

Techniques needed and plant shape



Classification

Phylum: Rhodophyta; Order: Rhodymeniales; Family: Rhodymeniaceae
tattered red blades

*Descriptive name

Features



1. plants red, 160-200 mm tall, broader than tall, of a **tattered** (lacinate) sheet attached by a very small basal stalk
2. **female** blades speckled with pustulate, dark cystocarps
3. tiny bladelets (spatula-shaped **proliferations**) cover **sporangial** blade surfaces

Occurrences

SE Tasmania

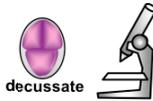
Usual Habitat

on rock, 5-12m deep

Special requirements



1. cut cross sections of blades and examine microscopically to find
 - narrow outer (cortical) layers of small cells, grading rapidly to larger inner (medulla) cells of mixed sizes, **loosely** arranged
 - pustulate mature female structures (cystocarps) protruding from blades with inner loosely arranged large cells and outer rows of small cells forming a wall (pericarp), single depressed external opening (ostiole), mass of carposporangia with a small group of basal nutritive cells
2. view the surface of a sporangial blade proliferation microscopically to see the mass of scattered, decussately divided tetrasporangia **ringed** by surface (cortex) cells

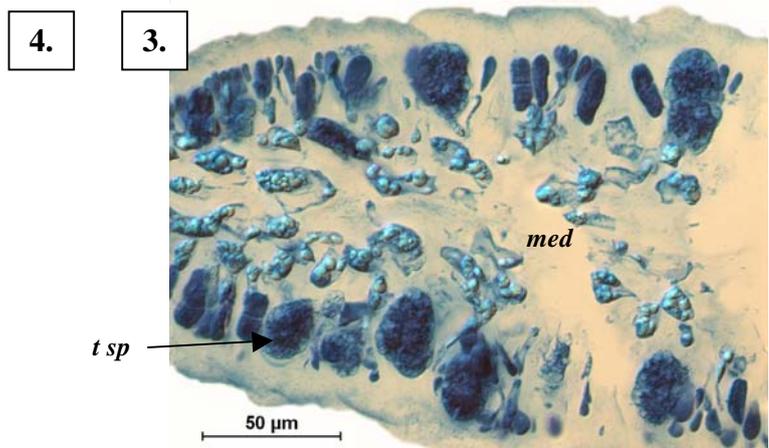
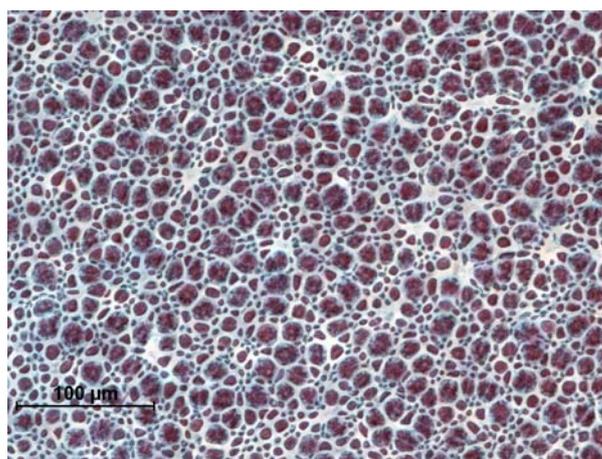
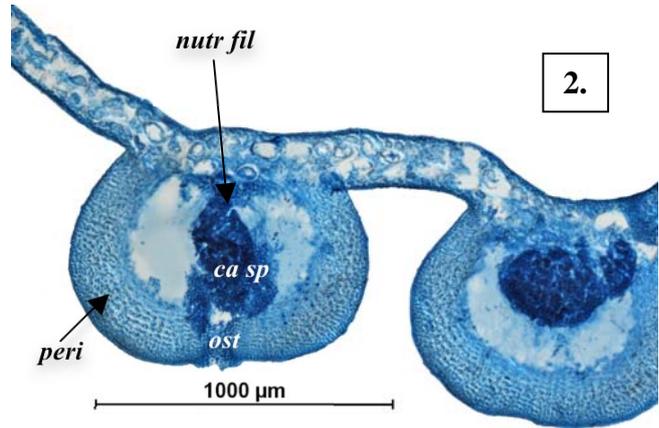
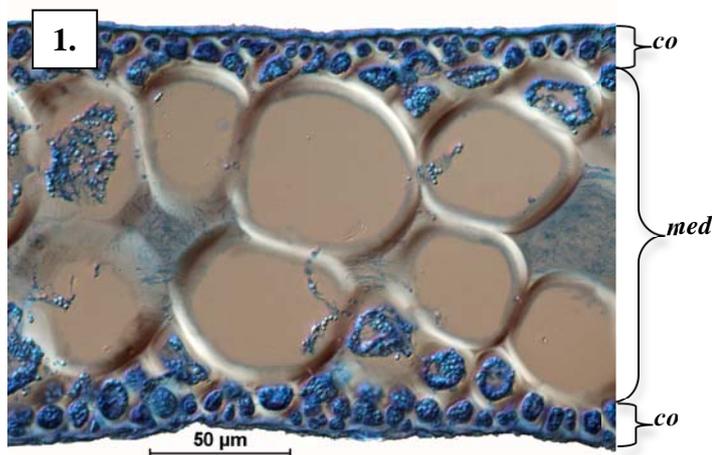


Similar Species

Halymenia plana but that has fine threads in the medulla, and no sporangial proliferations

Description in the Benthic Flora

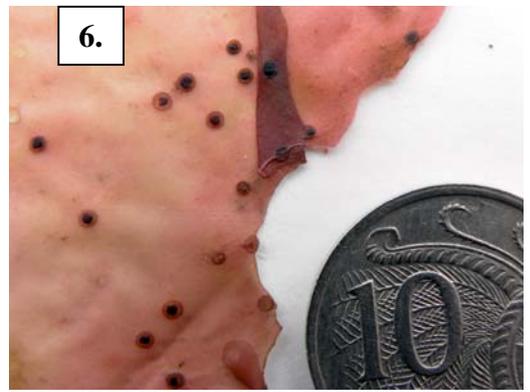
Part IIIB, pages 83-85



Rhodymenia halymenioides stained blue and viewed microscopically; #1-3 cross sections, #4 surface view

1. blade with narrow outer layers (cortex, *co*) of small cells and core (*med*) of larger cells of mixed sizes (A63868 slide 15044)
2. two cystocarps protruding from a blade (with cellular wall (pericarp, *peri*) of rows of small cells, depressed opening (ostiole, *ost*), central mass of carposporangial (*ca sp*) supported by nutritive threads (*nutr fil*) (A63886 slide 15068)
3. bladelet with tetrasporangia (*t sp*) amongst elongate cells in the cortex, and star-shaped (stellate) medulla cells (*med*) (A63868 slide 15044)
4. surface view of a tetrasporangial bladelet with rings (rosettes) of cortical cells about tetrasporangia (A63868 slide 15045)

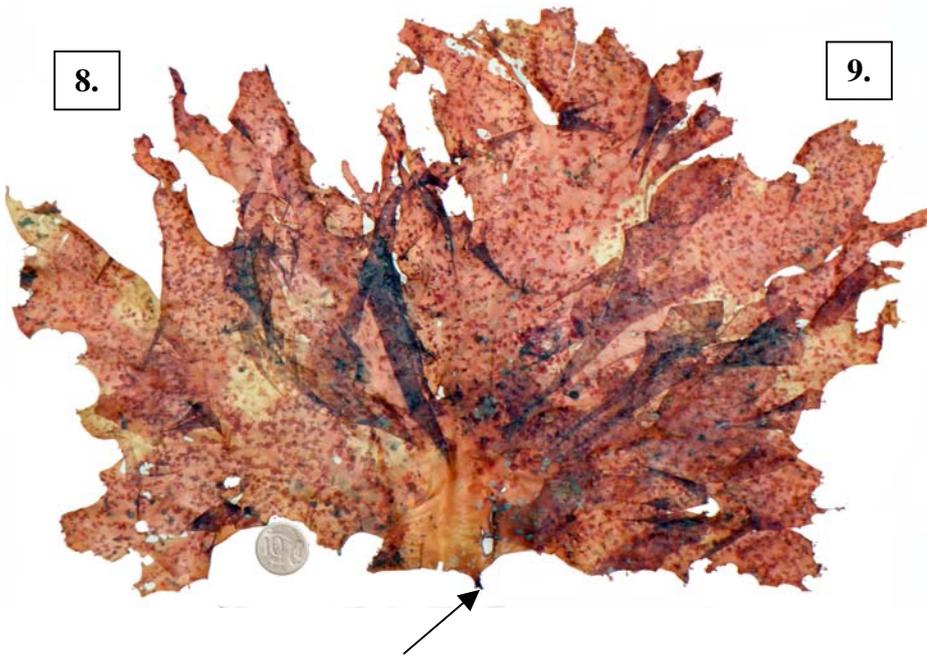
5.



7.



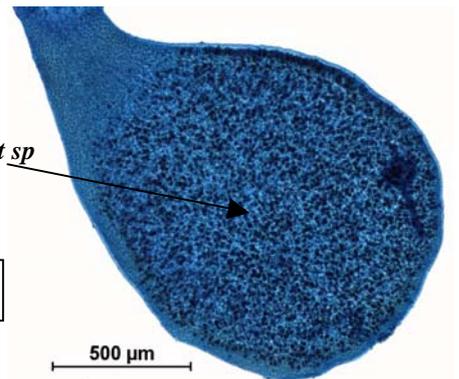
8.



9.



10.



Variations in shape of *Rhodymenia halymeniodes* (J Agardh) Womersley from Tasmania

- 5-7. views of specimens from 5-12m deep, Arch Rock, E of Ninepin Point (A63886) at different magnifications, showing a broad, tattered blade speckled with mature female structures (cystocarps), basally a tiny stalk (arrowed) and in #6, several heart-shaped young blades basally
- 8, 9 different magnified views of a sporangial specimen from Gordon (A63792) showing a broad blade with tattered lobes speckled with small spatula-shaped bladelets, tiny basal stalk (arrowed) and detail of surface with proliferations
- 9 detached bladelet stained blue and enlarged (A63868 slide 15045) with scattered central mass of tetrasporangia (*t sp*)