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Studies On Spiroboloid Millipeds. IX.
A Second Typhlobolellid Genus From Mexico

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In connection with a synopsis now in preparation of the known cambaloid genera of the world, I became interested in the status of *Ergene setosus*, a supposed member of the family Leioderidae described by R. V. Chamberlin in 1943 from two female specimens taken in Tamaulipas. As all other members of that group are confined to California, it seemed possible to me that perhaps Dr. Chamberlin may have had material of a small species of *Cambala* in which the tergal crests were suppressed, and that this notion could be verified even though the types were females.

Dr. John Kethley generously responded to my inquiry about this material (property of Field Museum of Natural History) by promptly loaning it for study. The one complete specimen in the vial (a second is represented only by the head) proved to be an adult male, not of a cambaloid form, but of a spirobolellid species which is obviously closely related to *Typhlobolellus whiteheadi*, described by me in 1969[1]. Although partaking of the major anatomical features of the latter species, *Ergene setosa* (the generic name is actually feminine) is nonetheless endowed with a variety of distinctive characters, which I take this occasion to illustrate and discuss. The zoogeographic anomaly of a "leiodereid" genus in eastern Mexico is, of course, automatically disposed of at the same time.

[1] Described in the wrong *order*! Not the first time such a level of confusion has occurred involving supposed cambaloids. In 1946 Chamberlin redescribed the well-known spiroboloid *Pseudospirobolellus bulbiferus* (Attems) under the name *Saipanella mariana* and referred it to the Cambalidae; in 1936 Graf Attems described a species of *Bollmania* (Lysiopetalida: Caspiopetalidae) in his new genus *Apatidea* which he likewise placed in the Cambalidae.

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Family Spirobolellidae Brolemann

Subfamily Typhlobolellinae Hoffman

The two genera referred to this subfamily have in common the following structural features which set them apart from other spirobolellids and, in fact, from all other members of the order Spirobolida: ocelli completely absent; ozopore series beginning on the 3rd segment; one or two of the podomeres with prominent armature on the dorsal surface; metaterga continuous behind metasterna. Further, the body is unusually long and slender, having the form and proportions of a cambaloid rather than a spiroboloid milliped, and the antennae, perhaps in compensation for the loss of ocelli, are long and slender.

These genera, each so far monotypic, are referred provisionally to the Spirobolellidae rather than to a family of their own because of the obvious evidence of gonopod structure, already noted for *Typhobolellus* and now confirmed even more conclusively by *Ergene*. They occupy a limited range in eastern Mexico, considerably removed from the nearest known localities for more typical members of the family.

Ergene Chamberlin

Ergene Chamberlin, 1943, Bull. Univ. Utah, biol. ser., 8, no. 2, p. 4.

(Described as a new genus of Cambalopsidae, but compared with Californian taxa later included in a new family Leioderidae by Schubart).

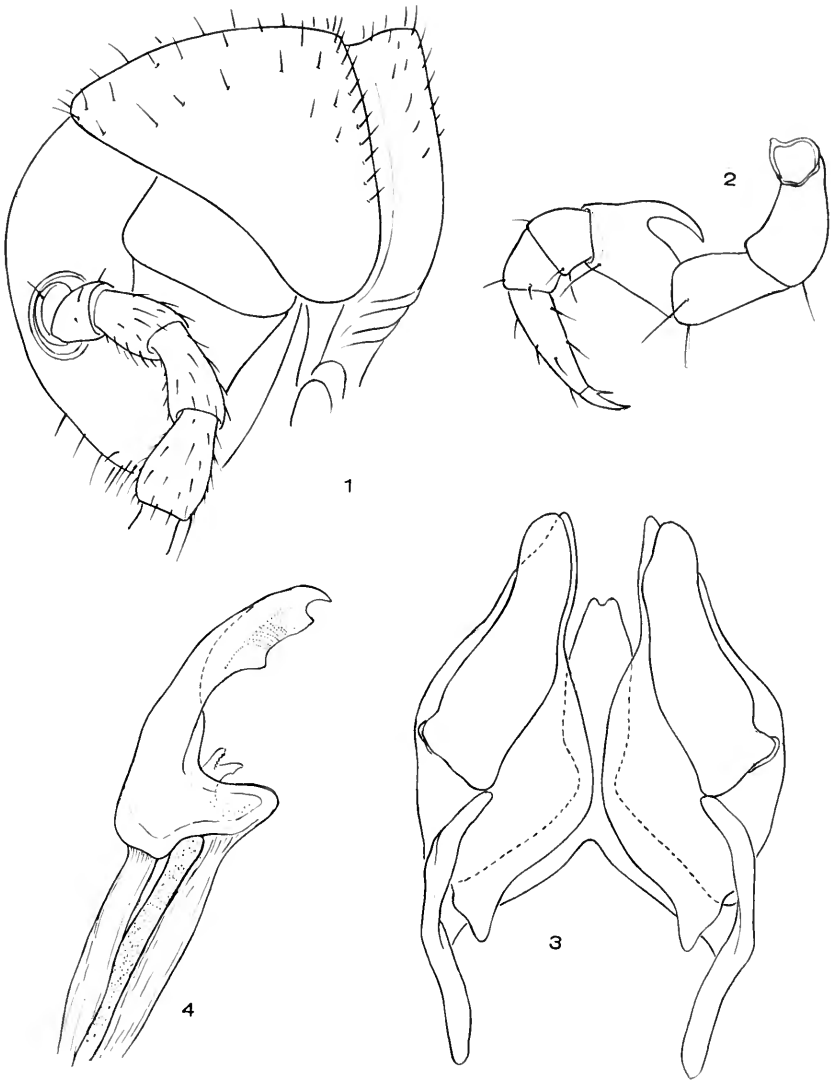
Type species.—*Ergene setosus* [*sic*] Chamberlin, by original designation.

Diagnosis.—Generally similar to *Typhlobolellus* but differing in shape of the collum, which is more distinctly narrowed toward the ends; in having the femur of the walking legs provided with a large, falcate, retrorse dorsal spine; in having the metazonites moderately setose; and in the shape of the male genitalia, particularly the apically notched sternum and spatulate telopodites of the coleopods, and simple, laminate, unsegmented telopodites of the phallopods.

Ergene setosa Chamberlin. Figures 1–4.

Ergene setosus Chamberlin, 1943, Bull. Univ. Utah, biol. ser., 8, no. 2, p. 5, figs. 3, 4.

Type material.—The species was originally stated to have been described from two females taken at the intersection of "Highway No. 1 and Tropic of Cancer" about 19 miles south of Ciudad Victoria,



FIGS. 1–4. *Ergene setosa* Chamberlin, structural details of holotype. **1.** Head, collum, and 2nd segment, lateral aspect to show outline of collum. **2.** Midbody leg. **3.** Anterior gonopods (coleopods), aboral aspect. **4.** Left posterior gonopod, aboral aspect. Drawings made to different scales.

Tamaulipas, Mexico, by H. S. Dybas on June 17, 1941. Returned to Field Museum in a vial bearing these data, and a label stating "♀ holotype" and "♀ paratype" in Chamberlin's handwriting are a complete adult male and the head of a second apparently conspecific individual of unknown sex. The remainder of the body is perhaps still in the Chamberlin collection at Salt Lake City. As no distinction was made between the two ostensible "females," I herewith designate the complete male specimen as a sort of "lecto-holotype." It has been dissected and the gonopods and a midbody leg mounted on a microscope slide.

Description.—The holotype agrees fairly closely with the description given in 1969 for *Typhlobolellus whiteheadi*, but it is considerably smaller—about 23 mm. in length and about 1.0 mm. in diameter—and with 61 segments instead of 55.

Collum of the outline as shown in Figure 1, the anterior edge distinctly indented in passing behind the mandibular stipes instead of almost perfectly straight as in *T. whiteheadi*, and the lateral end therefore much narrower.

Body segments with prominent median constriction, longitudinally striated in its deepest part. Most segments with moderately profuse setae on dorsal surfaces, the setae of varying lengths and partially arranged in transverse series; prozonites and lower sides glabrous. Segments otherwise as described for *Typhlobolellus*.

Legs relatively short, scarcely extending laterad beyond sides of body, beginning at about 23rd legpair each femur provided on the dorsal side with a large, prominent, proximally recurved falcate spine (fig. 2). Coxa, prefemur, femur, postfemur, and tibia each with a single apical ventral seta, tarsus with two setae; prefemur, postfemur, tibia, and tarsus each with a lateral seta, tarsus also with three dorsal setae, postfemur and tibia each with one dorsal seta. Tarsal claw relatively large, with a small basal accessory spine. Anterior legs without modified podomeres, their tarsal claws not reduced.

Coleopods of the form shown in Figure 3, the sternum produced medially and apically notched; coxal endites prolonged, distally subacute, considerably exceeding sternal apex; telopodites slender, spatulate, and apically rounded, equal in length to coxal endite lobes. Coxa prolonged caudomesially and almost completely separating telopodite from posterior extension of sternum.

Phallopods relatively simple, without evidence of complex sternal sclerites, no trace of anatomical divisions; coxal region projecting mesad, telopodite region connected at nearly a right angle, very thin and hyaline, of the outline shown in Figure 4; two small nearly transparent hyaline projections from base of inner angle of gonopod. Sternal apodeme long, slender, spirobolellid in form and location, pivoted at midlength of coxal region.

Distribution.—This species is known so far only from the type locality, between the east slope of the Sierra Madre Oriental and Sierra Azul in southern Tamaulipas. This site is nearly 700 km. northwest of the type locality of *T. whiteheadi*, and one is doubtless justified in suspecting that a variety of these small blind millipeds will be found in the intervening areas.

It is much to be hoped that collectors passing the type locality of *Ergene setosa* will obtain additional material in order that a better concept of the species can be formulated than is now possible from the unique holotype. In particular, the gonopod complex requires a careful study to verify the apparent absence of sternal elements from the base of the phallopods.

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