

Techniques needed and plant shape



MACRO  
PLANT



Classification

Phylum: Rhodophyta; Order: Rhodymeniales; Family: Rhodymeniaceae

\*Descriptive name

§ a red forkweed; thin forkweed

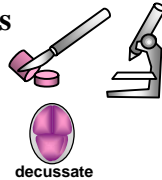
Features

1. plants red-brown fading to grey-red, 100-250 mm long, of clumps of *very thin, flattened* blades, 1-3mm wide, distantly forked arising from a pad encrusting rock, often with short spatula-shaped side branches from the edges of fronds
2. *angled, ball-shaped* mature female structures (cystocarps), protruding from blades apparently not common. From Robe S Australia to Victoria and Tasmania shaded intertidal pools to shallow water, often in rock overhangs

Occurrences

Usual Habitat

Special requirements



cut cross sections of blades and examine microscopically to find

- narrow outer (cortical) layers of small cells facing outwards, grading to large inner (medulla) cells, thick-walled in old blades
- scattered, diffuse patches of tetrasporangia on both sides of blades, sporangia divided decussately, mixed with small, divided outer (cortical) cells
- egg-shaped mature female structures (cystocarps) protruding and usually angled to the blade with inner circularly arranged large cells and outer rows of small cells forming a wall (pericarp), single very much depressed external opening (ostiole), mass of carposporangia with small group of basal nutritive cells

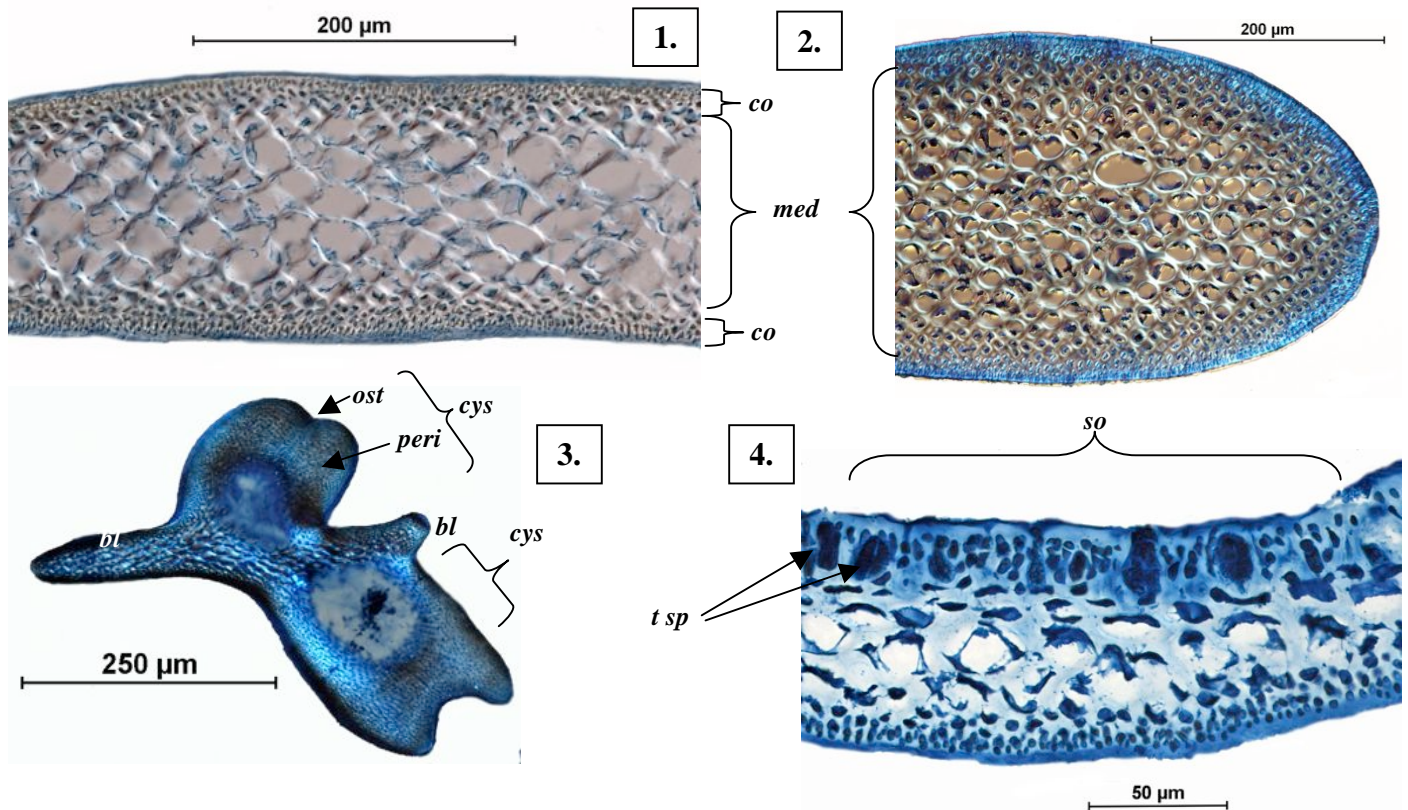
Similar Species

*Cordylecladia furcellata* but that has small, fertile bladders at tips; also like denuded *Areschougia stuartii* but that has a central thread and side branches are basally narrowed

Description in the Benthic Flora

Part IIIB, pages 70, 71

Details of anatomy

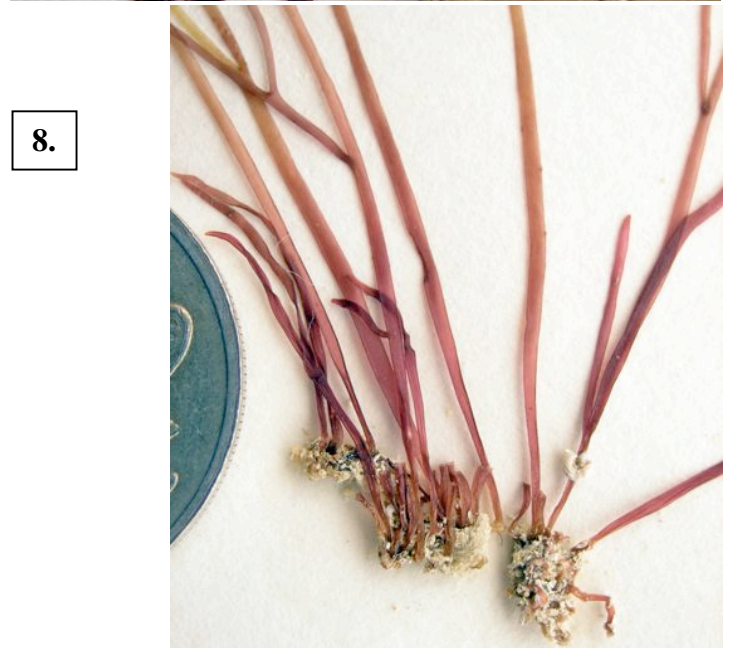


Cross sections of *Rhodymenia stenoglossa* stained blue and viewed microscopically

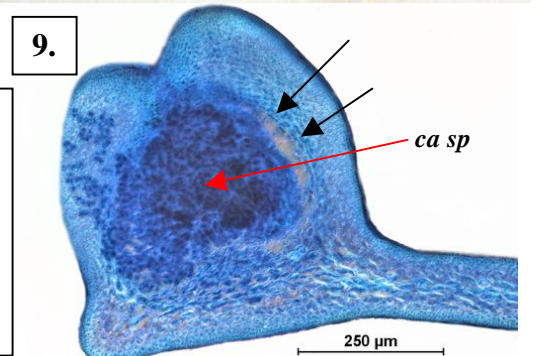
1. blade, showing narrow outer layers (cortex, *co*) of small cells increasing rapidly in size to a broad core (medulla, *med*) of large cells (A18375 slide 14540)
2. old blade showing expanded medulla of thick-walled cells (64527 slide 15478)
3. two mature female structures (cystocarps, *cys*) angled to the surface of the blade (*bl*) showing depressed opening (ostiole, *ost*), broad cellular wall (pericarp, *peri*) of chains of small cells (fertile contents of cystocarp lost in preparation) (A64529 slide 15480)
4. patch (sorus, *so*) of tetrasporangia (*tsp*) mixed with branched cortical cells (A64527 slide 15481)

§ 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, State Herbarium S Australia, November 2010



5, 6. *Rhodymenia stenoglossa* J Agardh showing variations in shape of plants from roof of an intertidal rock overhang, Warrnambool, Victoria (A64515) showing clumped thin blades and short side branches  
 7, 8 from Cape Lannes, Robe, S Australia (A67208) showing very thin blades and basal clumping  
 9. cross section of a cystocarp stained blue and viewed microscopically, showing circularly arranged inner pericarp cells (arrowed) and mass of carposporangia (*ca sp*)



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