THE HETERONEREIS PHASE OF A NEW SPECIES OF A POLYCHAETOUS ANNELID FROM URUGUAY.

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The following description is of the heteronereis phase of a new species of *Nereis* sent me for identification by the United States National Museum. The specimens were collected by the well-known Uruguayan naturalist, Dr. F. Felippone, of Montevideo, in the course of an expedition to the eastern coast of the Republic, off Punta del Este, Maldonado. He says: "The animal was not known to the sailors. I captured it by placing an electric light (100 candlepower) 40 centimeters below the surface of the ocean. Within five minutes thousands of animals appeared on the water moving rapidly about." Since paragnaths are found on all eight of the proboscis areas, the species belongs in the subgenus *Neanthes*. The collection contained only one male and a considerable number of females.

NEREIS (NEANTHES) AUSTRALIS, new species.

The single male was 37 mm. in length, with a width of 3 mm. in the anterior unmodified portion. Females varied considerably in size, depending in part on the degree of distension of the body by the sex products. One female, the largest of the collection, was 95 mm. long and 6 mm. wide in the median region.

The prostomium (fig. 1) narrows abruptly at about the middle of its length, so that it is roughly divided into two rectangular areas, the outer one nearly square in outline, the inner one about twice as long as wide. The eyes are prominent, those of the anterior pair lying near the margin, while the posterior ones are at the posterolateral angles. The antennae are about one-half as long as the prostomium, separated by less than their own width from one another. The basal joints of the palps are large, extending to the apex of the antennae, while the terminal joints are very small. The two ventral tentacular cirri (only the anterior one is shown in the figure) are short, hardly reaching to the apex of the prostomium. In the specimen drawn the anterior dorsal cirrus on the right side reached to somite 8 while on the left it was much shorter, apparently due to injury. The two posterior dorsal tentacular cirri extend to somite 10.

The appearance of somite 1 varies with the degree of protrusion of the pharynx, for in some specimens it was very much narrower than somite 2 while in others it was more as is represented in Figure 1. In most cases there is a gradual slope backward from the anterior border of somite 1 to that of somite 2. It is short as compared with other species of this genus, being never more than one-third its length longer than somite 2. Somite 2 gradually widens to somite 3, and this increase continues to the region of somites 6 to 8. The distension of the body with sex products or its collapse after they are extruded make measurements behind this region of little value.

In life the dorsal surface must have been dark brown in color. In the preserved material the dorsal surface of the prostomium, palps, and anterior somites, and the ceratophores of the tentacular cirri are dusky brown. The remainder of the body is colorless. A row of clear spots runs across the dorsal surface of each somite a short distance posterior to its anterior margin.

A parapodium from the anterior region of the male is shown in Figure 2. On the notopodium are two cirruslike lobes, one above and one below, and a cirruslike presetal lip. The dorsal cirrus is relatively smaller than in many heteronereids and has the characteristic swelling toward its apex. In the neuropodium there is a cirruslike postsetal lobe and an asymmetrically pointed anterior one with a larger triangular lobe ventral to these two. The ventral cirrus is very small and placed near the base of the parapodium. There is a single black acicula in each half of the parapodium.

A parapodium from the sexual region of the male (fig. 3) has in the notopodium two cirruslike presetal lobes, the postsetal being short and rounded. On the dorsal surface is a rounded flat lobe, and the dorsal cirrus arises between the base of this and the dorsal one of the two presetal lobes. It has about ten lobulations along its ventral border. The neuropodium has two presetal lobes, one broad and fan-shaped with a deep notch in the dorsal border of its base, the other much more slender and cirruslike. On the ventral border of the neuropodium are two lobes, of which the ventral one is the larger and the ventral cirrus arises between the two. It is much smaller than the dorsal cirrus and lobulated along its dorsal border.

The parapodia of the female agree in general with those of the male, except that all lobes and lips are heavier and blunter. In the anterior region the dorsal cirrus does not have the expansion toward the apex, but is uniformly tapered.

In the anterior region of the male are two kinds of setae, both compound. One form (fig. 4) has a very long slender terminal joint, toothed along one margin. These make up all of the notopodial tuft, and the dorsal and ventral parts of the neuropodial. In

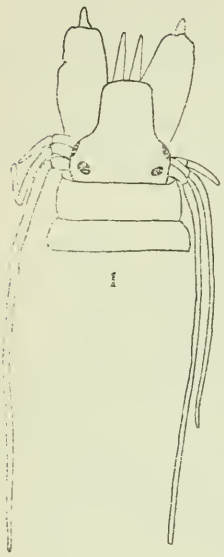
the latter tuft, occupying the middle region, is a smaller group of setae with terminal joints shorter than in the other type, with blunt ends and long marginal teeth (fig. 5). Both forms of setae have camerated shafts. In the sexual region of the male I found only one type of seta, having the broad flat. paddle-shaped terminal joint with one margin toothed, which is characteristic of heteronereids. The form and arrangement of setae in the female is essentially like that in the male, except that in among the paddle-shaped setae of the sexual portion I found a few of the long type, like Figure 5. There would be one or two of these in each half of the parapodium. I did not determine whether they are present in all of the sexual parapodia but they appeared in those from near the middle of the body. I could find none of these in the sexual region of the male, but the material at hand was not sufficient to enable me to decide whether this is a sex difference.

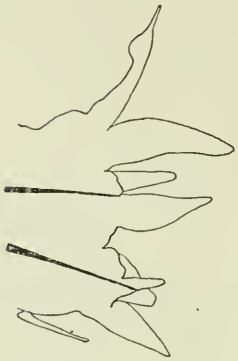
The jaws are rather heavy, translucent-brown in color each with about 10 teeth. Paragnaths are arranged as follows: I, 3 or 4; II, about 20 arranged in approximately 3 diagonal rows; III, about 30 on either side, arranged in the form of a curved triangle, 4 or 5 paragnaths wide at the base and narrowing toward the apex, the terminal 2 rows made up of one paragnath each; IV, about 30 in 4 (approximately) transverse rows; V, usually 3 in a longitudinal row, but 2 specimens had only 1 each; VI, a circular patch of about 9 on either side; VII, a single row on either side, which toward the ventral end becomes double and merges gradually into VIII, which has 3 transverse rows, of which the 2 anterior are of much larger paragnaths than are found in the posterior one.

The male holotype (Cat. No. 19095 U.S.N.M.) and female paratypes (Cat. No. 19096 U.S.N.M.) are in the collections of United States National Museum.

EXPLANATION OF PLATE.

FIG. 1.—Anterior region of female ×10.
2.—Parapodium from anterior region of male ×28.
3.—Parapodium from the sexual region of male ×28.
4.—Seta from anterior region of male ×250.
5.—Second form of seta from anterior region of male ×250.





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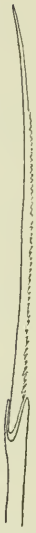

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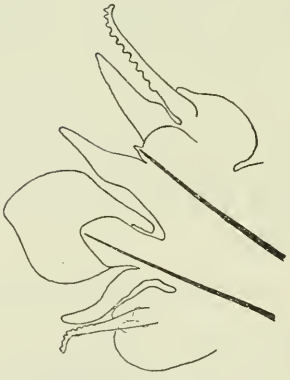

3

NEREIS (NEANTHES) AUSTRALIS, NEW SPECIES

FOR EXPLANATION OF PLATE SEE PAGE 3