

GASTROTRICHA FROM ILLINOIS

CLYDE E. ROBBINS
Department of Biology
Loyola University, Chicago, Ill. 60626

ABSTRACT.—Twelve species of gastrotrichs from Illinois are recorded; four species are described and figured. They are: *Chaetonotus macrochaetus*, *C. quintospinosus*, *Heterolepidoderma gracile* and *H. ocellatum*. These four species have not been previously recorded in the North American published literature.

Freshwater gastrotrichs of apparently identical or similar species have been reported from widely separated areas of the earth, but few geographic or political areas have been systematically studied for their occurrence. Michigan (Brunson, 1950) and Illinois (Robbins, 1963) are the only states of the United States that have been extensively surveyed for the presence of gastrotrichs.

In the Illinois study at least one collecting station was established in each county of the state. Temporary and permanent, lotic and lentic waters were sampled. Twelve species of gastrotrichs were found. They are: *Chaetonotus acanthophorus*, *C. aculeatus*, *C. longispinosus*, *C. macrochaetus*, *C. octonarius*, *C. quintospinosus*, *C. spinulosus*, *C. trichodrymodes*, *Heterolepidoderma gracile*, *H. illinoiensis*, *H. ocellatum*, and *Lepidodermella squamatum*. Distributional data for the species cited above will be furnished by the author on request.

Most of the collections for this study were made during the years 1961 to 1963, but collecting was continued during summer seasons until 1968. Horlick (1969) has since established the presence of additional species and genera of gastrotrichs in his study of selected areas of northeastern Illinois. Previous reports of gastrotrichs in Illinois are those of Goldberg (1949) and Sacks (1955), both of whom found *Lepidodermella squamatum*.

Materials and methods for the collection and observation of gastrotrichs are those described by Robbins (1965).

This paper presents figures and descriptions of four species previously known, but undescribed in the published literature as North American forms.

DESCRIPTIONS

Chaetonotus macrochaetus
Zelinka, 1889

Plate I, Figs. 1 and 2

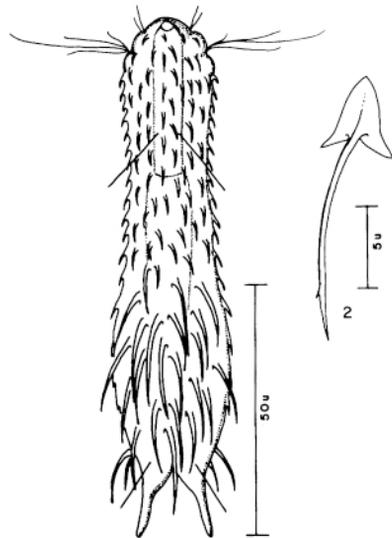


PLATE I

Fig. 1. Dorsal aspect of *Chaetonotus macrochaetus*.

Fig. 2. Single spine-bearing scale of *C. macrochaetus*.

Total length, 77μ - 105μ ; head width, 18μ ; neck width, 13μ ; trunk width, 23μ ; pharynx length, 30μ ; caudal furca length, 16μ ; short spine length, 6μ ; long spine length, 16μ - 18μ ; all spines minutely bifurcate, originate in scales, and arranged in nine to ten indistinct longitudinal rows; spines on trunk three times the length of those on head and neck; five lobed head; anterior and posterior pairs of tactile bristles present.

Specimens from Illinois identified as *C. macrochaetus* are identical to those described from Europe, except that the spines of the Illinois forms are twenty per-cent shorter.

Chaetonotus quintospinosus
Greuter, 1917

Plate II

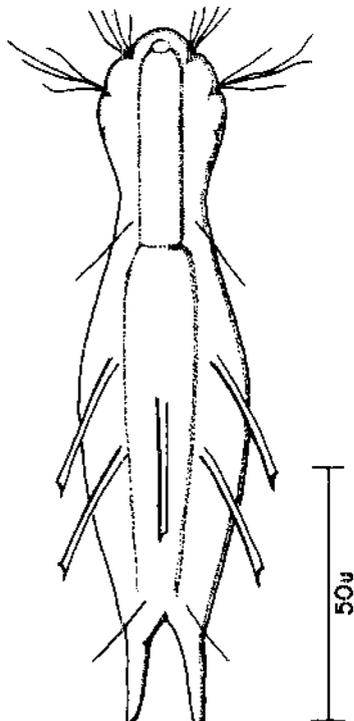


PLATE II

Dorsal aspect of *Chaetonotus quintospinosus*.

Total length, 130μ - 135μ ; head width, 22μ ; neck width, 14μ ; trunk width, 32μ ; pharynx length, 36μ ; caudal furca length, 19μ ; spine length, 24μ ; five moveable bifurcate spines on trunk; five lobed head; scales absent; anterior and posterior pairs of tactile bristles present.

Chaetonotus trichostichodes Brunson, 1950 is also a five spined form; unlike *C. quintospinosus*, the spines are arranged in a single transverse row on the anterior portion of the trunk.

Specimens from Illinois are thirty per-cent larger than those described from Europe: they are otherwise identical.

Heterolepidoderma gracile
Remane, 1927

Plate III, Figs. 1 and 2

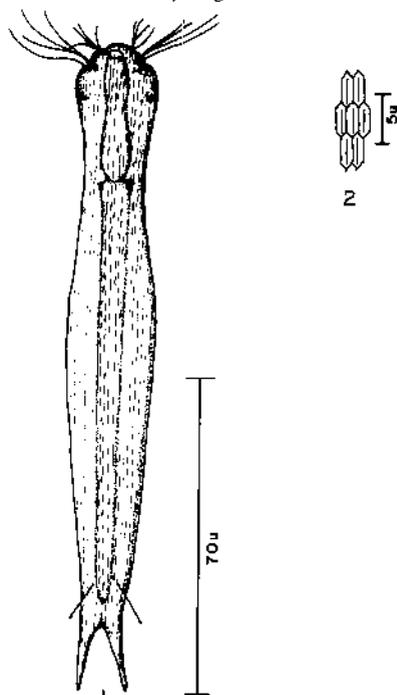


PLATE III

Fig. 1. Dorsal aspect of *Heterolepidoderma gracile*.

Fig. 2. Keel-bearing scales of *H. gracile*.

Total length, 140μ - 150μ ; head width, 18μ ; neck width, 14μ ; trunk width 20μ ; pharynx weakly double bulbed, 28μ long; caudal furca length, 16μ ; hexagonal keeled scales, 3μ - 5μ long, 1μ - 2μ wide; scales arranged in twenty to twenty-five longitudinal rows of forty to forty-five scales each; five lobed head; posterior pair of tactile bristles present.

Specimens from Illinois are approximately sixteen percent smaller and have more strongly developed head lobes than those described by Remane from Europe.

Heterolepidoderma ocellatum

(Metschnikoff, 1865)

Plate IV, Figs. 1 and 2

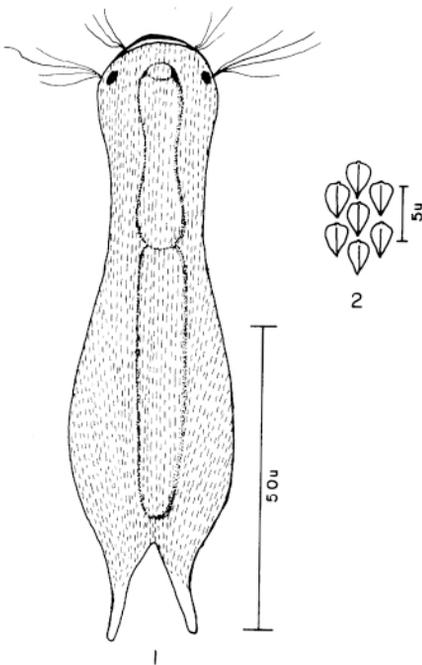


PLATE IV

Fig. 1. Dorsal aspect of *Heterolepidoderma ocellatum*.

Fig. 2. Keel-bearing scales of *H. ocellatum*.

Total length, 83μ - 117μ ; head width, 22μ ; neck width 17μ ; trunk width, 30μ ; pharynx weakly double bulbed, 35μ long; caudal furca length, 21μ ; subtriangular keeled scales, 2μ - 4μ long, 1μ - 2μ wide at base with apex directed posteriorly; scales arranged in twenty-five to thirty longitudinal rows of forty to fifty scales each; head broadly rounded; reddish refractile bodies on opposite sides of head; cuticle thickened at anterior margin of head; posterior pair of tactile bristles present.

The caudal furca of Illinois specimens is one-third longer than those described from Europe.

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