

STUDIES ON NEW OR LITTLE KNOWN POLYCHAETES FROM THE  
INDIAN SEAS. 2. *MICROMALDANE JONESI* N. SP. (MALDANIDAE)

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THE genus *Micromaldane* is represented by two species, *Micromaldane ornithochaeta* Mesnil (1897) from France (Atlantic coast) and *M. bispinosa* Hartmann-Schroder (1960) from Gardafa (Red Sea). *M. ornithochaeta* has subsequently been reported from North Atlantic and Irish Sea by various workers (Fauvel, 1927; Southward, 1956; and Hammond, 1966), from Cape Margerie, Adelle coast Antarctica by Fauvel as reported by Hartman (1966) and from the coast of British Columbia by Berkeley, E. & C. (1962). Fauvel (1927) however doubted the validity of *M. ornithochaeta* since this species invariably occurs in association with other maldanids and is more or less similar to the post-larval stages of *Nicomache trispinata* Arwidsson in the structures of its anterior and posterior extremities.

The present species is described based on a good collection of micromaldanids from the Gulf of Mannar. The small tubes of fine sand grains form colonies of 'aggregate fenestrated masses' similar to those of *Salmacina dysteri* Huxley. This differs from the known species of this genus in many characters and is treated as a new species.

Genus *Micromaldane* Mesnil 1897

Type species: *Micromaldane ornithochaeta* Mesnil

Generic characters: Head without limbate plates. Nuchal organs nearly straight or parallel. Avicular uncini with short stem in all segments. Dorsal bristles of two kinds, geniculate with serrated cutting edge and shorter spatulate with striations. Pygidium broadly funnel-like. No collerette.

Key to the species of *Micromaldane*

1. Spatulate setae with narrow shaft and a broad lanceolate distal end. Lateral teeth and subrostral barbules of the avicular uncini rudimentary or absent.....2  
Spatulate setae more or less uniformly broad. Avicular uncini with prominent lateral teeth and subrostral barbules.....*M. bispinosa*
2. Geniculate setae uniformly serrated. Avicular uncini with rudimentary subrostral barbules and anal cone inside the shallow pygidial funnel. ....*M. ornithochaeta*  
Serrated geniculate setae with the first serration prominent giving a bifid appearance. Avicular uncini without subrostral barbule and anal cone projecting beyond the pygidial funnel.....*M. jonesi* sp. nov.

**Micromaldane jonesi** n. sp.

**Material :** 25 specimens measuring 3.5 mm. to 12 mm. and having 15 to 19 setigerous segments are extracted from the large colony of minute tubes. All specimens above 4.5 mm. are with 19 setigerous segments.

**Description :** Body cylindrical fragile with 19 setigerous segments. No ante-anal achaetous segments in specimens having 19 setigers. Head ovoid. Two nuchal grooves slightly arched and not very prominent. No eyes visible. Buccal segment is without setae. First setigerous segment with dorsal bristles as well as ventral avicular uncini (Fig. 1 A). The length of segments up to 9th setiger is less than segments 9th to 14th. Parapodia are not very prominent. The dorsal bristles are of two kinds (Fig. 2 B, F, G, H) : a lancet-shaped bristle with narrow shaft and a pointed spatulate blade and a geniculate bristle with fine serrations at the concave side. The first serration at the proximal end being very prominent, it gives a semi-bifurcated appearance to the bristle (Fig. 2 F). The number of lancet and geniculate bristles varies in different specimens. Ventrally all the setigerous segments have 2 to 8 uncini (Fig. 2 D) with very curved rostrum. The maximum numbers occur between segments 5 and 14. Each uncini has 5 to 6 teeth and a very much recurved manubrium (Fig. 2 C & E) having a bulbous swelling on either side. The subrostral barbules are absent. Ante-anal achaetous segment absent in specimens having 19 setigers. Pygidium is broad and the anal cone projects beyond the posterior border (Fig. 1 B, C) of the pygidial segment.

The tubes are of very fine sand grains (Fig. 1 D) adhering by means of mucus and are found to cluster together (Fig. 1 F) producing colonies, resembling those of *Salmacina dysteri*.

The species is named after Dr. S. Jones, Director, Central Marine Fisheries Research Institute, in appreciation of his interest and encouragements in my work on Polychaetes.

**Holotype :** A specimen measuring 12 mm. and having 19 setigers is designated as the holotype to be deposited at the Central Marine Fisheries Research Institute Museum CMFRI No. 155.

**Paratypes :** 24 specimens measuring 3.5 mm. to 11 mm. with 15 to 19 setigerous segments. CMFRI No. 156.

**Type locality :** Off Pudumadam, Gulf of Mannar (31-12-1967). From trawl net operated at the bottom. Fine silty sand and mud.

**Remarks :** In *Micromaldane jonesi* n. sp., no further additions of segments is noticed after it attains 19 setigers at about 4.5 mm. length. In specimens below this length the segments are added from the posterior region, as is shown by the ante-anal achaetous segment in younger animals. Fauvel (1927) in his remarks on Rioja's observations on *M. ornithochaeta* shows that the segments are added in this species from the anterior end, a new segment getting marked off from the head and later developing the capillary and uncini bristles. In the present species during the growth from 4.5 mm. to 12 mm. no further setigers are added, which indicates that after the 19 setigerous segment stage the length is increased only by the growth in length of each segment. The higher rate of growth takes place between segments 6 and 16, the maximum rate being at segments 9 to 14. It is observed that when the

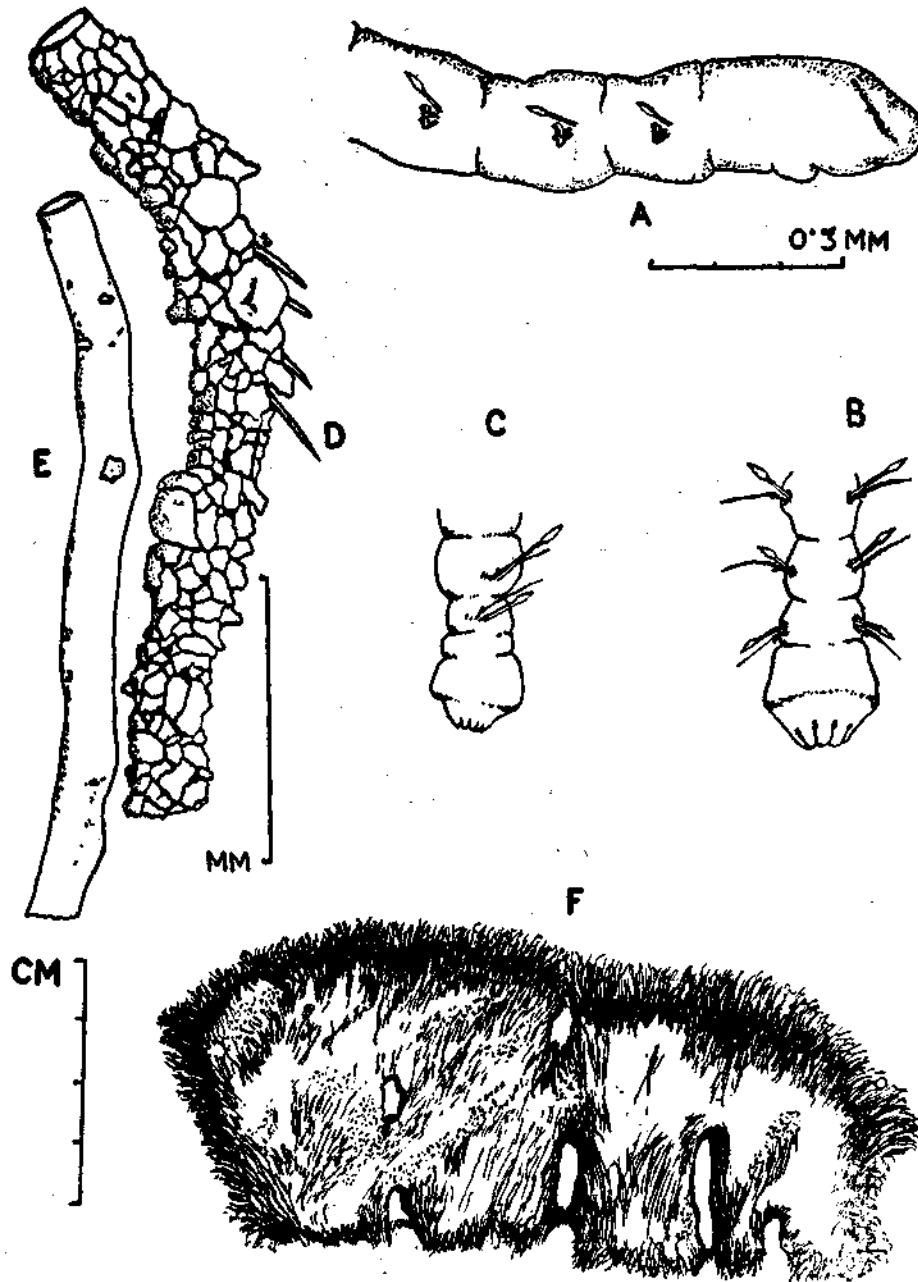


FIG. 1. *Micromaldane jonesi* n. sp. A. anterior region; B. pygidium with three ante-anal setigers; C. pygidium of young specimen; D-E. tube magnified to show the size of sand grains and when sand grains removed; F. colony of *Micromaldane jonesi* n. sp.

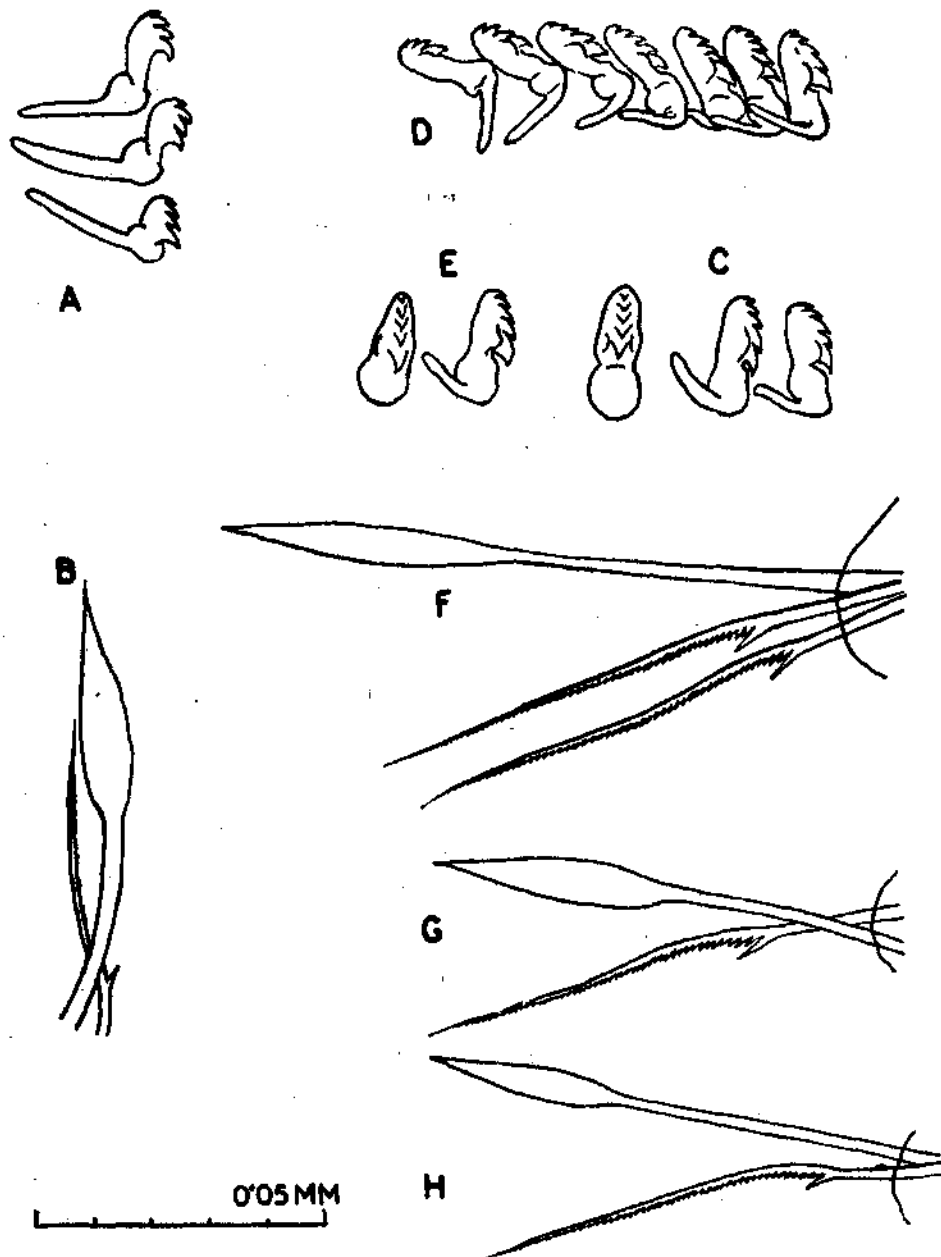


FIG. 2. *Micromaldane jonesi* n. sp. A. uncini of first setiger. B. spatulate and geniculate bristle from first setiger; C, D, E. uncini from 5th, 7th and 8th setiger respectively; F. spatulate and geniculate bristle from middle region; G-H. bristles from 18th and 19th setiger.

animal attains a length of 7 mm. the growth rate at the anterior segments (6 to 9) is retarded, though between 9 and 15 it continues to grow.

#### SUMMARY

*Micromaldane jonesi*, a new species of the family Maldanidae is described from Gulf of Mannar. A key for the known species of *Micromaldane* is given.

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