HARVESTMEN (OPILIONES) FROM THE AZORES [1]

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With 3 figures

The present material collected by Dr. Per Brinck and Dr. Erik Dahl in the Azores, contains one species only, *Homalenotus coriaceus* (Simon), represented by 65 samples from 25 localities, all in the island of São Miguel. The material was collected from 28th February, to 25th March. Of a total of 103 specimens 76, or 73.8 %, are juveniles and 27, or 26.2 % are adults (17 ♀ and 10 ♂). The juvenile specimens represent different stages of development, from newly hatched young of 0.7 mm length to subadults of 3.8 to 3.9 mm body length. The histogram (Fig. 1) shows the frequency within size groups. These frequency data indicate the age distribution of *H. coriaceus* as regards the actual season — the month of March. Since the material, however, was not collected by quantitative methods, the frequency within the size groups cannot be regarded as quite reliable. It is probable that the large specimens are slightly over-represented.

The ecological milieu where the species was met with varies considerably. In 8 cases the material originates from grassy ground, often sandy and dry, and from heaths; in 5 cases it was taken near the seashore, on freshwater lakes, springs and at a bog; in 3 cases the species was found in ravines and in 3 in mossy ground, amongst decaying leaves and among scrub. In 13 cases it was met with under stones. It was taken in undisturbed habitats (Fig. 2) as well as in areas, greatly influenced by cultivation. In spite of intensive search, particularly on Faial, no Opiliones were found on any of the other Azorean islands visited. Nor have earlier expeditions reported any Harvestmen from these islands, so it seems probable that they are absent except in São Miguel, where *H. coriaceus* occurs

1) Report No. 27 from the Lund University Expedition to Madeira and the Azores in 1957.

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abundantly throughout the island (Fig. 3). Endemic elements of Opiliones do not seem to occur in the Azores.

The general distribution of *Homalenotus coriaceus* is as follows: the South of France, the Iberian Peninsula, NW Africa and Morocco. Accord-

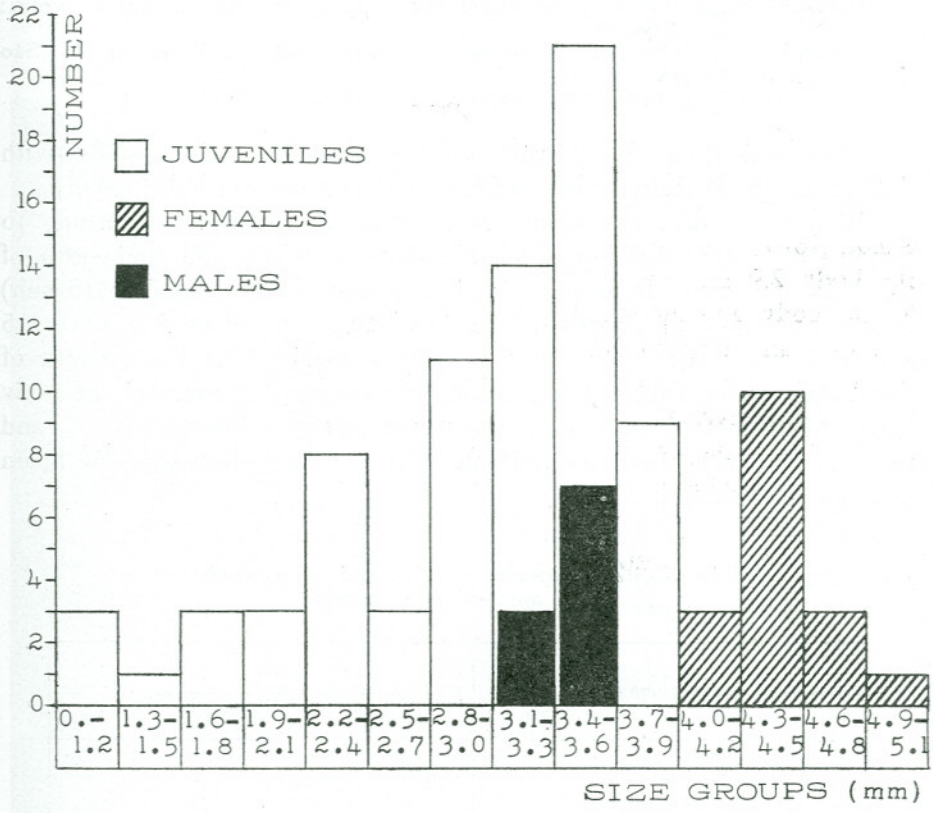

Fig. 1. – Frequency within the size groups of *Homalenotus coriaceus* from the Azores

ing to Kraus (1961) the species also occurs at the southern coast of Brittany (Bretagne).

The identification of *Homalenotus coriaceus* was facilitated thanks to comparative material from NW Spain, which Dr. O. Kraus in Frankfurt a. M. kindly put at my disposal and for which I am sincerely grateful.

Fam. ***Phalangiidae***

Subfam. ***Sclerosomatinae***

Homalenotus coriaceus (Simon 1879)

Parasclerosoma Perssoni Schenkel 1938, pp. 23-25, fig. 11. Terra typica: São Miguel, Azores.
Parasclerosoma Perssoni v. *brunnea* Schenkel 1938, pp. 25-26, fig. 12. São Miguel. Azores.
Further literature in Grasshoff (1959) and Kraus (1961).

Specimens from São Miguel coincide in all important details with descriptions of *H. coriaceus* by Simon (1879) and Roewer (1912, 1923).

Biometrical data concerning *H. coriaceus* are scarce. According to Simon (1879) the total length of the body is 5 mm and the width of the body 2.9 mm. Roewer (1912, 1923) reports the same size (5 mm) for the body, and the lengths of the legs I-IV are given as 6.5, 13.0, 8.5 and 10.5 mm respectively. In the present material the body length of the females varies from 4.1 to 5.0 mm, the average 4.5 mm, and the body length of the males from 3.3 to 3.6 mm, the average 3.4 mm. Two ♂♂ and two ♀♀ from the provinces of Pontevedra and La Coruña in NW Spain measure as in table 1.

Table 1.—Size of specimens of *Homalenotus coriaceus* from north-western Spain.

Measurements	♂♂		♀♀	
	1	2	1	2
Length of body	4.6	4.7	3.1	3.2
Width of abdomen	2.9	2.7	1.8	2.0
Length of carapace	1.7	1.7	1.4	1.4
Length of palpus	1.7	1.7	1.6	1.6
» 1. leg	4.1	4.0	3.8	3.7
» 2. leg	8.4	8.3	8.1	8.2
» 3. leg	4.2	4.3	4.2	4.1
» 4. leg	6.9	6.8	6.2	6.3

On the Azores the species attains almost the same length; it is but slightly smaller, as can be seen in table 3.

Fig. 2. — A virgin habitat of *Homalenotus coriaceus:* Ravine in the Caldeira das Sete Cidades (São Miguel). Phot. E. Dahl.

Table 2.— The size of *Homalenotus coriaceus* in the Azores.

Length of	♀♀				♂♂			
	N	M	∂	m	N	M	∂	m
Body	17	4.5	0.25	0.06	10	3.4	0.11	0.03
Carapace	17	1.7	0.13	0.03	10	1.5	0.09	0.03
Palpus	16	1.8	0.12	0.03	10	1.5	0.19	0.06
1. leg	16	4.1	0.20	0.05	10	3.8	0.11	0.03
2. leg	15	8.7	0.35	0.09	9	8.4	0.35	0.12
3. leg	16	4.5	0.15	0.04	10	4.2	0.08	0.03
4. leg	16	6.9	0.32	0.08	10	6.3	0.13	0.04

N number, *M* the mean, ∂ standard deviation and *m* standard error of the mean

The space between the anterior margin of the carapace and the cusp of spines at the posterior margin of tergal scutum is referred to as the body length. The strong median spine on the anterior margin of the carapace

Fig. 3.—The distribution of *Homalenotus coriaceus* on the island of S. Miguel.

is not included. The length of the median spine varies from 0.16 to 0.28 mm. The length of the carapace is measured from the anterior margin to the posterior cusp of the lateral portion. Across the third and fourth areas there is a row of 4 well-developed tubercles, the 2 in the middle being the largest. The first area with 2 tubercles in the middle only. The second area with 2 tubercles in the middle, the 2 lateral tubercles, one on either

side, only indicated, not developed. The femur of the palpus ventrally with small spines as described by Roewer (1912, 1923); on patella and tibia of the palpus also some few large granulae (Schenkel 1938). According to Grasshoff (1959) there is no sculpture in the palpus. Dr. Kraus was kind enough to examine Simon's type material and asserted that the femur of the palpus is armed.

Juveniles as well as adults after their last shedding of skin have a characteristic brown spotted colour pattern. Old females and males frequently become strongly pigmented, so that the pattern becomes blurred and the entire dorsum is almost entirely blackish brown.

The legs of the juveniles are provided with regular rows of pointed spines on all segments with the exception of metatarsus and tarsus.

In 1938 Schenkel described a new species from the Azores (São Miguel), *Parasclerosoma perssoni* including the var. *brunnea*. This form, however, cannot be considered as separate from *Homalenotus coriaceus* (Simon). Measurements given by Schenkel (table 3) agree well with my own measurements presented in table 2.

Table 3.—The size of *Parasclerosoma perssoni* Schenkel=*Homalenotus coriaceus* (Simon) according to Schenkel (1938)

Measurements	♀	♂
Length of body	4.40	3.40
Width of body	2.55	1.90
Lenght of carapace	1.40	1.23
Length of median spine	0.16	0.26
Length of palpus	1.74	1.51
» 1. leg	4.00	3.65
» 2. leg	8.35	6.10
» 3. leg	4.30	3.88
» 4. leg	6.73	7.90

The variety *brunnea* is certainly identical with the male, as already supposed by Schenkel. The length of the second leg of the male 6.1 mm, as stated by Schenkel, must be erroneous (table 3). The second leg is always the longest one.

The present material is as follows:—

Records from São Miguel: Loc. 2. Vila Franca do Campo, 28.2.57

stones on grassy ground, 1 ♀, 2 juv. — Loc. 3. São Pópulo, 7.5 km E of Ponta Delgada, 1.3.57, sandy grassy ground, 1 ♀, 1 juv. — Loc. 7. Sete Cidades, at Lagoa Azul, 2.3.58, on shore, under stone, 1 juv. — Loc. 10. São Pópulo, 7.5 km E of Ponta Delgada, 4.3.57, grassy ground near rocky sea shore, 3 juv. — Loc. 12. Fonte Grande SE Feteiras, 6.3.57, at a spring, 1 ♀, 6 juv. — Loc. 13. Lagoa do Carvão, 7.3.57, on shore, 1 ♂. — Loc. 15. Lagoa do Pau Pique, 7.3.57, at the lake, 1 ♂, 1 juv. — Loc. 18. Caldeira das Sete Cidades, 8.3.57, at freshwater lake, 1 ♀, 2 juv., grassy ground under stones and in the outer tunnel mouth, 7 juv., in mountain ravine among moss, 1 ♂, 1 juv., at a bog, 1 juv. — Loc. 22. At Lagoa das Furnas, 10.3.57, on burnt land, 1 ♂, 1 juv. — Loc. 23. Valley of Ribeira Quente, 11.3.57, 2 km SE of Furnas, 1 juv. 1 ♂. — Loc. 24. Furnas Park, 11.3.57, 1 juv. — Loc. 25. 3 km W of Furnas, 11.3.57, in heath, 5 juv. — Loc. 28. Caldeiras 5 km SE of Ribeira Grande, 14.3.57, among decaying leaves above the hot spring, 3 juv. — Loc. 29. river 5 km SSE of Ribeira Grande, 14.3.57, sieved from leaves of *Eucalyptus* and *Edychium*, 1 ♂. — Loc. 31. Relva, tanque da Rocha Quebrada, 15.3.57, at freshwater lake, 3 juv., under stones, 3 ♀. — Loc. 32. Relva, Nascente dos Lagos, 15.3.57, under stone, 1 ♀, at a spring, 1 ♀, 2 juv. — Loc. 33. Tanque (pond) 1 km SE Lagoa do Congro, 6 juv. at the lake. — Loc, 36. Fonte at Casas Telhadas, SW of Ribeira Grande, 18.3.57, grassy ground, under stones, 11 juv, 1 ♂. — Loc. 37. Ribeira Seca, W of Ribeira Grande, 18.3.57, on shore, under stone, 1 ♀, 2 juv., on dry grassy ground, under stones, 2 ♀, 1 juv. — Loc. 53. 1 km W of Ribeira Seca, W of Ribeira Grande, 22.3.57, in sandy ground, under stones, 2 juv. — Loc. 54. At Lagoa do Fogo, 22.3.57, on shore, under stones, 3 ♀, 1 ♂, 5 juv. — Loc. 55. Ribeira das Três Voltas, near Ribeira Chã, 23.3.57, 1 ♀, 1 ♂, 1 juv. — Loc. 60. 1 km N of Povoação Ribeira dos Lagos, 24.3.57, under stone, 1 juv. — Loc. 63. 3 km E of Ribeirinha (N coast), 25.3.57, under stone in a ravine, 1 juv., under stone in a gravel pit, 1 ♂, 1 ♀, on a rock wall in a ravine, 1 juv. — Loc. 64. 3 km S of Pico da Pedra, 25.3.57, among low scrub and under stones, 4 juv.

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