Portieria Zanardini, 1851

BRYOPSIDALES, BRYOPSIDACEAE

Thallus recumbent to erect, growing from a discoid holdfast, often with several fronds growing from a common holdfast, or tangled among other algae with no obvious holdfast, with 1 or more percurrent axes that are richly alternately branched. Axes compressed to flattened, with inrolled apices. Structure uniaxial; each axial cell producing 3 or 4 periaxial cells, the first arising alternately and forming the primary filament of lateral branches. Medulla pseudoparenchymatous, consisting of large cells, grading to a smaller-celled cortex with prominent vesicular cells.

- M.D. Guiry in Guiry, M.D. & Guiry, G.M. September 26, 2018. *AlgaeBase*. World-wide electronic publication, National University of Ireland, Galway. https://www.algaebase.org; searched on March 12, 2022.

Species reported from Sri Lanka

Chondrococcus hornemanni (Mert.) Schmitz – Durairatnam, 1961: 51, pl. XII, figs 1, 2

Portieria hornemannii (Lyngbye) P. Silva, 1987

- Silva et al, 1996
- Coppejans et al, 2009: 186-187, Fig. 155
- Mallikarachchi, 2004: 31
- Mallikarachchi, 2013: 15, 47, Fig. 13B

Portieria tripinnate (Hering) De Clerck, 2005

- Coppejans et al, 2009: 188, Fig. 156

Description of species

Portieria hornemannii (Lyngbye) P. C. Silva, 1987

Synonyms: *Desmia* hornemannii Lyngbye, 1819; Chondrococcus *hornemannii* (Lyngbye) P. C. Silva, 1987

Morphology Thalli deep or bright red, brownish underwater, 5-8 cm high. Often with a heavy coating of silt obscuring the colour and details of branching. Attached to hard substrates by a disc that might give off a number of fronds; sometimes the attachment is a spreading calcareous expansion. Profusely branched in one plane, segments narrow, compressed, ultimate branchlets of the distal portion wider with inrolled tips; those at the basal portion have acute tips (Trono & Ganzon-Fortes,). Branches alternate, crowded, the thalli tending to form small bushy clumps. Cartilaginous, smooth, and slippery. Fruiting bodies—tetrasporangia (Durairatnam, 1961)—on one

side of frond; they appear as flattened, round or irregular, pink coloured blobs. The fertile frond appears thicker and less divided than sterile fronds. Thalli solitary or gregarious, often growing in water subject to strong currents and surge.

The thallus gives a strong, sweetish aromatic odour after 36 hrs in sea water following collection. This is also commented on by Trono & Ganzon-Fortes.

Anatomy Cortex of small, pigmented, round cells seen in surface view; scattered among them are larger vesicular cells, round, colourless and refractile. In sectional view, the outermost cortical row consists of cells oval in outline, the long axis at right angles to the surface. The inner cortical row is of smaller round cells. The medulla consists of rounded polygonal cells grading from smaller to larger ones in the middle.

Ecology Epilithic on subtidal stones and rocky reefs, 3 – 18 m; even attached to mussel (*Pteria*) valves on the Colombo First reef. Solitary and scattered or gregarious forming small, expanded colonies (Hikkaduwa lagoon). Often covered in silt, that brushes off easily.

Discussion A characteristic plant, unlikely to be confused with other species; is commonly encountered. Was determined by reference to Durairatnam, 1961 and comparing with the drawing in Trono & Ganzon-Fortes, 1980.

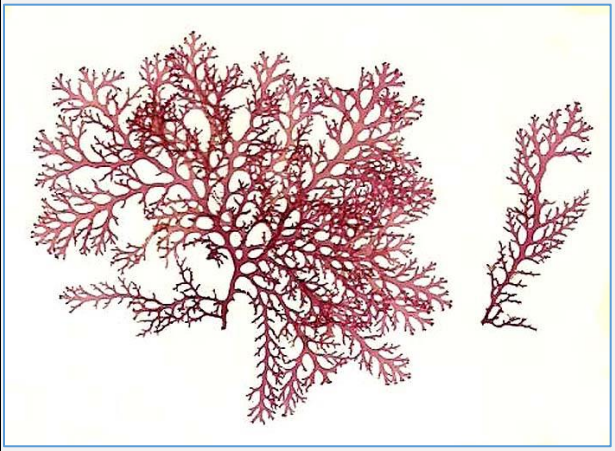
Material examined

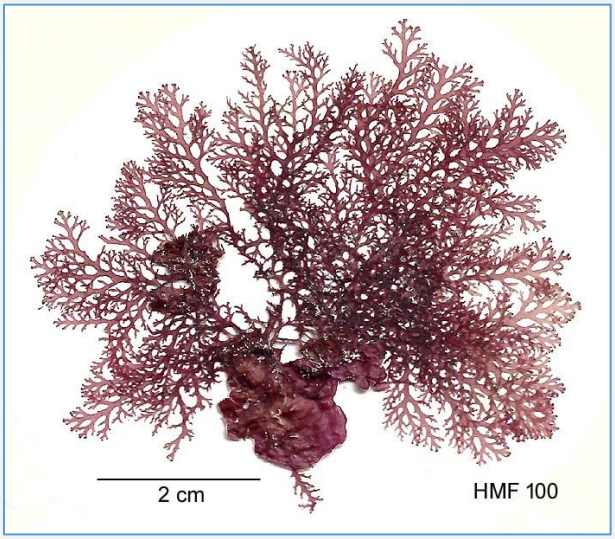
HMF 557, 15.1.89, Hikkaduwa, inshore of Rocky Islets, 3-5 m, epilithic on sandstone rocks.
HMF 558, 12.3.89, Dehiwela, S of Wasala Lane, 3 m, inner face of reef (back reef).
HMF 559, 8.1.89/4; 13.3.94/1, Mount Lavinia, Bellangala & reef to south, 2 - 3 m, epilithic, 8.1.89: reef to south of Bellangala, 3m, epilithic.
13.3.94: Bellangala east, 2 m, epilithic on the side of a rock in a strong swell and current location.
HMF 017, 14.1.96, Mount Lavinia, First reef, 4.4 m, epilithic on rock and mussel valves.
HMF 100, 22.6.98, Kalmunai, opposite mosque, 14 m.
HMF 127, 8.2.99, Negombo, Suda, 18 m.
HMF 188, 23.01.2000, Galle, Unawatuna bay, 2-3 m.

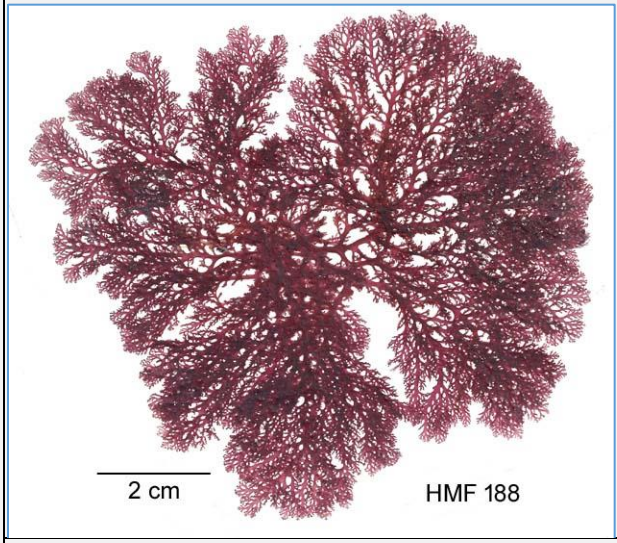
References

Coppejans et al, 2009: 186-187, fig. 155
Durairatnam, 1961: 51, pl. XII figs. 1, 2
Trono & Ganzon-Fortes, 1980: 65

Portieria hornemannii (Lyngbye) Silva, 1987



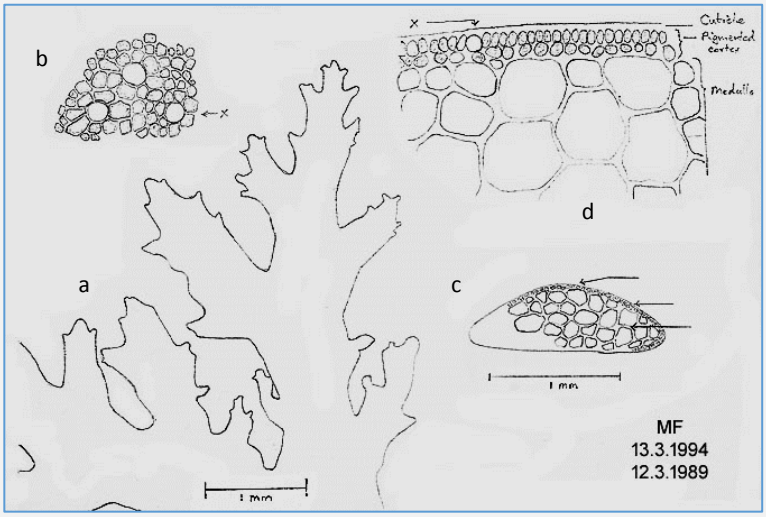




Herbarium images

Above: HMF100 from Kalmunai, 14 m. The spreading, calcareous attachment is shown in the right-hand image.

Below: HMF188 from Galle, Unawatuna Bay, 2-3 m.



Drawing of *Portieria hornemanni*

a. Terminal fronds much enlarged.

b. Cortical cells in surface view: small, pigmented cells irregularly arranged, and scattered among them larger, unpigmented, refractile vesicular cells (X).

c. Transverse section of thallus showing cortex of small cells and a pseudoparenchymatous medulla of large, polygonal cells – low power view.

d. Cells in transverse section: small, pigmented cortical cells with scattered vesicular cells and large, unpigmented medullary cells.

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