Techniques needed and shape

Classification
*Descriptive name
Features

Phylum: Rhodophyta; Order: Gigartinales; Family: Cystoclioniaceae
dark red threads

1. plants are **dark red** to red-brown, 40-120mm tall and **tangled**
2. branches are **thin**, about **0.2mm wide**, forked or branched irregularly, pointed at tips

Occurrences
Usual Habitat
Similar Species

*Descriptive name
dark red threads

Features
1. plants are **dark red** to red-brown, 40-120mm tall and **tangled**
2. branches are **thin**, about **0.2mm wide**, forked or branched irregularly, pointed at tips

only known from Port Phillip Heads, Victoria and Port Noarlunga S Australia
in the lower intertidal on rock but possibly also on other algae

Hypnea spp particularly H. filiformis but differs reproductively

Diagnosis can be difficult

**Details of Anatomy**

1. view fronds microscopically to see
   - **single** cells at the tips of branches
   - a single central thread running lengthwise, visible only at the tips
   - only vague ring patterns (rosettes) of surface cells

2. cut a lengthwise slice of a branch and view microscopically to find:
   - a core (medulla) of a central thread flanked by loosely arranged angular cells
   - outer layers of a small cells in inconspicuous rings (rosettes) about larger cells

3. find female plants with ball-shaped, protruding swellings (cystocarps), sometimes in groups. Cut a cross section if possible to view:
   - small basal masses of small cells and terminal chains of spores
   - a definite cellular wall (pericarp) but no opening

4. if possible, find sporangial plants with **large**, cigar-shaped tetrasporangia scattered near the surface, divided across into four sporangia (**zonate**)

Description in the Benthic Flora

Part IIIA, pages 432, 434-436

Erythronaema ceramioides

stained blue and viewed with interference microscopy, showing

1. a cross section with central thread (**c fil**), surrounding cells of the core (**med**) and outer (**co**) of large cells ringed by small ones (A61795 slide 13239)

2. lengthwise section with central filament and medulla cells, and cortical cells (A61795 slide 13240)

3. cross section of a sporangial plant with tetrasporangia (**t sp**) in the outer (cortical) layers (A61795 slide 13239)

4. cross section of a pair of post-fertilisation female structures (cystocarps, **cyst**) with basal cell groups (arrowed), chains of sporangia (carposporangia, **ca sp**) and cellular wall (pericarp, **peri**) (A61855 slide 13323)

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

“Algae Revealed” R N Baldock, S Australian State Herbarium, October 2008
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5. Two specimens of *Erythronema ceramioides* J Agardh
6. from a rock sea wall at the base of Witton Bluff, Port Noarlunga, S Australia (A61795)
7. along a channel 16-23m deep, N of the Quarantine Station, Port Phillip Heads, Victoria (A64518)
8. specimens stained blue and viewed microscopically
9. surface view of cells with little apparent cell rings pattern (rosettes) (A61795 slide 13240)
10. a cluster of ball-shaped cystocarps (A64518 slide 13322)