Bull.Br.arachnol.Soc. (1976) 3 (9), 251-252

A glandular secretion in the ocular area of certain erigonine spiders (Araneae, Linyphiidae)

Jan Meijer
Department of Zoology,
Free University,
De Boelelaan 1087,
Amsterdam-Buitenveldert, Holland

On 27 March 1974 three male *Troxochrus scabriculus* (Westring) were caught in the garden of "Vaeshartelt", Meerssen, Z. L., the Netherlands. One of these spiders proved to have a thin layer of gelatinous matter between the fine hairs in the ocular area. This substance looked like the secretion of the cheliceral glands in nemastomatid opilionids, that has a function during copulation (Meijer, 1972). Attempts were made to get more information on the occurrence of this secretion in erigonines.

Three pitfall traps filled with formalin were placed in a birch wood in Schiermonnikoog, where a population of *Diplocephalus picinus* (Blackwall) was known to live. (This species is comparable to *T. scabriculus* in cephalic structure.) The catches of these traps were collected each fortnight from 27 November 1974 until 28 October 1975 by Drs W. K. R. E. van Wingerden. All adult spiders in the samples were identified and checked for the presence of the secretion.

In all 29 male *D. picinus* showing the secretion were caught (Table 1). In this species a high percentage of males have the secretion during the main activity period of the population. The low percentage on 28 May may be caused by the presence of a large number of carabids in the traps that severely damaged the catch by trampling and so rubbed off the secretion.

Of the other 50 spider species caught in the traps one *Tapinocyba praecox* (O. P.-Cambridge) on 19 February and one *Entelecara acuminata* (Wider) (out of two) showed the secretion. So far I have found this secretion in the four aforementioned species as well as in *Walckenaera melanocephala* O. P.-Cambridge (4♂♂, 3 August 1974, Westpolder near Vierhuizen) and *Oedothorax apicatus* (Blackwall) (1♂, 22 May 1974, "Silt", Lauwerszeepolder).

Legendre and Lopez (1974) described a "glande clypeale" in *Argyrodes* (Theridiidae) which they suspected to have a function in mating. They submitted that the secretion of this gland would have "une influence inhibitrice" on the female during copulation. Lopez (1976) reported the presence of a "glande du bandeau" in the erigonines *Grammonota pictilis* (O. P.-Cambridge) and *Moebelia penicillata* (Westring) and a "glande du vertex" in the former species. He suggested that the probable secretion of these hypodermic glands would lubricate the male's integument to prevent damage from the female's chelicerae during copulation.

Martens (1969) established that in *Ischyropsalis* spp. (Opilionida) copulation can only take place if the female is immobilized on contact of its mouthparts with the secretion on the male's chelicerae.

All the erigonine species mentioned have in common a "field" of fine hairs somewhere on the head and a pair of post-ocular sulci; in fact these features occur in quite a number of erigonine genera. The post-ocular sulci on the male's head offer support to the female's chelicerae when it clasps the male in its fangs during copulation (Bristowe, 1971: fig. 116). In this position the group of fine hairs (and the eventual secretion) are in contact with the female's mouthparts. It would therefore seem likely that the secretion found in or around the ocular area in male erigonines with the above mentioned characteristics serves the same function as the secretion of the cheliceral glands in ischyropsalid and nemastomatid opilionids: immobilization of the female during copulation.

	Total males	Males with secretion on head	% with secretion	Females
30 April	3	–	–	–
14 May	29	9	31.0	7
28 May	56	7	12.5	19
11 June	31	10	32.3	9
25 June	12	3	25.0	4
9 July-17 Sept.	–	–	–	7

Table 1. Catches of *Diplocephalus picinus*

References

BRISTOWE, W. S., 1971: *The world of spiders.* Rev. Ed., Collins, London.

LEGENDRE, R. and LOPEZ, A., 1974: Étude histologique de quelques formations glandulaires chez les araignées du genre *Argyrodes* (Theridiidae) et description d'un nouveau type de glande: la glande clypeale des mâles. *Bull.Soc.zool.Fr.* 99: 453-460.

LOPEZ, A., 1976: Présence de glandes tégumentaires prosomatiques chez les mâles de deux Erigonidae (Araneae). *C.r.hebd.Séanc.Acad.Sci., Paris,* série D. 282: 365-367.

MARTENS, J., 1969: Sekretdarbietung während des Paarungsverhaltens von *Ischyropsalis* C. L. Koch (Opiliones). *Z.Tierpsychol.* 26: 513-523.

MEIJER, J., 1972: Some data on the phenology and the activity-patterns of *Nemastoma lugubre* (Müller) and *Mitostoma chrysomelas* (Hermann) (Nemastomatidae, Opilionida, Arachnida). *Neth.J.Zool.* 22: 105-118.

Bull.Br.arachnol.Soc. (1976) 3 (9), 252-253

A new species of spider of the genus *Eilica* (Gnaphosidae) from India

B. K. Tikader
and
U. A. Gajbe
Zoological Survey of India,
Western Regional Station,
Poona-5, India

The spiders of the family Gnaphosidae are little known from India. The genus *Eilica* Keyserling was recently described by Platnick (1976) from India, and a second Indian species is described here.

The type specimen will be deposited in the National Zoological Collections, Zoological Survey of India, Calcutta.

The authors are grateful to Dr N. I. Platnick, The American Museum of Natural History, New York for help with literature on Gnaphosidae. The species is named after Dr Platnick, a well known arachnologist, as a token of the high regard which the present authors have for him.

Eilica platnicki sp.nov.

General: Cephalothorax dark brown with black reticulations; legs light brown; abdomen uniformly dark grey. Total length 9.0 mm; carapace 3.5 mm long, 3.0 mm wide; abdomen 5.5 mm long, 4.0 mm wide.

Cephalothorax: Longer than wide, oval, narrowing in front, flattened, posteriorly provided with a conspicuous fovea, clothed with hairs. Eyes pearly white except the anterior medians; posterior row of eyes longer than the anterior row. Anterior row of eyes slightly procurved (as seen from in front), circular, medians slightly smaller than the adjacent laterals and a little closer to laterals than to each other. Posterior row of eyes slightly recurved, medians elliptical, smaller than laterals and a little closer to adjacent laterals than to each other. Median ocular area longer than wide, and wider behind than in front. Chelicerae each with two translucent laminae which are contiguous, dissimilar in size and fused at their bases as in Fig. 4. Maxillae long, strongly convergent, labium elongate, clothed with hairs, shape as in Fig. 5. Sternum oval, pointed behind, clothed with hairs. Legs strong, clothed with hairs and some spines. Leg formula 4123.