

# ZOOLOGISCHE MEDEDEELINGEN

UITGEGEVEN VANWEGE

's RIJKS MUSEUM VAN NATUURLIJKE HISTORIE

Deel V.

te  
LEIDEN

Aflevering 2.

## VII. — THREE NEW *NEREIS*-SPECIES FROM THE DUTCH EAST-INDIES.

BY Dr. R. HORST. — (WITH 3 TEXTFIGURES).

*Nereis buitendijki* n. sp.

Malacca-strait. P. Buitendijk, 1910.

Amidst the Plankton of Malacca-strait Mr. P. Buitendijk met with a small *Nereis*-specimen, characterized by the presence of a digitiform appendage on the dorsum of the parapodia in the posterior body-region. The worm measures about 14 mm. in length. The head is longer than broad, trapezoidal, provided with large, broad palps and two short antennae, measuring about a third of the length of the head. The tentacular cirri are rather short, the longest of them reaching about to the 6<sup>th</sup> segment. The armature of the proboscis consists of:

I = 2 paragnaths, one behind the other.

II = an oblique, distichous group of 10 paragnaths.

IV = a transverse, tristichous group of 10 to 12 paragnaths.

III = 3 paragnaths, arranged in a triangle.

V = 0.

VI = a round group of 10 to 12 paragnaths.

VII—VIII = a subtristichous belt of paragnaths.

A parapodium of the anterior body-region consists of an elongated, conical ligule, that bears a cirrus, not quite extending to its distal extremity; the median ligule and the anterior lip of the dorsal lobe also have a conical shape, whereas its posterior lip is short and convex. In the ventral lobe the posterior lip is bluntly conical, not quite as long as the

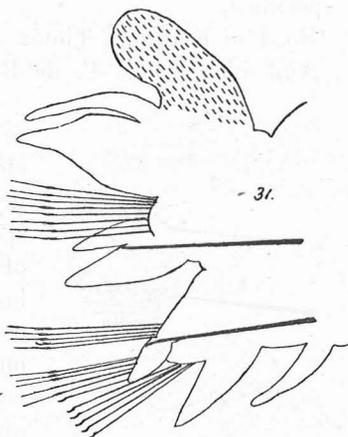


Fig. 1.

anterior lip, that has about the same length as the ventral ligule. The ventral cirrus only reaches to half the length of the ventral ligule. On the dorsum of the 14<sup>th</sup> parapodium, behind the place of insertion of the dorsal cirrus, a small, conical tubercle becomes visible, that in the succeeding segments grows larger and acquires a digitiform shape; in the posterior body-region this appendage becomes tongue shaped, whereas also the dorsal ligule grows broader and acquires a foliaceous appearance. The parapodial appendage is rich in blood-vessels and presumably will have the function of a gill. The dorsal bristle-fascicle consists of homogomph, setigerous setae; the ventral one in its superior part contains also homogomph setigerous and some heterogomph, falcigerous bristles, whereas in its inferior part there occur heterogomph, falcigerous setae, with a slender, ciliated terminal piece and some heterogomph setigerous bristles.

*Nereis (Perinereis) rumphii* n. sp.

Siboga-expedition, Stat. 272. Dobo, Aroe-islands. Reef-exploration. 1 specimen.

Off the south-coast of East-Flores. Dr. van der Sande, 14 Jan. 1909. 1 specimen.

Road of Koepang, Timor. Dr. van der Sande, 22 Jan. 1909. 1 specimen.

Amboina. Dr. L. F. de Beaufort, March 1910. 28 specimens.

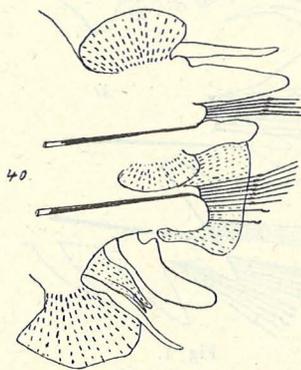


Fig. 2.

At the above-named localities several *Nereis*-specimens were collected, which, though closely allied to *Ner. mictodonta* Mrz.<sup>1)</sup>, in my opinion can not be identified with this species<sup>2)</sup>. The worms are in a different stage of sexual maturity, among those from Amboina 15 being atocous, whereas 11 are epitocous females and 2 are males, however without having the setae of the atocous phase replaced by swimming bristles, as well is the case with the specimens from Dobo and Flores and Koepang. The atocous specimens attain a length of 110 mm., whereas the ♀ measure about 85 and the ♂ ones only 64 mm. in length. The body is nearly discoloured; only the papilliform, distal piece of the palps is densely covered with small, oval, white spots and in the median body-region a patch of dark pigment appears on the dorsum of the parapodia,

1) Süd-japan. Anneliden, I, 1879, p. 10, Pl. 11, fig. 2. Izuka, Errant. Polychaeta of Japan p. 148, pl. XVI, figs. 1-6.

2) Presumably it has been done by Fishly, who mentions *Ner. mictodonta* from Ternate, however without any remark (Polych. von Ternate, Abh. Senckenb. Naturf. Gesellschaft, Vol. XXV, 1903, p. 113).

near the base of the dorsal cirrus. The head is longer than broad, trapezoidal and the two pairs of eyes are situated on its posterior half; they are enlarged in the specimens showing sexual maturity. The antennae are rather long, reaching the distal extremity of the basal joint of the palps, that on its dorsal side is provided with an oblique groove. The tentacular cirri are short, the longest one of the superior pair only extending to the anterior margin of the 5<sup>th</sup> segment, whereas in *Ner. mictodonta* according to Marenzeller and Izuka it reaches to the 7<sup>th</sup> or 8<sup>th</sup> segment.

In the specimen from South-Flores the armature of the everted proboscis consists of:

I = a round group of 5 small paragnaths.

II = a transverse, subtristichous group of 13 paragnaths, the smaller ones in front.

IV = a longitudinal group of 4 rows of paragnaths.

III = a transverse group of paragnaths and one or two situated laterally at some distance.

V = 3 conical paragnaths.

VI = a row of 7 to 8 transverse and conical paragnaths.

VII—VIII = a subdistichous belt of paragnaths, passing laterally into a single row.

In other specimens of *Ner. rumphii* group VI of the oral region of the dissected proboscis only contains 6 transverse paragnaths and in group I of the maxillary region there are 2 large, conical ones. The maxillae have a blackish distal part and are provided with 6 teeth.

The parapodia of the anterior two segments, consisting of a single lobe, differ somewhat in appearance from those of *Ner. mictodonta*, as described and figured by Marenzeller; the dorsal ligule extends only a little beyond the setiferous lobe, that is as long as the ventral ligule. The dorsal cirrus is somewhat longer than the dorsal ligule, whereas the ventral cirrus does not reach to the distal extremity of the ventral ligule. The setiferous lobe has its posterior lip rounded triangular, shorter than the anterior one, that has the shape of a rounded lobe; its middle-lip is hardly visible. The epitocous transformation of the parapodia commences in the ♂ with the 24<sup>th</sup> parapodium, in the ♀ with the 29<sup>th</sup> one, whereas according to Izuka in the Japanese worms it occurs already with the 21<sup>st</sup> one. Unfortunately Izuka's description is somewhat incomplete, for he does not mention whether his description relates to the male or female form; neither does he say anything about the cirri of the anterior parapodia. However in the specimens from Dobo and Flores the dorsal cirri of the anterior six parapodia and the ventral cirri of the

anterior five ones are enlarged in their basal part. In an epitocous parapodium of the male the dorsal cirrus, provided with six papillae along its ventral border, extends beyond the distal extremity of the dorsal ligule, that has grown elongated and slender; a fan-shaped lamella has been developed at the base of the dorsal cirrus and another small one at the base of the dorsal ligule. The median ligule is somewhat shorter than the dorsal one and also provided with a lobe at its base. At the posterior side of the ventral lobe a large lamella is present, limited distally by a straight border, not a rounded one as in *Ner. mictodonta*, according to Izuka. A large oval lamella occurs ventrally at the base of the long ventral cirrus and two elongated ones are placed dorsally. The ligulae as well as the dorsal and ventral lamellae are abundantly furnished with dark-coloured glandular bodies. Each segment on the lateral side of the back shows a transverse ridge-shaped thickening, especially in the epitocous region of the body. On the road of Koepang a large male (*Heteronereis* form) was captured, measuring 110 mm. in length; it is nicely coloured on the back, brownish with white intersegmental grooves, each of them succeeded by an other narrow, transverse, white band; moreover there occurs a dark median dorsal line. The dorsal cirri show about 9 papillae along their inferior border.

*Nereis* (*Ceratonereis*) *ramosa* n. sp.

Siboga-expedition, Stat. 96. South-east side of Pearl-bank. Sulu archipelago. Tow-net. 5 specimens.

Stat. 296. 10° 14' Lat. S., 124° 5' 5" Long. E. Anchorage of Noimini, South coast of Timor. Reef exploration. 1 specimen.

South of Flores; 122° 39' Long. E. Dr. van der Sande. January 1909. 1 specimen.

A *Ceratonereis*-species (*Heteronereis*-form) differing from the species of this subgenus hitherto described, not only by the armature of its proboscis as well as by the peculiar branched appendages at the lobes of the epitocous parapodia. The largest specimen has a length of 35 mm. The body is punctulated with black spots and there occurs a dark transverse band over the dorsal side of the buccal segment. The head is rectangular, much broader than long, its frontal border faintly protuberant; its lateral sides are entirely occupied by a pair of large, coalescent eyes. The antennae reach to the distal end of the basal joint of the palps. The longest tentacular cirrus extends over 8 to 9 anterior segments. The armature of the proboscis consists of:

I = 2 or 3 conical paragnaths, one behind the other.

II = a group of 8 paragnaths, arranged in a crescent, longitudinal row; the 4 largest ones in front.

IV = 8 paragnaths, situated upon a crescent, triangular plate; the 3 largest ones at the internal side.

III = 3 paragnaths, one behind the other.

The paragnaths of each group appear to be situated upon a common plate. The maxillae are provided with 4 to 5 stout denticulations.

In the parapodia of the anterior body-region the superior ligula is short, rounded, somewhat projecting beyond the anterior dorsal lip, which is as long as the median ligule; the ventral lobe with its anterior lip somewhat extending beyond the inferior ligule. Both have a rounded, distal extremity. The dorsal cirrus a little longer than the superior ligule, whereas the ventral one is somewhat shorter than the inferior ligule.

In the anterior 7 parapodia the basal part of the dorsal cirrus is enlarged; the anterior 6 parapodia have the ventral cirrus enlarged in its basal part. The dorsal bristle-fascicle consists of homogomph setigerous setae; the ventral fascicle in its superior part contains some homogomph setose bristles and some stout, yellow, heterogomph falcate ones, with ankylosed articulation and provided with a short terminal piece that has an enlarged apex and a ligament bent down over its edge. The inferior

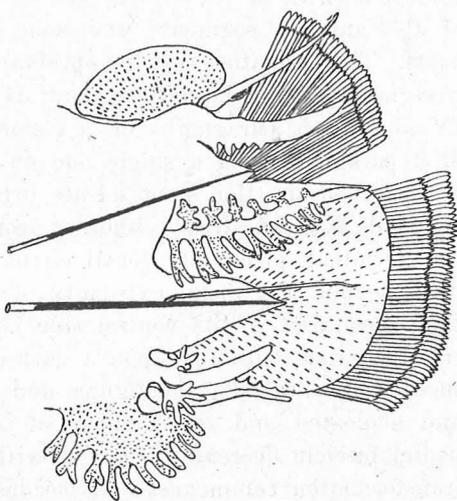


Fig. 3.

part of this fascicle consists of heterogomph setose bristles and some heterogomph falcate ones, which are provided with a terminal piece, that is more slender than that of the falcate setae in the superior part. The aciculae are dark black. The epitocous transformation of the parapodia commences in the 14<sup>th</sup> or 15<sup>th</sup> parapodium (in the specimen from Noimini in the XVI<sup>th</sup>); in the 14<sup>th</sup> one already a small, round lamella is visible at the base of the dorsal cirrus, whereas small appendages are developed at the dorsal and ventral side of the base of the ventral cirrus. The swimming bristles at the first time appear in the 15<sup>th</sup> parapodium. In the parapodia of the epitocous body-region the superior ligule has grown long and slender of an elongated oval shape, whereas the dorsal cirrus with its thin, distal end extends beyond the extremity of the ligule; at the ventral side of the dorsal lobe as well as at the superior border of the ventral lamella ramous appendages are visible.

The inferior ligule has the shape of a ploughshare. At the base of the dorsal cirrus a narrow, palette-shaped lamella occurs; at the base of the ventral cirrus dorsally some branched appendages are situated, whereas ventrally a lamellar lobe is visible. The cultrate setae are faintly heterogomph and bear a terminal piece, that is denticulated along one border and provided with an acute apex.

South off Flores by Dr. van der Sande a *Heteronereis*-specimen was captured, that according to the armature of the proboscis and the shape of its parapodia must be considered to represent a female specimen of *Ceraton. ramosa*. It has a length of about 70 mm. and is pale-brown coloured, with a transverse, white band in the intersegmental grooves of the anterior segments, and some oblique white lines on their lateral parts. The armature of the proboscis consists of: I = 3 large, conical paragnaths, one behind the other; II = a crescent row of 8 paragnaths; IV = 4 to 5 paragnaths on a common plate; III = a longitudinal row of 3 paragnaths and a single one on each side at some distance. In the 8<sup>th</sup> parapodium the stout falcate bristles of the dorsal part of the neuropodial fascicle already show a conspicuous tendency to ankylosis of the terminal piece; its dorsal cirrus is rather long and extends a good deal beyond the distal extremity of the dorsal ligule. This cirrus along the basal part of its ventral side is beset with a longitudinal group of small papillae, situated upon a dark-coloured (? glandular) tissue. In the succeeding parapodia the ligules and parapodial lobes grow more slender and aculeated and the number of stout falcigerous setae in the neuropodial fascicle decreases, whereas with the 25<sup>th</sup> parapodium the epitocous transformation commences and besides the cultrate bristles only a single stout, hook-shaped seta is visible in the ventral lobe.

This species much resembles *Ceratonereis pachychaeta*, the atokous form of which was described by Fauvel from Djibouti and Madagascar<sup>1)</sup>; it has nearly a similar armature of the proboscis and in the ventral lobe of the parapodia stout, heterogomph, falcate bristles, with ankylosed articulation. Fauvel however does not mention that the paragnaths of the different groups are placed on a common basal plate and according to his description group I should only consist of a single paragnath.

*Gymnorhynchus*: Zoolog. Mededeelingen, Dl. IV, p. 247.

This name ought to be cancelled, because it already has been used by Rudolphi (*Entozoorum Synopsis*, p. 129) for a tape-worm; I propose to replace it by *Gymnonereis*.

1) *Bullet. Muséum d'Hist. natur.* 1918, p. 506.

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ONDER REDACTIE VAN

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DEEL V

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BOEKHANDEL EN DRUKKERIJ  
v/H E. J. BRILL, LEIDEN  
1919—1920