

V. — A CONTRIBUTION TOWARDS OUR KNOWLEDGE OF THE
POLYCHAETA OF SOUTH AFRICA.

BY Dr. R. HORST. — (WITH 2 TEXTFIGURES).

2. *Nereidae* ¹⁾.

Nereis (*Platynereis*) *striata* (Schm.).

(*Mastigonereis striata* Schm.).

Of this species several specimens were collected in Table bay, where they were found for the first time by Schmarda ²⁾ and afterwards met with by Willey ³⁾. Unfortunately the description of the species is rather short and incomplete and the synonymy somewhat dubious; therefore I think it not superfluous to give a detailed account of them, especially while an epitocous male was among them. The specimens are rather small, measuring about 30 mm. in length, whereas the number of segments amounts to 70. The specimens of Schmarda and of Willey were somewhat larger, measuring 50 mm. in length, with about 80 segments.

Nereis striata is characterized by a conspicuous coloration, consisting of a narrow, transverse, black band (dark violet in the living worm), which laterally becomes broader and acquires the shape of a brace, over the dorsal side of each segment; moreover there occurs a double black patch at the base of the dorsal cirri and an other one near the ventral cirri, whereas an interrupted black line runs in the median ventral line. Armature of the proboscis: maxillary region, I absent; II a narrow, semilunar patch of paragnathi; IV a semilunar group, consisting of five rows of densely crowded paragnathi; III three transverse groups, consisting of two or three separate rows of paragnathi; basal region: V absent; VI a small distichous patch; VII and VIII five, transverse, distichous or tristichous acervuli. In some specimens group II of the maxillary region is absent or only faintly developed. In the anterior body-region (Fig. 1) the lip of the notopodium is deeply notched and consists of a small, round, dorsal lobe and a large, oval, ventral part; the dorsal ligule is obtusely conical, nearly as long as the dorsal lip. The dorsal cirrus, emerging from the middle of the ligule, is about twice as long as it. The neuropodial lobe, much shorter than the notopodial one, has obtusely conical

1) For part I, see Vol. III, p. 285 of this journal.

2) Neue Wirbellose Thiere, II, 1861, p. 112, Pl. XXXI, fig. 248.

3) Littoral Polychaeta from the Cape of Good Hope, 1903, p. 262, Pl. XIII, fig. 14, Pl. XIV, figs. 11 and 12.

lips, the anterior of which somewhat extends beyond the posterior one; the ventral ligule is shorter than the neuropodial lobe, whereas the ventral cirrus does not reach the extremity of the ligule. In the median

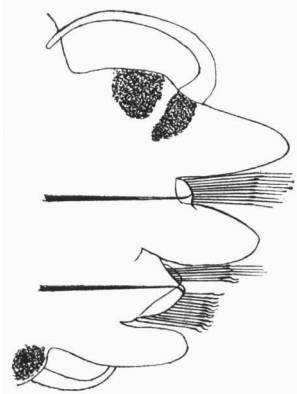


Fig. 1.

body-region the dorsal lobe and the dorsal ligule acquire a more conical shape and are nearly of the same length, whereas in the posterior segments the dorsal ligule grows more slender and extends beyond the notopodial lobe; also the ventral ligule increases in length and reaches beyond the distal end of the neuropodial lobe. The aciculae are dark blackish. The notopodial fascicle in the anterior segments contains only homogomph setose bristles; in the median body-region however in the ventral part of this fascicle some homogomph falcate bristles appear. The terminal joint of these bristles does not possess

cilia and their tip is capped. The neuropodial fascicle consists dorsally of homogomph setose bristles, with some heterogomph falcate ones, whereas its ventral part contains heterogomph falcate bristles and some heterogomph setose ones in the posterior segments.

The epitocous transformation of the parapodia (*Heteronereis*) in the male commences at the 16th segment. A fully developed parapodium of this region (Fig. 2) has the superior ligule, near the base of the dorsal

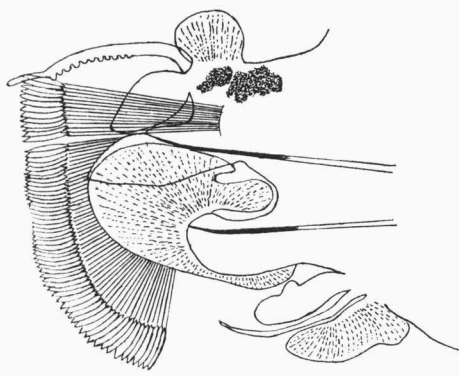


Fig. 2.

cirrus, provided with a small, oval lamella, whereas the inferior ligule bears a blunt, conical process on its dorsal border. A large rounded lamella, with an oval appendix at the dorsal part of its posterior margin, is developed around the tip of the neuropodial lobe and another narrow, oblong lamella occurs at the base of the ventral cirrus. This cirrus is strongly elongated, reaching beyond the extremity of the ventral ligule;

the dorsal cirrus also is rather long and shows 10 or 11 papillae along its ventral side. Both lobes of the parapodia have setose bristles with knife-shaped terminal pieces of ordinary appearance. The head of the

epitocous form has the eyes strongly enlarged and on each side of the head they lie next to each other. The longest of the tentacular cirri reaches to the 14th segment. The dorsal cirri of the anterior 7 parapodia are elongated and thickened, whereas the ventral cirri show this character only in the anterior 4 segments.

Platyn. striata has been identified by Augener ¹⁾ with *Platyn. australis* from Australia and New Zealand; however in my opinion this is somewhat dubious. For the epitocous specimen, described by Schmarda, has been examined anew by Ehlers and this author has stated, that the transformation of the parapodia only commences at the 30th parapodium, whereas in *Platyn. striata* this occurs already at the 15th one. Ehlers has also given an accurate description and figures of the atocous form of this species, from which it may be concluded that indeed there is a great agreement between *Platyn. striata* and — *australis* with regard to the structure of the parapodia as well as the shape of the bristles; the armature of the proboscis however appears not to be the same, as *Platyn. australis* lacks also group II of the paragnathi and sometimes group III. This question can only be settled by the investigation of a large material from different parts of the world.

Nereis (Perinereis) variegata Gr.

Grube, Annulata Örstediana, Naturh. Foren. Vidensk. Meddelelser, 1857, p. 7.

Ehlers, Die Polychaeten des Magellan. u. Chilenischen Strandes, 1901, p. 112, Pl. XIV, figs. 1—21.

Mc Intosh, Marine Investigat. in South Africa, Polychaeta, 1903, p. 37, Pl. I, figs. 6—10, Pl. II, figs. 11 and 12.

Seven small specimens were collected at Seapoint near low watermark; only three of them have the proboscis everted and they possess on group VI of the basal region a transversely elongated tooth, with a rather sharp edge, whereas ventrally group VII and VIII consist of a distichous belt of paragnathi, ending at each side in a single row. According to Ehlers, who made a careful revision of specimens from various parts of the world, *Nereis variegata* is a widely distributed species, found at the Cape as well as on the West- and East-coast of South-America.

? *Nereis (Neanthes) operta* (Stps.).

Among the specimens of *N. striata* I met with a worm, that though resembling somewhat this species in coloration, differs from it by the

1) Fauna Südwest-Australiens, Polychaeta errantia, 1918, p. 182.

armature of the proboscis as well as by the shape of the parapodia. The incomplete specimen has a length of 35 mm. and consists of 60 segments. With regard to the arrangement of paragnaths it belongs to the sub-genus *Neanthes*, having pin-shaped teeth upon all the areas of the proboscis. The paragnaths of group I are represented by four teeth, as usually one behind the other; II is a semilunar group, passing inwards into a monostichous row; IV is a triangular group, also prolonged by an inward, simple row; III is a transverse group, consisting of small paragnaths in front and larger ones posteriorly. In the oral region group V consists of six teeth, arranged in two parallel longitudinal rows; VI is a transverse group of eight paragnaths arranged in two rows, one behind the other, VII and VIII is a broad belt, consisting of several rows. This arrangement of the paragnaths much agrees with that of *N. aperta*, as figured by Willey, Plate XIII, figs. 11 and 12, of his „Polychaeta from the Cape of Good Hope”¹⁾. With regard to the shape of the parapodia it also much resembles that species, for in the anterior segments the dorsal cirrus has nearly the same length as the dorsal ligule, whereas in the posterior body-region the ligule grows longer and more acute and the dorsal cirrus extends not-much beyond half its length. Willey has described two other *Neanthes*-species from the Cape; in *Neanthes latipalpa typica* however group VI consists of a monostichous row of paragnaths like as in *Nereis brevicirris* Gr. from St. Paul, a species presumably identical with *Nereis latipalpa*. In the third species *Neanthes capensis* group VI consists of 5 to 6 paragnaths arranged in a circle, whereas the parapodia have a dorsal cirrus that extends beyond the distal extremity of the dorsal ligule.

1) Trans. Linn. Society of London, (2e Ser.) Vol. IX, Zoology, 1903—'07, p. 255.