XVI. Description of a New Species of Argulus

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I FOUND, parasitic on *Lepidosteus osseus*, taken in the Niagara River, at Buffalo, in September, 1876, an Argulus which seems to be undescribed. I present the following description and figures and propose the name:

Argulus Lepidostei.

Carapace obcordate, greatest breadth a little more than one-half the entire length of body; convex, transparent, its lobes barely covering the third pair of swimming legs. Eyes brown, compound, having about sixty areolae. Antennae, first pair two-jointed, second joint terminating in a slender hook, basal joint nearly as broad as long, having a hook on its anterior margin, also another on its posterior (difficult to show in figure); second pair slender, one-third longer than the first pair, five-jointed, first joint bears a hook at its base, second nearly at right angles to the first (articulation with the same obscure), third as long as the first two, also equal in length to the fourth and fifth together, the last articulation being very slender. There are spines at the articulations. Posterior to the antennae on either side of the extremity of the siphon in line with the eyes are two stout brown hooks. Abdomen one-third as long as cephalothorax, as broad as long, deeply notched, lobes acute; on the inner margin near the apex is a slender tubercle with a few hairs; bodies at the base of the lobes (female) large, brown, ellipsoidal. Legs, first pair terminated by suctorial discs, second or ambulatory pair with three strong teeth on the thighs, the outer two rising from the same base, the inner one removed from the outer two one-half its length, more slender, the last joint ends in two hooks; just back of the insertion of the second pair are two pairs of hooks directed backwards; the remaining four pairs, the nalatory legs end each in two long pinulae, the third and fourth pairs having an extra recurved pinula; while the third, fourth and fifth pairs are three-jointed, the sixth is obscurely two-jointed, with an appendage at base, these appendicular lobes slightly curved backwards, obtuse, reaching to the margin of the abdomen, covered with hairs.

Color light yellowish green, upper part of body blotched and streaked with violet brown. Length of female .36 of an inch, greatest width of carapace 1.9 of an inch.

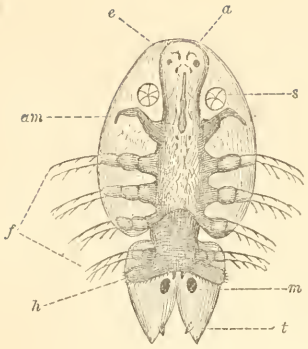

Fig. 1. (♀×3)

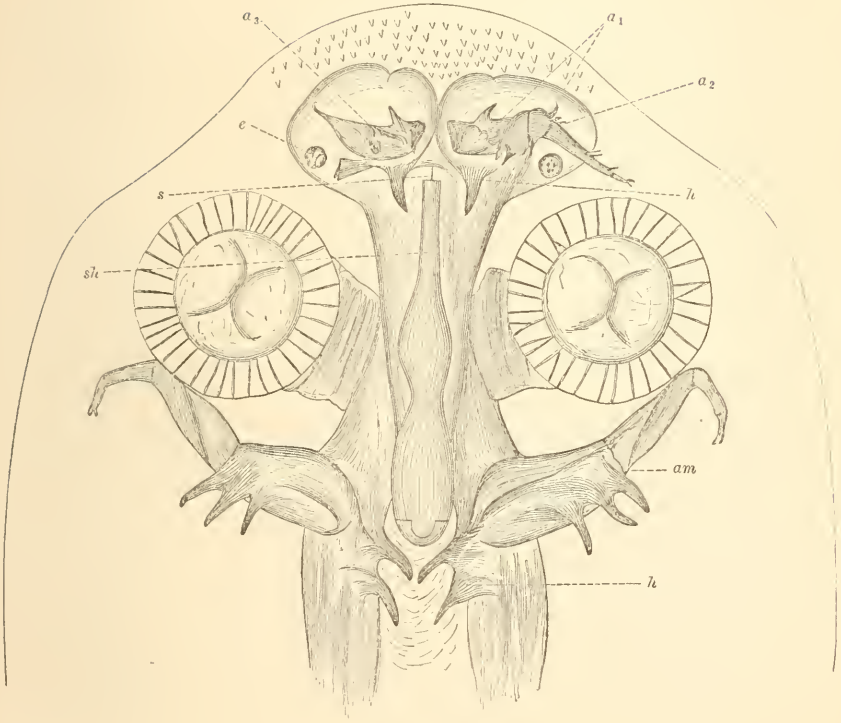

Fig. 2. (×18)

Fig. 1. *a*, antennae; *e*, eyes; *s*, suctorial discs of the first pair; *am*, ambulatory or prehensile pair; *sw*. natory legs; *h*, appendages of last pair; *m*, brown bodies; *t*, tubercles.

Fig. 2. a_1, antenna of first pair; a_2, antenna of second pair; a_3, antenna of first pair, the corresponding one of second pair removed; *e*, eye; *sh*, siphon; *am*, ambulatory legs; *h*, hooks; *s*, spiculum.

Of several individuals obtained all were females.

The favorite place for the parasite to fasten is immediately back of the pectoral fins of its host. It often left the fish and swam about the tank, then returning fastened to any part presented, and crawled to its place near the pectoral fins. I have reason to believe that it may also occupy the gill cavities. I have left individuals alone in a glass of water five days without any apparent loss of vigor.

The blood circulation is very well seen at many points, especially about the eyes and at the margins of the abdominal lobes. The current passes down the inner margin, around the apex and up the outer margin; at intervals along the outer edge lateral currents are given off, which seem to occupy blood vessels proper. The corpuscles are small, apparently spherical and not numerous.

The striped muscular fibers moving the legs and antennae can be very clearly made out with an inch objective.

The species of this genus are indeed microscopical and zoological gems whose value is not enhanced by their rarity.