Techniques needed and shape

Classification

Phylum: Phaeophyta; Order: Chordariales; Family: Leathesiaceae

*Descriptive name

slime tufts

Features

plants brown, of slimy tufts about 1mm tall on the brown alga *Scytosiphon*

Special requirements

tease out a slimy tuft from the host plant and view microscopically to find:

- basal layer of filaments that penetrate the host
- middle (medullary) layer, pinched where it exits the host made of slimy, colourless, branched filaments
- outer (cortex) layer with slightly swollen, loose, coloured, photosynthetic (assimilatory) filaments of determinate growth (about 20 cells long)
- colourless (phaeophycean) hairs that arise from the inner medullary filaments but extend well beyond the general plant body
- thin sporangia with many compartments in a single row (plurilocular sporangia), forming a definite layer in the cortex

Occurrence

only known on *Scytosiphon* from Wanna (Pt Lincoln), S. Australia; probably more widespread but unobserved because of its diminutive nature.

Usual Habitat

on *Scytosiphon*, in the lower intertidal

Similar Species

other epiphytic/partially parasitic members of the Chordariales such as *Elachista*, but that genus lacks hairs, or *Strepsithalia* which has a more diffuse body, or *Corynophloea* producing only a basal layer on the host.
The host plant (basophyte) can often be used to separate these genera.

Description in the Benthic Flora

Part II, pages 91-94

Details of Anatomy

1. Pieces of *Myriactula caespitosa* removed from their host plant *Scytosiphon*, stained blue and viewed microscopically at two magnifications to show the core (medulla, med) of threads, the outer layer (cortex, co) with distinct band of many-compartmented sporangia (plurilocular sporangia, pl spor), long, coloured threads (assimilatory filaments, as fil) and delicate, colourless hairs (phaeophycean hairs, ph ha)
2. whole plant (A31873, slide 9130)
3. detail of cortical threads and sporangia (A31873 slide 1503)

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

“Algae Revealed” R N Baldock, S Australian State Herbarium, August 2005
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