

Techniques needed and shape



MACRO
PLANT



Classification
*Descriptive name
Features

Phylum: Rhodophyta; Order: Gigartinales; Family: Cystocloniaceae
small filmy forked blades



plants red or fading to red brown, 50-150mm tall, soft, *thin* and *flat-branched*, blades 2-5 mm broad, *forked* sometimes narrower at the branch bases; fringing proliferations *absent* except for females with tiny, *ball-shaped cystocarps*

Occurrences
Usual Habitat

Fremantle, W Australia to Victoria and Flinders I., Bass Strait

a moderately deep water species (4-19m) in slight to moderate water movement, often on seagrass (*Amphibolis*) stems

Similar Species

members of the Delesseriaceae (“filmy reds”), but differing in the presence of cell rings (rosettes) in surface view. Differing in female reproductive features from *Rhodophyllis*

Description in the Benthic Flora Part IIIA, pages 422-425

Special Requirements



view microscopically to find

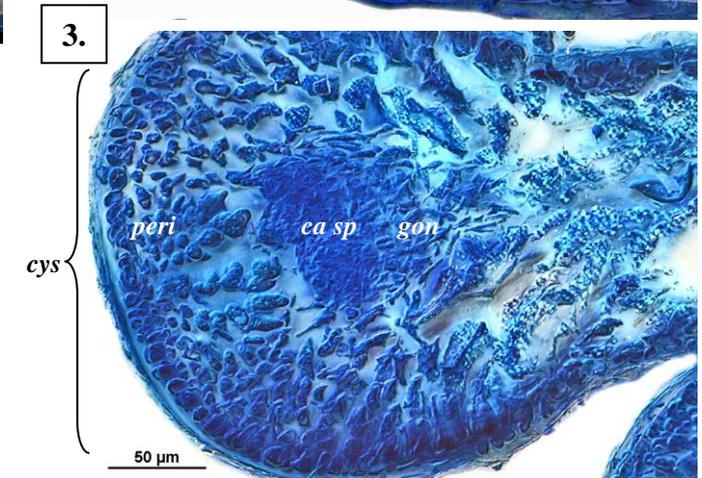
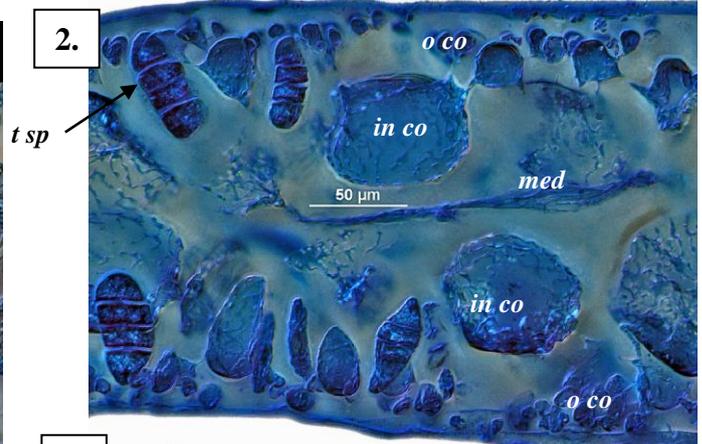
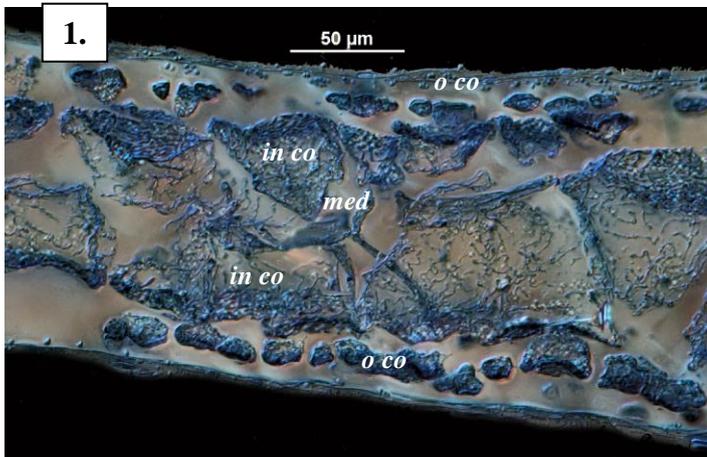


- blades in surface view: single apical cells in pits or notches; central, flat-branched (pinnate) *veins* (best seen when stained blue); *rosettes* – small cells ringing larger ones, rosettes later completely covered by small cells in old branches
- in cross sections of blades: an obscure core (medulla, *med*) of several loose threads, wide outer (cortex) layers of inner *large* spherical cells ringed with smaller, outer ones seen as 2-3 concentric rings or rosettes in surface view; bright gland cells *absent*
- in cross sections of spherical swellings (cystocarps) *protruding* from the *edges* of fronds of female plants: central masses of cells (gonimoblast, *gon*), *chains* of sporangia spreading outwards, a *distinct wall* of cells (pericarp, *peri*) but *no* opening (ostiole)
- in sporangial plants: *large*, tetrasporangia (*t sp*) scattered in the cortex of fringing proliferations, divided across into four spores (*zonate*)



zonate

Details of Anatomy



Cross sections of *Craspedocarpus venosus* stained blue and viewed microscopically:

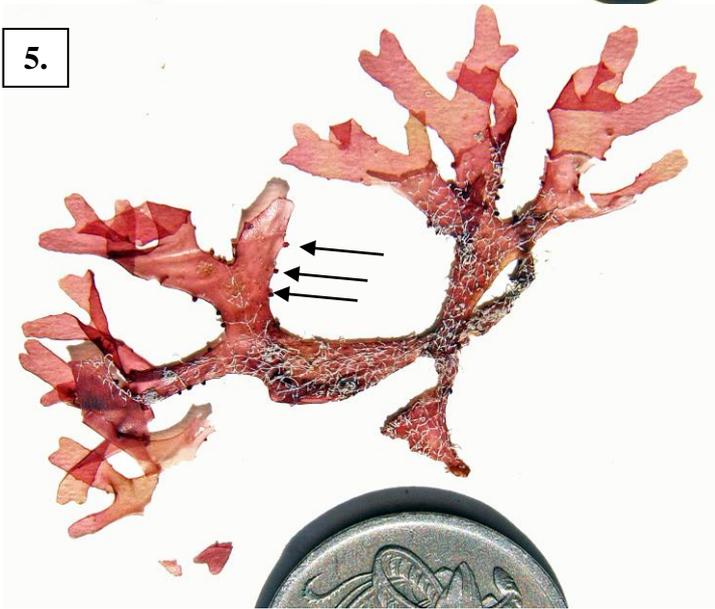
- threads in the core (medulla, *med*), inner large cells (inner cortex, *in co*) and outer small cells (outer cortex, *o co*) forming rings – rosettes – in surface view (slide 14121)
- tetrasporangia (*t sp*) dividing across (zonate) in the outer cortex (slide 17832)
- mature female structure (cystocarp, *cys*) fringing a frond: cellular wall (pericarp, *peri*), central mass of cells (gonimoblast, *gon*), chains of carposporangia (*ca sp*) (slide 4820)

4.



200 μm

5.



6.



Craspedocarpus venosus (Kützinger) Min-Thein & Womersley from S Australia

4. drift specimens from Vivonne Bay, Kangaroo I., (A68420)

5. from 20m deep, Toad head, West I., Victor Harbor (A31576) with fringing cystocarps (arrowed)

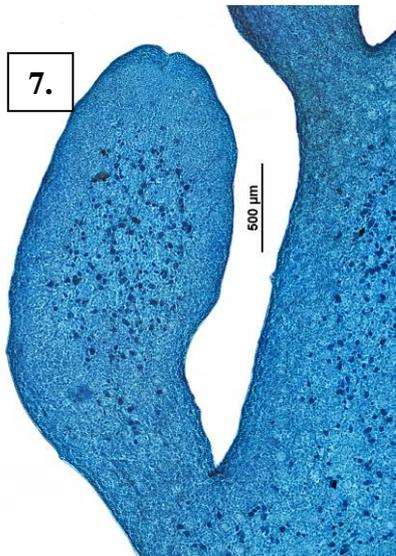
6-8. microscope surface views stained blue:

6. frond tip with apical notch, flat-branched central vein, cell rosettes (slide 13171)

8. sporangial plant: branches with scattered tetrasporangia (slide 5204)

7. female plant: protruding cystocarps (cys) on frond edges (slide 5203)

7.



8.

