

NOTES ON TWO ROTIFERS FOUND IN EPPING FOREST.

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PLATE XXV.

1. *Callidina magna-calcarata*.

I have the pleasure of bringing to the notice of the Club to-night two Rotifers which are new to me.

The one to which I will first refer is a *Callidina*, which I found on the excursion to Wood Street on the 10th October. It is not, strictly speaking, new, for my friend Mr. Western, to whom I forwarded some specimens, tells me he found it about two years ago, and Mr. D. Bryce also informs me that he has known it for some time. In endeavouring to discover if this Rotifer had been previously described, I found mentioned, in the "Supplement" to Hudson and Gosse, a *Callidina* to which Kellicott gives the name of *socialis*; his description of it agrees in several points with this, but does not fit it in all respects, so that in the absence of drawings of *socialis*, I have come to the conclusion that Kellicott's Rotifer and this are different species.

I found it attached in pretty considerable numbers to the underside of *Asellus*, and Mr. Western has found it also on *Gammarus*.

The body has numerous segments, and has a very stout appearance when seated on the *Asellus*, with rotary organs expanded in the act of feeding; its greatest diameter lies towards the upper part of the body, where it enlarges rather suddenly. It then gradually tapers away towards the foot. When swimming it is more elongated, and consequently rather less in diameter.

The corona is broad, measuring about the same width as the largest part of the body when the animal is swimming.

The column is stout, the tip furnished with what appears to be a ciliated cup with a hood-like projection extending partly over it.

The dorsal antenna is small, surmounted by setæ which are retractile by the invagination of the tip of the antenna.

Number of toes normal. When the animal is crawling on the

cover glass the toes have a lengthy and pointed appearance as they are withdrawn.

The contractile vesicle is small, and is situated in the foot immediately below the intestine.

We now come to the most conspicuous feature in this Rotifer, viz., the spurs, two in number. These are large and striking, of gracefully curved outline, broad at the base, with heels at the inner angles, narrowing towards the middle, then enlarging slightly to the base of the tapering point, the contour of which is slightly convex.

2. *Pterodina cæca*.

I first discovered this Rotifer near Loughton on the 10th September last. Like the one just described it lives commensally on *Asellus*. I obtained it again on a second visit to Wood Street, at the same spot at which I found the *Callidina*, and in some instances the two were discovered in company on the same host.

Pterodina cæca is a minute species of elegant outline in dorsal aspect. In shape it differs from the general character of the genus, and also in not having two plates soldered together at the edges. The lorica when viewed from the front is seen to be continuous and rounded at the edges, as in *Pompholyx complanata*, of the allied and only other genus of the *Pterodinadæ*. There are two broad, shallow furrows on the ventral side, and two deeper ones on the dorsal side, leaving a prominent rounded central ridge, easily seen in front view, while at the same time it will be noticed that the lorica is decidedly reflexed, as shown in the imaginary section (Fig. 3b). These ridges and furrows at once remind one of the genus *Pompholyx*, just referred to. The general outline more nearly resembles *Pompholyx complanata*, but in *sulcata* the same features may be traced, only that the ridges are more rounded and highly developed. There is also a considerable likeness in the pectoral and occipital edges in *complanata*, the notch in the one and central elevation in the other being present in a slightly modified form in *Pt. cæca*.

The aperture for the foot is close to the posterior end on the ventral side, instead of being high up as in all but two of the species figured in Hudson and Gosse. The shape of the aperture is peculiar, and will be best understood by reference to the drawings.

The foot has the ciliated cup common to the *Pterodina*. The cilia are long and in constant motion, whether drawn up into the foot or exerted. This continuous action, which I have observed going on even after a specimen was completely crushed, leads one to desire to know what is the function of these vibrating cilia. It can scarcely be imagined that they are without some important service to the animal, and it would be most interesting to learn what it is.

The lateral antennæ are located just below the level of the mastax when the ciliary wreath is protruded. They are situated in depressions at the extreme edges of the lorica, and may, perhaps, be slightly ventral. The setæ are long and of extreme fineness, and it requires a high power to see them.

I have not discovered a contractile vesicle.

The last and, perhaps, the most important specific character to which I would call attention is the absence of eyes. Mr. Gosse, in describing *Pt. mucronata*, says: "I have not satisfactorily observed the existence of eyes in this species." This is the only species of *Pterodina* described in Hudson and Gosse in which the absence of eyes is mentioned, and it would thus appear to be an abnormal character in the genus.

I have to thank my friend Mr. Chapman for the great trouble he has taken in making the drawings of these two restless animals. I am also indebted to him for several notes on the *Callidina*, which I had not time to sufficiently examine for myself.

REFERENCE TO THE FIGURES, PLATE XXV.

- Fig. 1. *Callidina magna-calcarata*.
 ,, 1a. Spurs of ditto.
 ,, 3. *Pterodina cæca*, ventral view of lorica.
 ,, 3a. " " side view.
 ,, 3b. " " imaginary section through c c.

