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Partial revision of *Scolelepis* (Polychaeta: Spionidae) from the Grand Caribbean Region, with the description of two new species and a key to species recorded in the area

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Abstract

Five *Scolelepis* species from the Gulf of Mexico and Western Atlantic Ocean are reported and certain species previously synonymized with *Scolelepis* (*S.*) *squamata* are revised. Four species are reinstated: *S.* (*S.*) *goodbodyi* (Jones, 1962), *S.* (*S.*) *minuta* (Treadwell, 1939), *S.* (*S.*) *acuta* (Treadwell, 1914), and *S.* (*S.*) *agilis* (Verrill, 1873); and two are described as new: *S.* (*S.*) *lighti* n. sp., and *S.* (*S.*) *vossae* n. sp. *Scolelepis* (*Scolelepis*) *goodbodyi* (Jones, 1962) n. comb., *S.* (*S.*) *minuta* (Treadwell, 1939) n. comb., *S.* (*S.*) *acuta* (Treadwell, 1914), and *S.* (*S.*) *agilis* (Verrill, 1873) are removed from synonymy with *S.* (*S.*) *squamata* Müller, 1806. The record of *Scolelepis* (*P.*) *texana* Foster, 1971 from the Grand Caribbean region is confirmed. A key to all *Scolelepis* species from the Grand Caribbean is provided.

Contents

Introduction

The genus *Scolelepis* was revised by Maciolek (1987) who established two subgenera, *Scolelepis* and *Parascolelepis*, based on the morphology of the hooded hooks. Subgenus *Scolelepis* De Blainville, 1828 included species having uni- to tridentate hooks with a falcate or straight shaft, while subgenus *Parascolelepis* Maciolek, 1987 included species having multidentate hooks with a curved shaft. Maciolek (1987) also described three new species from the eastern coast of the United States. After that, Imajima (1992) described six new *Scolelepis* species from Japan, Eibye-Jacobsen (1997) described *S.* (*Scolelepis*) *laciniata* from Thailand, and Eibye-Jacobsen and Soares (2000) described *S.* (*S.*) *vazaha* from Madagascar. Currently, 56 *Scolelepis* species are recognized, including 45 of the subgenus *Scolelepis,* and 11 species of *Parascolelepis.*

Few *Scolelepis* species have been described from the Grand Caribbean Region: *Nerine minuta* Treadwell, 1939 from Texas, and *Nerinides goodbodyi* Jones, 1962 from Jamaica. However, these species were synonymized with *Scolelepis squamata* Müller, 1806 by Pettibone (1963) and she also included other species such as *Nerine agilis* Verrill, 1873 from New Jersey, *Lumbricus cirratulus* Della Chiaje, 1828 from the Mediterranean, *Malacoceros longirostris* De Quatrefages, 1843 from France, *Nerine heteropoda* Webster, 1879 from Virginia, *Spio acuta* Treadwell, 1914 from California, and *Nerine capensis* McIntosh, 1925 from South Africa, into synonymy with *Scolelepis squamata* Müller, 1806. Thereafter, Foster (1971) described one species from the Gulf of Mexico belonging to *Parascolelepis*, and recorded *S.* (*S.*) *squamata* (Müller, 1806), which was originally described from Denmark.

In this work, I review type and non-type material

of certain species previously synonymized with *S.* (*S.*) *squamata* (Müller, 1806), as well as other species from the Grand Caribbean Region, and distinguish between the described species. This results in the reinstatement of four species and the description of two new species, and an identification key to *Scolelepis* species from the Grand Caribbean region is provided.

Material and methods

The material was collected off the Mexican coast in the states Tamaulipas, Tabasco, Campeche, Yucatan, and Quintana Roo. Specimens were fixed in 10% formaldehyde and later preserved in 70% ethanol. Additional material was collected in the oil platform area in the southern Gulf of Mexico during one oceanographic cruise: Dinamo II (Nov. 1990). Information about these cruises is provided by Granados Barba and Solis Weiss (1998). Drawings were made with a camera lucida. Specimens were measured with a millimetre rule; width includes parapodia but not chaetae.

The material has been deposited in several institutions: the Reference Collection of El Colegio de la Frontera Sur, Unidad Chetumal (ECOSUR), Chetumal, Mexico; Los Angeles County Museum of Natural History, Allan Hancock Foundation (LACMNH-AHF), Los Angeles, USA; United States National Museum of Natural History, Smithsonian Institution (USNM), Washington, D.C, USA; Rosenstiel School of Marine and Atmospheric Sciences, The Invertebrate Museum, University of Miami (UMML), Miami, USA; American Museum of Natural History, New York, U.S.A. (AMNH); Colección de Poliquetos, Laboratorio de Ecología Costera (Poliquetos) (LECyP-ICML-UNAM), México. In the following, the number of specimens in a sample is given in parentheses after the museum abbreviation.

For scanning electron microscopy (SEM), specimens were critical point dried using carbon dioxide, covered with gold-palladium, and then viewed with a Topcon SM-510 in El Colegio de la Frontera Sur, Tapachula, Chiapas.

Systematic section

Spionidae Grube, 1850
Scolelepis De Blainville, 1828

Key to *Scolelepis* from the Grand Caribbean Region

1. Hooks falcate with 0-3 small apical teeth, shaft straight (Subgenus *Scolelepis*) 2
– Hooks multidentate, shaft curved (Subgenus *Parascolelepis*). With occipital antenna; first chaetiger uniramous; without notopodial hooded hooks ..... *S.* (*P.) texana*
2. Notopodial hooded hooks present 3
– Notopodial hooded hooks absent 4
3. Peristomium distinct from prostomium, with low lateral wings; anterior notopodial lamellae oval, elongated, slightly ruffled; all hooks only tridentate ..... *S.* (*S.*) *lighti* n. sp.
– Peristomium completely fused to prostomium, without lateral wings; anterior notopodial lamellae bilobed, not ruffled; hooks uni, bi-, and tridentate ..... *S.* (*S.*) *vossae* n. sp.
4. Peristomium short; branchiae from middle region without glandular cells on the distal margin; all hooks tridentate; notochaetae of chaetiger 1 of one type: nearly straight, thin ..... *S.* (*S.*) *minuta*
– Peristomium long; branchiae from middle region with glandular cells on the distal margin; hooks uni, bi-, and tridentate; notochaetae of chaetiger 1 of two types: 1) abruptly curved, very broad and 2) nearly straight, thin (Fig. 4O) ..... *S.* (*S.*) *goodbodyi*

Subgenus *Scolelepis* de Blainville, 1828
Type species: *Lumbricus squamata* Müller, 1806, by monotypy.

Scolelepis (*Scolelepis*) *squamata* (Müller, 1806)
(Fig. 1A-Q)

Lumbricus squamatus Müller, 1806: 39

Material. South Shields, England, 7 Feb. 1982, P. Garwood coll., ECOSUR-SPIO 0077 (2).

Description. Two examined specimens complete, 60-65 mm long, 3 mm wide excluding chaetae, with 102-136 chaetigers. Color in alcohol yellowish. Body wide anteriorly, tapering posteriorly.

Prostomium conical, extended anteriorly to long, tapering point, posteriorly triangular, raised, without occipital antenna, extending to chaetiger 2. Two pairs of small reddish brown eyes present, anterior eyes slightly larger than posterior ones (Fig. 1A). Peristomium long, distinct from chaetiger 1, forming low lateral wings (Fig. 1B). Eversible proboscis, saclike, may be extremely inflated (Fig. 1A). Palps long, extending up to chaetiger 21; ciliation consists of two longitudinal bands of transverse rows of cilia. Palp sheaths short, segmented, fused to base of palps (Fig. 1C).

Branchiae present from chaetiger 2 to end of body (absent on last chaetiger of body), with thick, glandular, subtriangular tips (Fig. 1E); almost completely fused to notopodial postchaetal lamellae (Fig. 1E, J); each branchia with band of cilia along inner edge; each segment also with dorsal, transverse band of cilia, not continuous with ciliation of branchiae (Fig. 1A).

Parapodia of chaetiger 1 small but well-developed; notopodial postchaetal lamellae oval and neuropodial postchaetal lamellae rounded, with capillary chaetae in both rami (Fig. 1D). Notopodial postchaetal lamellae entire**,** slightly ruffled on chaetiger 2 (Fig. 1E), developing notch dividing the lamellae into two lobes on chaetiger 3 (Fig. 1F); lower lobe large and rounded (Fig. 1F), diminishing in size on following chaetigers (Fig. 1G-I); upper lobe elongate with rounded tip, best developed on chaetigers 3-27 (Fig. 1F-H). Middle and posterior notopodial lamellae entire (Fig. 1J).

Neuropodial postchaetal lamella rounded on anterior chaetigers (Fig. 1D-H), developing light notch on chaetigers 33-42 (Fig. 1I), after chaetiger 43 notch becoming deeper, dividing lamella into two separate lobes; on following chaetigers lower lobe remaining triangular, located ventral to neurochaetae (Fig. 1J), upper lobe broadly rounded with elongated tip, placed midway between neuro- and notochaetae (Fig. 1J).

Neurochaetae arranged in two rows on anterior chaetigers. Neuropodia of anterior chaetigers with capillaries only, those of anterior row broadest, moderately granulated, weakly bilimbate (Fig. 1K), shorter than those of posterior row. Neuropodial hooded hooks from chaetiger 43, up to 9 present per neuropodium, accompanied with two long chaetae above and two short chaetae below the hooks. Hooded hooks with bluntly rounded main fang surmounted by one or two smaller accessory teeth placed side by side, with long, slightly curved shaft (Fig. 1L). Sabre chaetae absent.

Notopodial capillary chaetae similar in morphology to those of neuropodia although more elongate, arranged in two rows, those of posterior row longest (Fig. 1M). Notopodial hooded hooks from chaetiger 85-92, up to six present per notopodium, accompanied with four long chaetae above and two short chaetae below the hooks. Hooded hooks with bluntly rounded main fang surmounted by one or two smaller accessory teeth placed side by side; with long, almost straight shaft (Fig. 1N-P).

Pygidium with ventral cushion (Fig. 1Q).

Remarks. Pettibone (1963) placed several species in synonymy with *Scolelepis squamata* without any explanation. This was followed by Foster (1971), Light (1977; 1978), Maciolek (1987) and Blake (1996) who, however, provided reasons to support these synonymies.

Foster (1971) made special reference to the variation of the dentition of the hooded hooks and stated that there was some confusion and inconsistency regarding the presence or absence of notopodial hooks in the species synonymized with *S. squamata* by Pettibone (1963). Light (1977, 1978) observed the same variation and also commented that the presence of a notch in middle and posterior neuropodial lamellae was quite variable among specimens from San Francisco and that this feature shows a continuous distribution within a single sample. On the basis of adult morphology, Light (1977) could not distinguish between the paratype *Spio acuta* from San Diego, the holotype of *Nerine minuta* from Texas, specimens identified as *Nerine agilis* from the northeast coast of North America, and specimens identified as *S. squamata* from both coasts of North America, The Netherlands, and Italy. Maciolek (1987) examined specimens from the east coast of North America, mostly small ones, including some postlarval or juvenile forms. All her specimens were consistent in having bilobed neuropodial lamellae and bi- or tridentate hooks, and all the material was identical with the syntypes of *S. agilis* (Verrill). Moreover, she studied some specimens identified as *Nerine cirratulus* from Italy and The Netherlands. The Italian specimens (Naples) had some differences in the shape of the bilobed neuropodial lamella of middle chaetigers and their unidentate hooded hooks had some indication of having apical teeth, while all the Dutch specimens had similar bilobed lamella in middle chaetigers and bi- or tridentate hooks. Also, Blake (1996) supported the synonymies, commenting that the presence of a thickened basal palpal sheath on both Atlantic and Pacific specimens of *S. squamata* was identical and that this structure not had been reported for any species of *Scolelepis sensu stricto*.

However, I have revised the holotype of *Nerine*

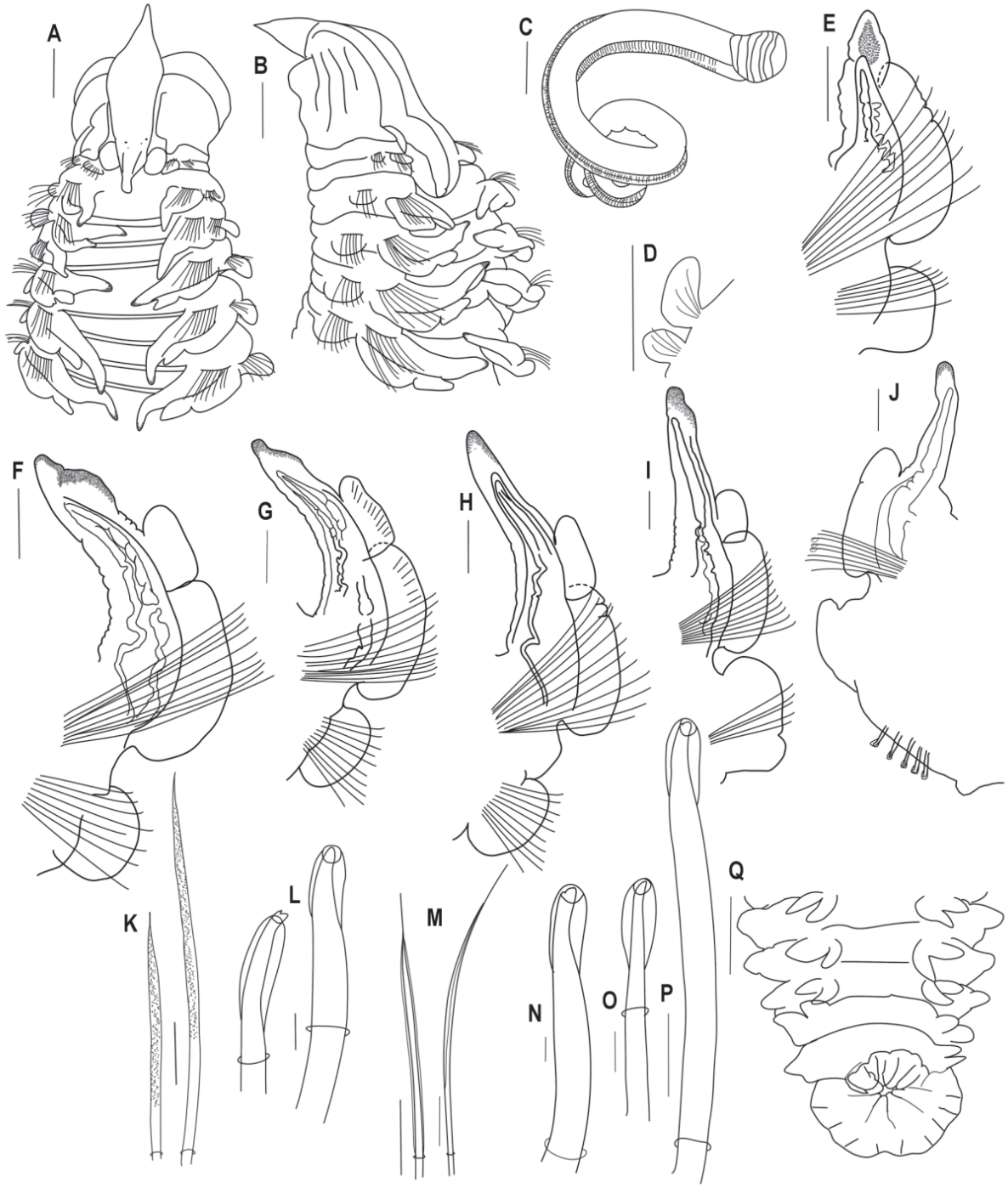


Fig. 1. *Scolelepis* (*S.*) *squamata* (Müller, 1806). (A) Anterior region, dorsal view. (B) Anterior region, lateral view. (C) Palp with short, segmented sheath. (D) Parapodium of chaetiger 1. (E) Parapodium of chaetiger 2. (F) Parapodium of chaetiger 3. (G) Parapodium of chaetiger 4. (H) Parapodium of chaetiger 5. (I) Parapodium of chaetiger 37. (J) Parapodium of chaetiger 101. (K) Capillary neurochaetae of chaetiger 2 (anterior and posterior rows). (L) Neuropodial hooded hooks from chaetiger 82. (M) Capillary notochaetae of chaetiger 98 (superior and inferior). (N) Neuropodial hooded hook from chaetiger 98. (O) Notopodial hooded hook from chaetiger 82. (P) Notopodial hooded hook from chaetiger 98. (Q) Pygidium, dorsal view. (Scales: A-D, 295 µm. E-J, 200 µm. K, L, N, 50 µm. M, 80 µm. O, 25 µm. P, 50 µm. Q, 500 µm).

minuta, the holotype and paratypes of *Nerinides goodbodyi,* the syntypes of *Nerine agilis,* the paratypes of *Spio acuta,* specimens identified as *S. squamata* from England and the Gulf of Mexico, and several important differences were found and are employed here to remove the four first species from synonymy with *S. squamata*. The differences between these species can be seen in the remarks on each species, in the key and in Table 1.

The type material of the species *Lumbricus cirratulus* Della Chiaje, 1828, *Malacoceros longirostris* De Quatrefages, 1843, *Nerine heteropoda* Webster, 1879, and *Nerine capensis* McIntosh, 1925, should be revised even though there do not appear to be any morphological differences among them.

Records. Atlantic Ocean: New England to Florida, Barbados, Central America, Brazil, Scotland to South Africa, Mozambique; Mediterranean; Pacific Ocean: Canada to southern California. This wide distribution requires detailed study to confirm whether these specimens really belong to the same species.

Scolelepis (*Scolelepis*) *acuta* (Treadwell, 1914) n. comb.
(Fig. 2A-N)

Spio acuta Treadwell, 1914: 199-201; pl. 11, figs. 14-20.

Material examined. Pacific Ocean.- San Diego, California, E.U.A. AMNH 714 (paratype).

Description. Paratype an anterior fragment with 62 chaetigers, 15 mm long, 1 mm wide excluding chaetae. Body wide anteriorly, tapering posteriorly. Color in alcohol dark brown.

Prostomium anteriorly acute, posteriorly rounded, raised, without occipital antenna, extending to chaetiger 1; eyes not visible (Fig. 2A). Peristomium short, distinct from chaetiger 1, forming well developed lateral wings (Fig. 2B). Eversible proboscis, saclike, may be extremely inflated (Fig. 2B). Palps long, extending up to chaetiger 20; ciliation consists of two longitudinal bands of transverse rows of cilia. Palp sheaths short, slightly rugose, fused to base of palps (Fig. 2A, B).

Branchiae present from chaetiger 2 to end of fragment, elongate, tapered, longest on anterior and middle part of body, almost completely fused to notopodial lamella in anterior chaetigers (Fig. 2D-F), with free, pointed tips; branchiae of posterior chaetigers fused basally to lamellae.

Parapodia of chaetiger 1 well-developed; notopodial postchaetal lamellae triangular and neuropodial postchaetal lamellae rounded, with capillary chaetae in both rami (Fig. 2C). Notopodial postchaetal lamellae entire on anterior chaetigers (Fig. 2D-F); oval with elongated pointed tip on middle chaetigers (Fig. 2G), becoming gradually smaller (Fig. 2H-J); lower corner of lamellae in posterior chaetigers ventrally rounded (Fig. 2I). Low dorsal folds present on chaetiger 1, gradually increasing in size and becoming low dorsal crests on middle and posterior segments.

Neuropodial postchaetal lamella rounded on anterior chaetigers (Fig. 2C-H), developing a slightly notch in chaetiger 22 (Fig. 2I). Notch becoming deeper, dividing lamella into separate lobes in chaetiger 24 (Fig. 2K); on following chaetigers lower lobe remaining triangular, located ventral to neurochaetae; upper lobe broadly rounded with elongated tip, placed midway between neuro- and notochaetae (Fig. 2J).

Neurochaetae arranged in two rows on anterior chaetigers. Neuropodia of anterior chaetigers with capillaries only, those of anterior row broadest, heavily granulated, limbate, shorter than those of posterior row. Neuropodial hooded hooks from chaetiger 28, up to 7 present per neuropodium, accompanied with two long chaetae above and three short, wide, heavily granulated chaetae below the hooks (Fig. 2L, M). Hooded hooks tridentate with long, curved shaft (Fig. 2N). Sabre chaetae absent.

Notopodial capillary chaetae similar in morphology to those of neuropodia although more elongate, arranged in two rows, those of posterior row longest. Notopodial hooded hooks absent.

Pygidium unknown.

Remarks. *Spio acuta* was synonymized with *S. squamata* by Pettibone (1963); Light (1977, 1978), reviewing the spionids of San Francisco Bay, supported Pettibone´s synonymy. However, *Scolelepis acuta* differs from *S. squamata* in having well developed lateral peristomial wings and a short peristomium; branchiae elongated, tapered; anterior notopodial lamellae oval, elongated; neuropodial hooded hooks

Fig. 2. Scolelepis (*S.*) *acuta* (Treadwell, 1914). (A) Anterior region, dorsal view. (B) Anterior region, lateral view. (C) Parapodium of chaetiger 1. (D) Parapodium of chaetiger 2. (E) Parapodium of chaetiger 3. (F) Parapodium of chaetiger 7. (G) Parapodium of chaetiger 19. (H) Parapodium of chaetiger 29. (I) Parapodium of chaetiger 44. (J) Parapodium of chaetiger 62. (K) Bilobed neuropodia of chaetiger 23. (L) Capillary neurochaeta of chaetiger 36. (M) Capillary neurochaeta of chaetiger 47. (N) Neuropodial hooded hook from chaetiger 47. (Scales: A-B, 500 µm. C, I, 80 µm. D-H, J, 100 µm. K, 200 µm. L-N, 0.25 µm).

only tridentate, notopodial hooded hooks absent. In contrast, *S. squamata* has low lateral peristomial wings, a long peristomium, branchiae with thick, glandular, subtriangular tips, anterior notopodial lamellae bilobed, and notopodial hooded hooks. Differences compared to other, similar species can be seen in the key and in Table 1.

Distribution. San Diego, California.

Scolelepis (*Scolelepis*) *agilis* (Verrill, 1873) n. comb. (Fig. 3A-O)

Nerine agilis Verrill, 1873: 600
Nerine heteropoda Webster, 1879: 249-250, pl. 8, figs. 103-110.
Scolelepis (*S.*) *squamata* Maciolek, 1987: 30, fig. 8 (in part, syntype material only).

Material examined. South New Jersey, AMNH 1822 (3), intertidal in sand.

Description. The three specimens studied are complete, 23-24 mm long, 1-1.1 mm wide excluding chaetae, with 77-81 chaetigers. Color in alcohol reddish brown. Body wide anteriorly, tapering posteriorly.

Prostomium long and conical, posteriorly acute, ending on chaetiger 2, raised, without occipital antenna (Fig. 3A). Two pairs of reddish brown eyes present, arranged in a trapezium, anterior eyes slightly larger than posterior ones (Fig. 3A, B) or with eyes arranged in transverse row, the outer pair larger. Peristomium long, distinct from chaetiger 1, forming low lateral wings (Fig. 3A, B). Proboscis not observed. Palps long, extending up to chaetiger 20; ciliation consists of two longitudinal bands of transverse rows of cilia. Palp sheaths short, rugose, fused to base of palps (Fig. 3A, B).

Branchiae present from chaetiger 2 to end of body (absent on last chaetiger of body), tapered are elongate, longest on anterior and middle part of body, almost fused to notopodial postchaetal lamellae (Fig. 3D, E); branchiae of posterior chaetigers fused basally to lamellae (Fig. 3I, J); tips of branchiae free. Each branchia with band of cilia along inner edge (Fig. 3I, J).

Parapodia of chaetiger 1 with noto- and neuropodial postchaetal lamellae overlapping (Fig. 3C); notopodial postchaetal lamellae long and rounded, neuropodial lamellae small and rounded, with capillary chaetae in single rows in both rami (Fig. 3C). Notopodial postchaetal lamellae oval, elongated on chaetiger 2 (Fig. 3D), developing a notch on chaetiger 3, dividing the lamellae into two lobes, lower lobe broad rounded (Fig. 3E), diminishing in size on following chaetigers (Fig. 3F, G); dorsal lobe rounded elongate on chaetigers 2-4 (Fig. 3D-F); becoming triangular and slightly ruffled on following chaetigers (Fig. 3G). Middle notopodial lamellae broad rounded with upper portion triangular (Fig. 3H); lower corners of lamellae in posterior chaetigers ventrally triangular (Fig. 3J). Low ciliated dorsal folds present on chaetiger 2, gradually increasing in size and becoming low crests by chaetiger 22, present to end of body.

Neuropodial postchaetal lamella rounded on anterior chaetigers (Fig. 3C-F), developing small notch by chaetigers 19-23, after chaetiger 21-22 becoming deeper, dividing lamella into separate lobes (Fig. 3H); on following chaetigers ventral lobe remaining rounded, located ventral to neurochaetae; dorsal lobe broadly rounded with elongated tip (Fig. 3I), on posterior chaetigers dorsal lobe triangular and placed midway between neuro- and notochaetae (Fig. 3J).

Neurochaetae arranged in two rows on anterior chaetigers. Neuropodia of anterior chaetigers with capillaries only, those of anterior row broadest, heavily granulated, weakly bilimbate, shorter than those of posterior row (Fig. 3K). Neuropodial hooded hooks from chaetiger 27-30, up to 10 present per neuropodium, accompanied by up to three slender chaetae above and two short chaetae below the hooks. Hooded hooks with two smaller accessory teeth surmounting large main tooth (Fig. 3L); posterior hooks with bidentate appearance (Fig. 3L); with long, curved shaft. Sabre chaetae absent.

Notopodial capillary chaetae similar in morphology to those of neuropodia although more elongate, arranged in two rows, those of posterior row longest. Notopodial hooded hooks from chaetiger 62-72, up to four present per notopodium, accompanied by four long chaetae above and two short chaetae below the hooks. Hooded hooks tridentate, with long, straight shaft (Fig. 3N).

Pygidium with ventral cushion (Fig. 3O).

Remarks. Hartman (1951) reported *Nerine agilis* from the Gulf of Mexico mentioning the presence of

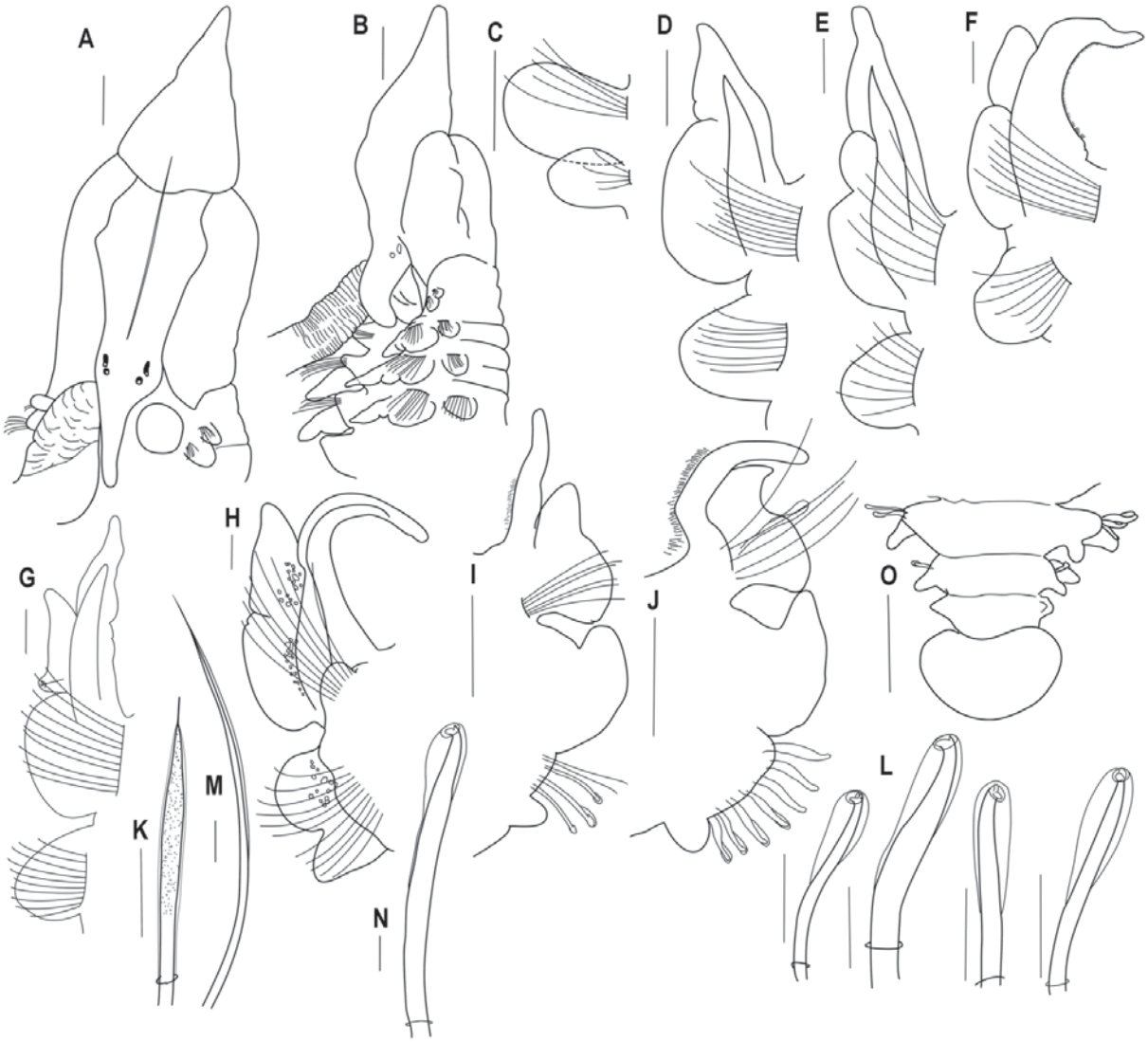


Fig. 3. Scolelepis (*S.*) *agilis* (Verrill, 1873). (A) Anterior region, dorsal view. (B) Anterior region, lateral view. (C) Parapodium of chaetiger 1. (D) Parapodium of chaetiger 2. (E) Parapodium of chaetiger 3. (F) Parapodium of chaetiger 4. (G) Parapodium of chaetiger 6. (H) Parapodium of chaetiger 22. (I) Parapodium of chaetiger 28. (J) Parapodium of chaetiger 64. (K) Capillary neurochaeta of chaetiger 4. (L) Neuropodial hooded hooks from middle and posterior chaetigers. (M) Capillary notochaeta of chaetiger 69. (N) Notopodial hooded hook from chaetiger 69. (O) Pygidium, ventral view. (Scales: A, 160 µm. B, H-I, M-O, 200µm. C-G, 80 µm. J-L, 50 µm).

notopodial and neuropodial hooks; later, Hartman (1956) transfered this same species to *Nerinides* because it lacks hooded hooks in the notopodia. *Nerine agilis* was synonymized with *S. squamata* by Pettibone (1963), *S. squamata* being characterized by the presence or absence of notopodial hooks (Foster, 1971; Light, 1978; Blake, 1996). However, the specimens of *S.* (*S.*) *agilis* from New Jersey have notopodial hooks, as mentioned by Maciolek (1987). *Scolelepis* (*S.*) *agilis* resembles *S. squamata* in having low lateral wings, a long peristomium, bilobed anterior notopodial lamellae, and notopodial hooded hooks. However, *Scolelepis* (*S.*) *agilis* differs from *S.* (*S.*) *squamata* in that the former has elongated, tapered branchiae, oval posterior notopodial lamellae with an elongated pointed tip and the lower corners

of ventral lamellae in posterior chaetigers triangular, dorsal folds and crests, and only tridentate hooded hooks. While *S.* (*S.*) *squamata* has branchiae with thick, glandular, subtriangular tips, and the posterior notopodial lamellae are entire with rounded lower corners, dorsal ridges are present, and hooded hooks are uni, bi-, or tridentate.

Nerine heteropoda Webster, 1879 was synonymized with *Nerine agilis* by Hartman (1945), and with *S. squamata* by Pettibone (1963). However, *N. heteropoda* should be revised, even though *Nerine heteropoda* and *S. agilis* do not seem to show any morphological differences.

Distribution. New Jersey, North Carolina to Florida.

Scolelepis (*Scolelepis*) *goodbodyi* (Jones, 1962) n. comb.
(Fig. 4A-P)

Nerinides goodbodyi Jones, 1962: 187-191, figs. 66-68.

Material examined. Green Bay, Port Henderson, Jamaica, August 11, 1960, AMNH 3609 (holotype); AMNH 3610 (10 paratypes).

Description. Holotype an anterior fragment with 48 chaetigers, 13 mm long, 0.8 mm wide excluding chaetae. Complete paratype observed; 12 mm long, with 55 chaetigers. Body wide anteriorly, becoming distinctly narrower, almost cylindrical in cross section from around chaetiger 21. Color in alcohol pale yellow.

Prostomium acute toward distal end, posteriorly triangular, slightly raised, without occipital antenna, extending to chaetiger 1 (Fig. 4A). Two pairs of small reddish brown eyes present, the outer pair larger, arranged in transverse row (Fig. 4A). Peristomium long, distinct from chaetiger 1, forming low lateral wings (Fig. 4B). Proboscis not observed. Palps long, extending up to chaetiger 20; ciliation consists of two longitudinal bands of transverse rows of cilia. Palp sheaths short, slightly rugose, fused to base of palps (Fig. 4C).

Branchiae present from chaetiger 2 to end of body (absent on last chaetiger of body); branchiae long, gently tapered, longest on anterior and middle part of body (Fig. 4D); almost fused to notopodial postchaetal lamellae in anterior chaetigers (Fig. 4E-H); branchiae of posterior chaetigers fused basally to lamellae (Fig. 4K); free tips of branchiae tapered; each branchia with band of cilia along inner edge. Mid-region of branchiae with highly glandular cell margin in chaetigers 14-38 (Fig. 4I-K).

Parapodia of chaetiger 1 well developed; notopodial postchaetal lamellae triangular and neuropodial postchaetal lamellae rounded, with capillary chaetae in both rami (Fig. 4B). Notopodial postchaetal lamellae oval with elongated triangular tip (Fig. 4E-J); lower corners of lamellae in posterior chaetigers ventrally pointed (Fig. 4K). Low dorsal folds present on chaetiger 3, gradually increasing in size and becoming low dorsal crests in middle and posterior segments (Fig. 4L).

Neuropodial postchaetal lamella rounded on anterior chaetigers (Fig. 4E-H), developing slight notch by chaetiger 18. Notch becoming deeper, dividing lamella into separate lobes by chaetiger 19 (Fig. 4J); on following chaetigers lower lobe remaining triangular, located ventral to neurochaetae; upper lobe broadly triangular with elongated tip, placed midway between neuro- and notochaetae (Fig. 4K).

Neurochaetae arranged in two rows on anterior chaetigers. Neuropodia of anterior chaetigers with capillaries only, those of anterior row moderately granulated, nearly straight, bilimbate and short (Fig. 4M); chaetae of posterior row similar to anterior row, but without granulation and longer (Fig. 4M). Neuropodial hooded hooks from chaetiger 25, numbering seven-nine per neuropodium, accompanied by two-three long chaetae above and two short chaetae below the hooks. Hooded hooks with one or two small apical teeth surmounting large main tooth (Fig. 4N); with long, curved shaft, (Fig. 4N). Sabre chaetae absent.

Notochaetae of chaetiger 1 arranged in two rows, those of anterior row abruptly curved and very broad (Fig. 4O), in posterior row nearly straight and thin (Fig. 4O). The other notopodial capillary chaetae similar in morphology to those of neuropodia, although more elongate, arranged in two rows, those of posterior row longest (Fig. 4P). Notopodial hooded hooks absent.

Pygidium with ventral cushion.

Variability. Paratypes 6.5-13 mm long, 0.7-1 mm wide, with 38-55 chaetigers. Several ovigerous. Body wide anteriorly, becoming distinctly narrower,

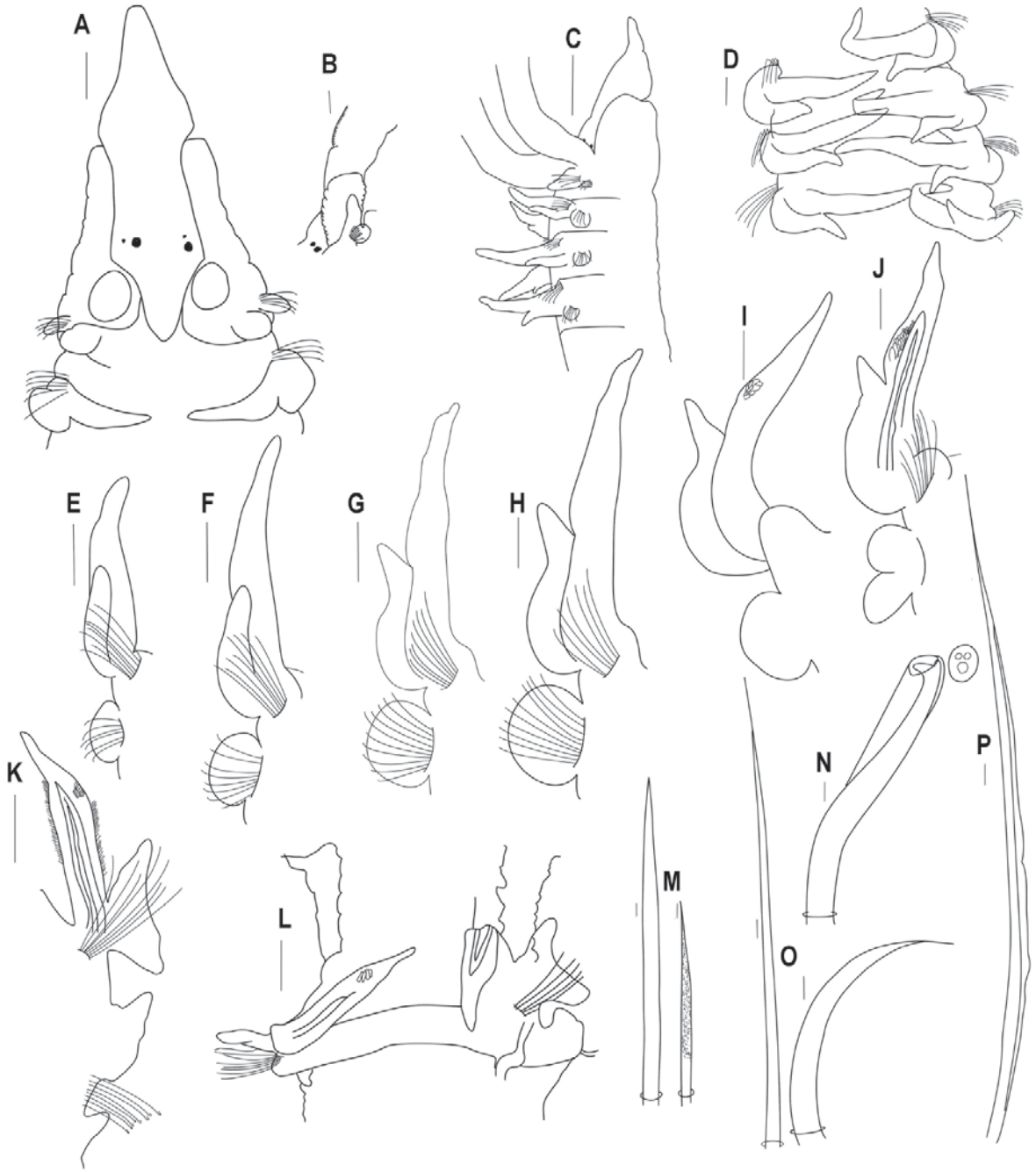


Fig. 4. Scolelepis (*S.*) *goodbodyi* (Jones, 1962). (A) Anterior region, dorsal view. (B) Short, rugose palp sheaths. (C) Anterior region, lateral view. (D) Notopodia and branchiae of anterior segments. (E) Parapodium of chaetiger 2. (F) Parapodium of chaetiger 3. (G) Parapodium of chaetiger 4. (H) Parapodium of chaetiger 5. (I) Parapodium of chaetiger 16. (J) Parapodium of chaetiger 19. (K) Parapodium of chaetiger 35. (L) Dorsal crest of chaetiger 43. (M) Capillary neurochaetae of chaetiger 5 (anterior and posterior rows). (N) Neuropodial hooded hook from chaetiger 47. (O) Capillary notochaetae of chaetiger 1 (anterior and posterior rows). (P) Capillary notochaeta of posterior chaetiger. (Scales: A-C, 80 µm. D-L, 80 µm. M-P, 0.25 µm).

almost cylindrical in cross section from around chaetiger 20-24. Palps extending up to chaetigers 14-22. Mid-region of branchiae with highly glandular cell margin from chaetigers 13-19 (in some paratypes from chaetiger 10-13). All paratypes with low dorsal folds starting from chaetiger 3, thereafter becoming low dorsal crests in middle and posterior segments up to the end of the body. All specimens with neuropodial lamellae anteriorly rounded, with notch from chaetiger 18, in only one specimen from chaetiger 19; lamellae becoming distinctly bilobed by chaetiger 19, in only one specimen by chaetiger 20. Neuropodial hooded hooks from chaetigers 24-26, numbering one-nine per fascicle. Hooded hooks with one or two apical teeth.

Remarks. *Scolelepis goodbodyi* n. comb. was synonymized with *Scolelepis squamata* by Pettibone (1963); however, *S. goodbodyi* differs from *S.* (*S.*) *squamata* in that the former has oval anterior notopodial lamellae with an elongated pointed tip, oval posterior notopodial lamellae with a lower corner pointed, notopodial hooded hooks absent. *Scolelepis goodbodyi* further differs from all species in having the mid-region of branchiae with highly glandular cell margin, and notochaetae of chaetiger 1 of two types: 1) abruptly curved and very broad, and 2) nearly straight and thin. The main differences between *Scolelepis goodbodyi* n. comb. and other species from the Grand Caribbean Region can be seen in the key and Table 1.

Distribution. Green Bay, Port Henderson, Jamaica.

Scolelepis* (*Scolelepis*) *lighti sp. nov.
(Figs. 5 A-K, 6 A-F)

Type material. GULF OF MEXICO. Tamaulipas: La Pesca, 23°87'N 97°51'W, collected by S.I. Salazar Vallejo, 5 April 1978, USNM-000 (holotype); La Pesca, 23°87'N 97°51'W, collected by S.I. Salazar Vallejo, 5 April 1978, ECOSUR-0059 (3).- Tabasco: off Paraiso, st. 20, 18°32.1'N 93°43.2'W, 38 m, sand, collected by F.E. Donath Hernández, ECOSUR-0060 (21). Quintana Roo: Isla Contoy, sta. The Pescador, 21°30'8.4"N 86°47'45.3"W, 2 m, sand, 20 March 1999, collected by V.H. Delgado Blas, UMML-000 (9); Mahahual, st. F14, 18°40'9.6"N 87°43'1.4W, collected by S.I. Salazar Vallejo, 15 May 1999, LACMNH-AHF-000 (1); P. Allen, 19°46'46"N 87°28'33"W, sand, *Thalassia testudinum*, 3 m, collected by F.E. Donath Hernandez, 27 February 1986, USNM-000 (2); 19°38'N 87°30'W, Ascension Bay, mangrove roots, collected by M.S. Jimenez Cueto, 28 May 1988, ECOSUR-0061 (1).

Description. Holotype complete, 18.5 mm long, 1 mm wide excluding chaetae, with 98 chaetigers. Body wide anteriorly, tapering posteriorly. Color in alcohol pale yellow.

Prostomium conical, tapering anteriorly, posteriorly triangular, without occipital antenna, extending to chaetiger 1. Two pairs of small brown eyes present, arranged in a transverse row (Fig. 5A). Peristomium long, distinct from chaetiger 1, slightly inflated, forming well developed lateral wings. Proboscis not observed. Palps long, extending up to chaetiger 20; ciliation consists of two longitudinal bands of transverse rows of cilia. Palp sheaths long, slightly rugose, fused to base of palps (Fig. 6B).

Branchiae present from chaetiger 2 to end of body (absent on last chaetiger of body); branchiae tapered, elongate, longest on anterior and middle part of body; partially fused to notopodial postchaetal lamellae (Fig. 5B); branchiae of posterior chaetigers fused basally to lamellae; each branchia with band of cilia along inner and outer edge.

Parapodia of chaetiger 1 well developed; notopodial postchaetal lamellae triangular and neuropodial postchaetal lamellae subtriangular, with capillary chaetae in both rami (Fig. 5B). Anterior and middle notopodial postchaetal lamellae entire with slightly ruffled edge (Fig. 5B, C); posterior lamellae oval with elongated pointed tip (Fig. 5D-G). Low dorsal folds present on chaetigers 3-21, becoming low ciliated crests, continuing to end of body (Figs. 5A, 6D).

Neuropodial postchaetal lamellae on chaetiger 1 obovate; lamellae on chaetigers 2-3 oval (Fig. 5B); on following chaetigers rounded (Fig. 5C, D), with a slight notch in chaetiger 23. Notch becoming deeper, dividing lamellae into two lobes by chaetigers 24-26 (Fig. 5E); on following chaetigers lower lobe remaining triangular, located ventral to neurochaeta; upper lobe broadly rounded with elongated tip, placed midway between neuro- and notochaetae (Fig. 5F-G).

Neurochaetae arranged in two rows on anterior chaetigers. Neuropodia of anterior chaetigers with capillaries only, those of anterior row broadest, limbate, heavily granulated, shorter than those of posterior row. Neuropodial hooded hooks from chaetiger 27, numbering one-seven per fascicle, accompanied by one or two slender, striated capillaries above and three or four stout, striated capillaries

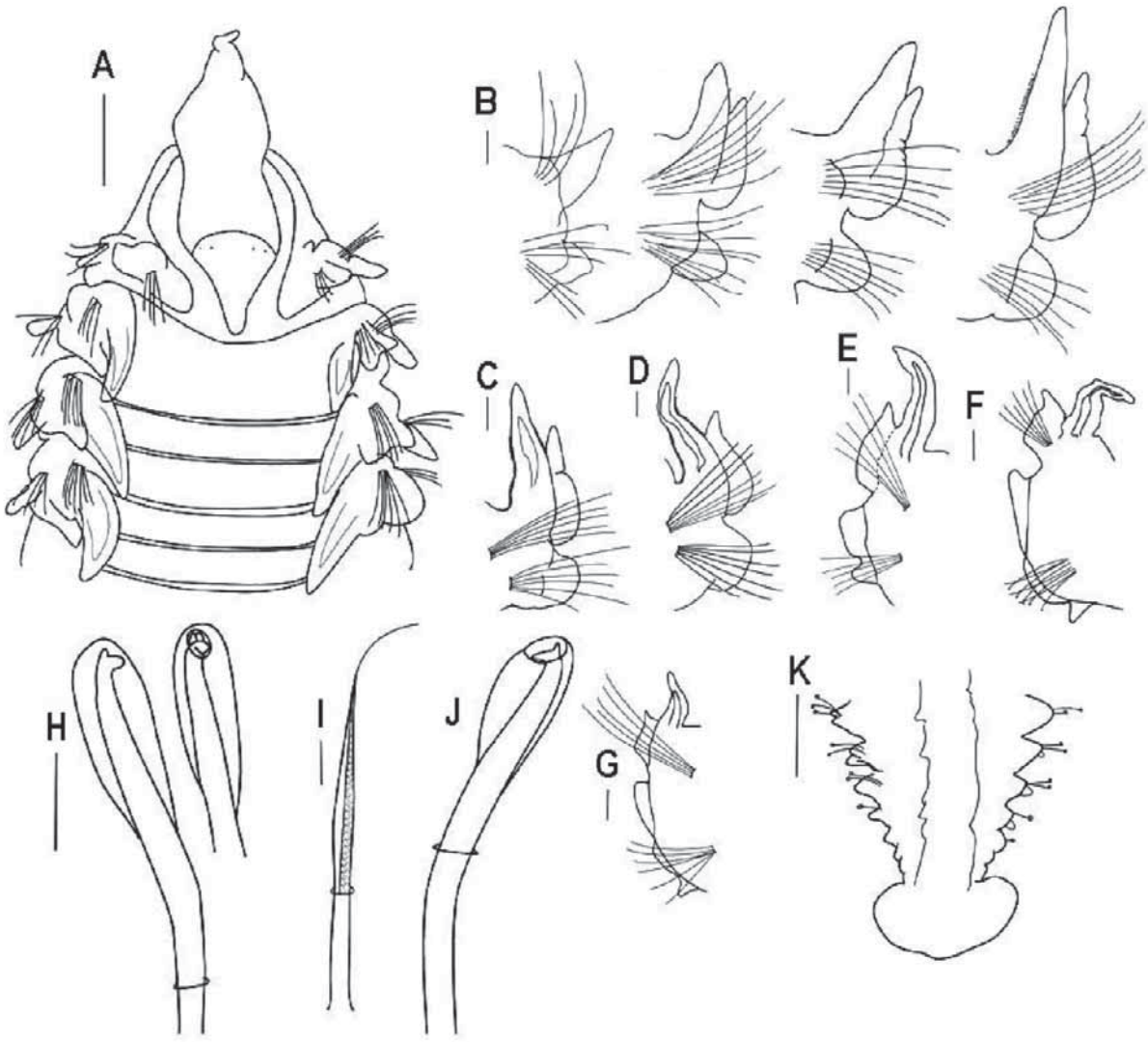
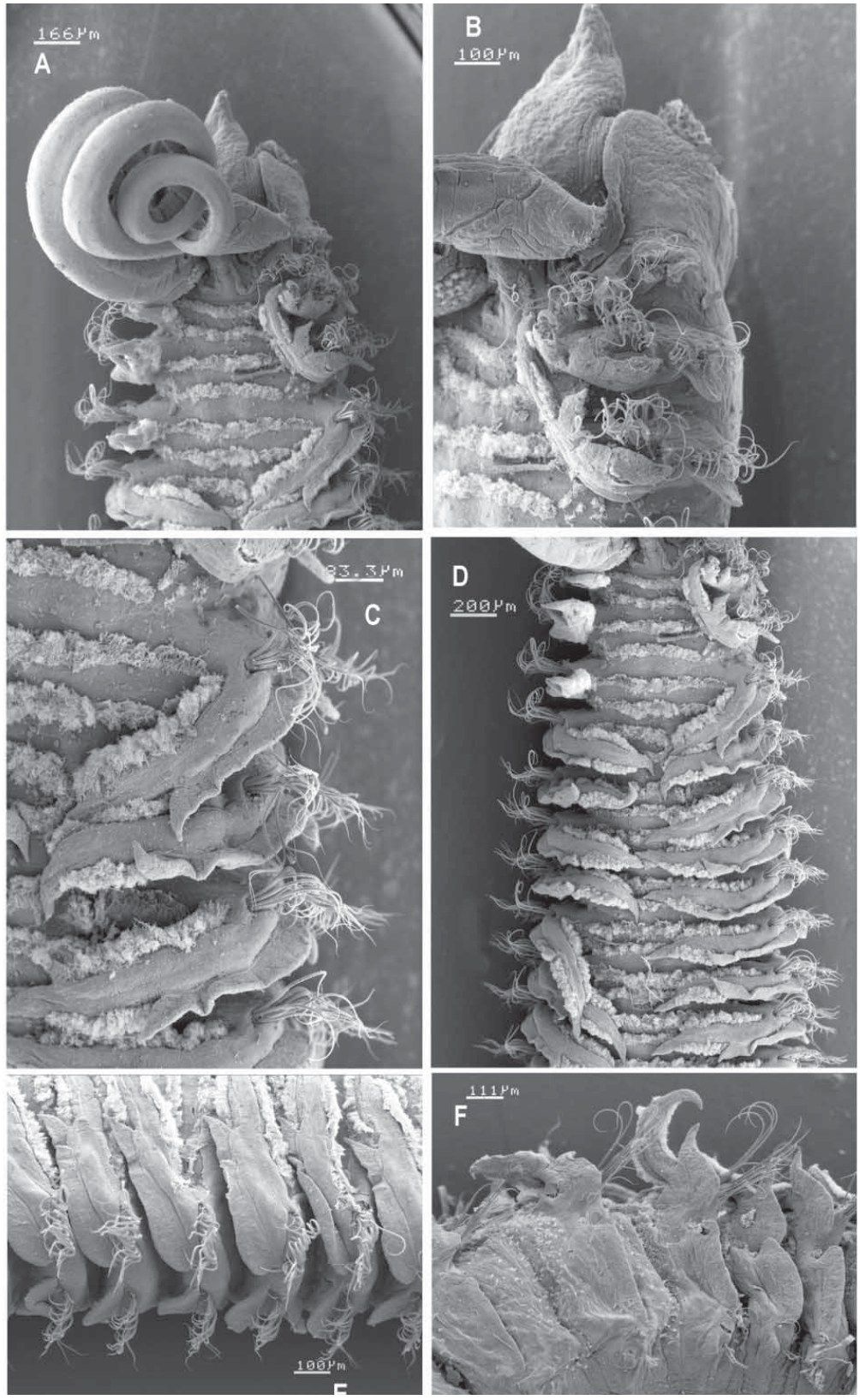


Fig. 5. Scolelepis (S.) lighti sp. nov. (USNM-000). (A) Anterior region, dorsal view. (B) Parapodia of chaetigers 1-4. (C) Parapodium of chaetiger 5. (D) Parapodium of chaetiger 19. (E) Parapodium of chaetiger 26. (F) Parapodium of chaetiger 51. (G) Parapodium of chaetiger 83. (H) Neuropodial hooded hook from chaetiger 51. (I) Capillary chaeta of chaetiger 77. (J) Neuropodial hooded hook from chaetiger 77. (K) Pygidium, ventral view. (Scales: A, K, 200 µm. B-G, 100 µm. H, 0.5 µm. I, J, 0.25µm).

Fig. 6. Scolelepis (*S.*) *lighti* n. sp. SEM micrograph. A, anterior end, dorsal view. B, basal section of palp showing basal sheath. C, anterior end, dorsal view, showing branchiae with band of cilia along both edges. D, dorsal, view, showing transverse bands of cilia. E, anterior region, side view. F, middle segments, lateral view, showing gradual subdivision of neuropodial postchaetal lamellae. ECOSUR-000. (Scale: A, 166 µm. B, E, 100 µm. C, 83.3 µm. D, 200, F, 111 µm). ▶

below the hooks; posterior hooks accompanied by two small, broad, limbate, finely punctuated chaetae (Fig. 5I). Hooded hooks with 2 small apical teeth surmounting large main tooth; with long, curved shaft (Fig. 5J, H).

Notopodial capillary chaetae similar in morphology to those of neuropodia although more elongate, arranged in two rows, those of posterior row longest. Notopodial hooded hooks present from chaetiger 83, numbering 1 per fascicle. Hooks with pointed main


166µm
A
B
100µm
83.3µm
C
D
200µm
100µm
E
111µm
F

fang surmounted by two small apical teeth (Fig. 5J, H). Sabre chaetae absent.

Pygidium with ventral cushion (Fig. 5K).

Variability. Paratypes 5.4-26 mm long, 0.5-2.3 mm wide, with 48-101 chaetigers. Palps long (Fig. 6A), extending posteriorly to chaetigers 16-18; ciliation consists of two longitudinal bands of transverse rows of cilia. Palps with basal sheath (Fig. 6B) (palps lost in holotype and many specimens). Eyes arranged in a transverse row or in trapezoid; lateral eyes kidney-shaped and inner ones rounded; there are big reddish spots above the eyes. Some specimens with inflated caruncle, and narrow curved semicircular nuchal organs surrounding posterior margin of prostomium (Fig. 6A). Each branchia with a ciliated band along the edges (Fig. 6C, D); each segment also with a dorsal, transverse band of cilia, continuous with branchial ciliation on chaetigers 3 to 28; thereafter ciliary bands on low dorsal crests to end the body (Fig. 6D). All specimens with neuropodial lamellae rounded on anterior chaetigers (Fig. 6E), developing notch around chaetiger 21-25 (usually one or two lamellae with notch). Notch becoming deeper, dividing lamellae into separate lobes around chaetigers 22-29 (usually two-four bilobed lamellae), on posterior chaetigers dorsal neuropodial lamellae square with triangular dorsal projection (Fig. 6F). Neuropodial hooded hooks present from chaetigers 13-29 (usually chaetiger 26), numbering one-nine per fascicle**.** Notopodial hooded hooks from chaetiger 40-83, two per fascicle. All specimens have hooks with large main fang surmounted by two small apical teeth.

Remarks. *Scolelepis* (*S.*) *lighti* n. sp. is most similar to *S. squamata*. It differs in the form of the anterior and middle notopodial lamellae, the shape of branchiae, and having only tridentate hooded hooks. Differences compared to other, similar species can be seen in the key and in Table 1.

Distribution.- Gulf of Mexico: Tamaulipas, Tabasco, Quintana Roo.

Etymology. This species is dedicated to Dr. William J. Light, in recognition of his research and publications on spionids.

Scolelepis (*Scolelepis*) *minuta* (Treadwell, 1939) n. comb.
(Fig. 7A-P)

Nerine minuta Treadwell, 1939: 5, figs. 18-20.

Material examined. Gulf of Mexico. Port Aransas, Texas, AMNH 2566 (holotype).

Description. Holotype complete, in two fragments, 17 mm long, 0.5 mm wide, with 54 chaetigers. Color in alcohol brown. Body almost cylindrical anteriorly, becoming slightly wider around chaetiger 14.

Prostomium conical, tapering anteriorly, posteriorly truncated, raised, without occipital antenna, extending to chaetiger 1 (Fig. 7A). Two pairs of small reddish brown eyes present, the outer pair larger, arranged in transverse row (Fig. 7A). Peristomium short, distinct from chaetiger 1, forming low lateral wings (Fig. 7B). Eversible proboscis**,** sac-like (Fig. 7B). Palps slender and long, extending up to chaetiger 23; ciliation consists of two longitudinal bands of transverse rows of cilia. Palp sheaths with smooth edge, without adornment, fused to base of palps (Fig. 7A, B).

Branchiae present from chaetiger 2 to end of body (absent on last chaetiger of body); branchiae elongate oval, longest on anterior and middle part of body; anterior and middle branchiae narrow abruptly at the apices (Fig. 7D-G); branchiae partially fused to notopodial postchaetal lamellae (Fig. 7D-G); branchiae of posterior chaetigers fused basally to lamellae (Fig. 7I-K); each branchia with band of cilia along inner edge.

Parapodia of chaetiger 1 small but well-developed; notopodial postchaetal lamellae oval and neuropodial postchaetal lamellae rounded, with capillary chaetae in both rami (Fig. 7C). Notopodial postchaetal lamellae oval with elongated pointed tip on anterior and middle chaetigers (Fig. 7D-J), developing notch on chaetiger 34, dividing lamellae into two lobes; lower lobe rounded and dorsal lobe elongate (Fig. 7K). Low dorsal folds on chaetigers 15-25, becoming low crests near end of body (Fig. 7L).

Neuropodial postchaetal lamellae rounded on anterior chaetigers (Fig. 7C-H), developing slight notch by chaetiger 15-18. Notch becoming deeper, dividing lamella into separate lobes by chaetiger 19

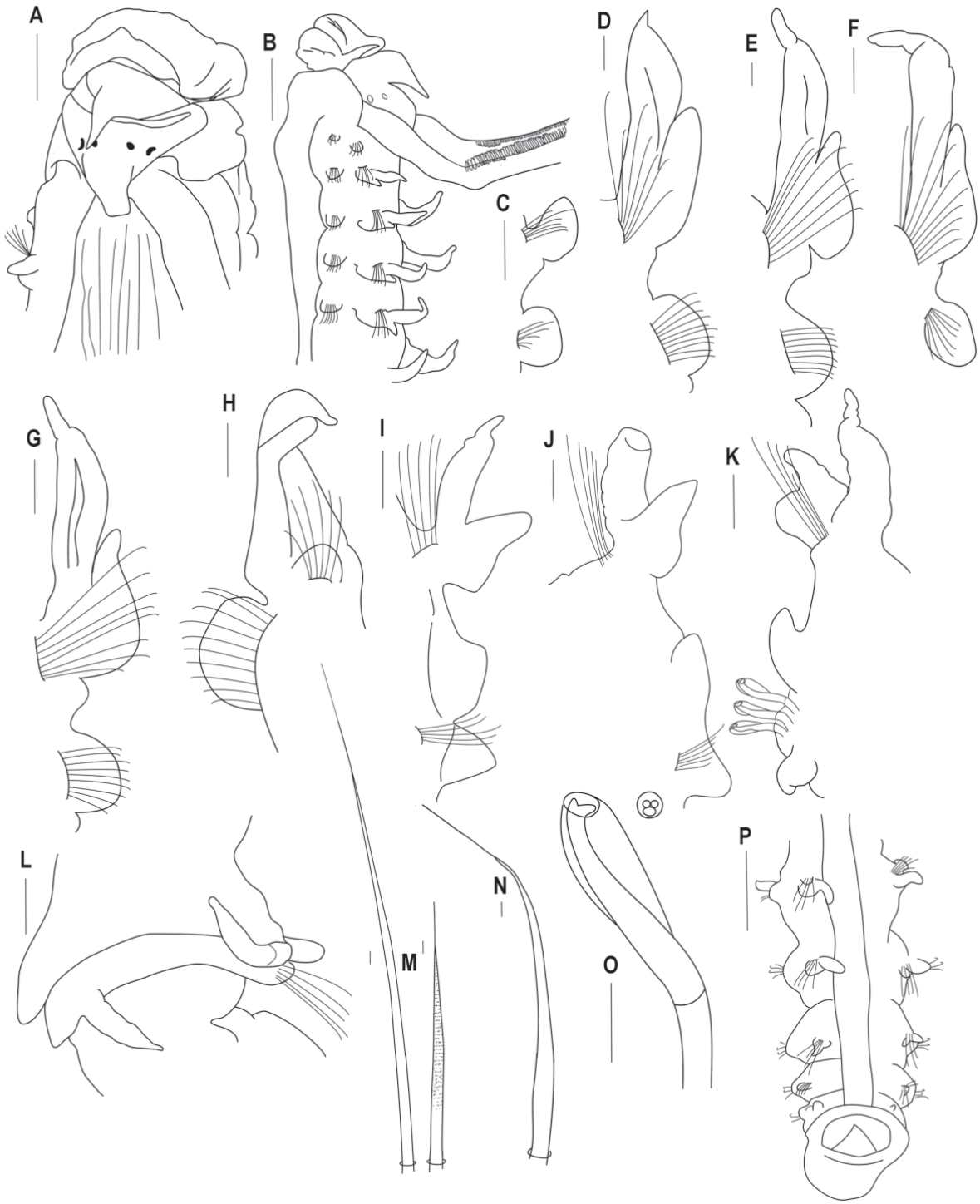


Fig. 7. *Scolelepis* (*S.*) *minuta* (Treadwell, 1939). (A) Anterior region, dorsal view. (B) Anterior region, lateral view. (C) Parapodium of chaetiger 1. (D) Parapodium of chaetiger 2. (E) Parapodium of chaetiger 3. (F) Parapodium of chaetiger 4. (G) Parapodium of chaetiger 5. (H) Parapodium of chaetiger 13. (I) Parapodium of chaetiger 28. (J) Parapodium of chaetiger 32. (K) Parapodium of chaetiger 48. (L) Dorsal crest of chaetiger 47. (M) Capillary notochaetae of chaetiger 4 (anterior and posterior rows). (N) Capillary notochaeta of posterior chaetiger. (O) Neuropodial hooded hook from middle chaetiger. (P) Pygidium, dorsal view. (Scales: A, 160 μm. B, P, 200 μm. C, F-H, J, K, 50 μm. D, E, 25 μm. I, L, 80 μm. M, N, 0.25 μm. O, 0.5 μm).

Table 1. Taxonomic characters of some species of *Scolelepis* (*Scolelepis*)

Species	Posterior margin of prostomium	Peristomium	Palp sheaths	Branchiae	Parapodia of chaetiger 1 a. Notopodial lamellae b. Neuropodial lamellae
S. squamata	Triangular, extending to chaetiger 2	Long with low lateral wings	Rugose	With thick, glandular, subtriangular tip	a. Oval b. Rounded
S. acuta	Rounded, extending to chaetiger 1	Short with well developed lateral wings	Rugose	Elongated, tapering	a. Triangular b. Rounded
S. agilis	Pointed, extending to chaetiger 2	Long with low lateral wings	Rugose	Elongated, tapering	a. Rounded b. Rounded
S. goodbodyi	Triangular, extending to chaetiger 1	Long with low lateral wings	Rugose	Mid-region of branchiae with glandular cells on the distal margin	a. Triangular b. Rounded
S. lighti sp. nov.	Triangular, extending to chaetiger 2	Long with well developed lateral wings	Rugose	Elongated, tapering	a. Triangular b. Subtriangular
S. minuta	Truncated, extending to chaetiger 1	Short with low lateral wings	Smooth	Elongate oval, narrow abruptly at the apex	a. Oval b. Rounded
S. vossae sp. nov.	Pointed, extending to chaetiger 2	Completely fused, lacking lateral wings	Smooth	Elongated, tapering	a. Long oval b. Rounded

(Fig. 7I); on following chaetigers lower lobe remaining triangular, located ventral to neurochaetae; upper lobe broadly rounded with elongated tip, placed midway between neuro- and notochaetae (Fig. 7K).

Neurochaetae arranged in two rows on anterior chaetigers. Neuropodia of anterior chaetigers with capillaries only, those of anterior row broadest, moderately granulated, limbate, shorter than those of posterior row. Neuropodial hooded hooks from chaetiger 35**,** up to seven per neuropodium, accompanied with two long chaetae above and two short chaetae below the hooks. Hooded hooks tridentate (Fig. 7O). Sabre chaetae absent.

Anterior notochaetae all capillaries, arranged in two rows. Notochaetae of chaetiger 1 thin and shorter than on other chaetigers; in chaetigers 2-10, those of anterior row slightly broader, heavily granulated, weakly limbated, shorter (Fig. 7M); posterior row without granulation and up to four capillaries extremely long in superior position of fascicle (Fig. 7N).

Pygidium with ventral cushion (Fig. 7P).

Remarks. *Scolelepis minuta* was synonymized with *Nerine agilis* by Hartman (1951, 1956), and with *S. squamata* by Pettibone (1963). It differs from both these species in the following characters: a short peristomium, oval anterior notopodial lamellae with an elongated pointed tip, and notopodial hooks absent. One character than can be used to separate them is the shape of branchiae: in *S. minuta* the branchiae narrow abruptly at the apices, whereas in *S. squamata* they have thick, glandular, subtriangular tips, and in *S. agilis* they are elongated, tapered. Differences compared to other, similar species can be seen in the key and Table 1.

Distribution. Port Aransas, Texas, Gulf of Mexico.

Anterior notopodial lamellae	Posterior notopodial lamellae	Neuropodial notch starting on chaetiger	Presence of hooks a. start on neuropodia b. start on notopodia	No. of teeth above main fang	Further remarks
Bilobed: dorsal lobe elongate with rounded tip; slightly ruffled	Entire with slight dentation	33-42	Neuro- and notopodial a. 43 b. 85-92	Uni, bi-, tridentate	Only with dorsal ridges; neuropodial hooks with long, slightly curved shaft, notopodial hooks with long, almost straight shaft
Entire	Oval with inferior portion elongated, rounded	24	Neuropodial a. 28	Tridentate	
Bilobed: dorsal lobe elongate with rounded tip; slightly ruffled	Oval with inferior portion elongated, rounded	19-23	Neuro- and notopodial a. 27-30 b. 62-72	Bi-, tridentate	Noto and neuropodial. lamellae of chaetiger 1 overlapping
Oval with elongated pointed tip	flaglike with inferior portion triangular	18-19	Neuropodial a. 24-26	Bi-, tridentate	Notochaetae of chaetiger 1: anterior row abruptly curved and very broad; in posterior row nearly straight and thin
Entire with ruffled margin	Oval with inferior portion rounded	22-29	Neuro- and notopodial a. 13-29 b. 40-83	Tridentate	
Oval with elongated pointed tip	Oval with deep notch	15-19	Neuropodial a. 35	Tridentate	Low dorsal folds on chaetigers 15-25, becoming low crests to end of the body
Bilobed: dorsal lobe elongate with triangular tip	Oval with deep notch	21-23	Neuro- and notopodial a. 24-25 b. 58-59	Uni, bi-, tridentate	Peristomium completely fused with prostomium

Scolelepis (Scolelepis) vossae sp. nov.
(Figs. 8A-K, 9A-G)

Type Material. Atlantic coast: Florida, 25°32'N 80°25'W, collected by Julio García, July 1970, USNM-000 (holotype); UMML-22.721 (1), ECOSUR-0062 (1); Marco Beach, Florida, collected by Nancy Voss, 22 November 1958, reference collection 22: 94, USNM-000 (1).

Description. Holotype complete, 20 mm long, 0.8 mm wide, 66 chaetigers. Color in alcohol pale yellow. Body wide anteriorly, tapering posteriorly.

Prostomium oval, tapering abruptly anteriorly, posteriorly pointed, ending on chaetiger 1, slightly wider in the region of the eyes, without occipital antenna. Two pairs of small brown eyes present, the outer pair larger, arranged in a transverse row; (Fig. 8A). Peristomium completely fused with chaetiger 1, slightly inflated, lacking lateral wings (Fig. 8A). Proboscis not observed. Palps long, extending up to chaetiger 21; ciliation consists of two longitudinal bands of transverse rows of cilia. Palp sheaths absent or completely fused to base of palps (Figs. 8A, 9A, B).

Branchiae present from chaetiger 2 to end of body (absent on last chaetiger of body), branchiae tapered elongate, longest on anterior and middle part of body (Fig. 9B); partially fused to notopodial postchaetal lamellae (Fig. 8B-D); branchiae of posterior chaetigers fused basally to lamellae (Fig. 8E-G); free tips of branchiae and lamellae tapered, elongate. Each branchia with band of cilia along inner edge (Fig. 9D).

Parapodia of chaetiger 1 well developed, notopodial lamellae long, oval; neuropodial lamellae rounded, small, with capillary chaetae in single rows in both rami (Fig. 8A). Notopodial postchaetal lamellae oval, elongated on chaetiger 2, developing a notch on chaetiger 3, dividing the lamellae into two lobes, ventral lobe broadly rounded (Fig. 8B, C), increasing in size on following chaetigers (Fig. 8D);

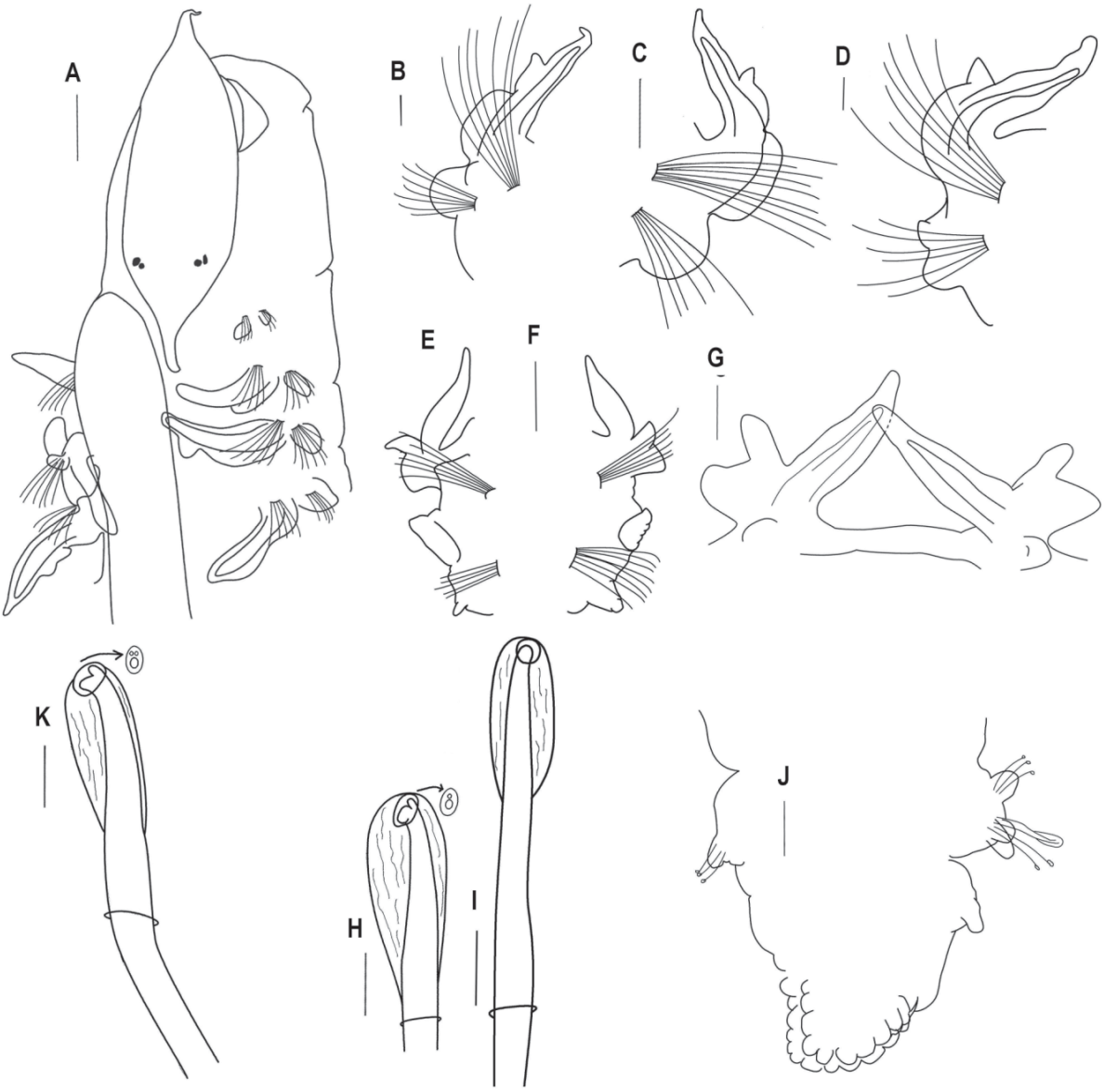
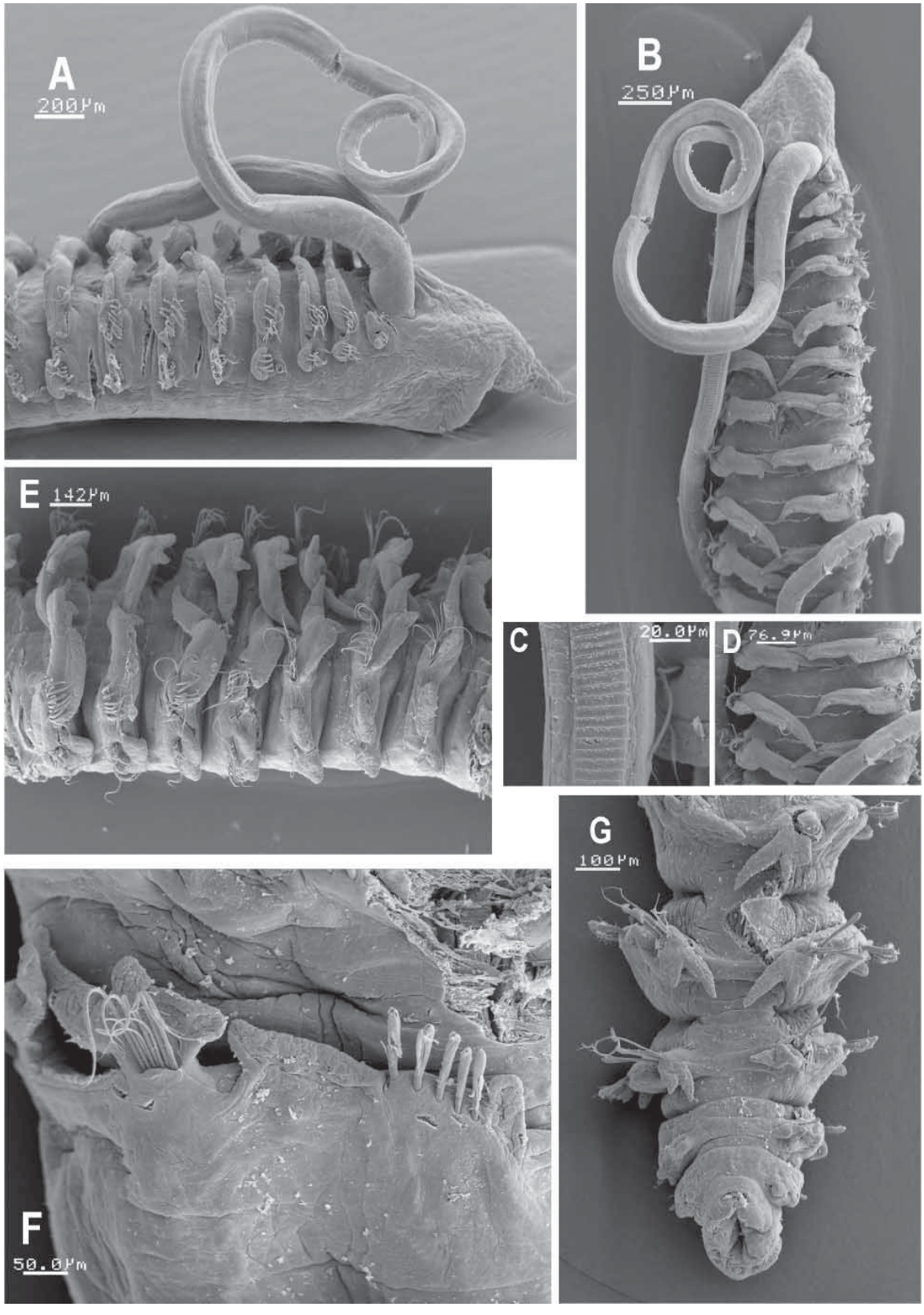


Fig. 8. *Scolelepis (S.) vossae* sp. nov. (USNM-000). (A) Anterior region, dorsal view. (B) Parapodium of chaetiger 6. (C) Parapodium of chaetiger 16. (D) Parapodium of chaetiger 22. (E) Parapodium of chaetiger 38. (F) Parapodium of chaetiger 52. (G) Dorsal crest. (H) Neuropodial hooded hook from chaetiger 38. (I) Neuropodial hooded hook from chaetiger 52. (J) Pygidium, dorsal view. (K) Notopodial hooded hook. (Scales: A, 200 µm. B, D, 100 µm. C, E, F, 200 µm. G, J, 80 µm. H, I, K, 200 µm).

Fig. 9. *Scolelepis* (*S.*) *vossae* sp. nov. SEM micrograph. (A) Anterior end, lateral view. (B) Anterior end, dorsal view. (C) Middle section of palp showing pattern of ciliation. (D) Anterior end, dorsal view. (E) Middle segments, lateral view, showing gradual subdivision of neuropodial postsetal lamella. (F) Middle parapodium, lateral view, with neuropodial hooded hooks and capillary chaetae. (G) Pygidium, dorsal view. ECOSUR-000. (Scale: A, 200 µm. B, 250 µm. C, 20 µm. D, 76.9 µm. E, 142 µm. F, 50 µm. G, 100 µm). ▶

dorsal lobe subtriangular and elongate (Fig. 8B, C). Middle notopodial lamellae broadly rounded with upper portion triangular (Fig. 8D, E), diminishing in size on following chaetigers (Fig. 8F). Low dorsal ciliated fold present on chaetiger 2, gradually increasing in size and becoming low crests by chaetiger 23, continuing to end of body (Fig. 8G).

Neuropodial postchaetal lamellae rounded anteri-


A
200µm
B
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E 142µm
C 20.0µm
D 76.9µm
G
100µm
F
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orly (Fig. 8B, C), lamellae with slight notch developing on chaetigers 19-20, becoming distinctly bilobed by chaetigers 21-24 (Fig. 8D), lamellae on middle and posterior chaetigers subtriangular, continuing of upper interramal lobe and digitiform lower lobe (Figs. 8E-F, 9F). Prechaeal lobes in noto- and neuropodia well developed throughout.

Neurochaetae arranged in two rows on anterior chaetigers. Neuropodia of anterior chaetiger with capillaries only, those of anterior row broadest, heavily granulated, weakly bilimbate, shorter than those of posterior row. Neuropodial hooded hooks from chaetiger 25, up to 10 present per neuropodium, accompanied with one or two slender chaetae above and two short chaetae below the hooks. Hooded hooks with bluntly rounded main fang surmounted by one or two smaller accessory teeth placed side by side (Fig. 8H, K); with long, slightly curved shaft (Fig. 8K). Sabre chaetae absent.

Notopodial capillary chaetae similar in morphology to those of neuropodia although more elongate, arranged in two rows, those of posterior row longest. Notopodial hooded hooks from chaetiger 56, up to three per notopodium, accompanied with four long chaetae above and two short chaetae below the hooks. Hooded hooks uni-, bi-, or tridentate; and with a long striate principal hood (Fig. 8H, I, K); with long, almost straight shaft.

Pygidium with ventral cushion, with a ventral protuberance (Fig. 8J).

Variability. Paratypes 16.3-19 mm long, 0.8-2.0 mm wide, 69-71 chaetigers. All specimens without peristomial wings; peristomium is not free from the prostomium (Fig. 9A, B). Palps extending to chaetigers 22-23, each ciliary band as transverse rows of cilia (Fig. 9C). Each row in median band up to 50 µm long; ciliary groove absent. Some specimens with two pairs of rounded eyes arranged in a transverse row; one specimen with three rounded eyes (UMML-000), and other specimen with kidney-shaped lateral eyes and rounded inner eyes (UMML-000). All specimens with anterior notopodial lamellae bilobed, upper lobe subtriangular elongate and lower lobe broad rounded (Fig. 9D). Each segment with a dorsal, transversal band of cilia, not continued from branchial ciliation (Fig. 9B). All specimens with low dorsal crest from chaetigers 22-28 to the end of the body, one specimen with low folds alternating in anterior segments (chaetigers 3-27), one ridge per segment, thereafter becoming moderate dorsal crests (Fig. 9F) (UMML-000).

All specimens with neuropodial lamellae anteriorly rounded, with slight notch in chaetigers 21-23, lamellae becoming distinctly bilobed around chaetigers 23-24 (Fig. 9E). Neuropodial hooded hooks from chaetigers 24-25, numbering five-ten per fascicle. Notopodial hooded hooks from chaetigers 58-59, two or three per fascicle. Hooded hooks uni-, bi- or tridentate (Fig. 8K), only one specimen with hooks tridentate (UMML-000). Pygidium with a smooth ventral cushion (Fig. 9G).

Remarks. *Scolelepis* (*Scolelepis*) *vossae* is most similar to *S.* (*S.*) *squamata* and *S.* (*S.*) *goodbodyi*. It differs from those species and all other species of the genus in having the peristomium completely fused with the prostomium and lacking of lateral peristomial wings.

Distribution. Florida.

Etymology. This species is dedicated to Dr. Nancy Voss for her important research activities in the Rosenstiel School of Marine and Atmospheric Sciences, her tireless management of The Invertebrate Museum, University of Miami (UMML), Miami, USA, and for her warm support to our research program on Grand Caribbean Region polychaetes.

Subgenus *Parascolelepis* Maciolek, 1987
Type species *Nerinides tridentata* (Southern, 1914), designated by Maciolek, 1987.

Scolelepis (*Parascolelepis*) *texana* Foster, 1971
(Fig. 10 A-F)

Scolelepis (*Scolelepis*) *texana* Foster, 1971: 63-64, figs. 132-142.
Scolelepis texana; Johnson, 1984: 6-35 to 6-36, figs. 6.25 and 6.26.
Scolelepis (*Parascolelepis*) *texana*; Maciolek, 1987: 34-36, fig. 10; Granados-Barba and Solís-Weiss, 1998: 116.

Material examined. Sta Cecilia, Quintana Roo, 18°55'3.2"N 87°52'8.1'W, 1 m, *Thalassia testudinum* and medium-sized sand,

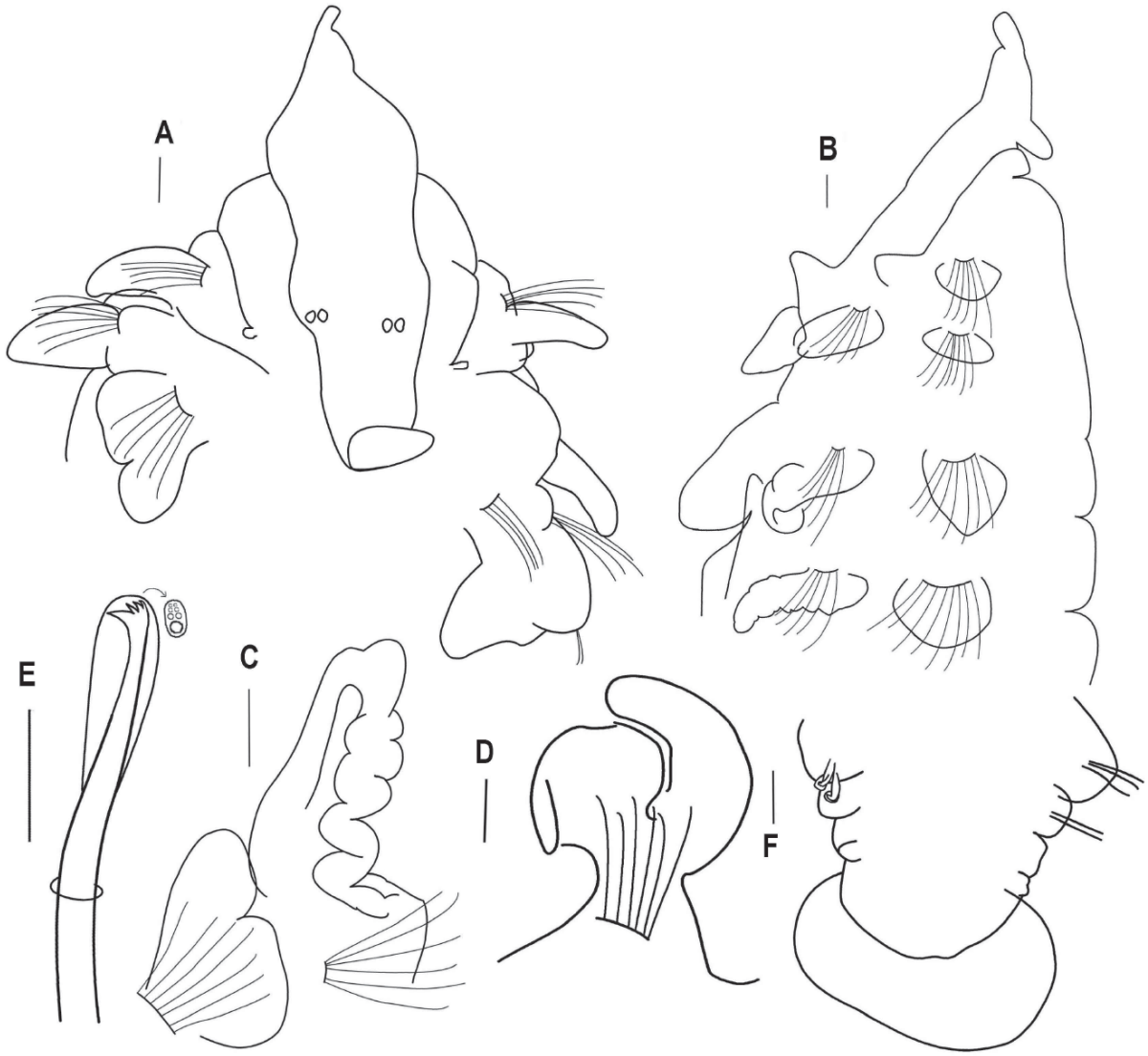

Fig. 10. Scolelepis (P.) texana (ECOSUR-000). (A) Anterior region, dorsal view. **(**B) Anterior region, lateral view. (C) Notopodium of chaetiger 2-3. (D) Notopodium of chaetiger 23. (E) Neuropodial hooded hook from chaetiger 28. **(**F) Pygidium, dorsal view. (Scales: A, B, D, F, G, 40 µm. C, 50 µm. E, 0.5 µm**)**.

collected by S. Jimenez and J. Oliva, 4 November 1990, ECOSUR-SPIO 0078 (3); Punta Hualastok, B. Ascension, Quintana Roo, 19°38'47.9"N 87°27'16.1"W, 0.5 m, sand, 26 February 1986, ECOSUR-SPIO 0079 (5); off Frontera, Tabasco, 18°44'N 92°56'W, DINAMO II, E42, 26 m, 2 November 1990, LECyP-ICML-UNAM-000 (1); off Celestun, Yucatan, E30, 21°02'N 91°05'W, DINAMO II, 31 m, 27.5°C, 36.8‰, sand, 2 November 1990, LECyP-ICML-UNAM-000 (3); off Paraiso, Tabasco, 18°39'N 93°15'W, DINAMO II, E32, 28 m, 31 October 1990, LECyP-ICML-UNAM-000 (1); off Campeche, E29, 20°57'N 91°03'W, DINAMO II, 28 m, 27.3°C, 36.5‰, sand, 31 October 1990, LECyP-ICML-UNAM-000 (3).

Description. Specimen complete, 5.3 mm long, 0.7 mm wide, 34 chaetigers. Color in alcohol pale pink. Oocytes present from chaetiger 25 to the posterior end. Anterior part of the body dorso-ventrally compressed, becoming distinctly narrower, almost cylindrical in cross section by chaetiger 14.

Prostomium conical, pointed anteriorly, posteriorly ending in rounded swelling on chaetiger 2, with an erect occipital antenna; four small brown eyes, rounded, arranged in transverse row (Fig. 10A).

Peristomium completely distinct from chaetiger 1, forming weak lateral wings (Fig. 10B).

Parapodia of chaetiger 1 with small digitiform notopodial lamellae and big rounded neuropodial lamellae; capillary chaetae present in neuropodia**,** lacking in notopodia (Fig. 10A, B). Notopodial lamellae completely fused with branchiae on chaetigers 2 to 11, lamellae with ruffled margin (Fig. 10C); partially separated from branchiae on chaetiger 12; branchiae becoming elongate, digitiform with expanded, small flag-like tip in middle segments, thereafter branchiae becoming shorter and without flag-like tip in posterior segments, and only basally fused with notopodial lamellae (Fig. 10D). Notopodial prechaetal lamellae rounded in anterior chaetigers, becoming reduced in posterior chaetigers. Low dorsal crests present from chaetiger 3 to end of body.

Neuropodial postchaetal lamellae rounded through chaetiger 12 (Fig. 10B), then becoming flattened and elongated in subsequent segments; thereafter lamellae divided into small triangular ventral lobe and elongated interramal lamellae in middle and posterior chaetigers. Neuropodial prechaetal lamellae rounded in anterior chaetigers, becoming reduced in posterior chaetigers.

Anterior chaetae all capillaries arranged in two rows, chaetae of anterior row without limbate, moderately granulated, chaetae of posterior row similar but narrower. Neuropodial hooded hooks from chaetiger 15, numbering six to 11 per fascicle, accompanied by slender capillaries. Notopodial hooded hooks absent. Hooks with three pairs of apical teeth above main fang, shaft long, slightly curved, with a long principal hood (Fig. 10E). Sabre chaetae absent.

Pygidium with large, broad ventral cushion (Fig. 10F).

Variability. The description above is based on a complete specimen. Other specimens 4.2-10 mm long**,** 0.6-3.0 mm wide, with 22-37 chaetigers. Anterior part of the body dorso-ventrally compressed, becoming distinctly narrower, almost cylindrical in cross section from around chaetiger 14-20. All specimens had lost their palps. Notopodial lamellae completely fused with branchiae from chaetiger 2 to 12-29 (usually from chaetiger 2 to 29), lamellae with ruffled margin. Small specimens with low dorsal crests from chaetiger 3 to the end the body; larger specimens only with low dorsal folds or tenuous folds (ECOSUR-000). Neuropodial hooded hooks from chaetiger 16-25 (usually chaetiger 19)**,** numbering seven-nine per fascicle, hooks with three pairs of apical teeth. Pygidium lost in almost all specimens; two specimens (ECOSUR-000) have pygidium with large, broad ventral cushion. (Fig. 9D)

Remarks. The new material agrees with description and illustrations provided by Foster (1971) and Maciolek (1987).

Distribution. U.S. Atlantic coast, New England to North Carolina; Gulf of Mexico; Central California; Japan. This is a wide distribution which requires a detailed study to confirm if these specimens really belong to the same morphological species.

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