

Caulibugula exilis (MacGillivray, 1890). Tilbrook, 2006, p.41, pl.5D.

Caulibugula exilis (MacGillivray, 1890)
Plate 5D

Stirparia exilis MacGillivray, 1890: 106, Fig.4, figs 1, 1a, 1b.

Stirparia exilis: Waters, 1903: 468, Fig.64, figs 1-3.

Caulibugula exilis: Harmer, 1926: 462, Fig.33, figs 11-16.

Type material Lectotype: NHM 1897.5.1.347-349, off Point Nepean (Port Phillip Heads, Victoria), Australia.

Paralectotypes: MOV F45558 (part – 4/5 slides): 63471 & 63472, near Point Nepean (on sponge) Feb. 1869. Coll. J.B.W.; 63473 & 63474, Port Phillip Heads. Coll. J.B.W.

Other material examined SBMNH 365074-075, **508-87**; NHM 1928.3.6.309, (396.U³), “Siboga” Station 162, Off Loslos Island, N. end of New Guinea, 18 m; MOV F45558 (part – 1/5 slides): 65611 Port Jackson, NSW, Australia. Mr Whitelegge.

Description Colony erect, with short kenozooidal stalks jointed by one or two annuli, leading to fan-like subcolonies of autozooids. Proximal zooid *Bicellariella*-type, turbinate, with six to eight long jointed spines, attached to kenozooid stalk by one or two distinct annuli. Autozooids delicate (0.55 x 0.20 mm), obliquely face to face in biserial branches, narrower proximally, with pointed outer distolateral corners that curve toward branch axis, long frontal membrane covering opesia, narrowing proximally, one or two (maybe three) spines distally (three or four spines in most proximal zooids), generally a long, curved, articulated spine at outer distolateral corner, others distal, or commonly, a median distal spine originating slightly on basal surface. Spines on autozooids nearer centre of fan often reduced to distolateral spine only. Avicularia rare, at proximal margin of opesia, approximately as long as opesia is wide, with elongated head and hooked rostrum, mandible long, acute with hooked tip, articulated near peduncle. Ovicells globular. Autozooidal bifurcations of Type 5 (Harmer, 1923).

Remarks *Caulibugula exilis* is best characterised by its proximal zooid and by the presence of distinct annuli that precedes it. This species is also characterised by the gracile nature of its autozooids that bear elongate spines on the external distolateral corners and often disto-medially on the basal wall. The paucity of avicularia is also a character of note.

Caulibugula exilis differs from *C. lunga* in having far fewer avicularia; the autozooids of *C. lunga* are also more robust and face outwards rather than inwards as in *C. exilis*. The proximal zooid of *C. exilis* is *Bicellariella*-like (sensu Harmer, 1926) and has a preceding annulus whereas *C. lunga* has a *Bugula*-like proximal zooid attached directly to the kenozooidal stalks. *C. exilis* has shorter and more robust stolons and stalks than *C. lunga*.

Of the 12 *Caulibugula* species that Liu (1985) described only *C. dendrograpta* and *C. zanzibarensis* have the *Bicellariella*-like proximal zooid, but neither has a preceding annulus; all the others possess the *Bugula*-like condition, with the exception of *C. binata* which apparently initiates sub-colonies from a pair of proximal zooids. This condition is unique within the genus.

All previous authors recording *Caulibugula exilis* note that their material is associated with, and growing within, sponge as noted on two of the paralectotype specimens. The Solomon Islands material described here is mounted dry on slides and there is no evidence of the original substratum.

Caulibugula exilis (MacGillivray, 1890). Tilbrook, 2006, p.41, pl.5D.

