

A COPEPOD PARASITE OF THE CISCO FROM TROUT LAKE, WISCONSIN

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In the summer of 1944 two copepods, belonging to the genus *Salmincola*, were collected by Ralph V. Bangham from ciscos, caught in Trout Lake, Wisconsin. The body conformation and appendages are distinct from any of the described species. For this reason we suggest that our specimens are members of a hitherto undescribed species of the genus *Salmincola*.

Salmincola wisconsinensis n. sp.

Female.—The cephalothorax (Fig. 1) is strongly arched dorsally. A dorsal view of this region (Fig. 2) shows that it is greatly elongated and narrowed anterior to the bases of the second maxillae. The trunk is curved dorsally, its ventral surface flattened and containing a number of transverse grooves. Each first antenna (Fig. 3) is two-jointed, the terminal joint carries a small spine near its base and is tipped with one large and two somewhat smaller ones. The second antennae (Fig. 4) are biramose. The exopod is knob-shaped and covered with many sharp, curved spines; the endopod is two jointed, the basal joint is broad and also covered with spines, the terminal joint narrow and armed with a broad spine on the side next to the exopodite. Upon the lateral border of each of these second antennae is a small elevated surface covered with tiny, blunt projections. The mandibles (Fig. 5) are slender and each is armed with five distal teeth. Each first maxilla (Fig. 6) ends in two thumb-shaped projections, a third of these is located some distance behind the other two and curves backwards. Each of these projections carries a small spine at its tip. The very prominent maxillipedes (Fig. 7) are set well forward of the attachment arms (second maxillae). Each of these appendages is composed of three joints. Like *S. inermis*, they do not terminate in hooks, as in other species. These appendages are without palps. The second maxillae (Fig. 1) are nearly as long as the trunk. At their extremities they are joined, by a very short stalk, to an elliptical bulla. This structure is firmly anchored in the flesh and serves to attach the parasite to its host.

Only one of our specimens carries egg sacs. The eggs are arranged in five longitudinal rows.

Total length (excluding egg sacs) 6.25 mm.; length of cephalothorax 2.50 mm.; length of trunk 3.75 mm., width 1.20 mm.; length of egg sacs 10.32 mm.

Male: Unknown.

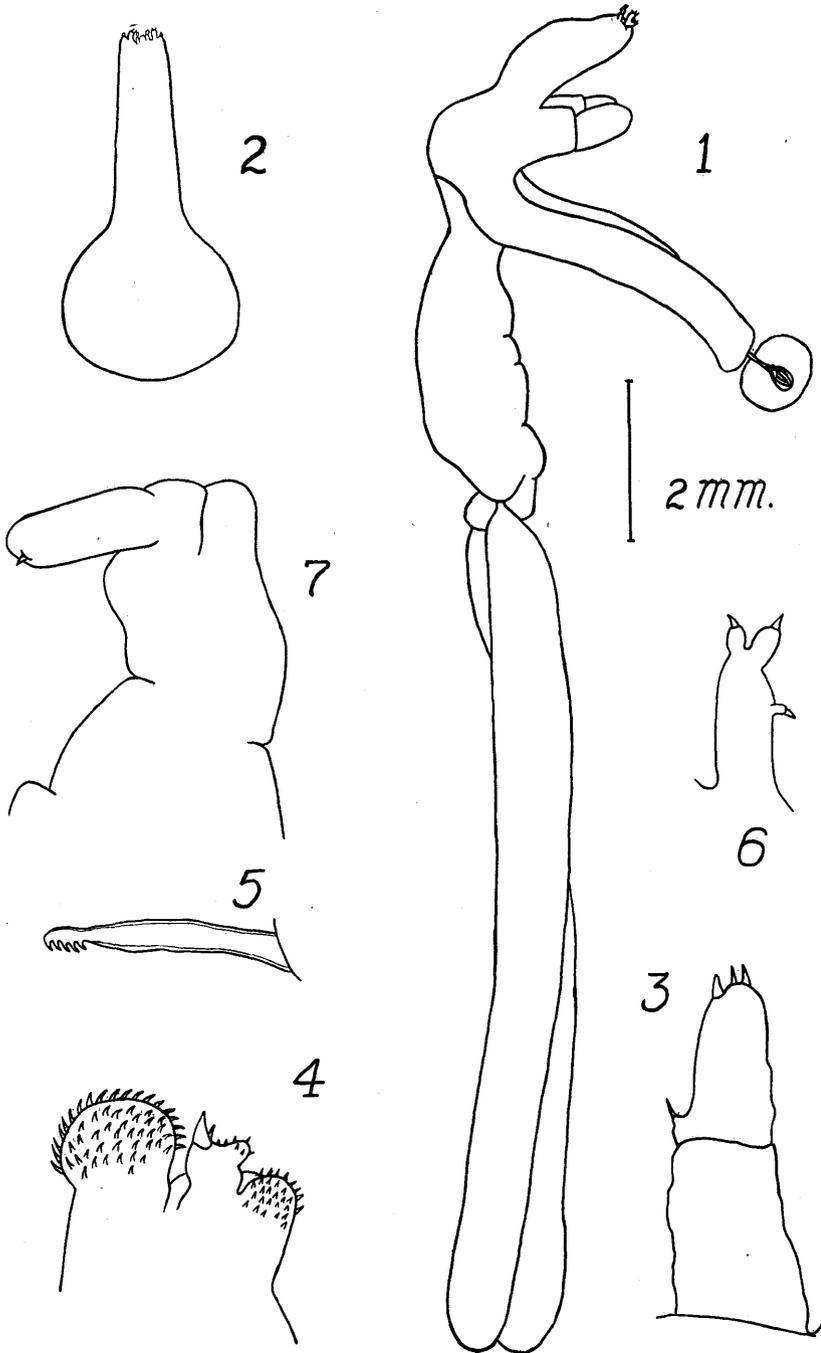
Host: *Leucichthys artedii clemensi* Koelz.

Location: Upon the surface of the body and fins.

Holotype: U. S. Nat. Mus Catalog No. 81553.

DISCUSSION

The affinity of the species described above is with *S. inermis* (Wilson) which is also a parasite of the cisco. However, it can be readily differentiated from Wilson's species by the marked differences in the morphology of the antennae, narrow and pointed head, and an entirely different shaped bulla. The egg sacs are not turned forward along the sides of the body as in *S. inermis* but are carried behind the trunk. The two species differ further in their choice of a location upon the host. *S. inermis* is a parasite of the gill cavity. Its umbrella-shaped bulla is held among the gill filaments, while in *S. wisconsinensis* this structure is firmly embedded upon the surface of the body and fins.



All figures drawn by the aid of a camera lucida from glycerin mounts.

Fig. 1. Lateral view of female. Fig. 2. Dorsal view of cephalothorax. Fig. 3. First antenna. Fig. 4. Second antenna. Fig. 5. Mandible. Fig. 6. First maxilla. Fig. 7. Anterior view of a maxillipede.

REFERENCES

- Wilson, C. B. 1911. North American parasitic copepods. Descriptions of new genera and species. Proc. U. S. Nat. Mus. 39: 625-634.
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