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## Studies on Japanese Anascan Bryozoa 9. Division Malacostega (7)<sup>1)</sup>

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### Abstract

One recent species of *Setosellina* is described from Japan. This species is the first record of the recently proposed family Setosellinidae from Japan.

**Key words:** Bryozoa, systematic description, *Setosellina*.

Following the previous article (Mawatari and Mawatari, 1986) which includes three species of Hiantoporidae, this is the ninth work of our serial studies on Japanese anascan bryozoans. The present paper deals with a species of *Setosellina*, Setosellinidae.

### Family SETOSELLINIDAE Hayward and Cook, 1979

Lunulariidae (part) Auctt.

Setosellidae (part) Levinsen 1909.

Hincksinidae (part) Harmer 1926, Canu and Bassler 1929, Bassler, 1953.

Setosellinidae Hayward and Cook, 1979, p. 45.

*Diagnosis:* Zoarium encrusting, unilamellar, often with free pericyst. Zooecia arranged in two series originated from early spiral budding. Matured zooecia with wider opercula. Avicularia interzooecial, with setiform mandible occurring distally or distolaterally to each zooecium. Ooecia distal to zooecia with large foramen.

*Note:* Hayward and Cook proposed this family to separate membraniporine *Setosellina* and *Heliodoma* from microporine *Setosella*, all of them were once included together in the Setosellidae. Setosellinidae is placed under the Division Malacostega leaving the old Setosellidae under the Division Coelostega.

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### Genus *Setosellina* Calvet, 1906

*Membranipora* (part) Auctt.

*Ellisina* (part) Norman, 1903.

*Cupularia* (part) Waters, 1926.

*Setosellina* Calvet, 1906, p. 157; 1907, p. 395; Canu and Bassler, 1920, p. 111, text-fig. 27 E; Harmer, 1926, p. 264; Bassler, 1953, p. 160; Cook, 1965, p. 182; Prenant and Bobin, 1966, p. 299; Hayward and Cook, 1979, p. 48.

Type species: *Setosellina roulei* Calvet, 1906.

*Diagnosis*: Zoarium encrusting, unilamellar, sometimes becoming free in periphery. Zooecia in spiral series. Gymnocyst absent or reduced. Cryptocyst narrow, often more or less developed proximally, usually minutely tuberculated. Opesia oval, or a little enlarged below. Vibracula alternate with zooecia in longitudinal series, occurring just distal to each zooecium. Vibracular opesia often more or less asymmetrical. Ooecia, if present, a little transverse with a median fenestra.

*Note*: This genus differs from *Vibracellina* Canu and Bassler 1917 in the not-scattered but alternate vibracula. *Setosellina* differs also from *Heliodoma* Calvet 1906 in having obscure spiral arrangement of zooecia and less developed cryptocyst. The following recent species fall in the present genus.

*Cupularia capriensis* Waters, 1926, Mediterranean, Azores. (10–150 m)

*Setosellina constricta* Harmer, 1926, p. 264, Borneo, Strait of Makassar, New Guinea, Celebes. (0–59 m)

*Membranipora coronata* Hincks, 1881, Indian Ocean, Ceylon, Torres Strait, Loyalty Isl., West Australia, New Guinea, China Sea. (0–18 m)

*Setosellina goesi* Silén, 1942, Florida, West Indies.

*Setosellina roulei* Calvet, 1906, South Africa (500–1,000 m), Cape Verde Is., Cap Blanc. (1,900 m–2,300 m)

*Setosellina elegantula* d'Hondt & Schopf, 1984, South west Atlantic.

#### *Setosellina coronata* (Hincks, 1881) (Figure 1)

*Membranipora coronata* Hincks, 1881, p. 147, pl. 10, fig. 1; 1882, p. 118; Waters, 1898, pp. 661, 668; Kirkpatrick, 1890, pp. 611, 615; Thornely, 1907, p. 186.

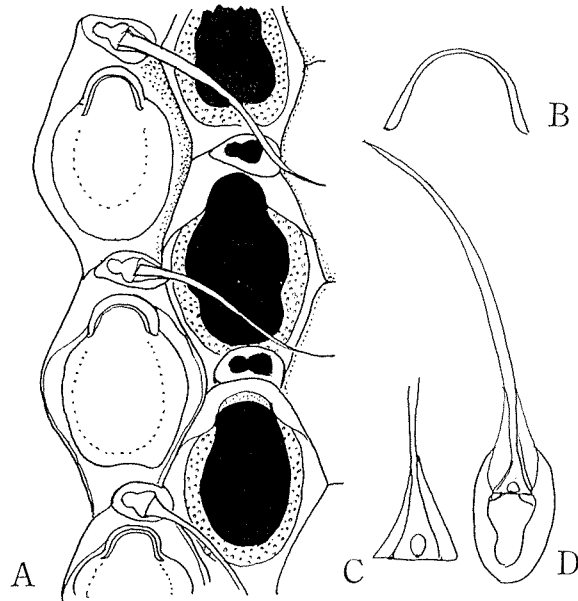
*Biflustra coronata*: MacGillivray, 1891, p. 79, pl. 9, fig. 3.

*Ellisina coronata*: Norman, 1903, p. 596.

*Setosellina coronata*: Harmer, 1926, p. 265, pl. 16, figs. 2–4.

*Material*: 2 immature colonies, 5–15 m, off Kochi, Kochi Pref., 11-V-1969, S. Mawatari leg.; 1 immature colony, 10–30 m, off Osumi, Kagoshima Pref., 25-VIII-1970, Mawatari leg.

Zoarium unilamellar, usually yellowish gray, encrusting on shells or stones. Zooecia somewhat large, subhexagonal, adjacent, usually arranged quinquentially in longitudinal series. Frontal gymnocyst absent. Membranous frontal entire, as large as zooecia. Opercular valve with distinct semicircular, submarginal sclerite. Cryp-



**Figure 1.** *Setosellina coronata* (Hincks, 1881). A, enlarged view of a part of a colony, showing each zoecium with a distal interzoecial vibraculum. B, an operculum. C, basal part of a vibracular rostrum. D, an interzoecial vibraculum with a vibracular rostrum.

tocyst narrow, descending, minutely tuberculate. Opesia elliptical to subtriangular, sometimes widened proximally. Vibracula on distal end of each zoecium, wider than long, with transverse rostrum. Rostrum with narrowly elongated trifoliate opening limited by a pair of long condyles which supports triangular basal sclerite of seta. Seta long, curved, spout-like, with basal membraneous wings and minute hairs. Ooecia not found.

In our Japanese specimens, the early astogeny is obscure and spiral development of the zoarium is also not clear.

*Affinities*: The present species differs from *S. constricta* Harmer in larger and wider opesia and in the transverse position of vibracula. *S. coronata* also differs from the type species *Setosellina roulei* Calvet in larger opesia, undeveloped gymnocyst, transverse vibracula and longer setae.

*Distribution*: Indian Ocean (Kirkpatrick, 10–20 m), Ceylon (Thornely, 0–10 m), New Guinea (Harmer, 10–20 m), Torres Strait (Waters, 10–30 m), West Australia (McGillivray, 20–30 m), Celebes (Harmer, 5–40 m), Singapore (Hincks, 10 m, Harmer, 5–10 m), China Sea (Thornely, 10–12 m), Japan.

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