Techniques needed and plant shape

Classification

*Descriptive name

Features

Phylum: Rhodophyta; Order: Rhodymeniales; Family: Rhodymeniaceae

Descriptive name
red wireweed

1. plants dark brown-red, gristly 100-250mm tall, wiry
2. main branches cylindrical to slightly flattened, irregularly forked, about 1mm wide
3. tiny fertile egg-shaped clusters at branch tips, becoming hollow and shed when mature

Occurrences
West I., S Australia to Victoria and E coast Tasmania

Usual Habitat
shallow water to 24m deep, on rock

Special requirements
cut cross sections and view microscopically to find

- narrow band of small outer (cortical) cells, grading rapidly to large core (medulla) of large angular cells
- tetrasporangia mixed with elongate cells in the cortex of hollow, egg-shaped fertile spore structures
- mature female structures (cystocarps) protruding from the egg-shaped fertile structures, with a single opening (ostiole). Internally, masses of sporangia mixed with threads joined basally to a pyramid of feeding cells

Similar Species
superficially like Trematocarpus concinnus and Nizymenia furcata

Description in the Benthic Flora
Part IIB, pages 49-51 (as Cordylocladia)

Details of Anatomy

Cross sections of Cephalocystis furcellata stained blue and viewed microscopically

1, 2 two magnifications showing narrow outer band (cortex, co) of small cells and broad core (medulla, med) of large, angular cells (A39609 slide 13411)

3. tetrasporangia (t sp) divided in a cross or decussate pattern, mixed with elongate cortical cells (co c) from the tiny inflated fertile structures near branch tips (A42220 slide 13414)

4. detail of a mature female structure (cystocarp) showing masses of carposporangia (c sp) mixed with threads and basal nutritive tissue (nutr c) inside an inflated fertile structure near branch tips (A39609 slide 13413)

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

“Algae Revealed”, R N Baldock, S Australian State Herbarium October 2010
Cephalocystis furcellata (J Agardh) Millar A, Saunders G, Strachan I & Kraft G
5, 6 two magnifications of specimens from 3-8m deep at Nora Creina, S Australia (A39609), showing the cluster of tiny egg-shaped fertile side branches near tips (arrowed)
7. preserved, bleached tips somewhat shrunken, showing fertile structures (A57692)
8. cross section through a female fertile structure with a protuberant cystocarp (cys) (A39609 slide 13413)

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“Algae Revealed”, R N Baldock, S Australian State Herbarium October 2010