

## Introduction

Since the appearance of my list of S.W. African solifuges in 1963 a number of further additions have been made (1966, 1967) in papers which also include descriptions of typical desert Arachnida such as the dune spiders (Sparassidae) and scorpions. The current paper presents descriptions of still further discoveries, chiefly from little explored regions of South West Africa, the Namib litoral and the north western Kaokoveld. Among these two species of large Amblypyge whip-scorpions are recorded from the territory for the first time with notes and comments on the systematics and distribution of the African fauna.

I am under a great obligation to the following collectors for their enthusiasm and co-operative support: Dr. C. Koch of the Desert Research Station, Gobabeb, S.W. Africa; Mr. C. G. Coetzee of the State Museum, Windhoek; Dr. W. Steyn, Dr. L. Schulze and Mr. W. D. Haacke of the Transvaal Museum, Pretoria; Dr. W. G. H. Coaton, Chief of the Termite Survey, Plant Protection Research Institute, Pretoria; Mr. F. Gaerdes of Okahandja, and Mr. H. Maedler, Walvis Bay.

The types are deposited in the State Museum, Windhoek, and the Transvaal Museum, Pretoria.

## Order Solifugae

### Family SOLPUGIDAE

#### NOTE ON A PECULIAR FORM OF SOLPUGID FROM SOUTH WEST AFRICA.

Figs. 1 and 2

A male specimen of Solpugid from Spitzkoppe, Erongo Mts., sent to me by Dr. C. Koch, Director of the Desert Research Station, Gobabeb, differs completely from any known species of the order from Southern Africa in its colouring, and from all other genera of the family Solpugidae, except *Zeriassa*, in the setation of the coxae of the legs. The following is a brief description based on a dried and disarticulated specimen:

**Colour.** — The entire animal deep black with the exception of the tergites of the abdomen (though not the two anterior ones) which are snowy white contrasting strongly with the general colouring. The first two tergites of abdomen a light golden or tawny colour, the scopula of pedipalp-metatarsus also a dull terra-cotta contrasting with the general dark colour of the appendage; the long slender setae of the palpi and legs of a similar colour along their entire length or with the basal halves blackish; spines of the tarsi reddish brown.

**Setation.** — Chelicerae with long, stout curved setae dorsally and in anterior half of lateral surface, thick at their bases but finely tapering, an under coat of quite short slender setae; headplate with strong black setae along its anterior margin, more numerous around the ocular tubercle, these much shorter though comparatively thicker than the long setae of the chelicera; general surface of headplate with an under coat of very short, fine setae of uniform length, shorter and much denser than those of the chelicerae.

Coxae of legs I—IV with a number of short, bluntly pointed rod-like setae (the *bacillae* of Roewer), differing in thickness and general appearance from the neighbouring setae and resembling those figured for *Namibesia* (Lawrence 1962, *Ann. Transv. Mus.* 24 (2, 3), p. 217, figs. 2a, b); they are arranged as follows: I with about 8 along its anterior margin, II with about 10 along the anterior and lateral margins, III with 12—14 on the anterior half of the segment, IV with 20—22 covering most of the surface of the segment. The pedipalp coxae without bacillae.

The white appearance of the dorsum of abdomen created by a thick coating of comparatively short and fairly thick hairs, not pointed apically but sometimes weakly cleft; furthermore on each tergite a small number of much longer, slender, finely pointed setae directed backwards. Sternites with fairly sparse, moderately long black setae of approximately consistent length throughout. Legs with scattered long setae as previously described and an under coat of short hairs similar to those on the chelicerae. Pedipalp metatarsus with a scopula extending its entire length, almost to its distal end, its ventral surface with scattered cylinder bristles, these more numerous distally and on the tarsus, tibia without. Tarsi of legs II—IV with the spine formula typical of the genus *Solpuga*, the spines very strong; claws normal.

#### Structures of the chelicerae:

Flagellum as in fig. 2a seen from the outer side, fig. 2b seen from above, smooth except for a few accessory spicules. Dentition normal but the teeth much worn down, fig. 2a. Stridulatory area unusually large, slightly raised above the general surface and defined by a distinct narrow rim; with 8 strong keels and between them on the anterior margin about 6 much shorter keels, fig. 2c.

*Total length* approximately 38 mm.

A colour photo of another specimen from the same locality taken by Mr. H. Maedler *in situ* is undoubtedly a female specimen and gives a clear idea of the general colouring which is essentially similar to that of the male, Fig. 1.



Fig. 1. A female specimen of the peculiar Solpugid from Spitzkoppe, photographed on the spot by Mr. H. Maedler (\*).

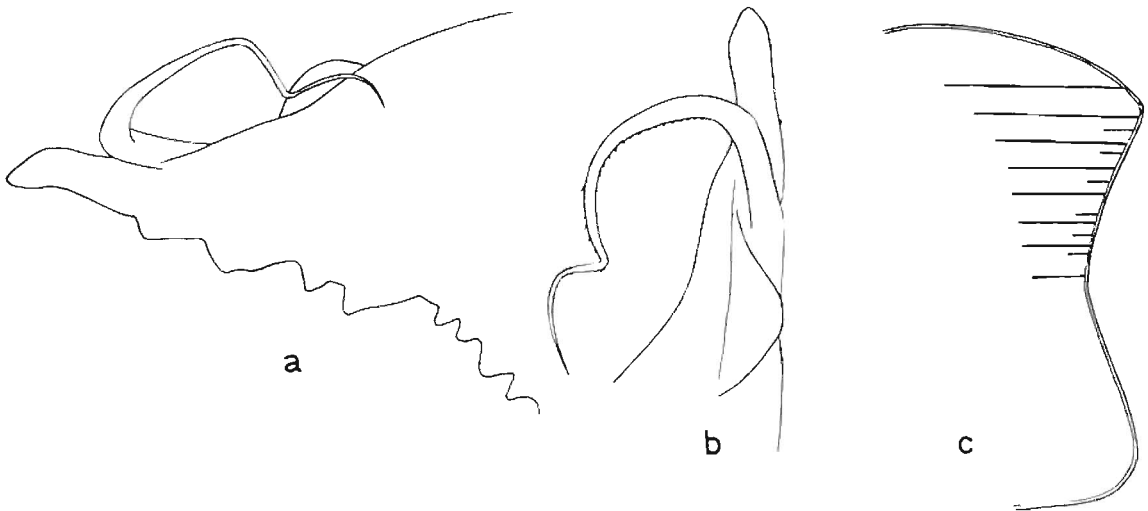


Fig. 2. A melanic male Solpugid from Spitzkoppe, Erongo Mts.: *a*, chelicera from outer side; *b*, apical half of the same from above; *c*, stridulatory area.

(\*). Special thanks are due to the photographer who placed one of his original colour slides at the disposal of the Namib Desert Research Station.

*Remarks.* — This melanic form is peculiar in its distinctive colouring and also in having stout rod-like setae on the ventral surfaces of the coxae of the legs (bacillae). Although it must undoubtedly be placed in the Solpugidae, none of the genera of this family except *Zeriassa*, which has been considered by some authors to represent a distinct subfamily, possess these organs. In Southern Africa besides *Zeriassa* only *Namibesia* of the family Daesiidae has such structures, which are more characteristic of the Rhagodidae, a family of north African and predominantly deserticolous Solifuges; they are also found in the North American family Eremobatidae. The stridulatory mechanism is unusually well developed.

Only among the Rhagodidae (of north African and tropical east African distribution), are totally black or dark coloured species found; even in this family many, if not most, of the members are parti-coloured, black alternating with yellow or reddish brown.

#### SOLPUGEMA AETHIOPS sp.n.

Fig. 3 (a, b)

*Type* 1 ♀, Numas Valley, Brandberg, South West Africa, collected by W. Steyn, April, 1963.

*Colour.* — Whole dorsal surface blackish brown, contrasting sharply with the sides and ventral surface which are dirty white to pale yellow; pleurites, except for a small blue-black portion adjoining the tergites on each side, white; sternites pale yellow, each bordered at the side by a blackish marking, giving the impression of a dark lateral stripe down each side; last two or three sternites almost entirely dark, anal segment blackish; ventral surface of prosoma (coxae and one or two segments distal to them) cream to light yellow, malleoli uniformly pale yellow; appendages uniformly blackish brown above and below (except only the basal segments mentioned above) even the claws, except at extreme apices, blackish, femur-tarsus of legs II and III also a little lighter ventrally.

*Setation.* — Chelicerae dorsally with scattered long reddish brown spinose setae and more numerous fine dirty yellow setae; headplate with numerous short yellow brown setae, some long brown spinose setae; tergites with yellow to russet coloured setae, pleurites almost naked, sternites of abdomen fairly thickly covered with yellow setae, coxae similar but the setae much more dense; stridulatory organ with 10-11 strong distinct lamellae.

*Dentition.* — First intermediate tooth very large, not very much smaller than the first main tooth,

two subgeminat intermediate teeth between second and third main teeth, Fig. 1a; outer cheek series with 4 moderate sized teeth, the last a little smaller than the others; inner cheek series with 4 teeth, the second and fourth minute, subequal, the first very large, almost twice as high as the third, the second a little nearer the first than the third.

*Pedipalps.* — Metatarsus with numerous cylinder bristles ventrally, a few at the base of tarsus but more on tibia; metatarsus dorsally with a regular, fairly thick brush-like row of short setae, these less dense on tarsus and tibia.

*Legs* with the generic formula of spination, no mane on leg IV, the hairs and setae of all legs rather sparse, either quite short or in a few cases very long, the tarsal segments ventrally with much denser brush-like covering of short setae with a russet tinge.

The genital sternites drawn out posteriorly into the strongly projecting rounded lobes characteristic of the genus, these shiny and appearing to be more strongly chitinised than the rest of the segment, Fig. 1b.

*Dimensions:* Chelicera (*in situ*) 10.5, width of headplate 9, pedipalp 28.5, total length 39 mm.

Although in general females of this family cannot be satisfactorily identified, this species of *Solpugema* with its characteristic blackish coloration should be easy to recognise; in this respect it appears to be quite different from any other South West African Solpugid.

The species is peculiar in having a large first intermediate tooth between the two anterior main teeth and subequal to the first main tooth, Fig. 1a; in this it resembles *Solpugelis* and *Solpugiba* but the tooth is much larger than in these genera, the jaws themselves far more robust; it further differs completely from these forms in its colouring.

#### PROSOLPUGA SCHULTZEI (Kraepelin)

*Solpuga schultzei* Kraep., 1908, *Denkschr. med. nat. Jena*, 13, p. 270, figs. 2, 3.

Figs. 4 (a, b, c, d) and 5

Kraepelin's type was based on a single immature female, 10.5 mm. in length, from Rooibank, Walvis Bay, South West Africa.

The following description is based on 1 ♂, 1 ♀, 3 immature specimens, Swartbank near Gobabeb, C. Koch leg., Dec. 1966.

#### *Male:*

*Colour* yellow with blackish markings as follows: chelicerae with a narrow lateral stripe, the inner