

A NEW WOLF SPIDER IN THE GENUS *SCHIZOCOSA* (ARANEAE: LYCOSIDAE) FROM ILLINOIS

The purpose of this paper is to describe a new species of *Schizocosa* from specimens collected beside a stream in a central Illinois floodplain forest. These specimens are of particular interest in that the structure of the male palpus and female epigynum are apparently inseparable from those of the widespread eastern species *S. ocreata* (Hentz).

Dondale and Redner (1978, Canadian Entomol. 110: 143-181), in a revision of the genus *Schizocosa*, indicated that *S. ocreata* embraces occasional males in which the usually conspicuous brush of erect, black setae on tibia I is reduced or completely absent. Laboratory studies on an Illinois population of "brushless" individuals indicate that it represents a species separable from *S. ocreata* on the basis of a reproductive barrier. Our purpose here is to describe this new species and thus make the name available for use in future publications.

Anatomical terminology follows that of Dondale and Redner (1978).

Schizocosa rovneri, new species

Male.—Total length 6.48 to 8.07 mm. Carapace 3.48 to 4.07 (mean 3.73) mm long and 2.57 to 2.95 (mean 2.77) mm wide (10 specimens measured). Carapace with lateral areas red-brown, streaked with black; pale submarginal bands slender and indistinct, not extending to carapace margins; pale median band wide, with smooth, undulating margins. Sternum dull orange-red. Chelicerae red-brown, setaceous, with 3 teeth on promargin of fang furrow and 3 on retromargin. Legs yellow-orange, paler toward extremities, usually lacking dark rings; leg I not darker than II to IV, without tibial brush. Dorsum of abdomen without heart-mark, with black marginal band along each side, without chevrons. Venter dull red or paler. Cymbium of palpus with approximately 10 stout terminal macrosetae. Median apophysis with distal margin convex and undulating. Embolus with intromittent part slender and pointed, nearly straight but with slight hook ventrad at tip. Palea with long distal process, and with furrow marking off rugose prominence on retrolateral side. Terminal apophysis scale-like, with thickened margin, extending to and concealing base of intromittent part of embolus. (Note: external genitalia as illustrated for *S. ocreata* (Hentz); see Dondale and Redner, 1978).

Female.—Total length 6.01 to 7.95 mm. Carapace 3.45 to 4.28 (mean 3.91) mm long and 2.64 to 3.24 (mean 2.93) mm wide (7 specimens measured). General structure and color essentially as in male. Epigynum with moderately deep atrium; median septum with longitudinal piece broad posteriorly and narrowing anteriorly, with slightly concave, slightly irregular lateral margins; transverse piece with large, paired surface excavations having distinct margins, these excavations nearly meeting at mid-line. Spermathecae ovoid, smooth, separated by approximately their width. (Note: external genitalia as described for *S. ocreata* (Hentz) by Dondale and Redner (1978) figs. 36-38).

Type material.—Holotype male from Allerton Park, Piatt Co., Illinois, 22 May 1973, deposited in the American Museum of Natural History, New York, N.Y. Ten male and 6 female paratypes from the type locality, dated either 22 or 16 May 1973, deposited in the Canadian National Collection of Insects and Arachnids, Ottawa, Ont.

Comments.—Individuals of *S. rovneri* are anatomically indistinguishable from those of *S. ocreata* (Hentz) except by the lack of tibial brush on leg I of the male. Both sexes key to *ocreata* in Dondale and Redner's key to species, and respective carapace dimensions fall within one standard deviation of the means given by those authors for *ocreata*. Males resemble those of *S. floridana* Bryant in lacking a tibial brush, but differ in having a rugose (rather than smooth) prominence marked off the palea of the genital bulb of the palpus; females also resemble those of *floridana* in general, but are separable by the closely-set surface excavations in the transverse piece of the epigynal septum.

Individuals of *rovneri* clearly differ from those of *ocreata* in sexual behavior. Laboratory studies of courtship indicate that males of *rovneri* approach the female and court in qualitatively and quantitatively different ways. Females of both species were courted equally well, but in no instance did the *ocreata* female permit a *rovneri* male to mount and copulate. When males of *ocreata* were placed with females of *rovneri*, they courted but were not permitted to mount and copulate. Conspecific matings for both species in the same tests proceeded normally and resulted in egg deposition and hatching. The behavioral data will be published in full elsewhere.

S. rovneri is named in honor of Dr. J. S. Rovner in recognition of his stimulating work on the behavior of North American wolf spiders. This research was supported in part by funds provided by the University of Cincinnati Research Council.

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