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THE SCALIBREGMATIDAE (ANNELIDA: POLYCHAETA) FROM SOUTH AMERICA AND ANTARCTICA COLLECTED CHIEFLY DURING THE CRUISES OF THE R/V *ANTON BRUUN*, R/V *HERO* AND USNS *ELTANIN*

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Abstract.—A total of 14 species in 8 genera are reported from South America and Antarctica. The generic synonymies of *Pseudoscalibregma* Ashworth are clarified. *Scalibregmides* Hartmann-Schröder is resurrected from synonymy and redefined. Six species are new to science: *Asclerocheilus tropicus, A. ashworthi, Hyboscolex equatorialis, Oligobregma notiale, Pseudoscalibregma usarpium,* and *Scalibregmides peruanum. Pseudoscalibregma collare* Levenstein, 1975 is redescribed and transferred to the genus *Oligobregma,* with its junior homonym, *P. bransfieldia collaris* Hartman, 1978, being renamed and redescribed as *O. hartmanae. Sclerocheilus antarcticus* Ashworth, 1915 is redescribed. A revised scheme to the scalibregmatid genera is presented, along with a list of valid species. *Proscalibregma linea* Hartman, 1967 has been determined to belong to the Opheliidae, while *Scalispinigera oculata* Hartman, 1967, and *S. cirrata* Hartman and Fauchald, 1971 are related to the Hesionidae.

Introduction

A large collection of Scalibregmatidae, provided by the Smithsonian Oceanographic Sorting Center forms the basis of the present report. These new materials were collected as part of the Southeastern Pacific Biological and Oceanographic Program (SEPBOP) off western South America by the R/V *Anton Bruun* and by the United States Antarctic Research Program (USARP) from western South America, subantarctic regions, and high Antarctic seas by the R/V *Hero* and USNS *Eltanin.* A small collection of unidentified scalibregmatids collected during the U.S. Navy's Deep Freeze I–IV programs (1956–59) were provided by the National Museum of Natural History, Smithsonian Institution (USNM). These new collections were compared with the previously identified USARP and other materials described by Hartman (1952, 1967, 1978). Analysis of all of these materials reveals the presence of a unique and highly endemic scalibregmatid fauna in South America and Antarctica.

In an earlier study of Australian scalibregmatids, it was necessary to review the genera and to redefine the basis for their separation (Kudenov and Blake 1978). A scheme was presented which simplified the generic definitions and listed all of the then known valid species. Unfortunately, a number of species, upon subsequent examination of their type-specimens, have proven to be generically misplaced. Furthermore, it is now apparent that the generic scheme is more complex and that some generic synonymies were misconstrued, especially as they pertain to the South American and Antarctic species. These problems are corrected in the present report including a revised outline of the genera which updates the list of valid species.

The following genera and species from South America and Antarctica are included in this report:

Asclerocheilus tropicus, new species
A. ashworthi, new species
Hyboscolex equatorialis, new species
H. oculatus (Ehlers, 1901), new combination
Oligobregma collare (Levenstein, 1975), new combination
O. hartmanae, new name
O. notiale, new species
Pseudoscalibregma bransfieldium (Hartman, 1967)
P. usarpium, new species
Scalibregma inflatum Rathke, 1843
Scalibregmides chilensis Hartmann-Schröder, 1965 emended
S. peruanus, new species
Sclerocheilus antarcticus Ashworth, 1915
Kebuita minuta Hartman, 1967

Asclerocheilus Ashworth, 1901

Type-species.—*Asclerocheilus intermedius* (Saint-Joseph, 1894).

Remarks.—There may be a quantitative basis for separating some species of *Asclerocheilus* by using the ratio between the lengths of the short and long tynes of the furcate setae. Scalibregmatids typically have unequal tynes, but in some species of *Asclerocheilus* these differences appear to be especially conspicuous. By measuring tyne lengths from the published figures of 3 species and those of the 2 new species and dividing longer lengths by the shorter ones, the following ratios are obtained: *A. tropicus* 2.66, *A. ashworthi* 2.64, *A. heterochaetus* 2.2, *A. beringianus* 1.7, *A. capensis* 1.7. Insufficient material is presently available to determine the extent of variability in these ratios, but the technique would appear to be useful, since scalibregmatids have so few taxonomic characters.

Asclerocheilus tropicus, new species
Fig. 1A–C

Material examined.—ECUADOR, *Anton Bruun* Sta. 6670, 8 May 1966, 02°11′28″S, 80°56′31″W, 8–9 m, SCUBA, holotype (USNM 65070).

Description.—Holotype complete, small, 1.8 mm long and 0.45 mm wide for 20 segments. Body narrow, with slight thickening in anterior and posterior segments. Color in alcohol: light tan.

Prostomium broadly heart-shaped, formed anteriorly into 2 large lateral wings (Fig. 1A); eyes orange, arranged as 2 longitudinal groups of separate ocelli; nuchal organs not observed. Peristomium simple, smooth ring.

Body surface with minute reticulations; anterior segments lacking annulations; posterior segments triannulate. Parapodia with simple tori throughout body; dorsal and ventral cirri lacking.

Setiger 1 with 2 rows of enlarged notopodial acicular spines in addition to simple capillaries; each spine curved, sharply pointed, with fine bristles near tip (Fig. 1B); capillary notosetae accompanied by furcate setae from setiger 2; each furcate seta with 2 short, unequal spinous tynes (Fig. 1C). Remaining notosetae and neurosetae all capillaries.

Pygidium simple, lacking cirri. Branchiae lacking.

Remarks.—*Asclerocheilus tropicus* is most closely related to *A. heterochaetus* Kudenov and Blake, 1978 from southeastern Australia and *A. acirratus* (Hartman, 1966b) from southern California, in having prostomial eyes. The eyes are arranged in 2 longitudinal lines in *A. tropicus,* as 2 inverted V-shaped structures in *A. heterochaetus* and as 2 pairs of transverse bars in *A. acirratus.*

The lateral anterior prostomial extensions of *A. tropicus* are broad and winglike, while those of *A. heterochaetus* and *A. acirratus* are narrow and provide a T-shape to the anterior end. *Asclerocheilus tropicus* and *A. acirratus* both have notopodial acicular spines on setiger 1, while *A. heterochaetus* has spines on setigers 1–4.

Distribution.—Ecuador, 8–9 m.

Asclerocheilus ashworthi, new species
Fig. 1D–F

Material examined.—SOUTH SHETLAND ISLANDS, off Elephant Island, *Eltanin* Sta. 408, 31 Dec. 1962, 61°16′S, 56°11′W, 223–225 m, Menzies trawl, holotype (USNM 60569).—SOUTH PACIFIC OCEAN, west of Antipodes Island, *Eltanin* Sta. 2144, 23 Mar. 1968, 49°07′S, 172°00′E, 384–397 m, camera grab, 1 specimen (USNM 69372).

Description.—Holotype incomplete. 3.0 mm long and 0.5 mm wide for 18 segments. Non-type specimen smaller, complete, 1.2 mm long and 0.2 mm

wide for 30 segments. Body largest in anterior segments, tapering posteriorly. Color in alcohol: dark brown.

Prostomium expanded on frontal margin to form 2 lateral lobes (Fig. 1D); eyes lacking, nuchal organs not apparent. Peristomium simple achaetous ring.

Body surface mostly smooth throughout; anterior segments uniannulate, becoming triannulate in middle and posterior segments. Parapodia reduced to low, simple tori; dorsal and ventral cirri lacking.

Setiger 1 with enlarged notopodial acicular spines arranged in 2 rows; second row with accompanying capillaries; setiger 2 with single row of spines with capillaries and furcate setae; each spine curved, with fine bristles (Fig. 1E); furcate setae with 1 tyne being much shorter than other (Fig. 1F), tynes with inner borders of denticles; subsequent notopodia with capillaries and furcate setae. Neurosetae including capillaries and furcate setae.

Pygidium surrounded by 4 short stubby cirri. Branchiae absent.

Etymology.—This species is named for the late Dr. J. H. Ashworth of the University of Edinburgh, whose early studies on the Scalibregmatidae have proved so important in interpreting the systematics of the family.

Remarks.—*Asclerocheilus ashworthi* is most similar to *A. capensis* Day, 1963 from South Africa in lacking eyes and in having acicular spines on setigers 1–2. In *A. capensis,* the prostomium is expanded laterally into 2 very broad rounded lobes, while in *A. ashworthi,* the lateral extensions form a weakly-developed T-shaped arrangement. The acicular spines of setiger 2 are more delicate than those of setiger 1 in *A. capensis,* while in *A. ashworthi* the spines of setigers 1–2 are equally heavy.

Asclerocheilus ashworthi is also similar to *A. beringianus* Uschakov, 1955, a poorly known deep water species from the Bering Sea. The original account suggests that the prostomial extensions are more prominent than in *A. ashworthi* and that the acicular spines of setigers 1–2 differ in lacking bristles and in being distinctly sickle-shaped with a curved tip, instead of being heavily bristled and with a straighter shaft and tip.

Distribution.—South Pacific Ocean, near subantarctic islands, 223–397 m.

Hyboscolex equatorialis, new species
Fig. 2

Material examined.—ECUADOR, *Anton Bruun* Sta. 6670, 8 May 1966, 62°11′28″S, 80°56′31″W, 8–9 m, SCUBA, holotype (USNM 60571) and 8 paratypes (USNM 60572).—PERU, south of Callao, near Pucusano, *Anton Bruun* Sta. 65215, 29 Nov. 1965, SCUBA, 3 specimens (USNM 60573).

Description.—A small species, up to 5.4 mm long and 0.6 mm wide for 40 segments. Color in alcohol: light tan. Body arenicoliform, narrow anteriorly, then expanding in middle segments and narrowing again posteriorly; some posterior segments moniliform (Fig. 2B).

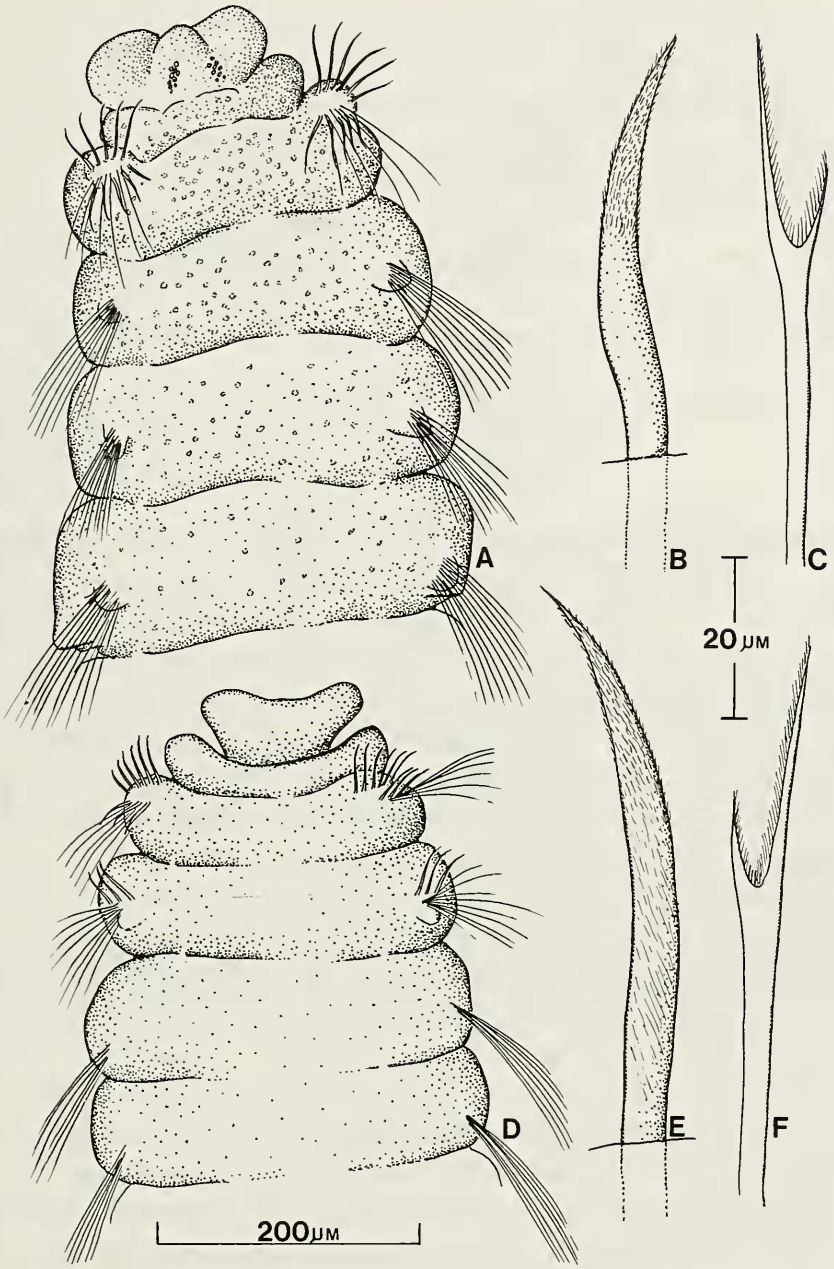

Fig. 1. *Asclerocheilus tropicus* (holotype, USNM 60570): A, Anterior end in dorsal view; B, Notopodial acicular spine from setiger 1; C, Furcate seta.—*Asclerocheilus ashworthi* (holotype, USNM 60569): D, Anterior end in dorsal view; E, Notopodial acicular spine from setiger 1; F, Furcate seta.

Prostomium widest anteriorly, forming 2 short lateral lobes (Fig. 2A); eyes composed of 2 groups of small red pigment spots, located on posterior edge of prostomium and extending posteriorly under the achaetous peristomium; nuchal organs not apparent.

First 3 setigers smooth, uniannulate; setigers 4 and 5 biannulate; segments triannulate from setiger 6 (Fig. 2A), continuing through middle segments;

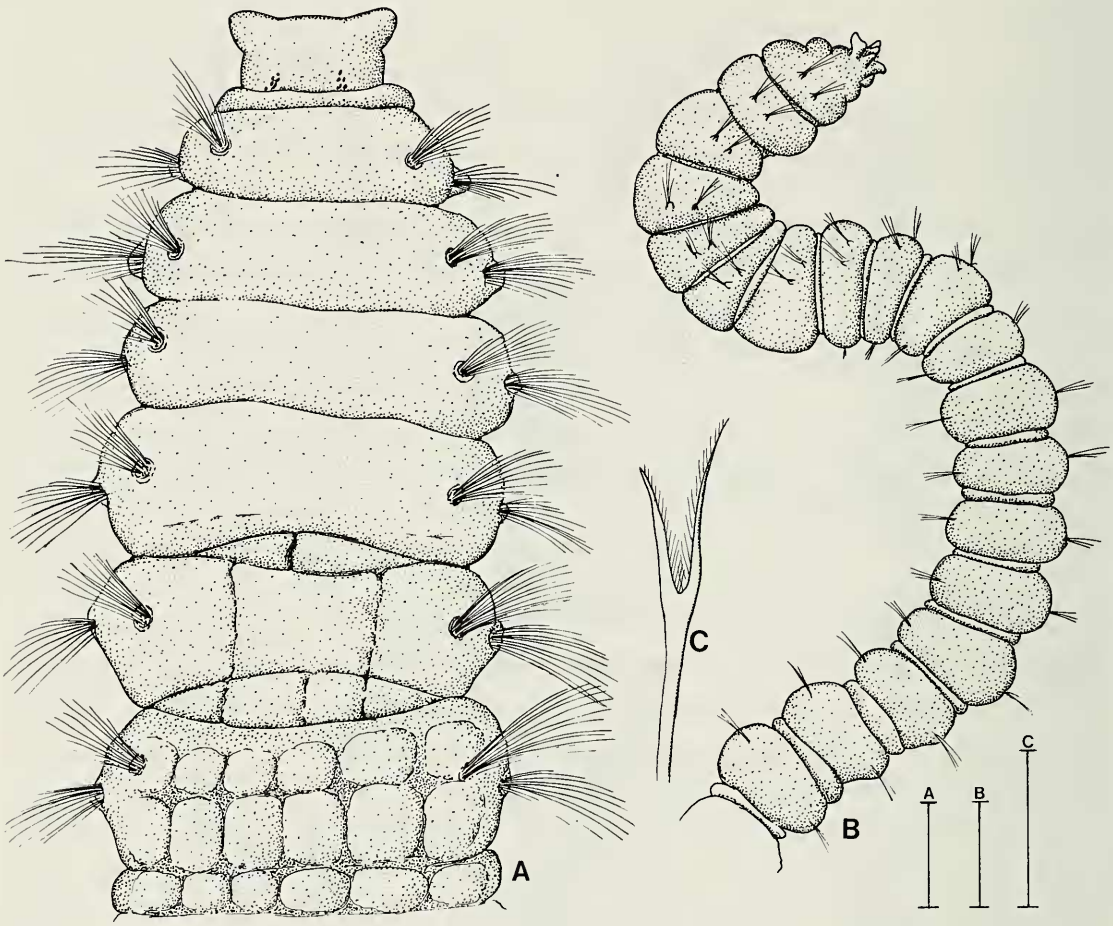

Fig. 2. *Hyboscolex equatorialis* (paratype, USNM 60572): A, Anterior end in dorsal view; B, Posterior end in twisted dorsolateral view; C, Furcate seta. Scale: A, 100 μm; B, 200 μm; C, 20 μm.

posterior segments biannulate, becoming gradually uniannulate in far posterior segments (Fig. 2B). Parapodia reduced to short conical tori.

Setae include noto- and neuropodial fascicles of long capillaries and shorter furcate setae with unequal tynes (Fig. 2C); furcate setae from setiger 2, with fine denticles on inner margins of tynes.

Pygidium with 4 short cirri surrounding anal opening (Fig. 2B). Branchiae lacking.

Remarks.—Hyboscolex equatorialis is similar to *H. pacificus* (Moore) from the eastern Pacific (ssp. *pacificus*) and Japan (ssp. *borealis*) in the general configuration of the prostomium, segmental annulations, parapodia and setae. *Hyboscolex pacificus* from California was said to lack anal cirri (Moore 1909), but reports from British Columbia (Berkeley 1930) and Japan (Imajima 1961) indicate that 4–6 cirri may be present. *Hyboscolex equatorialis* bears 4 anal cirri. The chief difference between the 2 species is with the arrangement of the eyes. In *H. equatorialis,* the eyes are arranged in an

anterior posterior direction on the posterior part of the prostomium and extend under the peristomial segment. In *H. pacificus,* the eyes are in 2 parallel transverse rows on the lateral sides of the prostomium. The eye pattern of *H. equatorialis* also differs from the Australian species, *H. dicranochaetus* (Schmarda), in which the eyes are H-shaped (Kudenov and Blake 1978).

Distribution.—Ecuador and Peru, intertidal to 10 m.

Hyboscolex oculatus (Ehlers, 1901), new combination

Eumenia oculata Ehlers, 1901a:265; 1901b:181–182, pl. 22, figs. 15–16; Ashworth 1915:417. [Not Gravier 1911; Fauvel 1951].
Not *Sclerocheilus oculatus.*—Hartman 1967:135.

Remarks.—*Eumenia oculata* Ehlers, 1901 from southern Chile is a related species of *Hyboscolex* (type-specimen was examined by Ashworth 1915:417). Ehlers (1913) referred this species to *Oncoscolex dicranochaetus,* a position apparently supported by Hartman (1959:424) and Day (1961:417). Hartman (1967:135) identified some Antarctic specimens as *Sclerocheilus oculatus,* without explanation. An examination of Hartman's material has revealed that they are actually *S. antarcticus* Ashworth (see below). The records of *Eumenia oculata* by Gravier (1911) and Fauvel (1951) also appear to refer to *S. antarcticus* (see below). An inspection of the description and figures of *E. oculata* by Ehlers (1901a–b) and the comments by Ashworth (1915) on the type-specimen indicate that the species belongs to the genus *Hyboscolex* and differs from *H. equatorialis* as follows: 1) the prostomium of *H. oculatus* bears prominent frontal horns which appear to articulate with the anterior margin, while *H. equatorialis* has reduced frontal horns which are barely wider than the anterior margin of the prostomium; 2) the eyes of *H. oculatus* form V-shaped structures on either side of the prostomium, in contrast to single rows in *H. equatorialis.*

Distribution.—Southern Chile, intertidal. Type-locality: Tumbes Peninsula, near Talcahuano, approximately 36°42′S, 73°06′W.

Oligobregma collare (Levenstein, 1975), new combination
Fig. 3

Pseudoscalibregma collaris Levenstein, 1975:134, fig. 6a–d.
Pseudoscalibregma nr. *aciculata.*—Hartman 1967:133 [not Hartman 1965].
Asclerocheilus nigrocirrus Hartman, 1978:177–179, fig. 26a–d. New Synonymy.

Material examined.—DRAKE PASSAGE, *Eltanin* Sta. 126, 29 July 1962, 57°12′S to 57°14′S, 62°45′W to 62°51′W, 3733–3806 m, bottom trawl, 3 specimens (USNM 56653).—ROSS SEA Deep Freeze II, *Glacier* Sta. 11, 1

specimen (USNM 67617).—WEDDELL SEA, *Glacier* Sta. 69-19, 11 March 1969, 74°06′S, 32°36.3′W, 1622 m, anchor dredge, 2 specimens (USNM 46842); Sta. 69-22, 13 March 1969, 73°28.4′S, 30°26.9′W, 3111 m, anchor dredge, 1 specimen (USNM 46843); Sta. 69-23, 14 March 1969, 72°49.6′S, 30°29.7′W, 3697 m, anchor dredge, 1 specimen (USNM 46844); Sta. 69-27, 19 March 1969, 64°46.2′S, 41°30.1′W, 4575 m, epibenthic sled, holotype of *Asclerocheilus nigrocirrus* (USNM 46841).—BELLINGSHAUSEN SEA, western sector, off Thurston Island, *Eltanin* Sta. 941, Jan. 1964, 70°01′S, 98°43′W, 2562 m, 3 m Isaacs-Kidd midwater trawl, 1 specimen (USNM 60575).

Description.—A large species, up to 26 mm long and 5 mm wide for 43 segments. Color in alcohol: light tan to brown. Body expanded in anterior segments, then tapering to narrow posterior end.

Prostomium cordate, with 2 rounded lobes projecting from anterior margin (Fig. 3A); no eyes; with paired nuchal organs sometimes apparent lateral to posterior edge of prostomium. Peristomium well-developed, formed into large achaetous segment, sometimes appearing as 2 rings; proboscis saclike, lacking papillae.

Anterior 2 setigers smooth, becoming rugose from setiger 3; anterior and middle body segments triannulate (Fig. 3A), becoming quadriannulate in posterior segments (Fig. 3F). Anterior parapodia reduced to simple lobes; medial and posterior segments with prolonged conical noto- and neuropodia and short, conical dorsal and ventral cirri (Fig. 3E); cirri with grandular tips appearing iridescent by reflected light; small sense organs present between noto- and neuropodia (Fig. 3E).

Setigers 1–3 with heavy acicular spines in notopodia in addition to capillaries (Fig. 3B); spines arranged in 2 rows on setigers 1–2 and single row on setiger 3 (Fig. 3A); spines sickle-shaped, with dense cloak of bristles on apical ends (Fig. 3C); furcate setae from setiger 4, with each having long tynes and fine denticles (Fig. 3D). Neurosetae all capillaries.

Pygidium terminal, with lobate margin bearing up to 8 anal cirri (Fig. 3F). Branchiae absent.

Remarks.—*Asclerocheilus nigrocirrus* Hartman, 1978 from deep stations in the Weddell Sea agrees with *Pseudoscalibregma collaris* Levenstein, 1975 from the Scotia Sea. *Pseudoscalibregma bransfieldia collaris* Hartman, 1978, also from the Weddell Sea, is a junior homonym of Levenstein's species, but is distinct and is herein renamed (see below). *Pseudoscalibregma collaris* Levenstein is transferred to *Oligobregma* based on the presence of anterior notopodial spines and the absence of branchiae. Species of *Pseudoscalibregma* lack notopodial spines, but have branchiae (Kudenov and Blake 1978). *Oligobregma collare* is most closely related to *O. aciculatum* (Hartman, 1965) from the North Atlantic off New England. *Oligobregma collare* has notopodial spines on the first 3 setigers, while *O. aciculatum* has such spines only on setigers 1–2.

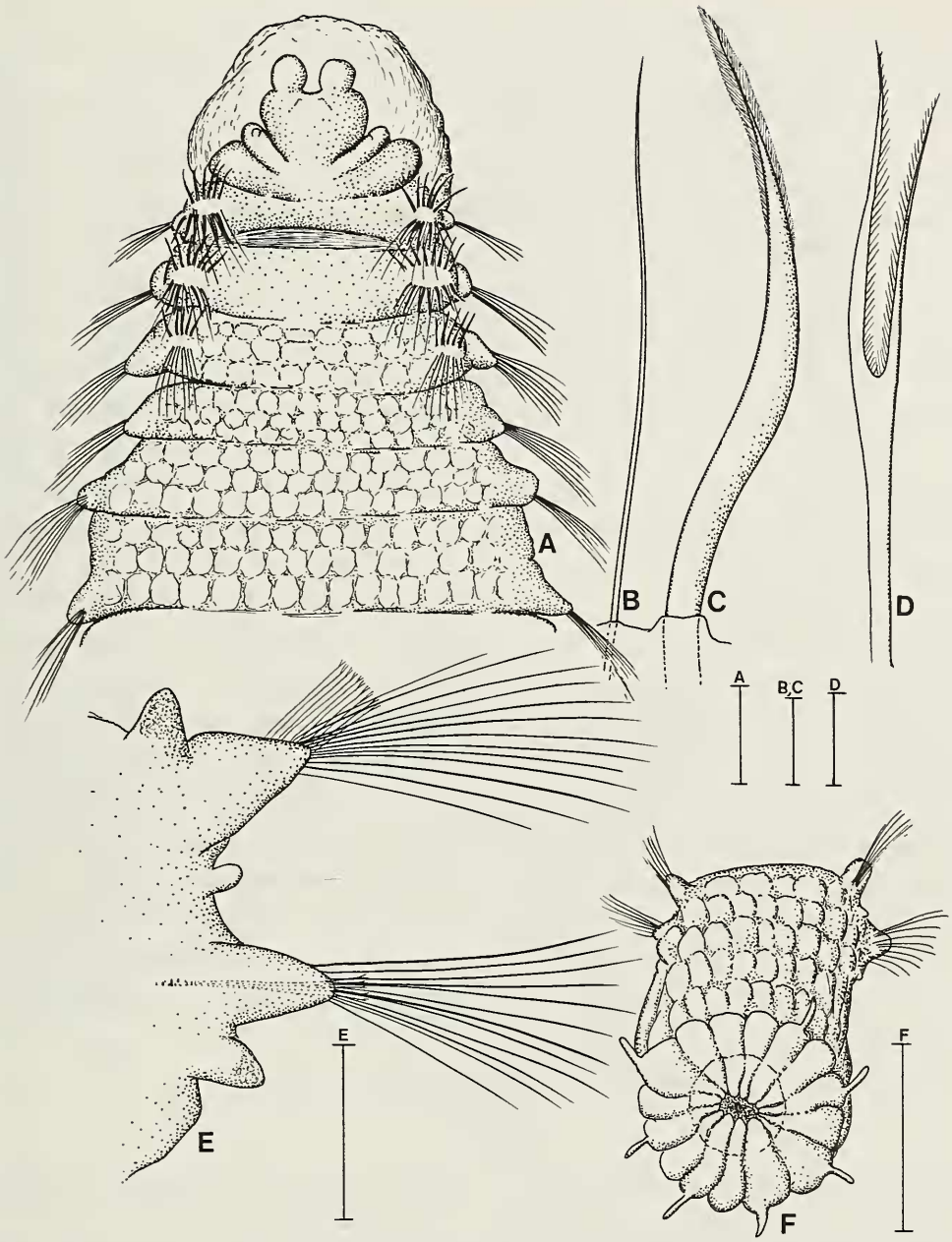

Fig. 3. *Oligobregma collare:* A, Anterior end in dorsal view, pharynx extended; B, Capillary notoseta from setiger 1; C, Acicular spine from setiger 1; D, Furcate seta; E, Setiger 20 in anterior view; F, Posterior end in terminal view. Scale: A, 300 μm; B–C, 50 μm; D, 20 μm; E, 500 μm; F, 500 μm.

Distribution.—Subantarctic and Antarctic, in 1622–6070 m.

Oligobregma hartmanae, new name
Fig. 4

Pseudoscalibregma bransfieldia collaris Hartman, 1978:181, figs. 29a–b, HOMONYM. [Not *Pseudoscalibregma collaris* Levenstein, 1975].

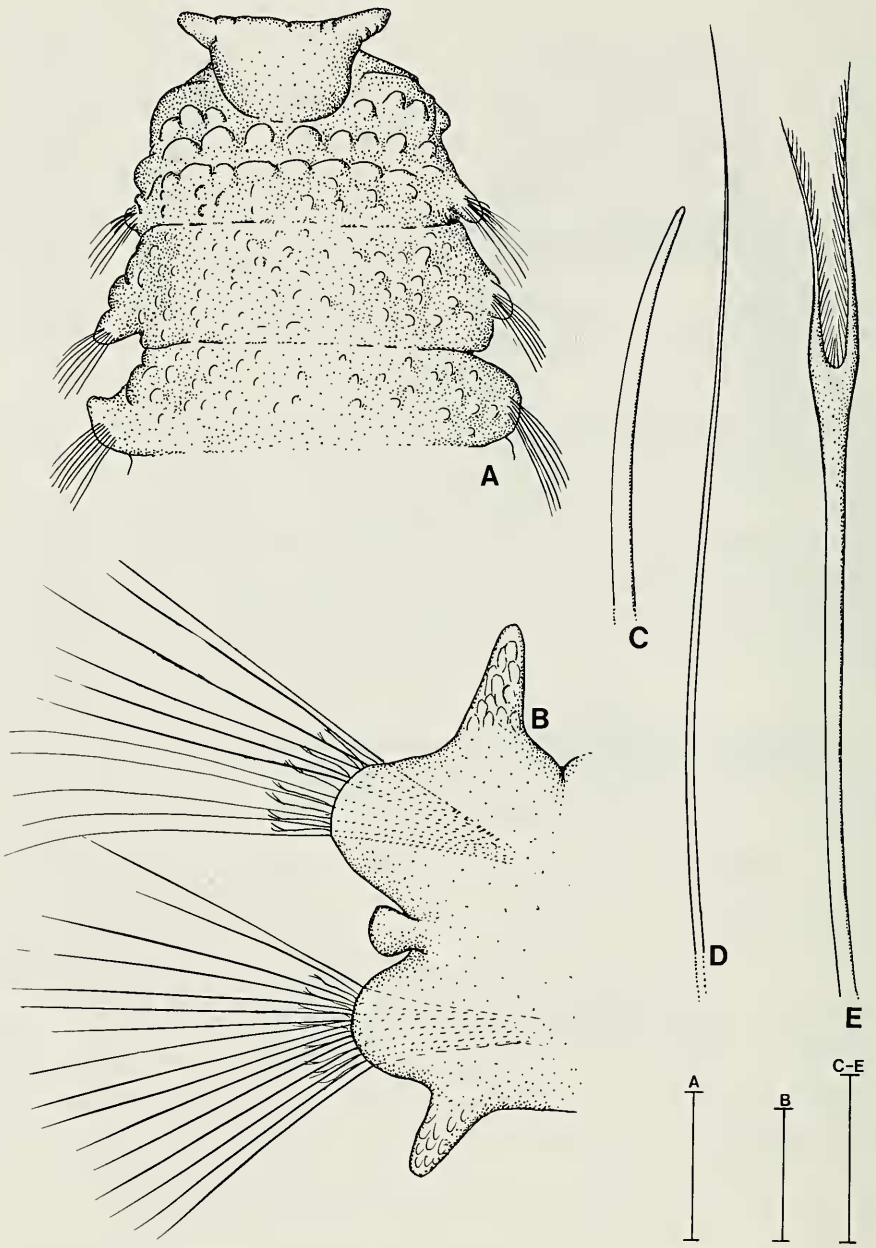

Fig. 4. *Oligobregma hartmanae* (holotype, USNM 46976): A, Anterior end in dorsal view; B, Posterior setiger in anterior view; C, Acicular notopodial spine from setiger 1; D, Capillary notoseta from setiger 1; E, Furcate seta. Scale: A, 300 μm; B, 100 μm; C–E, 20 μm.

Material examined.—WEDDELL SEA, *Glacier* Sta. 69-8, 2 March 1969, 77°36.2′S, 42°30′W, 585 m, anchor dredge, holotype of *P. bransfieldia collaris* (USNM 46976).

Description.—Holotype small, incomplete, 6 mm long and 2 mm wide for 22 setigerous segments. Anterior end of body expanded, narrowing posteriorly.

Prostomium with 2 short laterally directed processes (Fig. 4A); no eyes; no nuchal organs. Peristomium inflated, bearing several large papillae extending across dorsum. Dorsal surface of subsequent setigers bearing papillae arranged in 4–5 rows.

Parapodia of posterior setigers bearing distinct dorsal and ventral cirri (Fig. 4B); cirri with numerous bacillary glands; interramal sense organs cirriform.

Notosetae arranged in 2 tiers throughout, those of anterior tier shorter; setigers 1–2 with inconspicuous short, narrow blunt-tipped spines mixed with capillaries in first tier, numbering 8–10 per fascicle (Fig. 4C–D); furcate setae present from setiger 3; with unequal tynes and numerous denticles on inner margins (Fig. 4E).

Remarks.—Pseudoscalibregma bransfieldia collaris differs significantly from its stem form, *P. bransfieldium* (see below) and is here elevated to full species status. The subspecies name, *collaris* Hartman, 1978, is a junior homonym of *P. collaris* Levenstein, 1975, and is here renamed *hartmanae*. The species is transferred to *Oligobregma* based on the presence of short acicular spines in setigers 1–2. *Oligobregma hartmanae* differs from other congeners in the papillated nature of the peristomium. The species resembles *O. simplex* Kudenov and Blake, 1978, from Australia in lacking eyes. The latter species, however, has acicular spines in setigers 1–4, instead of 1–2. *Oligobregma hartmanae* also resembles *O. oculatum* Kudenov and Blake, 1978, from off New Caledonia in having acicular spines in setigers 1–2. The latter species, however, has a well-developed ocular area and lacks peristomial papillae.

Distribution.—Weddell Sea, in 505 m.

Oligobregma notiale, new species
Fig. 5

Material examined.—ANTARCTIC PENINSULA, Palmer Archipelago, *Hero* Sta. 447, 16 March 1970, 64°49′13″S, 63°30′03″W to 64°49′13″S, 63°30′15″W, 20–27 m, Blake trawl, holotype (USNM 60576) and 3 paratypes (USNM 60579); Sta. 448, 16 March 1970, 64°49′17″S, 63°30′10″W to 64°49′17″S, 63°30′32″W, 18–27 m, Blake trawl, paratype (USNM 60578); Sta. 1018, 15 Dec. 1971, 64°42′S, 62°38′W, 97 m, Petersen grab, paratype (USNM 60579); Gamma Island, Melchoir Harbor, *Staten Island* Sta. 63-32, 6 Feb. 1963, 64°19′S, 62°59′W, 45 m, dredged, coll. W. L. Schmitt, paratype (USNM 58965).—WEDDELL SEA, off Vahsel Bay, Deep Freeze IV, *Edisto* Sta. 20, Trawl 5, 28 Jan. 1959, 77°40′S, 35°30′W, 28 m, bottom trawl, coll. J. Tyler, paratype (USNM 58966).—ANTARCTICA, BUDD AND KNOX COASTS, Vincennes Bay, near Wilkes Station, Deep Freeze III, *Atka* Sta. 29, 27 Jan. 1958, 66°17′35″S, 110°18′40″E, 10 paratypes (USNM

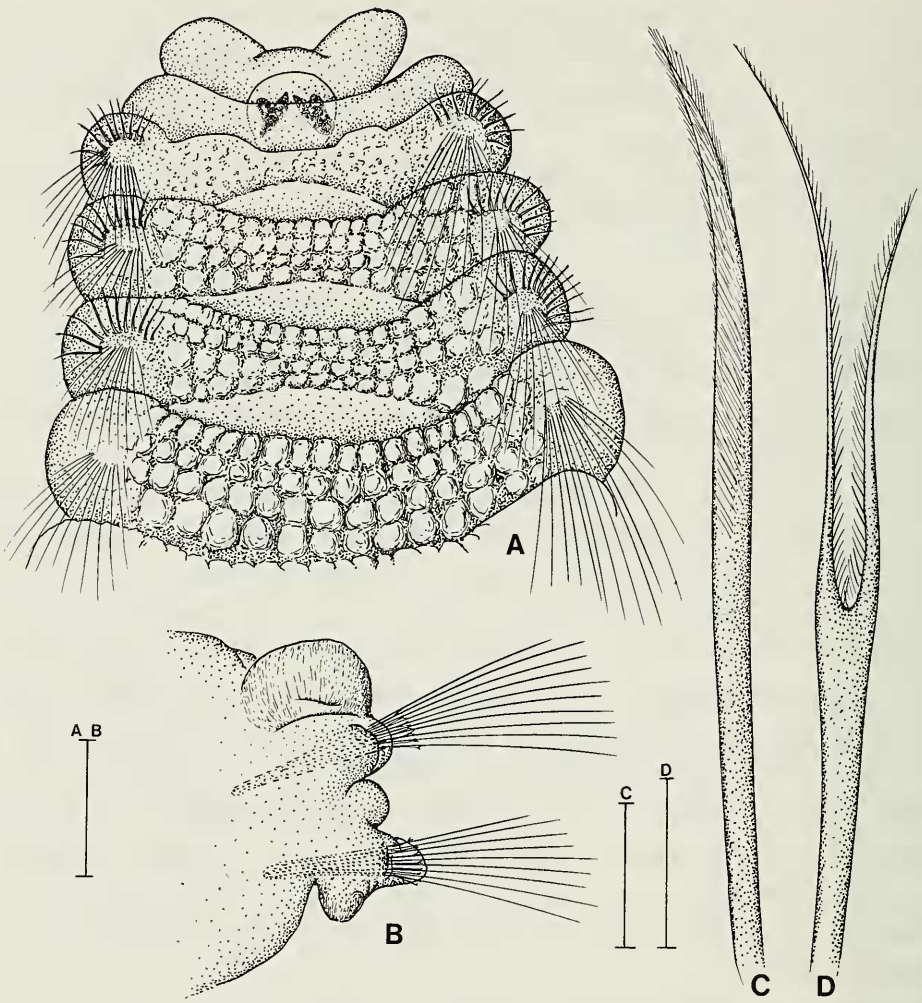

Fig. 5. *Oligobregma notiale* (paratype, USNM 60577): A, Anterior end in dorsal view; B, Posterior parapodium in anterior view; C, Notopodial acicular spine from setiger 1; D, Furcate seta. Scale: A–B, 500 μm; C, 30 μm; D, 20 μm.

58967).—ROSS SEA, *Eltanin* Sta. 2050, 22 Jan. 1968, 77°01′S, 168°38′E to 77°03′S, 168°23′E, 909–923 m, Blake trawl, paratype (USNM 60580).

Description.—A moderately large species, up to 13 mm long and 3 mm wide for 32 setigers on incomplete paratype. Color in alcohol: light tan to dark brown.

Prostomium with 2 broadly rounded frontal lobes projecting laterally (Fig. 5A); 2 elongated eyes present, each formed of numerous individual ocelli arranged in Y-shape; nuchal organs lobate, located on posterior margin of prostomium, usually concealed under peristomium. Peristomium smooth, sometimes superficially divided into 2 rings; proboscis simple, saclike when everted.

Body enlarged in anterior one-third, tapering posteriorly. Most segments quadriannulate (Fig. 5A); parapodial rami reduced to low mounds on ante-

rior segments, becoming lobate in posterior segments and bearing ventral cirri, both inflated; with interramal cirri (Fig. 5B).

Setigers 1–3 with curved acicular spines in notopodia accompanying capillaries (Fig. 5A); spines numbering 8–12 per notopodium, bearing fine bristles on shaft, best seen near apex (Fig. 5C); subsequent notopodia and most neuropodia with furcate setae accompanying capillaries; furcate setae with unequal tynes, with numerous denticles along inner borders (Fig. 5D). Branchiae absent. Pygidium with 5 ventrally-placed cirri.

Etymology.—Notiale: Latin for southern.

Remarks.—Oligobregma notiale is most closely related to *O. oculatum* Kudenov and Blake, 1978, from New Caledonia in having a T-shaped prostomium with eyes. The latter species, however, has acicular notopodial spines on setigers 1–2, instead of 1–3 and the dorsal and ventral cirri of posterior parapodia are digitiform, instead of inflated.

Distribution.—Endemic to Antarctica, occurring in shallow depths of 18–97 m in most localities and 923 m in the Ross Sea.

Pseudoscalibregma Ashworth, 1901

Remarks.—The genus *Eusclerocheilus* Hartman, 1967 was referred to *Hyboscolex* Schmarda, 1861 by Kudenov and Blake (1978) and to *Pseudoscalibregma* by Hartman (1978). The latter decision is the correct one, because *E. bransfieldia,* the only named species of *Eusclerocheilus,* has dorsal and ventral cirri on the posterior parapodia. They are swollen and inflated, instead of the typical flattened cirri usually seen on species of Scalibregmatidae.

Scalibregmides Hartmann-Schröder, 1965, was erroneously referred to *Pseudoscalibregma* by Kudenov and Blake (1978), based on the assumption that the type-species, *S. chilensis* Hartmann-Schröder, 1965, possessed dorsal and ventral cirri in posterior parapodia. Following an examination of the holotype of *S. chilensis,* it is apparent that these structures are elongated postsetal lamellae rather than dorsal and ventral cirri. *Scalibregmides* is herein redefined as a valid genus (see below).

Pseudoscalibregma has 4 valid species: *P. parvum* (Hansen, 1878), the type-species, *P. pallens* Levenstein, 1962; *P. bransfieldum* (Hartman, 1967); and *P. usarpium,* new species (see below).

Pseudoscalibregma bransfieldium (Hartman, 1967)
Fig. 6

Eusclerocheilus bransfieldia Hartman, 1967:130–131, pl. 39.
Hyboscolex bransfieldia.—Kudenov and Blake, 1978: 440.
Pseudoscalibregma bransfieldia.—Hartman, 1978:180–181, fig. 28.

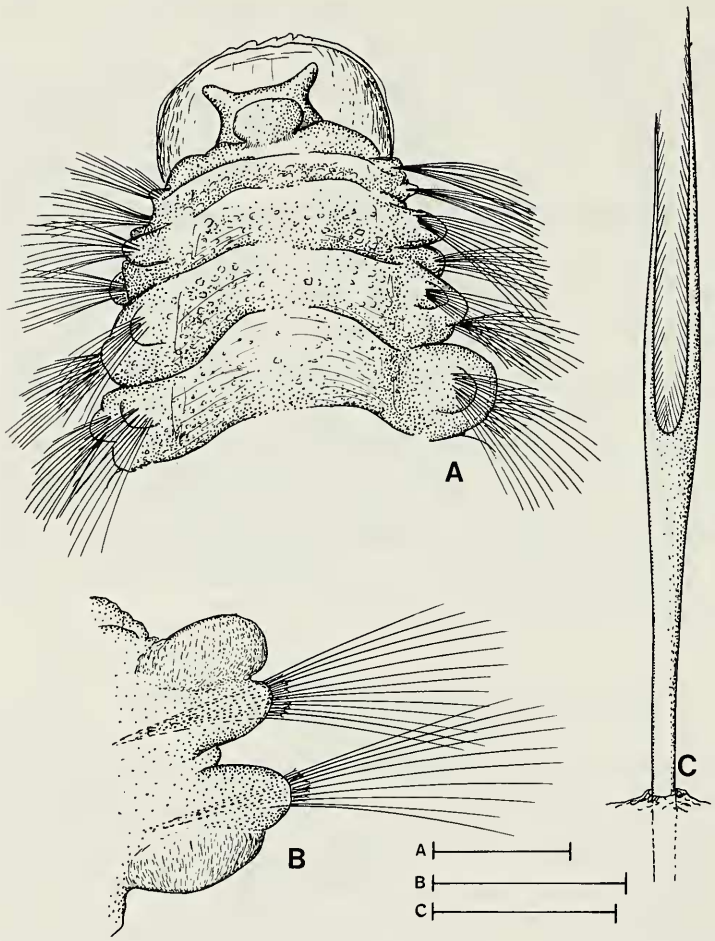

Fig. 6. *Pseudoscalibregma bransfieldium* (USNM 46974): A, Anterior end in dorsal view, pharynx extended; B, Posterior parapodium in anterior view; D, Furcate seta. Scale: A, 500 μm; B, 500 μm; C, 30 μm.

Material examined.—ANTARCTIC PENINSULA, *Eastwind* Sta. 1966-004A, 24 Jan. 1966, 67°53′S, 69°10.6′W, 335 m, coll. Pawson and Squires, 1 specimen (USNM 58971); BRANSFIELD STRAIT, *Eltanin* Sta. 997, 14 March 1964, 61°44′S, 55°56′W to 61°46′S, 55°54′W, 769 m, Blake trawl, holotype (USNM 55552).—WEDDELL SEA, *Glacier* Sta. 69-2, 25 Feb. 1969, 75°31′S, 30°08′W, 412 m, anchor dredge, 5 specimens (USNM 46973); Sta. 69-10, 4 March 1969, 77°50′S, 42°05.2′W, 659 m, anchor dredge, 1 specimen (USNM 46975).—ROSS SEA, *Eltanin* Sta. 2051, 22 Jan. 1968, 77°04′S, 168°19′E, 916 m, camera grab, 1 specimen (USNM 60581).

Description.—A moderately large species, up to 22 mm long and 3–6 mm wide in expanded thoracic region of 12–14 setigers, abdominal region with 16–20 setigers.

Prostomium with 2 short frontal horns (Fig. 6A); rounded nuchal crest on posterior part of prostomium; no eyes. Peristomium forming simple achaetous ring; proboscis saclike, with papillae on oral opening (Fig. 6A).

Parapodial rami well developed as rounded lobes, supported by 2–3 yellow acicula; dorsal and ventral cirri of posterior segments broad and inflated lobes (Fig. 6B).

Setae numerous, arranged in 3–5 rows in anterior parapodia; with fewer setae in 2–3 rows in posterior parapodia. Setae including capillaries, furcate setae and imbedded acicula; furcate setae with unequal tynes having teeth along their inner borders (Fig. 6C).

Pygidium with 3–4 indistinct lobes, lacking cirri.

Remarks.—Pseudoscalibregma bransfieldium differs from other species of the genus by having a rounded nuchal crest present on the prostomium and broad and inflated dorsal and ventral cirri on the posterior parapodia rather than elongated cirri.

Distribution.—Antarctica, in 355–916 m.

Pseudoscalibregma usarpium, new species
Fig. 7

Material examined.—ROSS SEA, *Eltanin* Sta. 1926, 27 Jan. 1967, 74°53′S, 175°10′W to 74°52′S, 174°42′W, 2143–2154 m, Blake trawl, holotype (USNM 60583).

Description.—Holotype posteriorly incomplete, 6 mm long and 1.3 mm wide for 27 setigers. Color in alcohol: pink. Body arenicoliform, with expanded portion over setigers 7–12. Segments heavily papillated (Fig. 7A) with anterior and posterior segments having 4 annulations, middle segments with 5 annulations.

Prostomium with 2 prominent diverging lobes (Fig. 7A); no eyes, no nuchal organs. Peristomium reduced, consisting of lobate achaetous ring enclosing prostomium.

Parapodia well-developed, with elliptical notopodium and triangular neuropodium (Fig. 7B); dorsal and ventral cirri present from setiger 12, with prominent bacillary glands (Fig. 7B); cirri somewhat globular, shorter than parapodial lobes; small indistinct interramal cirrus present throughout body.

Setae including both capillaries and furcate setae; capillary fascicles of anterior setigers arranged in 4–5 rows, with setae being unusually long, providing spinous appearance to anterior end; short furcate setae from setiger 3, visible only at bases of capillaries; furcate setae with subequal tynes bearing fine denticles on inner margins (Fig. 7C).

Branchiae absent. Nature of pygidium unknown.

Remarks.—Pseudoscalibregma usarpium differs from other species of the genus in the form of the prostomium, combined with the absence of eyes and the number and arrangement of the annuli with their numerous papillae. The presence of bacillary glands in the dorsal and ventral cirri is also unusual and has not been reported in related species.

Etymology.—Usarpium: coined from the abbreviated designation of the

United States Antarctic Research Program (USARP) under whose auspices the species was collected.

Distribution.—Ross Sea, in 2143–2154 m.

Scalibregma inflatum Rathke, 1843

Scalibregma inflatum Rathke, 1843:184, pl. 9, figs. 15–21.—Ehlers, 1900a:14; 1900b:219; 1901b:180.—Ashworth, 1901:237–309, pls. 13–15.—Fauvel, 1927:123, fig. 44a–f; 1941:289.—Monro, 1930:163.—Støp-Bowitz, 1945:67–72, fig. 2.—Imajima and Hartman, 1964:305.—Hartman, 1966a:45; 1967:134; 1969:313–314, figs. 1–4; 1978:181.—Day, 1967:390, fig. 27.2e–i.—Kudenov and Blake, 1978:428–430, figs. 1–2.

Scalibregma inflata.—Hartman and Fauchald, 1971:122, 125.

Material examined.—ARGENTINA, off Tierra del Fuego, *Hero* Sta. 677, 24 May 1971, 54°46.5′S, 64°23.5′W, 51 m, Petersen grab, 1 specimen (USNM 60584).—SOUTH SHETLAND ISLANDS, *Hero* Sta. 726, 26 Dec. 1971, 62°19.3′S, 59°11.8′W to 62°19.2′S, 59°11.7′W, 64–82 m, Blake trawl, 1 specimen (USNM 60587); Sta. 1060, 19 Dec. 1971, 62°19.0′S, 59°11.4′W, 44 m, Petersen grab, 1 specimen (USNM 60586).—ANTARCTIC PENINSULA, *Hero* Sta. 843, 26 Jan. 1972, 64°47.5′S, 64°07.2′W to 64°47.5′S, 64°07.1′W, 107 m, 1 specimen (USNM 60588); Sta. 1035, 16 Dec. 1971, 64°13.0′S, 61°05.4′W, 118 m, Petersen grab, 3 specimens (USNM 60585); Sta. 1070, 28 Jan. 1972, 64°47.7′S, 64°07.4′W, 100 m, Blake trawl, 2 specimens (USNM 60589); Sta. 1112, 4 Mar. 1972, 64°47.5′S, 64°07′W, 91–96 m, grab, 1 specimen (USNM 60590); Sta. 5411, 20 Mar. 1972, 65°05.3′S, 64°02.0′W to 65°04.7′S, 65°02.3′W, 50–92 m, 20 specimens (USNM 60591).—All specimens previously reported by Hartman (1967, 1978) from South America and Antarctica also examined (USNM).

Remarks.—*Scalibregma inflatum* is the most familiar species of the family. It is readily recognized by its T-shaped prostomium, lack of anterior acicular spines, branched gills on setigers 2–5 and prominent dorsal and ventral cirri in posterior parapodia. Kudenov and Blake (1978) suggested that the species may encompass several siblings once morphological variations have been studied in more detail. Unfortunately, *S. inflatum* does not appear to be a species which readily lends itself to the appropriate population studies necessary to test this hypothesis. A large sample of specimens from widespread localities will need to be accumulated in order to quantify the characters in question.

Distribution.—Australia; New Zealand; Antarctic seas; South America; North America; Europe; South Africa. Intertidal to continental shelf depths; abyssal depths (Hartman and Fauchald 1971).

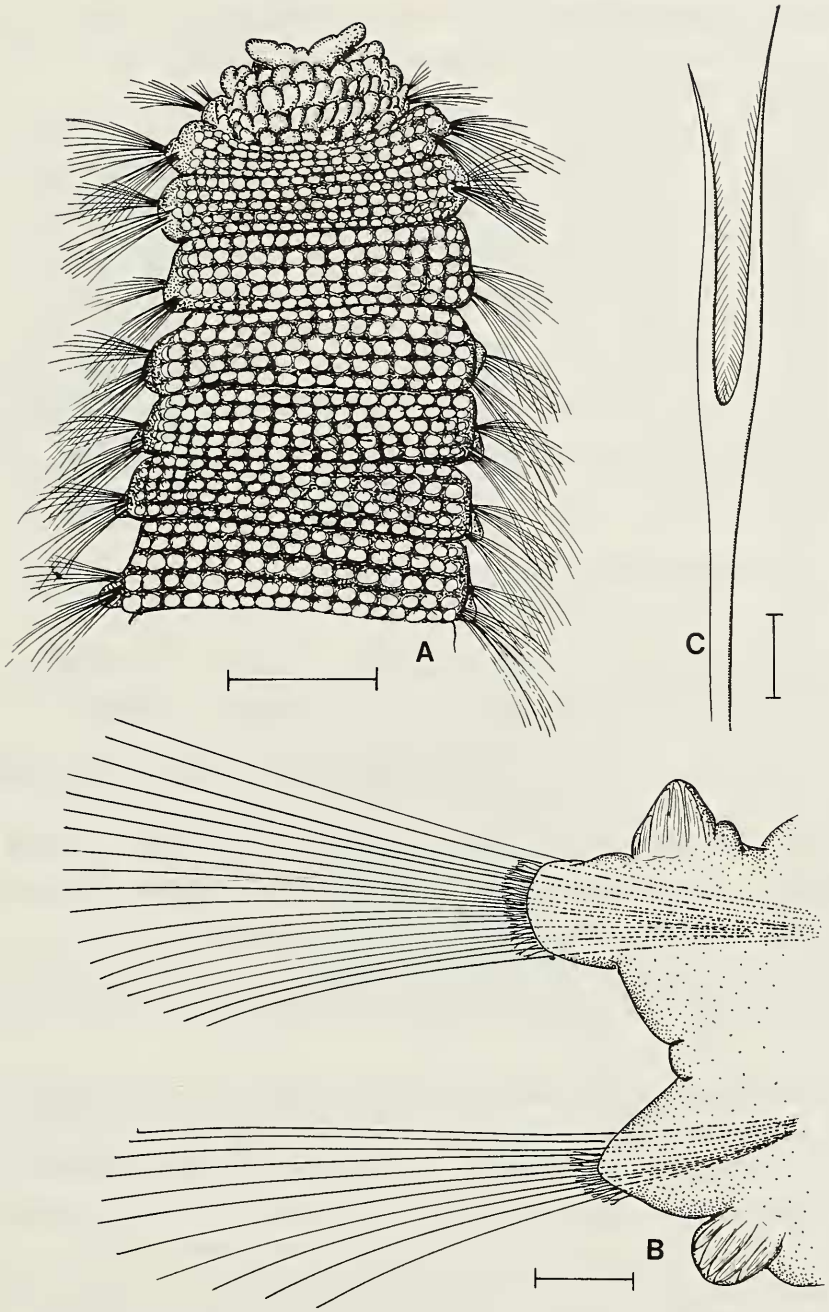

Fig. 7. *Pseudoscalibregma usarpium* (holotype, USNM 60583): A, Anterior end in dorsal view; B, Middle parapodium in anterior view; C, Furcate seta. Scale: A, 500 μm; B, 100 μm; C, 10 μm.

Scalibregmides Hartmann-Schröder, 1965

Type-species.—*Scalibregmides chilensis* Hartmann-Schröder, 1965.

Diagnosis.—Body elongate, arenicoliform; prostomium with 2 prominent lateral processes; branchiae absent; parapodia with prolonged noto- and

neuropodial postsetal lamellae; interramal cirri absent; acicular setae lacking on anterior setigers; setae including simple capillaries and furcate setae; pygidium simple, lacking cirri.

Remarks.—*Scalibregmides* was referred to *Pseudoscalibregma* Ashworth by Kudenov and Blake (1978), who erroneously interpreted the diagnostic post-setal lamellae, mentioned by Hartmann-Schröder, as dorsal and ventral cirri. Examination of the holotype of the type-species of *Scalibregmides* showed that Hartmann-Schröder was correct and the genus is considered to be distinct.

Scalibregmides includes 2 species: *S. chilensis* Hartmann-Schröder, 1965, and *S. peruanus,* new species. The genus represents a separate new category in the generic scheme proposed by Kudenov and Blake (1978) (see Discussion, below).

Scalibregmides chilensis Hartmann-Schröder, 1965
Fig. 8

Scalibregmides chilensis Hartmann-Schröder, 1965:231–233, figs. 227–229.
Pseudoscalibregma chilensis.—Kudenov and Blake, 1978:439.

Material examined.—CHILE, Puerto Aguirre, 21 July 1958, mytilid bank, 10 m, coll. Stuardo, holotype (ZMH P-15148).

Description.—A large species, 28 mm long and 3.5 mm wide for 80 setigerous segments. Body enlarged in anterior one-third, tapering thereafter toward narrow posterior end. Color in alcohol: light tan.

Prostomium with 2 laterally projecting horns, articulating from rounded basal portions (Fig. 8A); eyes lacking. Peristomium forming simple achaetous ring.

Setigers 1–3 smooth, lacking annulations; segments becoming triannulate and heavily papillated from setiger 4, continuing to near posterior end, then changing to biannulate and finally uniannulate in far posterior setigers. Postsetal lamellae becoming apparent by setiger 12, arising slightly below small and swollen notopodial lobes and slightly above similar neuropodial lobes; postsetal lamellae gradually lengthen over subsequent segments, becoming long, cirriform lamellae in middle (Fig. 8B) and posterior setigers; notopodial lobes slightly shorter than neuropodial.

Setae including capillaries (Fig. 8C) and furcate setae with unequal tynes bearing fine denticles along inner borders (Fig. 8D).

Branchiae absent. Pygidium reduced to ring of papillae surrounding large anal opening.

Remarks.—*Scalibregmides chilensis* differs from its only congener, *S. peruanus* (see below) in having very distinct prostomial horns which articulate at the base, instead of 2 non-articulating rounded lobes. Furthermore, *S. chilensis* has much longer parapodial postsetal lamellae than *S. peruanus*

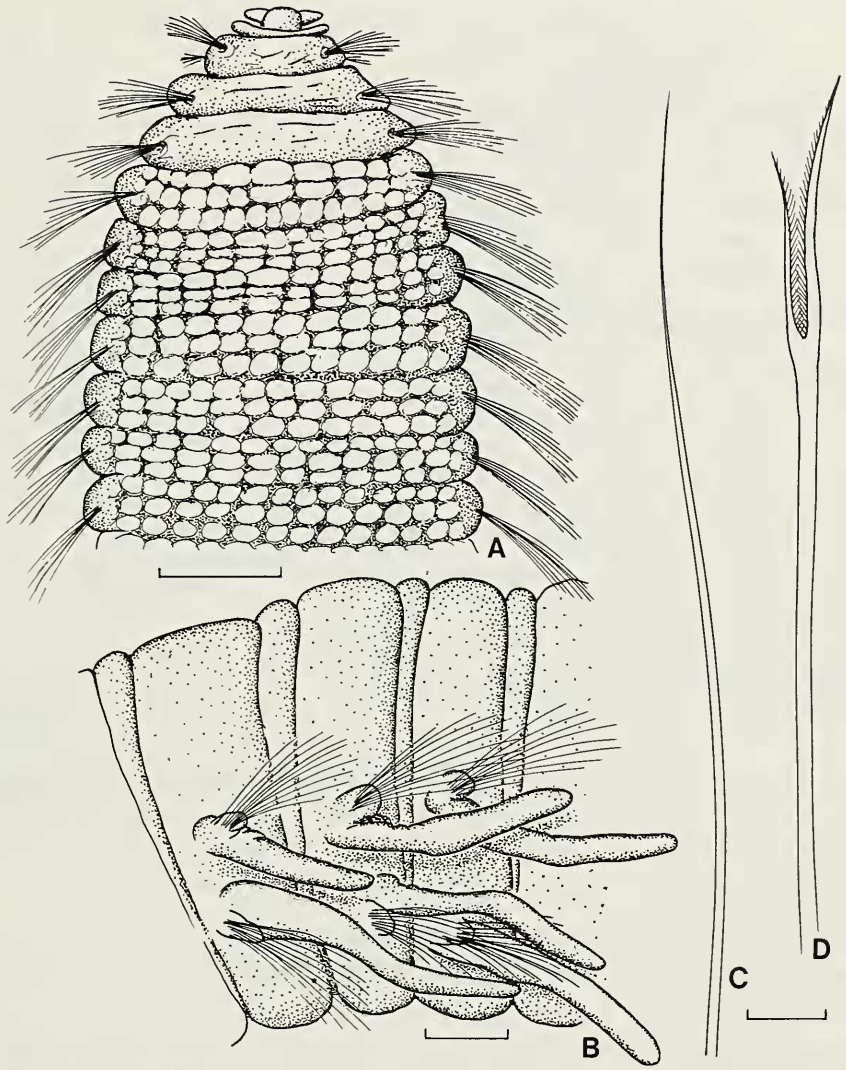

Fig. 8. *Scalibregmides chilensis* (holotype, ZMH P-15148): A, Anterior end in dorsal view; B, Group of 3 middle body segments in lateral view; C, Capillary notoseta; D, Furcate seta. Scale: A, 300 μm; B, 200 μm; C, 10 μm.

and has the first 3 segments smooth and non-annulated, instead of the first 4.

Distribution.—Chile, in 10 m.

Scalibregmides peruanus, new species
Fig. 9

Material examined.—PERU, island near Pucusana, south of Callao, *Anton Bruun* Sta. 65215, 29 Nov. 1965, 0–5 m, holotype (USNM 60582).

Description.—Holotype complete, with 52 setigerous segments, 6.4 mm long and 1 mm wide at expanded middle portion. Body light tan in alcohol.

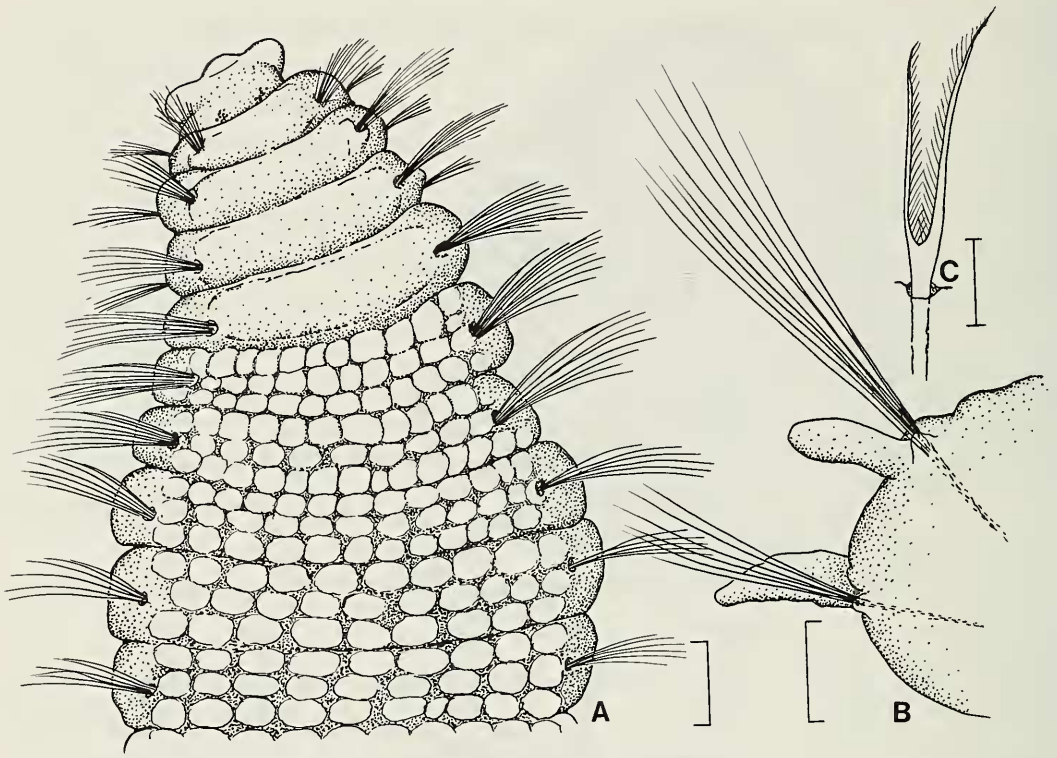

Fig. 9. *Scalibregmides peruanus* (holotype, USNM 60582): A, Anterior end in dorsal view; B, Middle parapodium in anterior view; C, Furcate seta. Scale: A, 200 μm; B, 100 μm; C, 10 μm.

Anterior end narrow, followed by expanded middle portion, then tapering to narrow posterior end.

Prostomium produced laterally into 2 rounded lobes, with small medial protuberance on anterior margin (Fig. 9A); eyes present as 2 distinct clusters of individual ocelli; no nuchal organs apparent. Peristomium reduced, recessed into setiger 1.

Setigers 1–4 smooth, lacking annulations; triannulate segments (Fig. 9A) from setiger 5 with prominent papillae continuing for two-thirds of body length; posterior segments lacking annulations, but with faint dorsal reticulations. Middle and posterior parapodia with notopodial and neuropodial fingerlike postsetal lamellae arising slightly posterior to short setal lobes (Fig. 9B).

Setae including both capillaries and furcate setae; anterior acicular spines lacking, although both short and long notopodial capillaries on setiger 1; short furcate setae from setiger 3, barely visible at base of capillaries, having subequal and fine denticles on inner margins (Fig. 9C).

Branchiae absent. Pygidium simple ring, lacking cirri.

Remarks.—See comments (above) under *S. chilensis*.

Distribution.—Peru, in 0–5 m.

Sclerocheilus antarcticus Ashworth, 1915
Fig. 10

Sclerocheilus antarcticus Ashworth, 1915:405–418, text-figs. 1–2, pl. 36, figs. 1–6.—Hartman, 1978:181–182.
Eumenia oculata.—Gravier, 1911:112, pl. 4, fig. 44 [not Ehlers, 1901]. *Fide* Ashworth, 1915.
?*Eumenia oculata*.—Fauvel, 1951:766 [not Ehlers, 1901].
Oncoscolex dicranochaetus.—Hartman, 1952:233; 1966a:45, pl. 14, figs. 1–5 [in part, not Schmarda, 1861].
?*Sclerocheilus minutus*.—Fauvel, 1951:766 [not Grube, 1851].
Sclerocheilus oculatus.—Hartman, 1967:135–136 [not Ehlers, 1901].

Material examined.—ANTARCTIC PENINSULA, Marguerite Bay, U.S. Navy Antarctic Exped. 1948, Sta. 234, 2 April 1948, 82 m, coll. D. C. Nutt, 1 specimen (USNM 23878); Neny Fjord, 20 Mar. 1940, 90 m, bottom dredge, 1 specimen (USNM 58972); Port Lockroy, off Wiencke Island, Anvers Island, *Staten Island* Sta. 63-9, 26 Jan. 1963, 64°48′S, 63°30′W, 61.5 m, dredged on mud bottom, 1 specimen (USNM 46408); Melchoir Island, *Staten Island* Sta. 63-25, 7 Feb. 1963, 64°19′S, 62°59′W, 45 m, 1 specimen (USNM 46409).—BRANSFIELD STRAIT, *Eltanin* Sta. 418, 2 Jan. 1963, 62°39′S, 56°10′W to 62°40′S, 56°08′W, 311–426 m, Blake trawl, 1 specimen (USNM 56627); Sta. 1002, 15 Mar. 1964, 62°40′S, 54°45′W, 265 m, Blake trawl, 1 specimen (USNM 56628); Sta. 1003, 15 Mar. 1964, 62°41′S, 54°43′W, 210–220 m, Blake trawl, 5 specimens (USNM 56629).

Description.—A moderate-sized species, up to 15 mm long and 2.5 mm wide for 43 setigers. Holotype 19 mm long and 3 mm wide with 43 setigers according to Ashworth (1915). Color in alcohol: light tan to dark brown.

Prostomium with 2 laterally-directed lobes, variable in shape, either broad (Fig. 10A) or narrow; entire anterior part of prostomium sometimes shrunken or withdrawn into peristomium; eyes prominent, forming inverted V-shape, with point of V directed anteriorly (Fig. 10A); tip of V separated on some specimens; nuchal organs present as lobate structures directly posterior to prostomium. Peristomium achaetous, variably convoluted, sometimes appearing as a double segment; everted proboscis lobate, saclike.

Segments of anterior and posterior regions generally smooth, mostly uniannulate; middle segments distinctly biannulate to quadriannulate. Parapodia reduced in anterior setigers to low lobes lacking cirri; digitiform ventral cirri present from about setigers 17–19 to end of body (Fig. 10B); lateral sense organs or interramal cirri present between noto- and neuropodia.

Setae of 3 types: 1) acicular notopodial spines occurring on setigers 1–3, sharply pointed and bearing a fine cloak of bristles (Fig. 10C), 2) furcate setae occurring from setiger 3–4 in noto- and neuropodia with subequal

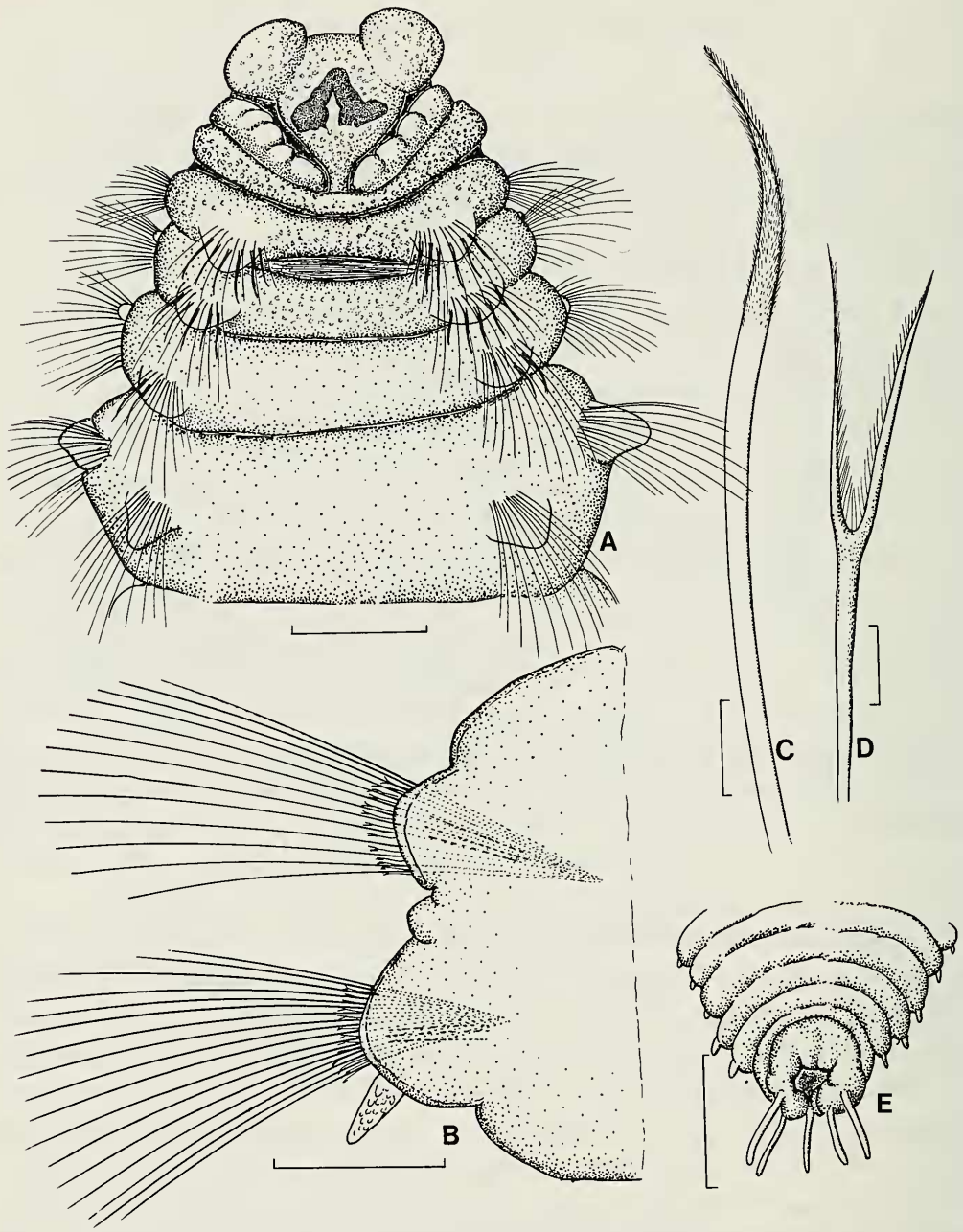

Fig. 10. *Sclerocheilus antarcticus:* A, Anterior end in dorsal view; B, Middle parapodium in anterior view; C, Notopodium acicular spine; D, Furcate seta; E, Posterior end in dorsal view. Scale: A, 200 μm; B, 100 μm; C, 30 μm; D, 10 μm; E, 200 μm.

tynes, bearing fine denticles along inner margins (Fig. 10D) and 3) capillaries of variable lengths and diameters occurring in both rami throughout body.

Branchiae absent. Pygidium with 4–5 ventrally-located cirri (Fig. 10E).

Remarks.—The specimens referred to *Oncoscolex dicranochaetus* Schmarda by Hartman (1952) and *Sclerocheilus oculatus* (Ehlers) by Hartman (1967) were examined and found to agree very well with Ashworth's

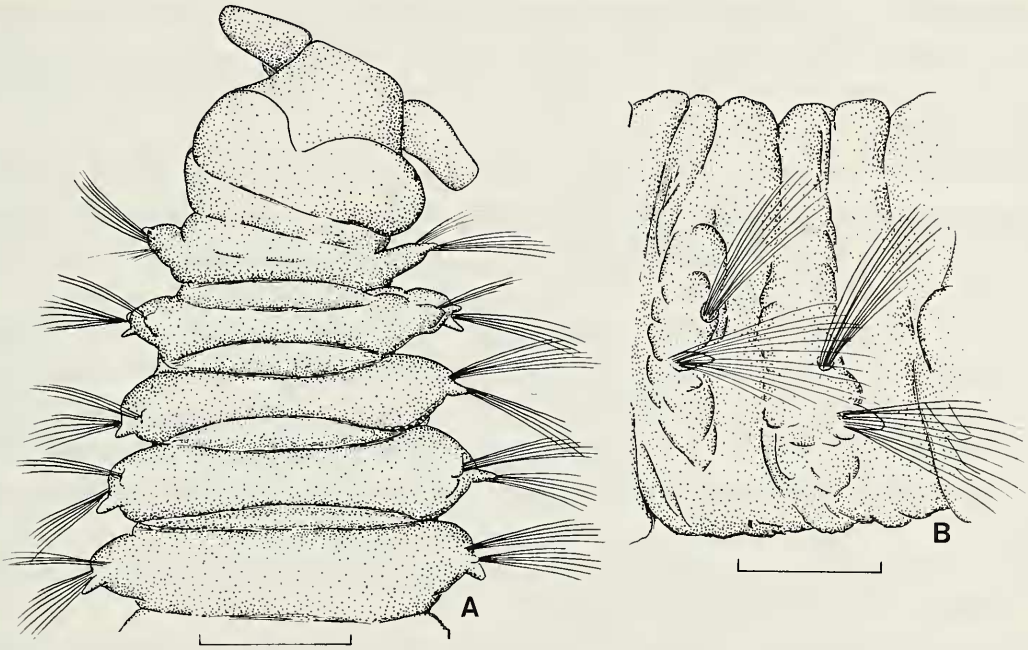

Fig. 11. *Kebuita minuta:* A, Anterior end in dorsal view; B, Two anterior setigers in lateral view. Scale: A, 300 μm; B, 200 μm.

(1915) excellent account of *S. antarcticus* [see also remarks under *Hyboscolex equatorialis*]. *S. antarcticus* differs from its closest relative, *S. minutus* Grube from the North Atlantic, in having notopodial acicular spines present on setigers 1–3, instead of only setiger 1.

Distribution.—Antarctica, in 45–426 m.

Kebuita minuta Hartman, 1967
Fig. 11

Kebuita minuta Hartman, 1967:131–132; 1978:179, fig. 27a–b [in part, specimen from *Glacier* Sta. 19-21 = *Notomastus* sp.].

Material examined.—SOUTH SHETLAND ISLANDS, *Eltanin* Sta. 993, 13 Mar. 1964, 61°25′S, 56°30′W to 56°32′W, 300 m, Blake trawl, 1 specimen (USNM 56622).—SOUTH ORKNEY ISLANDS, *Eltanin* Sta. 1079, 13 April 1964, 61°26′S to 61°24′S, 41°55′W, 593–598 m, Blake trawl, holotype (USNM 55553).—ANTARCTIC PENINSULA, *Eltanin* Sta. 272, 21 Oct. 1962, 64°54′S, 68°21′W, 412 m, 1 specimen (USNM 56625).—ROSS SEA, *Eltanin* Sta. 2012, 13 Jan. 1968, 73°59′S, 170°51′E to 73°58′S, 170°58′E, 589–608 m, Blake trawl, 1 specimen (USNM 60574).—WEDDELL SEA, 13 Mar. 1969, *Glacier* Sta. 69-21, 73°52′S, 31°18′W, 2288 m, epibenthic sled, 1 specimen (USNM 46991); Sta. 69-23, 14 Mar. 1969, 72°49.6′S, 30°29.7′W, 3687 m, anchor dredge, 1 specimen (USNM 46972).

Description.—A small species, up to 8 mm long and 3 mm wide at mid-body region. Body narrow anteriorly and posteriorly, swollen in middle, appearing generally grublike or maggot-shaped. Color in alcohol: light tan to dark brown.

Prostomium narrow anteriorly, tapering posteriorly, with blunt anterior margin bearing 2 prominent lateral horns (Fig. 11A); eyes lacking; nuchal organs not apparent. Peristomium well-developed, overlapping prostomium dorsally; with mid-dorsal notch (Fig. 11A); everted proboscis saclike.

First 6–8 setigers narrower than those following, with first 4–5 having prominent annulations; subsequent segments smoother, swollen; posterior 8–10 segments more slender, terminating in simple pygidial ring lacking cirri. Notopodial lobes and cirri lacking; neuropodia with distinct setal lobes and small postsetal lamellae (Fig. 11B), best seen on anterior and posterior segments.

Setae all capillaries. Specimen from Ross Sea (*Eltanin* Sta. 2012) with ova measuring 80–85 μm in diameter.

Remarks.—Hartman (1967, 1978) reported the presence of furcate setae in this species, but despite careful inspection none have been observed.

Distribution.—Widespread localities in Antarctic and subantarctic seas, in 300–3687 m.

Discussion

The genera of the Scalibregmatidae were reviewed by Kudenov and Blake (1978) as part of a study of Australian species. They recognized 13 genera arranged into 3 main groups. While the basis for their arrangement remains valid, it is now apparent that some species were generically misplaced owing to a reliance on published descriptions rather than an examination of pertinent type-specimens. The outline presented below is revised from that of Kudenov and Blake (1978) to accommodate several nomenclatural changes at the species level. It also includes a new category (D) in Group I for *Scalibregmides* Hartmann-Schröder and an as yet unnamed genus.

Group I includes species having elongated or arenicoliform bodies and T-shaped prostomia. The 4 generic categories include: (A), species having dorsal and ventral cirri in posterior parapodia [Genera: *Scalibregma* Rathke, *Sclerobregma* Hartman, *Pseudoscalibregma* Ashworth, and *Oligobregma* Kudenov and Blake]; (B), species having only ventral cirri in posterior segments [Genera: *Parasclerocheilus* Fauvel, and *Sclerocheilus* Grube]; (C) species lacking dorsal and ventral cirri in posterior segments (also lacking postsetal lamellae) [Genera: *Cryptosclerocheilus* Blake, *Hyboscolex* Schmarda, and *Asclerocheilus* Ashworth]; (D), species lacking dorsal and ventral cirri but having markedly elongate and digitiform postsetal lamellae. *Scalibregmides* is the first genus in this latter category and

lacks anterior acicular spines. A second genus, to include *Asclerocheilus californicus* Hartman, 1963, but yet to be named, will include species having anterior acicular spines.

I. Body arenicoliform; prostomium T-shaped with distinct lateral processes or horns.
  (A) Parapodia of posterior segments with dorsal and ventral cirri.
    (1) With branchiae; without acicular spines.
      Scalibregma Rathke, 1843
        (*Oligobranchus* Sars, 1846)
        S. inflatum Rathke, 1843 (type)
    (2) With branchiae; with acicular spines
      Sclerobregma Hartman, 1965
        S. branchiatum Hartman, 1965
        S. stenocerum Bertelsen and Weston, 1980
    (3) Without branchiae; without acicular spines
      Pseudoscalibregma Ashworth, 1901
        P. bransfieldium (Hartman, 1967)
        P. pallens Levenstein, 1962
        P. parvum (Hansen, 1878) (type)
        P. usarpium, new species
    (4) Without branchiae; with acicular spines
      Oligobregma Kudenov and Blake, 1978
        O. aciculatum (Hartman, 1965) (type)
        O. collare (Levenstein, 1978)
        O. hartmanae, new name
        O. notiale, new species
        O. oculatum Kudenov and Blake, 1978
        O. simplex Kudenov and Blake, 1978
  (B) Parapodia of posterior segments with ventral cirri, without dorsal cirri; without prolonged postsetal lamellae
    (1) With branchiae; with acicular spines
      Parasclerocheilus Fauvel, 1928
        P. branchiatus Fauvel, 1928 (type)
        P. capensis Day, 1961
    (2) Without branchiae; with acicular spines
      Sclerocheilus Grube, 1863
        S. antarcticus Ashworth, 1915
        S. deriugini Zachs, 1925
        S. minutus Grube, 1863 (type)
  (C) Parapodia of posterior segments reduced; without dorsal and ventral cirri; without prolonged postsetal lamellae
    (1) With branchiae; without acicular spines

Cryptosclerocheilus Blake, 1972
C. baffinensis Blake, 1972
[Note: following a reexamination of slides of the setae of setiger 1 prepared from the types of *C. baffinensis,* I have determined that the acicular "spines" are merely worn capillaries. The genus remains valid, but the definition is revised to reflect the absence of acicular spines].

(2) Without branchiae; without acicular spines
Hyboscolex Schmarda, 1861 (see Day 1961 for literature)
(*Oncoscolex* Schmarda, 1861)
H. dicranochaetus (Schmarda, 1861)
H. equatorialis, new species
H. longisetus Schmarda, 1861 (type)
H. oculatus (Ehlers, 1901), new combination
H. pacificus (Moore, 1909)
H. reticulatus (McIntosh, 1885)
H. verrucosus Hartmann-Schröder, 1979

(3) Without branchiae; with acicular spines
Asclerocheilus Ashworth, 1901
A. acirratus (Hartman, 1966), new combination
A. ashworthi, new species
A. beringianus Uschakov, 1955
A. capensis Day, 1963
A. heterochaetus Kudenov and Blake, 1978
A. intermedius (Saint-Joseph, 1894) (type)
A. tropicus, new species

(D) Parapodia of posterior segments reduced; without dorsal and ventral cirri; with prolonged postsetal lamellae
(1) Without branchiae; without acicular spines
Scalibregmides Hartmann-Schröder, 1965
S. chilensis Hartmann-Schröder, 1965 (type)
S. peruanus, new species

(2) Without branchiae; with acicular spines
Genus to be named for *Asclerocheilus californicus* Hartman, 1963

II. Body maggotlike; prostomium usually incised or entire, rarely with distinct lateral processes.
(A) Prostomium incised
(1) With branchiae
Polyphysia Quatrefages, 1865
(*Eumenia* Oersted, 1843, preoccupied)
(*Lipobranchus* Cunningham & Ramage, 1888)
P. caulleryi (McIntosh, 1922)

P. crassa (Oersted, 1843) (type)
P. crassa fauveli (Laubier, 1959)
P. hysticis (McIntosh, 1922)

(2) Without branchiae
Kebuita Chamberlin, 1919
(*Gwasitoa* Chamberlin, 1919
K. glabra (Ehlers, 1887) (type)
K. minuta Hartman, 1967

(B) Prostomium entire
(1) Without branchiae
Neolipobranchus Hartman & Fauchald, 1971
N. glabrus Hartman & Fauchald, 1971 (type)

III. Body elongated, slender; prostomium with 2 long frontal antennae; 2 prominent nuchal organs
(1) Without branchiae
Scalibregmella Hartman & Fauchald, 1971
S. antennata Hartman & Fauchald, 1971 (type)

Two genera, *Proscalibregma* Hartman, 1967, and *Scalispinigera* Hartman, 1967 were considered to be *incertae sedis* by Kudenov and Blake (1978). Examination of the type-specimens of the species of those genera now permits comment on their placement within the Polychaeta. *Proscalibregma linea* Hartman, 1967, from deep waters of Drake Passage, has uniramous parapodia and a ventral groove typical for species of the Opheliidae. Hence, this monotypic genus should be referred to that family, and possibly to the genus *Tachytrypane* McIntosh, 1885. *Scalispinigera* has 2 named species: *S. oculata* Hartman, 1967, from the Antarctic Peninsula and *S. cirrata* Hartman and Fauchald, 1971, from the deep North Atlantic. Both species are closely related to the Hesionidae in the structure of the pharyngeal region, parapodia and setae. The antennae, however, are reduced, a feature which is aberrant in Hesionidae.

A tabulation of scalibregmatid species reported by Day (1967) from South Africa, Kudenov and Blake (1978) from Australasia, and by the present investigator from South America and Antarctica reveals that each continent has a distinct suite of species. Only the cosmopolitan *Scalibregma inflatum* occurs throughout the southern hemisphere. *Polyphysia crassa,* a North Atlantic species, occurs in South Africa. The following list of species is limited to those scalibregmatids occurring south of 30° south latitude. No zoogeographic trends are evident at the generic level.

South Africa: *Asclerocheilus capensis, Hyboscolex longiseta, Parasclerocheilus capensis, Polyphysia crassa.*

Australasia: *Asclerocheilus heterochaetus, Oligobregma simplex, Hyboscolex dicranochaetus.*

South America: *Hyboscolex oculatus, Scalibregmides chilensis.*

Antarctica: *Asclerocheilus ashworthi, Kebuita minuta, Oligobregma hartmanae, O. collare, O. notiale, Pseudoscalibregma bransfieldium, P. usarpium, Sclerocheilus antarcticus.*

Cosmopolitan: *Scalibregma inflatum.*

Key to the Scalibregmatidae from South America and Antarctica

1. Posterior parapodia with either long postsetal lamellae, short neuropodial lobes, dorsal and ventral cirri or only ventral cirri 5
– Parapodia reduced, lacking postsetal lamellae and dorsal and ventral cirri 2
2. Anterior notopodia with acicular spines 3
– Anterior notopodia without acicular spines 4
3. Anterior acicular spines limited to setiger 1; prostomial eyes arranged in 2 longitudinal groups; anterior margin of prostomium formed into 2 large, lateral wings (Fig. 1A) ... *Asclerocheilus ashworthi*
– Anterior acicular spines on setigers 1–2; no eyes; anterior margin of prostomium formed into 2 lateral lobes (Fig. 1D) .... *Asclerocheilus tropicus*
4. Prostomial eyes V-shaped; frontal horns prominent, articulating with anterior margin of prostomium ..... *Hyboscolex oculatus*
– Prostomial eyes forming single rows; frontal horns reduced, not articulating with anterior margin of prostomium (Fig. 2A) ..... *Hyboscolex equatorialis*
5. Parapodia with elongated postsetal lamellae or short neuropodial lobes; no dorsal or ventral cirri 6
– Parapodia without postsetal lamellae or lobes; with dorsal and ventral cirri 8
6. Parapodia with elongated postsetal lamellae; peristomium poorly developed, recessed into setiger 1 7
– Neuropodia with short postsetal lobes; peristomium well developed, notched, overlapping prostomium (Fig. 11A); body more or less maggotlike ..... *Kebuita minuta*
7. Anterior margin of prostomium with 2 distinct frontal horns articulating with anterior margin (Fig. 8A); parapodial postsetal lamellae as long as 3–4 segments (Fig. 8B); eyes absent; first 3 segments smooth, non-annulated ..... *Scalibregmides chilensis*
– Anterior margin of prostomium with 2 non-articulating rounded lobes (Fig. 9A); parapodial postsetal lamellae 1–2 segments long (Fig. 9B); 2 clusters of eye spots present; first 4 segments smooth, non-annulated ..... *Scalibregmides peruanus*
8. Posterior parapodia with both dorsal and ventral cirri; eyes lacking or arranged as 2 distinct groups of ocelli 9

– Posterior parapodia with ventral cirri; no dorsal cirri; eyes fused into a single, large inverted V (Fig. 10A) ..... *Sclerocheilus antarcticus*

9. Some anterior setigers with branched gills .... *Scalibregma inflatum*
– Gills entirely absent 10
10. Acicular spines present on some anterior notopodia 11
– Acicular spines absent 13
11. Anterior notopodial spines prominent, occurring on setigers 1–3; peristomium smooth, lacking papillae 12
– Anterior notopodial spines inconspicuous, intermixed with longer capillaries on setigers 1–2; peristomium with numerous papillae (Fig. 4A) ..... *Oligobregma hartmanae*
12. Dorsal and ventral cirri inflated, saclike, not tapering at tip; eyes present; anterior margin of prostomium with 2 broadly rounded laterally projecting lobes (Fig. 5A) ..... *Oligobregma notiale*
– Dorsal and ventral cirri conical, tapering at tip; eyes absent; anterior margin of prostomium with 2 short rounded lobes projecting forward (Fig. 3A) ..... *Oligobregma collare*
13. Rounded nuchal crest present posteriorly on prostomium (Fig. 6A); dorsal and ventral cirri broad, inflated (Fig. 6B); segmental papillae generally lacking ..... *Pseudoscalibregma bransfieldium*
– Nuchal crest absent; dorsal and ventral cirri short, globular, not inflated (Fig. 7B); body segments heavily papillated (Fig. 7A) ..... *Pseudoscalibregma usarpium*

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