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THE GENUS EREMULUS BERLESE, 1908,
WITH A DESCRIPTION OF A NEW SPECIES
(ACARINA : ORIBATEI, EREMAEIDAE) 1

BY

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Berlese (1908) described the genus Eremulus and two species, and later (1910) figured these species. For the type, Eremulus flagellifer, he indicated a flask-shaped chestnut colored body and an evenly pitted dorsum. The generic characters in his brief description included the stated similarity to Eremaeus, the tectopedia and the monodactyle claws. E. modestus was described as a lighter chestnut color and with a more elongated body. Another species in the genus was added with Berlese’s (1913) description of E. avenifer.

When Jacot (1937) described E. cingulatus from North Carolina, he compared the species to E. modestus Berlese, and indicated the differences between the species in the lamellar ridges. The most distinctive feature of E. cingulatus was a wavy, sclerotic transverse bar raised above the notogastral surface, which was lacking in Berlese’s species. Unfortunately, Jacot did not figure the species, but the writers were able to obtain a cotype of E. cingulatus, which is redescribed and illustrated below. Jacot also described E. pectinatus in this same article, but the writers have not seen specimens of this species.

Willmann (1941) redescribed E. simplex, another species in the genus.

The most recent species described in the genus are those of Hammer (1958), E. nigrisetosus and E. crispus, from the Argentine.

It is interesting to note that the genus is not mentioned by either Sellnick (1928) or Willmann (1913) in their major articles on the oribatids.

In light of the brief diagnosis of Eremulus by Berlese (1908) the writers have added below a description of additional characters which will help to further distinguish this genus.

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Genus *Eremulus* Berlese, 1908.

Rostrum rounded or pointed, decurved or depressed at level of insertions of rostral hairs and anterior to lamellae and insertions of lamellar hairs; lamellae curved, roughened, lyriform ridges on dorsum of propodosoma, lamellar hairs inserted medially in distal tips of lamellae; tectopedia I prominent, tectopedia II reduced; pseudostigmata open, circular cups at base of tectopedia II, pseudostigmatic organ (sensillus) elongate, flagelliform, finely pectinate or setose; hysterosoma (notogaster) obovate or elongate, with 10 pairs of dorsal setae; 3 to 5 pairs of genital setae; monodactyle.

*Eremulus cingulatus* Jacot, 1937, p. 364. (Figs. 1, 2).

*Diagnosis*: The most distinctive features of this species are the flagelliform, finely serrate pseudostigmatic organs and the irregular, sclerotized, transverse bar between setae *ta* on the dorsum of the hysterosoma.
Description: Cotype specimen yellowish-tan, anterior end of rostrum elongated in a prominent projection, rostral hairs simple, inserted laterally; lamellae irregular, sclerotized, lyriform ridges, expanded distally into rounded tips, lamellar hairs simple, inserted in these expansions, lamellar hairs projecting beyond anterior margin of rostrum; interlamellar hairs simple, shorter than lamellar hairs, procumbent in cotype specimen, inserted between indistinct laterally-directed proximal bases of lamellae; pseudostigmata (bothridia) cup-like, projected above surface of propodosoma, pseudostigmatic organs flagelliform, finely serrate on anterior border, as long as width of propodosoma at level of pseudostigmata; exobothridial hairs not observed in cotype specimen.

Hysterosoma oval in outline, with straight anterior margin (dorsosejugal suture), a slightly truncate posterior end with 10 pairs of robust simple dorsal setae; with a sclerotized, transverse ridge extended between setae ta on dorsum, ridge raised above surface of hysterosoma and with a fine, medial, ventrally projected point or crevice.

Camerostome preceded by an open, elongate projection of rostrum. Details of the ventral aspect of this species were difficult to see in the cotype specimen because of the thickness of the slide and the interference of the legs bent beneath the body but some are shown in figure 2.

Nine specimens of this species were collected by Jacot 2 miles southwest of Bent Creek on the Asheville-Brevard road, North Carolina. They were mounted on slide 34F 11E, which is the same marking borne on the cotype slide the writers have used for comparison.

Length 318 μ; hysterosoma 210 μ; width 180 μ.

Discussion: The most striking similarity of E. cingulatus Jacot is to Hammer's (1958) species in the arrangement of the transverse, sclerotized ridge on the dorsum of the hysterosoma. One of Hammer's species, E. nigrisetosus, possesses "a transverse row of small chitinous knobs arranged by threes in oblique rows." Even though both of these species possess this transverse sclerotization, however, the single ridge of E. cingulatus is markedly different from the three rows of chitinous knobs of E. nigrisetosus. Both E. nigrisetosus and E. crispus of Hammer's (1958) Argentine collections are similar to E. cingulatus in the pectinate pseudostigmatic organs, lyriform lamellae, and general type of body setae. The three species differ in the number of genital setae, in size and in color.

Eremulus spinifer, n. sp.
(Figs. 3, 4).

Diagnosis: Distinguished by the minute spines and bare tip on the pseudostigmatic organ in contrast to the pectinate organs of the other species of the genus.

Description: Golden-tan in color; rostrum entire, rounded anteriorly, anterior surface from level of rostral hairs depressed, rostral hairs inserted laterally, exten-
Fig. 3. Dorsal view of *Eremulus spinifer*, n. sp., legs partially omitted, left side of notogaster of type specimen broken. — Fig. 3A. Dorsal view of pseudostigmata (bothridium) and pseudostigmatic organ (sensillus) of *E. spinifer*, n. sp., showing fine spines and smooth distal tip. — Fig. 4. Ventral view of *Eremulus spinifer*, n. sp., type specimen broken on left side, showing genital and anal apertures. — Fig. 4A. Dorsal view of tibia and tarsus I of *E. spinifer*, n. sp.
ded slightly beyond tip of rostrum; lamellae long, irregular ridges extending from level of tectopedia I nearly to transverse depression at level of rostral hairs, with lateral, sclerotized spurs, distal (anterior) tips incurved and swollen, insertions of lamellar hairs in swollen tips, lamellar hairs missing in type specimen; insertions of inter-lamellar hairs closer together than lamellae, interlamellar hairs missing in type specimen; exobothridial hair short, inserted anterior to pseudostigmata (bothridia); pseudostigmata cup-like, erected slightly above dorsal surface of propodosoma, pseudostigmatic organ nearly as long as width of propodosoma at level of pseudostigmata, with heavy, flagelliform, shaft barbed with fine spines (Figs. 3, 3A), smooth and barbless at distal tip.

Hysterosoma broken on left side in type specimen, dorsum with 10 pairs of setae (figure 3), with some cerotegument and other adherent material.

Camerostome oval, with sclerotized lateral borders that coalesce with apodemata I, ventral setation in broken type specimen as seen in figure 4; genital aperture nearly round, one cover missing in type specimen, genital cover with 5 pairs of genital setae; anal opening half its length posterior to genital aperture, only one anal cover with two anal setae; adanal setae as seen in figure 4.

Legs with a covering of cerotegument, tarsus I as in figure 4A.

Length 402 μ, hysterosoma 252 μ; width 258 μ.

A single specimen of this species was collected from dead leaves, Jefferson City, Missouri, 6 June 1955 by W. W. Dowdy. The type specimen is a female and will be deposited in the U. S. National Museum.

LITERATURE CITED