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Polynoe scolopendrina

XXXVI.—*Miscellanea Zoologica*. By GEORGE JOHNSTON, M.D., Fellow of the Royal College of Surgeons of Edinburgh.

[With a Plate.]

[Continued from p. 274.]

THE IRISH ANNELIDES.

I now continue my description of the collection of Irish Annelides before me*.

Family APHRODITACEÆ.

1. APHRODITA ACULEATA, *Lin.*—Strangford Lough, Wm. Thompson, Esq.; Bangor, Dr. Drummond.

2. APHRODITA HYSTRIX, *Sav.*—Aud. and Edw. Litt. de la France, ii. p. 70. pl. 1. fig. 1—9. Courtmasherry Harbour, county Cork, Mr. Geo. J. Allman.

I had previously received a specimen from Mr. Edward Forbes, who dredged it in 20 fathoms water about 4 miles from land on the N.W. coast of the Isle of Man.

DESC. *Body* elliptic-oblong, depressed, the back covered with 15 pairs of imbricated naked scales; the sides hirsute and spinous with golden and brown-coloured bristles; the ventral surface of a dirty blackish-brown colour, covered with a coriaceous tuberculated skin, marked with transverse parallel rugæ along the margins, and with a narrow depressed space down the centre. *Head* small, entirely concealed under the front scales; *eyes* very distinct, occipital, pedunculate; between and above the peduncles there is a short porrect biarticulate *antenna*, and on one side of the mouth a long awl-shaped ciliated *palpus* invested with a fleshy sheath at the base. *Proboscis* large and muscular. *Scales* large, irregularly heart-shaped, smooth, soft, thin and membranous, with entire even margins, overlapping each other on the median line and behind; the anterior pair is small, rounder than the others and hidden under those that follow, and the posterior pairs are likewise so much imbricated that the anal ones are almost concealed: they are all attached to a fleshy peduncle and are of a greyish or flesh-colour tinted with brown. *Feet* 32 pairs; the anterior and posterior are minute, but they gradually in-

* See *Annals Nat. Hist.* vol. v. p. 168.

crease in size towards the middle of the body, where they attain their greatest development. They are of two kinds,—the squamiferous and cirriferous,—but a foot of either is divisible into two branches, viz. a ventral and dorsal. The ventral branch (or proper foot) forms a stout rough tuberculated conoid process armed with a stout *spine* protruded from the pale papillary apex, and with four or five firm *bristles* proceeding from under the apex and partially surrounding the spine. The *spine* tapers insensibly to an obtuse point, is smooth, and of a pale yellow colour: the bristles are of a rich burnished brown colour, with a round shank which grows a little thicker upwards, and is terminated with a curved cutting point like a pruning-knife; in most of them there is also a tooth-like process on the inner side beneath this point. (Plate V. fig. *a.*) The *cirrus* of the foot does not reach its apex, excepting that of the first pairs; it is fleshy, setaceous, and of a pale colour. The dorsal branch of all the feet has an upward direction, and cannot be used as an organ of progression along the ground: that of the *squamous feet* is armed with two bundles of bristles (*b*), each proceeding from a distinct tubercle; the innermost or dorsad brush consists of many slender golden yellow bristles, arranged in a fan-shaped manner; they are comparatively short, curved like the italic letter *f*, and roughened with minute granulations on their upper half (*c*): the bristles of the other brush, placed between the dorsad one and the proper foot, are remarkable for their stoutness and length; they are of a rich dark brown colour, straight, and terminated with a lanceolate point, which is notched on each side with four reverted barbs, so that the bristle resembles the barbed arrow or spear of the South-sea islanders (*d*). The notches are not opposite, but alternate, and they are inclosed within a plain sheath, consisting of two dilated valves which shut upon them (*e*). The *cirriferous foot* has a single fan-shaped brush of bristles only; the bristles are simple and curved like those of the dorsad fascicles of the squamous feet, but they are more numerous, slenderer, longer, of a paler colour, and quite smooth; they are unequal in length, some of them very fine and hair-like, and the whole brush is usually matted and soiled with extraneous matters. Length of the worm 2 inches; breadth $\frac{6}{10}$ ths.

The slight differences which may be detected between the above description, drawn up from an examination of two specimens of this worm, and that of Audouin and M. Edwards, do not indicate any difference of species. The body of our specimens was much more oblong, and in both of them one palpus only was to be found; but the eminent naturalists just mentioned tell us that the worm is variable in form, and, though they delineate two palpi of equal size, they also say that often one of them is much less developed than the other. The scales are represented by M. Edwards as roundish, inclining to oval: we found those near the middle of the back somewhat heart-shaped, but not uniformly alike, and those near the extremities were rounded. When highly magnified they appeared to be striated with fine lines, and were thinly sprinkled over with very minute granules.

3. *POLYNOE SQUAMATA*, Sav.—Bangor, Dr. Drummond; Strangford Lough, Messrs. Hyndman and Thompson; coast of county Down, Mr. Thompson; Belfast Bay, E. Getty, Esq.—From the number of specimens it may be concluded that this is a common species.

4. *POLYNOE CIRRATA*, Sav.—Belfast Bay, Messrs. Thompson and Getty; Strangford Lough, Messrs. Hyndman and Thompson; Bangor, Dr. Drummond; Sligo, Mr. Hyndman. The specimens are still more numerous than those of the preceding, and scarcely two are alike in the colour and variegation of the scales.

5. *POLYNOE SCOLOPENDRINA*, Sav.—Aud. and Edw. Litt. de la France, ii. p. 92.—Bangor, Dr. Drummond; coast of county Down, Mr. Thompson. Plate V.

DESC. *Body* linear-elongate, flattened, rounded in front and slightly tapered behind, attaining a length of nearly 4 inches, and about 4 lines in breadth; the anterior portion of the back scaly, the posterior and larger portion naked but muricated with small tubercles arranged in three rows, one down the middle, and one on each side above the bases of the feet: ventral surface smooth, grooved down the middle,

more or less iridescent. *Head* concealed by the front scales, small, tumid, somewhat heart-shaped, sinuated in front, smooth and flesh-coloured; *eyes* 2, very distinct, round and black, placed far back on the occiput and remote from each other: *antennæ* 3, the mid one originating in the sinus of the head, large and equal in length to the palpi, setaceous with an abruptly acuminate point, downy, of a dusky colour, but pale and jointed at the base; the lateral antennæ are only about a third the size of the odd one, and of the same form and structure. *Palpi* 2, awl-shaped, larger than the odd antenna, downy or ciliate, and of a straw-yellow colour. On each side of them there is a pair of *tentacular cirri* equal in length to themselves, but not so stout, and in every respect resembling the mid antenna. *Mouth* inferior, terminal, furnished with a protrusile *proboscis*, armed with 4 jaws of a horn colour, and encircled at the orifice with a series of short conical papillæ. *Segments* numerous, narrow, deeply incised on the sides, broader than deep. *Scales* deciduous, rather small, roundish, smooth, with a plain unfringed edge, of a greenish-grey colour, irregularly clouded, and covered with pale puncture-like dots. In all our specimens some pairs had been lost. Audouin and M. Edwards say there are 15 pairs, and they are affixed to every alternate segment after the fashion of the more normal species of the genus. The anterior pairs are imbricated and cover the back entirely, but the posterior pairs lie over the bases of the feet, and leave the back naked in the middle. *Feet* well developed, homologous; the dorsal branch represented by a mere tubercle, from which grows a fan-shaped brush of short stout equal bristles; the ventral branch conoid, protruded much beyond the dorsal, obliquely truncate, armed with a series of golden-yellow strong bristles, and with a small inferior *cirrus* which does not extend beyond the apex. *Bristles* of the dorsal branch somewhat curved, rather obtuse, rough on one side, and generally soiled with extraneous matter; those of the ventral branch more than twice as long, decreasing both in strength and length as the series descends to the belly, the two upper ones pointed like a lance, the rest like a hedge-knife, with

two sharp denticles at the tip, and the inner edge of the curved part minutely serrulated. *Spines* yellow, tapered insensibly to a rather obtuse point, one to each brush of bristles. *Tentacular cirri* awl-shaped, abruptly acuminate, downy or ciliate, of a dusky or dark colour, with paler spots, reaching to or a little beyond the apex of the foot; all the feet posterior to the 31st pair are furnished with these cirri, but only those anterior to them which are destitute of scales. Tail without elongated styles.

It is difficult to describe the colouring of this fine worm. Of specimens preserved in spirits the ground colour is a straw or ochre-yellow, but the back is clouded and spotted with dusky olive-green, there being a row of spots down the middle, a line or band along each side, and another row of spots exterior to this above the bases of the feet; and these markings correspond with the arrangement of the tubercles which roughen this surface. The number of segments is liable to vary. Audouin and Edwards say that there are 82 of them. In one specimen we found them to be about 80; but that which served for our figure, and which was twice the length of the other, had not less than 110.

PLATE V. Fig. 1. *P. scolopendrina* of the natural size. 2. The head with its appendages, highly magnified; the front scales have been removed. 3. The proboscis laid open. 4. Section of a segment, showing the squamous feet; the scales have been raised and reverted. 5. A scale. 6. One of the cirriferous feet. 7. A bristle of the dorsal brush. 8. The upper bristle of the ventral brush. 9. One of its under bristles.

6. SIGALION BOA, *Johns.*—Strangford Lough, Messrs. Hyndman and Thompson.

[To be continued.]

XXXVII.—*On the Corymorpha nutans of Sars, a remarkable Hydroid Polype.* By EDWARD FORBES, Esq., and JOHN GOODSIR, Esq.

AT the Birmingham Meeting of the British Association we gave a short account of a remarkable Hydroid Zoophyte, new to the British seas, which, supposing it to be altogether new, generically and specifically, we proposed to name *Ellisia flos*