Centroceras Kützing, 1842 '1841'

CERAMIALES, CERAMIACEAE

Thallus filamentous, with erect axes arising from a prostrate system. Axes corticated, each axial cell with distal nodes of 6 or more periaxial cells, these producing 3 cortical initials (2 acropetal and 1 basipetal). First acropetal initial bearing 2 or 3 acropetal cells, or 1 or 2 acropetal cells and a vesicular cell or short spinous branch. Second acropetal initial bearing a 1- or 2-celled acropetal filament and a many-celled basipetal filament. Basipetal initial also bearing a many-celled basipetal filament, these longitudinally aligned, covering the axial cell, their cells not or rarely transversely aligned. Spinous branches usually prominent at apices, occasionally dehiscent.

- M.D. Guiry in Guiry, M.D. & Guiry, G.M. October 8, 2018. *AlgaeBase*. World-wide electronic publication, National University of Ireland, Galway. https://www.algaebase.org; searched on April 12, 2022.

Species reported from Sri Lanka

Centroceras clavulatum (C. Agardh) Montagne, 1846
- Børgesen, 1936: 92
- Durairatnam, 1961: 66, 102-103
- Silva et al, 1996
- Coppejans et al, 2009:198, Fig. 167
- Mallikarachchi, 2004: 164 Fig. 99
  2013:48, Fig. E

Description of species

Centroceras clavulatum (C. Agardh) Montagne 1846

Morphology Pink or red thalli, gregarious, forming small 2-3 cm diameter cushions or spreading as a mat. Epilithic, or epiphytic on larger algae (e. g., *Ulva*) on exposed intertidal rocks, air exposed at low tide but continually wave-washed.

Cushions of *Centroceras* and *Pterocladia* on the N-W flank of Keti Ketiya, at Mount Lavinia. Low tide.

Anatomy Thalli consist of thin, (50-75 µm [Dur.], 180-200 µm [MF], up to 300 µm [EC et al], 107-190 µm [Mall]) thread-like, supple, erect, branched filaments, 1 to 4 cm tall. Under a hand lens the filaments are seen to be composed of short cylindrical segments with whorls of hairs at the nodes—in reality the 'hairs' are whorls of 2-3 celled spinous branches. Branching is dichotomous with forcipate apices (the terminal branches horse-shoe shaped). Under microscopy the cortical cells are square or rectangular arranged in axial and transverse rows. A uniseriate axial filament gives the thallus the appearance of a hollow tube under the microscope.

Ecology Mount Lavinia, intertidal, on wave exposed rocks or algae. Durairatnam, 1961 has collected from Keerimalai. Mallikarachchi, 2013 from Lanka Patuna, Panama and Okande. Coppejans points out that thalli on exposed rocks tend to be short while those in sheltered pools are longer.

Discussion This species has been collected from Mount Lavinia as cushions growing on their own. In March 2022 they were found in mixed cushions together with *Pterocladia heteroplatos*.

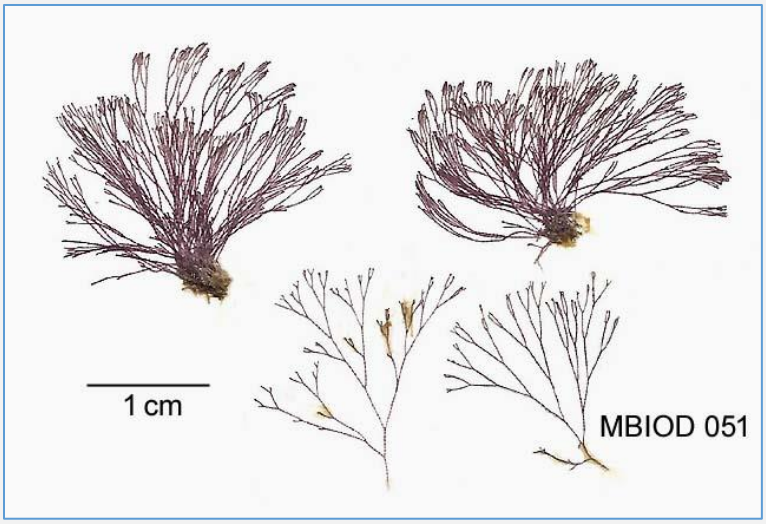
Material examined MBIOD 051, 13.10.1996, Mount Lavinia, Dig gala, epilithic, low intertidal, reddish cushions on the sheltered side of the rock. MBIOD 012, 13.8.1995, Mount Lavinia, Dig gala, epilithic, low intertidal, small, soft, pinkish brown cushions on the rock and in gullies. Also FN070189/7 & 060889/5 on Did Gala at Mount Lavinia.

References

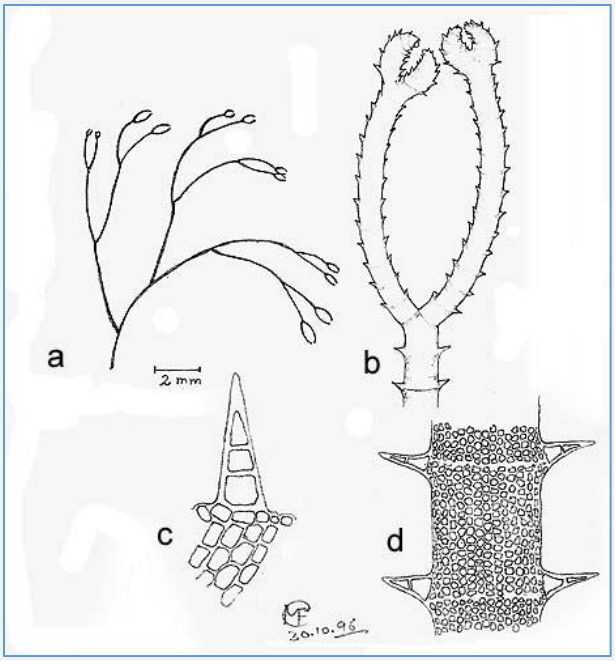
Børgesen, 1936: 92
Durairatnam, 1961: 66, 102-103
Silva et al, 1996
Coppejans et al, 2009:198, Fig. 167
Mallikarachchi, 2004: 164 Fig. 99; 2013:48, Fig. E

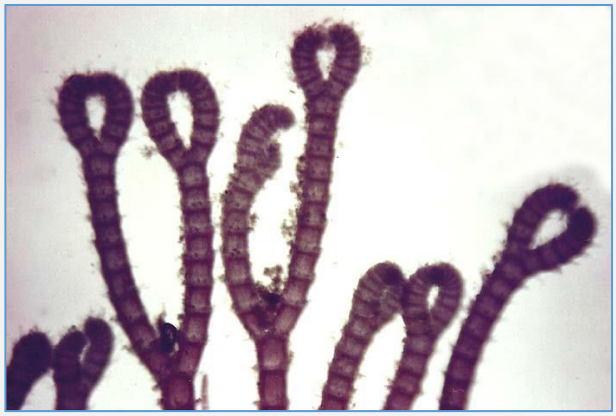
Centroceras clavulatum (C. Agardh) Montagne 1846

Portion of a freshly collected cushion, Mount Lavinia, 20.3.2022. At different magnifications.



Left:- Herbarium image, Mount Lavinia, 13.10.1996





Above:- Microscope image.

Drawing at left:- (a) Habit; (b) Enlarged view of a filament showing forcipate terminal branching and whorls of spines; (c) Detail of a spine consisting of 3 cells; (d) Surface view of a filament showing rows of cortical cells and nodal spines.

References

Børgesen, F., 1936. Some Marine Algae from Ceylon. *Ceylon J. Sci.* Vol. XII, Pt. 2.

Coppejans, E., Leliaert, F., Dargent, O., Gunasekara, R. and De Clerck, O. 2009. *Sri Lankan Seaweeds, Methodologies and field guide to the dominant species*, ABC Taxa, Vol. 9, Belgian Development Corporation.

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

Silva, P.C., Basson, P.W. and Moe, R.L., 1996. *Catalogue of the Benthic Marine Algae of the Indian Ocean*. University of California Publications in Botany, Vol. 79. University of California Press.

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.

Mallikarachchi, U., 2013 (a). *Taxonomic survey of seaweeds along the coastal belt of Sri Lanka* (*Part I - Eastern Coastal Segment*). Report to Biodiversity Secretariat, Ministry of Environment, Sri Lanka. Marine & Coastal Resources Conservation Foundation.

MF 14.4.2022