

Remarks.—As in the case of *H. waltoni*, specimens have always been scarce and are becoming scarcer. The type locality has been subdivided for development and is largely built up with homes. Fortunately, this snail can be found well up along Pine Valley Creek to the north wherever fallen logs can provide a suitable habitat.

Helminthoglypta edwardsi is most closely related to *H. waltoni*, differing from the latter by its less elevated, smaller shell with more closely coiled whorls, by the more widely reflected inner lip, more regularly and closely spaced papillation, and more delicate incremental striation. Anatomically, it is nearly identical to *H. waltoni*, differing from the latter by the proportionately shorter spermathecal diverticulum and portion of the spermathecal duct proximal to the attachment of the diverticulum.

In view of the fact that *H. thermimontis*, *H. waltoni*, and *H. edwardsi* have closely similar anatomies, it became necessary to decide, in our opinion, whether all three might be conspecific. *Helminthoglypta thermimontis* is a log snail living at high elevations above 5000 feet on Hot Springs

Mountain (we have found it at 6100 ft) while *H. edwardsi* is a log snail living at lower elevations along Pine Valley Creek, some 35 miles south of Hot Springs Mountain, and *H. waltoni* is a rock-slide inhabitant. Repeated attempts to raise *H. waltoni* in a wooden terrarium have failed, even though *H. edwardsi* has thrived in a similar terrarium; this led us to believe that *H. waltoni* has different ecological and physiological adaptations than *H. edwardsi*. Thus, in attempting to infer reproductive isolation from morphological, anatomical, ecological, and physiological differences, we concluded that it appears highly improbable that any hybrid populations (even if hybrids could be obtained) would be able to survive in any one of the three niches of the parent populations. Accordingly, *H. waltoni* and *H. edwardsi* are considered closely related but distinct species. Both are also closely related to *H. thermimontis* and all three are probably derived from an immediate common ancestor.

Helminthoglypta edwardsi is named for the late H. Arden Edwards who first brought this snail to the attention of one of us (WOG).

SOME NEPHTYIDAE (POLYCHAETA) FROM UBATUBA, BRASIL

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ABSTRACT: Four species of nephtyid polychaetes are reported from Ubatuba, Brasil. The description of *Aglaophamus juvenalis* (Kinberg, 1866) is amplified and illustrations of median parapodia are given for all four species.

Nephtyids from Brasil have previously been reported by Kinberg (1866, p. 240; Hartman, 1948, p. 51) and Nonato and Luna (1970, p. 71). The present collection was sent to the author for identification by Edmundo Nonato of Instituto Oceanografico de Universidade de Sao Paulo. It contains four species from intertidal and shallow subtidal areas.

Station list:

A-144: Station pier, Ubatuba, under stones in black, sand mud.

A-255: Praia Dura, Ubatuba, intertidal in fine sand.

A-322: Anchieta Island, 10 m, gray, fine mud.

B-9 : Cananeia, 4 m, soft mud with organic debris.

B-63 : Cananeia, 6 m, soft mud with organic debris.

Aglaophamus juvenalis (Kinberg, 1866) (Fig. 1a-c)

Aglaophame juvenalis Kinberg, 1866, p. 240

Aglaophamus juvenalis, Hartman, 1948, pp. 51-52

Aglaophamus juvenalis has remained known through its original record from Rio de Janeiro only.

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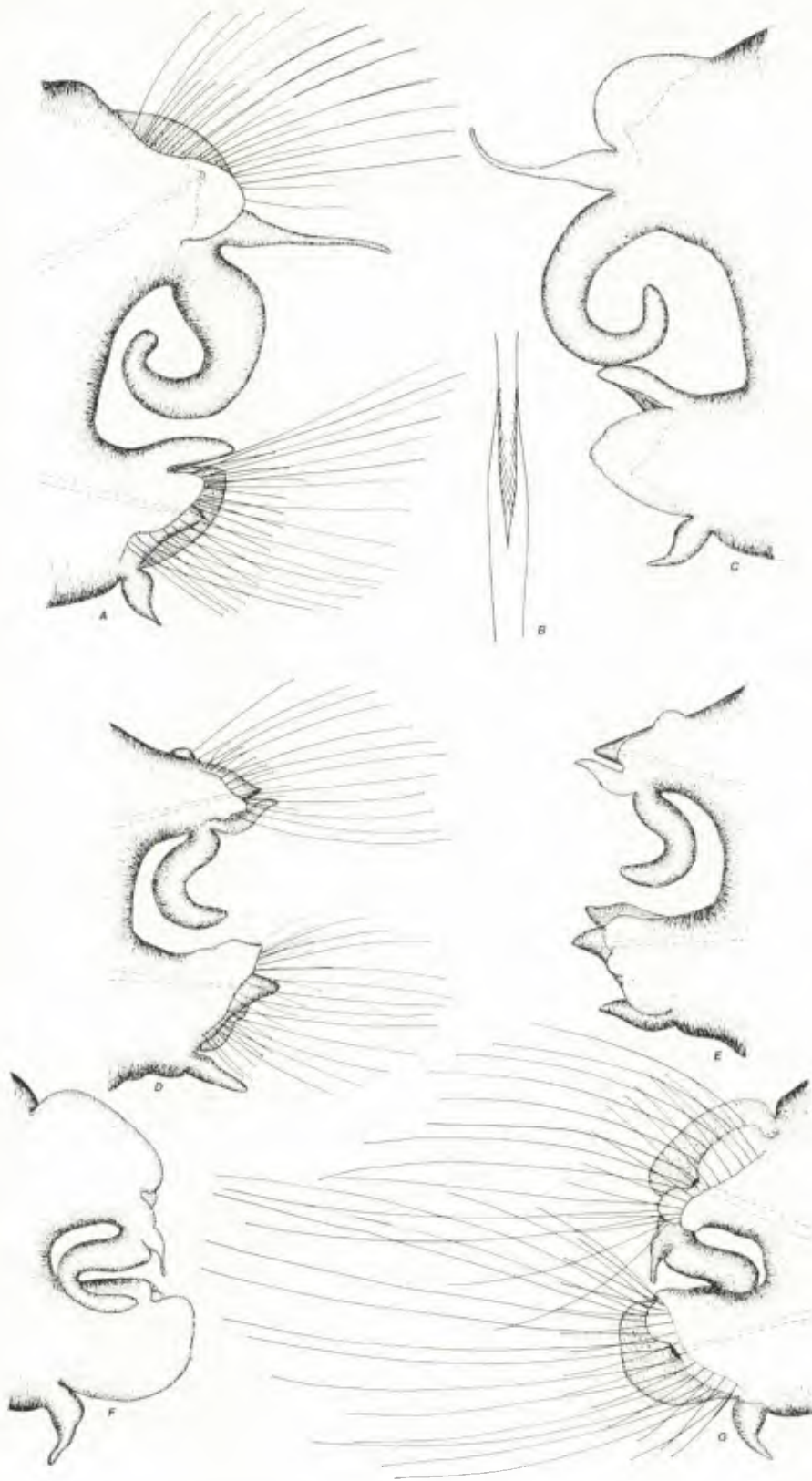


Figure 1. *Aglaophamus juvenalis*: A. parapodium 25, anterior view, $\times 34$; B. furcate seta, $\times 257$; C. parapodium 25, posterior view, $\times 34$. *Nephtys acrochaeta*: D. parapodium 25, anterior view, $\times 16$; E. parapodium 25, posterior view, $\times 16$; *Nephtys magellanica*: F. parapodium 25, anterior view, $\times 32$; G. parapodium 25, anterior view, $\times 32$.

The species is interesting, because it is one of the few species of nephytids which has an aberrant number of rows of subterminal papillae on the proboscis. Most species have either fourteen or twenty-two; *A. juvenalis* has sixteen rows of papillae. The original description was reviewed and amplified by Hartman (1948). The present specimen, which is incomplete with 45 setigers, fit well with Hartman's description. Some important points are reviewed below.

The proboscis has sixteen rows of subterminal papillae with five or six papillae in each row. A mid-dorsal papilla is present and is more than twice as long as all other papillae. The proximal surface of the proboscis is smooth.

Setiger 1 has short, button-shaped parapodia: both noto- and neurocirri are present. The acicular lobes are pointed in the fully developed parapodia (Figs. 1a, c) at setiger 20. The rounded notopodial presetal lobe covers the anterior face of the acicular lobe completely. The notopodial postsetal lobe is placed dorsal to the presetal lobe and is visible, in anterior view, above the dorsal margin of the acicular lobe. It is rounded.

A thick, folded erect lobe is on the superior margin of the neuropodia. The lobe is first present on setiger 4 and becomes reduced in setigers 35-40; it is absent posterior to setiger 40. The neuropodial presetal lobe is as high as the acicular lobe and is placed dorsal to that lobe. The postsetal lobe is triangular and is higher than all other lobes in the neuropodia, with the exception of the erect lobe. Notopodial cirri are greatly prolonged and distally filiform in median setigers; neuropodial cirri are short and tapering.

Interramal cirri are present from setiger 4 to the end of the fragment. Where fully developed, each is involute and describes approximately a semi-circle. The cirri are rapidly reduced after setiger 30; by setiger 35 each is a small, nearly straight papilla at the base of the long notopodial cirri.

Aglaophanus tabogensis Monro (1933, pp. 53-55, fig. 23) resembles *A. juvenalis* in that it has strongly prolonged notopodial cirri in median setigers. *Aglaophanus tabogensis* has rounded acicular lobes in anterior setigers; all acicular lobes are pointed in *A. juvenalis*. Interramal cirri are present from setiger 8 in *A. tabogensis* and from setiger 4 in *A. juvenalis*. The type-material of *A. tabogensis* was recently reviewed by the present author (Fauchald, in press).

Material: A-255 (1).

Nephtys acrochaeta Hartman, 1950
(Fig. 1d-e)

Nephtys acrochaeta, Hartman, 1950, pp. 114-1146, pl. 16, figs. 1-6; Hartman, 1953, p. 33.

Nephtys acrochaeta was originally described from Uruguay in 80 m depth. It is characterized primarily by the presence of spurred setae in the postacicular fascicles, but resembles *N. squamosa* Ehlers (see below) in that the dorsal body-wall is expanded to form

flattened scales over the dorsum and the bases of the parapodia in a median region. This condition is also found in *N. serratifolia* Ehlers (1897, pp. 24-25, pl. 1, fig. 13; Hartman-Schröder, 1965, pp. 141-145, figs. 110-113) from Chile and southern Argentina.

Nephtys acrochaeta differs from *N. squamosa* in that it has sharply pointed, rather than bluntly rounded acicular lobes. Interramal cirri are first present from setigers 9-10 in the former and from setiger 2 in the latter (Nonato and Luna, 1970, p. 41).

Nephtys acrochaeta resembles *N. serratifolia* closely, and in fact, Hartman-Schröder (1965) suggested that the two might be synonymous. The pre- and postacicular lobes are very much higher than the acicular lobes in *N. serratifolia* and shorter than these lobes in *N. acrochaeta* both as illustrated by Hartman (1950, pl. 16, figs. 1-2) and in the present specimens. Interramal cirri are present from setiger 3 in *N. serratifolia* and from setigers 9-10 in *N. acrochaeta*.

Material: A-322 (3); B-9 (2); B-63 (4).

Nephtys magellanica (Augener, 1912)
(Fig. 1f-g)

Nephtys magellanica, Augener, 1912, pp. 208-209, figs. 27-28; Hartman, 1940, l. 238, pl. 41, figs. 100-104; Hartman, 1950, p. 100

Nephtys magellanica has a smooth proboscis with 22 rows of subterminal papillae; a long mid-dorsal papilla is present.

Interramal cirri are present from setiger 3 and the acicular lobes (Figs. 1c-d) are broadly, but shallowly incised or excavated in the fully developed parapodia. The notopodial postsetal lobe is obliquely rounded; the neuropodial one is truncate; both are somewhat higher than the acicular lobe. The notopodial presetal lobe has an inferior free, rounded flap; the neuropodial one is continuous with the postsetal lobe around the superior margin of the neuropodial acicular lobe. Setae are very long, especially in the postacicular fascicles.

Material: A-255 (3).

Nephtys squamosa (Ehlers, 1887)

Nephtys squamosa Nonato and Luna, 1970, p. 71, figs. 27-31 and references therein.

Nephtys squamosa is well known from warmer waters on both sides of the Americas. It is distinguished from other species with the dorsal body-wall expanded as indicated above.

Material: A-255 (2).

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A NEW SPECIES OF *DIOPLOSYLLIS* (POLYCHAETA: SYLLIDAE) FROM CALIFORNIA

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ABSTRACT: A new species of *Dioplosyllis* is described. Three specimens were collected swarming at a night light. A table is presented to separate the four known species.

Dioplosyllis broadi, new species

Figures 1-6

Material Examined: Three epitokous specimens were taken at a night light located in Fishermans Cove, Santa Catalina Island, California. An anterior fragment with seven setigers was collected on 18 August 1973, and two complete specimens were collected on 19 August 1973. (Holotype No. POLY 1141, deposited in Allan Hancock Foundation; Paratype No. 740, deposited in University of Alaska Museum.)

General Description: The complete specimens are 22 and 24 mm long, 2.0 and 2.1 mm wide without parapodia and 6.0 and 6.1 mm wide with parapodia. The specimens consist of 13 setigers, a buccal segment and an astigerous preanal segment. The outline in cross-section is ellipsoidal, strongly arched dorsally and flattened ventrally. The body in outline is tapered from the median segment to both ends. The median seg-

ment is twice the width of the anterior and posterior ends.

The body is brownish purple dorsally and lighter in color ventrally. Each segment (Fig. 1) appears regularly wrinkled with from two wrinkles on the buccal segment to 12 wrinkles on the fourth. Each wrinkle has a purple stripe with a cream colored valley in between. The parapodial wrinkles run parallel to the long axis of the body with each stripe strewn with white spots. The dorsal and ventral cirri have ten longitudinal stripes made up of rows of small purple pigment spots. The eyes in life are red-orange in color.

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