

Techniques needed and plant shape



MACRO
PLANT



flat-bladed



forked (dichotomous)

Classification

Phylum: Rhodophyta; Order: Rhodymeniales; Family: Rhodymeniaceae
§ a red forkweed

***Descriptive name**

Features

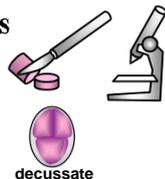
1. plants red to red-brown, 40-100 (-200) mm long, of obscure cylindrical stalks and slightly gristly, flat, forked blades 3-5mm wide; branching regenerating from damage clumped; blades often encrusted with bryozoans and hydroids
2. sporangia, if present, in scattered, diffuse patches
3. ball-shaped mature female structures (cystocarps), if present, protruding from blades



Occurrences

Usual Habitat

Special requirements



decussate

cut cross sections and examine microscopically to find

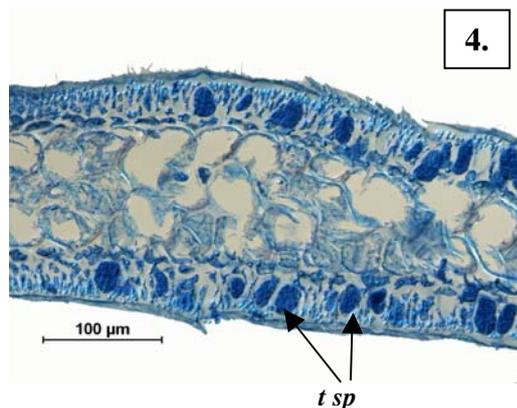
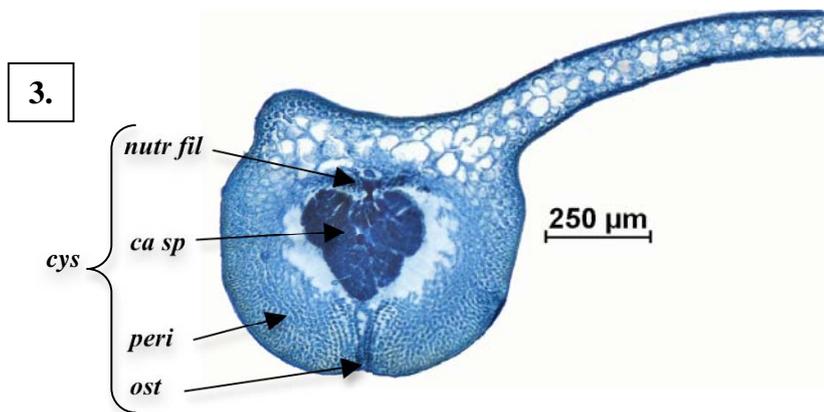
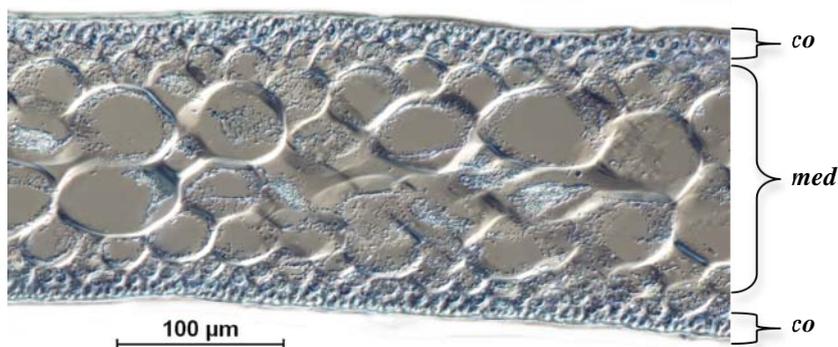
- narrow outer (cortical) layers of small cells facing outwards, grading to larger inner (medulla) cells with few gaps between cells
- scattered, diffuse patches of tetrasporangia, sporangia divided decussately, mixed with branched, small outer (cortical) cells
- ball-shaped mature female structures (cystocarps) protruding from blades, rows of small cells forming a wall (pericarp), single depressed external opening (ostiole), mass of angular carposporangia with basal nutritive cells

Similar Species

Rhodymenia verrucosa and difficult to separate if cystocarps are absent

Description in the Benthic Flora

Part IIIB, pages 74-75, 77 (as *Rhodymenia australis* Sonder)

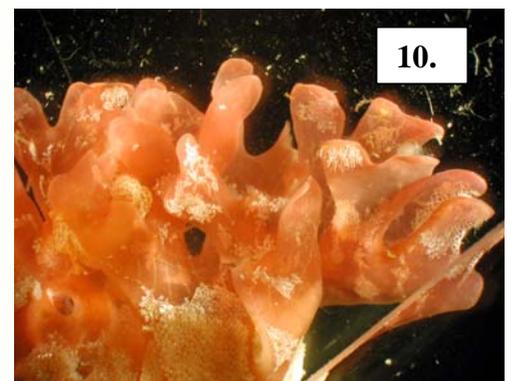
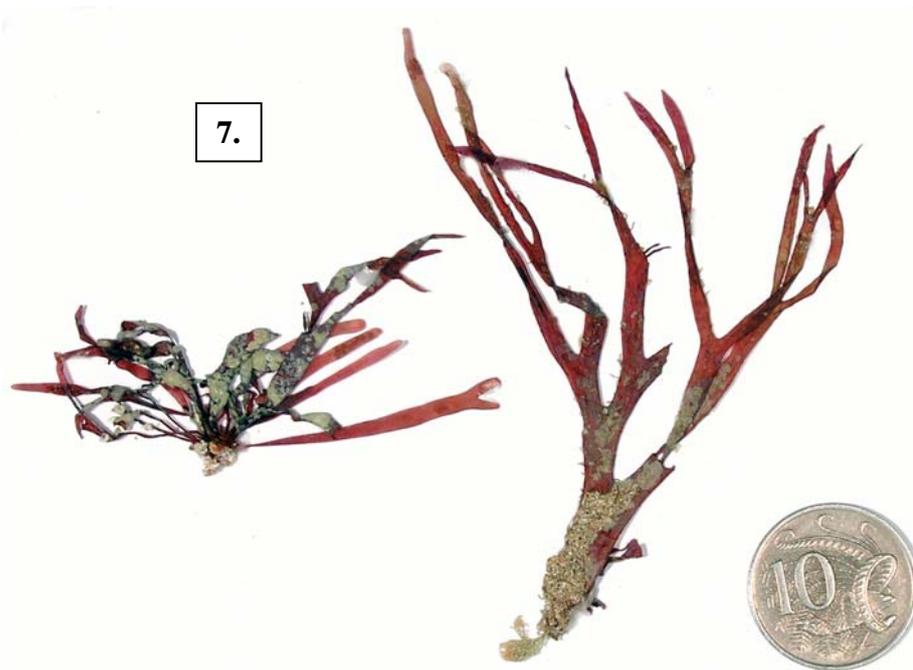


Cross sections of *Rhodymenia foliifera* stained blue and viewed microscopically

1. blade showing narrow outer layers (cortex, *co*) with small cells, grading to the core (medulla, *med*) of large egg-shaped cells with few spaces between cells (A59571)
2. part of a perennial cylindrical stalk showing growth rings in the cortex
3. mature female structure (cystocarp, *cys*) protruding from the edge of a blade, showing central mass of angular carposporangial, *ca sp*, basal nutritive tissue (*nutr fil*) cellular wall (pericarp, *peri*) of chains of small cells facing outwards, and depressed opening (ostiole, *ost*) (A60404 slide 14504)
4. sporangial patch (sorus) showing tetrasporangia mixed with branched chains of small cells (A60404 slide 14505)

§ name used in Edgar, G. *Australian Marine Life, 2nd Ed.* (2008) for other *Rhodymenia* species

*Descriptive names are inventions to aid identification, and are not commonly used
"Algae Revealed", R N Baldock, S Australian State Herbarium November 2010



Rhodymenia foliifera Harvey showing variations in shape of plants from S Australia

5. from 5m deep, Glenelg Blocks (A72052)
6. small epiphytic plant 5m deep, on an exposed reef, Troubridge Hill (A66273)
7. 5m deep, Granite I. (A72162)
- 8, 9. from Brown Beach, Yorke Peninsula, showing encrusting bryozoans and narrow tips (A26575)
10. from the Althorpe I. with numerous blades proliferating from damaged tips (A70419)

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