

NEW SENSORY (?) ORGAN ON A SPIDER TARSUS

While examining Australian spiders of the general *Arcys* and *Archemorus* (family Araneidae), S. H. discovered a new structure. On the dorsal surface of tarsus I the males exhibit a brush-like structure composed of about 1500 fine and very short hairs. In all the species examined, these hairs almost totally cover the upper side of the tarsus. Scanning electronic microscope examination revealed setae of an unusual shape (Fig. 1). It is likely that the hairs are chemosensory structures, although neither the paper of Foelix and Chu-Wang (1973. *Tissue and Cell* 5(3):461-478) nor of Kronestedt (1979. *Zool. Scripta*, 8(4):279-285) mention similarly shaped sense organs. It may be assumed that the new structure is of importance in courting, or in copulation, since the brush is found only in mature males—females and last instar juvenile males have normal setae at that location. At present, research has not revealed any corresponding structures on the females, such as

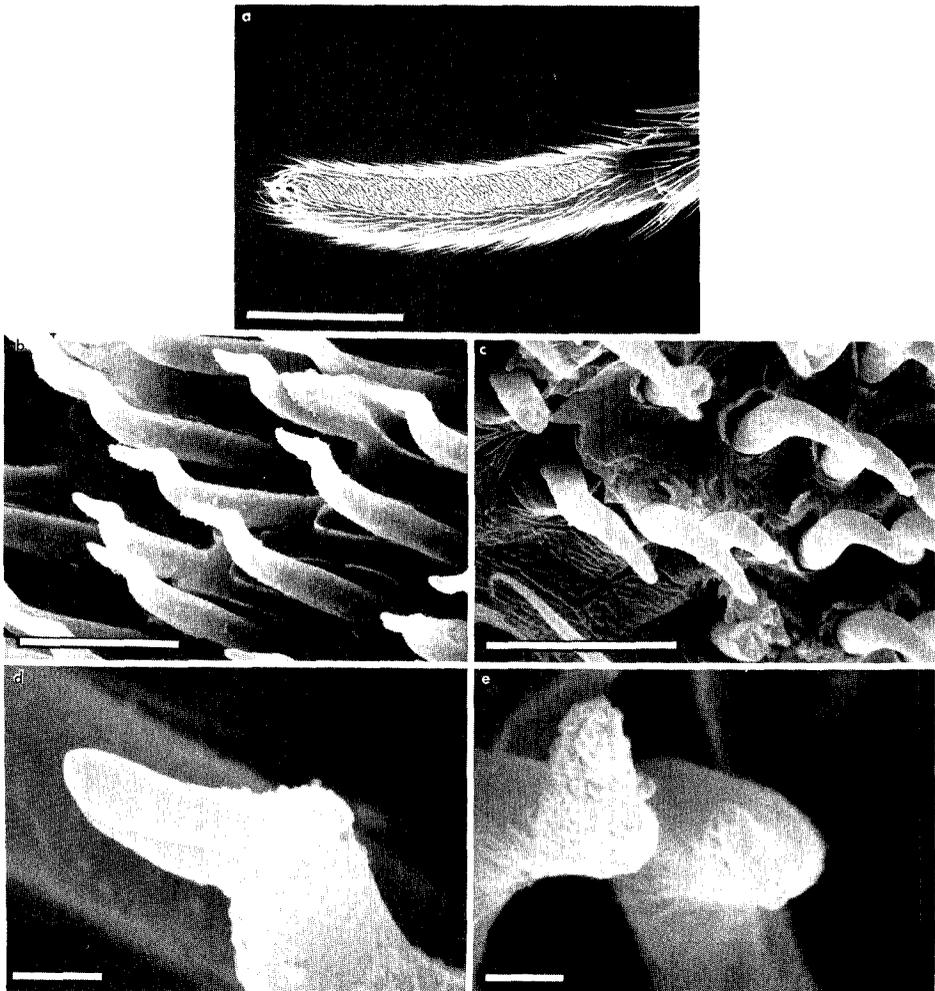


Fig. 1.—a. first tarsus of male *Archemorus roosdorpi* Chrysanthus; scale line 500 μm long. b-c. Setae from brush-like structure on tarsus, scale lines 10 μm long. d-e. Distal ends of individual setae, scale lines 1 μm long.

fields of glands which might interact with the male sense organs. Studies of courtship behavior and perhaps a histological examination with fresh material, are needed to clarify the nature and function of this interesting structure.

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Stefan Heimer, Staatlichen Museum für Tierkunde, Dresden, Deutsche Demokratische Republik; **John M. Hunter**, Museum of Comparative Zoology and **Timothy S. Oey**, Harvard College; and **Herbert W. Levi**, Museum of Comparative Zoology, Cambridge, Mass. 02138.

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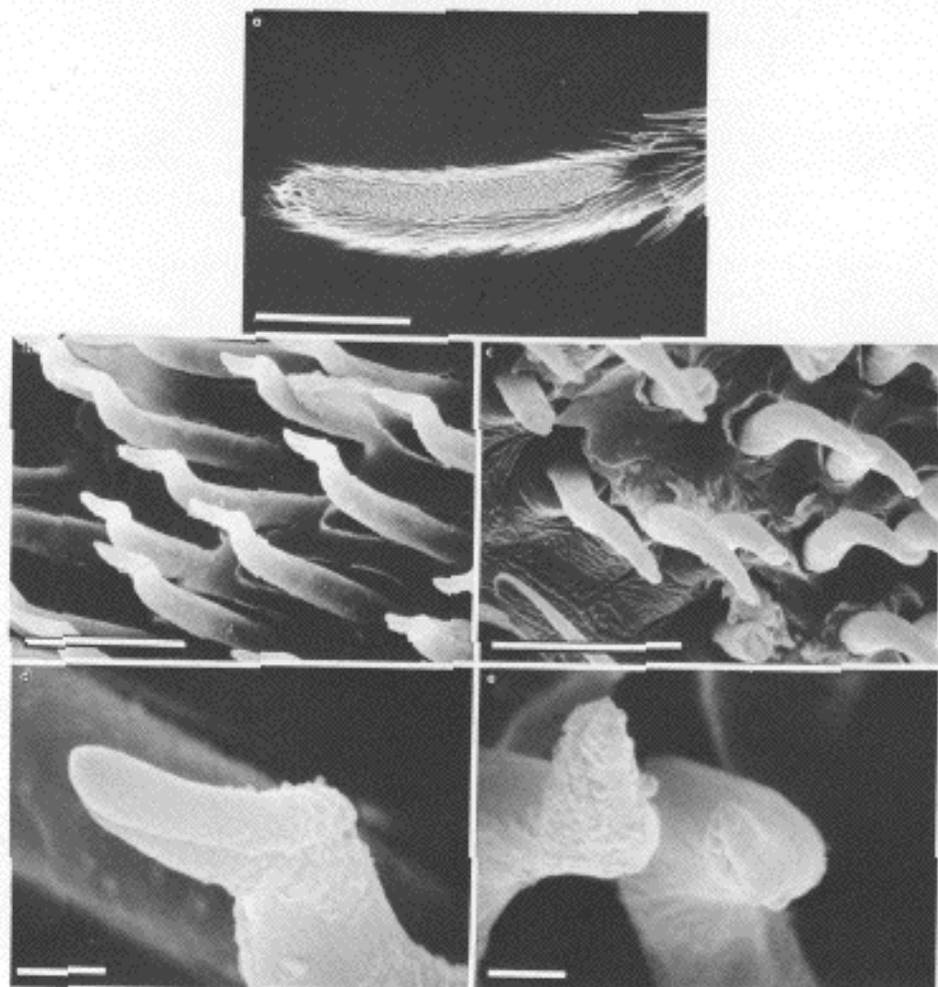


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