ABNORMALITIES IN A BRITISH POPULATION OF *HAPLOPHILUS SOULETINUS* (BRÖLEMANN, 1907)

Małgorzata Leśniewska[1] & A. D. Barber[2]

[1] Department of General Zoology, Adam Mickiewicz University ul. Umultowska 89, 61-614 Poznań, Poland.
E-mail: remiz@amu.edu.pl

[2] Rathgar, Exeter Road, Ivybridge, Devon, PL21 0BD, UK.
E-mail: abarber159@btinternet.com

Conventionally, structural abnormalities in geophilomorphs whether of developmental origin or due to injury have tended to be regarded as relatively infrequent. However, in a study of European populations of *Hapolophilus subterraneus* (Shaw, 1794) (*Stigmatogaster subterranea* (Shaw, 1794)), morphological abnormalities of various types were shown not to be rare occurrences but remarkably common (Leśniewska, 2012).

The same study included reference to a population of the related species *Haplophilus souletinus* (Brölemann,1907) (*Stigmatogaster souletina* (Brölemann,1907)) from near Jarret in the Pyrenées where 15 out of 37 individuals collected showed abnormalities of the trunk, of legs and of the of antennae with the highest number in any one individual being four. The highest number of leg-bearing segments found in the sample was 107.

H.souletinus was first described, as *Nesoporogaster souletina*, from the Basses- Pyrenées (Ahusquy) by Brölemann in 1907 and his monograph (Brölemann, 1930) cites Basses-Pyrenées and Hautes-Pyrenées as locations giving numbers of leg-bearing segments as 99 -101 (males) and 103 -107 (females). According to Bonato & Minelli (2014) *H. souletinus* var. *lusitianus* Verhoeff, 1925; *Nesoporogaster lusitianum* Verhoeff, 1951 from the Western part of the Iberian Peninsula, and *Nesoporogaster mediterranea* Matic & Dărăbanțu, 1969 from a locality in central Iberia are synonymous with *H. souletinus.*

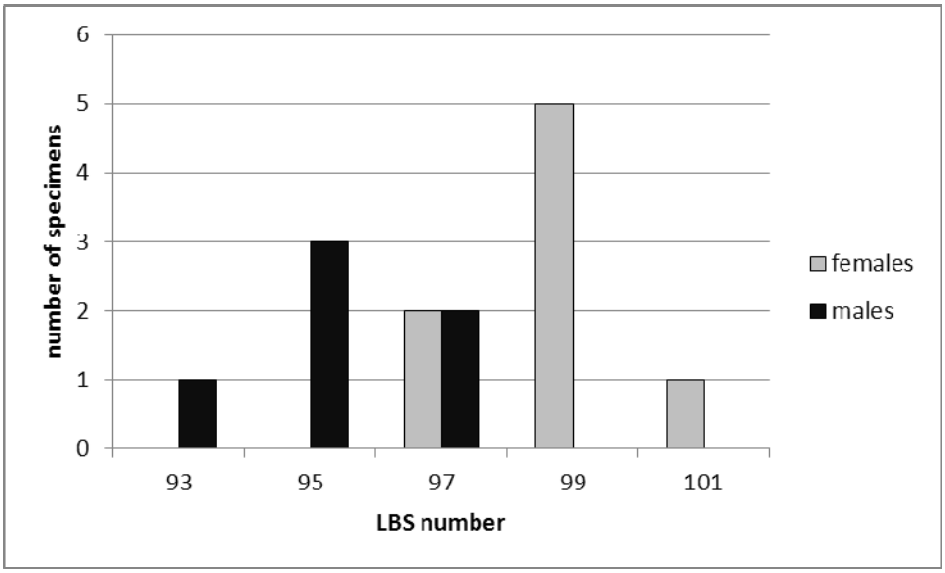

FIGURE 1: *Haplophilus souletinus* from Cornwall: numbers of leg-bearing segments (LBS) in 14 examples

In 1960 Dr E.H.Eason collected specimens of what he identified as *H. souletinus* from mixed woodland on the Carclew Estate in West Cornwall (Eason, 1962). Because of their lower number of leg-bearing segments (up to 101), he described these as belonging to a new subspecies *Nesoporogaster souletina brevior* which he thought was likely to have been introduced e.g. with plants. Subsequent studies in recent years have shown that *H. souletinus* occurs in a number of other localities in the Falmouth area ranging from a woodland nature reserve at Devichoys Wood, a National Trust ornamental garden at Glendurgan, another garden on the Universities` Campus at Tremough, woodland near Pendennis Point and The Dell, a site near the station in the centre of the town (see: Barber, 2013).

Eleven specimens collected from sites around and in the Falmouth area by one of us in 2013 (ADB) together with a further three from 2009 (6♂♂, 8♀♀) were examined by ML. The number of leg-bearing segments (LBS) varied between 93 and 97 in males and between 97 and 101 in females (Fig. 1). The characteristic sternal fossae of the species were also examined and began on sternites 40 to 45, terminating on sternites 45 to 50. Of 14 adults and juveniles examined, seven specimens (50%)

TABLE 1: *Haplophilus souletinus* from Cornwall: characteristics, presence of scars and anomalies. m = male, f = female, juv. = juvenile
T/Ts = tergite(s) S/Ss = sternite(s) R.leg(s) = right leg(s) L.leg(s) = left leg(s)

No	Date	Sex	Stage	LBS	Body Length	Fossae: sternites	Scars	Abnormalities
1	June 2013	m	adult	95	62 mm	41 – 45	L.leg 16. Ts 17, 62	
2	June 2013	m	adult	97	65 mm	42 – 47		
3	June 2013	m	adult	95	59 mm	42 – 47		L.leg 64. R.legs 79, 95
4	June 2013	m	adult	97	57 mm	42 – 47		L.leg 69
5	June 2013	f	juv	97	43 mm	43 – 48	L.leg 25. Left antenna	
6	June 2013	f	adult	99	80 mm	43 – 50	Head, Ts:3,5,10,12,19,41, 43, 54,60. Ss:4,6,7,9,12, 13,18; coxae last legs	L.legs 22, 25, 49
7	June 2013	f	adult	99	65 mm	44 – 48	Sternite 35	
8	June 2013	m	adult	95	59 mm	41 – 46	Pleurites L. 60, 67	
9	June 2013	f	juv.	101		45 – 49	S 22. Coxa last R.leg	L legs 15, 73
10	June 2013	f	juv.	97	43 mm	43 – 48		L.leg 59
11	June 2013	f	adult	99	50 mm	44 – 48	Sternites 23, 24, 25	
12	April 2009	m	adult	93	72 mm	40 – 46	Ts 2,4,14,15,17,19-21,27-29, 33, 34. Ss 4,16,22,27,33	
13	April 2009	f	adult	99	62 mm	45 – 50	Sternites 13, 14, 17, 18	R.legs 28, 36, 37, 69. L.leg 32 Right antenna: 13
14	April 2009	f	adult	99	63 mm	44 – 49		

(3♂♂, 4♀♀) showed some sort of abnormality (seven of legs and one antennal) although trunk abnormalities were not seen in this small sample. In individual specimens there are one to six defective appendages. The leg abnormalities are located both on the left (nine) and on the right (six) side, in the anterior (eight) and in the posterior (seven) part of the body. Nine of the specimens showed various types of scars but there was no correlation between the occurrence of abnormalities and that of scars. These results are summarized in Table 1.

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NOTE ON NOMENCLATURE

Bonato & Minelli (*loc.cit*.) indicate that the correct generic name for the two species referred to here is *Haplophilus* rather than *Stigmatogaster* as currently listed in Chilobase (Accessible online: http://chilobase.bio.unipd.it/search).