

ZOOLOGISCHE MEDEDEELINGEN

UITGEGEVEN VANWEGE

's RIJKS MUSEUM VAN NATUURLIJKE HISTORIE

Deel IV.	te LEIDEN	Aflevering 3.
----------	--------------	---------------

IX. — ON A REMARQUABLE FRESH-WATER POLYCHAETE "NEREIS NOUHUYSI" FROM THE EAST-INDIES.

BY D^r. R. HORST. — (WITH 1 TEXTFIGURE).

In the year 1905 Mr. J. W. van Nouhuys presented to our Museum some *Nereis*-specimens, collected in the Miha at the South-coast of the isle of Taliaboe, at a distance of two hours from the mouth of the river, that moreover was shut off by a bank of gravel ¹⁾. There are eleven specimens, ten females and one male, all mature and in the *Heteronereis*-form. They are characteristically marked; in the median body-region each segment shows on its dorsal side a transverse, black band, narrow in the middle and growing broader laterally, on the base of the parapodia. Two black spots occur on the dorsal side of each parapodium, whereas the dorsal ligule is also black coloured. Ventrally the segments show a similar marking; however on the base of the parapodium there occurs an oval spot, consisting of longitudinal lines and in front of it a small transverse patch. The anterior ten or twelve segments have a dark brown hue, with pale, oblique stripes on their lateral part; the head also is dark coloured, its posterior part being somewhat paler. The largest specimen has a length of 110 mm. and consists of 225 segments. The head is longer than broad, elongated trapezoidal; its antennae are small, whereas the palps are stout, with a small distal joint. The eyes are large and nearly coalesce. The longest tentacular cirrus extends to the eighth segment.

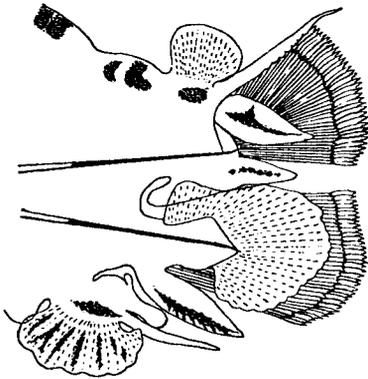
The armature of the proboscis consists on area I of a transverse, indistinctly tristichous group of about 13 to 18, distant, hook-shaped paragnaths; on areas II and IV there occurs a curved, distichous or tristichous group of acute, hook-shaped paragnaths; area III has a broad group of 45 to 50 paragnaths, arranged in 5 or 6 rows, the lateral ones being

¹ Tijdschrift Ned. Dierk. Vereeniging (Ser. 2), Vol. IX, 1905, p. XXXVI.

larger. In the oral region there occurs on area V a transverse group of 12 to 14 small, distant, obtuse-conical paragnaths; group VI consists of 3 to 5 paragnaths, but is not distinctly separated from group VIII, that forms with group VII a complete belt of small paragnaths, the larger ones being situated anteriorly.

In the anterior region of the body the parapodia are provided with an obtuse conical, dorsal ligule, about as long as the notopodial lobe; the latter one has a conical, anterior lip, which reaches to about half the length of the ligule. The neuropodium with its conical posterior lip extends a little beyond the notopodial lobe; it has an obtuse conical, anterior lip, half as long as the posterior one and a ventral ligule of the same length. The dorsal cirrus extends nearly to the extremity of the dorsal ligule, whereas the ventral cirrus is much shorter and only reaches to half the length of the ventral ligule. In the female the anterior 5 parapodia have the dorsal cirrus enlarged in its ventral part; in the male this occurs in the anterior 7 parapodia. The notopodial fascicle only consists of homogomph, setigerous bristles; the neuropodial one in its dorsal part contains homogomph setigerous setae and some heterogomph falcate ones, whereas its ventral part consists of heterogomph setigerous and falcigerous bristles. The terminal piece of the falcate bristles is elongated, faintly bent and terminates in an obtuse apex.

The epitocous change of the parapodia much resembles that of other Nereidae and commences in the male with the 18th feet, in the female with the 22^d ones. At the base of the dorsal cirrus a small, comb-like lamella appears, whereas the cirrus itself in the male is provided with 7 to 8 papillae along the ventral border; the dorsal ligule has a pointed, conical shape and the dorsal lobe obtained the shape of a ploughshare. At the ventral lobe a rather large lamella, with a crenulated margin, has been developed. The ventral ligule is pointed, tongue-shaped and the base of the ventral cirrus bears inferiorly a fan-like lamella and superiorly a club-shaped appendage with an obtuse conical lobe on its dorsal border.



Nereis nouhuysi nov. sp.
Epitocous parapodium.

In the male specimen the parapodia of the posterior segments show the last vestiges of the *Heteronereis*-form, by the presence of small, papilliferous lobes at the base of the ventral cirrus; the swimming bristles have

totally disappeared and in both foot-lobes only a stout, black acicula is present, whereas the dorsal cirrus is strongly developed and extends a good deal beyond the extremity of the dorsal ligule. The anal opening is surrounded by a circle of papillae. In the females the epitocous transformation of the feet ceases with the 75th to 85th segment; the swimming bristles have disappeared and instead of them the ordinary setigerous setae are to be seen.

According to the armature of the proboscis this species ought to be ranged among the subgenus *Neanthes* and is closely allied to *Nereis cricognatha* Ehl. ¹⁾ and *N. caudata* Dch. ²⁾, which both have group I composed of several paragnaths and have the lobes of the parapodium provided with an elongated conical anterior lip. Both species however are distinguished from *N. nouhuysi* by having all the paragnaths of the oral region of the proboscis united in a single coherent girdle.

It is a remarkable fact, that *Nereis nouhuysi*, though living in fresh-water, acquires the *Heteronereis*-form, when attaining sexual maturity; for other euryhaline species of this genus, like *N. limnicola* from lake Merced (California) according to the observations of Johnson ³⁾, and *N. diversicolor*, as demonstrated by Mc Intosh, breed in the atokous state. Gravier however has described *Perinereis seurati* ⁴⁾ from a fresh-water pond in Tarauru-roa (Gambir isles), which showed some traces of a *Heteronereis*-state, consisting of two foliaceous bobes at the neuropodium and at the ventral cirrus, whereas the dorsal part of the parapodium remains unchanged and swimming bristles do not appear.

1) Ehlers, Neuseeländische Anneliden, I, Abhand. K. Gesellsch. Wissensch. Göttingen, (N. F.) Vol. III, 1904, p. 29, Pl. IV, figs. 3—7.

Augener, Fauna Südwest-Australiens, Polychaeta errantia, 1913, p. 163.

2) Claparède, Annél. chétopodes du Golfe de Naples, p. 478, Pl. X, fig. 1, Pl. XI, fig. 3.

3) Fresh-water Nereids from the Pacific coast etc.; Mark Anniversary Volume, 1903, p. 208, Pl. XVI, figs. 1—10.

4) Bulletin Muséum d'Hist. naturelle, Vol. XI, 1905, p. 243. This species afterward was also met with by Dr. Merton in the Waskai river; Ehlers, Polych. Anneliden von den Aru- und Kei-Inseln, p. 239.