Mucropetraliella serrata (Livingstone, 1926). Tilbrook & Cook, 2004, p. 332, fig. 9A-D

Mucropetraliella serrata (Livingstone, 1926)

Figs 9A–D

Petralia vultur var. *serrata* Livingstone, 1926: 95, pl. 6, figs 7–10.

Petralia vultur var. *serrata*: Hastings, 1932 (in part): 436, text figs 14A–D.

Mucropetraliella serrata: Stach, 1936: 372; Harmer, 1957 (in part): 718, pl. 46, fig. 8, Fig. 66 (*cum syn*).

Material examined

HOLOTYPE: AM U.2297, Surprise Shoal, between Cairns and Townsville, Great Barrier Reef, 28 fathoms (51 m).

OTHER MATERIAL EXAMINED: BMNH 1931.10.12.6, Peak Point, North Island, Queensland, 5.5–11 m; BMNH 1932.4.20.58, W. of Low Island, Great Barrier Reef, 11 m; BMNH 1890.3.24.38, Murray Island, Torres Strait; BMNH 1963.9.16.2–5, Torres Strait, Haddon Coll.; BMNH 1986.7.30.3, off Townsville, Queensland, 10–20 m, mud and shell bottom; BMNH 2000.4.11.26, Cleveland Bay, Great Barrier Reef.

Description

Colony semi-encrusting, with erect laminar expansions. Autozooids polygonal (*c*. 1.00 × 0.70 mm); frontal shields flat, uniformly perforate; marginal pores indistinct, lateral walls distinct. Primary orifice longer than wide, very narrow shelf-like ledge around anter, terminating midway along the lateral border, small paired lateral denticles and a moderately wide median denticle (less than one-third width of orifice); six oral spines. Suboral complex prominent, including a large, blunt mucro with an associated, elongate oval, ascending avicularium; with a rostrum raised from the mucro, crossbar complete with a small columella, mandible rounded terminally. Numerous frontal and sutural avicularia produced later in ontogeny, smaller than the mucronal avicularium, oval, randomly directed. Large lateral avicularium, rostrum elongated, widening distally and curving basally, orientated proximo-laterally; crossbar complete with a small columella. Ovicells prominent, minutely perforate, smooth but often bearing groups of protuberances of secondary calcification. A single radicular chamber distally, often accompanied by one or more small basal pores. Colonies are brilliant red when alive.

Remarks

Mucropetraliella serrata is distinguishable from *M. bennetti* by its larger suboral mucro, shorter and wider, large lateral avicularia, and less numerous oral spines. *Mucropetraliella serrata* does, however, have more oral spines than *M. tuberosa* which only bears four; the latter species has no lateral avicularia, only a large suboral avicularium.

Canu & Bassler (1929) described *Petraliella falcifera* and *P. philippinensis* from the Philippines, both of which have large, lateral avicularia, similar to *Mucropetraliella serrata*. No details of oral spines were given in the original description, or have been seen in the 'co-type' material deposited in the Natural History Museum, London collections. Harmer (1957) thought *P. falcifera* and *P. philippinensis* to be the same species, an idea with which we must concur having examined 'co-type' material of both, *P. philippinensis* taking precedence. *M. serrata* resembles *M. loculifera* in having supernumerary avicularia and large, lateral avicularia. However, *M. serrata* has six oral spines whereas *M. loculifera* has a maximum of four. *M. serrata* has a narrower median denticle and also lacks the occlusor laminae diagnostic of *M. loculifera*.

Both Hastings (1932) and Harmer (1957) assigned specimens from a wide area to *M. serrata*, and these varied considerably in character from the Queensland material. Much of their material has been re-examined, and is considered to differ (most often with regard to attributes of the large frontal avicularia) too much to be referable to *M. serrata sensu stricto*. However, there are differences in character states even within the Queensland material of *M. serrata*. For example, the specimen from Townsville (BMNH 1986.7.30.3) has a taller, more erect mucro, with larger mucronal avicularia, than Hastings's specimen from Peak Point (BMNH 1931.10.12.6). There are also slight differences in the width of the median denticle within the material examined, but no more marked than the width variations seen within certain colonies.

M. serrata sensu stricto appears to be confined to the Queensland coast.

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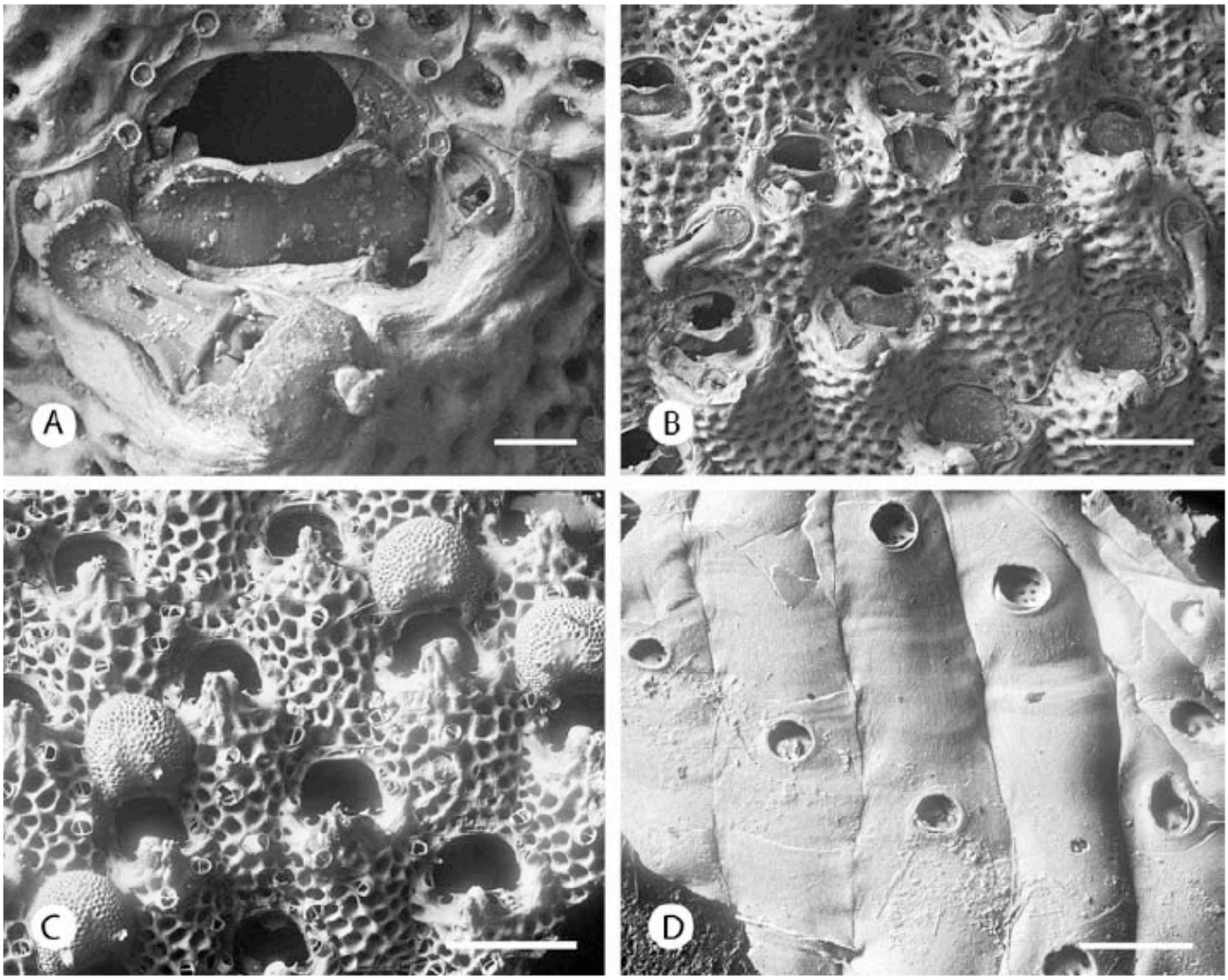

Figure 9 A–D, *Mucropetraliella serrata* (Livingstone, 1926). A, B, AM U.2297, Surprise Shoal, Great Barrier Reef. C, D, BMNH 1932.4.20.58, W. of Low Island, Great Barrier Reef. A, primary orifice with suboral mucro and enlarged suboral avicularium, note the small proximolaterally directed lateral oral avicularium, median denticle, lateral sinuses and lateral denticles. B, group of autozooids, note the large proximolaterally directed frontal avicularia. C, group of zooids including several ovicellate zooids, note the small supernumerary frontal avicularia. D, basal surface or several zooids showing circular radicular chambers. A, scale bar 100 μm; B, C, scale bar 500 μm; D, scale bar 400 μm.