

Iodictyum willeyi Harmer, 1934. Hayward, 2004, p.313, fig.7.

***Iodictyum willeyi* Harmer (Figs 7A–E)**

Iodictyum willeyi Harmer, 1934: 544, pl. 35, figs 3, 4, pl. 36, figs 16–24, 29.

Iodictyum projectum Harmer, 1934: 550, pl. 35, fig. 6, pl. 36, figs 2, 3, 10–15.

Iodictyum buchneri Harmer, 1934: 552, pl. 35, fig. 7, pl. 37, figs 1–5.

Iodictyum receptaculum Hayward & Ryland, 1995: 568, fig. 16 B–D.

Material

Holotype: BMNH 1934. 8. 18. 3A Lifui, Loyalty Islands (figd Harmer, 1934, pl. 36, figs 16–21)

Other material: BMNH 1876. 10. 14. 41, New South Wales, J. G. Jeffreys; 1893. 8. 11. 23, Macclesfield Bank; 1934. 8. 18. 4, Port Jackson, Sydney (figd Harmer, 1934, pl. 36, figs 22–24); 1934. 8. 20. 8, Siboga station 131, Talaud Is, south of Mindanao, Philippines (holotype of *I. buchneri*); 1934. 8.20. 3, Siboga station 60, Samau Id, West Timor, 0–36 m (holotype of *I. projectum*); 2002. 3. 12. 9, Cleveland Bay, Queensland, 24 July 1982. QMG 304949, Heron Island, stn. 27, GBR (holotype of *I. receptaculum*).

Description

Colour pink, purple or cerise; colony architecture incompletely known, Harmer (1934) figured small colonies with an open cup-shape, developing broadly lobed edges, and in two cases showing anastomosis to form closed tubes. Fenestrulae oval, wider than the trabeculae, commonly 1.25 × 0.5 mm. Trabeculae consist of two to four alternating longitudinal autozoid series. Autozooids at growing edge hexagonal, bordered by raised lateral walls, the frontal shield finely granular, with a deep gutter between it and the lateral walls, and with four to six very large areolar pores. Primary orifice longer than wide, slightly pear-shaped and broadest mid-distally; condyles rounded, downcurved, the rim distal to the condyles is indistinctly crenulated; no oral spines. Orifice hidden from earliest ontogeny by the development of a tall projecting peristome with slightly flared rim; mid-proximally the inner rim of the peristome has a rounded sinus defined by bluntly pointed cusps, laterally it may be produced into pointed lobes which may extend some distance into the peristome as vertical ridges. Avicularia dimorphic, sporadic; many autozooids with a frontal avicularium, c. 0.15 mm long, proximal to the peristome, with inflated cystid, the rostrum elongate triangular, hooked distally, acute to frontal plane and directed laterally, proximo-laterally, or proximally. Within some fenestrulae, proximo-laterally, are single, larger avicularia with narrowly spatulate rostrum, 0.5 mm long, directed distally. Ovicell longer than wide, pear-shaped, the median fissure seals over in early ontogeny and a longitudinal ridge develops along the line of fusion, with an equally long, parallel-sided slit on each side. The frontal shield of the autozoid thickens continually

through ontogeny; the peristome rim becomes flush with the frontal surface, but the U-shaped sinus and the variably lobed rim are still conspicuous. Typically, four marginal pores persist, a very large lateral pair, and a smaller proximal pair.

Remarks

Iodictyum willeyi, *I. buchneri* and *I. projectum* were previously distinguished by different development of the peristome rim, and according to the orientation of the frontal avicularia. These characters vary continuously between the specimens examined here and, more significantly, the morphology of the primary orifice is identical in the type series of the three taxa. *Iodictyum receptaculum* was founded on a single specimen from Heron Island, GBR (Hayward & Ryland, 1995). It was characterized by its pyriform orifice, by frontal adventitious avicularia with acute triangular rostrum, and by sparse peristomial avicularia with laterally curved rostra. Examination of a wider selection of recently collected specimens reveals a greater diversity of avicularian morphology including all types seen in *I. willeyi*. More importantly, SEM micrographs of the primary orifice of all nominal taxa noted here establishes conclusively that only one species may be recognized. Harmer (1934) recorded

I. buchneri from nine Siboga stations in the Indo-Malayan region, and *I. projectum* from a further Siboga station. *Iodictyum willeyi* was not present in the collections of the Siboga expedition; its type locality is Lifu, Loyalty Islands, and it is known with certainty from Macclesfield bank, South China Sea, and from New South Wales.

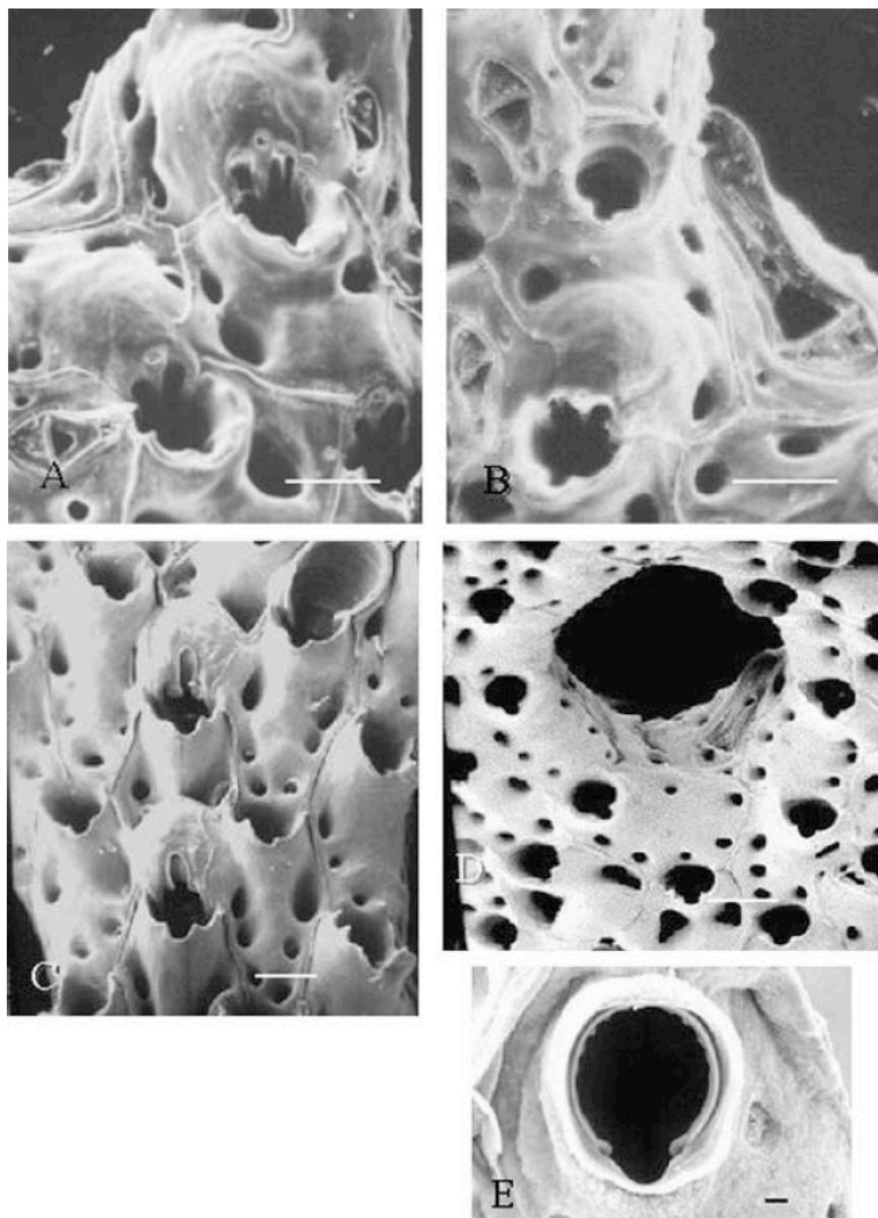


Figure 7 *Iodictyum willeyi*. (A), (B) holotype: (A) autozooids, ovicelled zooids and avicularia; (B) an enlarged avicularium at the proximal end of a fenestrula. (C) BMNH 2002. 3. 12. 9, autozooids and ovicells in early ontogeny. (D), (E) QMG 304949, holotype of *I. receptaculum*: (D) an enlarged avicularium within a fenestrula; (E) the primary orifice. Scale bars = 0.1 mm (A–D) or 0.01 mm (E).