

Techniques needed and plant shape



MACRO PLANT



Classification

*Descriptive name

Features

Occurrences

Usual Habitat

Special requirements

Phylum: Rhodophyta; Order: Rhodymeniales; Family: Rhodymeniaceae

§ a red forkweed; tasselled red blades

1. plants red-brown, 50-300 mm long, of **clumps** of narrow, **gristly** compressed stalks, about 1mm wide from a single holdfast, broadening towards the tips to 2-6mm wide with **numerous** fringing short side blades, sometimes also on the main blade surfaces
2. ball-shaped mature female structures (cystocarps), if present, protruding from blades

Victoria, around Tasmania

shaded intertidal pools to shallow water, on rock

1. cut cross sections of blades and examine microscopically to find

- narrow outer (cortical) layers of small cells facing outwards, grading rapidly to large inner (medulla) cells **loosely** arranged
- scattered, diffuse patches of tetrasporangia, sporangia divided decussately, mixed with small outer (cortical) cells
- egg-shaped or beaked mature female structures (cystocarps) protruding from blades with inner loosely arranged large and outer rows of small cells forming a wall (pericarp), single depressed external opening (ostiole), mass of carposporangia with small group of basal nutritive cells

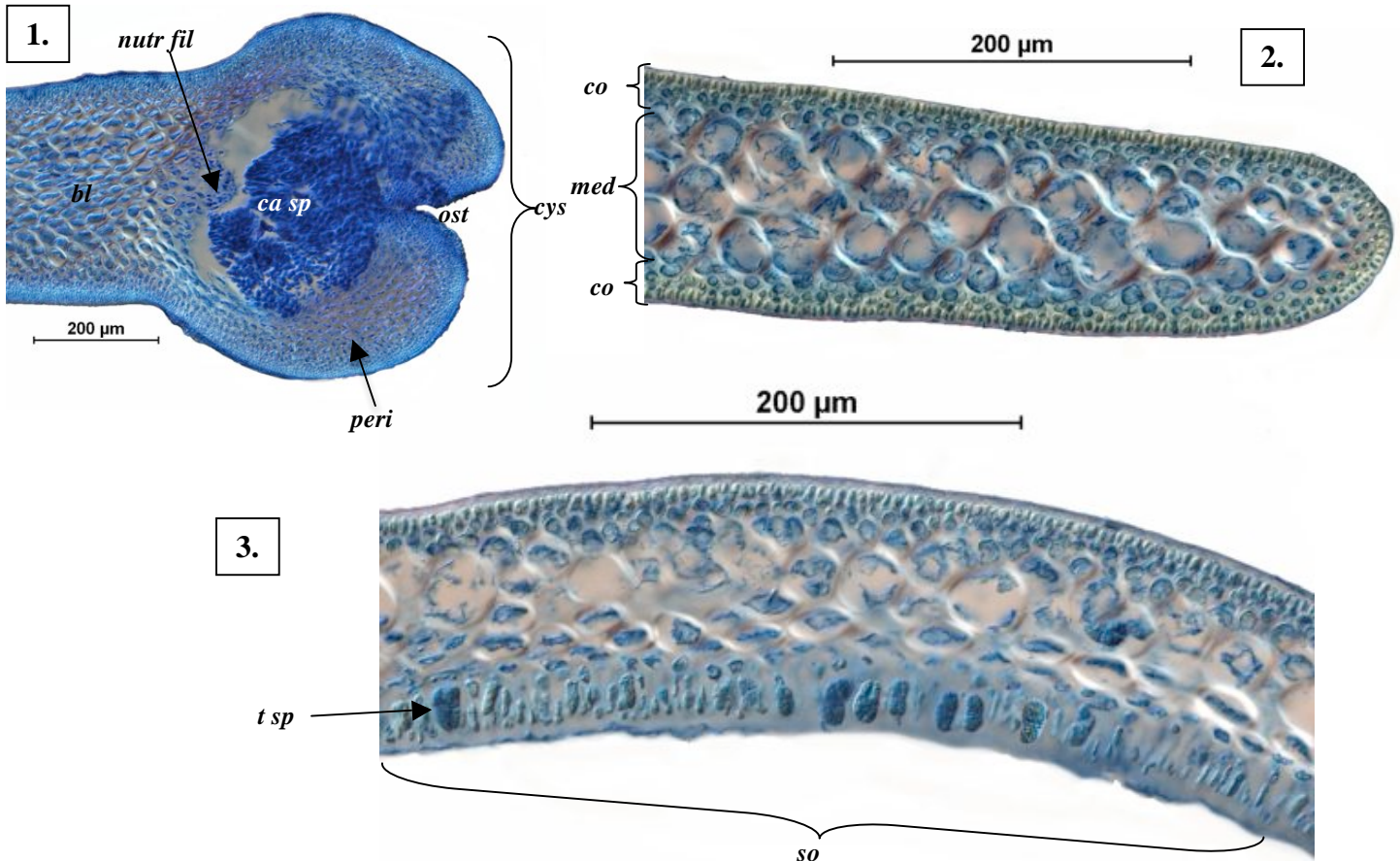


Similar Species

Rhodymenia stenoglossa but that has blades narrow throughout their length

Description in the Benthic Flora

Part IIIB, pages 80, 81, 82



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

1. cystocarp (*cys*) at edge of a blade (*bl*) with mass of carposporangia (*ca sp*) originally attached to a pad of nutritive cells (*nutr fil*), cellular wall (pericarp, *peri*) and depressed opening (ostiole, *ost*) (A41873 slide 14375)
2. blade with narrow outer layers of small cells (cortex, *co*) and core (medulla, *med*) of egg-shaped cells (A27830 slide 14373)
3. sporangial patch (sorus, *so*) containing tetrasporangia (*t sp*) mixed with elongate cortical cells (A27830 slide 14373)

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

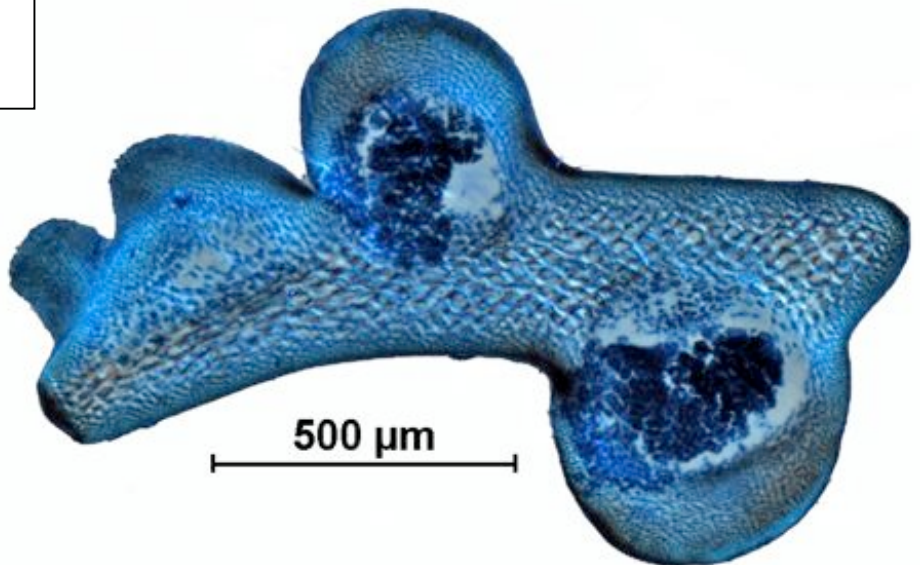
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"Algae Revealed", R N Baldock, State Herbarium S Australia, November 2010



Rhodymenia prolificans Zanardini showing variations in shape of plants from Tasmania

- 4, 5. two magnifications of a specimen from 0-6m deep, Fluted cape, Bruny I., (A41873) showing blades bunched from a basal holdfast and short fringing side blades
- 6, 7. two magnifications of a specimen from the lower intertidal, Safety Cove, near the port, with fewer, narrower blades and upper fringing, branched side fronds forming a bushy terminal tuft (A49246)
- 8. cross section stained blue and viewed microscopically, showing several mature female structures (cystocarps) on both sides of a blade (A41873 side 14375)

8.



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