

Smittipora cordiformis Harmer, 1926. Tilbrook, 2006, p.74, Pl.12A

Smittipora cordiformis Harmer, 1926
Plate 12A

Smittipora cordiformis Harmer, 1926 (part): 260, Fig. 16, figs 14-18.

Smittipora cordiformis: Dumont, 1981: 635; Winston, 1986: 10; d'Hondt, 1986: 701; Hayward & Ryland, 1995a: 543, Fig. 6C; Tilbrook, Hayward & Gordon, 2001: 52, Fig. 6G.

Type material Holotype (part): NHM 1928.3.6.74, "Siboga" Station 71, Makassar, SW Celebes, 0-32 m.

Other material examined SBMNH 365128-132, **401-84**; SBMNH 365133-134, **406-84**; SBMNH 365135, **403-84**; SBMNH 365136, **514-87**; SBMNH 365137, **413-84**; SBMNH 365138-142, **501-87**; NHM 1885.12.29.3, Mergui Archipelago, Burma (Myanmar), Dr Anderson; NHM 1999.8.9.5, W. of E. Channel, Aldabra Island, Seychelles.

Description Colony encrusting, unilaminar. Autozooids hexagonal to irregularly polygonal (0.65 x 0.40 mm), concave, separated by raised marginal rim and distinct sutures. Membranous frontal membrane translucent, light orange-brown, covering the sparsely granular cryptocystal frontal surface, opesia small, longer than wide (0.18 x 0.15 mm), an elongate D-shape, in distal half of zooid, surrounded by frontal cryptocyst, anter rounded with a small rounded denticle pointing proximally, proximal edge convex, smooth, with an angular lip, dipping proximally slightly at each lateral corner. Operculum dark brown-orange in colour, smaller than opesia, lacking any discernible marginal sclerite. Avicularia as long as autozooids but much narrower (0.67 x 0.25 mm), apparently torqued towards its sibling autozooid (cf. *Thalamoporella granulata*), cryptocyst granular, concave; opesia elongate oval, distally located, wider distally, proximal border denticulate, smooth distally, a pair of condyles, developed approximately two-thirds the way along each lateral wall; distal end of avicularium drawn to a point, turned towards its sibling zooid, and channelled to accept the mandibular rachis; mandible long, rachis light chocolate brown in colour, hooked at its tip, translucent light orange-brown blades reaching approximately two-thirds length of rachis. Fertile zooids similar in size to autozooids but with dimorphic opesia, much larger, almost twice as long as wide, bell-shaped, anter rounded, with a small cap of smooth gymnocystal calcification distally, proximal and lateral edges convex; operculum similar in colour to avicularian mandible, resting in an orange-brown frontal membrane. Ancestrula appears identical to subsequent autozooids though a little smaller.

Remarks *Smittipora cordiformis* is characterised by its opesial shape but especially by its avicularian shape, i.e. with its pointed distal end turned towards its sibling zooid.

Smittipora cordiformis differs from the other two *Smittipora* species, described here, in having an avicularium with a turned, pointed end; those of both *S. harmeriana* and *S. philippinensis* follow in the direction of colony growth. *S. cordiformis* has a similar-shaped opesia to that of *S. harmeriana* but this species lacks the dimorphic opesia in fertile zooids. *S. cordiformis* has larger, longer opesia than does *S. philippinensis* but this species has dimorphic opesia in fertile zooids.

Smittipora cordiformis was the commonest of the three species found at the Solomon Islands and appears to be the commonest of the five known species of *Smittipora* in the Indo-Pacific.

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Distribution Harmer (1926) described *Smittipora cordiformis*, citing material from Indonesia and the Indian Ocean (Myanmar and the Seychelles). Its presence in the SW Pacific is now established but it may prove to be even more widely distributed in reef habitats in the tropical Pacific. In the Solomon Islands over a dozen colonies of *S. cordiformis* were found from Guadalcanal and the Russell and Florida Islands. This species therefore has a truly Indo-West Pacific distribution.

