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# NEW RECORDS OF SOME LITTLE KNOWN AUSTRALIAN POLYCHAETOUS ANNELIDS

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Plates 36-38. Fig. 1

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The four species named below were sent to the Allan Hancock Foundation by Miss Elizabeth Pope, Curator of Worms and Echinoderms at the Australian Museum, Sydney, New South Wales. I am indebted to Miss Pope for the privilege of examining these interesting animals. Mr. Carl Petterson, scientific illustrator, prepared the plates of photographs and figures. I am grateful to the Administration of the Allan Hancock Foundation of the University of Southern California for support and the use of physical facilities. The specimens are deposited in the Australian Museum, Sydney.

Family **POLYODONTIDAE** Pflugfelder

Genus **Polyodontes** Audouin and Milne Edwards, 1832

**Polyodontes australiensis** (McIntosh) 1885

Plate 36 a, b

*Eupompe australiensis* McIntosh, 1885, pp. 135-139, pl. XXI, figs. 4, 5, pl. XXIII fig. 8, pl. XXIV, fig. 4, pl. XXXIA, figs. 2-6.

*Polyodontes australiensis* Hartman, 1939, p. 82.

New records: The Basin, Pittwater, Port Jackson, New South Wales.

Diagnosis: A large, posteriorly incomplete specimen measures 150 mm. long by 20 mm. wide and retains about 90 setigerous segments. The species was first described from a fragment measuring 50 mm. long and 24 mm. wide, thus a comparably large individual. The body (pl. 36 a) is thickest in the anterior region between setigers 10 to 20 where it is dorsally arched. The ventrum (pl. 36 b) is nearly flat, and behind segment 40 to 50 the body is depressed. Elytra are large and limited to the sides; they do not cover the dorsum. The prostomium has a pair of prominent eyestalks. The species was referred to *Polyodontes* because the superior neuropodial setae are distally hastate and not penicillate (Hartman, 1939, p. 81).

The present specimen agrees well with the original account of McIntosh (1885, p. 135). The species has remained unreported since first taken by the Challenger Expedition, off Cape York, Torres Strait.

Distribution: New South Wales, Queensland, Australia.

\* Contribution No. 278 of the Allan Hancock Foundation, University of Southern California.

Family **SYLLIDAE** GrubeGenus **Myrianida** Milne Edwards, 1845**Myrianida pachycerus** (Augener) 1913, new combination

Fig. 1 a, b

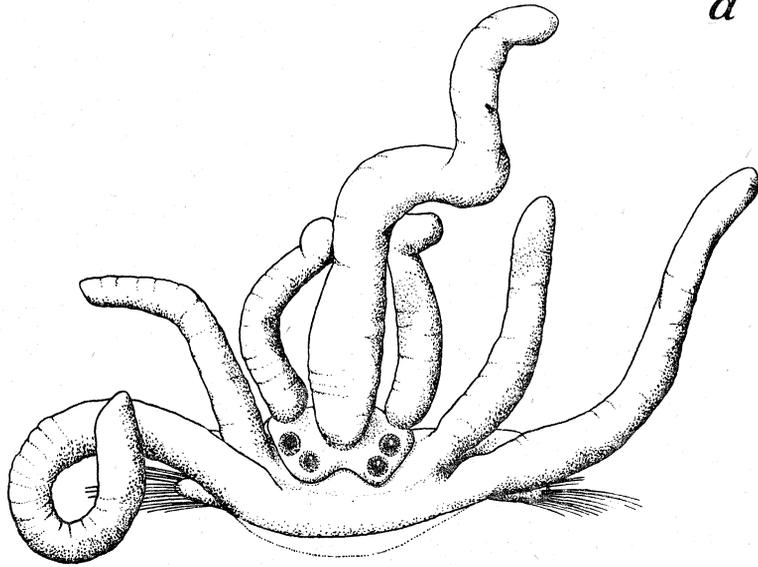
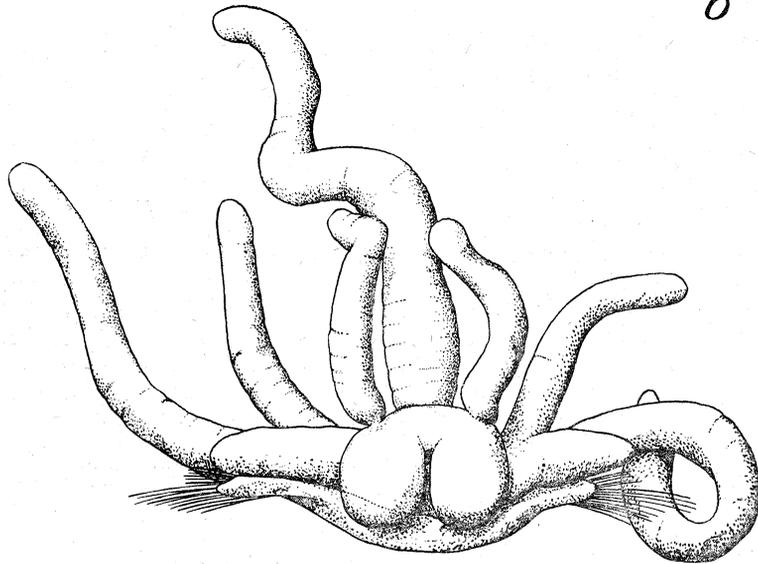
*a**b*

Fig. 1 a, b: *Myrianida pachycerus* (Augener) 1913; a, anterior end, in dorsal view, x 120; b, anterior end, in ventral view, x 120.

*Autolytus pachycerus* Augener, 1913, pp. 257-260, pl. II, figs. 11 a-12, text fig. 40 a-c.

New Record: Long Reef, New South Wales, in weed-mat, intertidal, August 4, 1962.

Diagnosis: In life the stock, without stolons, is about 5 mm. long and 0.5 mm. wide. The stock with 50 segments is accompanied by smaller, slenderer stolons numbering 10 to 15 in a chain; together they are nearly as long as, or somewhat longer than, the stock region; each consists of about 30 segments. Colours in life (noted by Miss Pope) consist of a bright blue or purple spot, usually round but sometimes a transverse streak, on the mid-dorsum of each segment; the ground colour is orange. Preserved specimens have no colour pattern.

The prostomial lobe is wider than long and slightly emarginate at its posterior end; it lacks epaulettes. It has long, thick antennae; the median antenna is thickest and is inserted between the anterior prostomial eyes; the paired lateral antennae are much smaller. The tentacular cirri (fig. 1 a) are very similar to the antennae; the two dorsal cirri are longer than the two ventral ones. Four eyes are present in trapezoidal arrangement, with the anterior pair wider apart. The paired palpi (fig. 1 b) are thick, subglobular and to be seen only in ventral view. The pharynx, seen through the body wall, terminates distally in a circlet of larger teeth alternating regularly with three much smaller denticles. The proventriculus extends through segment 7/8 or 8/9.

Parapodia are short and blunt throughout. Dorsal cirri are long and digitiform as originally shown (Augener, 1913, fig. 4 c). Setae are of two kinds: a single, superior seta is simple and very slender; it is accompanied by a transverse fascicle of 23 or more thicker, shorter, composite falcigers; each of these has an appendage about twice as long as wide, and the distal end is unequally bifid, with the larger tooth at an oblique angle to the shaft and the distal tooth nearly in line with it; the cutting edge of both appendage and shaft is denticulate.

This is referred to *Myrianida* because dorsal cirri are thick and digitiform, instead of slender and filiform; the stock gives rise to many, instead of a few, stolons.

Distribution: New South Wales; Western Australia, in intertidal or shallow depths.

Family **PECTINARIIDAE** Quatrefages

Genus **Amphictene** Savigny, 1818

**Amphictene crassa** Grube, 1870

Plate 37 a, b

*Pectinaria crassa* Grube, pp. 321-322.

*Pectinaria (Amphictene) crassa* Nilsson, 1928, pp. 58-64, figs. 18, 19.

New record: Specific locality not known; received from Sydney, New South Wales, August, 1963.

Diagnosis: The body is thick, plump and measures to 70 mm. long; it is widest at the fourth segment where it measures 15 to 20 mm. across, and it tapers posteriorly to a width of 10 mm. Colour (preserved) is pearl grey. Both dorsum and ventrum have fine transverse stripes (retained in alcohol). There are 16 segments with flattened setal fascicles; the first three and the last two pairs project little from the parapodia. The anterior margin of the cephalic lobe has 32 cirriform appendages

and the posterior fold of this lobe, which is about twice as broad as long, terminates in 56 triangular lobes. Twelve pairs of gold-coloured spines are directed forward; they are conspicuous and terminate distally to slender points. The lateral cirrus of the first segment at the outermost ends of paleae is shorter and slenderer than that of the second segment.

Branchiae are brown, measure about 7 mm. long, and numerous. Uncini are broad, the cutting edge of each has 8 to 10 teeth. Uncinial tori number 13 pairs; the first are present from the fourth setiger. The tube (pl. 37 a) is thin-walled, fragile, externally covered with white, smooth, platy-pebbles about 3 mm. across, and a few dark ones; it measures about 37 mm. long and 16 mm. wide at its anterior end and 14 mm. at the posterior, narrower end. Internally (pl. 37 b) it is lined with a thin, translucent membrane which retains its form even though the pebbles are broken away.

The scapha at the posterior end is approximately six-sided; it measures 4.5 mm. long by 6 mm. wide.

The species has been redescribed by Nilsson (1928) based on specimens from Palau.

Distribution: New Caledonia; Trincomali, Ceylon; Palau; questionably New South Wales.

Family **TEREBELLIDAE** Malmgren

Genus **Loimia** Malmgren, 1866

**Loimia** nr. **ingens** (Grube) 1878

Plate 38 a, b

*Terebella ingens* (Grube) 1878, pp. 228-230, pl. XIII, fig. 1.

*Loimia ingens* Hessle, 1917, p. 170.

New record: Long Reef, Collaroy, Sydney, New South Wales, under boulder, collected October 6, 1963, by Miss Isobel Bennett.

Diagnosis: This is the largest of all *Loimia* species; it measures 310 to 506 mm. long, of which the thorax comprises nearly one-third of the total length; the cephalic region (pl. 38 a) is relatively short. Greatest width is at segments 12 to 13, where the body is about 16 mm. wide; it tapers posteriorly to a blunt end. The thorax consists of 17 setigerous segments and the abdomen of many more. Lateral lappets (pl. 38 b) are conspicuous in the branchial region. Branchiae number three pairs with the first pair the largest; all are dendritically branched and have thick, basal trunks. Thoracic notopodia are present from segment 4; the setae are smooth and limbate. Uncini are present from the second setiger; they are pectinate, with the teeth in a single row; the first uncini in the first segment have only three or four marginal teeth each, with the basal tooth always the largest, and decreasing in size distally. The specific identity is questioned because the number of uncinial teeth varies between three to five.

Distribution: Sydney, New South Wales; Bohol, Philippine Islands.

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## EXPLANATION OF PLATES

Plate 36 a, b, *Polyodontes australiensis* (McIntosh) 1885: a, entire animal, in dorsal view, x 1. b, entire animal, in ventral view, x 1.

Plate 37 a, b, *Amphictene crassa* (Grube), 1870: a, tube and entire animal, the tube seen from the outside, and animal in dorsal view, slightly enlarged. b, tube and entire animal, the tube seen from the interior, and the animal in ventral view, slightly enlarged.

Plate 38 a, b, *Loimia* nr. *ingens* (Grube) 1878: a, entire animal, in right lateral view, slightly enlarged. b, entire animal, in left lateral view, showing distal ends of branchiae, slightly enlarged.

