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# The male of *Sceliphron pietschmanni* Kohl, with notes on its biology, and a note on homonymy in *S. jamaicense* (F.) (Hymenoptera: Sphecidae)

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The male of *Sceliphron pietschmanni* is described and notes are given on the biology of the species. The supposed homonymy of *S. jamaicense* is discussed.

## INTRODUCTION

The nominate subgenus of *Sceliphron* Latreille was revised by Vecht and Breugel (1968) with a key to both sexes of the 18 species, but excluding the male of *S. pietschmanni* Kohl which was at that time known only from three females collected in Iraq. The material discussed below was collected by Miss C. A. Hulme (of the University College of South Wales and Monmouthshire, Cardiff), and I thank her for donating the specimens to the British Museum (Natural History) collections and for allowing me to include some of her observations on the biology of the species. I also thank Professor J. van der Vecht for advice and encouragement and Mr. M. C. Day for suggestions on improving the manuscript.

### *Sceliphron pietschmanni* Kohl

*Sceliphron (Pelopoeus) pietschmanni* Kohl, 1918: 15, 91. Holotype ♀, Mesopotamia [? Iraq], Hsitsche, Naturhistorisches Museum, Vienna (not seen).

This species belongs to the *spirifex* species-group, which is characterized by the strongly angulate outer surface of the third coxa. *S. pietschmanni* lacks the pair of strong scutellar tubercles present in *S. arabs* (Lepelletier). Further, *S. pietschmanni* has the mesoscutum very strongly striate with impunctate interstices, which distinguishes it from all the remaining species of its group. In all these characters the sexes are alike so that both may readily be identified with Vecht and Breugel's key (1968: 231-2).

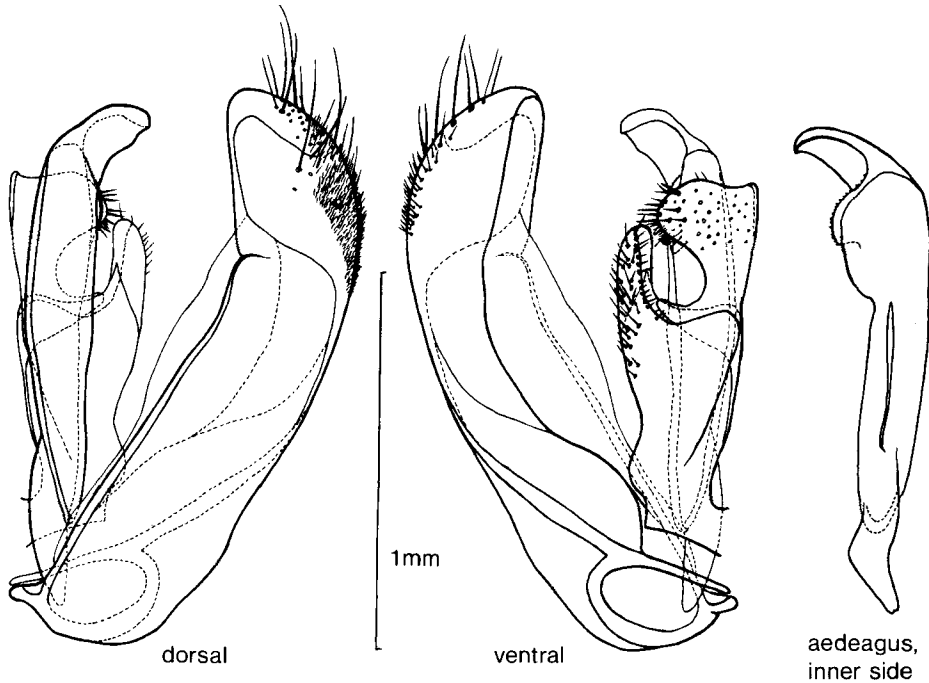


Figure 1. Genitalia of *Sceliphron pietschmanni*, left half.

Table 1. Ratio of anterior widths of second and third cubital cells

	2 > 3	2 = 3	2 < 3
Number of male wings	2	7	9
Number of female wings	4	17	11

Males range in length from 21-25 mm, females 24-27 mm. Males lack the yellow markings on the scutellum and postcutellum which are present in the females. Both sexes have a yellow spot on the tegula and another beneath it on the upper anterior corner of the mesopleuron, but males have a greater tendency for the latter spot to extend below the carina which is present at that point. The genitalia (Fig. 1) should be compared with those of other species figured in Vecht & Breugel (1968: 234-6).

Vecht & Breugel (1968: 232, 237) tentatively suggest that the relative anterior widths of the second and third cubital cells may be of use in distinguishing this species from others. Table 1 gives the data for the present material. While there is a tendency for the second to be narrower than the third, the great variation indicates that this character is unlikely to be useful. Because of frequent asymmetry, each record refers to a single wing.

At the suggestion of Professor van der Vecht, the form and distribution of the male antennal tyloidea of *S. pietschmanni* were compared with those of the other three species, listed below, which occur in or near its

range. This revealed considerable intraspecific variation and overlap between species, and this character is thus unlikely to be of value for species recognition in this group.

### *Distribution*

It is interesting to note that *S. pietschmanni*, apparently confined to the Tigris-Euphrates basin, appears to occupy a northward displacement of the southern boundary of the range of *S. destillatorium*. It is also quite closely allopatric with *S. spirifex*. Only *S. arabs*, over part of its range, is sympatric with *S. pietschmanni*.

### *Material studied*

9 ♂ 16 ♀ Iraq, Lake Razazah near Karbala, 1-5 August, 1973, Miss C. A. Hulme, British Museum (Natural History). 1 ♂ 1 ♀, same data, Rijksmuseum van Natuurlijke Historie, Leiden.

### *Biology*

The observed nests were at least 20 cm back in a horizontal fissure, which was overhung with spiders' webs, and about 1 m up the face of a sandstone cliff.

The nests were of typical *Sceliphron* form, made of mud and covered with an extra layer (crépissage) after completion of the cells. Each cell was provisioned with some 10-15 spiders and closed only when fully stocked. The mud was collected near leaking freshwater taps (the shore of the nearby brackish lake was of sand).

The wasps carefully selected mud of the right consistency, cut a small piece with the mandibles and pushed it back between the forelegs. After adding several more pieces, they used their mouthparts and forelegs to work them into a ball about 3 mm across, i.e. about the same size as their spider prey. The wasps then flew off with the ball held against the underside of the head by the mandibles and forelegs.

Hunting females were seen to take spiders from webs on the walls of a disused building, usually having to make several attempts to catch a spider. A wasp did not always continue to pursue the same one, but individuals varied greatly in their perseverance. Altogether it might take five to ten minutes finally to succeed in catching one; and the hunter often had to stop and clean itself of web. When a spider was caught, the wasp held it against the underside of the head in the same way as a mud ball, and stung it under the cephalo-thorax. The wasp then turned its paralysed prey around and spent some time "gathering-up" the legs before flying off with it.

Some of the wasps (of both sexes) spent the night, sparsely spread out, clinging to the spiders' webs across the nesting fissure. These webs possibly also afforded some protection to the nests, at any rate the wasps were not seen to prey on the occupants.

### *Note on supposed homonymy in Sceliphron jamaicense (F.)*

Menke (in Vecht & Breugel, 1968: 254) claims that the name *Sceliphron jamaicense* (Fabr.) is unavailable because of homonymy, and that *S.*

*annulatum* Cresson as next available name should be used for the species.

*Sphex jamaicense* Fabricius, 1775 was transferred to *Pelopoeus* by Fabricius in 1804. *Vespa jamaicensis* Drury, 1773 was not placed in *Sphex* until 1837 (by Westwood). Thus at no time were the two taxa together in *Sphex* and therefore no secondary homonymy arose. Clearly, no primary homonymy exists. Therefore *Sceliphron jamaicense* (Fabricius) is the senior available name for this taxon.

#### REFERENCES

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