Techniques needed and plant shape

Classification

Division: Rhodophyta; Order: Ceramiales Family: Rhodomelaceae; Tribe: Lophothalieae

*Descriptive name

furry threads

Features

plants dark red, 20-100mm tall, with slender main branches covered with tiny hair-like threads

Special requirements

view plants under the microscope to find:

• apically a central thread (filament) flanked by 4 (pericentral) cells and long, coloured, branched threads (trichoblasts) ending in pointed cells, later developing an envelope (cortication) of small cells and extra branched threads (adventitious filaments) similar to trichoblasts
• clusters of spermatangia where the trichoblasts branch
• urn-shaped cystocarps (products of fertilisation) with narrow necks and openings, club-shaped carpospores inside
• tetrasporangia in smaller side branches bearing trichoblasts with pairs of tetracosporangia in columns at right angles (decussate)

Occurrences

Port Phillip Heads, Victoria, Ports Noarlunga and Stanvac, Gulf St Vincent, SA

Usual Habitat

on jetty piles and a tyre reef, 3-19m deep

Other thread-like members of the Rhodomelaceae, especially Doxodasya leonormandiana, but that species has rigid, spiky trichoblasts ending in a sharp point

Similar Species

Description in the Benthic Flora

Part IIID, page 272-274

Description in the Benthic Flora

Part IIID, page 272-274

Details of Anatomy

Doxodasya hirta stained blue and viewed microscopically at different magnifications

1. young male structure on a trichoblast showing an upper sterile filament (arrowed) and developing spermatangia (sp) (A42704 slide 4434)

2. urn-shaped mature female structure, (cystocarp, cys) with narrow neck and opening (ostiole, ost) and club-shaped spores (carposporangia, ca sp) inside (A57442 slide 18120)

3, 4 two magnifications of tetrasporangia in short branches (stichidia, stich) showing pairs of tetrahedrally divided spores (A57442 slide 18122)

* Descriptive names are inventions to aid identification, and are not commonly used

"Algae Revealed" R N Baldock, S Australian State Herbarium, April 2007
5. *Doxodasya hirta* (J Agardh) Womersley & M J Parsons
A57442 from Port Noarlunga, S A. on a tyre reef at 19m deep
6. 7. specimens stained blue and viewed microscopically
(A42704 slide 4434)
6. upper branches with side tufts of coloured, branched threads (trichoblasts, trich)
7. lower branches showing cortication (co) and a mix of branched hairs (trichoblasts) produced at the apex of branches and hairs produced from cortical cells (adventitious filaments ad fil)

* Descriptive names are inventions to aid identification, and are not commonly used
"Algae Revealed" R N Baldock, S Australian State Herbarium, April 2007