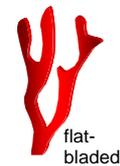




MACRO
PLANT



Techniques needed and plant shape

Classification

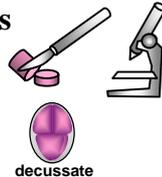
*Descriptive name

Features

Occurrences

Usual Habitat

Special requirements



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

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

- 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

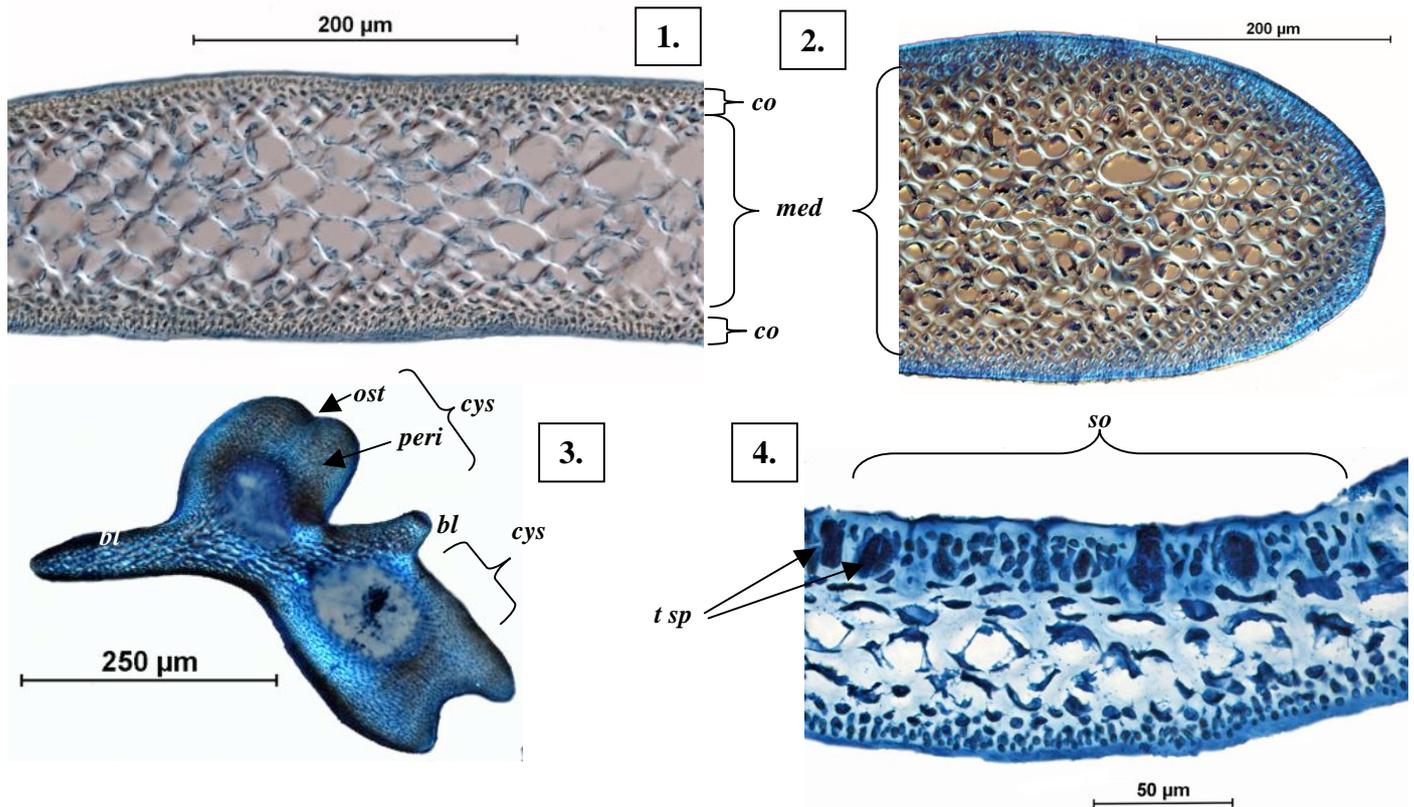
Similar Species

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

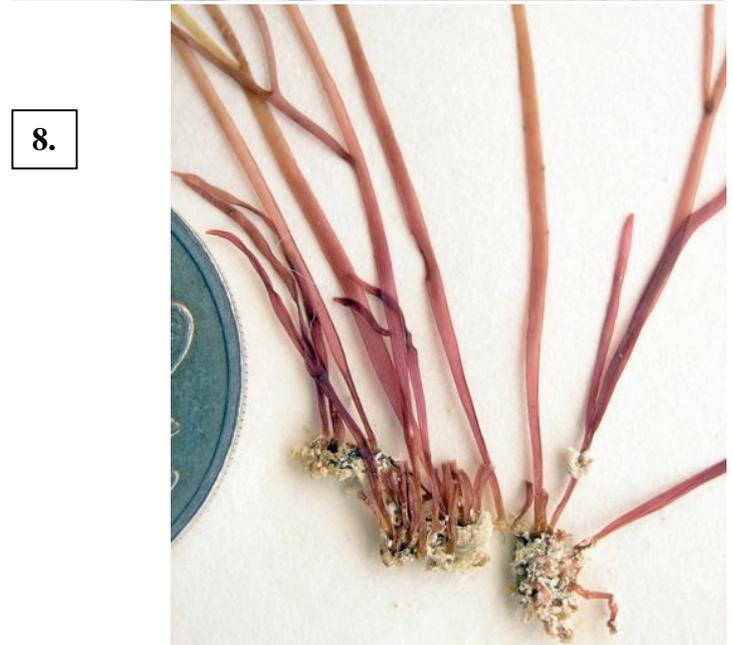
Details of anatomy



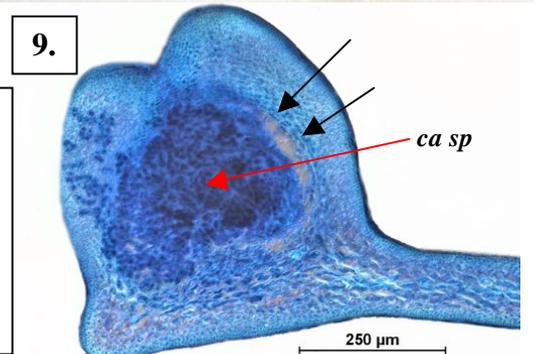
Cross sections of *Rhodymenia stenoglossa* stained blue and viewed microscopically

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



Rhodymenia stenoglossa J Agardh showing variations in shape of plants
 5, 6. 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*)



[§] 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