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NOTES ON SIPHONOPHORES

3. *Nectopyramis spinosa* n. sp.

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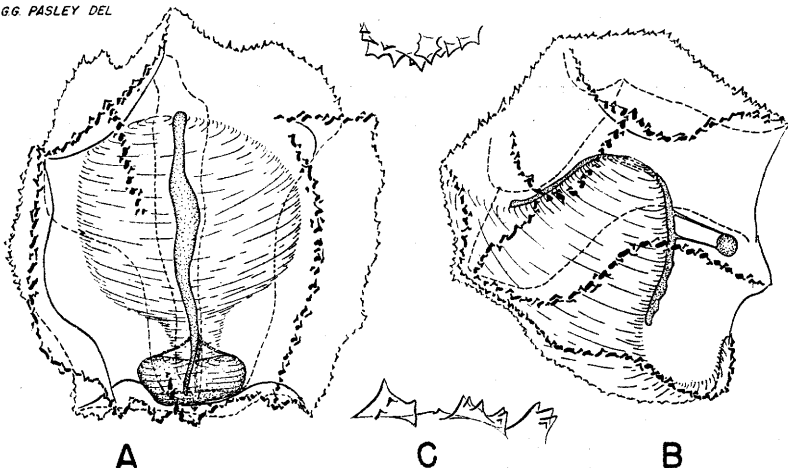
In a number of samples collected by the "Dana" in tows with 1000 to 3000 meters of wire out, there were several nectophores and bracts with rows of peculiar jagged spines (Fig. C). These spines are quite unlike those on other deep-dwelling species, such as *Vogtia pentacantha* K  lliker, *V. spinosa* Keferstein and Ehlers, and *Athorybia rosacea* Forsk  l. In fact, the specimens have little in common with either the Hippopodidae or the Anthophysidae. However, one nectophore was described by Moser (1925, p. 425, Pl. 25, figs. 5-7) as *Hippopodius* (?) *cuspidata*, although it actually closely resembled the specimens found in the "Dana" collection. The chief difference is that hers had the peculiar jagged spines scattered irregularly over its surface, whereas on the "Dana" specimens these are arranged in discrete rows. Nevertheless, the spines themselves seem to be identical in structure. Like the "Dana" nectophores, most of the characteristics described and figured by Moser (1925) make it appear almost certain that her specimen was also a *Nectopyramis*, not a *Hippopodius*. In all examples, the shape of the nectosac, its relation to the hydroecium, and the fact that the nectophores have all been taken singly and at considerable depths are all peculiarities of *Nectopyramis*. On the other hand, the somatocyst is tubular and not "represented by a series of divergent canals" (Bigelow, 1911a, p. 338) as defined in the brief description of the genus.

The original account was based on one species, *Nectopyramis thetis*. Soon thereafter a second species, *Nectopyramis diomedea*, with many of the same characteristics was recorded (Bigelow, 1911b). Since then no additional species have been reported, and little more has been

¹ Papers from the "Dana" Collection No. 38, and Contribution No. 607 of the Woods Hole Oceanographic Institution.

learned about the genus. Hence, there has been little reason for modifying the original description. Nevertheless, our ideas concerning the relationships of this genus have changed considerably. Thus, the family of the Monophyiidae has been broken up and the individual genera transferred to other well-established families (Totton, 1932, p. 328) with which they had obvious affinities. *Nectopyramis*, therefore, is now referred to the Prayidae. In this family, the somatocyst and radial canals are structurally quite varied; in some, they are simple, in others branched. At first, these were used as a criterion for separating genera (Bigelow, 1911b), but more recently, a transitional form with branched radial canals and a simple somatocyst has been

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discovered (Leloup, 1934, p. 11). This suggests that when more is known about this family, differences in the structure of somatocyst and canals may prove to be of specific rather than generic value.

If, then, we consider that the shape of the somatocyst is in all probability a specific character in *Nectopyramis*, as may be the case among other prayids, we have two species originally described by Bigelow (1911a; 1911b), *N. thetis* and *N. diomedae*, both of which had branched somatocysts, but simple radial canals and two species, *N. cuspidata* Moser and *N. spinosa* n. sp. (described below) with simple tubular somatocysts. The two latter are both spiny, but the two are readily distinguished for Moser's species is irregularly covered by the spines, but in *spinosa* these are arranged in regular rows along more or less distinct ridges.

NECTOPYRAMIS SPINOSA n. sp.

The type specimen is a nectophore about 5 mm. in length taken at "Dana" St. 3933^{IV} at 11°18'S., 50°13'E. on 20 December, 1929, in a stramin net 150 cm. in diameter towing with 2000 meters of wire out. The type specimen will be deposited in the University Museum, Copenhagen, Denmark.

Other specimens were taken as follows:

- St. 3556^{II}. 2°52'N., 87°38'W. 14. IX. 1928.
S150. 2000 m. wire. 1 nectophore.
- St. 3677^{IV}. 5°28'S., 130°39'E. 23. III. 1929.
S150. 2000 m. wire. 2 bracts.
- St. 3920^{VI}. 1°12'N., 62°19'E. 9. XII. 1929.
S150. 1000 m. wire. 1 bract.
- St. 3964^{VI}. 25°19'S., 36°13'E. 15. I. 1930.
E300. 3000 m. wire. 1 bract.
- St. 3998^{III}. 7°34'S., 8°48'W. 1. III. 1930.
S150. 1000 m. wire. 1 bract.

Nectophore (Fig. A). The unique rows of jagged spines make it obvious that the nectophore is new. Although probably flattened on preservation, in dorsal or ventral view, it is roughly triangular much as are the nectophores of the other known species of *Nectopyramis*. The nectosac opens into the base of the triangle and like *N. thetis* "is comparatively small, shallow, and saucer-shaped" (Bigelow, 1911a, p. 338) with four primary radial canals along its sides. It is uncertain whether or not these eventually branch because of preservation. A large deep hydroecium lies just above it with a slit-like opening on the ventral surface. This extends the entire length of the hydroecium. The somatocyst insofar as can be determined appears to be a tubular rod extending from the base of the hydroecium to slightly above its apex. The stem and appendages are entirely missing.

Bract (Fig. B). Although bracts have not been found attached to the nectophore, there seems to be little doubt that the bracts with rows of the same jagged spines belong to this species. These are globular, about 2.5 mm. high and slightly more than 3 mm. wide. As in the nectophore, the hydroecium is so deep that it extends somewhat into the upper half of the bract. Closely associated with the hydroecium is a long tubular somatocyst which follows the outline of the hydroecium. On two of the specimens, two threadlike branches are given off dorsally and appear distally to have a globular connection.

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