BULLETIN

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Vol. XXX, 1911.

EDITOR, J. A. ALLEN.

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1911.
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Continued from 3rd page of cover.)

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GENERA.

NEW SPECIES, SUBSPECIES, AND VARIETIES.

ERRATA.

Page 43, footnote, for *P. truei* read *P. dalli.*
" 49, line 7, for more read less.
" 89, at bottom, insert Feet over column of figures.
" 90, at top, insert Feet over column of figures.
" 98, lines 10 and 11, for Plate VI read Plate IV.
" 98, line 12, for Plate IV, Fig. 2, read Plate VIII, Fig. 1.
" 98, footnote, read Granger, *loc. cit.*, etc.
" 110, at bottom, omit last sentence.
" 116, line 10, for have been from read have been derived from.
Plate VII, in the legends, for Big Land Draw read Big Sand Draw.

BULLETIN

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VOLUME XXX, 1911.

59.51,7(75.9)

Article I.—POLYCHÆTOUS ANNELIDS FROM THE DRY TORTUGAS, FLORIDA.

BY AARON L. TREADWELL.

The following is the first of a proposed series of systematic papers on the polychætous annelids of the southeastern United States and West Indian regions. I have collections made by the American Museum expedition in the Bahamas in 1908, in Bermuda by Professor Verrill, to whose generosity I am indebted for an opportunity of studying them, and by myself while at the Laboratory of the Carnegie Institution at the Dry Tortugas. To the Director of this laboratory, Dr. Alfred Goldsborough Mayer, I am under the greatest of obligations for many courtesies, and for the facilities of the laboratory which he put at my disposal.

The majority of the annelids at the Tortugas live in the crevices of the dead coral rock, or in some cases in canals penetrating the solid part of this rock, these canals sometimes fitting the bodies of the animals so closely that they seem to have been excavated by the animals. Tube dwelling forms, as Sabellids and Serpulids, live in or among the heads of the living coral, and in the mud in the moat at Fort Jefferson. There are no mud flats in this region, the annelids usually found in such places living in the dead coral.

To secure satisfactory results in Annelid collecting, preliminary narcotization is essential, and for this purpose I have found a solution of $MgSO4$, at a strength of 153.74 grams to the litre, gives the best results. This was devised by Dr. Mayer, and used by him for a variety of other animals. When completely narcotized, they are transferred to 5 % formalin until dead, and are then fixed in 90 % alcohol. It is usually desirable in order

to avoid shrinking to run them down to 50 % alcohol, returning to 80 % for final preservation. This method preserves both form and color very well. Final preservation in formalin is to be avoided, as specimens in it have a tendency to macerate.

Marphysa fragilis n. sp.

A number of specimens found July 2, 1910, in the crevices of soft coquina rock left bare by the tide at Loggerhead Key just south of the laboratory landing. The animals were very fragile, and it was difficult to remove them from the rock without breaking. Some were apparently broken when found and later examination showed in these various stages of regeneration of the posterior ends.

Only one specimen, and that a small one, was removed entire. This had a width of 7 mm. and a total length of 50 mm., with about 160 somites.

Head (Fig. 1) bilobed, each lobe with rounded anterior margin, and slight lateral protrusion. Peristomium about four times broader than long, length in mid line about one third less than at lateral margin. Anterior margin slightly prolonged to cover the bases of the tentacles. Tentacles five, of nearly equal length, the outer pair a trifle longer than the inner. Each tapers gradually from the base to a bluntly rounded apex. Transverse bands of brown pigment, in some cases not complete, cross the tentacles in various places and give a certain resemblance to articulations. Eyes one pair, obscure, between bases of paired tentacles, completely covered by anterior margin of peristomium.

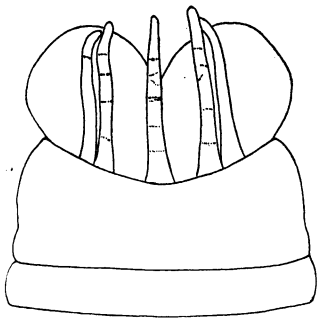


Fig. 1. Head of *Marphysa fragilis*. × 7.5.

Somite 2 about one third as long as peristomium, its width equal to about ten times its length. Somites 4 to 9 show a gradual increase in length, the width of somite 9 being about equal to 7 times its length. Behind this, the somites gradually decrease in length, width of somites in the gill bearing region being at least 14 times their length. This is, however, variable, depending on the amount of contraction. For the greater part of the posterior half of the body, the intersegmental constrictions are especially prominent, so that the somites seem to be relatively narrow, colorless rings, separated by broad and deep dark colored furrows. Ventral surface rather less rounded than dorsal and intersegmental grooves less pronounced. Anterior somites decidedly rounded dorsally with parapodia situated ventro-laterally. Those of somites 3 to 10 show a gradually more elevated position, the 10th being on the lateral margin. Succeeding somites resemble this in the position of the parapodia. Toward the posterior end the dorsal surface again shows a tendency to round and the parapodia are again nearer the ventral than

dorsal surface. Pygidium of entire specimen showed no trace of anal cirri. A regenerating one had two ventrally placed stout cirri.

First parapodium (Fig. 2) with blunt ended basal portion. Dorsal cirrus constricted at base, terminal portion lanceolate, extending to three times length of basal portion. Ventral cirrus broader than dorsal, in form of a truncated cone. Large conical posterior lobe resembling ventral cirrus in outline, but more slender. Dorsal cirri of next three or four appendages much like those of first, but gradually decrease in length, finally being barely as long as the basal portion of the appendage. Ventral cirrus on third somite begins to show a differentiation into a small rounded terminal portion and a thick ventral pad which is prominent up to about somite 25. Behind this region it becomes relatively inconspicuous, but the two parts of the cirrus may be distinguished throughout the body. Posterior parapodial lobe prominent anteriorly, but disappears behind the region of the 30th appendage.

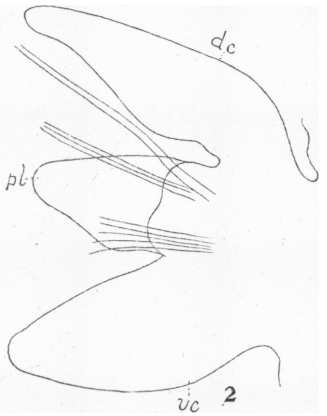


Fig. 2. Parapodium of *Marphysa fragilis*. × 25. *d. c.*, dorsal cirrus; *v. c.*, ventral cirrus; *pl*, posterior lobe.

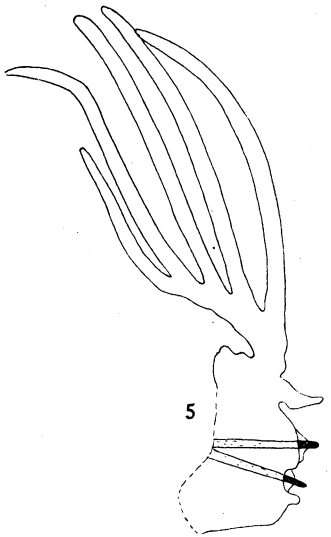
Setæ of all somites in a dorsal and a ventral bundle. Anteriorly in dorsal bundle are three kinds. 1. Long, slender, slightly curved, with feebly toothed narrow marginal expansion. 2. Setæ somewhat like 1, but shorter, and more curved (Fig. 3) and marginal expansion with fine denticulations. 3. A few very delicate comb-shaped setæ, situated dorsal to the base of 1, with elongated lateral teeth, and 12 to 15 intermediate ones. These latter are very delicate, and difficult to see. Ventral setæ in a dense bundle, all compound. Basal joint long, its distal expansion pointed and covered with minute spines (Fig. 4). Terminal joint relatively short, with two stout hooks at end, covered with a hood. Edge of hood with minute denticulations throughout its whole extent. Five or six very stout blunt-pointed aciculæ in middle of parapodium. Behind the fourth somite these are replaced by two black aciculæ, which project from the end of the parapodium, and can be seen with a hand lens. Throughout posterior region of body the same sorts of setæ appear as on the anterior somites, but are all somewhat modified. The comb-shaped setæ here form a dense tuft at the dorsal side of the base of the long setæ, while the shorter of the two forms of long ones have more prominent lateral teeth than they do anteriorly. Compound setæ are similar to anterior ones, but with much longer basal joints.

Fig. 3. Dorsal seta of *Marphysa fragilis*. × 185.

Fig. 4. Compound ventral seta of *Marphysa fragilis*. × 280.

Gills begin on somites 16 to 19. The first with one or two branches, which

increase in number and size on later somites, five being the greatest number of branches seen on any one gill. They are prominent and are long enough to cover the back, though at least in preserved material, are bent posteriorly so that the middle



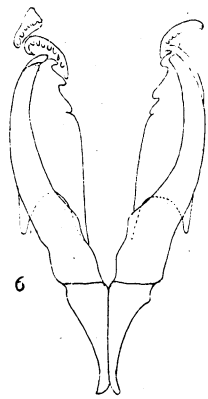


Fig. 5. 33rd parapodium of *Marphysa fragilis.* × 14.
Fig. 6. Maxillæ of *Marphysa fragilis.* × 10. The tip of the right forcep had been broken.

of the back is not covered. They are most prominent on somites 20 to 50, behind this point diminishing both in size, and in number of branches. On one entire specimen having a total length of 50 mm. with about 160 somites, gills began on somite 20 and ended on 100. Fig. 5 is of a posterior view of the 33rd parapodium.

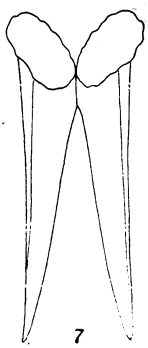


Fig. 7. Mandible of *Marphysa fragilis.* × 10.

Maxillæ (Fig. 6) with slender dark colored base, terminal portion gently curved, proximal part lighter colored than distal. Left paired plate with 3 strong teeth, right with 3 large and 1 small tooth. Second paired plates with 7 small teeth each. Left unpaired with 2 stout, and 4 smaller teeth. All teeth very dark colored, general surface of plate much lighter. Mandibles (Fig. 7) long, slender, light brown with darker edges. Terminal plates pearly white.

Living specimens showed the anterior and ventral surfaces of the prostomium white, dorsal surface as far as bases of antennæ brown, portions between bases of antennæ white, with brown arch around bases of unpaired and inner paired antennæ. Brown patch on head continued in a patch on top of each palp. A number of brown rings around the antennæ, varying in number on different antennæ and different animals, but usually 3 or 4. Prostomium brown, densely covered with pearly white spots, next 3 somites with lateral areas like head, but with prominent pearly white patch in mid-dorsal line, also with fewer white spots on lateral area than in head. These dorsal patches

become less prominent on somites 3 and 4 and disappear entirely on 5, to reappear on 7. They are less prominent on 8 and 9, while 10 is entirely white. Later somites show a median white patch on dorsal surface, which as far as at about somite 25 is continuous with a transverse band across the anterior face of the somite. Behind this region, entire surface of animal pearly white. Ventral surface throughout similar in color to posterior dorsal region. The whole surface of the animal is highly iridescent. Gills bright red. Alcoholic specimens show practically the same coloration as living material, though the gill coloration, being due to contained blood, is entirely lost.

This is apparently closely related to *Leodice* (*Marphysa*) *hamata* of Schmarda from Jamaica, though according to Schmarda's description that has bidentate aciculæ, and the gills begin near the middle of the body, and have only two branches.

Type in American Museum of Natural History.

Aracoda attenuata n. sp.

An extremely attenuated animal, fairly abundant in the coral rocks. They occupy small tubes in the rocks, just large enough to accommodate the body, and usually are first seen when, the rock having been split open, the delicate body, usually narrowed to the diameter of a fine thread, is found stretching across from one piece to the other. It is practically impossible to remove the animal from the burrow without breaking. One incomplete specimen of average size had (in alcohol) a diameter of barely 1 mm., with a length of 120 mm., over 200 somites being present. The body is noticeably narrower for the anterior 100 somites than it is farther back.

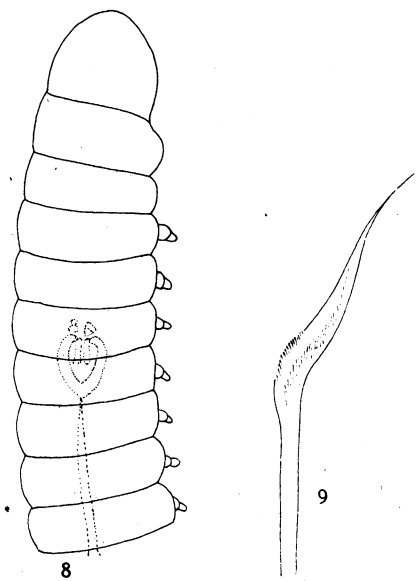


Fig. 8. Anterior end of *Aracoda attenuata*. × 45. The jaw apparatus showing through the body wall.

Fig. 9. Seta of *Aracoda attenuata*. × 500.

Head (Fig. 8) broadly rounded, length about equal to breadth. (The figure was drawn from an animal partly rolled on its left side.) First two somites about as wide as head. Appendages begin on somite 4. Each with a bluntly ending basal portion, carrying setæ, and a prominent conical ventral lobe extending beyond the basal portion to a distance rather less than height of latter.

Setæ (Fig. 9) of only one kind, with long, rather stout base, terminal portion bent and prolonged into an acute tip, and with a sharply toothed expansion along convex edge. On some appendages were short very delicate setæ just protruding from the end. These seemed to me to be merely the ends of developing setæ of above type.

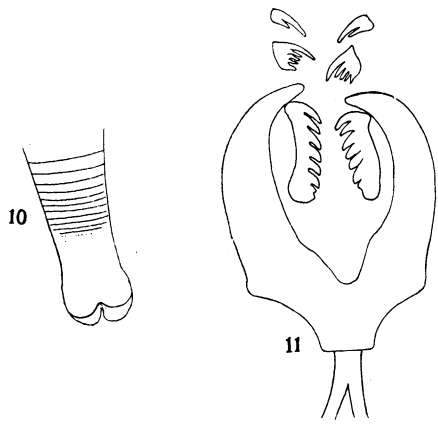


Fig. 10. Posterior dorsal view of *Aracoda attenuata.* ×45.
Fig. 11. Maxillæ of *Aracoda attenuata.* × 185.

Toward posterior end the parapodia disappear and somite boundaries are hard to distinguish. Pygidium with dorsal and ventral paired lobes, but no cirri. This may possibly have been a regenerating individual (Fig. 10).

Jaw apparatus jet black. Maxillæ rather stout, tapering to a blunt point. 1st pair of toothed plates between maxillæ, each with 6 large and a small 7th tooth. Terminal paired plates with one long and one short tooth. Middle plates with one long and 4 much shorter teeth (Fig. 11).

Collected in 1909 and 1910 from coral rocks near Fort Jefferson. Type in American Museum of Natural History.

Aracoda spatula n. sp.

Body slender, 170 mm. long, 2.5 mm. wide at widest part, which is about one quarter of the distance back from the anterior end. Prostomium as broad as first somite, in length equal to rather more than the first two somites, broadly rounded and flattened. No eyes. (Fig. 12.)

Maxillæ black, basal portion elongated into long slender spines (Fig. 13). Left hand plate with about 7 denticulations, that of the right side similar, but with denticulations a trifle stronger. Maxillæ curved uniformly to a blunt point. Terminal plates 2 on either side, triangular, larger on left than on right. The mandible was not seen.

Parapodia of anterior region mere rounded lumps on side of body, but apparently with setæ like those of posterior region. After somite 15, parapodia increase in size up to the 20th, while from here to the posterior end there is very little change, though the posterior ones are the largest in the body. Fig. 14 of a posterior parapodium. Postero-ventrally, a stout lobe overhangs the bases of the tuft of setæ. Setæ 4 or 5, stout, slightly bent, with broad terminal portion, and acute tips. (Only 1 shown in figure.) Most of the broad portion covered with slight protuberances, too irregular to be called denticulations. A single large rounded aciculum barely protrudes from the surface. Each parapodium contains 1 or 2 fine hairlike setæ, usually more or less bent.

No anal cirri were to be seen, though the specimen seemed entire.

According to Ehlers's original grouping of the Eunicidæ, this belongs to the genus *Larande*, following Kinberg, who bases the distinction on the number of plates in the jaw apparatus. In his Florida Anneliden, however,

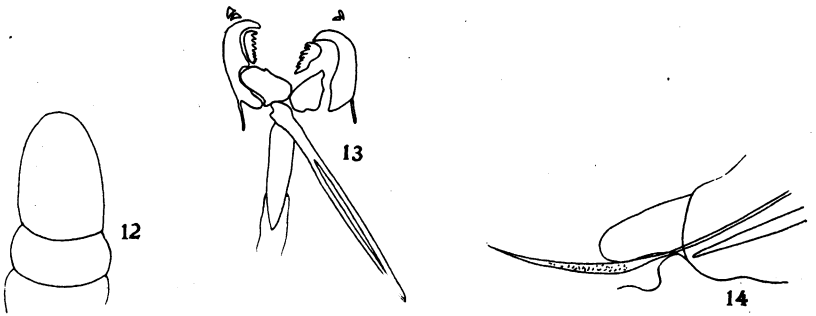


Fig. 12. Head of *Aracoda spatula*. × 7, 5.
Fig. 13. Maxillæ of *Aracoda spatula*. × 7, 5.
Fig. 14. Posterior parapodium of *Aracoda spatula*. × 136.

Ehlers decides that the number of plates may vary, and thus be useless for classification. This species seems to be closely related to *Aracoda debilis*.

A single specimen, collected from reef near Fort Jefferson, in June, 1909. Type in the American Museum of Natural History.

Nicidion kinbergii *Webster*.

Webster, Annelida from Bermuda. Bull. 25, U. S. Nat. Museum, p. 320.

These agree with Webster's brief description, but since his account is very incomplete I have thought it best to redescribe.

Size small, the largest an incomplete specimen, having a length of 80 mm. with about 150 somites. Greatest width in region of 20th somite, where it is barely 4 mm.

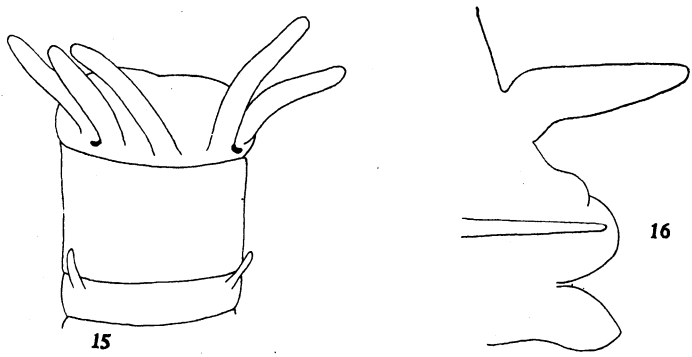


Fig. 15. Head of *Nicidion kinbergii*. × 14.
Fig. 16. Anterior parapodium of *Nicidion kinbergii*. × 68.

excluding parapodia. Behind region of somite 12 the somites broaden and shorten, becoming much compressed as far back as somite 50. Behind this they narrow a little, and become much longer, the posterior somites equaling in length at least 3 of those in region of somite 50.

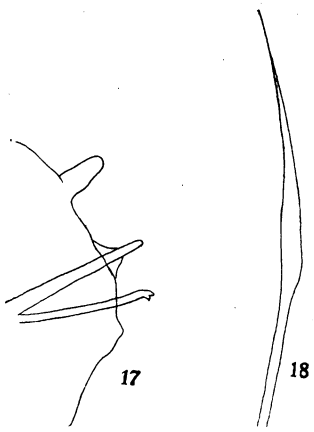


Fig. 17. Posterior parapodium of *Nicidion kinbergii*. × 68.
Fig. 18. Simple seta of *Nicidion kinbergii*. × 280.

Breadth of prostomium about equal to twice its length, only very slightly bilobed (Fig. 15). Tentacles relatively rather stout, uniformly tapering to tip, unpaired, extending to middle of somite 3. Inner paired about equal to unpaired in length, outer paired a trifle shorter. Eyes one pair, dark, at base of inner paired tentacles. Peristomium relatively long, equal to more than the combined lengths of 2 and 3. Breadth about equal to $1\frac{1}{2}$ times the length, a little wider at margins than in the middle. Somite 2 less than half the length of 1. Tentacular cirri very short, hardly as long as somite 2. Somites 3, 4 and 5 increasing slightly in length. Prostomium (in alcohol) colorless ventrally, dorsal surface with brown ground color, densely spotted with white. Peristomium and somite 2 pearly white, though former may have a brown tinge with white spots near anterior border. Somites 3, 4 and 5 brown with white spots, 6 and 7 colorless or nearly so, later somites like 3 and 4, but fainter. The amount of this color varies in different animals. Posterior half colorless.

Anterior parapodia with prominent cirri, and single large aciculum (Fig. 16). Dorsal cirrus with a bend near the base, terminal portion tapering to a very bluntly rounded apex, ventral cirrus shorter, ovate from a broad base and rather thick. Throughout anterior third of body a prominent ventral pad on each parapodium. Parapodia of posterior half of body with small dorsal cirrus, while the ventral cirrus practically disappears. Two large aciculæ the dorsal one with rounded end, ventral one with hooked apex covered with a delicate hood (Fig. 17). Both aciculæ dense black except at apex which is colorless. Anal cirri two, short, finger shaped, ventrally placed.

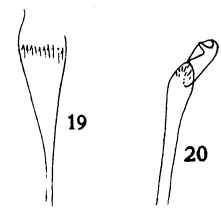


Fig. 19. Comb-shaped seta of *Nicidion kinbergii*. × 280.
Fig. 20. Compound seta of *Nicidion kinbergii*. × 280.

Setæ of 3 sorts. 1. Simple setæ with narrow elongated basal portion, apex suddenly widening and then narrowing again to an acute point. No prominent denticulations or striations on this terminal portion (Fig. 18). 2. Compound, with narrow basal joint, apex provided with minute teeth where it widens to form support for terminal joint. Latter relatively short, with curved apical and straighter subapical tooth (Fig. 20). 3. Comb-shaped setæ, with narrow stalk and 12 to 15 teeth in the flattened end. As noted by Webster, one lateral tooth is longer than the corresponding one on the other side (Fig. 19). All three forms of setæ occur all through the body, 1 and 3 being dorsal to the aciculæ and 2 lying between the two aciculæ. Anteriorly

the comb-shaped setæ are relatively few in number, while posteriorly they form a dense bundle on the dorsal face of the simple setæ.

Mandible (Fig. 21) slender, cutting edges delicate, marked with concentric lines, outer and posterior margins very dark colored. Basal arms light brown, darker along adjacent faces. Maxillæ (Fig. 22) very light colored except that all teeth, the tips and inner faces of the forceps, and a band where the latter join their basal portion, are very dark brown. Forceps slender, slightly curved. First paired plates with 4 teeth, second with 7, left unpaired with 6. Ventral to maxilla is a transparent plate bifurcated so that each half corresponds to half of the jaw apparatus, and with a prominent dark brown spot just anterior to the toothed plates. (Not shown in figure.)

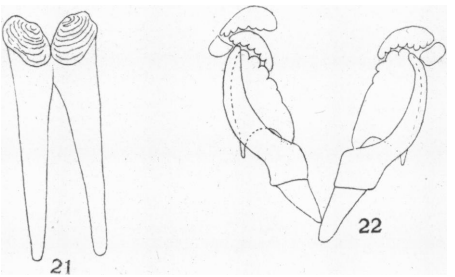


Fig. 21. Mandibles of *Nicidion kinbergii.* ×27.5.
Fig. 22. Maxillæ of *Nicidion kinbergii.* ×27.5.

Found in interstices of coral rock in the vicinity of Fort Jefferson.

Hermenia verruculosa *Grube.*

GRUBE, Annulata Œrstediana, 1856.

In 1901, in a report on the Annelids of Porto Rico, published in the Bulletin of the U. S. F. C., I described as *Polnoë nodosa* a species having a peculiar rough skin. The specimens in my possession had apparently lost all except the most anterior pair of elytra, an accident not unusual in collecting. The specific name was however, preoccupied, having been used by Sars in 1860, and the species had been previously described by Grube in 1856, as *Hermenia verruculosa.* Grube established the genus *Hermenia* on "Tentacula 3, lateralia nulla. Elytra pari 1mo excepto minutissima." Examination of a considerable number collected in the Tortugas showed that the elytra behind the first pair are present but very small, being hardly larger than the tubercles which cover the surface of the body. (See Fig. 23 for relative size of first and later pairs.) Grube seems to have had a specimen which had lost its palps, since these in my possession are undoubtedly of his species, but have the palps, "Lateral tentacles" of Grube. Since the original diagnosis is very brief, and without figures, I have thought it wise to publish a redescription.

Head rounded, prolonged anteriorly into bases of antennæ, with breadth a trifle less than distance from posterior margin to bases of antennæ. Eyes laterally placed, scarcely visible from dorsal surface. Ceratophore of median tentacle about $\frac{1}{3}$ as long as head. Median tentacle (Fig. 23) long, slender, when folded back extend-

ing beyond posterior margin of head. A subterminal swelling with filamentous tip. Lateral tentacles rather more than half as long as median, but similar in form. Tentacular cirri about as long as median tentacle. Palps long, tapering at first, and then more rapidly to an acute tip. Palps, tentacles, and tentacular cirri with a general ground color of brown with subterminal swelling white, and a varying amount of white along the stalk.

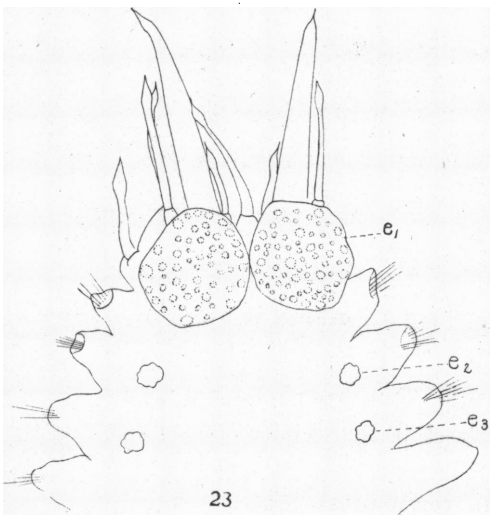


Fig. 23. Anterior dorsal view of anterior end of *Hermenia verruculosa* to show relative size of 1st (e_1), 2nd (e_2), and 3rd (e_3) elytra. The surface tubercles of the skin are not shown. × 6, 5.

Proboscis 4.5 mm. long in a specimen of 20 mm. Surface of proboscis smooth, with a variable number, 7 to 11, of papillæ fringing the edge of each lip. In the mouth are two large brown horny teeth, above and below, which interlock when the mouth is closed.

On either side of these large teeth is a small black cutting surface running laterally from the outer edge of the tooth.

Coloration of dorsal surface variable. There is a ground color of white or cream, and it is thickly studded with tubercles, the coloration depending on the color and arrangement of these. Most of the tubercles are dark brown, those on cirrus-bearing somites being lighter in color than those on somites with elytra. As a result the somites appear alternately light and dark. In most cases, the 4th setigerous somite shows more or less white. The entire dorsal surface may have this color, or it may appear as a median and two lateral patches, with a narrow brown patch on either side between. Somites 3, 2 and 1 show each a mid dorsal patch of white, relatively narrowing from behind forward, so that with the patch on the 4th somite the whole forms a triangular area with the apex at the anterior end. Variations may appear in the direction of an entire patch of white over the dorsal surfaces of the first 4 somites, or on the other hand this entire area may be dark, in which case it is the darkest portion of the body. There is usually a median row of white papillæ running along the mid dorsal line, much the most prominent toward the posterior end. Ventral surface creamy white, with numerous papillæ giving it a villous appearance. Nephridial papillæ are very prominent, especially toward the posterior end.

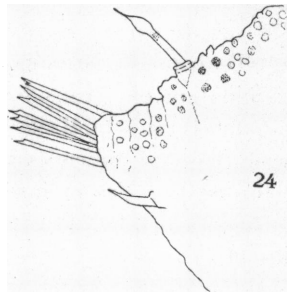


Fig. 24. Parapodium of *Hermenia verruculosa.* × 13.

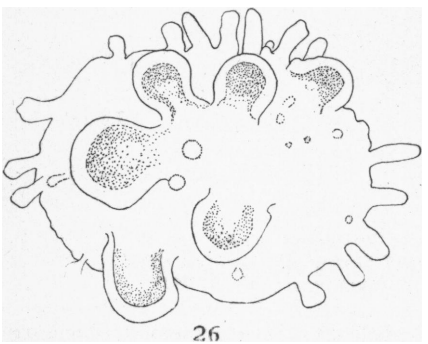
Parapodia stout, more or less wrinkled, and thickly covered with tubercles (Fig. 24).

No notopodial setæ. Neuropodial setæ stout with bifid apex (Fig. 25), about 13 in a bundle. First elytron nearly rectangular in outline, and covered with tubercles (Fig. 23). The edge bears a fringe of narrow finger-shaped processes, not shown in figure because not visible under the magnification employed. The elytra of later somites are shown on same scale as the first in Fig. 23, and under greater magnification in Fig. 26. They are roughly oval in outline, with edge carrying a number of relatively thick finger-shaped processes. On the dorsal surface from four to six large, dark, hard tubercles.

25

Fig. 25. Seta of *Hermenia verruculosa.* × 156.

Length of a medium sized specimen 30 mm. Width of middle somite of body, including parapodium, 7 mm. From middle region the body narrows slightly toward both anterior and posterior ends. Number of somites 26, with 12 pairs of elytra on somites 1, 3, 4, 6, etc.



26

Fig. 26. Small elytron of *Hermenia verruculosa.* × 150.

The specimens from the Tortugas were found living in interstices in the coral rocks moving into deeper crevices with considerable rapidity when disturbed, and clinging with great tenacity to the rock, so that it is often difficult to get them off without injury. A single specimen was collected at Andros in the Bahamas in 1908. Grube records it from "St. Jan," and, as noted above, it was collected by the U. S. F. Commission in Porto Rico. It apparently, therefore, has a wide distribution throughout the West Indies.

Streblosoma verrilli n. sp.

Prostomium inconspicuous, forming a horseshoe-shaped lip overhanging the mouth. Tentacles slender, elongated, half as long as the body. Peristomium (Fig. 27) with a thickened collar-like edge, not drawn out into lobes, having a shallow median dorsal depression, and ventrally a small lower lip, the latter partly divided into two lobes by a medial depression. Outer surface of peristomium with a dense accumulation of dark pigment spots (ocelli). No lateral lobes on somites posterior to head.

At least the first 33 somites with capillary setæ borne on prominent papillæ. Body of uniform diameter to about 25th to 32nd somite, where it narrows to barely

half the diameter of thorax. From somite 32 it narrows gradually to an acute tip. Only one specimen was complete and this had the entire posterior end of body filled with eggs. Ventral face of thorax with 17 shields, the last three narrower than the others. Uncini extend through greater part of the body, apparently to extreme posterior end.

Gills cirriform, in clusters on somites 2, 3, and 4. In the specimens in my possession, 5 was the largest number in any one cluster, while the specimen best preserved in other respects had only 2. Gills twice as long as transverse diameter of body.

Setæ in each parapodium, beginning on 1st branchial somite, borne on a prominent papilla, arranged in a single row. Setæ of two kinds (Fig. 28). One form large, with stout shaft, broadened for the terminal two thirds, tapering rather abruptly

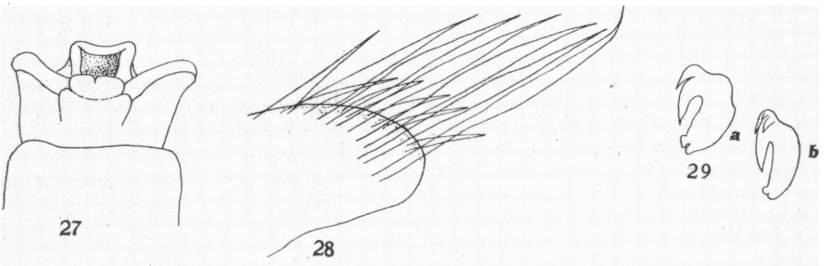


Fig. 27. Head and somite 1 of *Streblosoma verrilli.* × 13.
Fig. 28. Seta of 25th somite of *Streblosoma verrilli.* × 65.
Fig. 29*a* and *b*. Uncinus of *Streblosoma verrilli.* × 280.

to an acute tip. Under high power, the whole seta shows numerous oblique striations. Second form much shorter, more nearly transparent, with acute tip. The two are arranged alternately in a single row on the end of the papilla.

Uncini begin on 3rd branchial somite, in a single row of about 30. This single row condition persists throughout the body, though the number in the row increases toward the middle portion. Uncinus with stout base, with a knob. A single large hook above, with two smaller hooks at the base. Between these a third, smaller hook. (Fig. 29*a*, profile; 29*b*, $\frac{3}{4}$ face view.)

No tubes were found.

Length of body, 90 mm. with greatest breadth of thorax 7 mm. in a specimen having 160–170 somites.

Collected from reef near Fort Jefferson, June, 1909. Type in American Museum of Natural History.

Vassar College, Jan., 1911.