

Uloborus ferokus sp. nov. (Araneae: Uloboridae) a commensal of *Stegodyphus sarasinorum* Karsch

B. L. Bradoo

Department of Zoology, D.A.V. College,
Sector-10, Chandigarh, India

Summary

Description of *Uloborus ferokus* sp. nov., a commensal on the web of the social spider *Stegodyphus sarasinorum* Karsch, is given.

Introduction

Stegodyphus sarasinorum Karsch is a social spider that lives in large complex silken nests (Jambunathan, 1905; Gravely, 1915; Subrahmanyam, 1953; Phaniel, 1960; Bradoo, 1972a; Jacson & Joseph, 1973). Most of these nests contain some intranidal insect commensals (Gravely, 1915; Bradoo, 1967, 1971; Bradoo & Joseph, 1970). Gravely (1915) was the first who reported a small unidentified *Uloborus* sp. in commensalistic association with *S. sarasinorum*, from Cochin, Kerala. This association between two cribellate spiders was later confirmed by the author (1972a, 1972b), while observing social spiders in many different localities in Kerala. These observations made it possible for me to investigate the life history and biology of this commensal which will be published separately.

The genus *Uloborus* Latreille is very inadequately known from India. Even the classical work of Pocock (1900) on Indian spiders completely omits information on these spiders. Roewer (1954) records only six species, namely *Uloborus albescens* Camb., *U. bigibbosus* Simon, *U. filifaciens* Hingston, *U. furunculus* Simon, *U. hilaris* Simon, and *U. modestus* Thorell, from India. Tikader (1966, 1969, 1970) reported *U. walckenaerius* Latr. and described three new species, namely *U. khasiensis* Tikader, *U. danolius* Tikader and *U. krishnae* Tikader, thus raising the total to ten species. *U. geniculatus* (Olivier), a cosmopolitan tropical species was observed by the author inside old houses at Devagiri, Calicut district, Kerala. The genus *Uloborus* (for detailed characters of the genus see

Muma & Gertsch, 1964) is now represented by twelve species from India, including the new species reported in this paper.

Uloborus ferokus sp. nov. (Figs. 1-8)

Female

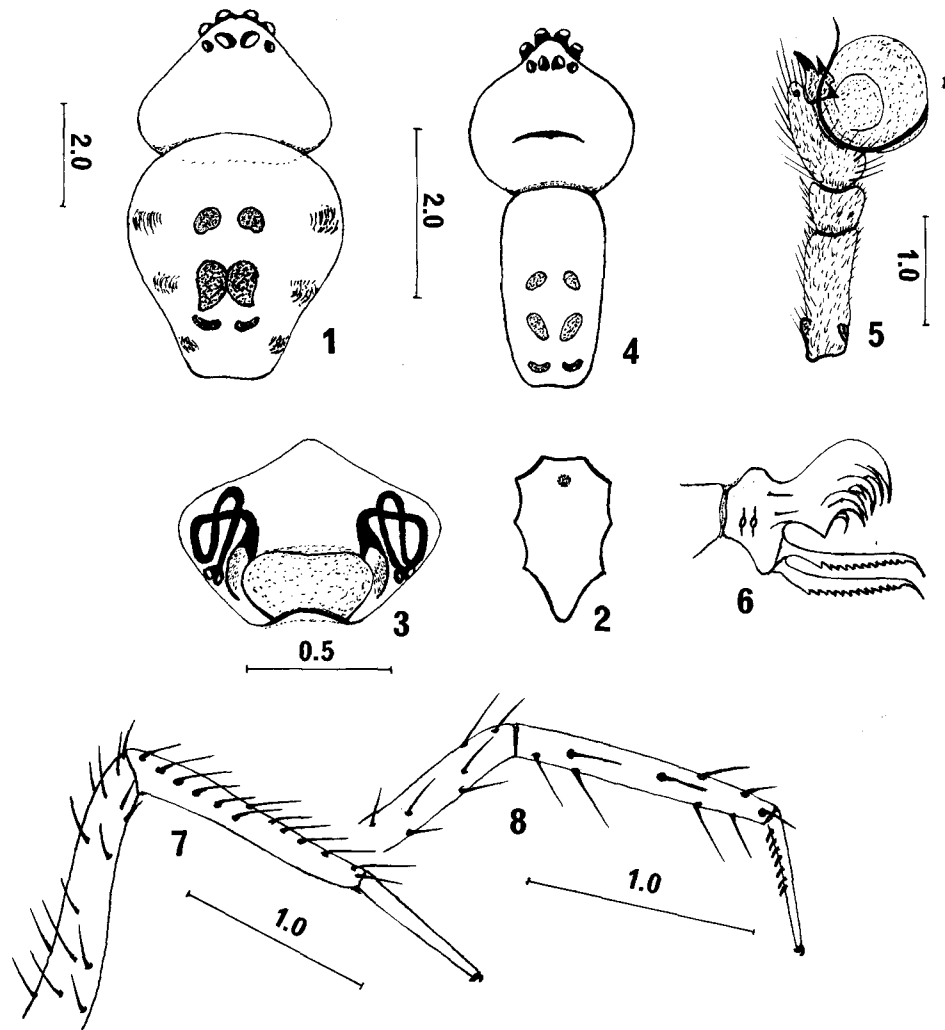
Total length: 5.1-7.0 mm. (Holotype 7 mm long, with carapace 2.9 mm and abdomen 4.1 mm). *Colour*: darker in the immature individuals; greyish-black in the adult, with three pairs of prominent grey dots and hairs on the upper surface of the abdomen (Fig. 1). *Cephalothorax*: oval, a little longer than wide, moderately low and darker above. Cephalic region narrower than the thoracic. Eyes eight, in two transverse rows that are recurved, but connate tubercles absent. Median ocular quadrangle about as long as broad. Sternum darker, longer than wide, posteriorly narrowing into a blunt point between the hind coxae (Fig. 2). *Chelicerae*: small, covered with dark pubescence. *Legs*: slender, annulated with dark transverse bands. Anterior tibiae with few weak spines, but brushes of tibial hairs absent. Second and third femora with a row of ten to eleven long, thin hairs. *Hind tarsi and metatarsi* with a row of 12 short, equidistant spines and 30 small, calamistral hairs, respectively. Each pretarsus has a pair of accessory claws (Fig. 6). Leg I longest, about 5.6 mm long, with coxa 0.5, trochanter 0.2, femur 1.3, patella 0.3, tibia 1.5, metatarsus 1.2 and tarsus 0.6 mm long. Leg formula 1, 4, 2, 3. *Abdomen*: greatly arched in its basal third, with three pairs of grey dots on the dorsum; anterior pair small and widely separated from each other; middle pair larger and joined together; posterior pair, crescentic and closer to middle pair. *Epigynum* (Fig. 3): with atrium a deep simple depression, somewhat triangular in shape; posterior margin slightly concave, atriobursal openings widely separated, leading into small convoluted tubes that open into small pear-shaped seminal receptacles on each side.

Male

Total length: 4.5-5.2 mm. *Colour*: reddish-brown in the mature individuals, but darker in the immature individuals. *Cephalothorax*: flat, almost circular (Fig. 4) in shape, with an anterior small cephalic projection,

bearing two rows of small tuberculated eyes. A horizontal groove is present in the middle of the cephalothorax. Sternum and chelicerae similar to those of female. *Palpal organ* (Fig. 5): reddish-yellow, rounded in shape. Embolus a long thin tube encircling the bulb; conductor a grooved sclerite, with a small basal lobe and a apical spur; median apophysis a short triramous spur. *Legs*: slender, annulated with dark bands and with numerous strong spines. Leg I longest with femur heavily developed; tibia (Fig. 7) with about 15 strong spines (4 retrolateral, 5 dorsal and 6 prolateral); metatarsus with 13 small spines in two

rows dorsally. Second and third femora each with a row of 10 or 11 long thin, movable hairs. Hind tarsus with 7 to 9 equidistant short spines ventrally (Fig. 8). Leg I, 5.3 mm long with coxa 0.4, trochanter 0.3, femur 1.3, patella 0.4, tibia 1.2, metatarsus 1.1 and tarsus 0.6 mm in length. Leg formula 1, 4, 2, 3. *Abdomen*: narrower than cephalothorax, rectangular, rather low, without dorsal humps; reddish-brown in colour. Upper surface with three pairs of grey dots; middle pair larger but distinctly separate, unlike those of the female. Ventral surface dark, covered with greyish pubescence.



Figs. 1-8: *Uloborus ferokus* sp. nov. 1 female, dorsal view; 2 sternum; 3 epigynum; 4 male, dorsal view; 5 palpal organ; 6 pretarsus with two accessory claws; 7 distal end of leg I of male; 8 distal part of leg IV of male. Scales in mm.

Material examined

Holotype, female in alcohol; paratypes, 17 males and 23 females, in alcohol, coll. B. L. Bradoo, 12 November 1968, from Ferok, District Calicut, Kerala State. The other localities where this commensal was observed with the host spiders are Kadalundi, Somasundarapuram, Chelari, Tenipalam, Chatamanglam, Devagiri and Trichur in Kerala. The holotype and paratypes have been deposited in the Department of Zoology, University Centre, Calicut.

Diagnosis

Uloborus ferokus sp. nov. can be separated from the other Indian species, as well as from *U. umboniger* Kulcz. from Sri Lanka, by the shape of the cephalothorax, being circular and flat in the male; presence of six grey dots on the abdomen in both sexes; absence of any tibial hairs or brushes, anterior tibia and metatarsus of male with 15 and 13 spines respectively; structure of the epigynum; palpal organ with a long embolus encircling bulb, and median apophysis with a triramous spine. These characters show that the new species is closer to the social uloborids.

Unlike other Indian species, *U. ferokus* sp. nov. is a gregarious commensal found only in association with the social spider *Stegodyphus sarasinorum* Karsch. From a morphological and behavioural point of view, the new species is related to the social uloborids of the *republicanus* group, particularly to *U. variegatus* O.P.-Camb., a free-living social species, found in Mexico, West Indies and Texas (Muma & Gertsch, 1964). However, the new species differs from it in colour, females being greyish-black, males reddish-brown; upper surface of the abdomen with three pairs of grey dots; structure of the palpal organ and the epigyne.

Occurrence

U. ferokus sp. nov. was never found without the hosts, and a maximum of 54 adult individuals (22 males and 32 females), with many young and cocoons, was observed on a single host web, at Kadalundi. Thus the large sticky web sheets of the *Stegodyphus* not only support numerous orbs of this commensal but also supply minute prey at all times of the year. The sticky host web also protects the *Uloborus* cocoons against the egg-parasite *Idris* sp. (Bradoo, 1972b).

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