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NEW BRITISH ANNELIDS.

By Rev. Hilderic Friend.

The following records serve to show that as yet we are far from having gained a complete knowledge of the Annelid fauna of our own country. Nearly every time I go out to collect, some species new to Britain or to science is discovered; and, as each species has its place in the economy of nature, it is clear that we have much yet to learn respecting the part which the lesser worms play as friends or foes of the farmer and the gardener. My present records will be limited to one family, the Enchytræids. For the rest, suffice it to place on record the fact that *Limnodrilus hoffmeisteri*, Claperède, was found by me at Easter near the lake in Sutton Park, Birmingham—this being, so far as I know, the first record for this country.

1. Fridericia magna, n. s.

During Easter week, while on a visit to the Lake District, I went one day to the meeting of the waters where the Cocker joins the Derwent under the shadow of the Castle, and in view of Wordsworth House at Cockermouth. Among my other gleanings I here took two specimens of a worm which I at once found to be new to me, and, as it proved, new to science also. Its large size at first threw me off the track, and it was some time before I could bring myself to believe that it was a veritable Enchytræid, and a *Fridericia*, despite its well-marked characteristics. It was the largest species of the genus I have ever found, as it somewhat exceeded in size the seaside worm known as *Enchytræus humicultor*, which I once found on the banks of the Solway.

Fridericia magna *is* 35–40 *mm. in length, and consists of about ninety segments. There are two setæ in each bundle behind the girdle, and three usually in each bundle on all the preclitellian*

segments. I found as many as four setæ in two of the bundles, and, according to the accepted theory respecting this genus, the setæ should always be in even numbers (2, 4, 6, 8) *; but the rule is by no means invariable. In one specimen the four posterior segments were without setæ, and the penultimate set of four had only one seta in each sac. A marked peculiarity of this species is to be found in the colour of the blood, which is decidedly disposed to be red, as may be seen when the worm has been kept for a day or two in clean water. The body segments are striate, with about half a dozen rows of striate cells per segment. The girdle extends over segment* xii *and the hinder half of segment* xi, *the usual gland-pores being found on the former segment. I traced the dorsal blood-vessel to segment* xviii, *so it is post-clitellian in origin. The egg-sac extended back to the sixteenth segment. The blood-vessels in segments* i–iv *did not differ greatly in arrangements from that which usually prevails, the dorsal vessel giving off two branches on each side in the third segment, which formed loops and joined the returning vessels caused by the dorsal vessel dividing into two at the head. I found heart-like swellings in segments* vii, viii, ix. *The brain is nearly as broad as long, convex behind, and very slightly concave in front, the outline being slightly oval rather than circular. The coiled tube of segment* xi *is very long and fine ; but the most obvious characteristic is found in the spermathecæ. There is a pair of sacs at the base of the pouch which is attached to the intestine, and at the outer extremity, between segments* iv *and* v, *the aperture of the spermathecal tube has a pair of large brown glands. These are so conspicuous that when first seen they have all the appearance of eye-spots. The length of the tube is about three times the width of the sacs.*

I have named the species *magna*, because it is by far the largest yet described. I have not studied the nephridia, nor have I as yet determined the salivary glands, for want of material. The worm, which is sluggish in its habits, is found in moist places by slowly moving water. I found the same worm, or a close ally, at Hastings last summer, but, as only one specimen was taken, and one's holiday equipment does not render identications easy, the exact species was not determined.

2. Fridericia agricola, Moore.

Mr. C. Whitehead, of Maidstone, has recently submitted specimens of this worm for examination, on account of their having been found associated with meadow-grass which showed symptoms of disease. First found by Mr. Moore in America, it was some time ago discovered by me in two localities in Cumberland. Its distribution is therefore wide, and it is important that, in connection with future records, an attempt be made to show whether or not it is worthy of suspicion as an injurious annelid. I have discussed the question in the 'Gardeners' Chronicle' for the present month.

3. Enchytræus pellucidus, n. s.

I give this name to a species taken by me among old stable-manure at Heaton Moor, Stockport, on March 4th, 1899.

It is a white, pellucid worm, with colourless blood, about three-quarters of an inch in length, and containing some sixty segments. There are usually four setæ in front of the girdle and three behind, equal in length, slender, and with a curve at right angles on the inner extremity, giving the setæ the appearance of a golf-stick. The curve, not as is usual, is very decided, the curved portion being nearly one-third the length of the shaft. The brain, which is about twice as long as broad, is oval, and rounded (not concave or notched) behind. There are no swellings or offgrowths on the nerve-ganglion, which is of practically equal size throughout. The salivary glands are unbranched and club-shaped, being swollen or knob-like at the free extremity. The spermathecæ open in the usual place between segments iv–v, *without glands, while the internal extremity is somewhat pear-shaped, and without diverticula or sac-like appendages. The girdle is minutely papillose, or presents a fine granular appearance. Very long coiled tube extending back to segment* xx, *or even as far as* xxiv. *The first nephridium seemed to lie in segment* vii. *Perhaps here the most distinctive feature is to be found in the spermathecæ, which differ from any I have seen elsewhere. These organs are divided into three parts, each of which is about equal in length to the other. These are* (1) *a slender tube connected with the gut,* (2) *the*

enlarged pear-shaped body, (3) *the tube opening intersegmentally between* iv–v.

4. ENCHYTRÆUS ARGENTEUS has just reached me from Kew. It is new to Britain.

I have many other notes on species which are new or little known, and only require time for their fuller study.