

Erythrotrichia Areschoug, 1850

ERYTHROPELTALES, ERYTHOTRICHIACEAE

Thalli may be uniseriate, multiseriate or slightly foliose, to several millimetres in height. Each cell with a single, stellate chloroplast with central pyrenoid. Contains B-Type II phycoerythrin. Pit plugs absent. Growth may be apical in the early developmental stages, but soon becomes intercalary or diffuse. One or more of the basal cells produce rhizoidal outgrowths. Asexual reproduction via monospores. An oblique cytokinesis cleaves a vegetative cell into two unequal sized cells, the smaller of which becomes the monosporangium. In situ germination of monospores to form lateral branches has been reported. Sexual reproduction has been documented. Growing epiphytically on other algae or seagrass.

- M.D. Guiry in Guiry, M.D. & Guiry, G.M. 2021. *AlgaeBase*. World-wide electronic publication, National University of Ireland, Galway. <http://www.algaebase.org>; searched on 19 July 2021.

Species reported from Sri Lanka

Erythrotrichia carnea (Dilwyn) J. Agardh, 1883
[Durairatnam, 1961: 47, Pl. XI, Figs. 3, 4]
- Silva et al, 1996

Erythrotrichia carnea (Dilwyn) J. Agardh, 1883
[Mallikarachchi, 2004:152, Photo 52]

Description of species

***Erythrotrichia carnea* (Dilwyn) J. Agardh, 1883**

Morphology A mat of epiphytic red coloured erect filaments crowded together; 1-2 mm high. Found mainly on the middle branches and to a lesser extent on the terminal branches of the host alga (*Stoechospermum polypodioides*).

Anatomy Cells of filaments quadratic with rounded corners, the walls gelatinous. The apical cells seen in young filaments are high domed. Older filaments about twice as wide as young filaments, one cell wide, showing the diagonal, asymmetrical intercalary division which is characteristic of this genus. The

proximal daughter cell is smaller. The basal cells not seen very clearly - but appear to show the lobed form said to be characteristic of the species *carnea* (Fritsch, Vol. II, 1972 reprint). "Ramified rhizines spreading over the surface of the host" is described by Durairatnam.

Durairatnam gives the cell dimensions as: 12 - 27 μm in diameter and the filaments as 0.5 - 2 cm high.

Ecology Epiphytic on other algae (*Stoechospermum polypodioides*). Collected from shallow water on the reef at Mount Lavinia. Durairatnam (1961) reports the species epiphytic on *Padina* and *Stoechospermum* in Colpetty and Bambalapitiya.

Discussion The plants were identified with reference to the descriptions in Fritsch and Durairatnam

Material examined

MBIOD 078, 9.2.1997, Mount Lavinia, First reef transect #2, epiphytic on *Stoechospermum marginatum* (= *S. polypodioides*), 3m.

References

Durairatnam, 1961: 47, Pl. XI, Figs. 3, 4.

Fritsch, 1972 reprint Vol. II: 423 et seq.

Mallikarachchi, M.U. 2004: 152, Photo 52.

Silva et al, 1996.

Erythrotrichia carnea (Dilwyn) J. Agardh, 1883



Left: Herbarium image The filamentous growth covers the host *Stoechospermum*.

Right: Drawing of HMF 078

a) Cells of young filament showing high-domed apical cell.

b) & c) Cells of older filaments showing asymmetric diagonal cell division, the smaller portion being proximal.



BIBLIOGRAPHY

Durairatnam, M., 1961. Contribution to the Study of the Marine Algae of Ceylon. *Bulletin No. 10, Fisheries Research Station, Ceylon*.

Fritsch, F.E., 1972. *The Structure and Reproduction of the Algae*. Volume II. Reprint: Cambridge University Press.

Guiry, M.D. in Guiry, M.D. & Guiry, G.M. 2021. AlgaeBase. World-wide electronic publication, National University of Ireland, Galway. <http://www.algaebase.org>; searched on 02 March 2021.

Mallikarachchi, U., 2004. *A study of the taxonomy and distribution pattern of algae on the southwest coast of Sri Lanka with special reference to anthropogenic effects*. Thesis, Master of Philosophy, University of Ruhuna, unpublished.

24.6.2021

