	4.63	5.29	5.57	6.12	4.96	
	5	10	56.50	85.43	109.73	130.10	145.76		
			2.32	3.21	5.31	5.33	3.72		
	4	5	52.27	79.83	101.76	121.60			
			0.75	1.07	1.91	3.23			
	3	2	53.56	82.59	101.08				
			0.15	2.38	2.97				
	2	2	50.87	77.84					
			1.39	0.06					
TOTAL			55.09	83.66	107.75	129.23	147.44	162.39	173.52
			3.12	4.42	5.83	6.12	5.20	4.74	1.69

Barbus graellsi Total 87 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = -2.695794 + 3.435331 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9169174 NUMERO DE EJEMPLARES = 67
L.FURCAL = -3.349522 + 3.109041 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9148236 NUMERO DE EJEMPLARES = 67

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	1	54.12	95.78	126.08	160.16	186.68	209.40	224.55	243.49	254.85	266.21
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	1	48.76	86.49	113.93	141.37	165.38	189.40	216.84	233.99	247.71	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8	6	56.62	98.20	133.40	162.67	186.01	204.71	220.98	233.86		
		4.02	6.35	8.93	11.59	11.69	9.23	9.02	7.98		
7	14	49.16	87.06	120.56	149.65	171.65	188.15	202.20			
		2.99	3.67	3.71	3.56	5.74	7.24	7.87			
6	18	48.93	83.86	114.84	141.70	163.14	180.07				
		3.87	5.28	6.09	7.17	7.23	6.21				
5	14	50.21	86.25	116.67	141.82	161.29					
		2.42	3.45	5.80	5.73	4.72					
4	5	45.72	80.56	108.29	133.38						
		0.78	1.43	2.32	4.32						
3	6	47.26	83.13	109.08							
		3.53	4.43	4.54							
2	2	48.04	85.08								
		2.39	0.75								
TOTAL		49.59	86.26	117.30	145.35	167.89	187.56	209.01	235.08	251.28	266.21
		4.07	6.12	8.49	9.99	10.61	11.40	12.00	7.60	3.57	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	1	48.39	86.33	113.93	144.97	169.12	189.81	203.61	8.00	9.00	10.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	220.85	231.20	241.55
9	1	43.30	77.51	102.39	127.26	149.03	170.80	195.68	0.00	0.00	0.00
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	211.23	223.67	
8	6	50.34	87.97	119.82	146.31	167.43	184.39	199.12	0.00	0.00	
		3.36	5.02	7.05	9.35	9.22	7.12	6.68	210.80		
7	14	43.71	78.12	108.53	134.92	154.88	169.85	182.61	6.05		
		2.73	3.57	3.91	3.67	5.17	6.60	7.21			
6	18	43.15	74.63	102.54	126.73	146.06	161.31				
		3.31	4.57	5.19	5.88	6.04	4.98				
5	14	44.61	77.27	104.84	127.63	145.27					
		2.35	3.37	5.62	5.67	4.50					
4	5	40.57	72.18	97.32	120.06						
		1.06	1.51	1.86	3.07						
3	6	41.88	74.36	97.85							
		3.23	4.17	4.22							
2	2	42.36	75.78								
		1.54	0.38								
TOTAL		43.97	77.15	105.26	130.63	151.00	168.71	188.66	212.11	227.44	241.55
		3.65	5.56	7.69	8.96	9.51	10.36	10.52	6.19	3.77	0.00

Barbus graellsii Femelles 85 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = -7.240346 + 3.47021 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9788866 NUMERO DE EJEMPLARES = 44
L.FURCAL = -8.695746 + 3.156626 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9768223 NUMERO DE EJEMPLARES = 44

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10	11	12
12	4	58.53	95.68	126.13	153.75	178.46	261.27	221.25	237.42	252.68	265.95	277.39	287.02
		2.36	3.21	2.32	4.23	3.84	5.27	5.90	6.69	6.81	6.66	6.69	7.31
11	3	57.69	93.76	122.52	151.38	176.63	199.44	218.54	231.70	244.86	255.68	264.06	
		2.57	4.00	3.04	4.06	5.00	4.70	2.01	0.90	0.76	0.59	1.03	
9	2	52.10	85.33	113.26	139.37	165.49	189.92	209.05	228.19	240.34			
		2.25	5.25	6.31	5.56	4.81	5.73	4.71	3.70	2.41			
8	6	49.51	78.78	106.30	131.04	155.18	178.61	195.91	210.97				
		4.51	6.17	8.27	10.44	11.45	10.53	9.74	7.19				
7	5	51.63	80.36	107.02	133.75	156.98	177.45	194.51					
		2.79	2.68	3.83	5.48	6.57	4.98	3.73					
6	1	48.83	76.87	111.91	136.44	153.96	171.49						
		0.00	0.00	0.00	0.00	0.00	0.00						
4	6	50.39	81.30	108.52	130.46								
		3.63	6.65	10.78	10.52								
3	8	50.13	74.89	99.79									
		9.57	4.00	5.58									
2	1	48.68	78.88										
		2.65	0.00										
TOTAL		51.79	81.99	109.51	137.85	164.03	186.36	205.34	224.47	247.33	261.55	271.68	287.02
		6.19	8.35	10.77	12.03	12.57	12.80	13.26	12.83	6.91	7.16	8.34	7.31

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10	11	12
12	4	51.53	85.56	113.44	138.73	161.35	182.22	200.52	215.31	229.29	241.44	251.92	260.75
		2.31	3.35	2.97	4.16	3.75	4.47	4.75	5.17	5.42	4.91	5.06	6.26
11	3	50.53	83.44	109.66	135.98	159.02	179.82	197.22	209.21	221.20	231.07	238.71	
		2.80	4.36	3.70	4.86	5.90	5.76	3.46	2.53	1.71	2.10	1.26	
9	2	45.08	75.20	100.51	124.17	147.83	169.98	187.31	204.65	215.66			
		2.18	4.97	6.00	5.38	4.75	5.65	4.77	3.90	2.76			
8	6	42.78	69.32	94.28	116.72	138.61	159.84	175.51	189.16				
		4.40	6.05	8.11	10.21	11.33	10.50	9.85	7.65				
7	5	44.63	70.66	94.82	119.04	140.08	158.63	174.08					
		2.56	2.52	3.50	4.99	6.01	4.64	3.47					
6	1	41.88	67.17	98.78	120.91	136.71	152.52						
		0.00	0.00	0.00	0.00	0.00	0.00						
4	6	43.71	71.82	96.59	116.55								
		3.33	6.21	10.19	10.18								
3	8	43.52	66.04	88.68									
		8.74	3.16	4.30									
2	1	42.91	70.75										
		2.42	0.00										
TOTAL		45.02	72.48	97.47	123.22	147.00	167.29	184.59	202.21	223.57	237.00	246.26	260.75
		5.77	7.85	10.11	11.60	12.31	12.56	12.98	12.58	6.79	6.48	7.62	6.26

Barbus graellsi Mascles 85 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -3.309972 + 3.201599 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9763262 NUMERO DE EJEMPLARES = 45
L.FURCAL = -7.207704 + 2.964117 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9756338 NUMERO DE EJEMPLARES = 45

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	3	52.21	85.73	114.66	140.08	164.37	185.19	201.37	216.43	229.15	239.56
		0.92	1.21	3.01	2.30	2.36	2.47	1.09	2.33	2.97	3.10
8	2	46.93	76.70	103.45	127.05	149.03	169.39	188.22	205.44		
		1.72	1.17	3.65	6.03	6.78	5.91	6.55	5.57		
7	3	50.46	83.01	112.20	136.83	159.18	178.16	192.68			
		3.30	4.84	7.04	7.72	7.24	6.63	6.05			
6	4	49.77	79.95	106.89	128.96	149.36	165.69				
		1.30	2.58	2.50	1.99	2.80	4.57				
5	4	46.74	75.44	101.12	124.43	144.62					
		5.41	4.74	5.80	6.04	6.14					
4	4	46.18	75.12	99.44	122.28						
		0.71	2.00	1.21	2.33						
3	12	46.43	73.97	97.46							
		1.98	3.14	3.76							
2	9	49.57	77.77								
		2.17	2.81								
TOTAL		48.19	77.30	102.71	129.38	152.79	174.30	194.82	212.03	229.15	239.56
		3.17	4.70	7.27	7.98	9.06	9.35	7.32	6.68	2.97	3.10

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	3	44.13	75.14	101.90	125.40	147.86	167.11	182.06	195.97	207.72	217.34
		0.99	1.99	3.89	3.60	3.86	4.10	2.78	2.54	1.66	1.84
8	2	39.04	66.44	91.06	112.79	133.03	151.76	169.10	184.94		
		1.80	1.43	3.83	6.12	6.91	6.20	6.87			
7	1	42.75	72.94	100.02	122.87	143.61	161.24	174.74			
		3.50	4.50	6.10	6.30	5.66	4.89	4.84			
6	4	42.53	70.85	96.12	116.80	135.95	151.29				
		0.87	3.26	4.27	4.34	5.82	7.72				
5	4	38.98	65.47	89.16	110.68	129.31					
		4.89	4.30	5.18	5.37	5.45					
4	4	38.38	65.04	87.44	108.47						
		0.64	2.16	1.56	1.97						
3	12	38.71	64.14	85.83							
		1.53	2.56	2.89							
2	9	41.70	67.77								
		2.04	2.52								
TOTAL		40.44	67.37	90.90	115.71	137.60	157.81	176.08	191.56	207.72	217.34
		2.99	4.51	7.00	7.77	8.81	9.02	7.06	6.91	1.66	1.84

Barbus graellsii Total 85 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -14.03745 + 3.509488 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .976238 NUMERO DE EJEMPLARES = 85
L.FURCAL = -15.53915 + 3.208433 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9748741 NUMERO DE EJEMPLARES = 85

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD													
EDAD	N		1	2	3	4	5	6	7	8	9	10	11	12
12	4		53.22	91.22	122.35	150.60	175.87	199.19	219.63	236.17	251.77	265.34	277.05	286.89
			2.39	3.27	2.34	4.24	3.82	5.27	5.91	6.71	6.82	6.67	6.69	7.31
11	3		52.50	89.46	118.93	148.50	174.38	197.75	217.33	230.81	244.29	255.38	263.97	
			2.64	4.10	3.13	4.17	5.13	4.83	2.07	0.94	0.79	0.62	1.03	
10	3		43.88	78.85	109.02	135.54	160.88	182.59	199.48	215.18	228.45	239.31		
			0.99	1.30	3.20	2.49	2.56	2.67	1.18	2.33	2.93	3.07		
9	2		46.88	80.99	109.66	136.46	163.27	188.35	207.99	227.64	240.11			
			2.30	5.38	6.47	5.69	4.92	5.86	4.82	3.77	2.45			
8	8		42.97	73.38	101.64	126.94	151.35	174.79	193.09	209.24				
			4.79	5.86	7.85	10.04	11.19	10.73	9.88	7.32				
7	8		45.15	76.52	105.23	132.20	156.00	176.69	193.42					
			3.72	3.77	5.72	6.65	7.02	5.75	4.89					
6	5		42.60	74.00	104.11	127.90	148.83	166.31						
			1.51	2.51	3.51	3.82	3.11	4.62						
5	4		39.36	69.98	97.38	122.25	143.79							
			5.67	4.90	5.97	6.17	6.23							
4	10		43.39	75.21	102.73	126.31								
			4.54	6.80	10.05	9.54								
3	20		42.72	71.20	97.08									
			7.19	3.80	4.88									
2	10		44.63	75.69										
			2.36	2.84										
TOTAL			44.23	75.51	103.38	131.75	157.13	180.54	201.32	220.59	242.13	254.54	271.44	286.89
			5.68	6.95	9.42	11.08	12.25	12.76	12.57	12.56	9.92	11.71	8.24	7.31

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD													
EDAD	N		1	2	3	4	5	6	7	8	9 10)	11	12
12	4		46.19	81.07	109.64	135.56	158.75	180.14	198.89	214.05	228.38	240.83	251.57	260.62
			2.35	3.42	3.00	4.17	3.74	4.46	4.74	5.17	5.41	4.90	5.04	6.25
11	3		45.31	79.11	106.05	133.09	156.75	178.12	196.00	208.32	220.64	230.78	238.62	
			2.87	4.47	3.78	4.97	6.04	5.89	3.53	2.57	1.73	2.13	1.26	
10	3		37.66	69.79	97.52	121.88	145.15	165.10	180.59	195.01	207.17	217.15		
			1.02	2.07	4.04	3.75	4.02	4.27	2.90	2.62	1.68	1.86		
9	2		39.82	70.83	96.88	121.24	145.60	168.40	186.24	204.09	215.42			
			2.23	5.10	6.15	5.51	4.87	5.78	4.88	3.97	2.80			
8	8		36.38	64.08	89.83	112.87	135.10	156.43	173.09	187.79				
			4.56	5.67	7.64	9.77	10.96	10.47	9.78	7.58				
7	8		38.53	67.19	93.42	118.04	139.78	158.68	173.97					
			3.40	3.58	5.31	5.91	6.23	4.97	4.11					
6	5		36.75	65.80	93.59	115.56	134.93	151.10						
			0.85	3.21	4.05	4.21	5.12	6.85						
5	4		33.24	61.22	86.26	108.98	128.67							
			5.08	4.42	5.31	5.47	5.50							
4	10		36.87	65.92	91.05	112.57								
			4.20	6.40	9.52	9.18								
3	20		36.27	62.25	85.86									
			6.60	3.16	3.90									
2	10		38.09	66.34										
			2.33	2.70										
TOTAL			37.72	66.29	91.79	117.79	141.09	162.53	181.22	198.83	218.98	230.71	246.02	260.62
			5.26	6.51	8.84	10.50	11.58	11.99	11.96	12.06	8.92	10.40	7.50	6.25

Barbus graellsii Femelles 86 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = -15.55465 + 3.615091 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9797675 NUMERO DE EJEMPLARES = 55
L.FURCAL = -17.32461 + 3.346221 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9763552 NUMERO DE EJEMPLARES = 55

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
15	2	51.46	91.28	124.78	156.16	185.47	208.47	227.28	246.09	262.85	275.41	287.98	298.48	308.99	317.36	323.68
		1.15	3.92	4.49	2.93	3.44	1.74	0.00	1.81	1.52	1.31	1.09	1.18	3.46	3.60	5.80
14	5	48.59	81.79	112.67	142.04	167.51	191.43	212.29	231.56	248.51	263.16	275.50	287.83	300.21	308.67	
		3.14	4.13	5.45	6.98	6.44	7.07	7.91	8.64	8.25	8.29	7.07	5.89	3.96	2.82	
12	2	44.30	75.98	107.65	133.84	158.03	176.50	195.20	213.91	232.61	247.57	260.55	271.77			
		3.84	4.01	4.18	5.87	5.56	3.02	4.22	5.42	6.62	7.58	6.55	7.27			
11	1	48.18	76.50	101.29	126.07	147.32	168.56	186.27	207.51	225.21	239.38	246.46				
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
10	3	39.17	68.28	97.39	124.20	149.81	175.46	196.42	212.70	225.52	237.18					
		1.01	2.19	3.66	4.63	6.18	6.13	6.21	3.40	2.01	2.38					
9	4	41.30	71.87	99.03	126.16	149.91	169.42	188.95	202.51	213.54						
		1.27	2.87	2.93	4.49	6.41	6.06	4.13	5.99	7.35						
8	7	41.27	71.70	98.21	124.20	147.69	168.74	186.83	200.97							
		2.95	4.79	7.44	9.25	9.56	9.96	8.99	7.87							
7	4	44.09	75.21	103.68	131.34	155.53	175.38	190.84								
		2.68	3.61	3.12	4.01	4.98	5.67	3.76								
6	4	44.17	77.25	110.15	137.74	157.32	174.11									
		2.60	4.66	5.52	4.91	4.48	4.57									
5	4	41.99	74.25	100.44	123.14	144.96										
		1.92	2.13	3.55	5.41	7.13										
4	2	41.12	71.00	97.80	117.21											
		2.22	3.46	4.43	3.42											
3	5	42.03	72.84	100.20												
		3.03	3.59	2.60												
2	2	41.23	67.95													
		0.77	1.13													
1	7	49.53														
		1.99														
TOTAL		44.17	74.83	103.70	130.69	155.17	177.46	196.75	214.18	234.67	254.82	272.10	286.63	302.71	311.16	323.68
		4.33	6.28	8.43	11.06	12.13	12.85	13.90	16.35	17.73	15.07	13.51	10.60	5.51	4.98	5.80

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
15	2	45.86	83.40	114.99	144.59	172.24	193.94	211.70	229.45	245.25	257.10	268.95	278.84	288.72	296.62	302.56
		0.49	2.76	3.00	1.25	1.47	0.34	2.17	4.01	3.89	3.80	3.71	1.65	0.40	0.46	2.48
14	5	42.14	72.91	101.53	128.75	152.36	174.53	193.86	211.72	227.42	241.01	252.45	263.89	275.38	283.24	
		2.93	3.58	4.73	6.02	5.45	5.79	6.42	6.76	6.14	6.04	4.79	3.56	2.52	1.84	
12	2	38.35	67.81	97.28	121.63	144.14	161.30	178.70	196.10	213.50	227.42	239.48	249.92			
		3.76	4.02	4.27	5.92	5.71	3.40	4.58	5.75	6.93	7.86	6.95	7.65			
11	1	42.03	68.41	91.50	114.58	134.37	154.15	170.64	190.43	206.92	220.11	226.70				
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
10	3	33.34	60.28	87.22	112.02	135.73	159.46	178.87	193.96	205.83	216.63					
		1.14	1.99	3.21	3.76	5.13	4.72	4.66	2.42	0.82	2.30					
9	4	35.00	63.13	88.11	113.07	134.91	152.87	170.86	183.33	193.47						
		1.41	2.75	2.62	3.61	5.09	4.64	3.27	4.87	6.00						
8	7	35.06	63.12	87.56	111.52	133.18	152.59	169.27	182.31							
		2.56	4.32	6.79	8.40	8.68	9.03	7.99	6.98							
7	4	37.55	66.18	92.36	117.81	140.06	158.32	172.52								
		2.86	3.93	3.68	4.68	5.68	6.37	4.55								
6	4	37.77	68.31	98.64	124.07	142.12	157.57									
		2.87	5.42	6.21	5.84	5.44	4.20									
5	4	35.46	65.04	89.05	109.87	129.88										
		1.81	1.62	2.93	4.67	6.20										
4	2	35.05	64.52	87.43	105.38											
		1.91	2.98	3.82	2.84											
3	5	35.69	64.06	89.25												
		2.78	3.42	2.58												
2	2	35.88	60.91													
		0.25	0.37													
1	7	43.39														
		1.72														
TOTAL		37.96	66.22	92.84	117.83	140.45	161.21	179.13	195.48	214.88	234.16	250.58	264.11	279.19	287.06	302.56
		4.26	6.14	8.28	10.79	11.95	12.65	13.76	16.13	17.55	14.80	13.22	10.66	6.40	6.25	2.48

Barbus graellsii Mascles 86 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -5.787217 + 3.370646 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9614228 NUMERO DE EJEMPLARES = 100
L.FURCAL = -8.544581 + 3.113885 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9630039 NUMERO DE EJEMPLARES = 100

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10	11	12	13
13	1	52.01	82.61	109.81	133.61	157.41	177.80	194.80	211.80	225.40	239.00	249.20	259.40	266.20
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	1	56.79	88.08	115.46	142.84	166.31	189.78	209.33	221.07	232.80	244.53	252.36	260.18	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	4	51.22	84.88	112.87	139.84	163.08	183.60	201.37	217.22	231.25	242.44			
		2.91	4.36	5.04	5.01	5.79	7.13	6.17	6.54	6.20	6.86			
9	7	47.33	80.18	107.44	132.28	155.51	175.77	194.60	208.52	221.65				
		3.14	5.23	6.73	9.16	9.21	8.01	8.09	8.30	12.20				
8	4	46.25	77.46	103.42	127.79	150.28	168.41	184.89	197.90					
		2.89	2.83	2.71	5.63	5.59	6.63	8.25	9.80					
7	15	44.78	74.88	100.76	125.64	147.53	166.04	181.45						
		4.47	7.38	9.89	11.48	13.63	14.64	15.46						
6	15	46.22	75.78	100.94	124.07	144.06	159.62							
		4.30	5.06	6.81	7.36	7.65	5.85							
5	7	45.82	77.67	103.20	126.81	146.58								
		2.56	4.46	6.03	5.72	5.84								
4	15	45.25	75.16	101.61	123.17									
		5.08	6.10	7.94	8.05									
3	15	46.86	75.89	101.44										
		4.46	4.04	4.52										
2	7	44.50	75.22											
		3.77	4.87											
1	8	53.15												
		1.89												
TOTAL		46.81	76.67	102.81	126.87	149.37	167.89	188.53	209.00	225.75	242.22	250.78	259.79	266.20
		4.77	5.98	7.76	9.58	11.10	12.74	14.43	10.72	10.68	5.83	1.58	0.38	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10	11	12	13
13	1	45.06	73.43	98.66	120.73	142.80	161.72	177.48	193.25	205.86	218.47	227.93	237.39	243.60
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	1	48.49	77.01	101.97	126.92	148.31	169.70	187.53	198.22	208.92	219.61	226.74	233.87	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10	4	44.15	75.25	101.13	126.08	147.57	166.53	182.96	197.62	210.59	220.94			
		2.36	3.49	3.98	4.00	4.97	6.22	5.10	5.48	4.97	5.76			
9	7	40.39	70.65	95.75	118.63	140.04	158.71	176.05	188.88	200.96				
		2.91	4.62	5.83	8.13	8.26	7.03	7.14	7.43	10.78				
8	4	39.82	68.82	92.96	115.59	136.49	153.35	168.66	180.75					
		2.53	2.41	2.30	4.67	4.27	5.46	6.95	8.38					
7	15	38.16	65.97	89.87	112.85	133.07	150.16	164.39						
		4.18	6.98	9.31	10.78	12.79	13.71	14.49						
6	15	39.49	66.81	90.05	111.42	129.90	144.29							
		3.62	4.36	5.88	6.32	6.56	5.19							
5	7	39.18	68.64	92.26	114.09	132.37								
		2.28	4.04	5.47	5.11	5.07								
4	15	38.56	66.14	90.54	110.43									
		4.65	5.63	7.32	7.44									
3	15	40.01	66.79	90.37										
		3.93	3.53	4.17										
2	7	38.18	66.73											
		3.44	4.44											
1	8	45.93												
		2.19												
TOTAL		40.04	67.63	91.73	113.97	134.79	151.89	170.93	189.83	204.91	220.31	227.33	235.63	243.69
		4.31	5.43	7.06	8.71	10.07	11.63	13.16	9.23	9.48	4.80	0.59	1.76	0.00

Barbus graellsii Total 86 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -14.31285 + 3.558415 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9706183 NUMERO DE EJEMPLARES = 149
L.FURCAL = -16.67142 + 3.296064 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9691934 NUMERO DE EJEMPLARES = 149

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
15	2	52.46	92.14	125.52	156.78	185.99	208.91	227.65	246.40	263.09	275.61	288.13	298.59	309.06	317.41	323.70	
		1.15	3.91	4.49	2.94	3.44	1.75	0.00	1.78	1.49	1.28	1.06	1.20	3.47	3.61	5.80	
14	5	49.59	82.67	113.44	142.69	168.06	191.90	212.68	231.88	248.76	263.36	275.65	287.93	300.27	308.70		
		3.13	4.11	5.43	6.95	6.42	7.05	7.88	8.61	8.23	8.27	7.05	5.88	3.95	2.82		
13	1	45.25	76.79	104.82	129.34	153.87	174.89	192.41	209.93	223.95	237.96	248.47	258.98	265.99			
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
12	3	46.93	78.72	109.16	135.95	160.08	180.40	199.54	215.99	232.44	246.41	257.71	267.85				
		3.90	4.22	3.58	5.23	5.02	5.49	6.60	5.11	5.42	6.45	6.76	8.15				
11	1	49.12	77.32	101.98	126.65	147.80	168.94	186.56	207.71	225.33	239.43	246.48					
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
10	7	42.70	74.99	103.94	131.30	155.95	179.01	198.44	214.75	228.50	240.09						
		3.22	6.26	6.81	7.48	7.78	7.36	6.42	5.71	5.48	5.95						
9	11	41.30	74.03	101.84	128.04	151.96	172.39	191.88	205.96	218.61							
		2.75	4.71	5.97	7.98	8.49	7.68	7.25	7.97	11.47							
8	11	41.34	72.40	98.99	124.66	148.03	168.21	185.89	199.76								
		3.20	4.20	6.15	8.11	8.31	8.92	8.82	8.78								
7	19	39.82	71.11	98.38	124.66	147.75	167.14	183.07									
		5.05	7.39	9.65	11.28	13.34	14.30	14.79									
6	19	41.25	72.65	100.36	125.28	145.94	162.33										
		4.59	5.78	8.57	9.69	9.41	8.34										
5	11	41.02	73.99	100.55	124.55	145.67											
		2.76	3.93	5.43	5.78	6.41											
4	17	40.09	71.78	99.43	121.88												
		5.06	6.02	7.80	7.92												
3	20	42.17	73.09	100.36													
		4.33	4.05	4.24													
2	9	40.66	72.48														
		3.63	5.00														
1	10	50.61															
		2.05															
TOTAL		42.36	73.55	101.33	126.92	150.76	171.16	191.99	211.81	230.70	250.80	268.55	281.76	298.18	311.19	323.70	
		5.15	6.26	8.29	10.55	12.13	13.81	14.96	14.60	15.86	14.31	14.86	14.24	13.21	4.99	5.80	

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
15	2	46.39	83.85	115.38	144.92	172.51	194.17	211.89	229.61	245.38	257.20	269.03	278.89	288.76	296.65	302.57	
		0.49	2.75	3.00	1.26	1.47	0.33	2.16	4.00	3.87	3.78	3.69	1.65	0.41	0.46	2.48	
14	5	42.67	73.37	101.93	129.09	152.65	174.78	194.07	211.88	227.56	241.11	252.53	263.94	275.41	283.25		
		2.92	3.58	4.72	6.01	5.44	5.78	6.40	6.74	6.13	6.03	4.78	3.55	2.52	1.84		
13	1	38.61	67.88	93.90	116.66	139.43	158.94	175.20	191.46	204.47	217.48	227.24	236.99	243.50			
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
12	3	39.99	69.40	97.58	122.37	144.70	163.48	181.19	196.44	211.69	224.63	235.11	244.50				
		3.45	3.65	3.49	4.86	4.67	3.91	4.95	4.70	6.26	7.58	8.44	9.90				
11	1	42.53	68.84	91.86	114.89	134.62	154.35	170.80	190.53	206.98	220.13	226.71					
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					
10	7	36.13	66.04	92.85	118.20	141.04	162.39	180.40	195.51	208.25	218.98						
		2.80	5.50	5.88	6.44	6.74	6.21	5.12	4.66	4.32	5.03						
9	11	34.62	64.81	90.45	114.61	136.68	155.52	173.50	186.50	198.15							
		2.60	4.21	5.22	7.03	7.46	6.58	6.35	7.04	10.09							
8	11	34.87	63.66	88.30	112.07	133.72	152.41	168.79	181.64								
		2.76	3.76	5.61	7.27	7.38	7.90	7.64	7.57								
7	19	33.36	62.29	87.49	111.78	133.12	151.04	165.76									
		4.72	6.99	9.08	10.60	12.53	13.42	13.85									
6	19	34.72	63.79	89.42	112.47	131.58	146.76										
		4.03	5.34	7.82	8.81	8.50	7.53										
5	11	34.45	64.92	89.46	111.64	131.14											
		2.43	3.49	4.87	5.21	5.64											
4	17	33.64	62.95	88.52	109.27												
		4.64	5.56	7.17	7.28												
3	20	35.54	64.13	89.34													
		3.86	3.62	3.95													
2	9	34.65	64.35														
		3.36	4.39														
1	10	43.80															
		1.89															
TOTAL		35.82	64.68	90.33	114.03	136.11	155.04	174.35	192.88	210.42	229.70	246.66	258.91	274.76	287.08	302.57	
		4.80	5.85	7.77	9.90	11.44	13.05	14.22	14.05	15.53	14.23	15.01	14.74	13.25	6.25	2.48	

Barbus graellsi Femelles 87 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -8.024736 + 3.786849 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9842808 NUMERO DE EJEMPLARES = 38
L.FURCAL = -8.934481 + 3.475819 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9839811 NUMERO DE EJEMPLARES = 38

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
17	1		55.19	92.38	125.85	155.60	181.63	203.94	226.25	248.56	267.16	282.03	296.91	311.78	326.66	341.53	352.69	363.84	371.28
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	1		56.32	88.50	120.67	148.82	176.98	201.11	221.22	241.33	257.41	277.52	293.61	321.76	325.78	337.85	349.91	361.98	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	2		54.72	92.06	123.43	152.77	180.22	207.67	229.32	248.92	266.65	284.22	299.91	315.59	329.24	338.97	348.70		
			2.49	5.93	7.17	6.37	7.46	8.55	11.37	12.15	14.81	13.54	14.17	14.79	13.37	11.80	10.23		
13	1		48.34	80.05	104.71	132.90	157.56	182.22	206.88	231.54	256.20	266.77	284.38	291.43	298.48				
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
12	3		55.06	89.98	120.86	150.38	175.87	198.66	218.80	234.91	251.04	265.78	277.87	287.26					
			1.07	1.19	3.17	4.25	5.58	8.70	8.57	8.47	5.12	5.35	5.23	4.11					
11	2		51.36	88.22	116.88	143.51	168.08	190.58	211.05	231.53	245.84	258.12	270.41						
			2.57	2.90	3.15	5.43	5.65	3.80	3.99	4.17	2.25	2.36	2.46						
10	2		49.95	85.43	111.60	137.70	161.97	186.30	206.83	223.62	238.57	253.52							
			2.83	1.55	1.99	1.31	2.78	0.50	2.03	3.62	3.37	3.12							
9	3		50.33	86.66	118.07	145.86	171.12	191.74	211.10	224.43	237.77								
			3.01	2.66	4.20	4.21	6.26	7.12	7.51	6.59	5.95								
8	6		48.50	80.13	108.08	134.88	161.49	184.50	203.14	217.01									
			4.55	6.24	8.36	10.07	9.85	10.10	8.71	8.24									
7	2		56.84	91.21	121.53	152.03	178.46	198.74	219.01										
			2.79	2.25	1.53	4.86	8.02	8.89	9.77										
5	2		44.72	76.64	103.74	132.52	154.91												
			0.65	3.28	7.59	7.07	6.67												
3	1		56.53	95.27	125.39														
			0.00	0.00	0.00														
2	3		52.09	80.95															
			5.38	9.05															
1	7		57.70																
			8.23																
TOTAL			52.75	85.41	115.24	142.89	168.53	192.69	212.84	229.03	249.95	267.95	284.91	302.24	321.88	339.33	350.00	362.91	371.28
			6.08	7.03	8.87	10.03	10.90	10.95	11.41	12.99	12.51	12.68	13.17	16.23	14.50	8.45	7.41	0.94	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
17	1		48.49	82.27	112.67	139.70	163.34	183.61	203.88	224.15	241.04	254.55	268.06	281.57	295.09	308.60	318.73	328.87	335.62
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	1		50.58	80.34	110.10	136.13	162.17	184.49	203.09	221.69	236.57	255.17	270.04	296.08	299.80	310.96	322.12	333.28	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	2		48.51	82.66	111.39	138.26	163.39	188.52	208.32	226.27	242.48	258.58	272.94	287.30	299.82	308.74	317.67		
			1.62	4.38	5.19	4.16	4.87	5.58	7.93	8.44	10.69	9.35	9.76	10.17	8.73	7.18	5.64		
13	1		43.42	72.87	95.77	121.94	144.85	167.75	190.66	213.56	236.46	246.28	262.64	269.18	275.73				
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
12	3		48.91	80.92	109.23	136.29	159.65	180.52	198.99	213.76	228.58	242.10	253.18	261.81					
			1.25	0.46	2.17	2.76	3.73	6.41	6.13	5.92	2.73	3.06	2.85	2.48					
11	2		45.51	79.28	105.55	129.97	152.49	173.10	191.86	210.63	223.73	234.99	246.25						
			2.72	3.24	3.64	5.90	6.25	4.69	4.98	5.27	3.59	3.77	3.94						
10	2		43.53	75.63	99.31	122.93	144.89	166.91	185.48	200.67	214.20	227.73							
			2.61	1.48	1.90	1.07	2.38	0.30	1.67	3.09	2.86	2.62							
9	3		44.00	76.94	105.40	130.58	153.45	172.14	189.70	201.79	213.89								
			3.23	3.04	3.72	3.14	4.10	4.89	5.00	3.88	3.09								
8	6		43.74	73.26	99.30	124.33	149.18	170.63	187.99	200.94									
			3.97	5.96	7.72	9.89	10.52	10.98	9.52	9.66									
7	2		50.62	82.17	109.99	138.00	162.29	180.90	199.51										
			3.02	2.77	2.32	5.60	8.69	9.63	10.58										
5	2		39.63	69.06	94.08	120.57	141.17												
			1.52	4.50	8.94	8.97	8.99												
3	1		49.67	84.84	112.19														
			0.00	0.00	0.00														
2	3		46.17	72.62															
			4.24	7.29															
1	7		50.97																
			6.99																
TOTAL			46.78	76.86	104.27	129.75	153.33	175.50	194.00	208.90	226.82	243.74	259.87	275.86	294.05	309.26	319.05	331.07	335.62
			5.27	6.11	7.75	8.99	9.96	9.84	10.00	11.32	11.69	11.59	11.27	13.99	10.85	5.18	4.39	2.21	0.00

Barbus graellsii Mascles 87 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -7.015951 + 3.517524 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9695244 NUMERO DE EJEMPLARES = 57
L.FURCAL = -9.513723 + 3.243337 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9683475 NUMERO DE EJEMPLARES = 57

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	5	49.14	82.66	112.57	140.29	162.96	184.28	201.34	215.54	228.98	238.80
		2.58	5.80	8.21	10.38	9.53	9.92	10.62	11.33	11.06	9.87
9	4	49.71	84.43	110.76	138.92	161.64	180.70	197.97	211.44	224.95	
		5.99	9.00	9.12	9.83	10.37	10.66	10.67	9.03	7.97	
8	4	49.58	81.13	109.90	137.72	160.99	180.59	196.67	210.10		
		3.26	6.43	8.26	9.56	9.61	8.19	7.76	7.62		
7	6	50.55	84.22	111.19	136.30	157.06	174.78	188.18			
		4.01	4.98	6.07	7.11	5.96	6.12	6.27			
6	13	48.35	79.26	106.04	129.83	150.47	166.39				
		3.87	4.91	5.66	6.75	8.60	8.42				
5	7	42.43	70.88	94.66	117.39	135.12					
		3.96	6.35	8.27	9.46	10.79					
4	5	42.03	70.71	94.97	115.40						
		0.98	1.03	4.09	6.24						
3	2	43.26	74.20	96.85							
		0.55	4.97	2.20							
2	6	50.63	78.57								
		6.24	9.72								
1	3	52.74									
		2.64									
TOTAL		47.83	78.48	104.83	129.83	152.55	174.32	194.71	212.61	227.19	238.80
		5.22	7.88	9.66	12.16	13.11	11.18	10.61	9.90	10.01	9.87

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	5	42.72	73.90	101.72	127.49	148.60	168.44	184.32	197.54	210.04	219.18
		2.43	5.30	7.54	9.41	8.83	9.40	10.19	11.05	10.86	9.97
9	4	42.88	74.97	99.24	125.21	146.18	163.77	179.74	192.15	204.65	
		5.79	9.00	8.86	9.17	9.68	9.95	10.51	8.89	8.58	
8	4	42.68	71.78	98.32	123.98	145.44	163.52	178.35	190.74		
		2.89	5.94	7.60	8.85	8.94	7.61	7.29	7.08		
7	6	43.36	74.29	99.07	122.15	141.23	157.51	169.82			
		3.73	4.44	5.69	6.89	6.17	6.57	6.95			
6	13	41.31	69.68	94.27	116.12	135.06	149.68				
		3.44	4.34	5.08	6.08	7.73	7.63				
5	7	35.76	61.82	83.59	104.41	120.64					
		3.50	5.70	7.36	8.44	9.53					
4	5	35.50	61.81	84.09	102.84						
		0.90	0.99	3.99	5.99						
3	2	37.69	66.56	87.90							
		1.98	2.30	0.95							
2	6	43.84	69.70								
		5.38	8.42								
1	3	45.86									
		2.39									
TOTAL		41.03	69.26	93.48	116.40	137.36	157.57	176.81	193.79	207.64	219.18
		4.83	7.25	9.05	11.50	12.45	10.87	10.63	9.79	10.27	9.97

Barbus graellsi Total 87 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = -13.45755 + 3.751668 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9766061 NUMERO DE EJEMPLARES = 94
L.FURCAL = -14.94695 + 3.453792 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9757802 NUMERO DE EJEMPLARES = 94

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
17	1		50.66	88.37	122.31	152.49	178.89	201.51	224.14	246.77	265.63	280.71	295.80	310.89	325.97	341.06	352.37	363.69	371.23
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	1		51.83	84.47	117.11	145.67	174.23	198.71	219.11	239.51	255.83	276.24	292.56	321.12	325.20	337.44	349.68	361.92	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	2		50.23	88.12	119.97	149.74	177.60	205.47	227.44	247.34	265.33	283.16	299.09	315.01	328.86	338.73	348.61		
			2.50	5.98	7.23	6.41	7.51	8.60	11.45	12.24	14.93	13.65	14.27	14.90	13.45	11.85	10.25		
13	1		43.90	76.16	101.25	129.93	155.03	180.12	205.21	230.31	255.40	266.15	284.08	291.25	298.42				
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
12	3		50.76	86.31	117.75	147.80	173.75	196.94	217.44	233.85	250.27	265.28	277.58	287.14					
			1.09	1.21	3.23	4.32	5.66	8.83	8.70	8.60	5.19	5.42	5.29	4.00					
11	2		47.07	84.63	113.85	140.99	166.03	188.97	209.83	230.70	245.29	257.81	270.33						
			2.61	2.94	3.19	5.51	5.73	3.84	4.03	4.21	2.25	2.36	2.46						
10	7		44.57	79.46	108.99	136.90	160.58	183.29	201.76	217.06	231.26	242.81							
			2.79	5.29	7.16	9.03	8.32	8.54	9.47	10.52	10.52	10.84							
9	7		45.38	81.67	110.88	139.57	163.97	184.18	202.80	216.54	230.31								
			5.08	7.29	8.48	8.79	10.16	10.92	11.57	10.38	9.58								
8	10		44.54	76.94	105.94	133.84	159.76	181.96	200.03	214.07									
			4.15	6.40	8.46	10.08	9.87	9.66	8.98	8.71									
7	8		47.68	82.53	111.16	138.39	161.21	180.10	195.66										
			4.91	5.61	7.14	9.65	11.43	12.50	15.26										
6	13		43.88	75.88	103.60	128.24	149.61	166.09											
			3.96	4.99	5.70	6.79	8.67	8.44											
5	9		38.74	69.14	94.63	119.67	139.18												
			3.72	6.37	9.04	11.03	13.01												
4	5		37.98	68.05	93.49	114.91													
			1.08	1.08	4.06	6.25													
3	3		44.33	79.54	105.94														
			6.56	10.89	13.63														
2	9		48.50	78.44															
			6.05	9.61															
1	10		55.04																
			7.78																
TOTAL			45.92	77.83	106.02	132.65	157.40	180.94	203.54	222.06	240.83	258.86	284.40	301.84	321.46	338.99	349.82	362.80	371.23
			6.62	8.17	10.37	12.64	14.16	13.95	14.02	14.04	15.72	17.55	12.91	16.03	14.40	8.48	7.41	0.88	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
17	1		43.47	77.84	108.76	136.25	160.31	180.93	201.54	222.16	239.35	253.09	266.84	280.58	294.33	308.07	318.38	328.69	335.56
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	1		45.60	75.88	106.15	132.64	159.13	181.84	200.76	219.68	234.82	253.74	268.88	295.37	299.16	310.51	321.86	333.22	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
15	2		43.54	78.31	107.55	134.91	160.50	186.09	206.24	224.52	241.02	257.41	272.03	286.65	299.40	308.48	317.57		
			1.64	4.44	5.26	4.20	4.92	5.64	8.03	8.54	10.83	9.46	9.88	10.29	8.82	7.25	5.67		
13	1		38.50	68.56	91.94	118.67	142.05	165.43	188.81	212.19	235.58	245.60	262.30	268.98	275.66				
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				
12	3		44.16	76.86	105.79	133.43	157.30	178.62	197.49	212.59	227.73	241.54	252.86	261.68					
			1.27	0.48	2.23	2.84	3.82	6.56	6.28	6.06	2.80	3.13	2.91	2.51					
11	2		40.76	75.32	102.20	127.18	150.22	171.31	190.51	209.71	223.12	234.64	246.16						
			2.76	3.28	3.69	5.98	6.33	4.73	5.02	5.31	3.59	3.77	3.94						
10	7		38.58	70.76	98.02	123.77	145.62	166.56	183.60	197.71	210.81	221.44							
			2.53	4.66	6.68	8.42	7.89	8.06	8.74	9.65	9.53	9.40							
9	7		39.02	72.30	99.03	125.32	147.66	166.18	183.25	195.85	208.48								
			4.96	7.25	7.80	7.74	8.62	9.20	9.96	8.63	8.19								
8	10		38.96	69.11	96.07	122.03	146.17	166.82	183.62	196.69									
			3.65	6.05	7.78	9.62	10.17	10.43	9.93	10.07									
7	8		41.18	73.15	99.43	124.44	145.41	162.76	177.05										
			4.70	5.28	6.89	9.49	11.40	12.54	15.17										
6	13		37.53	66.83	92.22	114.78	134.33	149.43											
			3.52	4.40	5.11	6.11	7.79	7.64											
5	9		32.86	60.72	84.09	107.03	124.90												
			3.47	6.17	8.86	10.87	12.72												
4	5		32.08	59.57	82.84	102.42													
			0.97	0.99	3.97	5.99													
3	3		38.60	71.11	95.61														
			5.77	8.77	11.49														
2	9		42.21	69.82															
			5.13	8.19															
1	10		48.26																
			6.80																
TOTAL			39.71	69.05	94.94	119.41	142.24	164.02	185.13	202.41	219.01	235.96	259.30	275.41	293.59	308.89	318.85	330.95	335.56
			6.08	7.49	9.64	11.93	13.45	13.25	13.08	12.68	14.15	15.43	10.97	13.77	10.73	5.21	4.38	2.26	0.00

A1.2. Càlcul de les longituds retrocalculades del barb cua roig (*Barbus haasi*)

Barbus haasi Femelles 87 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = .8218802 + 3.60377 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9718317 NUMERO DE EJEMPLARES = 38
L.FURCAL = -1.247173 + 3.407172 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9710863 NUMERO DE EJEMPLARES = 38

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
7	1		73.08	114.91	137.73	160.55	183.36	206.18	217.59
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	1		72.88	108.91	136.94	164.96	188.98	200.99	
			0.00	0.00	0.00	0.00	0.00	0.00	
5	2		73.94	116.28	148.97	168.21	187.45		
			0.29	0.45	5.20	5.12	5.05		
4	9		71.78	109.90	138.83	160.51			
			5.38	7.57	7.57	9.16			
3	9		75.82	117.33	145.09				
			4.80	5.97	8.54				
2	8		69.20	107.39					
			3.41	3.08					
1	2		63.56						
			5.64						
TOTAL			71.97	112.02	142.18	162.04	186.81	203.59	217.59
			5.51	6.91	8.37	8.39	4.13	2.60	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7
7	1		66.91	106.38	127.90	149.43	170.95	192.48	203.24
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	1		67.78	102.29	129.14	155.98	178.99	190.50	
			0.00	0.00	0.00	0.00	0.00	0.00	
5	2		68.19	108.39	139.49	157.76	176.04		
			0.56	0.88	6.62	6.76	6.91		
4	9		65.93	102.01	129.40	149.92			
			4.94	6.95	6.82	8.32			
3	9		69.44	108.56	134.73				
			4.77	5.88	8.50				
2	8		63.15	99.12					
			2.96	2.87					
1	2		57.98						
			5.46						
TOTAL			65.95	103.79	132.42	151.56	175.50	191.49	203.24
			5.21	6.51	8.03	8.04	5.68	0.99	0.00

Barbus haasi Mascles 87 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 5.093785 + 3.248938 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9652632 NUMERO DE EJEMPLARES = 28
L.FURCAL = 2.462551 + 3.067938 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9636809 NUMERO DE EJEMPLARES = 28

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4
4	1	74.77	104.64	134.50	154.41
		0.00	0.00	0.00	0.00
3	2	76.50	105.06	130.05	
		1.71	2.39	2.99	
2	13	69.11	101.79		
		6.14	7.86		
1	6	70.61			
		3.41			
TOTAL		70.45	102.38	131.53	154.41
		5.56	7.24	3.22	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4
4	1	69.05	97.59	126.12	145.15
		0.00	0.00	0.00	0.00
3	2	70.04	97.07	120.72	
		1.66	2.32	2.90	
2	13	62.92	93.77 c		
		5.84	7.43		
1	6	63.51			
		3.49			
TOTAL		64.01	94.42	122.52	145.15
		5.38	6.88	3.48	0.00

Barbus haasi Total 87 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = -4.476981 + 3.668448 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .968006 NUMERO DE EJEMPLARES = 63
L.FURCAL = -7.052711 + 3.48387 * RADIO TOTAL ESCAMA,
COEFICIENTE DE CORRELACION = .9672802 NUMERO DE EJEMPLARES = 63

LONGITUDES TOTALES RETROCALCULADAS

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	1	69.46	112.26	135.61	158.96	182.30	205.65	217.33
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	69.38	106.31	135.04	163.76	188.38	200.69	
			0.00	0.00	0.00	0.00	0.00	0.00	
	5	2	70.60	114.07	147.63	167.39	187.15		
			0.34	0.54	5.23	5.14	5.05		
	4	10	68.73	107.25	137.25	159.47			
			5.21	7.59	7.42	8.92			
	3	11	72.79	113.43	141.74				
			4.49	7.58	9.87				
	2	21	65.66	102.77					
			5.39	6.97					
	1	8	67.07						
			4.71						
TOTAL			68.21	107.07	139.90	160.87	186.24	203.17	217.33
			5.57	8.32	8.82	8.31	4.27	2.48	0.00

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	1	62.95	103.47	125.58	147.68	169.79	191.89	202.95
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	63.95	99.45	127.06	154.67	178.33	190.17	
			0.00	0.00	0.00	0.00	0.00	0.00	
	5	2	64.53	105.96	138.03	156.86	175.70		
			0.50	0.78	6.66	6.79	6.92		
	4	10	62.62	99.29	127.84	148.98			
			4.80	6.96	6.65	8.06			
	3	11	66.18	104.68	131.53				
			4.47	7.28	9.60				
	2	21	59.45	94.63					
			5.06	6.56					
	1	8	60.33						
			4.41						
TOTAL			61.87	98.84	130.16	150.42	174.88	191.03	202.95
			5.30	7.86	8.42	7.89	5.81	0.87	0.00

Barbus haasi Femelles 88 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 13.82221 + 3.293753 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9670312 NUMERO DE EJEMPLARES = 42
L.FURCAL = 10.85073 + 3.126554 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9652272 NUMERO DE EJEMPLARES = 42

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4
4	9	80.59	117.84	146.50	166.98
		3.47	4.98	7.75	7.95
3	18	80.20	117.29	143.37	
		4.95	6.90	8.56	
2	6	72.50	104.80		
		5.61	9.84		
1	4	72.02			
		2.78			
TOTAL		78.16	115.17	144.41	165.00
		5.79	8.62	8.43	9.60

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4
4	9	74.85	110.55	138.07	157.72
		3.35	5.05	8.33	9.13
3	18	73.55	108.60	133.24	
		4.63	6.50	8.09	
2	6	66.03	96.41		
		5.25	9.25		
1	4	65.86			
		2.68			
TOTAL		71.82	106.91	134.85	155.65
		5.60	8.41	8.48	10.66

Barbus haasi Mascles 88 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 14.53893 + 2.963754 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9675584 NUMERO DE EJEMPLARES = 32
L.FURCAL = 13.70271 + 2.721514 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9646643 NUMERO DE EJEMPLARES = 32

LONGITUDES TOTALES RETROCALCULADAS

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3
3	5	73.70	106.51	129.85
		2.27	2.44	4.81
2	18	74.16	102.96	
		4.25	9.72	
1	6	68.99		
		4.32		
TOTAL		73.01	103.73	129.85
		4.50	8.80	4.81

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3
3	5	67.85	97.91	119.27
		1.52	2.44	4.39
2	18	68.56	95.05	
		4.01	8.98	
1	6	63.42		
		4.05		
TOTAL		67.37	95.68	119.27
		4.24	8.11	4.39

Barbus haasi Total 88 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES Y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 5.232711 + 3.409749 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9588399 NUMERO DE EJEMPLARES = 71
L.FURCAL = 2.300836 + 3.237424 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9555901 NUMERO DE EJEMPLARES = 71

LONGITUDES TOTALES RETROCALCULADAS

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4
4	9	75.43	114.58	144.71	166.24
		3.60	5.00	7.83	7.99
3	23	74.07	112.47	139.54	
		5.46	7.65	9.58	
2	24	69.78	102.00		
		4.74	9.94		
1	10	68.32			
		3.95			
TOTAL		71.83	108.32	140.99	164.25
		5.44	10.05	9.41	9.65

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4
4	9	69.71	107.31	136.28	156.98
		3.46	5.04	8.41	9.18
3	23	67.39	103.70	129.29	
		5.22	7.46	9.33	
2	24	63.31	93.75		
		4.49	9.28		
1	10	62.25			
		3.68			
TOTAL		65.44	100.02	131.26	154.90
		5.24	9.74	9.61	10.72

Barbus haasi Femelles 89 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 15.76791 + 3.259238 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9904215 NUMERO DE EJEMPLARES = 39
L.FURCAL = 13.35961 + 3.08605 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9909636 NUMERO DE EJEMPLARES = 39

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5
5	2		79.88	113.57	142.42	166.42	185.52
			1.37	3.68	4.30	3.21	2.79
4	6		81.51	116.59	144.99	165.62	
			3.56	6.92	6.99	7.66	
3	6		79.79	114.96	142.81		
			8.23	9.38	7.88		
2	1		77.38	114.35			
			0.00	0.00			
1	5		78.94				
			5.83				
TOTAL			79.98	115.39	143.69	165.82	185.52
			5.84	7.57	7.17	6.84	2.79

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5
5	2		74.03	105.90	133.20	155.92	174.01
			1.12	3.22	3.73	2.63	3.10
4	6		75.62	108.86	135.74	155.26	
			3.29	6.77	6.56	6.89	
3	6		73.95	107.25	133.61		
			7.52	8.50	6.83		
2	1		72.18	107.47			
			0.00	0.00			
1	5		73.06				
			5.46				
TOTAL			74.15	107.73	134.47	155.43	174.01
			5.38	7.05	6.45	6.12	3.10

Barbus haasi Mascles 89 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 18.95721 + 2.860363 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9863431 NUMERO DE EJEMPLARES = 41
L.FURCAL = 16.81899 + 2.690631 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9856763 NUMERO DE EJEMPLARES = 41

LONGITUDES TOTALES RETROCALCULADAS

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3
3	9	75.26	104.66	126.85
		4.47	4.55	4.90
2	10	77.53	108.21	
		2.53	3.88	
1	5	73.15		
		5.42		
TOTAL		75.77	106.53	126.85
		4.37	4.57	4.90

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3
3	9	69.82	97.49	118.37
		4.37	4.43	4.74
2	10	72.00	100.91	
		2.75	4.18	
1	5	67.31		
		4.50		
TOTAL		70.21	99.29	118.37
		4.20	4.63	4.74

Barbus haasi Total 89 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 16.70215 + 3.097815 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9813872 NUMERO DE EJEMPLARES = 67
L.FURCAL = 14.2756 + 2.92973 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9813737 NUMERO DE EJEMPLARES = 67

LONGITUDES TOTALES RETROCALCULADAS

LONGITUD TOTAL A LA EDAD						
EDAD	N	1	2	3	4	5
5	2	80.48	113.99	142.69	166.57	185.57
		1.34	3.64	4.24	3.15	2.82
4	6	82.07	116.95	145.18	165.69	
		3.55	6.90	6.98	7.65	
3	15	76.57	108.51	133.14		
		6.96	8.82	10.14		
2	11	76.64	108.46			
		2.49	4.17			
1	9	76.48				
		6.66				
TOTAL		77.52	110.31	137.11	165.91	185.57
		5.80	7.76	10.55	6.82	2.82

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD						
EDAD	N	1	2	3	4	5
5	2	74.61	106.32	133.47	156.07	174.06
		1.10	3.18	3.67	2.57	3.13
4	6	76.17	109.20	135.93	155.33	
		3.28	6.75	6.55	6.88	
3	15	70.87	101.07	124.36		
		6.53	8.27	9.51		
2	11	71.03	101.16			
		2.72	4.48			
1	9	70.48				
		6.17				
TOTAL		71.74	102.84	128.17	155.52	174.06
		5.49	7.45	9.95	6.11	3.13

Barbus haasi Femelles 85 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 13.35769 + 2.860645 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .957416 NUMERO DE EJEMPLARES = 40
L.FURCAL = 10.31636 + 2.699248 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9537247 NUMERO DE EJEMPLARES = 40

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5
5		2	74.09	103.58	127.49	145.90	166.14
			1.33	2.60	0.96	1.11	0.56
3		5	68.15	98.21	119.37		
			2.13	3.23	4.68		
2		9	67.56	101.52			
			3.51	4.73			
1		10	65.84				
			5.74				
TOTAL			67.51	100.74	121.69	145.90	166.14
			4.74	4.48	5.42	1.11	0.56

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5
5		2	68.22	96.34	119.14	136.69	155.98
			1.09	2.74	1.25	1.45	0.09
3		5	62.24	90.71	110.77		
			2.19	3.22	4.77		
2		9	31.34	93.33			
			3.28	4.50			
1		10	59.33				
			5.35				
TOTAL			61.27	92.89	113.16	136.69	155.98
			4.59	4.32	5.57	1.45	0.09

Barbus haasi Mascles 85 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 23.11127 + 2.412727 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9653131 NUMERO DE EJEMPLARES = 33
L.FURCAL = 18.93596 + 2.284484 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9619942 NUMERO DE EJEMPLARES = 33

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3
3	7	67.46	90.09	105.88
		2.69	3.29	4.42
2	16	65.95	85.84	
		2.83	4.33	
1	4	70.07		
		5.10		
TOTAL		66.95	87.13	104.59
		3.55	4.49	5.36

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3
3	7	61.39	83.05	98.15
		2.63	2.97	4.04
2	16	59.22	77.93	
		2.58	4.10	
1	4	62.64		
		5.03		
TOTAL		60.29	79.49	96.72
		3.36	4.46	5.34

Barbus haasi Total 85 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 16.00898 + 2.719206 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9508484 NUMERO DE EJEMPLARES = 70
L.FURCAL = 12.551703 + 2.570151 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9468601 NUMERO DE EJEMPLARES = 70

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5
5	2	75.74	104.73	128.25	146.36	166.26
		1.31	2.55	0.93	1.09	0.56
3	12	66.15	92.59	111.10		
		3.87	6.35	8.60		
2	25	65.05	90.90			
		4.28	9.46			
1	14	67.17				
		5.75				
TOTAL		66.26	92.13	112.34	146.36	166.26
		5.01	8.90	10.65	1.09	0.56

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4	5
5	2	69.58	97.30	119.77	137.07	156.08
		1.07	2.70	1.23	1.43	0.10
3	12	60.25	85.41	103.04		
		3.69	5.92	8.07		
2	25	58.62	82.94			
		4.09	9.14			
1	14	60.34				
		5.39				
TOTAL		59.86	84.44	104.17	137.07	156.08
		4.81	8.66	10.32	1.43	0.10

Barbus haasi Femelles 86 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 11.09636 + 2.966293 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9501184 NUMERO DE EJEMPLARES = 38
IJ.FURCAL = 6.627705 + 2.869977 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9496048 NUMERO DE EJEMPLARES = 38

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6	2		75.84	106.46	133.54	156.20	172.10	186.81
			5.76	6.88	4.47	6.49	4.69	7.61
4	3		71.51	104.77	126.88	141.95		
			1.74	4.41	6.50	4.31		
3	13		69.90	101.69	123.66			
			4.78	5.75	6.81			
2	10		69.76	100.66				
			5.51	8.18				
1	8		67.29					
			6.04					
TOTAL			69.75	101.99	125.30	147.65	172.10	186.81
			5.53	6.90	7.26	8.76	4.69	7.61

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6
6	2		69.46	99.17	125.45	147.44	162.87	177.15
			5.66	6.78	4.48	6.46	4.73	7.58
4	3		65.53	97.92	119.49	134.22		
			0.58	2.55	5.06	2.84		
3	13		63.45	94.18	115.42			
			4.55	5.42	6.57			
2	10		63.15	92.91				
			5.06	7.47				
1	8		60.87					
			6.24					
TOTAL			63.30	94.48	117.21	139.51	162.87	177.15
			5.38	6.42	6.96	7.97	4.73	7.58

Barbus haasi Mascles 86 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 26.0332 + 2.407793 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9262811 NUMERO DE EJEMPLARES = 44
L.FURCAL = 22.33165 + 2.272411 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9243746 NUMERO DE EJEMPLARES = 44

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4
4	1	68.57	89.83	106.37	120.55
		0.00	0.00	0.00	0.00
3	18	71.08	91.72	106.79	
		5.46	7.42	7.68	
2	11	68.90	87.43		
		3.25	4.84		
1	10	67.13			
		1.90			
TOTAL		69.43	90.09	106.77	120.55
		4.46	6.77	7.47	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4
4	1	63.11	83.49	99.35	112.94
		0.00	0.00	0.00	0.00
3	18	64.85	84.34	98.58	
		5.16	7.09	7.39	
2	11	62.58	79.97		
		3.08	4.52		
1	10	61.13			
		2.21			
TOTAL		63.25	82.71	98.62	112.94
		4.27	6.48	7.20	0.00

Barbus haasi Total 86 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 15.60887 + 2.804447 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9473044 NUMERO DE EJEMPLARES = 82
L.FURCAL = 11.12892 + 2.702184 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9456683 NUMERO DE EJEMPLARES = 82

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6		2	78.80	108.67	135.10	157.21	172.73	187.08
			5.68	6.80	4.48	6.47	4.73	7.59
4		4	71.19	101.20	121.81	136.65		
			5.28	9.64	11.66	10.50		
3		31	68.58	94.81	113.46			
			6.24	9.82	11.73			
2		21	68.16	93.40				
			5.68	10.14				
1		18	66.57					
			4.37					
TOTAL			68.39	95.22	115.53	143.50	172.73	187.08
			5.97	10.33	12.63	13.47	4.73	7.59

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6
6		2	72.41	101.38	127.00	148.45	163.49	177.42
			5.58	6.70	4.48	6.43	4.77	7.55
4		4	65.22	94.40	114.46	128.93		
			5.06	9.05	11.05	10.11		
3		31	62.03	87.25	105.19			
			6.06	9.62	11.58			
2		21	61.54	85.75				
			5.43	9.72				
1		18	60.30					
			4.50					
TOTAL			61.93	87.69	107.37	135.44	163.49	177.42
			5.85	10.10	12.53	12.91	4.77	7.55

Barbus haasi Femelles 87 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES Y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 17.76747 + 3.002332 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .902535 NUMERO DE EJEMPLARES = 36
L.FURCAL = 13.44892 + 2.862959 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9067576 NUMERO DE EJEMPLARES = 36

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8
	8	1	78.76	109.26	133.66	155.01	173.30	191.60	206.85	212.95
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	79.28	116.19	140.79	159.24	174.62	183.85		
			0.00	0.00	0.00	0.00	0.00	0.00		
	5	1	88.49	118.27	144.33	166.67	181.56			
			0.00	0.00	0.00	0.00	0.00			
	4	9	76.20	108.60	134.06	153.35				
			3.02	3.91	6.46	8.42				
	3	15	72.70	101.37	120.21					
			7.55	11.88	13.24					
	2	6	71.10	104.54						
			5.40	5.83						
	1	2	77.91							
			0.69							
TOTAL			74.44	105.12	126.98	155.09	176.49	187.73	206.85	212.95
			6.58	9.68	13.17	8.25	3.62	3.88	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8
	8	1	71.16	100.01	123.09	143.29	160.60	177.92	192.34	198.11
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	72.22	107.48	130.99	148.62	163.31	172.12		
			0.00	0.00	0.00	0.00	0.00	0.00		
	5	1	80.59	108.86	133.60	154.80	168.93			
			0.00	0.00	0.00	0.00	0.00			
	4	9	69.29	100.25	124.58	143.04				
			2.79	3.59	5.92	8.10				
	3	15	65.87	93.22	111.16					
			7.11	11.12	12.12					
	2	6	64.31	96.23						
			4.77	5.27						
	1	2	70.15							
			0.80							
TOTAL			67.48	96.80	117.64	144.50	164.28	175.02	192.34	198.11
			6.13	9.06	12.24	7.82	3.47	2.90	0.00	0.00

Barbus haasi Mascles 87 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 19.58906 + 2.727129 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9221746 NUMERO DE EJEMPLARES = 37
L.FURCAL = 16.56746 + 2.548828 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9212366 NUMERO DE EJEMPLARES = 37

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6		1	81.58	109.13	126.34	140.12	157.34	171.11
			0.00	0.00	0.00	0.00	0.00	0.00
5		2	73.94	101.12	120.67	137.04	147.53	
			2.82	4.24	3.75	0.08	0.88	
4		1	75.81	99.49	114.29	126.12		
			0.00	0.00	0.00	0.00		
3		11	68.09	89.42	104.31			
			3.54	3.54	3.76			
2		7	65.78	88.58				
			2.68	4.81				
1		12	71.86					
			6.45					
TOTAL			69.91	91.57	108.62	135.08	150.80	171.11
			5.71	6.75	8.26	5.32	4.68	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6
6		1	75.04	101.03	117.27	130.27	146.51	159.50
			0.00	0.00	0.00	0.00	0.00	0.00
5		2	67.31	92.69	110.94	126.23	136.02	
			2.58	3.87	3.40	0.04	0.95	
4		1	67.93	89.56	103.08	113.89		
			0.00	0.00	0.00	0.00		
3		11	61.90	81.82	95.75			
			3.59	3.77	4.26			
2		7	59.66	80.92				
			2.58	4.60				
1		12	65.37					
			5.72					
TOTAL			63.54	83.75	99.70	124.15	139.52	159.50
			5.29	6.48	8.03	6.15	5.00	0.00

Barbus haasi Total 87 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 12.41259 + 3.062649 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9334257 NUMERO DE EJEMPLARES = 73
L.FURCAL = 8.76392 + 2.906048 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9342937 NUMERO DE EJEMPLARES = 73

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8
	8	1	75.05	106.38	131.43	153.36	172.15	190.94	206.60	212.87
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	2	76.52	109.95	131.63	148.35	165.27	177.23		
			0.69	3.94	7.63	9.94	8.87	6.43		
	5	3	74.88	104.20	126.88	146.05	158.53			
			7.80	9.17	11.82	14.09	16.13			
	4	10	72.94	105.71	131.04	150.30				
			2.97	4.72	8.60	11.50				
	3	26	67.70	94.74	112.91					
			6.80	11.21	13.06					
	2	13	65.54	95.21						
			5.15	9.54						
	1	14	71.00	0.53						
			6.81							
TOTAL			69.51	98.13	119.55	149.45	163.05	181.80	206.60	212.87
			6.76	10.79	14.45	11.66	13.49	8.33	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8
	8	1	67.91	97.49	121.15	141.85	159.60	177.34	192.13	198.04
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	2	69.75	101.55	122.19	138.09	154.19	165.56		
			0.54	3.92	7.46	9.69	8.70	6.40		
	5	3	67.71	95.36	116.77	134.86	146.64			
			7.52	8.86	11.44	13.67	15.64			
	4	10	66.26	97.40	121.49	139.83				
			2.83	4.87	8.68	11.73				
	3	26	61.21	86.86	104.07					
			6.53	10.72	12.38					
	2	13	59.12	87.26						
			4.77	9.12						
	1	14	64.78							
			6.07							
TOTAL			62.90	90.06	110.40	138.81	151.32	169.49	192.13	198.04
			6.35	10.34	13.82	11.70	13.14	7.62	0.00	0.00

A1.3. Càlcul de les longituds retrocalculades del barb de muntanya (*Barbus meridionalis*)

Barbus meridionalis Femelles 87 Llobregat
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 8.026733 + 3.013144 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9904505 NUMERO DE EJEMPLARES = 24
L.FURCAL = 5.119944 + 2.873766 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9890089 NUMERO DE EJEMPLARES = 24

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD										
EDAD	N		1	2	3	4	5	6	7	8	9
9	1		58.16	91.59	118.33	145.07	171.81	188.52	205.23	218.60	235.32
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1		52.95	88.24	113.91	136.37	158.83	181.29	194.12	210.17	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	1		50.88	87.62	102.92	142.72	161.08	179.45	194.76		
			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
6	1		54.74	89.00	117.03	141.94	163.74	182.43			
			0.00	0.00	0.00	0.00	0.00	0.00			
5	2		47.83	79.44	108.32	134.40	155.01				
			0.90	0.85	5.31	4.25	5.87				
4	2		48.25	79.01	101.72	119.06					
			2.57	3.20	3.31	3.08					
3	1		51.19	88.59	108.74						
			0.00	0.00	0.00						
1	3		49.65								
			3.54								
TOTAL			50.75	84.66	109.00	134.13	160.92	182.92	198.04	214.38	235.32
			3.67	5.21	6.65	9.80	6.70	3.40	5.09	4.22	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.										
EDAD	N		1	2	3	4	5	6	7	8	9
9	1		53.52	85.79	111.61	117.42	163.24	179.37	195.50	208.41	224.55
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1		47.93	81.57	106.03	127.44	148.84	170.25	182.48	197.77	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	1		45.80	80.67	95.20	132.98	150.41	167.85	182.38		
			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
6	1		49.60	82.22	108.90	132.63	153.38	171.17			
			0.00	0.00	0.00	0.00	0.00	0.00			
5	2		43.14	73.32	100.92	125.82	145.51				
			0.79	0.93	5.25	4.28	5.86				
4	2		42.88	71.74	93.05	109.32					
			2.80	3.69	4.02	3.98					
3	1		46.42	82.21	101.48						
			0.00	0.00	0.00						
1	3		44.58								
			3.86								
TOTAL			45.75	78.06	101.24	125.09	151.15	172.16	186.79	203.09	224.55
			3.83	5.45	7.05	10.27	6.94	4.34	6.16	5.32	0.00

Barbus meridionalis Mascles 87 Llobregat
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 11.37158 + 2.716486 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9784119 NUMERO DE EJEMPLARES = 51
L.FURCAL = 8.610849 + 2.569154 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9779009 NUMERO DE EJEMPLARES = 51

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	1	57.91	85.83	110.65	132.36	150.98	166.49	175.80
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	54.60	80.54	106.48	126.65	143.94	158.35	
			0.00	0.00	0.00	0.00	0.00	0.00	
	4	7	52.18	80.67	106.74	124.58			
			1.36	2.68	3.57	1.86			
	3	7	50.43	78.01	99.37				
			2.12	4.33	5.78				
	2	18	49.01	73.95					
			2.37	4.06					
	1	8	50.89						
			7.58						
TOTAL			50.48	76.71	103.74	125.67	147.46	162.42	175.80
			4.19	4.95	6.00	2.95	3.52	4.07	0.00

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	1	53.44	80.34	104.26	125.18	143.11	158.06	167.02
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	1	49.55	74.12	98.68	117.79	134.16	147.81	
			0.00	0.00	0.00	0.00	0.00	0.00	
	4	7	46.89	73.61	98.04	114.79			
			1.50	2.63	2.82	1.52			
	3	7	45.65	71.81	92.07				
			1.81	3.85	5.39				
	2	18	44.32	67.96					
			2.27	3.78					
	1	8	45.86						
			7.16						
TOTAL			45.60	70.46	95.86	116.28	138.64	152.93	167.02
			3.97	4.58	5.43	3.55	4.47	5.12	0.00

Barbus meridionalis Total 87 Llobregat
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 7.202537 + 2.921738 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9837296 NUMERO DE EJEMPLARES = 73
L.STANDARD = 2.876278 + 2.52165 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9790796 NUMERO DE EJEMPLARES = 73
L.FURCAL = 4.310975 + 2.779951 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9823278 NUMERO DE EJEMPLARES = 73

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9
9	1		57.52	91.06	117.89	144.73	171.56	188.33	205.10	218.52	235.29
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1		52.29	87.72	113.49	136.04	158.58	181.13	194.01	210.12	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	2		52.56	85.30	105.70	136.80	155.56	172.72	185.17		
			2.32	1.82	3.21	5.65	5.34	6.61	9.53		
6	2		52.86	83.37	110.77	133.64	153.46	170.24			
			1.26	5.15	5.91	8.06	10.13	12.12			
5	2		47.22	78.98	108.02	134.23	154.96				
			0.91	0.84	5.32	4.25	5.87				
4	9		49.06	78.88	104.95	123.20					
			1.87	2.84	4.04	3.10					
3	8		48.30	78.19	100.23						
			2.23	5.65	6.33						
2	18		47.11	73.55							
			2.45	4.08							
1	11		50.16								
			6.62								
TOTAL			48.94	77.52	105.07	129.35	157.26	175.90	192.37	214.32	235.29
			4.09	5.85	6.70	8.17	8.54	10.39	10.61	4.20	0.00

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9
9	1		52.89	85.27	111.18	137.09	162.99	179.19	195.38	208.33	224.52
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1		47.29	81.06	105.62	127.11	148.60	170.09	182.37	197.72	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	2		47.74	79.05	98.62	128.32	146.28	162.70	174.60		
			2.57	1.13	3.84	4.39	3.95	5.04	7.73		
6	2		47.72	76.74	102.78	124.53	143.38	159.34			
			1.27	5.01	5.77	7.86	9.85	11.77			
5	2		42.53	72.88	100.62	125.66	145.45				
			0.80	0.92	5.25	4.27	5.86				
4	9		43.69	71.74	96.24	113.41					
			2.03	2.95	3.69	3.17					
3	8		43.46	71.93	92.93						
			1.99	5.30	6.04						
2	18		42.36	67.55							
			2.35	3.80							
1	11		45.11								
			6.33								
TOTAL			43.99	71.18	97.22	120.11	147.73	165.56	181.74	203.03	224.52
			3.95	5.60	6.56	8.63	8.52	10.23	10.10	5.31	0.00

Barbus meridionalis Femelles 88 Llobregat
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 12.55333 + 2.865054 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9912999 NUMERO DE EJEMPLARES = 71
L.FURCAL = 9.704088 + 2.736273 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9911591 NUMERO DE EJEMPLARES = 71

LONGITUDES TOTALES RETROCALCULADAS

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	1	63.72	92.50	121.28	143.67	166.05	182.04	201.23	214.02	226.81	239.60
		0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
8	3	57.35	96.75	118.51	141.29	166.34	186.26	201.81	212.17		
		2.51	5.12	5.58	5.17	2.20	2.84	2.47	1.51		
6	4	55.26	94.48	124.95	152.40	167.61	182.10				
		2.04	8.68	10.06	7.22	8.34	8.53				
5	10	53.11	91.29	118.94	140.68	157.20					
		2.59	6.19	7.65	5.85	4.82					
4	8	55.50	89.89	115.69	136.63						
		1.99	7.41	10.78	8.96						
3	6	51.81	85.90	110.80							
		1.72	9.44	7.13							
2	3	52.45	79.16								
		4.17	5.97								
1	12	51.49									
		4.94									
TOTAL		53.57	89.87	117.38	141.42	161.53	183.65	201.66	212.63	226.81	239.60
		4.02	8.51	9.47	8.66	7.27	6.60	2.16	1.53	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	1	57.33	84.12	110.91	131.75	152.58	167.47	185.33	197.23	209.14	221.05
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	3	52.73	90.57	111.46	133.33	157.40	176.53	191.46	201.41		
		2.42	4.87	5.31	4.91	2.04	2.71	2.44	1.49		
6	4	50.59	88.07	117.25	143.56	158.15	172.02				
		1.88	7.69	9.03	6.55	8.11	8.30				
5	10	48.66	85.35	111.92	132.79	148.65					
		2.50	6.29	7.83	6.24	5.34					
4	8	50.74	83.60	108.24	128.27						
		1.97	7.05	10.17	8.79						
3	6	46.81	79.01	102.56							
		1.61	8.90	6.81							
2	3	47.11	72.15								
		3.62	5.05								
1	12	46.89									
		4.54									
TOTAL		48.83	83.46	109.83	133.08	152.44	173.14	189.93	200.37	209.14	221.05
		3.76	8.33	9.25	8.50	7.10	6.79	3.39	2.22	0.00	0.00

Barbus rneridionalis Mascles 88 Llobregat
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 20.66283 + 2.326961 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9851992 NUMERO DE EJEMPLARES = 55
L.FURCAL = 17.73878 + 2.195186 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9862992 NUMERO DE EJEMPLARES = 55

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6		1	62.54	86.10	107.04	125.36	141.06	154.15
			0.00	0.00	0.00	0.00	0.00	0.00
5		1	56.02	78.12	98.01	115.69	131.16	
			0.00	0.00	0.00	0.00	0.00	
4		6	55.60	80.71	101.64	116.21		
			2.83	3.50	5.12	3.57		
3		3	54.55	76.34	92.13			
			0.64	1.20	2.82			
2		8	55.70	75.39				
			3.63	5.55				
1		19	54.18					
			5.58					
TOTAL			55.02	77.93	99.21	117.28	136.11	154.15
			4.66	5.11	6.25	4.35	4.95	0.00

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6		1	56.93	78.97	98.57	115.71	130.41	142.65
			0.00	0.00	0.00	0.00	0.00	0.00
5		1	51.30	72.27	91.15	107.93	122.61	
			0.00	0.00	0.00	0.00	0.00	
4		6	50.73	74.46	94.23	107.99		
			2.49	3.18	4.64	3.21		
3		3	49.73	70.31	85.22			
			0.72	1.29	2.91			
2		8	50.89	69.49				
			3.37	4.93				
1		19	49.20					
			5.15					
TOTAL			50.10	71.84	91.88	108.95	126.51	142.65
			4.31	4.61	5.77	3.78	3.90	0.00

Barbus meridionalis Total 88 Llobregat
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 12.73156 + 2.789304 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .986023 NUMERO DE EJEMPLARES = 107
L.FURCAL = 9.752464 + 2.662111 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9856281 NUMERO DE EJEMPLARES = 107

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9	10
10	1		63.86	92.62	121.38	143.75	166.11	182.09	201.26	214.05	226.83	239.61
			0	0	0	0	0	0	0	0	0	0
8	3		57.49	96.86	118.59	141.35	166.39	186.29	201.82	212.18		
			2.51	5.11	5.57	5.16	2.2	2.84	2.47	1.5		
6	5		55.71	92.03	120.8	146.61	162.08	176.42				
			1.93	9.28	12.32	13.32	13.37	13.68				
5	11		52.98	89.8	116.83	138.29	154.79					
			2.6	7.73	9.99	9.47	8.93					
4	14		53.33	84.51	108.87	127.53						
			3.62	8.76	11.89	12.75						
3	9		51.22	81.85	104.17							
			1.79	9.67	11.17							
2	11		52.41	75.86								
			3.82	5.94								
1	27		53.25									
			5.24									
TOTAL			53.33	84.91	112.28	135.51	158.92	180.34	201.68	212.64	226.83	239.61
			4.26	10.06	12.39	13.27	10.59	11.29	2.15	1.53	0	0

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N	I		2	3	4	5	6	7	8	9	10
10	1		57.37	84.15	110.94	131.77	152.6	167.48	185.34	197.24	209.14	221.05
			0	0	0	0	0	0	0	0	0	0
8	3		52.77	90.59	111.48	133.35	157.41	176.54	191.47	201.41		
			2.42	4.87	5.31	4.9	2.04	2.71	2.43	1.49		
6	5		50.76	85.41	112.9	137.59	152.37	166.06				
			1.7	8.72	11.89	13.33	13.66	14.05				
5	11		48.42	83.81	109.79	130.39	146.23					
			2.53	7.78	10.08	9.66	9.2					
4	14		48.45	78.19	101.41	119.22						
			3.52	8.51	11.48	12.57						
3	9		46.2	75.21	96.36							
			1.66	9.08	10.51							
2	11		47.42	69.65								
			3.5	5.12								
1	27		48.36									
			4.79									
TOTAL			48.44	78.57	104.76	127.15	149.76	169.71	189.93	200.37	209.14	221.05
			3.97	9.76	12.13	13.15	10.56	11.64	3.39	2.22	0	0

Barbus meridionalis Femelles 89 Llobregat
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 16.14369 + 2.706698 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9507174 NUMERO DE EJEMPLARES = 53
L.FURCAL = 12.48982 + 2.578486 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9492626 NUMERO DE EJEMPLARES = 53

LONGITUDES TOTALES RETROCALCULADAS

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5
5	2	59.80	86.00	112.20	135.48	155.86
		2.16	3.46	4.76	5.91	6.92
4	3	59.90	85.03	110.16	130.64	
		1.17	3.29	3.22	6.56	
3	16	56.66	83.89	104.90		
		3.79	5.94	5.04		
2	22	55.75	82.32			
		4.38	7.50			
1	8	56.24				
		5.40				
TOTAL		56.52	83.26	106.29	132.58	155.86
		4.36	6.66	5.35	6.74	6.92

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5
5	2	54.32	79.42	104.52	126.82	146.35
		2.16	3.46	4.76	5.91	6.92
4	3	54.07	77.95	101.84	121.28	
		0.99	2.87	2.71	5.79	
3	16	51.15	77.13	97.19		
		3.48	5.41	4.60		
2	22	50.03	75.20			
		4.34	7.36			
1	8	50.98				
		5.05				
TOTAL		50.93	76.31	98.45	123.50	146.35
		4.19	6.42	4.97	6.44	6.92

Barbus meridionalis Mascles 89 Llobregat
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 14.87113 + 2.69413 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9606675 NUMERO DE EJEMPLARES = 78
L.FURCAL = 11.77812 + 2.547793 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9613504 NUMERO DE EJEMPLARES = 78

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6
6	2	57.46	80.17	102.85.	121.32	139.79	156.82
		0.43	0.66	1.95	0.34	1.27	1.44
5	5	56.05	78.02	101.07	119.19	136.21	
		0.70	1.08	1.61	2.09	2.45	
4	5	55.76	78.07	98.26	118.46		
		2.38	2.98	4.60	6.02		
3	16	54.53	75.52	96.04			
		1.95	3.23	4.98			
2	35	54.82	75.56				
		4.51	8.19				
1	15	57.80					
		5.16					
TOTAL		55.54	76.09	97.82	119.24	137.23	156.82
		4.12	6.49	4.92	4.23	2.71	1.44

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6
6	2	52.08	73.58	95.05	112.52	130.00	146.13
		0.43	0.66	1.79	0.26	1.27	1.44
5	5	50.97	71.87	93.81	111.05	127.24	
		0.60	0.92	1.55	2.05	1.81	
4	5	50.42	71.50	90.58	109.67		
		2.27	2.83	4.45	5.74		
3	16	49.23	69.06	88.44			
		1.88	2.97	4.58			
2	35	49.40	68.94				
		4.10	7.57				
1	15	52.78					
		4.71					
TOTAL		50.25	69.55	90.25	110.72	128.03	146.13
		3.85	6.02	4.69	4.07	2.09	1.44

Barbus meridionalis Total 89 Llobregat
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 15.22528 + 2.704676 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9562669 NUMERO DE EJEMPLARES = 131
L.FURCAL = 11.9046 + 2.565853 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9559411 NUMERO DE EJEMPLARES = 131

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6		2	57.71	80.37	102.99	121.42	139.84	156.84
			0.43	0.66	1.94	0.34	1.27	1.44
5		7	57.11	80.29	104.24	123.84	141.82	
			1.83	3.89	5.62	8.1	9.8	
4		8	57.23	80.61	102.69	123.01		
			2.57	4.38	6.96	8.54		
3		32	55.42	79.62	100.45			
			3.11	6.24	6.64			
2		57	55.11	78.16				
			4.47	8.56				
1		23	57.22					
			5.35					
TOTAL			55.84	78.97	101.53	123.16	141.38	156.84
			4.22	7.38	6.55	7.87	8.7	1.44

LONGITUDES FURCALES RETROCALCULADAS

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6		2	52.17	73.65	95.1	112.56	130.02	146.13
			0.43	0.66	1.79	0.26	1.27	1.44
5		7	51.87	73.98	96.84	115.54	132.69	
			1.8	3.81	5.52	7.92	9.49	
4		8	51.69	73.85	94.77	114.01		
			2.44	4.11	6.62	8.03		
3		32	50.05	73.02	92.79			
			2.9	5.88	6.32			
2		57	49.57	71.34				
			4.2	8.07				
1		23	52.12					
			4.94					
TOTAL			50.44	72.26	93.84	114.47	132.1	146.13
			3.99	6.98	6.26	7.56	8.47	1.44

A1.4. Càlcul de les longituds retrocalculades de la madrilla (*Chondrostoma miegii*)

Chondrostoma miegii Femelles 87 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 7.172342 + 3.488866 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9722004 NUMERO DE EJEMPLARES = 46
L.FURCAL = 4.808785 + 3.240964 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9718147 NUMERO DE EJEMPLARES = 46

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD								
EDAD	N		1	2	3	4	5	6
6	1		75.91	112.09	144.65	169.97	191.68	206.15
			0	0	0	0	0	0
5	8		79.15	116.95	147.65	171.72	189.72	
			4.74	6.1	7.93	9.21	9.55	
4	7		71.05	104.66	132.21	151.54		
			4.39	5.18	5.8	5.57		
3	3		72.11	107.42	138.11			
			7.22	8.12	11.23			
2	16		73.04	107.44				
			5.93	6.73				
1	5		66.18					
			1.97					
TOTAL			73.06	109.19	140.3	162.78	189.94	206.15
			6.38	7.75	10.36	12.43	9.02	0

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD								
EDAD	N		1	2	3	4	5	6
6	1		68.42	101.90	132.04	155.47	175.56	188.96
			0.00	0.00	0.00	0.00	0.00	0.00
5	8		71.90	107.16	135.77	158.22	175.02	
			4.17	5.55	7.07	8.38	8.94	
4	7		64.18	95.43	121.02	138.98		
			4.22	5.10	5.48	5.15		
3	3		64.98	97.69	126.13			
			6.73	7.43	10.28			
2	16		65.64	97.43				
			5.45	6.28				
1	5		59.90					
			1.82					
TOTAL			65.94	99.40	128.62	149.63	175.08	188.96
			5.90	7.36	9.65	11.64	8.43	0.00

Chondrostoma miegii Mascles 87 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 19.47591 + 3.113466 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9742014 NUMERO DE EJEMPLARES = 32
L.FURCAL = 17.17755 + 2.862188 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9733243 NUMERO DE EJEMPLARES = 32

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5
5	1		74.33	107.86	135.29	156.62	171.86
			0.00	0.00	0.00	0.00	0.00
4	2		84.24	114.16	137.77	156.70	
			4.08	3.67	3.01	3.74	
3	3		79.65	110.37	137.79		
			1.42	3.90	3.77		
2	13		76.76	105.98			
			6.07	8.30			
1	8		77.52				
			8.80				
TOTAL			77.77	107.63	137.37	156.68	171.86
			6.83	7.65	3.31	3.05	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5
5	1		67.38	98.06	123.16	142.69	156.63
			0.00	0.00	0.00	0.00	0.00
4	2		77.07	104.73	126.54	144.05	
			4.42	4.33	3.96	4.82	
3	3		12.61	101.00	126.29		
			1.61	4.05	4.08		
2	13		69.69	96.49			
			5.59	1.81			
1	8		70.48				
			7.86				
TOTAL			70.11	98.15	125.85	143.60	156.63
			6.28	1.35	3.81	3.99	0.00

Chondrostoma miegii Total 87 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 11.46959 + 3.374939 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9723378 NUMERO DE EJEMPLARES = 77
L.FURCAL = 9.080015 + 3.12726 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9716384 NUMERO DE EJEMPLARES = 77

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD								
EDAD	N		1	2	3	4	5	6
	6	1	78.80	114.23	146.13	170.93	192.19	206.37
			0.00	0.00	0.00	0.00	0.00	0.00
	5	9	80.40	117.15	147.02	170.42	187.83	
			5.96	7.24	8.82	9.98	10.49	
	4	9	74.95	107.38	133.75	152.80		
			5.02	5.28	5.43	5.54		
	3	6	74.94	108.38	137.84			
			5.14	6.36	8.32			
	2	29	74.20	106.64				
			6.07	7.69				
	1	13	72.40					
			8.03					
TOTAL			74.92	108.85	140.00	162.10	188.27	206.37
			6.68	8.04	9.47	11.81	10.04	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD								
EDAD	N		1	2	3	4	5	6
	6	1	71.30	104.04	133.51	156.43	176.08	189.18
			0.00	0.00	0.00	0.00	0.00	0.00
	5	9	73.17	107.35	135.10	156.87	173.07	
			5.52	6.85	8.21	9.39	10.11	
	4	9	68.00	98.09	122.54	140.22		
			4.90	5.29	5.30	5.38		
	3	6	67.85	98.81	126.08			
			4.83	5.97	7.76			
	2	29	66.93	96.85				
			5.57	7.19				
	1	13	65.63					
			7.19					
TOTAL			67.81	99.16	128.35	148.96	173.37	189.18
			6.18	7.67	8.93	11.15	9.64	0.00

Chondrostoma miegii Femelles 88 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 5.912329 + 3.551741 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9671104 NUMERO DE EJEMPLARES = 40
L.FURCAL = 4.547547 + 3.286447 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9653994 NUMERO DE EJEMPLARES = 40

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6	1		69.58	101.42	133.25	161.55	182.78	200.46
			0.00	0.00	0.00	0.00	0.00	0.00
5	4		71.16	106.57	137.42	165.56	186.43	
			2.60	5.00	7.37	7.83	8.90	
4	6		71.20	107.74	136.91	158.31		
			4.31	5.57	6.98	10.09		
3	15		73.32	108.08	135.44			
			5.72	6.87	8.04			
2	8		70.73	103.24				
			4.45	7.59				
1	1		75.65					
			0.00					
TOTAL			72.08	106.51	136.00	161.24	185.70	200.46
			4.94	6.89	7.61	9.45	8.09	0.00

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6	1		63.19	92.52	121.84	147.90	167.45	183.74
			0.00	0.00	0.00	0.00	0.00	0.00
5	4		64.88	97.63	126.18	152.21	171.51	
			2.20	4.61	7.05	7.61	8.62	
4	6		65.11	99.01	126.08	145.92		
			3.92	4.96	6.18	9.05		
3	15		66.94	99.13	124.45			
			5.18	6.35	7.40			
2	8		64.51	94.57				
			4.31	7.20				
1	1		68.24					
			0.00					
TOTAL			65.77	97.66	124.99	148.39	170.70	183.74
			4.52	6.41	7.01	8.62	7.88	0.00

Chondrostoma miegii Mascles 88 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 17.3479 + 3.256977 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9566078 NUMERO DE EJEMPLARES = 39
L.FURCAL = 14.32452 + 3.045373 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9562177 NUMERO DE EJEMPLARES = 39

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
7	1		79.90	114.65	138.97	159.82	177.20	191.10	201.52
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	1		79.60	109.09	132.02	154.96	174.62	187.72	
			0.00	0.00	0.00	0.00	0.00	0.00	
5	1		81.17	113.08	141.45	162.73	176.91		
			0.00	0.00	0.00	0.00	0.00		
4	2		73.01	103.04	128.52	147.63			
			1.00	2.37	1.19	0.30			
3	10		77.47	108.80	132.57				
			6.53	7.02	8.31				
2	16		79.52	110.10					
			3.29	4.29					
1	5		80.16						
			6.65						
TOTAL			78.74	109.44	133.08	154.55	176.24	189.41	201.52
			5.09	5.48	7.27	6.18	1.15	1.69	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
7	1		72.55	104.90	127.54	146.95	163.12	176.06	185.77
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	1		73.00	100.79	122.41	144.03	162.56	174.91	
			0.00	0.00	0.00	0.00	0.00	0.00	
5	1		73.94	103.76	130.25	150.13	163.38		
			0.00	0.00	0.00	0.00	0.00		
4	2		66.54	94.68	118.59	136.52			
			1.55	1.28	0.12	1.15			
3	10		70.80	100.23	122.57				
			6.11	6.48	7.66				
2	16		72.19	100.65					
			3.18	4.11					
1	5		72.76						
			6.22						
TOTAL			71.65	100.37	122.94	142.83	163.02	175.49	185.77
			4.75	5.05	6.62	5.55	0.34	0.58	0.00

Chondrostoma miegii Total 88 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 9.741731 + 3.458971 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9572634 NUMERO DE EJEMPLARES = 77
L.FURCAL = 7.654386 + 3.216118 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9560591 NUMERO DE EJEMPLARES = 77

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	1	74.83	110.99	136.30	157.99	176.07	190.54	201.38
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	2	73.45	104.45	132.03	157.88	178.54	194.06	
			1.27	1.05	2.59	4.50	4.64	6.48	
	5	5	74.24	108.67	138.80	165.31	184.64		
			2.55	4.46	6.53	7.17	8.86		
	4	8	72.24	106.93	135.03	155.74			
			4.29	6.32	7.62	10.01			
	3	25	74.59	108.18	134.24				
			6.14	7.03	8.38				
	2	24	74.88	107.13					
			4.20	6.10					
	1	6	78.09						
			5.90						
TOTAL			74.67	107.60	134.87	159.14	182.04	192.88	201.38
			5.14	6.33	7.80	9.31	8.13	5.54	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	1	68.10	101.69	125.19	145.34	162.13	175.57	185.64
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
	6	2	67.01	95.89	121.55	145.61	164.86	179.29	
			1.71	1.76	1.40	2.96	2.93	4.51	
	5	5	67.51	99.46	127.43	152.03	169.96		
			2.26	4.15	6.27	6.90	8.39		
	4	8	65.88	98.18	124.35	143.65			
			3.93	5.56	6.72	8.96			
	3	25	68.07	99.36	123.64				
			5.62	6.44	7.63				
	2	24	68.10	98.01					
			4.00	5.75					
	1	6	70.84						
			5.53						
TOTAL			68.00	98.66	124.17	146.62	167.71	178.05	185.64
			4.75	5.85	7.06	8.36	7.43	4.08	0.00

Chondrostoma miegii Femelles 89 Aiguadora
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 15.11478 + 3.344442 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9885689 NUMERO DE EJEMPLARES = 80
L.FURCAL = 13.04045 + 3.084923 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9880384 NUMERO DE EJEMPLARES = 80

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	1	74.13	102.08	130.03	154.88	176.62	195.26	207.68
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	2	79.88	110.36	138.76	161.26	177.88		
			5.96	8.76	9.48	7.78	3.64		
	4	5	75.50	107.99	137.83	162.98			
			4.47	7.01	8.17	9.15			
	3	5	80.04	113.82	140.67				
			4.57	4.85	4.18				
	2	6	80.02	112.04					
			3.97	2.99					
	1	4	65.62						
			10.66						
TOTAL			76.27	110.74	138.46	161.54	177.46	195.26	207.68
			7.99	6.24	7.33	8.62	3.03	0.00	0.00

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	1	68.27	94.44	120.60	143.86	164.21	181.65	193.28
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	2	73.34	101.71	128.14	149.09	164.54		
			5.71	8.40	9.15	7.62	3.81		
	4	5	69.08	99.23	126.93	150.26			
			3.91	6.03	6.99	7.53			
	3	5	72.06	102.68	127.07				
			5.49	5.99	6.66				
	2	6	72.55	101.91					
			3.71	2.94					
	1	4	59.49						
			9.60						
TOTAL			69.30	100.99	126.69	149.17	164.43	181.65	193.28
			7.41	5.77	7.21	7.37	3.11	0.00	0.00

Chondrostoma miegii Masc1es 89 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 18.04428 + 3.130389 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9846859 NUMERO DE EJEMPLARES = 64
L.FURCAL = 15.90175 + 2.891425 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9849782 NUMERO DE EJEMPLARES = 64

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4
	4	1	80.45	110.01	136.29	149.43
			0.00	0.00	0.00	0.00
	3	2	75.81	109.92	135.14	
			3.78	1.91	0.13	
	2	9	79.06	113.17		
			4.97	3.62		
	1	3	63.87			
			11.99			
TOTAL			75.68	112.37	135.52	149.43
			9.04	3.52	0.56	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4
	4	1	74.76	102.63	127.41	139.80
			0.00	0.00	0.00	0.00
	3	2	69.15	100.59	123.83	
			3.59	1.93	0.35	
	2	9	72.15	103.56		
			4.83	3.39		
	1	3	58.48			
			11.50			
TOTAL			69.19	102.99	125.02	139.80
			8.51	3.23	1.71	0.00

Chondrostoma miegii Total 89 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 15.70383 + 3.298136 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9873864 NUMERO DE EJEMPLARES = 96
L.FURCAL = 13.59742 + 3.044948 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9868351 NUMERO DE EJEMPLARES = 96

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD									
EDAD	N		1	2	3	4	5	6	7
	7	1	74.54	102.42	130.29	155.06	176.74	195.32	207.71
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	2	80.26	110.63	138.94	161.37	177.94		
			5.94	8.73	9.45	7.75	3.62		
	4	6	76.42	108.40	137.63	160.74			
			4.26	6.40	7.48	9.78			
	3	7	78.69	112.65	139.08				
			5.09	4.73	4.39				
	2	15	78.92	112.56					
			4.78	3.41					
	1	5	68.57						
			11.14						
TOTAL			76.98	111.32	137.97	160.25	177.54	195.32	207.71
			7.04	5.37	6.71	8.97	3.01	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD									
EDAD	N		1	2	3	4	5	6	7
	7	1	68.67	94.76	120.84	144.03	164.32	181.71	193.30
			0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5	2	73.69	101.97	128.32	149.19	164.60		
			5.69	8.37	9.12	7.59	3.80		
	4	6	70.11	99.86	127.07	148.54			
			3.87	5.56	6.37	7.92			
	3	7	71.08	102.02	126.14				
			5.41	5.33	5.84				
	2	15	71.79	102.75					
			4.54	3.29					
	1	5	62.46						
			10.36						
TOTAL			70.09	101.72	126.43	148.18	164.50	181.71	193.30
			6.61	4.99	6.57	7.54	3.10	0.00	0.00

Chondrostoma miegii Femelles 85 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTR.E LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 33.93457 + 2.618342 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9714688 NUMERO DE EJEMPLARES = 15
L.FURCAL = 28.05457 + 2.487953 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9707842 NUMERO DE EJEMPLARES = 15

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5
5		1	72.05	97.47	117.80	135.59	150.83
			0.00	0.00	0.00	0.00	0.00
4		7	75.76	101.36	120.85	138.07	
			3.77	3.41	3.87	4.21	
3		3	72.76	96.40	118.31		
			2.26	4.52	4.14		
2		1	78.06	104.02			
			0.00	0.00			
1		3	76.13				
			2.67				
TOTAL			75.14	100.02	119.88	137.76	150.83
			3.43	4.25	3.98	4.02	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5
5		1	64.34	88.53	107.88	124.81	139.32
			0.00	0.00	0.00	0.00	0.00
4		7	67.89	92.29	110.86	127.27	
			3.44	3.13	3.60	3.94	
3		3	64.64	86.91	107.55		
			2.41	4.57	4.59		
2		1	69.46	93.82			
			0.00	0.00			
1		3	68.44				
			2.72				
TOTAL			67.22	90.76	109.69	126.96	139.32
			3.30	4.15	4.05	3.78	0.00

Chondrostorna toxostorna Mascles 85 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 28.87949 + 2.779157 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9683257 NUMERO DE EJEMPLARES = 9
L.FURCAL = 23.22686 + 2.646727 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9728374 NUMERO DE EJEMPLARES = 9

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4
4	3		71.51	96.94	119.48	140.44
			2.48	3.23	2.27	4.60
3	3		76.47	104.62	124.94	
			3.75	4.55	3.89	
1	2		74.94			
			4.19			
TOTAL			74.23	100.78	122.21	140.44
			4.09	5.51	4.20	4.60

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4
4	3		63.72	87.90	109.36	129.24
			1.64	1.97	1.09	2.50
3	3		68.71	95.59	115.02	
			3.73	4.34	4.10	
1	2		67.11			
			4.38			
TOTAL			66.44	91.75	112.19	129.24
			3.98	5.11	4.12	2.50

Chondrostoma toxostoma Total 85 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 30.76607 + 2.705984 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9672972 NUMERO DE EJEMPLARES = 23
L.FURCAL = 24.89058 + 2.57658 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9692901 NUMERO DE EJEMPLARES = 23

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5
5	1	69.84	95.88	116.72	134.95	150.58
		0.00	0.00	0.00	0.00	0.00
4	10	73.45	99.38	120.06	138.63	
		3.52	3.54	3.51	4.53	
3	6	74.16	100.18	121.46		
		4.54	6.76	5.39		
2	1	76.58	103.53			
		0.00	0.00			
1	4	74.30				
		3.06				
TOTAL		73.78	99.68	120.35	138.30	150.58
		3.76	4.89	4.33	4.45	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4	5
5	1	62.12	86.95	106.80	124.18	139.07
		0.00	0.00	0.00	0.00	0.00
4	10	65.56	90.29	110.01	127.71	
		3.11	3.06	3.11	3.76	
3	6	66.16	90.89	111.11		
		4.66	6.85	5.91		
2	1	67.98	93.33			
		0.00	0.00			
1	4	66.52				
		3.19				
TOTAL		65.85	90.47	110.21	127.39	139.07
		3.63	4.70	4.36	3.73	0.00

Chondrostoma miegii Femelles 86 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 25.72878 + 2.871746 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9396945 NUMERO DE EJEMPLARES = 48
L.FURCAL = 21.30032 + 2.704924 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9372626 NUMERO DE EJEMPLARES = 48

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
	6	2	68.48	91.19	112.56	129.92	145.95	159.31
			0.00	1.34	1.34	0.00	0.00	0.00
	5	7	72.61	99.88	119.61	139.66	154.62	
			2.25	4.74	3.88	4.54	5.01	
	4	14	70.91	98.52	121.45	137.56		
			4.39	6.66	7.49	8.36		
	3	9	70.89	97.59	121.57			
			5.76	7.20	7.42			
	2	9	67.81	91.83				
			3.05	4.28				
	1	6	72.26					
			2.24					
TOTAL			70.63	96.72	120.52	137.54	152.69	159.31
			4.24	6.65	6.95	7.43	5.70	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6
	6	2	61.95	83.53	103.85	120.39	135.63	148.34
			0.74	0.14	0.23	1.81	2.08	2.31
	5	7	65.35	90.93	109.48	128.32	142.37	
			2.24	3.88	3.24	3.83	4.31	
	4	14	63.95	90.01	111.65	126.86		
			4.31	6.50	7.24	8.09		
	3	9	63.69	88.74	111.24			
			5.50	6.75	6.91			
	2	9	60.57	82.97				
			3.03	4.13				
	1	6	65.60					
			2.12					
TOTAL			63.59	88.03	110.57	126.74	140.88	148.34
			4.16	6.34	6.51	6.99	4.82	2.31

Chondrostoma miegii Mascles 86 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 18.97246 + 3.094112 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9756942 NUMERO DE EJEMPLARES = 28
L.FURCAL = 13.52696 + 2.930852 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9617021 NUMERO DE EJEMPLARES = 28

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4
4	8	69.92	96.58	119.00	137.88
		3.54	3.41	5.10	4.70
3	7	69.02	96.00	117.62	
		4.37	3.49	5.04	
2	10	68.17	95.16		
		4.06	5.94		
1	3	69.00			
		5.26			
TOTAL		68.97	95.85	118.35	137.88
		4.21	4.65	5.12	4.70

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4
4	8	61.72	86.95	108.16	126.01
		3.53	3.76	5.32	5.04
3	7	60.94	86.52	106.96	
		4.23	3.72	4.46	
2	10	60.60	86.43		
		3.64	5.50		
1	3	59.46			
		8.86			
TOTAL		60.88	86.62	107.60	126.01
		4.65	4.53	4.97	5.04

Chondrostoma toxostoma Total 86 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 24.20068 + 2.921644 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9499053 NUMERO DE EJEMPLARES = 76
L.FURCAL = 19.13371 + 2.763644 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9448511 NUMERO DE EJEMPLARES = 76

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6	2		67.40	90.35	111.95	129.50	145.70	159.20
			0.00	1.35	1.35	0.00	0.00	0.00
5	7		71.60	99.18	119.12	139.40	154.53	
			2.28	4.80	3.90	4.56	5.04	
4	22		71.09	98.18	120.78	137.76		
			4.35	5.72	6.74	7.27		
3	16		70.79	97.25	119.93			
			5.27	5.91	6.75			
2	19		68.91	93.89				
			3.99	5.71				
1	9		71.28					
			3.46					
TOTAL			70.45	96.59	119.87	137.60	152.57	159.20
			4.31	6.02	6.50	6.87	5.76	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6
6	2		60.43	82.34	102.99	119.79	135.27	148.18
			0.74	0.15	0.21	1.81	2.08	2.32
5	7		63.92	89.94	108.80	127.96	142.25	
			2.27	3.96	3.26	3.86	4.33	
4	22		63.51	89.16	110.55	126.61		
			4.21	5.68	6.67	7.15		
3	16		63.09	88.05	109.44			
			5.04	5.66	6.29			
2	19		61.45	85.09				
			3.80	5.46				
1	9		63.61					
			5.58					
TOTAL			62.87	87.60	109.59	126.48	140.70	148.18
			4.41	5.73	6.19	6.58	4.90	2.32

Chondrostoma toxostoma Femelles 87 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 20.37701 + 3.172842 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9187663 NUMERO DE EJEMPLARES = 33
L.FURCAL = 18.42736 + 2.934021 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9223527 NUMERO DE EJEMPLARES = 33

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6		1	64.16	95.43	120.45	145.47	164.24	176.75
			0.00	0.00	0.00	0.00	0.00	0.00
5		6	70.10	100.03	122.44	143.76	160.84	
			3.52	2.97	3.33	2.18	2.86	
4		11	70.39	100.75	125.44	145.70		
			3.33	3.47	4.19	5.47		
3		13	67.11	96.42	120.01			
			4.84	6.04	6.10			
2		2	73.36	98.29				
			4.31	6.34				
TOTAL			69.03	98.60	122.42	145.04	161.33	176.75
			4.52	5.15	5.45	4.55	2.90	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6
6		1	58.43	87.00	109.86	132.71	149.86	161.29
			0.00	0.00	0.00	0.00	0.00	0.00
5		6	64.42	92.13	112.86	132.59	148.40	
			3.29	3.22	3.51	3.22	4.00	
4		11	64.67	92.73	115.55	134.29		
			3.01	2.84	3.40	4.58		
3		13	61.66	88.78	110.61			
			4.38	5.36	5.39			
2		2	67.44	90.50				
			3.02	4.44				
TOTAL			63.42	90.76	112.78	133.64	148.61	161.29
			4.09	4.55	4.86	4.12	3.74	0.00

Chondrostoma toxostoma Mascles 87 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 44.04613 + 2.506665 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .8789551 NUMERO DE EJEMPLARES = 22
L.FURCAL = 44.33771 + 2.190244 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .8664011 NUMERO DE EJEMPLARES = 22

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5
5	2	83.34	106.85	129.20	147.77	160.10
		0.11	2.86	6.78	9.21	10.02
4	4	84.67	108.54	128.58	145.83	
		4.04	5.98	8.48	8.43	
3	13	83.83	106.66	123.23		
		4.36	5.28	7.19		
2	3	82.77	106.65			
		0.70	2.43			
TOTAL		83.79	107.02	124.98	146.48	160.10
		3.82	5.00	7.88	8.75	10.02

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4	5
5	2	78.41	98.82	118.25	134.38	145.08
		0.54	3.19	6.84	9.16	10.00
4	4	80.07	101.08	118.72	133.89	
		3.45	5.24	7.42	7.37	
3	13	79.00	98.88	113.32		
		3.85	4.71	6.46		
2	3	78.39	99.42			
		0.23	2.54			
TOTAL		79.06	99.35	114.98	134.06	145.08
		3.35	4.54	7.14	8.02	10.00

Chondrostoma toxostoma Total 87 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 28.9067 + 2.939442 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9046777 NUMERO DE EJEMPLARES = 55
L.FURCAL = 27.41467 + 2.681952 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9011517 NUMERO DE EJEMPLARES = 55

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
	6	1	70.39	100.03	123.73	147.44	165.22	177.07
			0.00	0.00	0.00	0.00	0.00	0.00
	5	8	75.08	102.83	124.94	145.22	160.75	
			3.09	3.41	4.39	5.01	5.67	
	4	15	75.57	103.65	126.68	145.83		
			3.52	4.38	5.83	6.42		
	3	26	73.81	100.74	121.33			
			4.95	5.85	6.73			
	2	5	75.71	101.77				
			2.63	4.55				
TOTAL			74.59	101.92	123.56	145.69	161.25	177.07
			4.24	5.16	6.53	5.86	5.53	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6
	6	1	65.00	91.84	113.31	134.79	150.89	161.63
			0.00	0.00	0.00	0.00	0.00	0.00
	5	8	69.52	94.84	114.98	133.48	147.66	
			3.06	3.94	4.66	5.50	6.44	
	4	15	70.06	95.72	116.76	134.26		
			3.13	3.80	5.07	5.55		
	3	26	68.32	92.85	111.62			
			4.39	5.14	6.00			
	2	5	70.24	94.12				
			1.74	3.81				
TOTAL			69.08	94.02	113.74	134.03	148.02	161.63
			3.79	4.65	5.94	5.43	6.16	0.00

Chondrostoma miegii Femelles 85 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 24.65755 + 3.048785 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9604084 NUMERO DE EJEMPLARES = 29
L.FURCAL = 18.71969 + 2.890442 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9640336 NUMERO DE EJEMPLARES = 29

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5
5	6	71.68	99.72	124.20	149.26	166.95
		4.70	2.98	4.07	6.29	5.83
4	6	66.84	96.69	122.59	143.85	
		1.65	3.75	6.66	4.17	
3	6	73.08	102.60	127.08		
		3.89	4.32	5.56		
2	5	71.84	98.37			
		4.12	7.78			
1	6	69.01				
		6.29				
TOTAL		70.44	99.39	124.62	146.55	166.95
		4.96	5.37	5.84	5.99	5.83

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4	5
5	6	63.18	89.71	112.88	136.57	153.30
		4.48	3.03	4.62	6.57	6.25
4	6	59.01	87.53	112.26	132.57	
		1.51	3.56	6.30	3.89	
3	6	64.35	92.16	115.23		
		3.74	3.99	4.97		
2	5	63.17	88.17			
		3.73	7.14			
1	6	61.09				
		5.81				
TOTAL		62.13	89.45	113.45	134.57	153.30
		4.54	4.92	5.50	5.76	6.25

Chondrostoma miegii Mascles 85 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 18.19768 + 3.02569 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9726037 NUMERO DE EJEMPLARES = 21
L.FURCAL = 15.09388 + 2.811468 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9740154 NUMERO DE EJEMPLARES = 21

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD						
EDAD	N		1	2	3	4
	4	2	68.39	95.82	118.41	138.31
			1.54	3.21	0.03	2.76
	3	3	65.81	92.26	117.52	
			3.00	7.71	7.40	
	2	8	63.36	90.50		
			8.18	8.82		
	1	6	60.93			
			3.76			
TOTAL			63.51	91.72	117.88	138.31
			6.30	8.17	5.75	2.76

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD						
EDAD	N		1	2	3	4
	4	2	62.10	87.79	108.95	127.58
			1.33	2.84	0.18	2.33
	3	3	59.00	83.41	106.70	
			3.05	7.56	7.45	
	2	8	57.05	82.29		
			7.45	7.99		
	1	6	54.75			
			3.62			
TOTAL			57.17	83.39	107.60	127.58
			5.84	7.58	5.88	2.33

Chondrostoma toxostoma Total 85 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 16.86768 + 3.193395 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9710859 NUMERO DE EJEMPLARES = 50
L.FURCAL = 13.0335 + 2.988169 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9733841 NUMERO DE EJEMPLARES = 50

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5
5	6	66.30	95.79	121.52	147.87	166.47
		4.91	3.10	4.13	6.40	5.88
4	8	63.06	93.70	119.97	141.89	
		3.10	3.88	6.15	4.54	
3	9	67.31	97.20	123.10		
		4.13	7.01	7.61		
2	13	64.72	92.72			
		7.45	9.16			
1	12	63.35				
		5.98				
TOTAL		64.78	94.57	121.60	144.45	166.47
		5.86	7.13	6.49	6.17	5.88

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5
5	6	59.26	86.84	110.92	135.55	152.95
		4.63	3.11	4.67	6.64	6.29
4	8	56.57	85.45	110.22	130.88	
		2.88	3.61	5.76	4.18	
3	9	59.91	87.68	111.74		
		3.96	6.64	7.15		
2	13	57.69	83.84			
		6.73	8.19			
1	12	56.60				
		5.48				
TOTAL		57.84	85.66	111.00	132.88	152.95
		5.34	6.50	6.14	5.85	6.29

Chondrostoma miegii Femelles 86 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 18.82388 + 3.081676 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9714484 NUMERO DE EJEMPLARES = 69
L.FURCAL = 14.8455 + 2.910867 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9710704 NUMERO DE EJEMPLARES = 69

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD									
EDAD	N		1	2	3	4	5	6	7
	7	2	76.89	107.85	134.95	158.17	175.53	189.03	198.76
			1.68	2.58	3.36	4.03	2.60	1.06	3.28
	6	7	67.69	94.73	119.57	141.29	157.37	171.27	
			4.06	4.70	5.94	5.73	4.55	4.64	
	5	12	67.65	92.08	115.74	136.66	153.44		
			3.48	3.61	4.40	4.79	6.94		
	4	14	69.26	95.36	119.71	140.51			
			3.91	3.57	4.25	4.42			
	3	11	71.28	98.04	123.01				
			4.62	4.12	3.53				
	2	7	69.51	97.20					
			4.71	5.09					
	1	11	70.32						
			2.01						
TOTAL			69.58	95.80	120.10	140.35	156.85	175.22	198.76
			4.20	5.15	6.00	6.80	8.66	8.46	3.28

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD									
EDAD	N		1	2	3	4	5	6	7
	7	2	69.80	99.12	124.76	146.75	163.19	175.97	185.10
			1.34	2.05	2.68	3.22	1.78	0.27	2.32
	6	7	61.09	86.69	110.21	130.78	146.00	159.15	
			3.62	4.00	5.28	5.17	3.66	3.25	
	5	12	61.03	84.12	106.52	126.30	142.16		
			3.47	3.44	4.62	4.94	6.69		
	4	14	62.60	87.32	110.38	130.06			
			3.73	3.44	4.19	4.22			
	3	11	64.01	89.08	112.49				
			4.44	4.14	3.77				
	2	7	62.55	88.62					
			4.22	4.27					
	1	11	63.52						
			2.11						
TOTAL			62.76	87.49	110.48	129.87	145.44	162.89	185.10
			3.96	4.74	5.73	6.50	8.16	7.56	2.32

Chondrostoma miegii Mascles 86 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 15.94241 + 3.144286 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9703301 NUMERO DE EJEMPLARES = 49
L.FURCAL = 11.91408 + 2.981159 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .96967 NUMERO DE EJEMPLARES = 49

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5
5	2	69.14	100.54	123.95	141.21	155.24
		1.80	5.99	5.23	7.37	6.29
4	6	67.68	99.12	125.52	147.51	
		2.15	3.14	3.45	3.74	
3	11	63.52	93.61	117.91		
		4.27	7.07	8.66		
2	19	59.99	86.22			
		5.46	7.15			
1	6	63.54				
		4.09				
TOTAL		62.82	91.15	120.95	145.94	155.24
		5.40	8.49	7.93	5.61	6.29

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5
5	2	62.74	92.77	115.12	131.64	145.02
		2.38	6.77	6.32	8.59	7.72
4	6	61.04	90.89	115.96	136.84	
		2.03	2.55	2.74	3.10	
3	11	57.17	85.79	108.90		
		4.13	6.84	8.35		
2	19	53.50	78.24			
		5.23	6.69			
1	6	56.79				
		3.98				
TOTAL		56.31	83.19	111.78	135.54	145.02
		5.26	8.23	7.64	5.54	7.72

Chondrostoma toxostoma Total 86 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 17.65973 + 3.104646 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9698711 NUMERO DE EJEMPLARES = 114
L.FURCAL = 13.58064 + 2.938233 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9693512 NUMERO DE EJEMPLARES = 114

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7
7	2	76.08	107.24	134.50	157.87	175.34	188.92	198.71
		1.68	2.58	3.37	4.04	2.60	1.05	3.28
6	7	66.88	94.12	119.14	141.02	157.22	171.23	
		4.08	4.72	5.98	5.77	4.57	4.65	
5	14	67.36	92.90	116.65	137.17	153.65		
		3.51	5.29	5.52	5.52	6.89		
4	20	68.61	96.36	121.38	142.58			
		3.49	4.13	5.00	5.36			
3	22	67.58	95.91	120.48				
		5.41	6.04	7.02				
2	26	63.02	89.36					
		6.36	8.12					
1	17	67.90						
		4.08						
TOTAL		66.81	93.78	120.22	141.28	156.62	175.16	198.71
		5.41	7.06	6.69	6.97	8.48	8.44	3.28

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7
7	2	68.93	98.45	124.28	146.42	162.98	175.85	185.12
		1.34	2.06	2.69	3.23	1.78	0.25	2.32
6	7	60.21	86.03	109.75	130.49	145.84	159.11	
		3.65	4.03	5.32	5.21	3.68	3.26	
5	14	60.71	84.93	107.46	126.91	142.52		
		3.58	5.37	5.92	5.96	6.94		
4	20	61.91	88.22	111.96	132.06			
		3.33	3.88	4.77	5.05			
3	22	60.72	87.50	110.71				
		5.02	5.76	6.67				
2	26	56.38	81.21					
		6.00	7.53					
1	17	61.10						
		4.05						
TOTAL		60.07	85.59	110.71	130.80	145.31	162.83	185.12
		5.16	6.70	6.43	6.74	8.11	7.53	2.32

Chondrostoma miegii Femelles 87 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 20.04856 + 3.100153 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9750546 NUMERO DE EJEMPLARES = 42
L.FURCAL = 15.27581 + 2.932874 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9737411 NUMERO DE EJEMPLARES = 42

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7
7	6	66.27	93.52	117.65	139.71	159.66	176.91	190.56
		2.88	5.07	6.74	8.19	8.62	7.39	6.72
6	3	64.61	90.95	115.25	136.51	157.77	174.90	
		2.16	3.98	4.43	4.83	5.25	2.00	
5	8	67.56	94.97	120.14	141.90	161.27		
		3.99	6.23	6.52	7.75	6.75		
4	5	64.31	91.72	116.97	137.90			
		4.04	6.29	4.43	3.86			
3	11	66.42	93.50	115.89				
		3.64	4.61	6.44				
2	5	67.91	94.24					
		6.78	5.60					
1	4	67.99						
		3.33						
TOTAL		66.56	93.47	117.34	139.66	160.09	176.24	190.56
		4.24	5.52	6.34	7.11	7.36	6.22	6.72

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7
7	6	59.01	84.81	107.64	128.52	147.40	163.72	176.64
		2.86	5.08	6.75	8.19	8.66	7.67	7.41
6	3	57.23	82.02	104.91	124.93	144.96	161.16	
		1.26	2.49	2.53	2.60	2.71	1.00	
5	8	60.27	86.22	110.06	130.67	149.00		
		3.98	6.21	6.77	8.11	7.16		
4	5	57.00	82.85	106.65	126.38			
		3.91	6.10	4.39	4.07			
3	11	59.27	84.97	106.23				
		3.36	4.28	6.26				
2	5	60.88	85.94					
		6.67	5.50					
1	4	60.08						
		3.20						
TOTAL		59.28	84.82	107.36	128.33	147.72	162.87	176.64
		4.10	5.35	6.23	7.17	7.35	6.40	7.41

Chondrostorna miegii Mascles 87 Vallderoures
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 7.9719 + 3.483544 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9777396 NUMERO DE EJEMPLARES = 40
L.FURCAL = 4.410962 + 3.285267 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9781059 NUMERO DE EJEMPLARES = 40

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD							
EDAD	N		1	2	3	4	5	6
6	1		56.17	87.16	114.70	142.24	162.90	180.11
			0.00	0.00	0.00	0.00	0.00	0.00
5	3		61.58	92.55	121.14	144.89	161.64	
			2.69	4.66	6.02	5.53	7.72	
4	5		60.34	92.90	121.98	145.33		
			1.90	3.91	6.16	7.43		
3	9		59.06	92.52	118.01			
			4.12	4.82	6.63			
2	14		59.79	92.04				
			4.75	8.15				
1	7		64.04					
			6.24					
TOTAL			60.50	92.21	118.94	144.84	161.96	180.11
			4.85	6.40	6.75	6.46	6.71	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD							
EDAD	N		1	2	3	4	5	6
6	1		49.53	78.54	104.32	130.10	149.44	165.55
			0.00	0.00	0.00	0.00	0.00	0.00
5	3		55.16	84.47	111.54	134.03	149.89	
			2.26	3.84	4.96	4.42	6.48	
4	5		53.80	84.52	111.94	133.97		
			1.66	3.65	5.71	6.87		
3	9		52.40	83.84	107.80			
			3.74	4.23	6.17			
2	14		53.41	83.92				
			4.55	7.82				
1	7		57.10					
			5.92					
TOTAL			53.93	83.87	108.94	133.56	149.77	165.55
			4.56	6.02	6.24	5.85	5.61	0.00

Chondrostoma toxostoma Total 87 Vallderoures
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 16.37014 + 3.205472 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9775878 NUMERO DE EJEMPLARES = 82
L.FURCAL = 12.16104 + 3.025547 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9769748 NUMERO DE EJEMPLARES = 82

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7
7	6	63.54	91.36	115.98	138.50	158.86	176.47	190.39
		2.91	5.14	6.83	8.30	8.72	7.44	6.72
6	4	62.02	89.60	114.79	137.65	158.87	176.10	
		1.92	3.75	4.36	5.77	5.53	3.07	
5	11	65.61	94.02	120.15	142.50	161.25		
		3.87	6.10	6.77	7.62	7.06		
4	10	63.85	93.32	120.04	141.83			
		3.76	6.20	6.59	7.11			
3	20	64.17	93.59	117.02				
		3.84	4.90	6.81				
2	19	64.50	93.51					
		5.44	7.32					
1	11	66.55						
		5.47						
TOTAL		64.57	93.18	117.84	140.88	160.12	176.32	190.39
		4.52	6.09	6.88	7.63	7.42	6.09	6.72

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7
7	6	56.70	82.98	106.23	127.49	146.72	163.34	176.50
		2.88	5.13	6.83	8.27	8.74	7.70	7.41
6	4	55.01	80.89	104.55	126.01	145.95	162.18	
		1.13	2.50	2.81	4.19	3.57	2.28	
5	11	58.72	85.59	110.29	131.42	149.14		
		3.78	5.93	6.72	7.71	7.03		
4	10	56.91	84.68	109.84	130.38			
		3.62	6.00	6.37	6.93			
3	20	57.25	85.00	107.12				
		3.52	4.41	6.44				
2	19	57.79	85.29					
		5.28	7.08					
1	11	59.21						
		5.18						
TOTAL		57.65	84.72	107.91	129.63	147.84	162.88	176.50
		4.30	5.81	6.59	7.48	7.22	6.16	7.41

A1.5. Càlcul de les longituds retrocalculades de la bagra (*Squalius cephalus*)

Squalius cephalus Femelles 87 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 3.530816 + 3.315897 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9919427 NUMERO DE EJEMPLARES = 45
L.FURCAL = 2.901714 + 3.065774 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9914111 NUMERO DE EJEMPLARES = 45

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
7	3		70.90	103.38	135.84	161.35	182.19	199.57	213.45
			2.99	2.83	5.28	6.24	7.06	5.88	8.02
6	1		60.52	96.14	128.20	156.69	174.50	192.31	
			0.00	0.00	0.00	0.00	0.00	0.00	
5	2		59.87	96.33	129.40	157.60	179.18		
			1.18	1.94	0.68	1.56	3.67		
4	10		66.40	102.47	129.46	150.89			
			7.38	6.36	4.78	8.45			
3	4		62.91	98.01	127.18				
			5.68	8.79	8.22				
2	4		59.82	90.14					
			8.89	8.71					
1	10		61.92						
			7.75						
TOTAL			63.74	99.01	129.89	154.05	179.91	197.76	213.45
			7.64	8.08	6.02	8.39	6.09	5.98	8.02

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
7	3		65.29	95.35	125.37	148.98	168.25	184.33	197.15
			3.34	3.26	4.69	5.31	5.40	3.69	5.34
6	1		55.79	88.84	118.59	145.03	161.56	178.08	
			0.00	0.00	0.00	0.00	0.00	0.00	
5	2		54.99	88.70	119.28	145.36	165.31		
			1.06	1.75	0.69	1.37	3.31		
4	10		60.99	94.31	119.24	139.05			
			6.79	5.91	4.41	7.88			
3	4		57.86	90.36	117.36				
			5.10	7.87	7.17				
2	4		55.13	83.24					
			8.60	8.62					
1	10		56.66						
			7.22						
TOTAL			58.53	91.24	119.76	142.07	166.15	182.77	197.15
			7.13	7.51	5.43	7.81	4.92	4.19	5.34

Squalius cephalus Mascles 87 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 2.545047 + 3.306532 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9917209 NUMERO DE EJEMPLARES = 39
L.FURCAL = 2.206768 + 3.049425 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9915304 NUMERO DE EJEMPLARES = 39

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
7	3		62.82	93.56	124.25	145.79	167.34	186.63	203.62
			3.23	6.55	7.37	7.44	6.61	5.63	3.32
6	2		62.05	91.84	121.48	144.59	164.40	184.21	
			4.73	8.74	6.15	6.70	7.18	7.65	
5	3		64.92	94.97	123.85	149.27	168.92		
			4.67	4.17	5.38	5.70	4.84		
4	4		61.92	95.29	125.30	148.83			
			4.53	8.84	7.28	7.20			
3	8		61.65	93.75	123.93				
			4.13	4.06	5.75				
2	6		61.96	95.15					
			4.87	8.38					
1	4		58.03						
			6.74						
TOTAL			61.74	94.28	124.00	147.47	167.19	185.66	203.62
			5.08	6.86	6.41	7.09	6.41	6.62	3.32

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
7	3		57.94	86.37	114.75	134.66	154.59	172.44	188.14
			3.01	6.07	6.84	6.85	6.06	5.18	3.08
6	2		57.11	84.58	111.96	133.29	151.57	169.86	
			3.96	7.47	4.88	5.24	5.54	5.85	
5	3		59.76	87.48	114.13	137.58	155.72		
			4.22	3.59	4.65	4.84	3.98		
4	4		56.63	87.21	114.72	136.31			
			4.16	8.03	6.65	6.82			
3	8		56.92	86.63	114.53				
			4.02	4.14	5.17				
2	6		56.90	87.44					
			4.24	7.27					
1	4		53.05						
			6.14						
TOTAL			56.76	86.82	114.28	135.71	154.26	171.40	188.14
			4.68	6.16	5.73	6.31	5.48	5.60	3.08

Squalius cephalus Total 87 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 1.505859 + 3.345901 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9910786 NUMERO DE EJEMPLARES = 76
L.FURCAL = 1.056114 + 3.091458 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9906352 NUMERO DE EJEMPLARES = 76

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	6	65.79	97.62	129.42	153.12	174.46	192.93	208.46
			4.87	6.89	8.55	10.32	10.06	8.63	7.85
	6	3	60.58	92.55	123.21	148.29	167.57	186.84	
			4.01	7.37	5.85	7.83	7.51	7.30	
	5	5	61.93	94.81	125.62	152.37	172.95		
			4.68	3.49	4.93	6.05	6.68		
	4	14	64.07	99.76	127.92	150.19			
			7.00	7.85	5.90	8.17			
	3	12	61.33	94.79	124.95				
			4.76	6.40	6.85				
	2	10	60.45	92.91					
			6.91	8.87					
	1	13	61.10						
			7.66						
TOTAL			62.19	96.02	126.61	151.00	172.44	190.90	208.46
			6.53	7.77	6.81	8.47	8.85	8.70	7.85

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7
	7	6	60.57	90.03	119.45	141.38	161.12	178.21	192.58
			4.71	6.53	7.86	9.39	8.91	7.44	6.26
	6	3	55.70	85.27	113.65	136.87	154.70	172.53	
			3.36	6.39	4.99	6.94	6.49	6.13	
	5	5	56.89	87.27	115.74	140.46	159.48		
			4.25	3.04	4.39	5.39	6.00		
	4	14	58.75	91.66	117.62	138.16			
			6.49	7.33	5.53	7.70			
	3	12	56.49	87.49	115.41				
			4.46	5.96	6.07				
	2	10	55.53	85.53					
			6.45	8.11					
	1	13	55.85						
			7.15						
TOTAL			57.09	88.42	116.70	139.12	159.16	176.32	192.58
			6.09	7.14	6.17	7.83	7.86	7.53	6.26

Squalius cepbalus Femelles 88 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -2.509718 + 3.448374 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9801479 NUMERO DE EJEMPLARES = 41
L.FURCAL = -3.923578 + 3.240396 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9814967 NUMERO DE EJEMPLARES = 41

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD								
EDAD	N		1	2	3	4	5	6
	6	3	64.83	99.68	129.89	157.7	178.58	194.8
			0.97	1.5	3.3	2.75	5.34	4.92
	5	10	60.21	96.43	129.24	154.69	174.56	
			5.19	7.71	9.63	9.35	8.36	
	4	13	64.39	102.43	133.12	155.19		
			4.48	5.44	5.97	6.86		
	3	4	67.34	105.35	137.99			
			3.01	2.91	2.76			
	2	4	52.73	85.79				
			3.3	3.38				
	1	4	66.63					
			3.52					
TOTAL			62.64	98.81	132.15	155.28	175.49	194.8
			5.89	7.94	7.53	7.67	7.95	4.92

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD								
EDAD	N		1	2	3	4	5	6
	6	3	59.29	92.01	120.36	146.47	166.07	181.31
			0.72	1.09	2.68	2.22	4.65	4.35
	5	10	54.89	88.85	119.63	143.52	162.17	
			4.66	6.81	8.53	8.56	7.74	
	4	13	58.99	94.77	123.64	144.39		
			3.92	4.62	5.07	5.86		
	3	4	61.83	97.60	128.31			
			3.04	2.91	2.39			
	2	4	48.06	79.19				
			3.06	3.49				
	1	4	60.94					
			2.97					
TOTAL			57.29	91.29	122.60	144.30	163.07	181.31
			5.41	7.26	6.72	6.84	7.34	4.35

Squalius cephalus Mascles 88 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -.230399 + 3.31394 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9699831 NUMERO DE EJEMPLARES = 42
L.FURCAL = -1.950916 + 3.116362 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9691648 NUMERO DE EJEMPLARES = 42

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4
4	7	61.86	100.24	130.06	148.79
		3.65	6.23	4.40	3.79
3	13	64.14	101.19	131.05	
		4.79	8.12	5.76	
2	14	59.67	93.37		
		5.63	9.81		
1	4	72.20			
		5.10			
TOTAL		62.92	97.78	130.70	148.79
		6.19	9.31	5.34	3.79

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4
4	7	56.60	92.80	120.90	138.57
		3.51	5.95	4.14	3.65
3	13	58.48	93.26	121.28	
		4.53	7.53	5.27	
2	14	54.30	85.93		
		5.28	9.17		
1	4	66.42			
		4.82			
TOTAL		57.43	90.14	121.15	138.57
		5.88	8.72	4.91	3.65

Squalius cephalus Total 88 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -5.467188 + 3.484889 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9762281 NUMERO DE EJEMPLARES = 80
L.FURCAL = -6.896814 + 3.278298 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9769222 NUMERO DE EJEMPLARES = 80

LONGITUDES TOTALES RETROCALCULADAS.

			LONGITUD TOTAL A LA EDAD					
EDAD	N		1	2	3	4	5	6
6	3		62.84	98.19	128.83	157.04	178.22	194.68
			0.97	1.50	3.32	2.76	5.39	4.96
5	10		58.25	95.05	128.39	154.23	174.43	
			5.25	7.80	9.72	9.40	8.37	
4	20		61.25	100.29	131.37	152.75		
			4.69	6.01	5.78	6.78		
3	17		62.37	100.89	132.42			
			4.93	7.69	6.06			
2	18		56.05	91.09				
			5.82	9.40				
1	8		68.65					
			5.19					
TOTAL			60.71	97.14	130.98	153.59	175.30	194.68
			6.26	8.64	6.91	7.55	7.95	4.96

LONGITUDES FURCALES RETROCALCULADAS.

			LONGITUD FURCAL A LA EDAD					
EDAD	N		1	2	3	4	5	6
6	3		57.29	90.51	119.30	145.82	165.71	181.19
			0.72	1.10	2.70	2.23	4.69	4.40
5	10		52.92	87.47	118.77	143.06	162.03	
			4.73	6.90	8.62	8.60	7.75	
4	20		55.95	92.74	122.02	142.16		
			4.24	5.38	5.04	5.96		
3	17		56.86	93.06	122.68			
			4.72	7.20	5.68			
2	18		50.92	83.87				
			5.42	8.77				
1	8		62.95					
			4.84					
TOTAL			55.36	89.60	121.43	142.76	162.88	181.19
			5.86	8.01	6.23	6.75	7.33	4.40

Squalius cephalus Femelles 89 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 15.07979 + 2.949953 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .99466 NUMERO DE EJEMPLARES = 49
L.FURCAL = 12.96487 + 2.789915 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9940276 NUMERO DE EJEMPLARES = 49

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6	3		68.88	103.33	136.69	166.03	189.21	209.34
			4.92	6.16	5.70	6.27	4.57	2.75
5	3		72.44	108.80	141.05	164.99	183.66	
			3.46	2.31	2.39	2.27	1.52	
4	6		66.88	100.92	128.81	151.90		
			4.93	4.04	2.61	4.17		
3	2		65.23	95.08	123.54			
			0.77	2.28	1.26			
2	1		64.34	92.85				
			0.00	0.00				
1	8		71.04					
			4.37					
TOTAL			69.06	101.66	132.37	158.70	186.43	209.34
			4.91	6.15	6.93	8.14	4.39	2.75

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6	3		64.02	96.71	128.36	156.20	178.20	197.31
			4.72	5.75	5.37	5.82	4.22	2.53
5	3		67.52	102.08	132.73	155.51	173.26	
			3.61	2.80	2.36	2.80	2.59	
4	6		61.83	93.95	120.27	142.05		
			4.58	3.72	2.50	4.02		
3	2		60.12	88.18	114.94			
			0.80	2.04	1.03			
2	1		58.69	85.16				
			0.00	0.00				
1	8		65.70					
			4.06					
TOTAL			63.92	94.77	123.91	148.95	175.73	197.31
			4.72	6.16	6.95	8.14	4.29	2.53

Squalius cephalus Mascles 89 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 17.47778 + 2.768814 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9930237 NUMERO DE EJEMPLARES = 54
L.FURCAL = 15.68816 + 2.58407 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9926521 NUMERO DE EJEMPLARES = 54

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4
4	5	69.50	99.77	125.59	144.42
		3.54	4.31	7.12	7.86
3	13	69.34	97.10	121.39	
		3.36	5.94	5.28	
2	6	69.41	98.43		
		4.49	6.02		
1	4	68.28			
		3.53			
TOTAL		69.23	97.99	122.55	144.01
		3.70	5.76	6.14	7.23

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4
4	5	64.30	92.57	116.71	134.30
		3.46	4.23	7.08	7.81
3	13	64.17	90.12	112.82	
		3.13	5.47	4.80	
2	6	63.91	90.86		
		4.00	5.34		
1	4	62.96			
		3.27			
TOTAL		63.97	90.81	113.90	133.94
		3.44	5.29	5.80	7.17

Squalius cephalus Total 89 Aiguadora
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 14.79706 + 2.902318 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9920446 NUMERO DE EJEMPLARES = 76
L.FURCAL = 12.66429 + 2.735262 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9909578 NUMERO DE EJEMPLARES = 76

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD							
EDAD	N		1	2	3	4	5	6
6	3		68.67	103.18	136.58	165.96	189.17	209.33
			4.92	6.17	5.71	6.28	4.58	2.76
5	3		72.25	108.66	140.97	164.95	183.64	
			3.46	2.32	2.40	2.27	1.52	
4	11		67.22	99.84	127.05	148.40		
			4.41	4.31	5.52	7.22		
3	15		67.52	96.15	121.50			
			3.34	5.70	5.03			
2	7		67.65	97.32				
			4.44	5.86				
1	11		70.30					
			4.34					
TOTAL			68.44	98.91	126.65	153.72	186.41	209.33
			4.36	6.29	8.18	10.51	4.39	2.76

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD							
EDAD	N		1	2	3	4	5	6
6	3		63.80	96.54	128.24	156.13	178.16	197.30
			4.73	5.76	5.38	5.83	4.22	2.54
5	3		67.32	101.94	132.64	155.46	173.24	
			3.62	2.80	2.37	2.80	2.60	
4	11		61.99	92.70	118.32	138.41		
			4.15	4.15	5.54	7.23		
3	15		62.20	89.09	112.91			
			3.12	5.27	4.59			
2	7		61.99	89.68				
			4.02	5.28				
1	11		64.88					
			4.12					
TOTAL			63.12	91.78	118.06	143.85	175.70	197.30
			4.16	6.10	8.11	10.60	4.28	2.54

Squalius cephalus Femelles 85 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -1.848749 + 3.345755 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9896742 NUMERO DE EJEMPLARES = 21
L.FURCAL = -4.31.3617 + 3.18658 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9877769 NUMERO DE EJEMPLARES = 21

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10	11
11	1	57.71	90.79	120.57	147.04	170.20	193.36	213.21	233.06	249.61	262.84	276.07
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	1	56.86	93.55	126.57	155.93	181.61	203.62	221.97	240.32	254.99		
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
8	2	58.50	90.26	120.44	147.10	172.16	193.87	215.58	232.35			
		2.87	2.71	4.15	2.08	1.60	0.96	0.32	1.12			
7	2	61.14	94.41	125.90	153.90	178.39	195.84	211.56				
		0.97	3.23	3.71	4.14	4.52	1.29	0.23				
6	1	50.94	83.93	113.62	140.02	163.11	179.61					
		0.00	0.00	0.00	0.00	0.00	0.00					
5	1	52.42	82.57	109.70	133.82	154.93						
		0.00	0.00	0.00	0.00	0.00						
3	2	54.11	82.88	108.49								
		4.07	6.89	6.55								
2	3	62.65	92.22									
		3.33	6.60									
1	6	55.91										
		3.10										
TOTAL		57.31	89.43	118.01	147.35	171.37	193.72	214.91	234.52	252.30	262.84	276.07
		4.34	6.31	7.96	7.41	8.59	6.67	3.57	3.45	2.69	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4	5	6	7	8	9	10	11
11	1	52.44	83.97	112.35	137.57	159.64	181.72	200.63	219.55	235.32	247.93	260.54
		0.00	0.00	0.00	0.00	0.00	0.00	209.87	227.42	241.47		
9	1	51.86	86.98	118.58	146.67	171.24	192.31	0.00	0.00	0.00		
		0.00	0.00	0.00	0.00	0.00	0.00	202.03	217.94			
8	2	52.95	83.10	111.74	137.04	160.82	181.43	0.30	1.06			
		2.73	2.58	3.94	1.97	1.52	0.91	200.15				
7	2	56.04	87.93	118.10	144.93	168.40	185.10	0.59				
		1.16	3.46	4.04	4.56	5.01	1.98					
6	1	46.56	78.36	106.97	132.41	154.67	170.56					
		0.00	0.00	0.00	0.00	0.00	0.00					
5	1	46.31	74.44	99.75	122.25	141.94						
		0.00	0.00	0.00	0.00	0.00						
3	2	48.01	74.92	98.86								
		3.93	6.63	6.37								
2	3	57.61	86.02									
		3.96	7.69									
1	6	50.72										
		3.25										
TOTAL		52.02	82.59	109.50	137.85	160.74	182.52	202.48	220.71	238.39	247.93	260.54
		4.54	6.90	8.49	7.92	9.18	6.15	3.42	4.00	3.08	0.00	0.00

Squalius cephalus Mascles 85 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -8.18548 + 3.483161 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9820066 NUMERO DE EJEMPLARES = 11
L.FURCAL = -6.855225 + 3.192793 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9838428 NUMERO DE EJEMPLARES = 11

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6		1	57.14	91.72	122.46	153.20	180.10	195.47
			0.00	0.00	0.00	0.00	0.00	0.00
5		3	59.41	95.67	127.18	152.68	173.84	
			3.74	2.36	2.58	4.04	1.34	
4		1	58.19	89.63	121.08	145.53		
			0.00	0.00	0.00	0.00		
3		1	49.41	81.40	107.00			
			0.00	0.00	0.00			
2		3	51.21	80.77				
			4.31	1.92				
TOTAL			55.21	88.01	122.01	151.46	175.41	195.47
			5.24	6.84	7.38	4.31	2.95	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6
6		1	51.99	83.15	110.84	138.54	162.77	176.61
			0.00	0.00	0.00	0.00	0.00	0.00
5		3	55.36	88.63	117.60	141.21	160.53	
			2.66	0.96	0.82	2.19	1.14	
4		1	54.74	83.92	113.10	135.79		
			0.00	0.00	0.00	0.00		
3		1	46.20	75.68	99.26			
			0.00	0.00	0.00			
2		3	47.54	74.61				
			4.02	1.87				
TOTAL			51.29	81.39	112.67	139.59	161.09	176.61
			4.71	6.24	6.56	2.75	1.38	0.00

Squalius cephalus Total 85 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -5.479086 + 3.412526 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9869791 NUMERO DE EJEMPLARES = 30
L.FURCAL = -7.72391 + 3.235039 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9861455 NUMERO DE EJEMPLARES = 30

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9	10	11
11	1		54.83	88.33	118.48	145.29	168.74	192.19	212.29	232.39	249.15	262.55	275.95
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	1		54.02	91.21	124.68	154.43	180.47	202.78	221.37	239.97	254.84		
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
8	2		55.76	87.99	118.61	145.67	171.10	193.13	215.16	232.17			
			2.92	2.75	4.21	2.11	1.62	0.97	0.32	1.13			
7	2		58.52	92.32	124.31	152.76	177.64	195.36	211.33				
			1.00	3.31	3.81	4.25	4.64	1.36	0.17				
6	2		53.63	87.48	117.77	146.37	171.40	187.38					
			5.40	5.69	5.76	7.51	9.04	8.24					
5	4		58.44	92.88	123.11	148.26	169.17						
			5.86	7.31	8.76	9.43	8.48						
4	1		59.85	90.79	121.74	145.81							
			0.00	0.00	0.00	0.00							
3	3		51.66	81.81	107.72								
			3.41	5.72	5.42								
2	6		56.73	86.39									
			5.72	7.08									
1	6		54.87										
			3.14										
TOTAL			55.82	88.24	118.87	148.32	172.18	193.34	214.44	234.18	251.99	262.55	275.95
			4.78	6.72	8.20	6.95	7.53	6.23	3.50	3.44	2.85	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8	9	10	11
11	1		49.74	81.66	110.39	135.93	158.27	180.62	199.77	218.92	234.89	247.65	260.42
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	1		49.20	84.78	116.80	145.26	170.17	191.52	209.31	227.09	241.33		
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
8	2		50.38	80.97	110.02	135.69	159.83	180.73	201.64	217.78			
			2.77	2.61	4.00	2.00	1.54	0.92	0.31	1.08			
7	2		53.57	85.96	116.61	143.85	167.69	184.65	199.94				
			1.19	3.53	4.12	4.65	5.12	2.04	0.64				
6	2		47.70	79.52	107.98	134.82	158.31	173.35					
			3.69	3.17	2.52	3.50	4.35	3.22					
5	4		52.09	84.34	112.64	136.17	155.76						
			5.23	6.77	8.16	8.67	8.22						
4	1		54.21	83.55	112.88	135.70							
			0.00	0.00	0.00	0.00							
3	3		45.94	74.27	98.59								
			3.26	5.56	5.28								
2	6		51.64	79.94									
			6.00	7.82									
1	6		49.74										
			3.28										
TOTAL			50.39	81.03	109.73	137.72	160.26	181.20	202.04	220.39	238.11	247.65	260.42
			4.63	6.62	7.89	6.51	7.45	5.97	3.37	3.97	3.22	0.00	0.00

Squalius cephalus Femelles 86 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -2.729055 + 3.354658 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9786531 NUMERO DE EJEMPLARES = 67
L.FURCAL = -5.158903 + 3.177571 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9792531 NUMERO DE EJEMPLARES = 67

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8
	8	1	57.12	90.37	120.30	150.22	173.50	193.45	213.40	230.02
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	2	59.81	95.30	124.03	152.76	179.80	203.46	220.36	
			5.10	3.43	5.14	3.46	3.47	3.49	3.49	
	6	13	60.11	94.04	124.33	152.41	175.18	194.27		
			2.58	4.79	6.56	7.69	8.30	9.26		
	5	6	58.44	90.45	117.48	142.17	164.57			
			3.05	3.99	6.80	7.40	7.26			
	4	8	58.09	92.53	123.99	149.46				
			4.02	4.99	6.68	5.62				
	3	19	56.10	87.57	115.48					
			5.52	7.45	8.72					
	2	9	61.24	91.88						
			4.94	6.72						
	1	6	64.71							
			6.12							
TOTAL			59.04	90.98	119.91	149.53	172.63	195.37	218.04	230.02
			5.27	6.55	8.48	7.81	9.08	8.98	4.35	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8
	8	1	51.59	83.12	111.50	139.87	161.94	180.86	199.78	215.54
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	2	53.46	86.74	113.67	140.61	165.96	188.15	203.99	
			4.57	2.89	4.39	2.72	2.65	2.58	2.53	
	6	13	54.49	86.71	115.45	142.11	163.72	181.85		
			2.24	4.46	5.83	6.72	7.22	8.13		
	5	6	52.92	83.30	108.95	132.39	153.67			
			3.48	4.42	6.92	7.78	8.01			
	4	8	52.11	84.53	114.15	138.13				
			3.86	4.73	6.32	5.33				
	3	19	50.71	80.59	107.11					
			5.21	6.98	8.35					
	2	9	55.35	84.31						
			4.50	5.91						
	1	6	58.73							
			6.12							
TOTAL			53.36	83.62	111.06	138.93	161.10	182.57	202.59	215.54
			5.00	6.08	7.92	7.28	8.38	7.68	2.87	0.00

Squalius cephalus Mascles 86 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -2.474847 + 3.258418 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9552021 NUMERO DE EJEMPLARES = 37
L.FURCAL = -4.647989 + 3.069464 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9563655 NUMERO DE EJEMPLARES = 37

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
	6	5	58.50	92.29	121.44	147.80	169.29	189.39
			5.02	7.97	10.52	11.90	11.99	10.50
	5	4	55.83	90.79	121.55	146.37	165.38	
			3.47	4.82	6.71	6.10	4.50	
	4	6	56.04	91.57	122.04	145.35		
			4.39	7.23	7.94	3.95		
	3	13	54.90	87.98	116.29			
			4.55	8.13	8.83			
	2	6	56.52	87.80				
			4.21	7.40				
	1	2	62.36					
			8.33					
TOTAL			56.38	89.55	119.19	146.44	167.55	189.39
			5.08	7.73	9.13	8.03	9.62	10.50

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6
	6	5	52.66	84.41	111.80	136.57	156.76	175.64
			4.94	7.69	10.18	11.54	11.56	10.19
	5	4	50.26	83.18	112.16	135.54	153.45	
			3.07	4.23	6.03	5.47	3.93	
	4	6	50.43	83.85	112.55	134.48		
			4.17	6.79	7.65	4.16		
	3	13	49.49	80.70	107.43			
			4.38	7.64	8.66			
	2	6	51.17	80.75				
			3.96	6.94				
	1	2	55.89					
			8.23					
TOTAL			50.81	82.10	109.98	135.46	155.29	175.64
			4.82	7.23	8.76	7.75	9.15	10.19

Squalius cephalus Total 86 Nonasp
CALCULO DE LAS LONGITUDES R,ETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -4.392332 + 3.357808 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9707474 NUMERO DE EJEMPLARES = 103
L.FURCAL = -6.670349 + 3.175495 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9712417 NUMERO DE EJEMPLARES = 103

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8
	8	1	55.87	89.35	119.48	149.61	173.04	193.13	213.22	229.96
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	2	58.59	94.33	123.27	152.20	179.44	203.27	220.29	
			5.13	3.44	5.16	3.47	3.48	3.49	3.49	
	6	18	58.45	92.63	122.85	150.69	173.29	192.82		
			3.54	5.93	8.00	9.32	9.84	9.86		
	5	10	56.22	89.73	118.53	143.52	164.77			
			3.52	4.36	7.09	7.23	6.33			
	4	14	56.09	91.37	122.74	147.55				
			4.36	6.13	7.37	5.40				
	3	32	54.62	87.17	115.62					
			5.21	7.75	8.77					
	2	15	58.65	90.07						
			5.28	7.30						
	1	8	63.75							
			6.94							
TOTAL			57.10	89.81	119.23	148.16	170.93	193.83	217.93	229.96
			5.47	7.02	8.67	8.01	9.50	9.69	4.39	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8
	8	1	50.45	82.19	110.75	139.31	161.53	180.57	199.61	215.48
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	2	52.35	85.86	112.98	140.11	165.63	187.97	203.93	
			4.60	2.90	4.41	2.73	2.65	2.58	2.53	
	6	18	52.83	85.19	113.79	140.15	161.54	180.03		
			3.38	5.69	7.52	8.74	9.21	9.18		
	5	10	50.71	82.43	109.68	133.34	153.46			
			3.65	4.37	6.78	7.14	6.69			
	4	14	50.29	83.51	113.06	136.43				
			4.15	5.78	7.03	5.21				
	3	32	49.25	80.08	107.06					
			4.96	7.27	8.47					
	2	15	52.99	82.71						
			4.85	6.61						
	1	8	57.67							
			6.95							
TOTAL			51.49	82.43	110.27	137.46	159.20	180.82	202.49	215.48
			5.21	6.56	8.21	7.62	8.99	8.85	2.90	0.00

Squalius cephalus Femelles 87 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -3.807794 + 3.462851 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9757512 NUMERO DE EJEMPLARES = 36
L.FURCAL = -4.825467 + 3.257647 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9764397 NUMERO DE EJEMPLARES = 36

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8	9
	9	1	49.06	94.88	130.12	140.69	168.89	193.56	214.71	235.85	253.48
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	3	61.35	97.87	128.29	156.09	181.31	203.02	220.72		
			1.46	1.10	3.78	4.78	5.81	4.80	2.90		
	6	3	60.32	95.29	125.61	155.89	182.66	203.67			
			2.41	2.81	4.19	2.95	1.18	2.28			
	5	4	59.94	75.92	131.27	158.28	182.73				
			3.45	39.87	2.33	3.11	3.26				
	4	12	57.51	92.19	125.50	149.04					
			3.63	6.14	8.46	8.56					
	3	6	60.04	96.44	125.54						
			6.35	9.87	11.78						
	2	6	56.19	88.34							
			3.89	7.36							
TOTAL			58.41	91.41	126.81	152.26	181.08	202.08	219.22	235.85	253.48
			4.60	15.94	8.08	8.00	5.39	4.89	3.62	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8	9
	9	1	45.61	89.32	122.95	133.04	159.94	183.47	203.65	223.82	240.64
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	3	56.29	90.56	119.10	145.17	168.85	189.21	205.46		
			1.17	1.24	3.76	4.83	5.99	5.13	3.48		
	6	3	55.11	87.80	116.13	144.45	169.49	189.12			
			1.86	2.03	3.11	1.81	2.25	1.83			
	5	4	54.98	69.79	121.91	147.26	170.19				
			3.16	37.25	3.05	3.98	4.03				
	4	12	52.90	85.55	116.91	139.06					
			3.58	5.96	8.30	8.27					
	3	6	55.61	90.06	117.64						
			5.56	8.60	10.39						
	2	6	51.42	81.59							
			3.68	7.28							
TOTAL			53.69	84.74	118.14	141.87	168.71	188.46	205.00	223.82	240.64
			4.22	14.97	7.57	7.47	5.09	4.24	3.11	0.00	0.00

Squalius cephalus Mascles 87 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -2.677973 + 3.346068 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9616992 NUMERO DE EJEMPLARES = 41
L.FURCAL = -3.876739 + 3.151976 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9607269 NUMERO DE EJEMPLARES = 41

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8
	8	1	57.24	87.20	117.15	143.78	167.08	187.06	203.70	220.34
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	60.66	97.33	130.66	160.66	184.00	207.33	227.33	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6	6	58.16	93.81	124.24	150.69	172.14	190.20		
			2.12	6.53	7.27	7.34	8.86	10.13		
	5	4	56.05	90.31	124.42	153.19	175.22			
			2.83	8.62	10.42	9.94	10.61			
	4	12	57.04	86.86	125.89	150.86				
			4.80	22.56	12.27	10.57				
	3	7	55.49	93.27	123.32					
			6.38	9.36	10.06					
	2	9	55.38	87.70						
			6.10	10.75						
TOTAL			56.56	89.83	124.67	151.32	173.73	191.95	215.52	220.34
			5.03	14.75	10.46	9.62	9.55	10.58	11.82	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8
	8	1	52.70	80.99	109.28	134.42	156.42	175.28	191.00	206.71
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	56.57	91.56	123.38	152.01	174.28	196.55	215.64	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6	6	53.39	86.94	115.59	140.48	160.68	177.69		
			2.01	6.16	6.99	6.91	8.59	9.96		
	5	4	51.24	83.42	115.43	142.38	163.04			
			3.10	8.80	10.64	9.91	10.46			
	4	12	52.38	80.43	117.22	140.74				
			4.47	21.14	11.30	9.60				
	3	7	51.02	86.66	115.01					
			6.20	8.97	9.70					
	2	9	50.65	80.99						
			5.79	10.06						
TOTAL			51.90	83.22	116.12	141.16	162.25	179.75	203.32	206.71
			4.83	13.92	9.94	9.03	9.47	10.74	12.32	0.00

Squalius cephalus Total 87 Nonasp
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = -3.95679 + 3.417619 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9674474 NUMERO DE EJEMPLARES = 77
L.FURCAL = -5.012582 + 3.216993 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9673198 NUMERO DE EJEMPLARES = 77

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9
9	1	48.94	94.78	130.05	140.63	168.84	193.52	214.68	235.84	253.47
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1	56.29	86.42	116.54	143.32	166.75	186.83	203.57	220.31	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	4	60.93	97.55	128.60	156.88	181.77	203.84	222.36		
		1.44	1.09	3.46	4.60	5.29	4.61	3.80		
6	9	58.25	93.83	124.36	152.21	175.53	194.66			
		2.62	5.67	6.47	6.75	8.83	10.52			
5	8	57.51	82.75	127.61	155.62	178.94				
		3.93	29.69	8.39	7.83	8.72				
4	24	56.82	89.20	125.54	149.91					
		4.31	16.89	10.57	9.67					
3	13	57.14	94.47	124.25						
		6.90	9.79	10.98						
2	15	55.32	87.82							
		5.37	9.56							
TOTAL		56.98	90.29	125.54	151.69	177.32	196.97	217.95	228.07	253.47
		4.99	15.40	9.47	8.87	8.62	9.69	7.67	7.77	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N	1	2	3	4	5	6	7	8	9
9	1	45.46	89.21	122.86	132.95	159.87	183.43	203.62	223.81	240.63
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1	51.86	80.30	108.73	134.01	156.13	175.08	190.88	206.68	
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7	4	56.07	90.54	119.79	146.42	169.85	190.63	207.99		
		1.06	1.13	3.70	5.05	5.76	5.43	5.33		
6	9	53.39	86.80	115.47	141.61	163.51	181.47			
		2.26	5.22	6.00	6.06	8.28	9.82			
5	8	52.65	76.27	118.46	144.71	166.58				
		3.83	27.89	8.55	7.97	8.71				
4	24	52.22	82.70	116.92	139.86					
		4.10	15.87	9.94	9.01					
3	13	52.72	87.99	116.14						
		6.47	9.02	10.14						
2	15	50.61	81.11							
		5.09	9.07							
TOTAL		52.33	83.67	116.94	141.41	165.40	184.06	204.41	215.25	240.63
		4.70	14.50	8.94	8.30	8.29	9.26	7.62	8.56	0.00

Squalius cephalus Femelles 87 Ripoll
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 9.969129 + 3.090638 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9836889 NUMERO DE EJEMPLARES = 58
L.FURCAL = 6.07938 + 2.933552 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9858635 NUMERO DE EJEMPLARES = 58

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8
	8	1	72.37	101.92	128.19	154.47	177.46	193.88	207.01	220.15
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	72.03	104.69	130.82	153.68	176.54	199.40	215.73	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6	3	70.17	101.85	128.25	154.65	172.62	189.53		
			1.49	3.19	3.41	3.93	3.57	3.31		
	5	3	64.65	91.92	117.34	141.76	164.28			
			1.78	3.11	0.20	2.75	6.96			
	4	5	65.07	95.38	121.52	144.50				
			3.04	2.22	4.22	7.95				
	3	13	70.54	101.60	128.52					
			4.61	6.07	6.68					
	2	16	69.12	98.68						
			3.48	5.16						
	1	12	66.73							
			3.79							
TOTAL			68.48	99.15	125.93	147.68	170.59	192.37	211.37	220.15
			4.18	5.69	6.66	7.69	7.05	4.66	4.36	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6	7	8
	8	1	65.04	92.97	117.80	142.62	164.35	179.86	192.28	204.69
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	7	1	64.24	94.86	119.35	140.77	162.20	183.63	198.94	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	6	3	63.03	93.01	117.98	142.96	159.96	175.95		
			1.66	3.29	3.66	4.30	4.04	3.85		
	5	3	57.83	83.65	107.71	130.82	152.13			
			1.64	2.96	0.34	2.45	6.55			
	4	5	58.14	86.80	111.51	133.23				
			2.77	2.18	4.14	7.73				
	3	13	63.71	93.27	118.90					
			4.12	5.55	6.24					
	2	16	62.52	90.71						
			3.32	4.78						
	1	12	60.81							
			3.95							
TOTAL			61.87	90.85	116.06	136.22	157.85	178.27	195.61	204.69
			3.95	5.34	6.43	7.35	6.62	4.29	3.33	0.00

Squalius cephalus Mascles 87 Ripoll
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 8.035652 + 3.142912 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9808735 NUMERO DE EJEMPLARES = 61
L.FURCAL = 6.611305 + 2.935805 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9816411 NUMERO DE EJEMPLARES = 61

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD							
EDAD	N		1	2	3	4	5	6
6	1		75.88	103.02	130.16	153.90	174.25	191.22
			0.00	0.00	0.00	0.00	0.00	0.00
5	4		69.47	99.42	124.66	143.72	166.47	
			2.22	1.37	0.83	5.14	4.42	
4	3		69.69	97.92	126.10	149.09		
			0.50	2.60	2.28	5.63		
3	7		69.96	108.29	131.83			
			4.54	8.92	8.08			
2	22		70.50	101.17				
			5.08	7.36				
1	19		65.53					
			3.95					
TOTAL			68.73	102.11	128.30	147.01	168.02	191.22
			4.93	7.62	6.43	6.17	5.04	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD							
EDAD	N		1	2	3	4	5	6
6	1		69.96	95.31	120.65	142.82	161.83	177.66
			0.00	0.00	0.00	0.00	0.00	0.00
5	4		63.90	91.82	115.36	133.14	154.33	
			2.26	1.32	1.08	5.04	3.81	
4	3		64.56	91.10	117.59	139.21		
			0.40	2.79	2.21	5.65		
3	7		64.19	99.75	121.71			
			4.35	7.54	7.73			
2	22		65.02	93.71				
			4.61	6.86				
1	19		60.39					
			3.80					
TOTAL			63.33	94.48	118.82	136.63	155.83	177.66
			4.59	6.85	5.98	6.17	4.54	0.00

Squalius cephalus Total 87
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 7.581745 + 3.149687 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9822961 NUMERO DE EJEMPLARES = 116
L.FURCAL = 4.970047 + 2.967614 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9840742 NUMERO DE EJEMPLARES = 116

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6	7	8
8	1		70.66	100.53	127.09	153.65	176.89	193.48	206.76	220.04
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1		70.35	103.38	129.81	152.93	176.06	199.18	215.70	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6	4		70.31	101.18	128.03	154.03	172.78	189.88		
			3.32	2.95	3.20	3.46	3.24	3.01		
5	7		66.56	95.58	121.09	142.63	165.45			
			3.66	4.80	4.01	4.44	5.79			
4	8		65.78	95.66	122.87	146.11				
			3.76	2.90	4.38	7.57				
3	20		69.44	103.47	129.57					
			4.62	8.01	7.41					
2	38		69.39	99.95						
			4.62	6.66						
1	31		65.74							
			3.92							
TOTAL			67.98	100.13	126.52	147.14	169.40	192.03	211.20	220.04
			4.60	6.92	6.79	7.11	6.40	4.24	4.47	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5			
8	1		64.25	92.33	117.28	142.24	164.08	179.68	192.16	204.64
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	1		63.46	94.25	118.88	140.43	161.98	183.53	198.92	
			0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6	4		63.94	92.95	118.20	142.64	160.26	176.33		
			3.22	3.00	3.37	3.75	3.61	3.44		
5	7		60.39	87.66	111.63	131.87	153.31			
			3.51	4.53	3.83	4.30	5.31			
4	8		59.75	87.87	113.49	135.37				
			3.71	3.16	4.59	7.63				
3	20		63.19	95.19	119.79					
			4.23	7.04	6.94					
2	38		63.38	92.26						
			4.30	6.25						
1	31		60.24							
			3.86							
TOTAL			62.04	92.21	116.87	136.16	156.95	178.09	195.54	204.64
			4.30	6.38	6.46	6.93	5.96	3.91	3.38	0.00

Squalius cephalus Femelles 88 Ripoll
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 19.36894 + 2.851888 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9905298 NUMERO DE EJEMPLARES = 31
L.FURCAL = 17.45929 + 2.656949 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9902593 NUMERO DE EJEMPLARES = 31

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6		1	78.70	106.95	132.37	154.97	174.75	188.87
			0.00	0.00	0.00	0.00	0.00	0.00
5		1	71.91	105.10	129.99	152.11	168.70	
			0.00	0.00	0.00	0.00	0.00	
4		2	72.19	105.01	133.53	156.37		
			1.89	0.75	1.85	1.65		
3		9	78.00	105.77	133.49			
			3.49	3.69	3.94			
2		10	75.93	108.45				
			5.56	5.03				
1		8	71.92					
			4.30					
TOTAL			75.22	106.89	133.14	154.96	171.73	188.87
			5.01	4.29	3.49	2.09	3.02	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD.

EDAD	N		1	2	3	4	5	6
6		1	72.88	99.27	123.02	144.14	162.61	175.80
			0.00	0.00	0.00	0.00	0.00	0.00
5		1	66.31	97.16	120.29	140.86	156.29	
			0.00	0.00	0.00	0.00	0.00	
4		2	66.66	97.22	123.78	145.05		
			1.90	0.92	1.43	1.18		
3		9	72.10	97.97	123.81			
			3.40	3.35	3.77			
2		10	70.13	100.40				
			5.24	4.72				
1		8	66.44					
			3.83					
TOTAL			69.49	98.98	123.47	143.77	159.45	175.80
			4.69	3.98	3.32	1.91	3.16	0.00

Squalius cephalus Mascles 88 Ripoll
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = -2.115641 + 3.394009 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9798959 NUMERO DE EJEMPLARES = 54
L.FURCAL = -2.62783 + 3.169988 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9795267 NUMERO DE EJEMPLARES = 54

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	1	66.16	98.68	127.94	153.95	176.71	196.22	212.48	228.73	244.99	257.99
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1	67.39	106.00	140.75	167.78	190.94	210.25	225.69	241.14		
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
7	1	57.83	91.13	124.43	151.07	174.39	194.37	214.35			
		0.00	0.00	0.00	0.00	0.00	0.00	0.00			
6	4	62.27	100.09	129.11	156.34	181.03	201.28				
		3.16	2.23	3.38	3.89	3.90	5.13				
4	4	65.89	99.18	127.19	153.57						
		4.32	5.67	6.61	5.20						
3	14	64.58	96.83	124.81							
		5.27	4.84	5.96							
2	21	64.60	99.70								
		6.28	8.54								
1	8	66.96									
		4.42									
TOTAL		64.82	98.74	126.63	155.68	180.88	200.85	217.51	234.94	244.99	257.99
		5.47	6.91	6.31	5.71	5.63	6.07	5.84	6.20	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	1	60.78	90.97	118.15	142.30	163.44	181.55	196.65	211.75	226.84	238.92
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1	62.24	98.27	130.70	155.93	177.55	195.57	209.98	224.40		
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
7	1	53.08	84.02	114.97	139.73	161.39	179.96	198.53			
		0.00	0.00	0.00	0.00	0.00	0.00	0.00			
6	4	57.64	93.06	120.23	145.73	168.84	187.80				
		2.76	1.77	2.97	3.66	3.52	4.66				
4	4	61.40	92.74	119.11	143.92						
		4.34	5.76	6.67	5.01						
3	14	59.60	89.68	115.79							
		4.99	4.45	5.45							
2	21	59.71	92.51								
		5.90	8.01								
1	8	61.66									
		4.08									
TOTAL		59.89	91.62	117.69	145.14	168.25	186.90	201.72	218.07	226.84	238.92
		5.14	6.52	5.97	5.35	5.45	5.88	5.89	6.32	0.00	0.00

Squalius cephalus Total 88 Ripoll
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 4.086592 + 3.241934 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9795202 NUMERO DE EJEMPLARES = 85
L.FURCAL = 3.120807 + 3.026848 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .979086 NUMERO DE EJEMPLARES = 85

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	1	70.81	102.59	131.19	156.61	178.85	197.92	213.80	229.69	245.58	258.29
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1	71.84	109.49	143.36	169.71	192.30	211.12	226.18	241.24		
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
7	1	62.44	94.85	127.27	153.20	175.89	195.34	214.79			
		0.00	0.00	0.00	0.00	0.00	0.00	0.00			
6	5	66.96	102.47	130.53	156.58	180.05	198.85				
		2.83	2.63	3.63	4.48	5.19	7.23				
5	1	61.72	98.13	125.43	149.70	167.90					
		0.00	0.00	0.00	0.00	0.00					
4	6	67.12	100.53	128.97	154.28						
		5.06	4.88	5.49	4.43						
3	23	68.60	99.54	127.97							
		4.76	4.57	6.12							
2	31	67.72	102.22								
		6.15	7.96								
1	16	68.05									
		4.41									
TOTAL		67.89	101.14	128.87	155.86	179.47	199.83	218.26	235.46	245.58	258.29
		5.21	6.43	6.00	5.62	7.06	7.22	5.61	5.77	0.00	0.00

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6	7	8	9	10
10	1	65.09	94.60	121.16	144.77	165.42	183.13	197.88	212.64	227.39	239.20
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	1	66.37	101.51	133.13	157.73	178.81	196.38	210.43	224.49		
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
7	1	57.35	87.47	117.60	141.70	162.79	180.86	198.94			
		0.00	0.00	0.00	0.00	0.00	0.00	0.00			
6	5	61.97	95.22	121.48	145.88	167.84	185.44				
		2.47	2.32	3.33	4.29	4.89	6.81				
5	1	56.75	90.62	116.02	138.60	155.53					
		0.00	0.00	0.00	0.00	0.00					
4	6	62.31	93.66	120.34	144.09						
		5.12	5.08	5.47	4.23						
3	23	63.32	92.17	118.70							
		4.53	4.18	5.64							
2	31	62.54	94.76								
		5.77	7.43								
1	16	62.74									
		3.98									
TOTAL		62.69	93.76	119.67	145.11	166.86	185.95	202.42	218.56	227.39	239.20
		4.90	6.03	5.64	5.30	6.78	6.85	5.68	5.92	0.00	0.00

Squalius cephalus Femelles 89 Ripoll
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 15.11179 + 2.969681 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9925566 NUMERO DE EJEMPLARES = 21
L.FURCAL = 13.4635 + 2.780514 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9931754 NUMERO DE EJEMPLARES = 21

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N	1	2	3	4	5	6
6	2	75.59	105.83	131.51	157.19	179.84	197.93
		1.12	1.68	0.65	0.39	1.48	4.17
5	2	69.86	99.68	126.40	151.46	172.12	
		2.21	1.97	3.06	0.36	2.48	
4	2	70.24	102.76	131.08	149.48		
		3.88	5.09	0.75	2.29		
3	8	71.76	102.34	132.18			
		3.84	6.43	5.00			
2	3	69.67	105.80				
		1.67	7.47				
1	1	78.67					
		0.00					
TOTAL		71.84	103.10	131.10	152.71	175.98	197.93
		3.88	6.08	4.43	3.54	4.37	4.17

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N	1	2	3	4	5	6
6	2	69.56	97.60	121.43	145.26	166.28	183.09
		0.48	0.71	0.49	1.69	2.91	5.57
5	2	64.70	92.58	117.59	141.04	160.39	
		2.27	1.53	2.45	0.85	2.91	
4	2	65.52	96.23	123.02	140.41		
		3.31	4.23	1.48	3.05		
3	8	66.63	95.36	123.36			
		3.47	6.07	4.84			
2	3	64.45	98.22				
		1.53	7.17				
1	1	72.03					
		0.00					
TOTAL		66.56	95.90	122.21	142.24	163.34	183.09
		3.39	5.62	4.31	2.99	4.14	5.57

Squalius cephalus Mascles 89 Ripoll
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES y EL RADIO TOTAL
L.TOTAL = 10.57749 + 3.010429 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9794877 NUMERO DE EJEMPLARES = 41
L.FURCAL = 8.878418 + 2.824795 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9786088 NUMERO DE EJEMPLARES = 41

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4
	4	10	66.57	98.48	127.08	148.74
			4.37	5.02	5.38	6.68
	3	18	68.02	99.04	125.50	
			3.30	5.25	6.79	
	2	11	64.52	94.25		
			3.74	6.87		
TOTAL			66.66	97.55	126.06	148.74
			4.00	6.07	6.37	6.68

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4
	4	10	61.38	91.30	118.12	138.42
			4.14	4.84	5.39	6.47
	3	18	62.89	92.05	116.92	
			3.15	5.04	6.47	
	2	11	59.35	87.17		
			3.48	6.31		
TOTAL			61.50	90.48	117.35	138.42
			3.82	5.78	6.13	6.47

Squalius cephalus Total 89 Ripoll
CALCULO DE LAS LONGITUDES RETROCALCULADAS
REGRESIONES y CORRELACIONES ENTRE LAS LONGITUDES Y EL RADIO TOTAL
L.TOTAL = 11.19446 + 3.016487 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9822208 NUMERO DE EJEMPLARES = 60
L.FURCAL = 9.627596 + 2.827022 * RADIO TOTAL ESCAMA
COEFICIENTE DE CORRELACION = .9820801 NUMERO DE EJEMPLARES = 60

LONGITUDES TOTALES RETROCALCULADAS.

LONGITUD TOTAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6	2		72.91	103.77	129.97	156.17	179.29	197.74
			1.17	1.75	0.71	0.34	1.44	4.18
5	2		67.21	97.72	125.07	150.70	171.85	
			2.25	2.04	3.16	0.34	2.50	
4	12		67.11	99.16	127.74	148.87		
			4.32	5.16	5.05	6.16		
3	26		68.73	99.79	127.47			
			3.54	5.74	6.93			
2	14		65.44	96.68				
			3.60	8.30				
1	1		77.83					
			0.00					
TOTAL			67.83	98.94	127.55	150.01	175.57	197.74
			4.20	6.40	6.17	5.86	4.24	4.18

LONGITUDES FURCALES RETROCALCULADAS.

LONGITUD FURCAL A LA EDAD

EDAD	N		1	2	3	4	5	6
6	2		66.93	95.58	119.92	144.26	165.74	182.90
			0.52	0.78	0.43	1.63	2.87	5.58
5	2		62.11	90.67	116.28	140.31	160.12	
			2.31	1.60	2.55	0.82	2.92	
4	12		62.07	92.13	118.96	138.77		
			4.05	4.92	5.17	6.06		
3	26		63.66	92.83	118.83			
			3.31	5.47	6.62			
2	14		60.32	89.51				
			3.36	7.77				
1	1		71.21					
			0.00					
TOTAL			62.70	91.87	118.80	139.65	162.93	182.90
			3.90	6.06	5.96	5.59	4.04	5.58

ANNEX 2. APLICACiÓ DEL MODEL DE VON BERTALANFFY AL CREIXEMENT DELS CIPRÍNIDS MÉS COMUNS EN ELS RIUS DE CATALUNYA

A2.1. Aplicació del model de creixement de Von Bertalanffy al barb comú (*Barbus graellsi*)

Nonasp Barbus graellsii Femelles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 36.23629 + .8969538 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9992963
L.FURCAL∞ = 351.6508
TASA DE CRECIMIENTO (k) = .108751
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -5.287009E-02
Coef. Correlación (r) = .9997238
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN B~RTALANFFY)
L.FURCAL(t) = 351.6508 * [l-exp [-.108751 * (t --5.287009E-02)]]
PESO TOTAL(t) = 500.3981 * [l-exp [-.108751 * (t --5.287009E-02)]] ^2.822464

EDAD	LONGITUD	+LONG.	PESO	G
1	38.04	38.04	0.94	-0.0614
2	70.36	32.32	5.33	1.7355
3	99.35	28.99	14.12	0.9737
4	125.35	26.00	27.22	0.6561
5	148.67	23.32	44.05	0.4816
6	169.58	20.92	63.88	0.3715
7	188.34	18.76	85.90	0.2962
8	205.17	16.83	109.36	0.2415
9	220.27	15.09	133.63	0.2004

Nonasp Barbus graellsii Mascles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 31.74854 + .9153284 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9974846
L.FURCAL∞ = 374.9608
TASA DE CRECIMIENTO (k) = 8.847238E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.5766921
Coef. Correlación (r) = .9987182
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 374.9608 * [l-exp [-8.847238E-02 * (t --.5766921)]]
PESO TOTAL(t) = 557.4383 * [l-exp [-8.847238E-02 * (t --.5766921)]] ^2.789654

EDAD	LONGITUD	+LONG.	PESO	G
1	48.82	48.82	1.89	0.6362
2	76.44	27.61	6.60	1.2506
3	101.71	25.28	14.64	0.7970
4	124.85	23.14	25.93	0.5718
5	146.03	21.18	40.15	0.4371
6	165.41	19.38	56.84	0.3477
7	183.15	17.74	75.53	0.2843

Nonasp Barbus graellsii Femelles 86
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 38.3141 + .8930296 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9993628
L.FURCAL∞ = 358.1747
TASA DE CRECIMIENTO (k) = .1131356
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = .1954464
Coef. Correlación (r) = .9991516
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 358.1747 * [l-exp [-.1131356 * (t -.1954464)]]
PESO TOTAL(t) = 614.0177 * [l-exp [-.1131356 * (t -.1954464)]] ^2.853331

EDAD	LONGITUD	+LONG.	PESO	G
1	31.16	31.16	0.58	-0.5472
2	66.14	34.98	4.95	2.1474
3	97.38	31.24	14.94	1.1037
4	125.28	27.90	30.65	0.7188
5	150.19	24.91	51.43	0.5175
6	172.44	22.25	76.27	0.3941
7	192.31	19.87	104.11	0.3112
8	210.05	17.74	133.93	0.2518
9	225.90	15.84	164.81	0.2075
10	240.05	14.15	196.01	0.1734
11	252.68	12.64	226.90	0.1464

Nonasp Barbus graellsii Mascles 86
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 34.89348 + .8784321 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9993354
L.FURCAL∞ = 287.0286
TASA DE CRECIMIENTO (k) = .1296168
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.402808
Coef. Correlación (r) = .9997489
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 287.0286 * [l-exp [-.1296168 * (t --.402808)]]
PESO TOTAL(t) = 328.0186 * [l-exp [-.1296168 * (t --.402808)]] ^2.891701

EDAD	LONGITUD	+LONG.	PESO	G
1	47.72	47.72	1.83	0.6047
2	76.81	29.09	7.25	1.3765
3	102.37	25.56	16.64	0.8305
4	124.82	22.45	29.52	0.5733
5	144.54	19.72	45.12	0.4242
6	161.86	17.32	62.59	0.3273
7	177.08	15.22	81.16	0.2598
8	190.44	13.37	100.16	0.2104
9	202.18	11.74	119.08	0.173

Nonasp Barbus graellsii Femelles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 36.98122 + .8966612 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9989372
L.FURCAL∞ = 357.8639
TASA DE CRECIMIENTO (k) = .1090772
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.3004463
Coef. Correlación (r) = .9991108
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 357.8639 * [l-exp [-.1090772 * (t --.3004463)]]
PESO TOTAL(t) = 815.0313 * [l-exp [-.1090772 * (t --.3004463)]] ^2.962342

EDAD	LONGITUD	+LONG.	PESO	G
1	47.33	47.33	2.03	0.7102
2	79.42	32.09	9.43	1.5334
3	108.19	28.77	23.56	0.9159
4	133.99	25.80	44.39	0.6336
5	157.13	23.13	71.16	0.4718
6	177.87	20.74	102.75	0.3673
7	196.47	18.60	137.95	0.2946
8	213.15	16.68	175.61	0.2414
9	228.10	14.95	214.68	0.2009
10	241.51	13.41	254.26	0.1692

Nonasp Barbus graellsii Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 37.50976 + .8444651 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9997519
L.FURCAL∞ = 241.1662
TASA DE CRECIMIENTO (k) = .1690518
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.5074487
Coef. Correlación (r) = .9998614
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 241.1662 * [l-exp [-.1690518 * (t --.5074487)]]
PESO TOTAL(t) = 224.0077 * [l-exp [-.1690518 * (t --.5074487)]] ^2.9018

EDAD	LONGITUD	+LONG.	PESO	G
1	54.25	54.25	2.95	1.0826
2	83.32	29.07	10.26	1.2451
3	107.87	24.55	21.70	0.7493
4	128.61	20.73	36.13	0.5101
5	146.11	17.51	52.33	0.3704
6	160.90	14.78	69.22	0.2797
7	173.38	12.48	85.98	0.2169

Vall-de-roures Barbus graellsii Femelles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 31.79967 + .9232201 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9992636
L.FURCAL∞ = 414.1666
TASA DE CRECIMIENTO (k) = 7.988764E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.4071759
Coef. Correlación (r) = .9994899
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 414.1666 * [l-exp [-7.988764E-02 * (t --.4071759)]]
PESO TOTAL(t) = 895.4209 * [l-exp [-7.988764E-02 * (t --.4071759)]] ^2.830153

EDAD	LONGITUD	+LONG.	PESO	G
1	44.04	44.04	1.58	0.4543
2	72.46	28.42	6.45	1.4092
3	98.69	26.24	15.46	0.8746
4	122.91	24.22	28.77	0.6212
5	145.28	22.36	46.17	0.4731
6	165.92	20.65	67.25	0.3761
7	184.98	19.06	91.48	0.3078
8	202.58	17.60	118.31	0.2572
9	218.82	16.25	147.18	0.2183
10	233.82	15.00	177.56	0.1876
11	247.67	13.85	208.95	0.1628
12	260.45	12.78	240.94	0.1424

Vall-de-roures Barbus graellsii Mascles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 31.35955 + .9111232 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9994703
L.FURCAL∞ = 352.8428
TASA DE CRECIMIENTO (k) = .0930772
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.2276552
Coef. Correlación (r) = .999709
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 352.8428 * [l-exp [-.0930772 * (t --.2276552)]]
PESO TOTAL(t) = 601.1693 * [l-exp [-.0930772 * (t --.2276552)]] ^2.885715

EDAD	LONGITUD	+LONG.	PESO	G
1	38.10	38.10	0.98	-0.0242
2	66.07	27.97	4.78	1.5887
3	91.56	25.49	12.26	0.9414
4	114.78	23.22	23.53	0.6523
5	135.94	21.16	38.34	0.4882
6	155.22	19.28	56.21	0.3827
7	172.78	17.56	76.59	0.3094
8	188.79	16.00	98.90	0.2556
9	203.37	14.58	122.59	0.2147
10	216.65	13.28	147.14	0.1826

Vall-de-roures Barbus graellsii Femelles 86
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 30.21732 + .9371535 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9995978
L.FURCAL∞ = 480.8117
TASA DE CRECIMIENTO (k) = 6.490822E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.2882995
Coef. Correlación (r) = .9996748
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 480.8117 * [l-exp [-6.490822E-02 * (t --.2882995)]]
PESO TOTAL(t) = 1519.903 * [l-exp [-6.490822E-02 * (t --.2882995)]] ^2.907809

EDAD	LONGITUD	+LONG.	PESO	G
1	38.57	38.57	0.99	-0.0099
2	66.36	27.79	4.80	1.5780
3	92.41	26.05	12.56	0.9627
4	116.82	24.41	24.84	0.6816
5	139.70	22.88	41.78	0.5200
6	161.13	21.44	63.27	0.4151
7	181.22	20.09	89.04	0.3417
8	200.05	18.83	118.69	0.2874
9	217.70	17.64	151.77	0.2458
10	234.23	16.54	187.77	0.2129
11	249.73	15.50	226.22	0.1863
12	264.25	14.52	266.63	0.1644
13	277.86	13.61	308.56	0.1460
14	290.62	12.75	351.57	0.1305
15	302.57	11.95	395.29	0.1172

Vall-de-roures Barbus graellsii Mascles 86
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 31.60044 + .9050533 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9993375
L.FURCAL∞ = 332.823
TASA DE CRECIMIENTO (k) = 9.976144E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.1855976
Coef. Correlación (r) = .9988592
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 332.823 * [l-exp [-9.976144E-02 * (t --.1855976)]]
PESO TOTAL(t) = 540.5751 * [l-exp [-9.976144E-02 * (t --.1855976)]] ^2.91786

EDAD	LONGITUD	+LONG.	PESO	G
1	37.13	37.13	0.90	-0.1071
2	65.20	28.08	4.65	1.6432
3	90.61	25.41	12.14	0.9603
4	113.61	23.00	23.49	0.6600
5	134.42	20.81	38.37	0.4909
6	153.26	18.84	56.26	0.3827
7	170.31	17.05	76.53	0.3078
8	185.74	15.43	98.57	0.2531
9	199.70	13.97	121.79	0.2115
10	212.34	12.64	145.67	0.1791
11	223.78	11.44	169.77	0.1531
12	234.14	10.35	193.72	0.1320
13	243.51	9.37	217.21	0.1145

Vall-de-roures Barbus graellsii Femelles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 32.64832 + .9303118 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .99953
L.FURCAL∞ = 468.4913
TASA DE CRECIMIENTO (k) = .0722355
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.3264437
Coef. Correlación (r) = .9989347
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 468.4913 * [l-exp [-.0722355 * (t --.3264437)]]
PESO TOTAL(t) = 1503.39 * [l-exp [-.0722355 * (t --.3264437)]] ^2.925066

EDAD	LONGITUD	+LONG.	PESO	G
1	42.81	42.81	1.37	0.3162
2	72.47	29.67	6.40	1.5401
3	100.07	27.60	16.45	0.9438
4	125.74	25.67	32.08	0.6680
5	149.63	23.89	53.35	0.5087
6	171.85	22.22	79.99	0.4050
7	192.52	20.67	111.52	0.3323
8	211.75	19.23	147.33	0.2785
9	229.65	17.89	186.79	0.2373
10	246.29	16.64	229.21	0.2047
11	261.78	15.48	273.96	0.1784
12	276.18	14.41	320.44	0.1567
13	289.58	13.40	368.08	0.1386
14	302.05	12.47	416.38	0.1233
15	313.65	11.60	464.90	0.1102
16	324.44	10.79	513.25	0.0989
17	334.48	10.04	561.10	0.0891

Vall-de-roures Barbus graellsii Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 31.51727 + .9115881 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9997884
L.FURCAL∞ = 356.4823
TASA DE CRECIMIENTO (k) = 9.256699E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.2700267
Coef. Correlación (r) = .9998202
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 356.4823 * [l-exp [-9.256699E-02 * (t --.2700267)]]
PESO TOTAL(t) = 652.9536 * [l-exp [-9.256699E-02 * (t --.2700267)]] ^2.88211

EDAD	LONGITUD	+LONG.	PESO	G
1	39.54	39.54	1.15	0.1438
2	67.56	28.02	5.41	1.5440
3	93.10	25.54	13.63	0.9243
4	116.39	23.29	25.93	0.6434
5	137.62	21.23	42.03	0.4828
6	156.97	19.35	61.40	0.3792
7	174.61	17.64	83.46	0.3069
8	190.69	16.08	107.59	0.2539
9	205.35	14.66	133.19	0.2134
10	218.71	13.36	159.73	0.1817

A2.2. Aplicació del model de creixement de Von Bertalanffy al barb cua roig (*Barbus haasi*)

Aiguadora Barbus haasi Femelles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 49.30482 + .8068271 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9972451
L.FURCAL∞ = 255.2368
TASA DE CRECIMIENTO (k) = .2146459
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.3684183
Coef. Correlación (r) = .9991944
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 255.2368 * [l-exp [-.2146459 * (t --.3684183)]]
PESO TOTAL(t) = 210.5646 * [l-exp [-.2146459 * (t --.3684183)]] ^2.959483

EDAD	LONGITUD	+LONG.	PESO	G
1	64.96	64.96	3.67	1.3001
2	101.72	36.76	13.83	1.3270
3	131.37	29.66	29.50	0.7572
4	155.30	23.93	48.40	0.4952
5	174.61	19.30	68.46	0.3468
6	190.18	15.58	88.15	0.2529
7	202.75	12.57	106.53	0.1894

Aiguadora Barbus haasi Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 39.42649 + .8678076 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9992236
L.FURCAL∞ = 298.2509
TASA DE CRECIMIENTO (k) = .1417853
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.6916058
Coef. Correlación (r) = .9998445
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 298.2509 * [l-exp [-.1417853 * (t --.6916058)]]
PESO TOTAL(t) = 345.6889 * [l-exp [-.1417853 * (t --.6916058)]] ^2.972723

EDAD	LONGITUD	+LONG.	PESO	G
1	63.6	63.6	3.5	1.2518
2	94.62	31.02	11.39	1.1809
3	121.54	26.92	23.97	0.7442
4	144.9	23.36	40.43	0.5226

Aiguadora Barbus haasi Femelles 88
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 51.54072 + .7742453 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9998188
L.FURCAL∞ = 228.3041
TASA DE CRECIMIENTO (k) = .2558665
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.4722794
Coef. Correlación (r) = .9999595
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 228.3041 * [l-exp [-.2558665 * (t --.4722794)]]
PESO TOTAL(t) = 175.8952 * [l-exp [-.2558665 * (t --.4722794)]] ^2.998177

EDAD	LONGITUD	+LONG.	PESO	G
1	71.66	71.66	5.45	1.6958
2	107.02	35.36	18.14	1.2026
3	134.40	27.38	35.92	0.6830
4	155.60	21.20	55.73	0.4391

Aiguadora Barbus haasi Mascles 88
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 38.68828 + .8422004 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9999991
L.FURCAL∞ = 245.1735
TASA DE CRECIMIENTO (k) = .1717373
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.8806309
Coef. Correlación (r) = 1.000019
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 245.1735 * [l-exp [-.1717373 * (t --.8806309)]]
PESO TOTAL(t) = 231.4069 * [l-exp [-.1717373 * (t --.8806309)]] ^3.034204

EDAD	LONGITUD	+LONG.	PESO	G
1	67.67	67.67	4.66	1.5382
2	95.68	28.01	13.32	1.0510
3	119.27	23.59	25.99	0.6687

Aiguadora Barbus haasi Femelles 89
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 47.306 + .8105812 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .999711
L.FURCAL∞ = 249.7429
TASA DE CRECIMIENTO (k) = .2100038
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.688704
Coef. Correlación (r) = .9999464
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 249.7429 * [l-exp [-.2100038 * (t --.688704)]]
PESO TOTAL(t) = 245.8384 * [l-exp [-.2100038 * (t --.688704)]] ^3.039706

EDAD	LONGITUD	+LONG.	PESO	G
1	74.57	74.57	6.24	1.8304
2	107.75	33.18	19.09	1.1189
3	134.64	26.9	37.59	0.6774
4	156.45	21.8	59.32	0.4562
5	174.12	17.67	82.13	0.3253

Aiguadora Barbus haasi Mascles 89
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 53.2235 + .656124 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = 1.000003
L.FURCAL∞ = 154.7753
TASA DE CRECIMIENTO (k) = .4214056
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.4343743
Coef. Correlación (r) = .9999999
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 154.7753 * [l-exp [-.4214056 * (t --.4343743)]]
PESO TOTAL(t) = 58.06889 * [l-exp [-.4214056 * (t --.4343743)]] ^3.050227

EDAD	LONGITUD	+LONG.	PESO	G
1	70.21	70.21	5.21	1.6505
2	99.29	29.08	14.99	1.0571
3	118.37	19.08	25.63	0.5361

Vall-de-roures Barbus haasi Femelles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 38.3803 + .8544312 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9935844
L.FURCAL∞ = 263.6575
TASA DE CRECIMIENTO (k) = .1573193
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.7033386
Coef. Correlación (r) = .9989636
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 263.6575 * [l-exp [-.1573193 * (t --.7033386)]]
PESO TOTAL(t) = 236.8605 * [l-exp [-.1573193 * (t --.7033386)]] ^2.777451

EDAD	LONGITUD	+LONG.	PESO	G
1	61.98	61.98	4.25	1.4461
2	91.34	29.36	12.47	1.0770
3	116.42	25.08	24.46	0.6740
4	137.85	21.43	39.11	0.4693
5	156.17	18.31	55.30	0.3464

Vall-de-roures Barbus haasi Mascles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 25.38603 + .8973954 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9999968
L.FURCAL∞ = 247.4162
TASA DE CRECIMIENTO (k) = .1082587
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -1.579843
Coef. Correlación (r) = .9998329
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 247.4162 * [l-exp [-.1082587 * (t --1.579843)]]
PESO TOTAL(t) = 189.3881 * [l-exp [-.1082587 * (t --1.579843)]] ^2.75819

EDAD	LONGITUD	+LONG.	PESO	G
1	60.29	60.29	3.86	1.3495
2	79.49	19.20	8.27	0.7625
3	96.72	17.23	14.20	0.5411

Vall-de-roures Barbus haasi Femelles 86
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 38.71191 + .8619438 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9967365
L.FURCAL∞ = 280.4067
TASA DE CRECIMIENTO (k) = .1485653
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.6921562
Coef. Correlación (r) = .9991239
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VON BERTALANFFY)
L.FURCAL(t) = 280.4067 * [l-exp [-.1485653 * (t --.6921562)]]
PESO TOTAL(t) = 300.6958 * [l-exp [-.1485653 * (t --.6921562)]] ^2.862118

EDAD	LONGITUD	+LONG.	PESO	G
1	62.33	62.33	4.06	1.4021
2	92.44	30.11	12.55	1.1279
3	118.39	25.95	25.49	0.7082
4	140.76	22.37	41.82	0.4953
5	160.04	19.28	60.39	0.3674
6	176.65	16.62	80.13	0.2828

Vall-de-roures Barbus haasi Mascles 86
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 28.52176 + .853319 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9996278
L.FURCAL∞ = 194.4475
TASA DE CRECIMIENTO (k) = .1586219
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -1.490409
Coef. Correlación (r) = 1.000008
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 194.4475 * [l-exp [-.1586219 * (t --1.490409)]]
PESO TOTAL(t) = 94.56305 * [l-exp [-.1586219 * (t --1.490409)]] ^2.727591

EDAD	LONGITUD	+LONG.	PESO	G
1	63.46	63.46	4.46	1.4949
2	82.67	19.21	9.17	0.7215
3	99.07	16.40	15.03	0.4935
4	113.06	13.99	21.55	0.3603

Vall-de-roures Barbus haasi Femelles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 40.76573 + .8384965 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9941258
L.FURCAL∞ = 252.4138
TASA DE CRECIMIENTO (k) = .176145
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.66479
Coef. Correlación (r) = .9978054
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 252.4138 * [l-exp [-.176145 * (t --.66479)]]
PESO TOTAL(t) = 245.0977 * [l-exp [-.176145 * (t --.66479)]]^2.843602

EDAD	LONGITUD	+LONG.	PESO	G
1	64.15	64.15	4.99	1.6065
2	94.56	30.40	15.02	1.1031
3	120.05	25.49	29.62	0.6788
4	141.43	21.38	47.20	0.4660
5	159.35	17.92	66.27	0.3393
6	174.38	15.03	85.63	0.2563
7	186.99	12.60	104.42	0.1984
8	197.55	10.57	122.09	0.1563

Vall-de-roures Barbus haasi Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 20.48856 + .9873051 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9926511
L.FURCAL∞ = 1613.913
TASA DE CRECIMIENTO (k) = 1.277624E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -2.132335
Coef. Correlación (r) = 1.001393
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 1613.913 * [l-exp [-1.277624E-02 * (t --2.132335)]]
PESO TOTAL(t) = 53476.42 * [l-exp [-1.277624E-02 * (t --2.132335)]] ^2.904125

EDAD	LONGITUD	+LONG.	PESO	G
1	63.31	63.31	4.40	1.4825
2	83.00	19.68	9.67	0.7862
3	102.43	19.43	17.81	0.6110
4	121.62	19.19	29.32	0.4986
5	140.57	18.94	44.65	0.4204
6	159.27	18.70	64.17	0.3628

A2.3. Aplicació del model de creixement de Von Bertalanffy al barb de muntanya (*Barbus meridionalis*)

Llobregat Barbus meridionalis Femelles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 32.96057 + .920171 * L.FURCAL(t)
i COEFICIENTE DE CORRELACION = .9978389
L.FURCAL∞ = 412.8898
TASA DE CRECIMIENTO (k) = 8.319578E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.4893499
Coef. Correlación (r) = .9991252
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 412.8898 * [l-exp [-8.319578E-02 * (t --.4893499)]]
PESO TOTAL(t) = 1148.111 * [l-exp [-8.319578E-02 * (t --.4893499)]] ^3.044936

EDAD	LONGITUD	+LONG.	PESO	G
1	48.12	48.12	1.65	0.5007
2	77.24	29.12	6.97	1.441
3	104.03	26.79	17.26	0.9068
4	128.69	24.66	32.99	0.6476
5	151.38	22.69	54.08	0.4944
6	172.25	20.88	80.15	0.3934
7	191.46	19.21	110.59	0.3219
8	209.14	17.68	144.71	0.2689
9	225.4	16.27	181.78	0.2281

Llobregat Barbus meridionalis Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 33.03604 + .8712486 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9974995
L. FURCAL∞ = 256.5877
TASA DE CRECIMIENTO (k) = .137828
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.3436617
Coef. Correlación (r) = .9989351
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 256.5877 * [l-exp [-.137828 * (t --.3436617)]]
PESO TOTAL(t) = 329.5225 * [l-exp [-.137828 * (t --.3436617)]] ^3.146796

EDAD	LONGITUD	+LONG.	PESO	G
1	43.38	43.38	1.23	0.2042
2	70.83	27.45	5.74	1.5429
3	94.75	23.92	14.33	0.9155
4	115.58	20.84	26.79	0.6256
5	133.74	18.15	42.4	0.4591
6	149.55	15.82	60.28	0.3518
7	163.34	13.78	79.55	0.2774

Llobregat Barbus meridionalis Femelles 88
METODO DE FORD-WALFORD
L.FURCAL(t+I) = 40.19402 + .8542353 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9990803
L.FURCAL∞ = 275.7459
TASA DE CRECIMIENTO (k) = .1575486
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.2497259
Coef. Correlación (r) = .9993992
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 275.7459 * [l-exp [-.1575486 * (t --.2497259)]]
PESO TOTAL(t) = 364.3054 * [l-exp [-.1575486 * (t --.2497259)]] ^3.113068

EDAD	LONGITUD	+LONG.	PESO	G
1	49.28	49.28	1.71	0.5375
2	82.29	33.01	8.45	1.5961
3	110.49	28.20	21.14	0.9173
4	134.58	24.09	39.05	0.6140
5	155.16	20.58	60.81	0.4429
6	172.73	17.58	84.94	0.3341
7	187.75	15.02	110.10	0.2595
8	200.58	12.83	135.25	0.2057
9	211.53	10.96	159.61	0.1656
10	220.89	9.36	182.64	0.1348

Llobregat Barbus meridionalis Mascles 88
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 25.06519 + .9270478 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9996617
L.FURCAL∞ = 343.5834
TASA DE CRECIMIENTO (k) = 7.575026E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -1.099755
Coef. Correlación (r) = .9999719
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 343.5834 * [l-exp [-7.575026E-02 * (t --1.099755)]]
PESO TOTAL(t) = 697.722 * [l-exp [-7.575026E-02 * (t --1.099755)]] ^3.095371

EDAD	LONGITUD	+LONG.	PESO	G
1	50.52	50.52	1.85	0.6141
2	71.90	21.38	5.51	1.0923
3	91.72	19.82	11.70	0.7536
4	110.10	18.37	20.60	0.5652
5	127.13	17.03	32.15	0.4453
6	142.92	15.79	46.19	0.3624

Llobregat Barbus meridionalis Femelles 89
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 25.66493 + .9792672 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9988301
L.FURCAL∞ = 1237.889
TASA DE CRECIMIENTO (k) = 2.095075E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -1.012359
Coef. Correlación (r) = 1.005738
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 1237.889 * [l-exp [-2.095075E-02 * (t --1.012359)]]
PESO TOTAL(t) = 29783.01 * [l-exp [-2.095075E-02 * (t --1.012359)]] ^3.11626

EDAD	LONGITUD	+LONG.	PESO	G
1	51.11	51.11	1.45	0.3693
2	75.71	24.61	4.92	1.2248
3	99.81	24.10	11.65	0.8610
4	123.40	23.60	22.57	0.6613
5	146.51	23.11	38.53	0.5349

Llobregat Barbus meridionalis Mascles 89
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 21.84905 + .9702201 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9992861
L.FURCAL∞ = 733.6856
TASA DE CRECIMIENTO (k) = 3.023228E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -1.317595
Coef. Correlación (r) = 1.00057
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 733.6856 * [l-exp [-3.023228E-02 * (t --1.317595)]]
PESO TOTAL(t) = 6070.639 * [l-exp [-3.023228E-02 * (t --1.317595)]] ^3.141075

EDAD	LONGITUD	+LONG.	PESO	G
1	49.65	49.65	1.29	0.2519
2	70.02	20.37	3.79	1.0799
3	89.78	19.76	8.27	0.781
4	108.96	19.18	15.19	0.608
5	127.56	18.6	24.93	0.4952
6	145.61	18.05	37.78	0.4157

A2.4. Aplicació del model de creixement de Von Bertalanffy a la madrilla (*Chondrostoma miegii*)

Aiguadora Chondrostoma miegii Femelles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 44.54334 + .8388533 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9961331
L.FURCAL∞ = 276.4148
TASA DE CRECIMIENTO (k) = .1757195
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.5133395
Coef. Correlación (r) = .9989769
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 276.4148 * [l-exp [-.1757195 * (t --.5133395)]]
PESO TOTAL(t) = 214.8944 * [l-exp [-.1757195 * (t --.5133395)]] ^3.011294

EDAD	LONGITUD	+LONG.	PESO	G
1	64.54	64.54	2.69	0.99
2	98.69	34.14	9.67	1.2786
3	127.33	28.64	20.82	0.7673
4	151.35	24.03	35.04	0.5205
5	171.5	20.15	51.05	0.3764
6	188.41	16.91	67.76	0.2831

Aiguadora Chondrostoma miegii Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 45.48467 + .7820048 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9950096
L.FURCAL∞ = 208.6498
TASA DE CRECIMIENTO (k) = .2458945
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.6352383
Coef. Correlación (r) = .9990973
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 208.6498 * [l-exp [-.2458945 * (t --.6352383)]]
PESO TOTAL(t) = 94.62602 * [l-exp [-.2458945 * (t --.6352383)]] ^3.066992

EDAD	LONGITUD	+LONG.	PESO	G
1	69.08	69.08	3.19	1.1597
2	99.51	30.43	9.77	1.1193
3	123.30	23.79	18.85	0.6575
4	141.90	18.61	29.01	0.4311
5	156.45	14.55	39.13	0.2994

Aiguadora Chondrostoma miegii Femelles 88
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 43.26649 + .8380891 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9982518
L.FURCAL∞ = 267.2241
TASA DE CRECIMIENTO (k) = .1766309
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.5534528
Coef. Correlación (r) = .9993475
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 267.2241 * [l-exp [-.1766309 * (t --.5534528)]]
PESO TOTAL(t) = 234.0484 * [l-exp [-.1766309 * (t --.5534528)]] ^3.157702

EDAD	LONGITUD	+LONG.	PESO	G
1	64.12	64.12	2.58	0.9486
2	97.01	32.88	9.54	1.3072
3	124.57	27.56	21.02	0.7896
4	147.67	23.1	35.97	0.5371
5	167.02	19.36	53.07	0.389
6	183.25	16.22	71.11	0.2927

Aiguadora Chondrostoma miegii Mascles 88
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 40.59115 + .8332773 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9985612
L.FURCAL∞ = 243.465
TASA DE CRECIMIENTO (k) = .1823888
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.8693187
Coef. Correlación (r) = .9993708
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 243.465 * [l-exp [-.1823888 * (t --.8693187)]]
PESO TOTAL(t) = 175.8208 * [l-exp [-.1823888 * (t --.8693187)]] ^3.246806

EDAD	LONGITUD	+LONG.	PESO	G
1	70.34	70.34	3.12	1.1380
2	99.20	28.86	9.53	1.1164
3	123.25	24.05	19.28	0.7048
4	143.30	20.04	31.45	0.4892
5	160.00	16.70	44.99	0.3579
6	173.91	13.92	58.98	0.2708
7	185.51	11.60	72.73	0.2096

Aiguadora Chondrostoma miegii Femelles 89
METODO DE FORD-WALFORD
I.FURCAL(t+I) = 43.49678 + .8270696 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9990167
L.FURCAL∞ = 251.5276
TASA DE CRECIMIENTO (k) = .1898664
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.6943196
Coef. Correlación (r) = .9997049
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 251.5276 * [I-exp [-.1898664 * (t --.6943196)]]
PESO TOTAL(t) = 171.7901 * [I-exp [-.1898664 * (t --.6943196)]] ^2.992739

EDAD	LONGITUD	+LONG.	PESO	G
1	69.19	69.19	3.61	1.2836
2	100.72	31.53	11.10	1.1238
3	126.80	26.08	22.12	0.6891
4	148.37	21.57	35.40	0.4701
5	166.21	17.84	49.72	0.3398
6	180.96	14.75	64.13	0.2545
7	193.17	12.20	77.96	0.1953

Aiguadora Chondrostoma miegii Mascles 89
METODO DE FORD-WALFORD
L.FURCAL(t+I) = 57.34904 + .6586908 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9999696
L.FURCAL∞ = 168.0266
TASA DE CRECIMIENTO (k) = .4175012
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.2715184
Coef. Correlación (r) = .9999996
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 168.0266 * [I-exp [-.4175012 * (t --.2715184)]]
PESO TOTAL(t) = 49.37607 * [I-exp [-.4175012 * (t --.2715184)]] ^2.961645

EDAD	LONGITUD	+LONG.	PESO	G
1	69.21	69.21	3.57	1.2726
2	102.94	33.73	11.57	1.1757
3	125.15	22.22	20.64	0.5788
4	139.79	14.63	28.63	0.3275

Nonasp Chondrostoma miegii Femelles 85
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 35.48187 + .8230559 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9992126
L.FURCAL∞ = 200.5258
TASA DE CRECIMIENTO (k) = .1947312
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -1.080025
Coef. Correlación (r) = .9998354
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 200.5258 * [1-exp [-.1947312 * (t --1.080025)]]
PESO TOTAL(t) = 113.9108 * [1-exp [-.1947312 * (t --1.080025)]] ^3.190656

EDAD	LONGITUD	+LONG.	PESO	G
1	66.79	66.79	3.41	1.2274
2	90.45	23.66	8.98	0.9678
3	109.93	19.48	16.73	0.6222
4	125.96	16.03	25.84	0.4343
5	139.15	13.19	35.50	0.3179

Nonasp Chondrostoma miegii Mascles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 37.24718 + .8189898 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9999535
L.FURCAL∞ = 205.7739
TASA DE CRECIMIENTO (k) = .1996838
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.9552317
Coef. Correlación (r) = 1.000034
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 205.7739 * [l-exp [-.1996838 * (t --.9552317)]]
PESO TOTAL(t) = 87.73613 * [l-exp [-.1996838 * (t --.9552317)]] ^3.200555

EDAD	LONGITUD	+LONG.	PESO	G
1	66.51	66.51	2.36	0.8597
2	91.72	25.21	6.61	1.0285
3	112.37	20.64	12.65	0.6497
4	129.27	16.91	19.82	0.4486

Nonasp Chondrostoma miegii Femelles 86
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 39.62794 + .7859805 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9973733
L.FURCAL∞ = 185.1604
TASA DE CRECIMIENTO (k) = .2408234
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.7012898
Coef. Correlación (r) = .9989659
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 185.1604 * [l-exp [-.2408234 * (t --.7012898)]]
PESO TOTAL(t) = 86.7721 * [l-exp [-.2408234 * (t --.7012898)]] ^3.12831

EDAD	LONGITUD	+LONG.	PESO	G
1	62.24	62.24	2.87	1.0529
2	88.55	26.31	8.63	1.1028
3	109.23	20.68	16.65	0.6565
4	125.48	16.25	25.69	0.4339
5	138.25	12.77	34.79	0.3033
6	148.29	10.04	43.32	0.2193

Nonasp Chondrostoma miegii Mascles 86
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 35.14023 + .8420592 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9997754
L.FURCAL∞ = 222.4899
TASA DE CRECIMIENTO (k) = .171905
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.8658467
Coef. Correlación (r) = .9999664
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VON BERTALANFFY)
L.FURCAL(t) = 222.4899 * [l-exp [-.171905 * (t --.8658467)]]
PESO TOTAL(t) = 115.145 * [l-exp [-.171905 * (t --.8658467)]] ^2.724752

EDAD	LONGITUD	+LONG.	PESO	G
1	61.05	61.05	3.40	1.2226
2	86.55	25.50	8.79	0.9510
3	108.02	21.47	16.08	0.6038
4	126.10	18.08	24.51	0.4217

Nonasp Chondrostoma miegii Femelles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 38.21708 + .8302736 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9993306
L.FURCAL∞ = 225.1688
TASA DE CRECIMIENTO (k) = .186
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.7645715
Coef. Correlación (r) = .9998316
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 225.1688 * [l-exp [-.186 * (t --.7645715)]]
PESO TOTAL(t) = 180.7888 * [l-exp [-.186 * (t --.7645715)]] ^3.152774

EDAD	LONGITUD	+LONG.	PESO	G
1	63.00	63.00	3.26	1.1816
2	90.52	27.52	10.22	1.1428
3	113.38	22.85	20.78	0.7097
4	132.35	18.97	33.85	0.4879
5	148.10	15.75	48.26	0.3546
6	161.18	13.08	63.01	0.2668

Nonasp Chondrostoma miegii Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 31.33739 + .8612013 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9917294
L.FURCAL∞ = 225.7758
TASA DE CRECIMIENTO (k) = .1494271
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -1.816736
Coef. Correlación (r) = .9984328
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 225.7758 * [l-exp [-.1494271 * (t --1.816736)]]
PESO TOTAL(t) = 160.9639 * [l-exp [-.1494271 * (t --1.816736)]] ^3.067299

EDAD	LONGITUD	+LONG.	PESO	G
1	77.56	77.56	6.07	1.8039
2	98.14	20.57	12.50	0.7216
3	115.85	17.72	20.79	0.5091
4	131.11	15.26	30.39	0.3795
5	144.25	13.14	40.73	0.2930

Vall-de-roures Chondrostoma miegii Femelles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 34.66309 + .8811753 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9999987
L.FURCAL∞ = 291.7163
TASA DE CRECIMIENTO (k) = .1264987
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.8947622
Coef. Correlación (r) = .9999314
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 291.7163 * [l-exp [-.1264987 * (t --.8947622)]]
PESO TOTAL(t) = 276.4634 * [l-exp [-.1264987 * (t --.8947622)]] ^2.743391

EDAD	LONGITUD	+LONG.	PESO	G
1	62.17	62.17	3.98	1.3811
2	89.45	27.28	10.79	0.9979
3	113.48	24.03	20.74	0.6529
4	134.66	21.18	33.16	0.4694
5	153.32	18.66	47.34	0.3561

Vall-de-roures Chondrostoma miegii Mascles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 33.65183 + .8769122 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9994805
L.FURCAL∞ = 273.3969
TASA DE CRECIMIENTO (k) = .1313485
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.7755935
Coef. Correlación (r) = .999929
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VONBERTALANFFY)
L.FURCAL(t) = 273.3969 * [l-exp [-.1313485 * (t --.7755935)]]
PESO TOTAL(t) = 184.6699 * [l-exp [-.1313485 * (t --.7755935)]] ^2.644361

EDAD	LONGITUD	+LONG.	PESO	G
1	56.87	56.87	2.91	1.0666
2	83.52	26.65	8.03	1.0163
3	106.90	23.37	15.41	0.6524
4	127.39	20.49	24.51	0.4638

Vall-de-roures Chondrostoma miegii Femelles 86
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 26.56769 + .9469673 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9966155
L.FURCAL∞ = 500.9681
TASA DE CRECIMIENTO (k) = 5.449075E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -1.606651
Coef. Correlación (r) = .9985688
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 500.9681 * [l-exp [-5.449075E-02 * (t --1.606651)]]
PESO TOTAL(t) = 1852.173 * [l-exp [-5.449075E-02 * (t --1.606651)]] ^3.060993

EDAD	LONGITUD	+LONG.	PESO	G
1	66.33	66.33	3.80	1.3353
2	89.38	23.05	9.47	0.9129
3	111.21	21.83	18.49	0.6688
4	131.88	20.67	31.15	0.5218
5	151.46	19.57	47.58	0.4236
6	169.99	18.54	67.75	0.3534
7	187.54	17.55	91.52	0.3008

Vall-de-roures Chondrostoma miegii Mascles 86
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 42.37709 + .7910136 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9851939
L.FURCAL∞ = 202.7743
TASA DE CRECIMIENTO (k) = .2344402
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.2961789
Coef. Correlación (r) = .9956491
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 202.7743 * [l-exp [-.2344402 * (t --.2961789)]]
PESO TOTAL(t) = 108.432 * [l-exp [-.2344402 * (t --.2961789)]] ^3.015262

EDAD	LONGITUD	+LONG.	PESO	G
1	53.14	53.14	1.91	0.6480
2	84.41	31.27	7.72	1.3955
3	109.15	24.74	16.75	0.7750
4	128.71	19.57	27.54	0.4972
5	144.19	15.48	38.79	0.3424

Vall-de-roures Chondrostoma miegii Femelles 87
METODO DE FORD-WALFORD
L.FURCAL{t+l) = 32.52113 + .8873566 * L.FURCAL{t)
COEFICIENTE DE CORRELACION = .9997492
L.FURCAL∞ = 288.7087
TASA DE CRECIMIENTO (k) = .1195084
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.9003001
Coef. Correlación (r) = .9998781
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL{t) = 288.7087 * [l-exp [-.1195084 * (t --.9003001)]]
PESO TOTAL{t) = 384.8829 * [l-exp [-.1195084 * (t --.9003001)]] ^3.182361

EDAD	LONGITUD	+LONG.	PESO	G
1	58.65	58.65	2.41	0.8810
2	84.57	25.91	7.73	1.1644
3	107.56	23.00	16.62	0.7654
4	127.97	20.40	28.89	0.5528
5	146.07	18.11	44.03	0.4211
6	162.14	16.07	61.37	0.3321
7	176.40	14.26	80.24	0.2682

Vall-de-roures Chondrostoma miegii Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 38.63618 + .8461319 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9986144
L.FURCAL∞ = 251.0993
TASA DE CRECIMIENTO (k) = .1670801
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.4370859
Coef. Correlación (r) = .9996798
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 251.0993 * [l-exp [-.1670801 * (t --.4370859)]]
PESO TOTAL(t) = 223.8155 * [l-exp [-.1670801 * (t --.4370859)]] ^3.094611

EDAD	LONGITUD	+LONG.	PESO	G
1	53.60	53.60	1.88	0.6318
2	83.99	30.39	7.55	1.3899
3	109.70	25.71	17.26	0.8265
4	131.46	21.76	30.21	0.5599
5	149.87	18.41	45.32	0.4056
6	165.44	15.58	61.54	0.3060

A2.5. Aplicació del model de creixement de Von Bertalanffy a la bagra (*Squalius cephalus*)

Aiguadora Squalius cephalus Femelles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 41.39439 + .8556957 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9990842
L.FURCAL∞ = 286.8548
TASA DE CRECIMIENTO (k) = .1558405
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.4439227
Coef. Correlación (r) = .9997643
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VON BERTALANFFY)
L.FURCAL(t) = 286.8548 * [1-exp [-.1558405 * (t --.4439227)]]
PESO TOTAL(t) = 305.3056 * [1-exp [-.1558405 * (t --.4439227)]] ^3.090317

EDAD	LONGITUD	+LONG.	PESO	G
1	57.80		2.16	0.7707
2	90.85		8.74	1.3976
3	119.14		20.20	0.8375
4	143.34		35.78	0.5715
5	164.05		54.30	0.4170
6	181.77		74.55	0.3170
7	196.94		95.49	0.2476

Aiguadora Squalius cephalus Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 37.26326 + .871808 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9994917
L.FURCAL∞ = 290.6831
TASA DE CRECIMIENTO (k) = .1371861
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.6169685
Coef. Correlación (r) = .9997714
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 290.6831 * [l-exp [-.1371861 * (t --.6169685)]]
PESO TOTAL(t) = 301.4815 * [l-exp [-.1371861 * (t --.6169685)]] ^3.071097

EDAD	LONGITUD	+LONG.	PESO	G
1	57.83	57.83	2.12	0.7497
2	87.68	29.85	7.60	1.2781
3	113.70	26.02	16.88	0.7982
4	136.39	22.69	29.51	0.5587
5	156.17	19.78	44.73	0.4159
6	173.41	17.24	61.70	0.3216
7	188.45	15.03	79.65	0.2553

Aiguadora Squalius cephalus Femelles 88
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 44.32806 + .8312675 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9986401
L.FURCAL∞ = 262.7119
TASA DE CRECIMIENTO (k) = .1848038
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.3496078
Coef. Correlación (r) = .9996409
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 262.7119 * [l-exp [-.1848038 * (t --.3496078)]]
PESO TOTAL(t) = 251.7013 * [l-exp [-.1848038 * (t --.3496078)]] ^3.093595

EDAD	LONGITUD	+LONG.	PESO	G
1	57.99	57.99	2.35	0.8546
2	92.53	34.54	9.98	1.4456
3	121.25	28.71	23.02	0.8361
4	145.12	23.87	40.13	0.5559
5	164.96	19.84	59.66	0.3965
6	181.45	16.49	80.11	0.2948

Aiguadora Squalius cephalus Mascles 88
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 48.38655 + .7617608 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9894772
L.FURCAL∞ = 203.1007
TASA DE CRECIMIENTO (k) = .2721226
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.1896259
Coef. Correlación (r) = .9984942
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 203.1007 * [l-exp [-.2721226 * (t --.1896259)]]
PESO TOTAL(t) = 119.0148 * [l-exp [-.2721226 * (t --.1896259)]] ^3.13185

EDAD	LONGITUD	+LONG.	PESO	G
1	56.17	56.17	2.12	0.7537
2	91.17	35.01	9.69	1.5171
3	117.84	26.67	21.63	0.8035
4	138.15	20.31	35.60	0.4981

Aiguadora Squalius cephalus Femelles 89
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 35.84811 + .9244985 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9993902
L.FURCAL∞ = 474.8
TASA DE CRECIMIENTO (k) = 7.850389E-02
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.8303853
Coef. Correlación (r) = .9999865
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 474.8 * [l-exp [-7.850389E-02 * (t --.8303853)]]
PESO TOTAL(t) = 1485.982 * [l-exp [-7.850389E-02 * (t --.8303853)]] ^3.053572

EDAD	LONGITUD	+LONG.	PESO	G
1	63.55	63.55	3.20	1.1629
2	94.60	31.05	10.78	1.2148
3	123.31	28.71	24.21	0.8092
4	149.84	26.54	43.91	0.5952

Aiguadora Squalius cephalus Mascles 89
METODO DE FORD-WALFORD
L.FURCAL(t+1} = 35.52894 + .8637159 * L.FURCAL(t}
COEFICIENTE DE CORRELACION = 1
L.FURCAL∞ = 260.6976
TASA DE CRECIMIENTO (k) = .1465114
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.9224384
Coef. Correlación (r) = .9999648
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 260.6976 * [l-exp [-.1465114 * (t --.9224384)]]
PESO TOTAL(t} = 239.2701 * [l-exp [-.1465114 * (t --.9224384)]] ^3.054655

EDAD	LONGITUD	+LONG.	PESO	G
1	63.99	63.99	3.28	1.1871
2	90.80	26.81	9.54	1.0688
3	113.96	23.15	19.10	0.6938
4	133.95	20.00	31.30	0.4939

Nonasp Squalius cephalus Femelles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 36.52145 + .9041466 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9994794
L.FURCAL∞ = 381.0136
TASA DE CRECIMIENTO (k) = .1007637
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.4025755
Coef. Correlación (r) = .9995771
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 381.0136 * [l-exp [-.1007637 * (t --.4025755)]]
PESO TOTAL(t) = 706.3583 * [l-exp [-.1007637 * (t --.4025755)]] ^3.013633

EDAD	LONGITUD	+LONG.	PESO	G
1	50.22	50.22	1.57	0.4530
2	81.92	31.71	6.88	1.4750
3	110.59	28.67	16.98	0.9043
4	136.51	25.92	32.04	0.6346
5	159.95	23.44	51.64	0.4775
6	181.14	21.19	75.13	0.3749
7	200.30	19.16	101.72	0.3030
8	217.62	17.32	130.61	0.2500
9	233.28	15.66	161.04	0.2094
10	247.44	14.16	192.34	0.1776
11	260.25	12.80	223.92	0.1520

Nonasp Squalius cephalus Mascles 85
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 40.01332 + .8631089 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9977642
L.FURCAL∞ = 292.3004
TASA DE CRECIMIENTO (k) = .1472144
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.254996
Coef. Correlación (r) = .9992578
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 292.3004 * [l-exp [-.1472144 * (t --.254996)]]
PESO TOTAL(t) = 286.8279 * [l-exp [-.1472144 * (t --.254996)]] ^2.954457

EDAD	LONGITUD	+LONG.	PESO	G
1	49.31	49.31	1.49	0.4009
2	82.57	33.26	6.85	1.5232
3	111.28	28.71	16.54	0.8816
4	136.06	24.78	29.95	0.5940
5	157.45	21.39	46.11	0.4313
6	175.91	18.46	63.98	0.3275

Nonasp Squalius cephalus Femelles 86
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 36.96856 + .8964888 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9991939
L.FURCAL∞ = 357.1452
TASA DE CRECIMIENTO (k) = .1092696
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.4179612
Coef. Correlación (r) = .9996411
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 35761452 * [l-exp [-.1092696 * (t --.4179612)]]
PESO TOTAL(t) = 654.4362 * [l-exp [-.1092696 * (t --.4179612)]] ^2.982901

EDAD	LONGITUD	+LONG.	PESO	G
1	51.26	51.26	2.00	0.6934
2	82.92	31.66	8.40	1.4347
3	111.31	28.38	20.21	0.8781
4	136.76	25.45	37.35	0.6141
5	159.57	22.81	59.18	0.4602
6	180.02	20.45	84.80	0.3597
7	198.35	18.33	113.25	0.2893
8	214.79	16.44	143.60	0.2375

Nonasp Squalius cephalus Mascles 86
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 37.22073 + .885178 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9995304
L.FURCAL∞ = 324.1602
TASA DE CRECIMIENTO (k) = .1219666
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.4062319
Coef. Correlación (r) = .9999127
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 324.1602 * [l-exp [-.1219666 * (t --.4062319)]]
PESO TOTAL(t) = 424.9004 * [l-exp [-.1219666 * (t --.4062319)]] ^2.866808

EDAD	LONGITUD	+LONG.	PESO	G
1	51.09	51.09	2.13	0.7551
2	82.45	31.35	8.39	1.3718
3	110.20	27.75	19.27	0.8318
4	134.77	24.57	34.32	0.5770
5	156.51	21.75	52.70	0.4289
6	175.76	19.25	73.48	0.3325

Nonasp Squalius cephalus Femelles 87
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 38.22884 + .8996304 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9989003
L.FURCAL∞ = 380.8807
TASA DE CRECIMIENTO (k) = .1057713
METODO DE BEVERTON C1954) PARA EL CALCULO DE to
to = -.4577231
Coef. Correlación (r) = .9996891
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 380.8807 * [l-exp [-.1057713 * (t --.4577231)]]
PESO TOTAL(t) = 1071.063 * [l-exp [-.1057713 * (t --.4577231)]] ^3.157809

EDAD	LONGITUD	+LONG.	PESO	G
1	54.42	54.42	2.30	0.8322
2	87.19	32.77	10.18	1.4883
3	116.67	29.48	25.54	0.9197
4	143.19	26.52	48.76	0.6468
5	167.04	23.86	79.33	0.4866
6	188.51	21.46	116.20	0.3817
7	207.81	19.31	158.11	0.3079
8	225.19	17.37	203.73	0.2535
9	240.81	15.63	251.80	0.2119

Nonasp Squalius cephalus Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 43.11046 + .843276 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9936846
L.FURCAL∞ = 275.0725
TASA DE CRECIMIENTO (k) = .170461
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -9.646787E-02
Coef. Correlación (r) = .9961812
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VON BERTALANFFY)
L.FURCAL(t) = 275.0725 * [l-exp [-.170461 * (t --9.646787E-02)]]
PESO TOTAL(t) = 371.3369 * [l-exp [-.170461 * (t --9.646787E-02)]] ^3.183405

EDAD	LONGITUD	+LONG.	PESO	G
1	46.89	46.89	1.33	0.2852
2	82.65	35.76	8.08	1.8043
3	112.81	30.16	21.75	0.9902
4	138.24	25.43	41.55	0.6471
5	159.69	21.44	65.75	0.4591
6	177.77	18.08	92.52	0.3415
7	193.02	15.25	120.23	0.2620
8	205.88	12.86	147.63	0.2053

Ripoll Squalius cephalus Femelles 87
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 36.51915 + .8795662 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9982644
L.FURCAL∞ = 303.23
TASA DE CRECIMIENTO (k) = .1283265
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.6876653
Coef. Correlación (r) = .9988716
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VON BERTALANFFY)
L.FURCAL(t) = 303.23 * [1-exp [-.1283265 * (t --.6876653)]]
PESO TOTAL(t) = 367.0077 * [1-exp [-.1283265 * (t --.6876653)]] ^3.099351

EDAD	LONGITUD	+LONG.	PESO	G
1	59.05	59.05	2.30	0.8343
2	88.45	29.41	8.06	1.2526
3	114.32	25.87	17.85	0.7950
4	137.07	22.75	31.33	0.5625
5	157.08	20.01	47.79	0.4223
6	174.68	17.60	66.42	0.3292
7	190.17	15.48	86.42	0.2632
8	203.78	13.62	107.08	0.2143

Ripoll Squalius cephalus Mascles 87
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 35.89736 + .8855071 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9948888
L.FURCAL∞ = 313.5334
TASA DE CRECIMIENTO (k) = .1215948
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.9531776
Coef. Correlación (r) = .9982703
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VON BERTALANFFY)
L.FURCAL(t) = 313.5334 * [l-exp [-.1215948 * (t --.9531776)]]
PESO TOTAL(t) = 394.6061 * [l-exp [-.1215948 * (t --.9531776)]] ^3.081865

EDAD	LONGITUD	+LONG.	PESO	G
1	66.28	66.28	3.28	1.1887
2	94.59	28.31	9.82	1.0960
3	119.66	25.07	20.27	0.7245
4	141.85	22.20	34.25	0.5244
5	161.51	19.66	51.09	0.3999
6	178.92	17.41	70.04	0.3154

Ripoll Squalius cephalus Femelles 88
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 40.16241 + .8412158 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9992818
L.FURCAL∞ = 252.9369
TASA DE CRECIMIENTO (k) = .1729072
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.8861063
Coef. Correlación (r) = .9997375
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VON BERTALANFFY)
L.FURCAL(t) = 252.9369 * [1-exp [-.1729072 * (t --.8861063)]]
PESO TOTAL(t) = 216.9297 * [1-exp [-.1729072 * (t --.8861063)]] ^3.143246

EDAD	LONGITUD	+LONG.	PESO	G
1	70.39	70.39	3.89	1.3590
2	99.37	28.99	11.51	1.0840
3	123.76	24.38	22.94	0.6897
4	144.27	20.51	37.14	0.4820
5	161.52	17.25	52.98	0.3551
6	176.04	14.51	69.43	0.2705

Ripoll Squalius cephalus Mascles 88
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 39.91231 + .8727644 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .999202
L.FURCAL∞ = 313.6881
TASA DE CRECIMIENTO (k) = .1360897
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.5506753
Coef. Correlación (r) = .9995706
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 313.6881 * [1-exp [-.1360897 * (t --.5506753)]]
PESO TOTAL(t) = 373.8803 * [1-exp [-.1360897 * (t --.5506753)]] ^3.038768

EDAD	LONGITUD	+LONG.	PESO	G
1	59.68	59.68	2.41	0.8814
2	92.00	32.32	8.99	1.3151
3	120.21	28.21	20.27	0.8127
4	144.82	24.62	35.71	0.5662
5	166.31	21.49	54.36	0.4204
6	185.06	18.75	75.21	0.3247
7	201.43	16.37	97.30	0.2575
8	215.71	14.28	119.82	0.2082
9	228.18	12.47	142.13	0.1707
10	239.06	10.88	163.74	0.1415

Ripoll Squalius cephalus Femelles 89
METODO DE FORD-WALFORD
L.FURCAL(t+l) = 35.63491 + .8955621 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9988778
L.FURCAL∞ = 341.2066
TASA DE CRECIMIENTO (k) = .1103038
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -1.004064
Coef. Correlación (r) = .9997221
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 341.2066 * [1-exp [-.1103038 * (t --1.004064)]]
PESO TOTAL(t) = 536.9193 * [1-exp [-.1103038 * (t --1.004064)]] ^3.11626

EDAD	LONGITUD	+LONG.	PESO	G
1	67.67	67.67	3.47	1.2443
2	96.24	28.57	10.40	1.0975
3	121.82	25.58	21.68	0.7346
4	144.73	22.91	37.09	0.5370
5	165.25	20.52	56.07	0.4132
6	183.63	18.38	77.88	0.3286

Ripoll Squalius cephalus Mascles 89
METODO DE FORD-WALFORD
L.FURCAL(t+1) = 38.2743 + .8592696 * L.FURCAL(t)
COEFICIENTE DE CORRELACION = .9988499
L.FURCAL∞ = 271.969
TASA DE CRECIMIENTO (k) = .1516725
METODO DE BEVERTON (1954) PARA EL CALCULO DE to
to = -.6754064
Coef. Correlación (r) = .9998324
ECUACIONES DE CRECIMIENTO TEORICO (MODELO VaN BERTALANFFY)
L.FURCAL(t) = 271.969 * [l-exp [-.1516725 * (t --.6754064)]]
PESO TOTAL(t) = 268.8191 * [l-exp [-.1516725 * (t --.6754064)]] ^3.141075

EDAD	LONGITUD	+LONG.	PESO	G
1	61.03	61.03	2.46	0.9002
2	90.71	29.69	8.54	1.2450
3	116.22	25.51	18.61	0.7783
4	138.14	21.92	32.02	0.5427

ANNEX 3. CÀLCUL DE LA PRODUCCIÓ SECUNDÀRIA DE LA COMUNITAT ÍCTICA DELS RIUS MEDITERRANIS

A3.1. Càlcul de la producció secundària de la comunitat íctica de l'Aigua d'Ora

l'Aigua d'Ora 87 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.223198801	0	0	0
31-35	0	0.388302453	-5.79048261	0	0
36-40	12.01557431	0.598095206	-9.24320031	0	7.186457394
41-45	24.8035157	0.873520564	-73.66129199	0	21.66638103
46-50	96.0451873	1.223875746	-54.64757949	0	117.5473752
51-55	134.4017553	1.658536566	49.9738423	49.9738423	222.9102256
56-60	108.1619374	2.186949736	99.07608926	99.07608926	236.5447205
61-65	68.25662799	2.818626589	-160.8578925	0	192.3899465
66-70	119.0149538	3.563137862	-72.96334611	0	424.0666881
71-75	137.3795427	4.430109282	273.9282972	273.9282972	608.6063871
76-80	81.52467253	5.429217787	88.98720068	88.98720068	442.6152022
81-85	66.62523043	6.570188252	68.40974099	68.40974099	437.7403063
86-90	57.10734037	7.862790619	340.6832551	340.6832551	449.0230601
91-95	17.30320675	9.316837364	-317.4203282	0	161.2111631
96-100	48.74074472	10.94218125	258.8920433	258.8920433	533.3300628
101-105	26.82109681	12.74871329	-312.4226082	0	341.9344732
106-110	49.60703141	14.74636095	379.9880771	379.9880771	731.5231909
111-115	25.56862658	16.9450865	-494.4233058	0	433.2625891
116-120	52.86982653	19.3548855	271.6119048	271.6119048	1023.289439
121-125	39.70295781	21.98578542	-231.4883883	0	872.9007107
126-130	49.60703141	24.84784441	402.8352071	402.8352071	1232.627798
131-135	34.32140577	27.95115014	-1751.750613	0	959.3227655
136-140	93.54024684	31.30581867	1436.755719	1436.755719	2928.354006
141-145	50.08713456	34.92199355	594.6267132	594.6267132	1749.14259
146-150	33.93522222	38.80984481	-1723.835038	0	1317.020708
151-155	76.14312049	42.97956814	1424.143254	1424.143254	3272.598435
156-160	44.6044067	47.44138407	636.4108824	636.4108824	2116.094789
161-165	31.8164653	52.20553723	41.84011457	41.84011457	1660.995664
166-170	31.05135443	57.28229563	795.0388977	795.0388977	1778.692864
171-175	17.78330989	62.68195	56.72937028	56.72937028	1114.692541
176-180	16.9170232	68.41481313	590.0550505	590.0550505	1157.374981
181-185	8.651603373	74.49121934	447.806002	447.806002	644.4684845
186-190	2.883867791	80.92152386	-1433.789142	0	233.3669763
191-195	19.90206681	87.71610233	1289.479701	1289.479701	1745.731729
195-200	5.767735582	94.88535026	0	0	547.2736109

Producció anual (gr/ha)	39552.98136
Biomassa anual (gr/ha)	29715.50632
P / B	1.331055272

l'Aigua d'Ora 87 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	16.1446561	0.20156718	-9.97953474	0	3.25423273
31-35	53.8155204	0.34816861	-2.31883688	0	18.7368748
36-40	59.1970724	0.53325594	-0.98778895	0	31.5671902
41-45	60.7336491	0.77496869	-3.88739738	0	47.0666762
46-50	64.9808469	1.08100761	20.9347582	20.9347582	70.2447902
51-55	48.3118009	1.45910201	-1.01495868	0	70.4918458
56-60	48.9186681	1.91700679	-46.7700131	0	93.7774189
61-65	70.4448763	2.46250012	127.738945	127.738945	173.470516
66-70	24.2368292	3.10338148	61.518843	61.518843	75.216127
71-75	6.43342895	3.84746999	-77.6214604	0	24.7524248
76-80	24.6818389	4.70260304	-180.203534	0	116.068891
81-85	59.5596047	5.67663503	-90.0974194	0	338.098139
86-90	74.0852068	6.77743633	19.9754324	19.9754324	502.107772
91-95	71.3745857	8.01289235	-625.124139	0	571.916872
96-100	143.438516	9.3909027	-754.316682	0	1347.01715
101-105	217.929042	10.9193805	495.629366	495.629366	2379.65013
106-110	175.685041	12.6062515	391.687148	391.687148	2214.72981
111-115	146.673527	14.4594538	837.779961	837.779961	2120.81909
116-120	92.412997	16.4869372	463.160298	463.160298	1523.60728
121-125	66.0327238	18.6966625	638.8528	638.8528	1234.59155
126-130	33.865579	21.0966011	-876.598393	0	714.448612
131-135	73.07302	23.6947349	983.442656	983.442656	1731.44584
136-140	33.8258889	26.4990556	-2176.10472	0	896.354112
141-145	111.633904	29.5175643	1733.81754	1733.81754	3295.16093
146-150	55.876487	32.7582714	351.250178	351.250178	1830.41713
151-155	45.68056	36.2291961	-244.718615	0	1654.96997
156-160	52.113989	39.9383663	1035.0758	1035.0758	2081.34758
161-165	27.39246	43.893818	122.730671	122.730671	1202.35965
166-170	24.721529	48.1035953	783.391189	783.391189	1189.19443
171-175	9.14405003	52.5757504	-1263.87247	0	480.755292
176-180	32.1671448	57.3183427	607.101179	607.101179	1843.76743
181-185	22.0109079	62.3394391	417.780909	417.780909	1372.14765
186-190	15.577479	67.6471138	190.807581	190.807581	1053.77149
191-195	12.8668579	73.2494479	-489.87195	0	942.490238
195-200	19.3002869	79.1545293	0	0	1527.70512

Producció anual (gr/ha)	38456.7975
Biomassa anual (gr/ha)	34773.5202
P / B	1.1059219

l'Aigua d'Ora 87 *B. haasi*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	11.2310651	0.29880396	0.7900099	0.7900099	3.35588674
31-35	9.2043793	0.50851745	-4.49074947	0	4.68058746
36-40	16.3820728	0.76977177	-16.5663597	0	12.6104572
41-45	34.3263064	1.10724151	-51.8367291	0	38.0075115
46-50	74.1474258	1.53040329	54.3227261	54.3227261	113.475465
51-55	43.4683725	2.04867616	42.7834227	42.7834227	89.0526183
56-60	25.1803335	2.67142792	38.6011588	38.6011588	67.2674461
61-65	12.3871075	3.40798031	-27.3732249	0	42.2150184
66-70	19.564801	4.26761309	-120.648997	0	83.4950008
71-75	45.0305334	5.25956769	-113.450003	0	236.841138
76-80	64.5953344	6.39305005	-624.821008	0	412.961206
81-85	153.781851	7.67723331	-136.566299	0	1180.61915
86-90	170.10161	9.12125992	-292.128405	0	1551.541
91-95	199.624621	10.7342437	-1257.73237	0	2142.81933
96-100	308.094447	12.5252713	75.6340305	75.6340305	3858.96654
101-105	302.482821	14.5034042	92.7439143	92.7439143	4387.03063
106-110	296.519576	16.6776797	-583.069503	0	4945.25851
111-115	329.225315	19.0571121	-1054.76442	0	6274.08373
116-120	381.15205	21.650694	846.047599	846.047599	8252.20641
121-125	344.392939	24.4673975	3886.62855	3886.62855	8426.39895
126-130	194.602147	27.5161747	699.572284	699.572284	5354.70667
131-135	170.573949	30.8059587	777.528151	777.528151	5254.69402
136-140	146.670377	34.3456645	1730.38583	1730.38583	5037.49158
141-145	98.8632344	38.1441898	638.70479	638.70479	3771.05798
146-150	82.9456866	42.2104152	-3638.27671	0	3501.17187
151-155	165.02073	46.5532054	3173.07313	3173.07313	7682.24393
156-160	100.01537	51.1814093	-899.614412	0	5118.92759
161-165	116.803561	56.1038609	2760.30403	2760.30403	6553.13075
166-170	69.746342	61.3293795	2016.39696	2016.39696	4277.49988
171-175	38.2589585	66.8667704	221.94536	221.94536	2558.25299
176-180	35.0762303	72.7248253	1600.48204	1600.48204	2550.91272
181-185	13.9492684	78.9123224	1145.37962	1145.37962	1100.76917
186-190	0	85.4380274	0	0	0
191-195	0	92.3106933	-1032.04573	0	0
195-200	10.7665402	99.5390612	0	0	1071.6913

Producció anual (gr/ha)	90520.3364
Biomassa anual (gr/ha)	95955.437
P / B	0.94335808

l'Aigua d'Ora 88 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	180.695222	0.24604037	-166.539598	0	44.4583202
31-35	693.663621	0.42839799	-435.143881	0	297.164098
36-40	1511.83097	0.66028899	553.275936	553.275936	998.245342
41-45	818.675606	0.96491339	-607.02105	0	789.951053
46-50	1350.01411	1.35262245	191.065418	191.065418	1826.0594
51-55	1228.7002	1.83386072	1706.45673	1706.45673	2253.26502
56-60	418.522856	2.41915687	754.161473	754.161473	1012.47244
61-65	143.97596	3.11911637	-30.139947	0	449.077773
66-70	152.568773	3.94441524	249.293038	249.293038	601.794596
71-75	95.8973474	4.9057949	6.24323668	6.24323668	470.452718
76-80	94.7479471	6.01405764	-226.789405	0	569.819615
81-85	129.022469	7.2800628	73.8293189	73.8293189	939.291676
86-90	119.753435	8.71472331	-64.9008986	0	1043.61805
91-95	126.594043	10.3290028	-149.648983	0	1307.59022
96-100	139.961356	12.1339127	602.339564	602.339564	1698.27888
101-105	93.9771794	14.1405102	376.437829	376.437829	1328.88526
106-110	69.22745	16.3598958	-666.003517	0	1132.55387
111-115	107.200042	18.8032115	917.090091	917.090091	2015.70506
116-120	61.5688009	21.4816389	-990.373393	0	1322.59875
121-125	104.82152	24.4063978	1856.68944	1856.68944	2558.31572
126-130	33.2695728	27.5887444	12.6610726	12.6610726	917.86574
131-135	32.8369157	31.0399701	-933.035399	0	1019.25688
136-140	61.2374416	34.7714005	551.193869	551.193869	2129.31161
141-145	46.229926	38.7943934	797.193351	797.193351	1793.46194
146-150	26.7387473	43.1203388	-1603.69594	0	1152.98384
151-155	62.0770593	47.7606569	1647.83302	1647.83302	2964.84113
156-160	29.2401436	52.7267978	743.822672	743.822672	1541.73914
161-165	15.7931088	58.0302401	-3491.95165	0	916.477895
166-170	73.2353026	63.6824907	4367.3442	4367.3442	4663.80647
171-175	7.68022581	69.6950832	115.201298	115.201298	535.273977
176-180	6.09816835	76.0795778	-1572.02766	0	463.946073
181-185	25.8991296	82.8475605	2236.51575	2236.51575	2145.67971
186-190	0	90.010642	-719.784257	0	0
191-195	7.68022581	97.5804575	779.512227	779.512227	749.439949
195-200	0	105.568666	0	0	0

Producció anual (gr/ha)	84745.8722
Biomassa anual (gr/ha)	43653.6822
P / B	1.94132242

l'Aigua d'Ora 88 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.17790373	-6.83672956	0	0
31-35	28.9334471	0.31384224	-4.53273343	0	9.08053772
36-40	40.5068259	0.48875209	-63.5738504	0	19.797796
41-45	147.619681	0.72075093	-162.544103	0	106.397022
46-50	337.327603	1.01855923	57.0800579	57.0800579	343.588145
51-55	289.374191	1.39105236	236.291994	236.291994	402.53465
56-60	141.968301	1.84724658	201.293341	201.293341	262.250459
61-65	46.2935153	2.39628763	84.7887172	84.7887172	110.932578
66-70	14.917273	3.04744112	-20.6524573	0	45.4595111
71-75	20.9781682	3.81008433	-31.2479605	0	79.9285902
76-80	28.3673569	4.69369921	-38.9653872	0	133.147841
81-85	35.8954412	5.7078662	72.923198	72.923198	204.886376
86-90	24.243581	6.86225882	136.117278	136.117278	166.365728
91-95	6.06089525	8.16663892	-90.3235607	0	49.497143
96-100	16.2455664	9.63085232	4.8947215	4.8947215	156.458651
101-105	15.7756362	11.264825	-39.6351281	0	177.70978
106-110	19.0410489	13.0785596	-6.60001206	0	249.029493
111-115	19.5109792	15.0821322	-522.37098	0	294.267167
116-120	51.8632163	17.2856895	454.538088	454.538088	896.491451
121-125	27.2312024	19.699446	-259.566913	0	536.4396
126-130	39.6061156	22.3336818	285.716912	285.716912	884.550382
131-135	27.5622369	25.19874	376.889867	376.889867	694.533643
136-140	13.4500839	28.305025	0	0	380.704961
141-145	13.4500839	31.6630001	93.4365309	93.4365309	425.870008
146-150	10.6546014	35.2831859	-512.364803	0	375.928282
151-155	24.4357199	39.1761588	513.19939	513.19939	957.297642
156-160	11.9828948	43.352549	127.286599	127.286599	519.489034
161-165	9.18741231	47.8230391	230.392274	230.392274	439.369978
166-170	4.59370616	52.598363	99.0552436	99.0552436	241.621424
171-175	2.7954825	57.6893041	-108.499834	0	161.26944
176-180	4.59370616	63.1066944	-302.823025	0	289.893611
181-185	9.18741231	68.8614132	660.098379	660.098379	632.658195
186-190	0	74.9643858	-358.90029	0	0
191-195	4.59370616	81.4265827	389.426823	389.426823	374.049794
195-200	0	88.2590183	0	0	0

Producció anual (gr/ha)	15087.8603
Biomassa anual (gr/ha)	10621.4989
P / B	1.42050199

l'Aigua d'Ora 88 *B. haasi*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	151.49216	0.32747232	-394.472222	0	49.6094886
31-35	1072.7226	0.55991449	-580.243162	0	600.632922
36-40	1913.46015	0.85070202	511.603183	511.603183	1627.78442
41-45	1412.83404	1.2276145	804.212012	804.212012	1734.41555
46-50	856.41596	1.70167508	337.042225	337.042225	1457.3417
51-55	685.449881	2.28387371	617.053962	617.053962	1565.48097
56-60	449.128773	2.98517074	189.922203	189.922203	1340.72607
61-65	392.861155	3.81649975	847.295738	847.295738	1499.3545
66-70	194.667195	4.78876998	652.023491	652.023491	932.216419
71-75	72.1344532	5.9128683	-228.650126	0	426.521522
76-80	107.178667	7.19966091	-300.786048	0	771.650059
81-85	145.271463	8.65999479	-118.636257	0	1258.05011
86-90	157.830055	10.304699	-2861.13587	0	1626.39121
91-95	413.588202	12.1445856	-2049.46683	0	5022.85733
96-100	569.70565	14.1904511	125.087775	125.087775	8084.38017
101-105	561.519246	16.4530767	2373.66543	2373.66543	9238.71924
106-110	427.066731	18.9432297	3574.74924	3574.74924	8090.0232
111-115	250.636728	21.6716638	-235.64463	0	5431.71489
116-120	260.832279	24.6491196	-1273.35911	0	6429.28605
121-125	309.400762	27.886326	1919.05327	1919.05327	8628.05051
126-130	244.54209	31.3939995	-360.460603	0	7677.15426
131-135	255.388075	35.182846	4267.04345	4267.04345	8985.27931
136-140	140.581504	39.2635602	644.566947	644.566947	5519.73036
141-145	125.011209	43.6468265	1355.04909	1355.04909	5456.34254
146-150	95.5119939	48.3433194	-3140.01838	0	4617.36683
151-155	157.333698	53.3637038	3879.47659	3879.47659	8395.90887
156-160	88.0290798	58.7186352	-2837.93728	0	5168.94743
161-165	134.172378	64.4187602	3613.26634	3613.26634	8643.21825
166-170	80.5461657	70.4747166	3062.2993	3062.2993	5676.4682
171-175	38.9478363	76.8971339	2228.44821	2228.44821	2994.97698
176-180	11.170316	83.6966333	408.820104	408.820104	934.91784
181-185	6.48288438	90.8838284	-84.3760877	0	589.189351
186-190	7.37480375	98.4693247	755.0953	755.0953	726.191945
191-195	0	106.463721	-407.792263	0	0
195-200	3.68740188	114.877607	0	0	423.599903

Producció anual (gr/ha)	142448.427
Biomassa anual (gr/ha)	131624.498
P / B	1.08223339

l'Aigua d'Ora 89 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	32.5191093	0.25221495	-73.8643128	0	8.20180545
31-35	254.906875	0.43739793	-226.845635	0	111.495738
36-40	673.310461	0.67203724	-198.09547	0	452.489702
41-45	917.487832	0.97936577	183.905424	183.905424	898.556177
46-50	758.691192	1.36949842	721.340504	721.340504	1039.02639
51-55	305.827987	1.85261438	40.7458235	40.7458235	566.581325
56-60	286.659445	2.43895067	63.6301841	63.6301841	699.148245
61-65	263.661976	3.13879698	475.497763	475.497763	827.581414
66-70	128.833165	3.96249133	363.440581	363.440581	510.500301
71-75	46.5239752	4.92041638	126.894612	126.894612	228.91733
76-80	23.2143143	6.02299633	77.2783159	77.2783159	139.81973
81-85	11.5444729	7.2806942	-196.318887	0	84.0517766
86-90	36.2057753	8.70400951	80.9809085	80.9809085	315.135412
91-95	27.6544961	10.3034761	176.901649	176.901649	284.93744
96-100	11.8043619	12.0896604	153.973283	153.973283	142.710726
101-105	0	14.0731596	0	0	0
106-110	0	16.2646004	-303.116115	0	0
111-115	17.3924691	18.6746373	69.4872783	69.4872783	324.798052
116-120	13.9095192	21.3139518	-76.9257321	0	296.466823
121-125	17.2971224	24.193251	4.23049339	4.23049339	418.473624
126-130	17.1325801	27.3232665	-107.670297	0	468.118052
131-135	20.8492679	30.7147538	115.427069	115.427069	640.38013
136-140	17.2971224	34.3784909	-5.97260313	0	594.648966
141-145	17.4616647	38.3252781	42.5136436	42.5136436	669.223157
146-150	16.409086	42.5659368	734.815105	734.815105	698.468119
151-155	0	47.1113089	-920.842123	0	0
156-160	18.6095901	51.9722561	820.695167	820.695167	967.182382
161-165	3.5521455	57.1596596	-897.171601	0	203.039427
166-170	18.5403945	62.6844191	0	0	1162.19386
171-175	18.5403945	68.5574524	-341.507155	0	1271.08221
176-180	23.309661	74.7896951	394.420522	394.420522	1743.32244
181-185	18.2543544	81.3920998	750.943654	750.943654	1485.76024
186-190	9.40014173	88.3756358	-1261.98889	0	830.743502
191-195	23.1189676	95.7512887	0	0	2213.67094
195-200	23.1189676	103.53006	0	0	2393.5081

Producció anual (gr/ha)	26086.0896
Biomassa anual (gr/ha)	22690.2335
P / B	1.14966157

l'Aigua d'Ora 89 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	19.0227234	0.23320525	5.80289424	5.80289424	4.43619897
31-35	0	0.39903005	-10.3689495	0	0
36-40	21.0753583	0.60661617	-76.8481519	0	12.7846531
41-45	126.505866	0.87583093	-166.829206	0	110.79775
46-50	288.256392	1.21459779	-571.454874	0	350.115577
51-55	694.290631	1.63082019	40.7830973	40.7830973	1132.26318
56-60	672.420847	2.13238369	563.748515	563.748515	1433.85924
61-65	438.646093	2.7271577	825.624413	825.624413	1196.25707
66-70	168.421952	3.42299694	451.714817	451.714817	576.507825
71-75	49.679281	4.22774261	100.639634	100.639634	210.031213
76-80	28.1095907	5.1492234	23.2640801	23.2640801	144.742562
81-85	23.9906515	6.19525642	-61.4164945	0	148.628238
86-90	33.0775188	7.3736479	-231.837218	0	243.901977
91-95	62.0360984	8.6921939	264.142256	264.142256	539.229796
96-100	33.9265077	10.1586809	-316.799798	0	344.648565
101-105	62.8850874	11.7808862	231.349771	231.349771	740.842059
106-110	44.5853472	13.5665787	-10.7302783	0	604.870623
111-115	45.3247494	15.5235191	682.247982	682.247982	703.599612
116-120	4.11893913	17.6594601	2.05858121	2.05858121	72.7382415
121-125	4.00935234	19.9821474	0	0	80.1154693
126-130	4.00935234	22.499319	-191.007452	0	90.2076975
131-135	12.028057	25.2187068	-106.821747	0	303.332043
136-140	16.0374094	28.1480355	234.741426	234.741426	451.421568
141-145	8.12829148	31.295024	-524.19737	0	254.375076
146-150	24.0429254	34.6673848	583.690625	583.690625	833.505347
151-155	8.01870468	38.2728249	0	0	306.89848
156-160	8.01870468	42.1190454	176.888277	176.888277	337.740187
161-165	4.00935234	46.2137421	-5.29745277	0	185.287175
166-170	4.11893913	50.5646054	217.568922	217.568922	208.272532
171-175	0	55.1793207	-286.006743	0	0
176-180	4.9679281	60.0655685	60.0020844	60.0020844	298.401426
181-185	4.00935234	65.2310243	-272.245	0	261.53416
186-190	8.01870468	70.6833591	589.380034	589.380034	566.788983
191-195	0	76.4302394	0	0	0
195-200	0	82.4793271	0	0	0

Producció anual (gr/ha)	23824.3378
Biomassa anual (gr/ha)	12748.1345
P / B	1.86884895

l'Aigua d'Ora 89 *B. haasi*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	8.39194373	0.30700013	-33.2327733	0	2.57632781
31-35	90.7198228	0.53076314	-135.552039	0	48.1507384
36-40	297.009443	0.81349821	-65.7930013	0	241.616649
41-45	364.077066	1.18297882	116.683389	116.683389	430.69546
46-50	280.586266	1.65106379	223.599659	223.599659	463.265824
51-55	164.047717	2.22966292	12.8681682	12.8681682	365.771112
56-60	159.013765	2.93073188	36.8661162	36.8661162	466.026712
61-65	147.917324	3.766268	166.31993	166.31993	557.096283
66-70	108.587744	4.74830675	384.70591	384.70591	515.607921
71-75	35.8362884	5.88891884	233.352963	233.352963	211.036994
76-80	0	7.20020767	-35.769766	0	0
81-85	4.52091245	8.69430721	42.9549248	42.9549248	39.3062017
86-90	0	10.3833801	-145.808915	0	0
91-95	12.9128562	12.2796158	-184.642351	0	158.564913
96-100	26.8005341	14.3952295	-21.7936678	0	385.799839
101-105	28.204354	16.7424604	507.436654	507.436654	472.210281
106-110	0	19.3335708	-1109.21594	0	0
111-115	53.563756	22.1808448	-132.645306	0	1188.08936
116-120	59.1635478	25.2965875	503.121177	503.121177	1496.63586
121-125	40.4888874	28.6931238	-242.54294	0	1161.75266
126-130	48.4457624	32.3827982	697.616278	697.616278	1568.80935
131-135	28.1203125	36.3779734	-369.64635	0	1022.95998
136-140	37.727977	40.6910299	460.328823	460.328823	1535.19024
141-145	27.0101916	45.3343653	1089.661	1089.661	1224.48989
146-150	4.19597187	50.3203938	-868.033242	0	211.142957
151-155	20.5975905	55.6615455	-180.356411	0	1146.49372
156-160	23.6834415	61.3702659	1523.85559	1523.85559	1453.4591
161-165	0	67.4590155	-378.473585	0	0
166-170	5.3588927	73.9402693	-192.398718	0	396.237969
171-175	7.8476625	80.8265164	-121.118352	0	634.299222
176-180	9.28272395	88.1302594	492.56709	492.56709	818.08887
181-185	3.92383125	95.8640145	-143.317467	0	376.154216
186-190	5.3588927	104.040311	580.207427	580.207427	557.540861
191-195	0	112.671689	-459.609643	0	0
195-200	3.92383125	121.770704	0	0	477.807693

Producció anual (gr/ha)	30309.1933
Biomassa anual (gr/ha)	19626.8772
P / B	1.54426978

A3.2. Càlcul de la producció secundària de la comunitat íctica del Llobregat

el Llobregat 87 *B. meridionalis*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	121.581601	0.30875853	-194.937471	0	37.539356
31-35	599.898811	0.53794723	-124.986916	0	322.7139049
36-40	786.997668	0.82955876	175.842645	175.842645	652.8608139
41-45	611.689168	1.21281709	-263.988522	0	741.8670769
46-50	795.494976	1.70081203	607.673224	607.673224	1352.987424
51-55	488.705101	2.30675694	217.296139	217.296139	1127.323885
56-60	406.701972	3.04397674	540.886507	540.886507	1237.991342
61-65	250.237416	3.92589808	-77.0119195	0	982.4065901
66-70	267.678893	4.96604124	696.970911	696.970911	1329.304423
71-75	141.848639	6.1780132	528.733092	528.733092	876.3427619
76-80	64.5616519	7.57550176	153.181342	153.181342	489.0869074
81-85	46.1851965	9.1722704	-1026.43429	0	423.6231105
86-90	148.455364	10.9821538	1070.71528	1070.71528	1630.359638
91-95	58.9105313	13.0190538	-252.733297	0	766.9593789
96-100	76.8194979	15.2969362	505.92224	505.92224	1175.102954
101-105	46.1851965	17.8298269	0	0	823.4740577
106-110	46.1851965	20.6318098	396.158779	396.158779	952.8841909
111-115	28.2762299	23.7170239	585.443278	585.443278	670.6280225
116-120	5.1836317	27.0996609	0	0	140.4746612
121-125	5.1836317	30.7939629	-756.108169	0	159.6245622
126-130	28.2762299	34.8142208	382.865041	382.865041	984.4149126
131-135	17.9089665	39.1747723	0	0	701.5796868
136-140	17.9089665	43.8900002	830.304844	830.304844	786.0245454
141-145	0	48.9743308	-924.746599	0	0
146-150	17.9089665	54.4422324	729.16433	729.16433	975.0041179
151-155	5.1836317	60.3082141	328.485742	328.485742	312.6155708
156-160	0	66.5868246	-1251.10826	0	0
161-165	17.9089665	73.2926507	0	0	1312.595629
166-170	17.9089665	80.4403164	1507.15695	1507.15695	1440.602935
171-175	0	88.0444818	0	0	0
176-180	0	96.1198421	0	0	0
181-185	0	104.681127	0	0	0
186-190	0	113.743099	0	0	0
191-195	0	123.320552	0	0	0
195-200	0	133.428315	0	0	0

Producció anual (gr/ha)	35704.80134
Biomassa anual (gr/ha)	22406.39246
P / B	1.593509593

el Llobregat 87 *P. phoxinus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	15.2082733	0.2457377	-33.7744939	0	3.73724611
31-35	121.067738	0.41423475	-23.0641941	0	50.1504636
36-40	166.493075	0.62234862	-5.58283668	0	103.616735
41-45	173.99747	0.88929269	97.2440498	97.2440498	154.734678
46-50	80.7118251	1.22194516	24.877765	24.877765	98.6254241
51-55	63.0685811	1.62709954	116.899603	116.899603	102.618859
56-60	0	2.11147447	0	0	0
61-65	0	2.68172155	0	0	0
66-70	0	3.34443176	0	0	0
71-75	0	4.10614076	0	0	0
76-80	0	4.97333341	0	0	0

Producció anual (gr/ha)	239.021418
Biomassa anual (gr/ha)	513.483406
P / B	0.46549005

el Llobregat 87 *A. anguilla*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
50-100	152.400595	0.64453226	-366.040926	0	98.2271005
110-150	406.940912	3.20849576	-485.897414	0	1305.66819
160-200	498.650932	8.74891374	-1790.68317	0	4362.65399
210-250	638.508089	18.7376004	2992.35153	2992.35153	11964.1094
260-300	520.993477	34.6040961	2696.68364	2696.68364	18028.5084
310-350	460.707395	57.8226994	11788.8485	11788.8485	26639.3452
360-400	297.202942	89.905289	29070.424	29070.424	26720.1164
410-450	30.7497813	132.396266	2418.34513	2418.34513	4071.15623
460-500	15.3748906	186.868781	-3355.70594	0	2873.08708
510-550	30.7497813	254.921797	9028.55031	9028.55031	7838.78949
560-600	0	338.177736	0	0	0

Producció anual (gr/ha)	33830.5351
Biomassa anual (gr/ha)	103901.661
P / B	0.32560148

el Llobregat 87 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	23.7727282	0.22045685	-66.5713768	0	5.2408607
31-35	251.414115	0.38792614	-82.5686672	0	97.5301063
36-40	422.145154	0.60291562	31.2670174	31.2670174	254.517908
41-45	379.402311	0.8875433	119.997201	119.997201	336.735978
46-50	265.581618	1.25230535	221.9433	221.9433	332.589279
51-55	113.820693	1.7078665	37.3108649	37.3108649	194.390549
56-60	94.8505777	2.26504462	48.909978	48.909978	214.84079
61-65	75.8804621	2.93479805	62.7493979	62.7493979	222.693832
66-70	56.9103466	3.72821503	237.121935	237.121935	212.17401
71-75	0	4.6565047	-293.992366	0	0
76-80	56.9103466	5.73098932	359.506934	359.506934	326.152589
81-85	0	6.96309758	0	0	0
86-90	0	8.36435858	0	0	0
91-95	0	9.94639666	0	0	0
96-100	0	11.7209266	0	0	0
101-105	0	13.6997495	0	0	0
106-110	0	15.8947488	0	0	0
111-115	0	18.3178871	0	0	0
116-120	0	20.9812025	0	0	0
121-125	0	23.8968063	0	0	0
126-130	0	27.0768797	0	0	0
131-135	0	30.533672	0	0	0
136-140	0	34.2794975	0	0	0
141-145	0	38.3267341	0	0	0
146-150	0	42.6878209	-853.095707	0	0
151-155	18.9701155	47.3752565	945.187623	945.187623	898.71409
156-160	0	52.4015973	0	0	0
161-165	0	57.7794556	0	0	0
166-170	0	63.5214983	0	0	0
171-175	0	69.6404454	0	0	0
176-180	0	76.1490688	0	0	0
181-185	0	83.0601905	0	0	0
186-190	0	90.3866821	0	0	0
191-195	0	98.1414628	0	0	0
195-200	0	106.337499	0	0	0

Producció anual (gr/ha)	8255.97701
Biomassa anual (gr/ha)	3095.57999
P / B	2.66702105

el Llobregat 88 *B. meridionalis*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	614.151157	0.28655833	-763.507916	0	175.9901315
31-35	2629.36836	0.50092225	-155.005838	0	1317.109121
36-40	2878.2293	0.77448371	548.650457	548.650457	2229.141708
41-45	2293.01975	1.13489683	43.7100966	43.7100966	2602.340848
46-50	2260.52964	1.59479486	1952.28143	1952.28143	3605.081056
51-55	1210.34721	2.16695812	171.562066	171.562066	2622.77171
56-60	1141.48408	2.86430001	421.188972	421.188972	3269.552852
61-65	1012.10163	3.69985555	-922.147757	0	3744.629832
66-70	1233.54936	4.68677182	2214.90968	2214.90968	5781.364369
71-75	810.124924	5.83829993	394.545788	394.545788	4729.752284
76-80	749.134502	7.16778799	2002.39465	2002.39465	5369.637284
81-85	495.399535	8.68867513	784.982565	784.982565	4304.36562
86-90	412.878568	10.4144862	-119.089877	0	4299.918159
91-95	423.375619	12.3588271	2143.54457	2143.54457	5232.426085
96-100	263.445344	14.5353806	-2036.1553	0	3829.27834
101-105	393.136878	16.9579026	5645.83654	5645.83654	6666.776871
106-110	83.7733773	19.6402186	391.82617	391.82617	1645.327445
111-115	65.17383	22.5962211	-632.786147	0	1472.682271
116-120	91.3613231	25.8398661	76.1493509	76.1493509	2360.764357
121-125	88.5978391	29.3851713	645.768056	645.768056	2603.462677
126-130	67.9373141	33.2462131	-1483.81702	0	2258.658423
131-135	109.996224	37.4371249	3944.12835	3944.12835	4117.942378
136-140	10.4970507	41.9720949	-89.8390571	0	440.583207
141-145	12.5226748	46.865364	-2249.66969	0	586.8797142
146-150	58.0365482	52.1312247	-1566.17706	0	3025.516334
151-155	86.5722149	57.7840188	5011.96787	5011.96787	5002.490493
156-160	4.05124829	63.8381363	-3666.17913	0	258.6241405
161-165	58.7744081	70.3080138	3651.82635	3651.82635	4132.311898
166-170	9.20928644	77.2081334	253.090153	253.090153	711.0318166
171-175	6.07687244	84.5530211	537.007278	537.007278	513.8179234
176-180	0	92.3572458	-230.853024	0	0
181-185	2.3945541	100.635418	-676.340545	0	240.9769534
186-190	8.84035649	109.40219	776.490957	776.490957	967.1543597
191-195	2.02562415	118.672252	0	0	240.3853788
195-200	2.02562415	128.460334	0	0	260.2123543

Producció anual (gr/ha)	195993.5403
Biomassa anual (gr/ha)	90618.9584
P / B	2.162831529

el Llobregat 88 *P. phoxinus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	37.4373903	0.24368338	-238.196143	0	9.12286964
31-35	773.15659	0.43014945	-862.918241	0	332.57288
36-40	2380.30553	0.67020502	1074.06857	1074.06857	1595.29272
41-45	1060.88453	0.98875697	751.038298	751.038298	1048.95697
46-50	422.048464	1.39783449	252.312232	252.312232	589.953897
51-55	267.619229	1.90968537	521.957394	521.957394	511.068525
56-60	30.4737972	2.53675639	88.0591672	88.0591672	77.3045997
61-65	0	3.2916772	0	0	0
66-70	0	4.18724681	0	0	0
71-75	0	5.23642209	0	0	0
76-80	0	6.45230787	0	0	0

Producció anual (gr/ha)	4479.05943
Biomassa anual (gr/ha)	4164.27246
P / B	1.07559231

el Llobregat 88 *A. anguilla*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
50-100	6.31188361	0.81930376	-148.220211	0	5.17134999
110-150	88.3171539	3.98736851	-903.974504	0	352.153039
160-200	226.656783	10.7086018	-2379.16674	0	2427.17725
210-250	379.359911	22.6684132	1237.36648	1237.36648	8599.48723
260-300	339.002473	41.4694603	248.923007	248.923007	14058.2496
310-350	334.340449	68.7468291	23831.2023	23831.2023	22984.8457
360-400	55.3855931	106.16256	6708.58428	6708.58428	5879.87636
410-450	3.1559418	155.401829	-362.176403	0	490.439127
460-500	5.12289696	218.170115	1302.26448	1302.26448	1117.66302
510-550	0	296.191022	0	0	0
560-600	0	391.20453	0	0	0

Producció anual (gr/ha)	19441.532
Biomassa anual (gr/ha)	55915.0627
P / B	0.34769758

el Llobregat 88 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	7.6347534	0.22045685	-5.58176232	0	1.68313366
31-35	26.7216369	0.38792614	6.45889832	6.45889832	10.3660214
36-40	13.3662751	0.60291562	-3.59714139	0	8.05873603
41-45	18.2836629	0.8875433	2.01801652	2.01801652	16.2275425
46-50	16.369518	1.25230535	10.7473144	10.7473144	20.4996349
51-55	9.02069349	1.7078665	-4.2842277	0	15.4061402
56-60	11.1989409	2.26504462	9.84220733	9.84220733	25.3661008
61-65	7.3815642	2.93479805	-30.2543726	0	21.6634002
66-70	16.52793	3.72821503	22.1582279	22.1582279	61.6196769
71-75	11.2098541	4.6565047	28.2440647	28.2440647	52.1987384
76-80	5.7424349	5.73098932	-0.79388113	0	32.9098331
81-85	5.86810717	6.96309758	-0.95908478	0	40.8602028
86-90	5.99377943	8.36435858	17.4591877	17.4591877	50.1341205
91-95	4.07963446	9.94639666	-148.487914	0	40.5776626
96-100	17.8319949	11.7209266	175.85924	175.85924	209.007503
101-105	3.9539622	13.6997495	34.1588149	34.1588149	54.1682916
106-110	1.63912929	15.8947488	27.9690513	27.9690513	26.0535484
111-115	0	18.3178871	-39.9893305	0	0
116-120	2.03981723	20.9812025	45.6747707	45.6747707	42.7978184
121-125	0	23.8968063	-51.8872311	0	0
126-130	2.03981723	27.0768797	58.6516295	58.6516295	55.2318859
131-135	0	30.533672	-123.501365	0	0
136-140	3.8173767	34.2794975	138.367199	138.367199	130.857755
141-145	0	38.3267341	0	0	0
146-150	0	42.6878209	0	0	0
151-155	0	47.3752565	0	0	0
156-160	0	52.4015973	0	0	0
161-165	0	57.7794556	0	0	0
166-170	0	63.5214983	0	0	0
171-175	0	69.6404454	0	0	0
176-180	0	76.1490688	0	0	0
181-185	0	83.0601905	0	0	0
186-190	0	90.3866821	0	0	0
191-195	0	98.1414628	0	0	0
195-200	0	106.337499	0	0	0

Producció anual (gr/ha)	2772.52139
Biomassa anual (gr/ha)	915.687747
P / B	3.02780221

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	381.226412	0.31289303	-579.89975	0	119.2830868
31-35	1791.25475	0.54057291	-580.834703	0	968.3037853
36-40	2659.39576	0.82807618	-398.577221	0	2202.182277
41-45	3058.63872	1.20359433	587.07939	587.07939	3681.360215
46-50	2645.6701	1.67911108	17.3409004	17.3409004	4442.373978
51-55	2636.78138	2.26665618	935.087526	935.087526	5976.676801
56-60	2276.88691	2.97830069	1309.05225	1309.05225	6781.253858
61-65	1889.10144	3.82615321	1403.06522	1403.06522	7227.991547
66-70	1562.46321	4.82235671	1808.85118	1808.85118	7534.754946
71-75	1225.5983	5.97908587	3174.70002	3174.70002	7327.957468
76-80	745.345569	7.30854481	1955.58362	1955.58362	5447.391488
81-85	501.814905	8.82296515	912.506063	912.506063	4427.495422
86-90	407.165179	10.5346043	2567.67475	2567.67475	4289.324031
91-95	183.011401	12.4557438	-463.808336	0	2279.543122
96-100	217.406518	14.5986884	1224.20076	1224.20076	3173.850009
101-105	139.642076	16.9757643	-211.226703	0	2370.530971
106-110	151.222213	19.5993184	558.014214	558.014214	2963.852297
111-115	124.638843	22.4817175	1903.02059	1903.02059	2802.09525
116-120	45.3687905	25.6353469	-126.745849	0	1163.044684
121-125	50.0115067	29.0726101	786.729155	786.729155	1453.965036
126-130	24.5369245	32.8059279	-138.219936	0	804.9565749
131-135	28.5124003	36.8477373	248.087956	248.087956	1050.617437
136-140	22.1459644	41.2104917	-828.029005	0	912.6460835
141-145	41.1831965	45.9066597	1685.26725	1685.26725	1890.582988
146-150	6.33628634	50.9487246	-174.027541	0	322.8257077
151-155	9.58422269	56.3491841	427.369827	427.369827	540.0631295
156-160	2.36081054	62.1205499	-1718.77711	0	146.6548493
161-165	28.7526681	68.2753469	917.187833	917.187833	1963.098389
166-170	15.920509	74.8261132	1245.43605	1245.43605	1191.269811
171-175	0	81.7853993	-1224.2349	0	0
176-180	14.3359933	89.1657681	7.50262488	7.50262488	1278.279857
181-185	14.2553119	96.9797944	1440.15059	1440.15059	1382.477218
186-190	0	105.240065	0	0	0
191-195	0	113.959176	0	0	0
195-200	0	123.149738	0	0	0

Producció anual (gr/ha)	91037.91565
Biomassa anual (gr/ha)	88116.70232
P / B	1.033151642

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	43.4797315	0.23283684	-44.0993266	0	10.1236832
31-35	183.829392	0.42402308	-245.288889	0	77.9479043
36-40	641.591475	0.67715272	-312.606811	0	434.45541
41-45	1017.57585	1.02087049	-207.964418	0	1038.81316
46-50	1187.26188	1.47134742	311.250894	311.250894	1746.87472
51-55	1007.84436	2.04539064	767.067345	767.067345	2061.43542
56-60	685.025033	2.76039778	1313.25219	1313.25219	1890.94158
61-65	270.40452	3.63431888	1046.64197	1046.64197	982.736251
66-70	16.7731763	4.68562381	88.43949	88.43949	78.5927943
71-75	0	5.93327415	-37.1469989	0	0
76-80	5.6073487	7.39669859	45.9934818	45.9934818	41.4758682

Producció anual (gr/ha)	6252.1294
Biomassa anual (gr/ha)	8363.39678
P / B	0.74755863

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
50-100	131.8224141	0.61205151	-634.524071	0	80.6821077
110-150	586.1520265	3.18688316	1830.30349	1830.30349	1867.99802
160-200	243.5863587	8.95761525	1696.0821	1696.0821	2181.95288
210-250	115.7025312	19.6367714	-1185.74253	0	2272.02416
260-300	159.7191314	36.9553844	1052.42994	1052.42994	5902.4819
310-350	137.8621204	62.7374878	5062.11222	5062.11222	8649.12309
360-400	73.59348485	98.8867842	7430.00999	7430.00999	7277.42305
410-450	12.046709	147.377073	652.629643	652.629643	1775.40871
460-500	8.339142052	210.244993	0	0	1753.26286
510-550	8.339142052	289.584303	590.412046	590.412046	2414.88464
560-600	6.576724791	387.541242	2874.96338	2874.96338	2548.7521

Producció anual (gr/ha)	17657.4523
Biomassa anual (gr/ha)	36723.9935
P / B	0.48081515

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	11.9103201	0.22045685	-19.3344326	0	2.62571161
31-35	78.024576	0.38792614	-68.1819201	0	30.2677724
36-40	219.007476	0.60291562	20.5168483	20.5168483	132.043028
41-45	190.960399	0.8875433	137.173269	137.173269	169.485622
46-50	60.8477266	1.25230535	-82.925095	0	76.1999333
51-55	117.550448	1.7078665	-3.05399043	0	200.760471
56-60	119.103201	2.26504462	125.173497	125.173497	269.774063
61-65	70.5536858	2.93479805	220.245338	220.245338	207.060819
66-70	3.97010668	3.72821503	0	0	14.8014114
71-75	3.97010668	4.6565047	20.5091187	20.5091187	18.4868204
76-80	0	5.73098932	-25.0794621	0	0
81-85	3.97010668	6.96309758	-30.2984031	0	27.6442402
86-90	7.94021337	8.36435858	72.4238123	72.4238123	66.4147919
91-95	0	9.94639666	0	0	0
96-100	0	11.7209266	-50.3082793	0	0
101-105	3.97010668	13.6997495	58.5848503	58.5848503	54.389467
106-110	0	15.8947488	0	0	0
111-115	0	18.3178871	0	0	0
116-120	0	20.9812025	-88.8970392	0	0
121-125	3.97010668	23.8968063	100.988383	100.988383	94.8728704
126-130	0	27.0768797	-114.153966	0	0
131-135	3.97010668	30.533672	128.44255	128.44255	121.221935
136-140	0	34.2794975	-143.903152	0	0
141-145	3.97010668	38.3267341	0	0	152.161223
146-150	3.97010668	42.6878209	-178.537709	0	169.475203
151-155	7.94021337	47.3752565	395.621808	395.621808	376.169645
156-160	0	52.4015973	0	0	0
161-165	0	57.7794556	-240.518932	0	0
166-170	3.97010668	63.5214983	264.054342	264.054342	252.187125
171-175	0	69.6404454	-578.222839	0	0
176-180	7.94021337	76.1490688	-315.740969	0	604.639854
181-185	11.9103201	83.0601905	1031.98198	1031.98198	989.273453
186-190	0	90.3866821	0	0	0
191-195	0	98.1414628	0	0	0
195-200	0	106.337499	0	0	0

Producció anual (gr/ha)	9658.93425
Biomassa anual (gr/ha)	4029.95546
P / B	2.39678437

A3.3. Càlcul de la producció secundària de la comunitat íctica al Matarranya, a Nonasp

el Matarranya Nonasp 85 *B. graellsii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	285.588627	0.37188613	137.01552	137.01552	106.206449
31-35	0	0.61893883	-1.82204445	0	0
36-40	2.4137931	0.92059821	-8.31160178	0	2.2221336
41-45	10	1.30391705	-269.278693	0	13.0391705
46-50	186.870417	1.77763918	-585.864649	0	332.188176
51-55	473.493527	2.3503285	-3817.31542	0	1112.86533
56-60	1903.85045	3.03039108	-1573.53502	0	5769.41144
61-65	2365.96467	3.82609272	-2479.3951	0	9052.40019
66-70	2947.83158	4.74557312	2968.66232	2968.66232	13989.1503
71-75	2381.82674	5.79685772	1808.86836	1808.86836	13807.1107
76-80	2097.61742	6.98786753	-1320.20639	0	14657.8727
81-85	2270.69474	8.32642754	7731.76193	7731.76193	18906.7752
86-90	1415.65299	9.82027399	-12142.332	0	13902.1003
91-95	2559.38681	11.4770606	7053.76577	7053.76577	29374.2376
96-100	1988.55439	13.3043641	9782.10678	9782.10678	26456.4517
101-105	1303.14168	15.3096893	-27169.4059	0	19950.6942
106-110	2963.00399	17.5004728	5295.2783	5295.2783	51853.9707
111-115	2679.1395	19.8840876	-9752.91104	0	53272.2445
116-120	3140.56407	22.4678462	-17746.4948	0	70561.7103
121-125	3885.50829	25.2590037	-22956.9802	0	98144.0682
126-130	4744.68796	28.2647609	-80205.9487	0	134107.471
131-135	7433.01416	31.4922665	31938.8618	31938.8618	234082.463
136-140	6470.28869	34.94862	-50705.1144	0	226127.66
141-145	7850.07961	38.6408734	76046.755	76046.755	303333.933
146-150	5975.19468	42.5760336	68303.5128	68303.5128	254400.089
151-155	4444.3954	46.761064	-176784.949	0	207824.658
156-160	8057.29486	51.2028862	75699.4834	75699.4834	412556.752
161-165	6642.45517	55.9083819	129120.194	129120.194	371368.921
166-170	4429.34664	60.8843942	-831.501873	0	269678.087
171-175	4442.45009	66.1377288	26459.8313	26459.8313	293813.559
176-180	4058.14325	71.6751557	-9490.8655	0	290868.05
181-185	4185.48215	77.5034102	141746.474	141746.474	324389.14
186-190	2424.83267	83.6291938	29412.4692	29412.4692	202786.801
191-195	2085.91942	90.0591759	111123.955	111123.955	187856.184
195-200	895.757532	96.7999943	56578.7537	56578.7537	86709.3239
201-205	331.47683	103.858256	-67977.708	0	34426.6055
205-210	963.90974	111.240539	64870.864	64870.864	107225.839
211-215	399.973866	118.953393	-63904.8533	0	47578.2484
216-220	919.895463	127.003338	52204.0248	52204.0248	116829.794
221-225	521.795523	135.396868	39607.7733	39607.7733	70649.4795
226-230	238.275862	144.140451	-51240.8028	0	34345.1902
231-235	583.05118	153.240528	17820.1143	17820.1143	89347.0708
236-240	470.195039	162.703517	9107.73506	9107.73506	76502.3867
241-245	415.835935	172.53581	30059.1968	30059.1968	71746.5897
246-250	246.551724	182.743775	0	0	45055.7927

Producció anual (gr/ha)	3979509.83
Biomassa anual (gr/ha)	4934874.81
P / B	0.80640543

el Matarranya Nonasp 85 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	93.4653687	0.19801118	13.0155394	13.0155394	18.5071882
31-35	44.2769321	0.35359701	-41.4418639	0	15.6561909
36-40	137.742301	0.55599198	63.3729067	63.3729067	76.5836142
41-45	44.2769321	0.82687009	43.6869234	43.6869234	36.6112707
46-50	0	1.17736358	-451.630485	0	0
51-55	327.128791	1.61889382	-2011.41087	0	529.586777
56-60	1401.98053	2.1631473	-1999.35337	0	3032.6904
61-65	2211.19514	2.82205577	-6459.07052	0	6240.11601
66-70	4235.45955	3.60777948	2387.1428	2387.1428	15280.604
71-75	3645.14938	4.53269282	-9971.45927	0	16522.3424
76-80	5622.6811	5.60937189	18067.83	18067.83	31539.7093
81-85	2708.03994	6.85058358	-1166.29607	0	18551.6539
86-90	2862.99697	8.2692759	12093.3781	12093.3781	23674.9119
91-95	1524.96385	9.87856945	6529.06305	6529.06305	15064.4614
96-100	917.438958	11.6917496	-6480.16871	0	10726.4666
101-105	1429.04273	13.7222597	-8778.78938	0	19609.6956
106-110	2021.80865	15.9836945	1141.546	1141.546	32315.9719
111-115	1955.40549	18.4897945	-27988.0522	0	36155.0457
116-120	3367.23349	21.2544407	7377.3361	7377.3361	71568.6646
121-125	3042.56045	24.2916496	-44211.4458	0	73908.8124
126-130	4749.54354	27.6155687	61841.6308	61841.6308	131161.346
131-135	2644.09253	31.2404725	28457.8867	28457.8867	82602.6999
136-140	1785.68948	35.1807584	2840.69614	2840.69614	62821.9101
141-145	1709.43884	39.450943	35688.2995	35688.2995	67438.9743
146-150	853.491544	44.0656592	-1486.33539	0	37609.6675
151-155	885.465251	49.0396523	24008.05	24008.05	43422.908
156-160	420.594159	54.3877776	2812.81527	2812.81527	22875.1816
161-165	371.405723	60.1249974	22511.9138	22511.9138	22330.7681
166-170	14.7589774	66.2663781	1025.29622	1025.29622	978.023975
171-175	0	72.8270882	0	0	0
176-180	0	79.8223954	-7800.81142	0	0
181-185	93.4653687	87.2676648	8518.17388	8518.17388	8156.50447
186-190	0	95.1783562	0	0	0
191-195	0	103.570023	0	0	0
195-200	0	112.458309	0	0	0

Producció anual (gr/ha)	941684.535
Biomassa anual (gr/ha)	854266.075
P / B	1.10233165

el Matarranya Nonasp 85 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	232.155916	0.25789673	-235.657689	0	59.8722512
31-35	928.623664	0.4439309	161.212273	161.212273	412.244741
36-40	634.789859	0.67807434	366.435903	366.435903	430.434715
41-45	185.97603	0.98307413	179.750946	179.750946	182.828223
46-50	30.996005	1.36837349	-596.028898	0	42.4141115
51-55	406.272853	1.84342909	57.0912745	57.0912745	748.935196
56-60	379.229879	2.41770962	-5720.76138	0	916.867725
61-65	2468.63312	3.10069465	3431.90131	3431.90131	7654.47751
66-70	1481.97048	3.90187374	890.505801	890.505801	5782.46169
71-75	1276.85754	4.8307456	3014.95745	3014.95745	6168.17393
76-80	711.96575	5.89681747	-14105.1209	0	4198.33208
81-85	2890.40398	7.10960451	1682.13211	1682.13211	20549.6292
86-90	2673.74606	8.47862931	5633.38477	5633.38477	22669.7018
91-95	2062.36027	10.0134214	-14756.3185	0	20651.2825
96-100	3424.29976	11.723517	11537.8127	11537.8127	40144.8366
101-105	2511.1741	13.6184585	21221.7576	21221.7576	34198.3203
106-110	1060.19962	15.7077942	-6116.29213	0	16653.3975
111-115	1423.9315	18.001078	14794.5895	14794.5895	25632.302
116-120	653.926771	20.5078692	-1605.3249	0	13410.6447
121-125	727.463753	23.2377325	-15752.9514	0	16904.6081
126-130	1365.89252	26.2002371	-31358.7066	0	35786.7079
131-135	2495.6761	29.4049571	21649.8448	21649.8448	73385.2487
136-140	1799.20835	32.8614714	39170.2937	39170.2937	59124.6337
141-145	669.424774	36.5793629	-26232.4502	0	24487.1317
146-150	1350.39452	40.5682189	4950.67091	4950.67091	54783.1005
151-155	1234.31656	44.8376308	-8194.33069	0	55343.8303
156-160	1408.4335	49.3971939	-125598.47	0	69572.6626
161-165	3834.52564	54.2565072	168074.213	168074.213	208047.968
166-170	874.537716	59.4251737	-8889.01329	0	51969.5556
171-175	1017.65865	64.9127996	-1050.12171	0	66059.0718
176-180	1033.15665	70.7289948	-1142.85381	0	73074.1313
181-185	1048.65465	76.8833726	-31288.7502	0	80624.1063
186-190	1439.4295	83.3855494	-54380.6464	0	120027.62
191-195	2066.3133	90.245145	159683.215	159683.215	186474.743
195-200	363.731876	97.4717822	-11747.3279	0	35453.5942
201-205	479.809834	105.075087	-17288.9413	0	50416.06
205-210	638.428769	113.064688	32189.6598	32189.6598	72183.7493
211-215	363.731876	121.450216	1949.16788	1949.16788	44175.3151
216-220	348.233874	130.241308	13554.7444	13554.7444	45354.4351
221-225	247.653918	139.447598	-81447.6618	0	34534.7442
226-230	812.545706	149.078729	125155.875	125155.875	121133.281
231-235	0	159.144341	0	0	0
236-240	0	169.654081	0	0	0
241-245	0	180.617596	0	0	0
246-250	0	192.044536	0	0	0

Producció anual (gr/ha)	2517396.86
Biomassa anual (gr/ha)	1799423.46
P / B	1.39900192

el Matarranya Nonasp 86 *B. graellsii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.38966243	0	0	0
31-35	0	0.65470011	0	0	0
36-40	0	0.98109107	-74.5785099	0	0
41-45	63.6635065	1.39873993	104.278065	104.278065	89.0486883
46-50	0	1.91808499	-465.123165	0	0
51-55	210.336128	2.54941386	425.613797	425.613797	536.23384
56-60	63.6635065	3.30288114	-195.582857	0	210.272995
61-65	116.247538	4.18852257	0	0	486.905438
66-70	116.247538	5.21626657	-391.597538	0	606.378149
71-75	184.044112	6.39594383	-4438.96824	0	1177.1358
76-80	815.052495	7.73729536	2001.84924	2001.84924	6306.30189
81-85	578.424351	9.24997945	-1587.17634	0	5350.41336
86-90	736.176447	10.9435776	-425.276151	0	8056.40404
91-95	772.070183	12.8275996	3999.90583	3999.90583	9903.80717
96-100	482.858008	14.9114884	2924.17823	2924.17823	7200.13158
101-105	300.29165	17.2046239	484.238683	484.238683	5166.40489
106-110	273.999634	19.7163266	786.354316	786.354316	5402.26626
111-115	236.628144	22.4558608	-6548.00245	0	5313.68866
116-120	510.627778	25.4324379	5119.88256	5119.88256	12986.5092
121-125	320.972845	28.6552183	-14405.5551	0	9197.54695
126-130	795.706886	32.1333146	5592.013	5592.013	25568.6997
131-135	631.008383	35.8757933	-19211.4662	0	22637.9263
136-140	1138.83868	39.8916769	-24168.1796	0	45430.1846
141-145	1714.46555	44.1899458	1351.3054	1351.3054	75762.1398
146-150	1685.36019	48.7795403	-6446.4862	0	82211.0955
151-155	1811.35162	53.6693615	-3039.63647	0	97214.0849
156-160	1865.42927	58.8682735	18060.7542	18060.7542	109814.6
161-165	1572.06816	64.3851042	25813.7636	25813.7636	101217.773
166-170	1188.18287	70.2286472	-8049.45778	0	83444.4756
171-175	1298.06853	76.4076621	799.533852	799.533852	99182.3817
176-180	1288.02445	82.9308767	46425.7886	46425.7886	106816.997
181-185	750.069262	89.806987	1709.36322	1709.36322	67361.4604
186-190	731.759046	97.0446589	32183.3746	32183.3746	71013.307
191-195	412.406122	104.652529	13390.9044	13390.9044	43159.3436
195-200	289.070008	112.639205	-24074.451	0	32560.6161
201-205	495.273069	121.013268	-22008.9692	0	59934.6128
205-210	670.893019	129.783271	68929.9062	68929.9062	87070.6906
211-215	157.609929	138.957741	-19693.1832	0	21901.1196
216-220	294.680829	148.54518	8069.96879	8069.96879	43773.4168
221-225	242.096797	158.554065	16973.0944	16973.0944	38385.4313
226-230	138.406487	168.992849	-40044.2298	0	23389.7066
231-235	368.088223	179.869961	64425.0599	64425.0599	66208.0143
236-240	20.6811952	191.193808	-31367.5276	0	3954.11645
241-245	179.911045	202.972773	4631.31737	4631.31737	36517.0437
246-250	157.752096	215.21522	0	0	33950.652

Producció anual (gr/ha)	1208390.94
Biomassa anual (gr/ha)	1556469.34
P / B	0.77636669

el Matarranya Nonasp 86 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.2687496	0	0	0
31-35	0	0.46190258	0	0	0
36-40	0	0.70467022	-200.666902	0	0
41-45	236.628144	1.02054646	-25.8886749	0	241.490015
46-50	258.139793	1.41918639	-247.934217	0	366.348482
51-55	408.721339	1.91024905	-611.54289	0	780.759548
56-60	688.372781	2.50339697	182.89298	182.89298	1723.27034
61-65	623.837833	3.20829592	2089.66039	2089.66039	2001.45638
66-70	43.0232988	4.03461455	-193.082571	0	173.582428
71-75	86.0465977	4.99202421	-1289.89784	0	429.546699
76-80	319.98485	6.09019872	-1662.85719	0	1948.77132
81-85	568.713764	7.33881424	-204.65564	0	4173.68467
86-90	594.256509	8.74754908	472.774688	472.774688	5198.28798
91-95	544.512223	10.3260836	2538.14426	2538.14426	5622.67873
96-100	317.294958	12.0841	2153.36855	2153.36855	3834.22402
101-105	151.922751	14.0312825	607.668667	607.668667	2131.67104
106-110	111.589343	16.1773169	-1862.33079	0	1805.21616
111-115	219.14759	18.5318905	1887.81454	1887.81454	4061.21915
116-120	123.690114	21.1046925	815.402275	815.402275	2610.44181
121-125	87.3878023	23.9054133	-5186.40555	0	2089.04153
126-130	291.744731	26.9437449	1841.78346	1841.78346	7860.69559
131-135	227.209782	30.2293806	2792.18332	2792.18332	6868.41098
136-140	139.82198	33.7720151	-2203.27971	0	4722.07002
141-145	201.667037	37.5813443	6011.81249	6011.81249	7578.91834
146-150	49.7442863	41.6670653	1354.35904	1354.35904	2072.69843
151-155	18.821758	46.0388765	454.699281	454.699281	866.53259
156-160	9.41087898	50.7064773	500.045863	500.045863	477.192522
161-165	0	55.6795684	-548.313026	0	0
166-170	9.41087898	60.9678513	599.592075	599.592075	573.76107
171-175	0	66.5810288	0	0	0
176-180	0	72.5288046	0	0	0
181-185	0	78.8208833	0	0	0
186-190	0	85.4669705	0	0	0
191-195	0	92.4767728	0	0	0
195-200	0	99.8599977	0	0	0

Producció anual (gr/ha)	79850.0919
Biomassa anual (gr/ha)	70211.9698
P / B	1.13727178

el Matarranya Nonasp 86 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.31560218	0	0	0
31-35	0	0.5395622	0	0	0
36-40	0	0.81971203	-27.7996442	0	0
41-45	28.2326369	1.18280807	26.2100417	26.2100417	33.3937909
46-50	9.41087898	1.63945981	-20.8034637	0	15.4287579
51-55	20.3643013	2.20024406	-46.345938	0	44.806433
56-60	38.7891454	2.87570846	-576.873045	0	111.546273
61-65	216.207259	3.67637432	790.513318	790.513318	794.858815
66-70	24.2432159	4.612739	-114.318088	0	111.827627
71-75	46.5469744	5.69527782	170.636363	170.636363	265.097951
76-80	19.3945727	6.93444576	16.9279874	16.9279874	134.490612
81-85	17.1687081	8.34067889	-500.193749	0	143.198681
86-90	72.1462762	9.9243956	267.2503	267.2503	716.008186
91-95	47.3408022	11.6959977	188.916787	188.916787	553.697916
96-100	32.3979588	13.6658715	-75.5615971	0	442.746342
101-105	37.5330094	15.8443884	423.774476	423.774476	594.687579
106-110	12.6064722	18.241906	-340.569883	0	229.966081
111-115	30.0615877	20.8687684	265.36087	265.36087	627.348311
116-120	18.1384367	23.7353074	-129.637067	0	430.52137
121-125	23.2734872	26.8518424	303.906194	303.906194	624.936011
126-130	12.6064722	30.2286815	-31.0317783	0	381.077034
131-135	13.5762009	33.8761216	173.515598	173.515598	459.909031
136-140	8.72755771	37.804449	-1766.14767	0	329.94051
141-145	53.0381109	42.02394	2345.69908	2345.69908	2228.87039
146-150	0	46.5448607	-744.733268	0	0
151-155	15.2292508	51.3774681	193.611525	193.611525	782.440346
156-160	11.6367436	56.5320098	689.033114	689.033114	657.848504
161-165	0	62.0187247	-440.329415	0	0
166-170	6.78810044	67.8478431	481.081821	481.081821	460.557973
171-175	0	74.029587	-3893.70657	0	0
176-180	50.4153323	80.5741705	4232.96065	4232.96065	4062.17359
181-185	0	87.4917998	-353.249269	0	0
186-190	3.87891454	94.7926734	0	0	367.692679
191-195	3.87891454	102.486983	412.945277	412.945277	397.538248
195-200	0	110.584912	-779.015233	0	0
201-205	6.78810044	119.096638	838.219654	838.219654	808.439944
205-210	0	128.032332	0	0	0
211-215	0	137.402157	-551.677019	0	0
216-220	3.87891454	147.216271	590.61908	590.61908	571.039334
221-225	0	157.484824	-7732.24031	0	0
226-230	47.5061464	168.217963	8253.31579	8253.31579	7991.38716
231-235	0	179.425824	0	0	0
236-240	0	191.118542	-764.604734	0	0
241-245	3.87891454	203.306245	812.852027	812.852027	788.607547
246-250	0	215.999052	0	0	0

Producció anual (gr/ha)	88057.1348
Biomassa anual (gr/ha)	26162.083
P / B	3.36583042

el Matarranya Nonasp 87 *B. graellsii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	164.070517	0.35302855	-79.1664114	0	57.9215759
31-35	334.8334	0.60881472	247.084008	247.084008	203.851501
36-40	6.69236535	0.93128595	-22.527737	0	6.23250581
41-45	26.7694614	1.35191781	42.7216322	42.7216322	36.1901117
46-50	0	1.88393588	-14.6413428	0	0
51-55	6.69236535	2.54060072	0	0	17.0026282
56-60	6.69236535	3.33520434	25.2881401	25.2881401	22.3204059
61-65	0	4.28106721	-204.750793	0	0
66-70	42.618025	5.39153589	215.599929	215.599929	229.776611
71-75	6.69236535	6.67998095	49.4090935	49.4090935	44.7048731
76-80	0	8.15979529	-87.8686435	0	0
81-85	9.80392157	9.84439257	26.2498829	26.2498829	96.5136527
86-90	7.36293373	11.747206	94.0241265	94.0241265	86.4938991
91-95	0	13.881687	-257.922697	0	0
96-100	17.1668553	16.2613045	-42.7926287	0	279.155461
101-105	19.6078431	18.8995437	199.045506	199.045506	370.579287
106-110	9.80392157	21.8099053	-915.815519	0	213.822601
111-115	49.0196078	25.0059051	-1505.20808	0	1225.77966
116-120	105.402149	28.5010728	-995.755194	0	3004.07433
121-125	138.216253	32.3089518	-1882.55691	0	4465.62226
126-130	193.079187	36.4430986	2591.39287	2591.39287	7036.40385
131-135	125.971343	40.9170818	-2815.15403	0	5154.37977
136-140	191.041294	45.7444825	-13572.0857	0	8739.08512
141-145	472.200614	50.9388928	1183.00893	1183.00893	24053.3765
146-150	450.151783	56.5139165	5726.32582	5726.32582	25439.8403
151-155	353.787336	62.4831678	-30592.9863	0	22105.7535
156-160	820.184593	68.8602714	-1730.25483	0	56478.1337
161-165	844.156126	75.6588621	-5270.27298	0	63867.8919
166-170	910.705713	82.8925844	9036.21864	9036.21864	75490.7502
171-175	806.420076	90.5750924	-19980.7979	0	73041.5729
176-180	1017.72312	98.7200493	17166.5759	17166.5759	100469.677
181-185	850.960803	107.341127	12102.3401	12102.3401	91343.0919
186-190	742.714571	116.452007	28208.1939	28208.1939	86490.6025
191-195	509.904291	126.066378	8284.92878	8284.92878	64281.7872
195-200	446.677102	136.197938	-40862.3418	0	60836.5002
201-205	735.60245	146.860392	13832.6332	13832.6332	108030.864
205-210	644.813856	158.067454	51218.8137	51218.8137	101924.084
211-215	332.207758	169.832844	14594.4993	14594.4993	56419.7883
216-220	249.234225	182.170292	-15908.7413	0	45403.0715
221-225	333.621236	195.093532	10575.6899	10575.6899	65087.3455
226-230	281.19929	208.616309	31078.9182	31078.9182	58662.758
231-235	137.027398	222.752372	5487.99085	5487.99085	30523.1779
236-240	113.168178	237.515476	-22531.3281	0	26879.1937
241-245	205.096593	252.919387	35980.5005	35980.5005	51872.9047
246-250	67.147814	268.977874	0	0	18061.2763

Producció anual (gr/ha)	969327.316
Biomassa anual (gr/ha)	1338053.35
P / B	0.72443099

el Matarranya Nonasp 87 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.22207356	0	0	0
31-35	0	0.39447362	0	0	0
36-40	0	0.61767741	0	0	0
41-45	0	0.91524199	0	0	0
46-50	0	1.29893783	-20.3568827	0	0
51-55	13.3847307	1.78079902	-13.7576789	0	23.8355153
56-60	20.077096	2.37310059	-8.42361028	0	47.6449685
61-65	23.1886523	3.08833981	46.6849952	46.6849952	71.614438
66-70	9.80392157	3.93922041	13.7241811	13.7241811	38.619808
71-75	6.69236535	4.93863915	-17.0779059	0	33.0511775
76-80	9.80392157	6.09967416	0	0	59.800727
81-85	9.80392157	7.4355748	80.0212096	80.0212096	72.8977921
86-90	0	8.95975266	0	0	0
91-95	0	10.6857736	-113.883008	0	0
96-100	9.80392157	12.6273505	-40.1643482	0	123.797554
101-105	12.7420999	14.7983369	0	0	188.561887
106-110	12.7420999	17.2127212	-417.112633	0	219.326213
111-115	35.2881214	19.8846211	-654.574895	0	701.690923
116-120	66.0111552	22.828279	-757.025937	0	1506.92107
121-125	97.0498291	26.0580571	1524.30693	1524.30693	2528.92999
126-130	42.1538646	29.5884339	-1942.56005	0	1247.26684
131-135	103.915572	33.4339997	1738.25109	1738.25109	3474.31321
136-140	54.8959645	37.6094533	1899.05029	1899.05029	2064.60721
141-145	7.18762578	42.1295988	-247.188747	0	302.81179
146-150	12.7420999	47.0093423	0	0	598.997736
151-155	12.7420999	52.2636893	700.98601	700.98601	665.94915
156-160	0	57.9077415	-775.447364	0	0
161-165	12.7420999	63.9566945	855.16519	855.16519	814.94259
166-170	0	70.4258355	0	0	0
171-175	0	77.3305408	0	0	0
176-180	0	84.6862739	0	0	0
181-185	0	0	0	0	0
186-190	0	0	0	0	0
191-195	0	0	0	0	0
195-200	0	0	0	0	0

Producció anual (gr/ha)	6858.1899
Biomassa anual (gr/ha)	14785.5806
P / B	0.46384312

el Matarranya Nonasp 87 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.273483	-66.5618841	0	0
31-35	183.486239	0.48118699	-18.316084	0	88.2911911
36-40	214.020088	0.74780482	120.358924	120.358924	160.045254
41-45	81.3606773	1.1007589	-52.8190777	0	89.5584896
46-50	121.757873	1.55305555	36.8038249	36.8038249	189.09674
51-55	101.464894	2.11790911	98.988309	98.988309	214.893424
56-60	60.8789364	2.80872291	-95.1261856	0	170.992064
61-65	90.6332689	3.63907363	165.058445	165.058445	329.821139
66-70	50.3898792	4.62269823	-52.4182499	0	232.937205
71-75	60.5363686	5.77348284	64.9876207	64.9876207	349.505685
76-80	50.3898792	7.10545319	0	0	358.042928
81-85	50.3898792	8.63276629	102.482986	102.482986	435.00405
86-90	39.5582541	10.3697031	225.594341	225.594341	410.207349
91-95	19.6078431	12.3306619	-10.4340691	0	241.777684
96-100	20.3873598	14.5301528	-234.006723	0	296.231454
101-105	35.2840126	16.9827922	645.434213	645.434213	599.221055
106-110	0	19.7032983	-638.595687	0	0
111-115	30.1912814	22.7064865	-714.732286	0	685.537922
116-120	59.6030461	26.0072658	-697.697261	0	1550.11226
121-125	84.7405694	29.6206353	1169.07388	1169.07388	2510.0695
126-130	47.6620038	33.5616805	-1622.47575	0	1599.61694
131-135	93.1868869	37.8455703	-971.395193	0	3526.71088
136-140	117.411539	42.4875546	2728.09612	2728.09612	4988.52919
141-145	56.6864087	47.5029613	-4817.89155	0	2692.77228
146-150	152.789933	52.9071937	-325.122505	0	8083.68658
151-155	158.623208	58.7157287	1181.42379	1181.42379	9313.67725
156-160	139.491287	64.9441143	-4462.40977	0	9059.13807
161-165	204.927608	71.6079677	1344.53011	1344.53011	14674.4495
166-170	187.019936	78.7229731	-2197.29922	0	14722.7654
171-175	213.67752	86.3048806	955.125181	955.125181	18441.4129
176-180	203.094082	94.3695039	9003.61856	9003.61856	19165.8877
181-185	111.740721	102.932719	-4378.21414	0	11501.7762
186-190	152.51544	112.010462	-304.983276	0	17083.3249
191-195	155.128483	121.618729	9314.69267	9314.69267	18866.5289
195-200	81.5494393	131.773573	-4137.03873	0	10746.061
201-205	111.740721	142.491106	13523.1827	13523.1827	15922.0589
205-210	20.3873598	153.787492	-7732.35781	0	3135.32094
211-215	68.8288803	165.678951	8323.06054	8323.06054	11403.4967
216-220	20.3873598	178.181757	3764.12448	3764.12448	3632.65559
221-225	0	191.312233	-8076.64813	0	0
226-230	40.7747197	205.086756	-2080.21113	0	8362.35499
231-235	50.5786412	219.521751	9738.92695	9738.92695	11103.1119
236-240	7.66680084	234.633693	1858.49091	1858.49091	1798.88979
241-245	0	250.439104	0	0	0
246-250	0	266.954555	0	0	0

Producció anual (gr/ha)	263892.624
Biomassa anual (gr/ha)	228735.572
P / B	1.15370172

el Matarranya Nonasp 88 *B. graellsii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.30789443	0	0	0
31-35	0	0.53276395	0	0	0
36-40	0	0.81711536	0	0	0
41-45	0	1.18894209	0	0	0
46-50	0	1.66026166	0	0	0
51-55	0	2.24315009	-140.933671	0	0
56-60	54.7890819	2.94973602	91.6222569	91.6222569	161.613329
61-65	27.3945409	3.7921959	-116.667058	0	103.885466
66-70	54.7890819	4.78274997	0	0	262.04248
71-75	54.7890819	5.93365894	179.767217	179.767217	325.099726
76-80	27.3945409	7.25722113	-218.496377	0	198.808241
81-85	54.7890819	8.76576994	0	0	480.268487
86-90	54.7890819	10.4716717	-312.004447	0	573.73328
91-95	82.1836228	12.3873239	734.925184	734.925184	1018.03515
96-100	27.3945409	14.5251532	-429.177633	0	397.909903
101-105	54.7890819	16.8976141	994.982253	994.982253	925.80476
106-110	0	19.5171876	-572.745333	0	0
111-115	27.3945409	22.39638	655.283191	655.283191	613.538548
116-120	0	25.5477215	0	0	0
121-125	0	28.9837657	0	0	0
126-130	0	32.7170879	0	0	0
131-135	0	36.7602849	0	0	0
136-140	0	41.1259741	0	0	0
141-145	0	45.8267924	0	0	0
146-150	0	50.8753958	-2931.85286	0	0
151-155	54.7890819	56.2844589	0	0	3083.77383
156-160	54.7890819	62.0666738	1782.77307	1782.77307	3400.57607
161-165	27.3945409	68.23475	1957.13928	1957.13928	1869.25965
166-170	0	74.8014138	-2142.59906	0	0
171-175	27.3945409	81.7794077	-7018.50517	0	2240.30933
176-180	109.578164	89.1814898	2548.19697	2548.19697	9772.3439
181-185	82.1836228	97.0204338	2769.03494	2769.03494	7973.49074
186-190	54.7890819	105.309028	-3002.36617	0	5769.78497
191-195	82.1836228	114.060076	-3248.54158	0	9373.87025
195-200	109.578164	123.286394	0	0	13509.4967
201-205	109.578164	133.000814	11342.4918	11342.4918	14573.985
205-210	27.3945409	143.216179	-12202.9438	0	3923.34149
211-215	109.578164	153.945349	8737.43377	8737.43377	16869.0486
216-220	54.7890819	165.201192	-4684.39024	0	9051.22163
221-225	82.1836228	176.996592	15045.0632	15045.0632	14546.2212
226-230	0	189.344445	-16082.8885	0	0
231-235	82.1836228	202.257657	-5722.56925	0	16622.267
236-240	109.578164	215.749148	24400.7776	24400.7776	23641.3954
241-245	0	229.831848	-6494.19268	0	0
246-250	27.3945409	244.518699	0	0	6698.47751

Producció anual (gr/ha)	239623.742
Biomassa anual (gr/ha)	167979.603
P / B	1.42650499

el Matarranya Nonasp 88 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.24684182	0	0	0
31-35	0	0.4309446	0	0	0
36-40	0	0.66561856	0	0	0
41-45	0	0.97450712	0	0	0
46-50	0	1.36833001	0	0	0
51-55	0	1.85792261	0	0	0
56-60	0	2.45422489	0	0	0
61-65	0	3.16827233	0	0	0
66-70	0	4.01118835	-346.511842	0	0
71-75	77.4193548	4.99417792	428.311201	428.311201	386.646033
76-80	0	6.1285221	-1914.97827	0	0
81-85	283.870968	7.42557324	-209.753395	0	2107.90466
86-90	309.677419	8.89675079	0	0	2755.12282
91-95	309.677419	10.5535377	590.607637	590.607637	3268.19231
96-100	258.064516	12.4074769	3112.06986	3112.06986	3201.92952
101-105	25.8064516	14.4701687	401.804555	401.804555	373.423708
106-110	0	16.7532678	0	0	0
111-115	0	19.2684811	0	0	0
116-120	0	22.0275654	0	0	0
121-125	0	25.0423254	0	0	0
126-130	0	28.3246117	-1551.10953	0	0
131-135	51.6129032	31.8863194	871.172256	871.172256	1645.74552
136-140	25.8064516	35.7393865	-1948.92614	0	922.306748
141-145	77.4193548	39.8957919	2171.47374	2171.47374	3088.70647
146-150	25.8064516	44.3675549	0	0	1144.96916
151-155	25.8064516	49.166733	1333.47711	1333.47711	1268.81892
156-160	0	54.3054217	-1470.56781	0	0
161-165	25.8064516	59.7957524	1616.88998	1616.88998	1543.11619
166-170	0	65.649892	-5318.2741	0	0
171-175	77.4193548	71.8800419	5815.46186	5815.46186	5564.90647
176-180	0	78.4984365	0	0	0
181-185	0	85.5173432	-2300.79485	0	0
186-190	25.8064516	92.9490606	0	0	2398.68544
191-195	0	0	0	0	0
195-200	0	0	0	0	0

Producció anual (gr/ha)	65365.0728
Biomassa anual (gr/ha)	29670.474
P / B	2.20303433

el Matarranya Nonasp 88 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.28793567	0	0	0
31-35	0	0.50656531	0	0	0
36-40	0	0.78718246	0	0	0
41-45	0	1.15864164	0	0	0
46-50	0	1.63462069	0	0	0
51-55	0	2.22901527	0	0	0
56-60	0	2.95591892	0	0	0
61-65	0	3.82960673	-230.540377	0	0
66-70	53.4133533	4.86452158	-580.740925	0	259.83041
71-75	160.24006	6.07526254	359.984426	359.984426	973.500434
76-80	106.826707	7.47657484	-440.173608	0	798.697868
81-85	160.24006	9.08334113	0	0	1455.51513
86-90	160.24006	10.9105738	317.739117	317.739117	1748.311
91-95	133.533383	12.9734082	-752.210493	0	1732.38308
96-100	186.946737	15.2870964	882.750944	882.750944	2857.87279
101-105	133.533383	17.8670021	-513.961549	0	2385.84124
106-110	160.24006	20.7285953	1782.83404	1782.83404	3321.55136
111-115	80.12003	23.887448	-3.6329E-13	0	1913.86305
116-120	80.12003	27.35923	-1559.54693	0	2192.02233
121-125	133.533383	31.1597052	1771.5889	1771.5889	4160.86086
126-130	80.12003	35.3047282	0	0	2828.61588
131-135	80.12003	39.810241	1126.50587	1126.50587	3189.5977
136-140	53.4133533	44.69227	2524.10465	2524.10465	2387.16401
141-145	0	49.9669235	0	0	0
146-150	0	55.6503886	0	0	0
151-155	0	61.7589295	0	0	0
156-160	0	68.3088847	0	0	0
161-165	0	75.3166652	0	0	0
166-170	0	82.7987521	-6945.89514	0	0
171-175	80.12003	90.7716954	7604.77212	7604.77212	7272.63096
176-180	0	99.2521116	0	0	0
181-185	0	108.256682	-9047.84338	0	0
186-190	80.12003	117.802153	6556.48059	6556.48059	9438.31203
191-195	26.7066767	127.90533	0	0	3415.9263
195-200	26.7066767	138.583082	3848.63491	3848.63491	3701.09357
201-205	0	149.852336	-4157.64114	0	0
205-210	26.7066767	161.730075	4483.1253	4483.1253	4319.27283
211-215	0	174.233343	-9651.08653	0	0
216-220	53.4133533	187.379235	-15556.0571	0	10008.5533
221-225	133.533383	201.184903	27815.0568	27815.0568	26864.9008
226-230	0	215.667552	-5958.98045	0	0
231-235	26.7066767	230.844438	-6373.72118	0	6165.08777
236-240	53.4133533	246.73287	13615.393	13615.393	13178.83
241-245	0	263.350205	0	0	0
246-250	0	280.713853	0	0	0

Producció anual (gr/ha)	247142.5
Biomassa anual (gr/ha)	116570.235
P / B	2.12011669

A3.4. Càlcul de la producció secundària de la comunitat íctica al Matarranya, a Vall-de-roures

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	40.5630088	0.41477392	-2.02433793	0	16.8244783
31-35	44.3409248	0.69222933	-31.0889637	0	30.6940887
36-40	81.1260177	1.03185526	-226.692907	0	83.7103077
41-45	265.548515	1.46429738	163.82965	163.82965	388.841994
46-50	169.807867	1.99969148	88.9935954	88.9935954	339.563346
51-55	131.133816	2.64798293	-282.387874	0	347.240107
56-60	224.985507	3.4189497	-114.272204	0	769.214129
61-65	254.711801	4.32222079	195.3715	195.3715	1100.92064
66-70	214.148792	5.36729112	405.98009	405.98009	1149.39891
71-75	145.748447	6.56353389	-799.248807	0	956.624871
76-80	256.600759	7.92021098	-1468.79514	0	2032.33215
81-85	426.408626	9.44648178	968.358083	968.358083	4028.06132
86-90	332.059903	11.1514108	-1962.85577	0	3702.93639
91-95	494.808971	13.0439744	-2822.96026	0	6454.27556
96-100	695.735057	15.1330665	-750.764714	0	10528.6049
101-105	741.96494	17.4275036	2338.65545	2338.65545	12930.5967
106-110	616.497998	19.9360298	2787.62357	2787.62357	12290.5224
111-115	485.364181	22.6673203	6093.83346	6093.83346	11001.9053
116-120	232.541338	25.6299855	-1205.37072	0	5960.03113
121-125	276.882263	28.8325743	5180.72262	5180.72262	7983.22843
126-130	107.074396	32.2835769	-1318.28717	0	3456.7445
131-135	145.748447	35.9914278	-5742.57392	0	5245.6947
136-140	297.163768	39.9645081	2636.95338	2636.95338	11876.0038
141-145	234.430296	44.2111481	-13619.0299	0	10364.4325
146-150	527.816148	48.7396292	6699.90647	6699.90647	25725.5633
151-155	396.682332	53.558186	3093.1617	3093.1617	21245.5861
156-160	341.504692	58.675008	-10297.9136	0	20037.7906
161-165	509.423602	64.0982417	19755.5493	19755.5493	32653.1572
166-170	214.148792	69.8359917	1614.07893	1614.07893	14955.2933
171-175	191.97833	75.8963223	1752.06985	1752.06985	14570.4492
176-180	169.807867	82.2872591	-12635.6814	0	13973.024
181-185	317.445272	89.0167902	17406.1257	17406.1257	28257.9592
186-190	129.244858	96.0928674	-1834.45354	0	12419.509
191-195	147.637405	103.523407	405.556098	405.556098	15283.9272
195-200	143.859489	111.316292	-3210.35832	0	16013.9049
201-205	171.696825	119.479372	5717.53663	5717.53663	20514.2288
205-210	125.466942	128.020464	8556.57183	8556.57183	16062.3362
211-215	60.8445132	136.947354	2335.76728	2335.76728	8332.4951
216-220	44.3409248	146.267799	3634.18674	3634.18674	6485.64946
221-225	20.2815044	155.989524	3264.81926	3264.81926	3163.70222
226-230	0	166.120229	-3474.48034	0	0
231-235	20.2815044	176.667582	0	0	3583.08434
236-240	20.2815044	187.639226	3919.54085	3919.54085	3805.60579
241-245	0	199.042778	-8697.50577	0	0
246-250	42.4519668	210.885828	0	0	8952.51816

Producció anual (gr/ha)	360055.244
Biomassa anual (gr/ha)	399074.187
P / B	0.90222634

el Matarranya Vall-de-roures 85 *B.haasi*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	113.131	0.44716026	51.8540058	51.8540058	50.5876872
31-35	22.8231948	0.73731123	-40.0128015	0	16.8277978
36-40	67.4846109	1.0886345	-30.7466332	0	73.4660758
41-45	91.2927792	1.53200814	-79.6604432	0	139.86128
46-50	135.954195	2.07663126	-54.3567441	0	282.326732
51-55	158.77739	2.73145852	-67.5729548	0	433.693855
56-60	180.615611	3.50523134	85.8267406	85.8267406	633.099501
61-65	158.77739	4.40650259	-646.566732	0	699.65298
66-70	290.791691	5.44365655	-119.315262	0	1582.9701
71-75	310.659966	6.62492531	-144.265866	0	2058.09907
76-80	330.52824	7.95840244	-1592.13184	0	2630.47675
81-85	514.098772	9.4520547	945.779902	945.779902	4859.28971
86-90	421.821019	11.1137319	-309.268522	0	4688.00573
91-95	447.599134	12.9511757	41.1472392	41.1472392	5796.93505
96-100	444.644214	14.972027	-15.7988277	0	6657.22517
101-105	445.629187	17.1838325	3642.61386	3642.61386	7657.6173
106-110	247.115249	19.5940508	-4182.312	0	4841.98873
111-115	447.599134	22.2100576	2598.19625	2598.19625	9941.20255
116-120	337.423054	25.0391503	-1236.66646	0	8448.78657
121-125	384.054417	28.0885523	5419.46772	5419.46772	10787.5326
126-130	201.468859	31.3654169	-4496.62481	0	6319.15476
131-135	337.423054	34.8768306	6593.41242	6593.41242	11768.2467
136-140	157.792417	38.6298167	-886.223101	0	6095.49213
141-145	179.630638	42.6313377	5013.95704	5013.95704	7657.89438
146-150	67.4846109	46.8882984	-3264.86297	0	3164.23857
151-155	133.984248	51.4075482	3574.25039	3574.25039	6887.80169
156-160	67.4846109	56.1958834	57.7917001	57.7917001	3792.35732
161-165	66.4996374	61.2600493	2789.94105	2789.94105	4073.77106
166-170	22.8231948	66.6067425	-1514.86203	0	1520.17866
171-175	44.6614161	72.2426122	1641.14094	1641.14094	3226.45736
176-180	22.8231948	78.1742622	1853.96183	1853.96183	1784.18641
181-185	0	84.4082527	0	0	0
186-190	0	90.9511016	0	0	0
191-195	0	97.8092856	0	0	0
195-200	0	104.989242	0	0	0

Producció anual (gr/ha)	132948.697
Biomassa anual (gr/ha)	128569.424
P / B	1.03406154

el Matarranya Vall-de-roures 85 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	601.150859	0.39035693	-30.7113664	0	234.663402
31-35	662.394457	0.64419151	-397.831878	0	426.708886
36-40	1170.46616	0.95177467	-379.67535	0	1114.02004
41-45	1506.63885	1.34018823	372.269248	372.269248	2019.17967
46-50	1268.11619	1.81756199	1885.33791	1885.33791	2304.87979
51-55	363.8821	2.39181405	567.920927	567.920927	870.338318
56-60	154.322751	3.07067779	18.5265189	18.5265189	473.875443
61-65	148.942703	3.86172322	-190.936278	0	575.175495
66-70	193.419206	4.77237415	-620.906661	0	923.068821
71-75	311.335525	5.80992237	-1733.84877	0	1808.83523
76-80	583.574594	6.9815395	497.441383	497.441383	4074.24908
81-85	518.204851	8.29428708	-4049.09965	0	4298.1398
86-90	968.349934	9.75512513	-241.77776	0	9446.37477
91-95	991.306247	11.3709197	675.401455	675.401455	11272.0637
96-100	936.069648	13.1484492	-2430.52343	0	12307.8642
101-105	1108.59561	15.0944104	760.327739	760.327739	16733.5972
106-110	1061.42909	17.2154235	-12168.4194	0	18272.9512
111-115	1725.25967	19.5180363	4917.63284	4917.63284	33673.6808
116-120	1487.99091	22.0087289	3047.8897	3047.8897	32748.7885
121-125	1357.25142	24.6939168	9496.2569	9496.2569	33515.8536
126-130	993.36932	27.5799545	7526.99467	7526.99467	27397.0806
131-135	734.58037	30.6731385	-2457.7848	0	22531.8854
136-140	810.710209	33.9797103	10368.5789	10368.5789	27547.698
141-145	520.267923	37.5058583	-4719.63948	0	19513.095
146-150	640.247315	41.2577209	5853.77601	5853.77601	26415.145
151-155	504.754731	45.241388	18808.4285	18808.4285	22835.8046
156-160	107.156223	49.4629035	-10128.5219	0	5300.25793
161-165	303.265453	53.9282669	11028.4878	11028.4878	16354.5803
166-170	107.156223	58.6434349	-2880.85274	0	6284.00899
171-175	154.322751	63.6143232	10212.9056	10212.9056	9817.13733
176-180	0	68.8468081	0	0	0
181-185	0	74.3467274	0	0	0
186-190	0	80.1198824	-1736.03759	0	0
191-195	20.8932399	86.1720385	1987.29058	1987.29058	1800.41307
195-200	0	104.989242	0	0	0

Producció anual (gr/ha)	341098.683
Biomassa anual (gr/ha)	372891.414
P / B	0.91473997

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	50.8464078	0.38954525	-48.4685759	0	19.8069767
31-35	146.670807	0.6567656	83.2821399	83.2821399	96.3283404
36-40	43.2239679	0.98686764	15.7697662	15.7697662	42.6563351
41-45	29.8569681	1.41033965	-247.141572	0	42.1084658
46-50	179.340938	1.93811102	-17.1802992	0	347.582648
51-55	187.022495	2.58097789	345.110283	345.110283	482.700923
56-60	69.6495276	3.34961852	-770.433419	0	233.299347
61-65	273.732975	4.25460564	215.815471	215.815471	1164.62586
66-70	228.31244	5.30641652	-233.995186	0	1211.5209
71-75	268.107974	6.51544133	230.684208	230.684208	1746.84177
76-80	235.937854	7.89199027	786.904403	786.904403	1862.01925
81-85	144.8002	9.44629958	-1323.53098	0	1367.82607
86-90	273.541119	11.1885368	676.042805	676.042805	3060.52488
91-95	217.761577	13.1288053	-1509.25412	0	2858.94936
96-100	324.330019	15.2771485	-1188.63534	0	4954.83786
101-105	396.729335	17.643553	-741.116041	0	6999.71506
106-110	435.949544	20.2379524	1085.15966	1085.15966	8822.72611
111-115	385.728655	23.0702295	2338.05618	2338.05618	8898.84858
116-120	290.538657	26.1502193	-1394.65992	0	7597.64959
121-125	340.76252	29.4877113	4039.46186	4039.46186	10048.3068
126-130	211.450616	33.0924516	-2357.77102	0	6997.41927
131-135	278.854991	36.9741446	2928.71835	2928.71835	10310.4248
136-140	203.76476	41.1424552	-430.382523	0	8383.38251
141-145	213.700352	45.6070101	-3586.91378	0	9746.23409
146-150	288.532336	50.3773996	-3087.26204	0	14535.5088
151-155	346.937768	55.4631789	4166.69389	4166.69389	19242.2715
156-160	275.228752	60.8738692	1173.83595	1173.83595	16754.2391
161-165	256.795879	66.6189594	-3386.79708	0	17107.4742
166-170	305.458941	72.7079066	-796.136452	0	22209.2802
171-175	315.953661	79.1501378	7012.15994	7012.15994	25007.7758
176-180	230.939695	85.9550505	7041.8021	7041.8021	19850.4332
181-185	152.235367	93.1320138	6751.26934	6751.26934	14177.9863
186-190	82.5178402	100.690369	-8369.28533	0	8308.7518
191-195	162.538231	108.639431	8767.60676	8767.60676	17658.061
195-200	84.767576	116.988489	-1621.26494	0	9916.83066
201-205	98.1345758	125.746806	0	0	12340.1095
205-210	98.1345758	134.923622	3166.7021	3166.7021	13240.6724
211-215	75.4575032	144.528151	6806.18578	6806.18578	10905.7334
216-220	29.9203838	154.569586	-4809.74645	0	4624.78133
221-225	60.0326236	165.057096	4748.90375	4748.90375	9908.81052
226-230	32.1701195	175.999829	2030.5661	2030.5661	5661.93552
231-235	20.9894398	187.40691	0	0	3933.56604
236-240	20.9894398	199.287444	2014.48363	2014.48363	4182.93181
241-245	11.1806798	211.650517	2437.19944	2437.19944	2366.39665
246-250	0	224.505192	0	0	0

Producció anual (gr/ha)	269189.436
Biomassa anual (gr/ha)	349229.885
P / B	0.77080871

el Matarranya Vall-de-roures 86 *B.haasi*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	21.6832742	0.44272744	-24.6664036	0	9.59978051
31-35	65.0502175	0.73073112	-9.27996578	0	47.5342182
36-40	75.4875562	1.08182145	48.5864447	48.5864447	81.6640576
41-45	37.6951892	1.52779986	-41.1729552	0	57.5907049
46-50	60.7965007	2.07914292	-408.445757	0	126.404614
51-55	231.730519	2.74617005	-1.9011676	0	636.371412
56-60	232.340355	3.53906171	-768.782421	0	822.266854
61-65	425.674658	4.46787401	220.395187	220.395187	1901.86074
66-70	381.385562	5.54255064	410.319136	410.319136	2113.84879
71-75	314.415831	6.77293282	-383.646744	0	2129.5173
76-80	365.993874	8.1687677	-187.972777	0	2989.71894
81-85	387.067708	9.73971558	646.540431	646.540431	3769.92938
86-90	325.964876	11.4953561	447.188195	447.188195	3747.08233
91-95	289.99445	13.4451937	-123.349051	0	3899.03154
96-100	298.511881	15.5986623	-480.044732	0	4656.38602
101-105	327.188163	17.9651298	3092.07566	3092.07566	5877.97781
106-110	166.276398	20.5539014	-490.854968	0	3417.6287
111-115	188.670697	23.3742236	430.842764	430.842764	4410.03105
116-120	171.338317	26.4352868	528.209454	528.209454	4529.37754
121-125	152.501904	29.746228	590.287143	590.287143	4536.3564
126-130	133.751092	33.3161339	855.27284	855.27284	4456.0693
131-135	109.441686	37.1540427	1480.27621	1480.27621	4066.20108
136-140	71.6385326	41.2689462	-1500.02786	0	2956.44675
141-145	106.190527	45.6697922	1341.16272	1341.16272	4849.6993
146-150	78.2264529	50.3654859	2985.82233	2985.82233	3939.91331
151-155	21.6832742	55.3648917	-1174.59686	0	1200.49213
156-160	41.9489061	60.6768346	623.39305	623.39305	2545.32683
161-165	32.1210078	66.310102	820.71913	820.71913	2129.9473
166-170	20.2656318	72.2734446	1527.19087	1527.19087	1464.66702
171-175	0	78.5755782	0	0	0
176-180	0	85.2251843	0	0	0
181-185	0	92.2309115	0	0	0
186-190	0	99.6013765	0	0	0
191-195	0	107.345165	0	0	0
195-200	0	104.989242	0	0	0

Producció anual (gr/ha)	54162.9503
Biomassa anual (gr/ha)	77368.9412
P / B	0.70006064

el Matarranya Vall-de-roures 86 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.25611709	-64.2583746	0	0
31-35	190.42057	0.44462431	-142.792599	0	84.6656136
36-40	449.407019	0.68369769	-185.579563	0	307.258542
41-45	674.175148	0.99707246	114.50636	114.50636	672.201473
46-50	577.089281	1.3951486	605.506526	605.506526	805.125305
51-55	204.043895	1.88839935	93.0513062	93.0513062	385.316357
56-60	161.109446	2.48736386	-612.540997	0	400.737813
61-65	378.135236	3.20264138	13.8878379	13.8878379	1211.03155
66-70	374.276657	4.04488627	573.263829	573.263829	1513.90651
71-75	247.119203	5.02480388	-1263.19162	0	1241.72553
76-80	474.294462	6.15314702	1361.92104	1361.92104	2918.40355
81-85	273.0166	7.44071286	-987.371048	0	2031.43812
86-90	394.360685	8.89834026	1213.36486	1213.36486	3509.15556
91-95	269.052244	10.5369074	64.5296887	64.5296887	2834.97858
96-100	263.399426	12.3673296	-2181.41652	0	3257.54752
101-105	426.85923	14.4005576	1183.77774	1183.77774	6147.01095
106-110	350.404385	16.6475757	-1253.58963	0	5833.38354
111-115	420.669985	19.1194003	2425.96928	2425.96928	8042.95784
116-120	301.915407	21.8270784	-346.66191	0	6589.93125
121-125	316.820782	24.7816864	3505.73207	3505.73207	7851.35326
126-130	183.720719	27.9943291	-731.184745	0	5143.13825
131-135	208.352815	31.4761382	1853.37505	1853.37505	6558.14198
136-140	152.702799	35.2382716	944.845086	944.845086	5380.98271
141-145	127.310517	39.2919127	1057.08997	1057.08997	5002.27373
146-150	101.784865	43.6482688	2383.33232	2383.33232	4442.73313
151-155	49.88765	48.318571	-1271.48573	0	2410.49996
156-160	74.9391374	53.3140733	514.308212	514.308212	3995.31067
161-165	65.7413549	58.6460516	3330.23333	3330.23333	3855.47089
166-170	11.5209613	64.3258033	-931.399182	0	741.095093
171-175	25.3651015	70.3646467	737.959183	737.959183	1784.8064
176-180	15.3247659	76.7739202	1227.47561	1227.47561	1176.54236
181-185	0	83.564982	0	0	0
186-190	0	90.7492096	0	0	0
191-195	0	98.3379988	0	0	0
195-200	0	104.989242	0	0	0

Producció anual (gr/ha)	81214.4525
Biomassa anual (gr/ha)	96129.124
P / B	0.84484753

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	63.2931731	0.36722393	-63.6385079	0	23.2427678
31-35	196.002502	0.62618995	40.2335138	40.2335138	122.734797
36-40	143.821031	0.9493737	140.586215	140.586215	136.539905
41-45	20.4341165	1.36744564	-52.7863522	0	27.9425434
46-50	53.248622	1.89235018	-101.44267	0	100.765039
51-55	99.5557095	2.5359746	16.6274209	16.6274209	252.470751
56-60	93.8168148	3.31015528	-17.8515648	0	310.548225
61-65	98.5893845	4.22668272	-433.688175	0	416.706047
66-70	190.243135	5.29730568	172.487785	172.487785	1007.77604
71-75	160.924072	6.53373466	-832.431592	0	1051.43519
76-80	276.441785	7.94764483	989.271628	989.271628	2197.06112
81-85	162.893857	9.55067853	-380.125713	0	1555.74686
86-90	199.396737	11.3544475	698.330315	698.330315	2264.03978
91-95	142.720174	13.3705348	-832.245563	0	1908.24505
96-100	200.326309	15.6104965	265.926934	265.926934	3127.19315
101-105	184.499829	18.0858631	69.8034131	69.8034131	3336.83865
106-110	180.901587	20.8081412	402.660175	402.660175	3764.22575
111-115	162.803376	23.7888142	-2096.89148	0	3872.89926
116-120	245.481665	27.0393439	1917.39151	1917.39151	6637.66318
121-125	178.792285	30.5711714	3303.25377	3303.25377	5465.88957
126-130	76.9252387	34.3957176	-2190.41054	0	2645.89878
131-135	137.098767	38.5243846	-2026.57789	0	5281.64564
136-140	186.909171	42.9685563	5234.71983	5234.71983	8031.21724
141-145	71.3302387	47.7395988	-3361.75388	0	3405.27698
146-150	138.258372	52.8488616	1326.64993	1326.64993	7306.79758
151-155	114.359597	58.3076778	-3041.03709	0	6668.04252
156-160	164.091737	64.1273646	2577.03833	2577.03833	10522.7706
161-165	125.715521	70.3192245	582.859812	582.859812	8840.21796
166-170	117.78906	76.894545	1079.6953	1079.6953	9057.33621
171-175	104.343958	83.8645994	-1869.85849	0	8750.76426
176-180	125.719898	91.2406474	3209.53927	3209.53927	11470.7649
181-185	91.9556958	99.0339352	-326.766252	0	9106.73442
186-190	95.1262486	107.255696	5435.92091	5435.92091	10202.832
191-195	46.3746237	115.917151	-8.66153762	0	5375.61428
195-200	46.4465711	125.029509	3816.27555	3816.27555	5807.19198
201-205	17.0291543	134.603966	-3932.98299	0	2292.1917
205-210	45.2150187	144.651707	-861.952495	0	6540.42963
211-215	50.9680696	155.183906	9.58747076	9.58747076	7909.4241
216-220	50.9083729	166.211725	5833.49852	5833.49852	8461.56849
221-225	16.9694576	177.746317	2286.36319	2286.36319	3016.2586
226-230	4.52149847	189.798824	-7330.6766	0	858.175092
231-235	41.9250726	202.380376	5211.68576	5211.68576	8484.81194
236-240	16.9694576	215.502094	1004.82826	1004.82826	3656.95365
241-245	12.4479592	229.175091	0	0	2852.76217
246-250	12.4479592	243.410467	0	0	3029.96356

Producció anual (gr/ha)	174205.442
Biomassa anual (gr/ha)	197155.608
P / B	0.88359364

el Matarranya Vall-de-roures 87 *B.haasi*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	58.3913984	0.38949114	9.29357602	9.29357602	22.742932
31-35	40.0735997	0.66087842	-27.9622903	0	26.4837772
36-40	74.5033647	0.99805803	46.1438291	46.1438291	74.3586814
41-45	35.914131	1.43264688	-74.6927034	0	51.4522678
46-50	80.3012405	1.97653027	21.6016602	21.6016602	158.717832
51-55	70.847357	2.64149806	-8.03046938	0	187.143156
56-60	73.5116597	3.4392554	-351.553596	0	252.825373
61-65	164.07477	4.38143128	278.579453	278.579453	718.882329
66-70	107.219958	5.47958557	-532.605604	0	587.520937
71-75	194.825984	6.74521494	-200.795206	0	1314.14314
76-80	221.841913	8.1897578	265.723083	265.723083	1816.83154
81-85	192.218415	9.82459858	-387.386511	0	1888.46877
86-90	228.410855	11.6610714	223.734664	223.734664	2663.51529
91-95	210.716367	13.7104635	603.303026	603.303026	2889.01907
96-100	169.962722	15.9840178	-861.331712	0	2716.68718
101-105	220.0612	18.4929356	2270.65039	2270.65039	4069.57761
106-110	105.51401	21.2483789	296.207753	296.207753	2242.00165
111-115	92.4680826	24.2614723	95.0918672	95.0918672	2243.41183
116-120	88.7895317	27.5433051	825.081246	825.081246	2445.55716
121-125	60.600896	31.1049326	325.375748	325.375748	1884.98679
126-130	50.7335326	34.957378	377.211428	377.211428	1773.51128
131-135	40.5320701	39.1116335	-1625.42301	0	1585.27547
136-140	79.9030734	43.5786618	1558.30901	1558.30901	3482.06901
141-145	45.9615524	48.3693974	0	0	2223.13259
146-150	45.9615524	53.4947471	1791.04188	1791.04188	2458.70162
151-155	14.0718226	58.9655918	358.369936	358.369936	829.753347
156-160	8.27394678	64.792787	-954.341024	0	536.092071
161-165	22.3457694	70.9871636	1658.06979	1658.06979	1586.26279
166-170	0	77.5595292	0	0	0
171-175	0	84.5206682	0	0	0
176-180	0	91.8813432	-2294.99705	0	0
181-185	23.9841765	99.6522953	2486.37684	2486.37684	2390.07824
186-190	0	107.844245	0	0	0
191-195	0	116.467891	0	0	0
195-200	0	104.989242	0	0	0

Producció anual (gr/ha)	53960.6607
Biomassa anual (gr/ha)	45119.2037
P / B	1.19595774

el Matarranya Vall-de-roures 87 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	8.03819237	0.26362994	-18.3614097	0	2.11910815
31-35	61.0439086	0.45516819	3.03452053	3.03452053	27.7852451
36-40	55.6559883	0.69689273	-144.744469	0	38.7862537
41-45	227.973158	1.01246708	-145.959309	0	230.815318
46-50	350.05134	1.41190858	-69.9424623	0	494.240492
51-55	392.695494	1.90526876	-49.787459	0	748.190457
56-60	415.49595	2.50262982	-183.225214	0	1039.83255
61-65	480.099609	3.2141018	124.344173	124.344173	1543.08902
66-70	445.634651	4.04982025	36.6552632	36.6552632	1804.74023
71-75	437.505054	5.01994424	-480.235783	0	2196.25098
76-80	524.043683	6.13465466	-678.911464	0	3214.82702
81-85	624.778684	7.40415278	1179.97692	1179.97692	4625.95683
86-90	478.916525	8.83865896	230.862865	230.862865	4232.97983
91-95	454.893054	10.4484115	-1371.16039	0	4752.90983
96-100	576.122295	12.2436658	-163.870506	0	7053.84887
101-105	588.535131	14.2346933	923.752347	923.752347	8377.61707
106-110	528.134818	16.4317806	-1408.35073	0	8678.19545
111-115	608.167579	18.845229	784.101623	784.101623	11461.0573
116-120	569.200273	21.4853537	4312.45447	4312.45447	12229.4692
121-125	380.708459	24.3624832	2914.1481	2914.1481	9275.00345
126-130	268.095727	27.4869588	-388.408063	0	7369.1362
131-135	281.429795	30.869134	3795.95421	3795.95421	8687.49406
136-140	165.143834	34.5193742	8.29672255	8.29672255	5700.66181
141-145	164.916095	38.448056	2774.05296	2774.05296	6340.70325
146-150	96.4242613	42.665567	174.298742	174.298742	4113.99578
151-155	92.5394859	47.1823056	1044.34683	1044.34683	4366.2263
156-160	71.4572213	52.0086802	2124.54452	2124.54452	3716.39577
161-165	32.4899146	57.1551091	23.7117046	23.7117046	1856.96461
166-170	32.0936028	62.6320205	-537.34902	0	2010.08719
171-175	40.3003677	68.4498517	1635.5248	1635.5248	2758.55419
176-180	17.4156255	74.619049	1355.21555	1355.21555	1299.53741
181-185	0	81.1500677	0	0	0
186-190	0	88.0533714	0	0	0
191-195	0	95.3394324	0	0	0
195-200	0	104.989242	0	0	0

Producció anual (gr/ha)	87919.7862
Biomassa anual (gr/ha)	130247.471
P / B	0.67502106

el Matarranya Vall-de-roures 88 *B. graellsii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.2794044	0	0	0
31-35	0	0.49002435	-70.7544888	0	0
36-40	115.971629	0.75960326	-133.44903	0	88.0924275
41-45	260.936164	1.11563076	76.7639548	76.7639548	291.108412
46-50	202.95035	1.57090774	159.416795	159.416795	318.816276
51-55	115.971629	2.13841223	142.678686	142.678686	247.995148
56-60	57.9858143	2.83128283	0	0	164.17424
61-65	57.9858143	3.6628052	-478.428452	0	212.390742
66-70	173.957443	4.64640074	-150.452682	0	808.275991
71-75	202.95035	5.79561698	-1304.083	0	1176.22249
76-80	405.9007	7.1241193	-455.079242	0	2891.68501
81-85	463.886514	8.6456838	1372.89891	1372.89891	4010.61612
86-90	318.921978	10.3741909	-655.643905	0	3308.5575
91-95	376.907793	12.32362	387.672816	387.672816	4644.86843
96-100	347.914886	14.5080442	-909.083417	0	5047.56452
101-105	405.9007	16.9416257	528.840499	528.840499	6876.61774
106-110	376.907793	19.6386125	0	0	7401.94609
111-115	376.907793	22.6133339	-2805.54892	0	8523.14175
116-120	492.879421	25.8801974	-10406.1177	0	12755.8167
121-125	869.787214	29.453686	3634.61814	3634.61814	25618.4395
126-130	753.815585	33.3483549	1026.36207	1026.36207	25138.5097
131-135	724.822678	37.5788291	-1154.01821	0	27237.9875
136-140	753.815585	42.159801	11628.449	11628.449	31780.715
141-145	492.879421	47.106028	-2881.77179	0	23217.5918
146-150	550.865235	52.4323308	-1600.95681	0	28883.1483
151-155	579.858143	58.1535909	-3545.38992	0	33720.8332
156-160	637.843957	64.2847492	-15652.275	0	41003.6388
161-165	869.787214	70.8408042	27987.8394	27987.8394	61616.4257
166-170	492.879421	77.8368101	-18898.0901	0	38364.1619
171-175	724.822678	85.2878758	31020.2978	31020.2978	61818.5865
176-180	376.907793	93.2091629	-25394.7756	0	35131.2599
181-185	637.843957	101.615885	3072.55382	3072.55382	64815.0782
186-190	608.85105	110.523306	23367.4304	23367.4304	67292.2306
191-195	405.9007	119.946738	14476.1518	14476.1518	48686.4648
195-200	289.929071	129.901542	7831.00141	7831.00141	37662.2334
201-205	231.943257	140.403126	16912.1599	16912.1599	32565.5584
205-210	115.971629	151.466944	-27342.6268	0	17565.8682
211-215	289.929071	163.108493	-24515.7208	0	47289.894
216-220	434.893607	175.343317	73732.544	73732.544	76255.6876
221-225	28.9929071	188.187	-33887.732	0	5456.08821
226-230	202.95035	201.655169	18142.8989	18142.8989	40925.9872
231-235	115.971629	215.763494	6466.0981	6466.0981	25022.4437
236-240	86.9787214	230.527682	0	0	20051.003
241-245	86.9787214	245.963483	14722.432	14722.432	21393.5893
246-250	28.9929071	262.086685	0	0	7598.65492

Producció anual (gr/ha)	956750.313
Biomassa anual (gr/ha)	1004879.97
P / B	0.95210407

el Matarranya Vall-de-roures 88 *B.haasi*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.30328109	-14.7495202	0	0
31-35	36.7957434	0.52980407	-24.2337373	0	19.4945347
36-40	73.5914867	0.81871046	-218.751789	0	60.2501197
41-45	294.365947	1.19915473	156.884317	156.884317	352.990319
46-50	183.978717	1.68440362	288.932609	288.932609	309.894417
51-55	36.7957434	2.28787244	0	0	84.1839672
56-60	36.7957434	3.0231109	-126.40607	0	111.237613
61-65	73.5914867	3.90379151	0	0	287.285821
66-70	73.5914867	4.94369986	0	0	363.814222
71-75	73.5914867	6.15672647	-1254.91178	0	453.082654
76-80	257.570204	7.55685973	918.320119	918.320119	1946.4219
81-85	147.182973	9.15817981	-1106.68183	0	1347.92814
86-90	257.570204	10.9748533	439.866869	439.866869	2826.79519
91-95	220.77446	13.0211283	1558.65363	1558.65363	2874.73258
96-100	110.38723	15.3113307	-1216.95093	0	1690.17539
101-105	183.978717	17.8598598	-4243.02475	0	3285.83408
106-110	404.753177	20.6811851	3264.68344	3264.68344	8370.77538
111-115	257.570204	23.7898435	-1.446E-12	0	6127.55483
116-120	257.570204	27.200436	1.6487E-12	1.6487E-12	7006.02183
121-125	257.570204	30.9276255	-4841.48777	0	7966.03478
126-130	404.753177	34.9861341	8195.84782	8195.84782	14160.7489
131-135	183.978717	39.3907412	3069.16968	3069.16968	7247.05802
136-140	110.38723	44.1562814	-1716.74939	0	4874.28959
141-145	147.182973	49.2976424	0	0	7255.7736
146-150	147.182973	54.8297636	6371.81543	6371.81543	8070.00764
151-155	36.7957434	60.7676342	-2350.06607	0	2235.99027
156-160	73.5914867	67.1262916	2591.95405	2591.95405	4939.9236
161-165	36.7957434	73.9208205	0	0	2719.97154
166-170	36.7957434	81.1663507	-3125.23635	0	2986.57621
171-175	73.5914867	88.8780568	6835.49473	6835.49473	6540.66834
176-180	0	97.0711561	-7456.50414	0	0
181-185	73.5914867	105.760908	8114.6254	8114.6254	7783.10246
186-190	0	114.962613	0	0	0
191-195	0	124.691612	0	0	0
195-200	0	104.989242	0	0	0

Producció anual (gr/ha)	151547.649
Biomassa anual (gr/ha)	114298.618
P / B	1.32589223

el Matarranya Vall-de-roures 88 *C. miegii*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.34405167	-13.4139513	0	0
31-35	30.3019132	0.56957337	0	0	17.2591629
36-40	30.3019132	0.84362695	0	0	25.5635107
41-45	30.3019132	1.19050558	-126.155834	0	36.0745967
46-50	121.207653	1.61770987	-450.257567	0	196.078816
51-55	363.622958	2.13256036	-732.777082	0	775.447908
56-60	666.64209	2.74222019	-652.773284	0	1828.0794
61-65	878.755482	3.45371296	-465.679618	0	3034.96919
66-70	999.963135	4.27393723	1572.83175	1572.83175	4273.77967
71-75	666.64209	5.20967852	1038.91033	1038.91033	3472.99097
76-80	484.830611	6.26761926	-2071.21969	0	3038.73368
81-85	787.849743	7.45434735	0	0	5872.90564
86-90	787.849743	8.77636341	-1723.57595	0	6914.45566
91-95	969.661222	10.2400871	333.822176	333.822176	9929.41541
96-100	939.359309	11.8518628	384.96341	384.96341	11133.1577
101-105	909.057395	13.6179643	440.875441	440.875441	12379.5111
106-110	878.755482	15.5445991	9533.1627	9533.1627	13659.9016
111-115	303.019132	17.6379125	-3974.31023	0	5344.62493
116-120	515.132524	19.903991	3195.49305	3195.49305	10253.1931
121-125	363.622958	22.3488654	0	0	8126.56054
126-130	363.622958	24.9785135	3193.94071	3193.94071	9082.76095
131-135	242.415305	27.7988628	-2660.67296	0	6738.86983
136-140	333.321045	30.8157932	3925.36891	3925.36891	10271.5524
141-145	212.113392	34.0351386	1082.01501	1082.01501	7219.30871
146-150	181.811479	37.4626892	4756.33658	4756.33658	6811.14693
151-155	60.6038264	41.1041932	0	0	2491.07139
156-160	60.6038264	44.9653589	2846.20907	2846.20907	2725.0728
161-165	0	49.0518557	-4651.19817	0	0
166-170	90.9057395	53.3693159	3369.55576	3369.55576	4851.57713
171-175	30.3019132	57.9233362	1826.40906	1826.40906	1755.1879
176-180	0	62.7194786	-3950.92194	0	0
181-185	60.6038264	67.763272	0	0	4106.71357
186-190	60.6038264	73.060213	4592.98832	4592.98832	4427.72847
191-195	0	78.6157673	0	0	0
195-200	0	104.989242	0	0	0

Producció anual (gr/ha)	131540.257
Biomassa anual (gr/ha)	160793.693
P / B	0.81806851

A3.5. Càlcul de la producció secundària de la comunitat íctica del Ripoll

Ripoll 87 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	71.6532132	0.22268558	15.7975507	15.7975507	15.9561375
31-35	17.9133033	0.38805523	-7.14982174	0	6.95135112
36-40	32.7492769	0.59850086	-28.1553142	0	19.6004703
41-45	71.6532132	0.87512258	-111.391297	0	62.7053451
46-50	179.133033	1.22738205	-123.633688	0	219.86467
51-55	265.62222	1.66483137	-435.28049	0	442.216204
56-60	493.215134	2.19710432	-664.982766	0	1083.6451
61-65	759.711985	2.83390925	658.155058	658.155058	2152.95482
66-70	553.226619	3.58502304	-397.742873	0	1983.33018
71-75	652.692715	4.46028613	-254.869802	0	2911.19626
76-80	704.293857	5.46959815	-915.961287	0	3852.20437
81-85	856.479907	6.62291418	1479.75247	1479.75247	5672.39292
86-90	652.296096	7.93024149	-609.115535	0	5172.86557
91-95	722.839228	9.40163661	-64.7447563	0	6795.87175
96-100	729.192197	11.0472027	-1947.31876	0	8055.53403
101-105	892.460569	12.8770874	3198.95816	3198.95816	11492.2928
106-110	661.528085	14.9014806	-3023.38364	0	9857.7479
111-115	850.759007	17.1306124	4167.51	4167.51	14574.0228
116-120	623.174824	19.5747517	486.59327	486.59327	12198.4925
121-125	599.855845	22.2442047	3908.39211	3908.39211	13343.3162
126-130	434.611492	25.1493128	403.262041	403.262041	10930.1803
131-135	419.495815	28.300452	3454.5667	3454.5667	11871.9212
136-140	304.173791	31.7080312	146.899303	146.899303	9644.75206
141-145	299.788071	35.3824915	6536.97493	6536.97493	10607.2489
146-150	124.562745	39.3343046	-2394.8157	0	4899.58896
151-155	182.408672	43.573972	-888.780194	0	7948.27037
156-160	201.819943	48.1120245	-3692.47982	0	9709.96604
161-165	274.971124	52.9590205	3463.26542	3463.26542	14562.2014
166-170	212.5499	58.1255461	4635.5935	4635.5935	12354.579
171-175	136.321389	63.6222134	-2481.22176	0	8673.06853
176-180	173.645964	69.4596608	2591.10208	2591.10208	12061.3897
181-185	137.900751	75.6485513	-236.247699	0	10431.992
186-190	140.896687	82.1995725	3258.77375	3258.77375	11581.6474
191-195	102.823128	89.1234359	2820.178	2820.178	9163.95049
195-200	72.4021972	96.430876	0	0	6981.8073

Producció anual (gr/ha)	175209.541
Biomassa anual (gr/ha)	251335.725
P / B	0.69711356

Ripoll 87 *P. phoxinus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.26731705	-80.786262	0	0
31-35	230.291187	0.46035592	-381.973146	0	106.015911
36-40	901.534831	0.70341489	-720.03049	0	634.153028
41-45	1751.52993	1.02013434	293.456648	293.456648	1786.79583
46-50	1507.73963	1.42035757	418.286152	418.286152	2141.5294
51-55	1254.04579	1.91394485	1888.92755	1888.92755	2400.17447
56-60	392.363858	2.51077163	1010.00519	1010.00519	985.136042
61-65	37.188332	3.22072714	65.8230122	65.8230122	119.77347
66-70	18.9714403	4.05371319	85.5782175	85.5782175	76.9047778
71-75	0	5.0196432	0	0	0

Producció anual (gr/ha)	5643.11515
Biomassa anual (gr/ha)	8250.48293
P / B	0.68397392

Ripoll 87 *B. meridionalis*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.3603516	0	0	0
31-35	0	0.60883936	0	0	0
36-40	0	0.91638863	0	0	0
41-45	0	1.31154718	0	0	0
46-50	0	1.80471468	0	0	0
51-55	0	2.40617842	0	0	0
56-60	0	3.12612615	0	0	0
61-65	0	3.97465639	0	0	0
66-70	0	4.96178687	0	0	0
71-75	0	6.0974615	0	0	0
76-80	0	7.39155639	0	0	0
81-85	0	8.85388486	0	0	0
86-90	0	10.4942019	-164.948243	0	0
91-95	14.505367	12.3222079	-771.47505	0	178.7381476
96-100	72.5268349	14.3475522	1118.60756	1118.60756	1040.582552
101-105	0	16.5798361	-515.290842	0	0
106-110	29.010734	19.0286152	589.557566	589.557566	552.0340921
111-115	0	21.7034022	-1814.37534	0	0
116-120	78.5009743	24.6136691	1137.67206	1137.67206	1932.197006
121-125	34.9848734	27.7688488	0	0	971.4896578
126-130	34.9848734	31.1783372	37.7081337	37.7081337	1090.770177
131-135	33.8409475	34.8514947	0	0	1179.407603
136-140	33.8409475	38.7976479	-686.123959	0	1312.949167
141-145	50.6341662	43.0260908	868.786043	868.786043	2178.59023
146-150	31.4258408	47.5460861	666.713095	666.713095	1494.175732
151-155	18.0643996	52.3668667	-3574.35704	0	945.9760045
156-160	83.2039327	57.4976361	2832.08342	2832.08342	4784.029448
161-165	36.1287992	62.9475704	2376.30933	2376.30933	2274.220129
166-170	0	68.7258184	0	0	0
171-175	0	74.841503	0	0	0
176-180	0	81.3037218	-1227.79255	0	0
181-185	14.505367	88.1215483	1329.30739	1329.30739	1278.235397
186-190	0	95.304032	0	0	0
191-195	0	102.8602	0	0	0
195-200	0	110.799055	0	0	0

Producció anual (gr/ha)	24652.67533
Biomassa anual (gr/ha)	21213.39534
P / B	1.162127747

Ripoll 88 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.22576483	0	0	0
31-35	0	0.39236824	-25.630125	0	0
36-40	52.6539276	0.60387361	27.1088661	27.1088661	31.7963175
41-45	15.4947036	0.8813398	-129.913077	0	13.6560989
46-50	140.064712	1.23405744	125.53694	125.53694	172.8479
51-55	52.6539276	1.67138949	-134.375952	0	88.0052209
56-60	122.686283	2.20276401	52.9150624	52.9150624	270.248929
61-65	101.521467	2.83766844	119.35795	119.35795	288.084263
66-70	64.102922	3.58564473	-247.636288	0	229.850305
71-75	126.053329	4.45628531	163.233389	163.233389	561.729598
76-80	92.9587525	5.45922956	-210.31036	0	507.48317
81-85	127.9844	6.6041608	-1602.3361	0	845.229556
86-90	349.808722	7.90080366	668.588452	668.588452	2763.77003
91-95	272.056944	9.35892173	-853.386036	0	2546.15964
96-100	356.209452	10.9883155	-3118.83245	0	3914.14184
101-105	619.20083	12.7988204	-682.413416	0	7925.04024
106-110	668.783195	14.8003055	-1293.01488	0	9898.19558
111-115	750.292954	17.0026712	-3291.65658	0	12756.9844
116-120	931.459393	19.4158489	3974.46986	3974.46986	18085.0748
121-125	739.372071	22.0497988	-23.4983143	0	16303.0054
126-130	740.374626	24.9145093	4496.25288	4496.25288	18446.0705
131-135	570.201677	28.0199959	4740.09212	4740.09212	15977.0486
136-140	410.337231	31.3762997	-2835.87067	0	12874.8639
141-145	495.921106	34.9934872	10556.7336	10556.7336	17354.0089
146-150	209.725071	38.881649	-2787.79118	0	8154.45662
151-155	277.864233	43.0508992	8869.49132	8869.49132	11962.3051
156-160	81.7501409	47.5113745	-3301.87026	0	3884.06156
161-165	148.005578	52.2732335	1725.62235	1725.62235	7736.73015
166-170	116.488059	57.3466564	-4790.10896	0	6680.2007
171-175	196.345006	62.7418439	138.599532	138.599532	12319.0477
176-180	194.230368	68.469017	6640.23075	6640.23075	13298.7623
181-185	101.281084	74.5384162	3943.98302	3943.98302	7549.33162
186-190	50.5108816	80.9603011	-8534.8177	0	4089.37618
191-195	151.773027	87.7449499	1609.50907	1609.50907	13317.3167
195-200	134.135278	94.9026591	0	0	12729.7945

Producció anual (gr/ha)	218750.744
Biomassa anual (gr/ha)	243574.678
P / B	0.89808491

Ripoll 88 *P. phoxinus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	86.7970793	0.24095461	-106.327921	0	20.9141564
31-35	420.351275	0.42172232	-98.9475017	0	177.271516
36-40	608.953304	0.65266505	-457.443953	0	397.442537
41-45	1187.70242	0.95720454	-555.597492	0	1136.87415
46-50	1677.16143	1.34611806	1107.98764	1107.98764	2257.65728
51-55	971.282583	1.83031716	1038.679	1038.679	1777.75518
56-60	477.841192	2.42083506	287.420511	287.420511	1156.77471
61-65	373.406418	3.12881616	1136.51007	1136.51007	1168.32004
66-70	50.7547776	3.96550748	224.692576	224.692576	201.26845
71-75	0	4.94225121	0	0	0

Producció anual (gr/ha)	4744.11225
Biomassa anual (gr/ha)	8294.27801
P / B	0.57197411

Ripoll 88 *B. meridionalis*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	63.2985927	0.3603516	0	0	22.80974942
31-35	63.2985927	0.60883936	-94.5616975	0	38.53867498
36-40	189.895778	0.91638863	156.137916	156.137916	174.0183329
41-45	47.4739445	1.31154718	24.3461502	24.3461502	62.26431805
46-50	31.6492964	1.80471468	65.9526496	65.9526496	57.11794968
51-55	0	2.40617842	0	0	0
56-60	0	3.12612615	-55.7811043	0	0
61-65	15.8246482	3.97465639	70.2753328	70.2753328	62.89753905
66-70	0	4.96178687	0	0	0
71-75	0	6.0974615	0	0	0
76-80	0	7.39155639	0	0	0
81-85	0	8.85388486	0	0	0
86-90	0	10.4942019	0	0	0
91-95	0	12.3222079	0	0	0
96-100	0	14.3475522	0	0	0
101-105	0	16.5798361	0	0	0
106-110	0	19.0286152	0	0	0
111-115	0	21.7034022	0	0	0
116-120	0	24.6136691	0	0	0
121-125	0	27.7688488	0	0	0
126-130	0	31.1783372	-1043.28085	0	0
131-135	31.6492964	34.8514947	1163.79761	1163.79761	1103.025283
136-140	0	38.7976479	-513.694478	0	0
141-145	12.572923	43.0260908	-61.0951033	0	540.9637245
146-150	13.9236981	47.5460861	0	0	662.017351
151-155	13.9236981	52.3668667	-2424.87728	0	729.1404437
156-160	58.1149673	57.4976361	1706.56206	1706.56206	3341.473243
161-165	29.7483463	62.9475704	-4699.99623	0	1872.586123
166-170	101.205887	68.7258184	6123.41453	6123.41453	6955.457389
171-175	15.8246482	74.841503	1234.41311	1234.41311	1184.340453
176-180	0	81.3037218	-1339.46181	0	0
181-185	15.8246482	88.1215483	-1152.21348	0	1394.492499
186-190	28.3975711	95.304032	2811.64519	2811.64519	2706.403027
191-195	0	102.8602	-3172.50609	0	0
195-200	29.7173962	110.799055	0	0	3292.659425

Producció anual (gr/ha)	51756.61017
Biomassa anual (gr/ha)	24200.20553
P / B	2.138684736

Ripoll 89 *S. cephalus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.20553956	0	0	0
31-35	0	0.3616373	0	0	0
36-40	0	0.56200872	0	0	0
41-45	0	0.82726187	0	0	0
46-50	0	1.16717031	0	0	0
51-55	0	1.59166386	0	0	0
56-60	0	2.11081424	0	0	0
61-65	0	2.73482336	-92.8965636	0	0
66-70	30.138335	3.47401353	117.009407	117.009407	104.700984
71-75	0	4.33881908	-282.223906	0	0
76-80	58.6335757	5.33977916	90.0147605	90.0147605	313.090346
81-85	43.3398837	6.48753152	-323.034431	0	281.168861
86-90	88.7719107	7.79280699	754.359954	754.359954	691.782366
91-95	0	9.26642459	-153.838694	0	0
96-100	15.2936921	10.9192872	0	0	166.996216
101-105	15.2936921	12.7623775	-204.063574	0	195.183872
106-110	30.138335	14.8067548	-939.127232	0	446.250935
111-115	89.2209599	17.0635512	-2322.77226	0	1522.42642
116-120	216.41464	19.5439694	1221.69218	1221.69218	4229.6011
121-125	157.841318	22.2592793	-961.357067	0	3513.43398
126-130	198.415484	25.220816	1429.81237	1429.81237	5004.20043
131-135	145.028565	28.4399773	-1166.37022	0	4124.6091
136-140	183.735113	31.9282216	-1401.58497	0	5866.33539
141-145	225.251142	35.6970659	1374.83073	1374.83073	8040.80484
146-150	188.757244	39.758084	2571.62798	2571.62798	7504.62637
151-155	127.357951	44.1229049	2097.81294	2097.81294	5619.40277
156-160	82.150449	48.8032108	-2328.20264	0	4009.20568
161-165	127.582476	53.8107361	4731.09036	4731.09036	6865.30694
166-170	43.7286794	59.1572655	-1066.71192	0	2586.8691
171-175	60.9502437	64.8546331	2231.45476	2231.45476	3952.9057
176-180	28.0461916	70.9147207	944.478656	944.478656	1988.88784
181-185	15.2936921	77.349457	1234.01871	1234.01871	1182.95878
186-190	0	84.1708159	-1118.47778	0	0
191-195	12.7524995	91.3908163	-1696.62702	0	1165.46134
195-200	30.5873842	99.0215201	0	0	3028.80928

Producció anual (gr/ha)	85934.6414
Biomassa anual (gr/ha)	72405.0186
P / B	1.18686029

Ripoll 89 *P. phoxinus*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.25578959	-39.8123451	0	0
31-35	117.835983	0.44626908	-125.632026	0	52.5865558
36-40	344.412867	0.68892625	-204.831301	0	237.275064
41-45	590.19137	1.00816619	-273.971679	0	595.010986
46-50	819.573624	1.41501023	-109.121254	0	1159.70506
51-55	885.766584	1.92059372	803.022359	803.022359	1701.19774
56-60	521.916918	2.53615509	997.375199	997.375199	1323.66225
61-65	175.741776	3.27302682	647.124385	647.124385	575.207548
66-70	0	4.14262806	-134.240756	0	0
71-75	29.0449523	5.1564582	165.887688	165.887688	149.769082

Producció anual (gr/ha)	3266.76204
Biomassa anual (gr/ha)	5794.41429
P / B	0.56377778

Ripoll 89 *B. meridionalis*

Interval talla	Densitat mitja anual	Pes mig individual		Producció cohort mitjana	Biomassa mitjana anual
LF (mm)	Nj (n/ha)	Wj(gr)		(gr /ha)	(gr/ha)
26-30	0	0.3603516	0	0	0
31-35	0	0.60883936	0	0	0
36-40	0	0.91638863	0	0	0
41-45	0	1.31154718	-23.1882726	0	0
46-50	15.0720444	1.80471468	31.4080051	31.4080051	27.20073971
51-55	0	2.40617842	0	0	0
56-60	0	3.12612615	0	0	0
61-65	0	3.97465639	0	0	0
66-70	0	4.96178687	0	0	0
71-75	0	6.0974615	0	0	0
76-80	0	7.39155639	0	0	0
81-85	0	8.85388486	0	0	0
86-90	0	10.4942019	0	0	0
91-95	0	12.3222079	0	0	0
96-100	0	14.3475522	0	0	0
101-105	0	16.5798361	0	0	0
106-110	0	19.0286152	0	0	0
111-115	0	21.7034022	0	0	0
116-120	0	24.6136691	0	0	0
121-125	0	27.7688488	0	0	0
126-130	0	31.1783372	-420.370754	0	0
131-135	12.7524995	34.8514947	-8.22685536	0	444.4436681
136-140	12.9762276	38.7976479	-6.74420286	0	503.4471075
141-145	13.1412952	43.0260908	594.376325	594.376325	565.4185607
146-150	0	47.5460861	0	0	0
151-155	0	52.3668667	0	0	0
156-160	0	57.4976361	-1557.79455	0	0
161-165	25.8937947	62.9475704	838.773616	838.773616	1629.951464
166-170	13.1412952	68.7258184	27.8838464	27.8838464	903.1462675
171-175	12.7524995	74.841503	-2218.25401	0	954.4162283
176-180	41.1895671	81.3037218	2388.09043	2388.09043	3348.865108
181-185	12.9762276	88.1215483	1189.1733	1189.1733	1143.485263
186-190	0	95.304032	0	0	0
191-195	0	102.8602	0	0	0
195-200	0	110.799055	0	0	0

Producció anual (gr/ha)	17743.96934
Biomassa anual (gr/ha)	9520.374407
P / B	1.863789026