

Techniques needed and plant shape



MICRO PLANT



Classification

Phylum: Rhodophyta; Order: Rhodymeniales; Family: Rhodymeniaceae  
Rhodymenia parasite

\*Descriptive name

Features



1. plants red, tiny, 1-3mm tall, usually branched, on blades of *Rhodymenia* spp
2. male and sporangial plants antler-like; mature female plants (cystocarpic) warty west coast S Australia to Victoria, but may be overlooked and more widespread semi-parasitic on *Rhodymenia* sp, possibly specific to *R. australis*

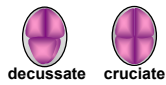
Occurrences

Usual Habitat

Special requirements



1. cut sections where plants penetrate host blades and examine microscopically to find narrow outer (cortical) layers of 2-4 layers of branched, small cells grading rapidly in size to large cells of the core (medulla), with chains of small cells penetrating and surrounding the large medulla cells of the host
2. cut sections of pustulate, mature female structures (cystocarps) to find layers of small cells forming a wall (pericarp), single prominent external opening (ostiole), internally a mass of carposporangia, prominent nutritive cells basally and envelope of threads initially present, but disintegrating
3. sporangia scattered in the inner part of the cortex, decussate or cruciate, mixed with elongated cells,

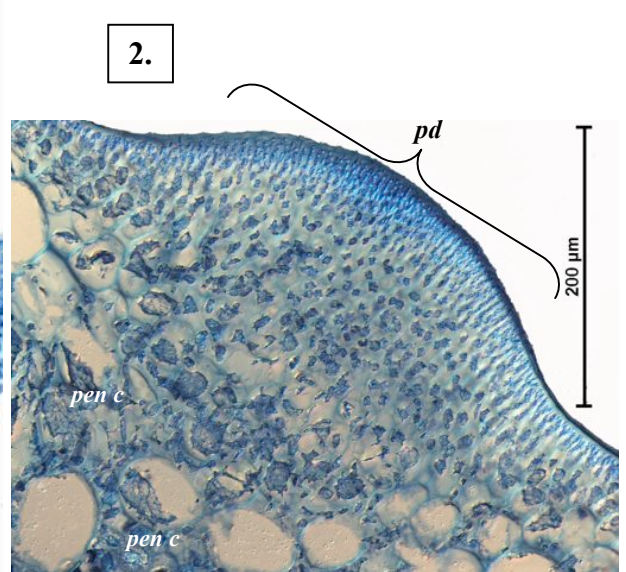
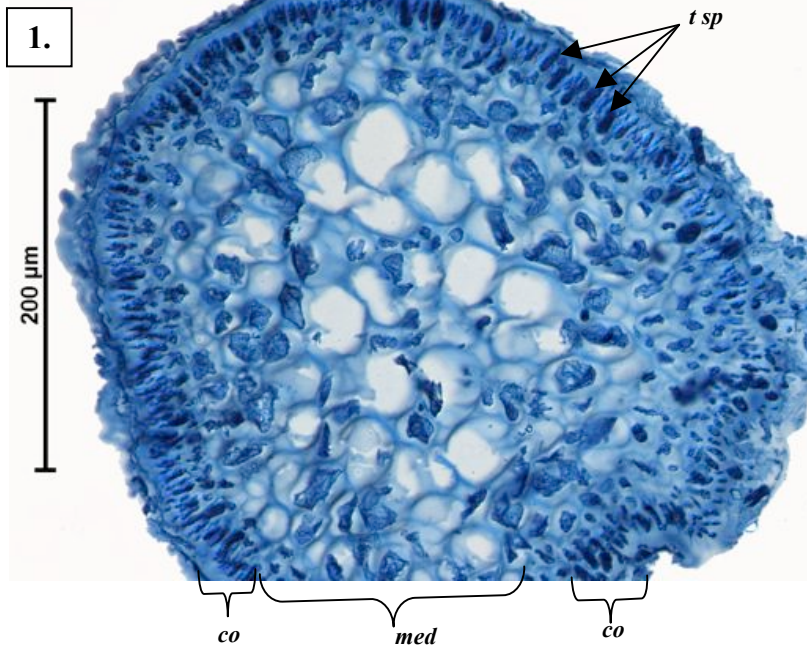


Similar Species

Description in the Benthic Flora

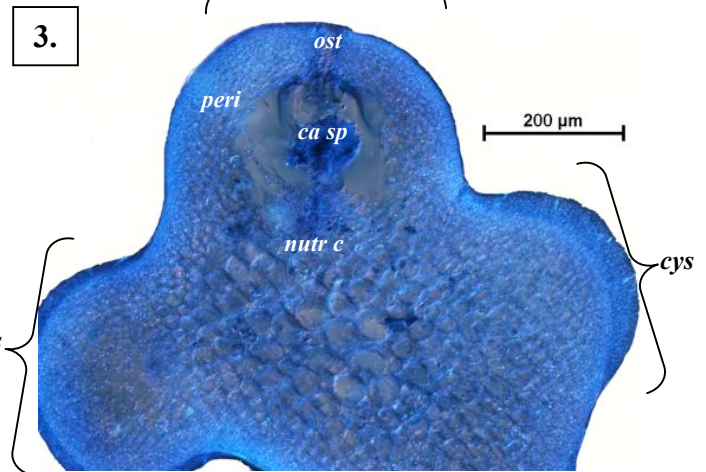
Part IIIB, pages 86-89

unique

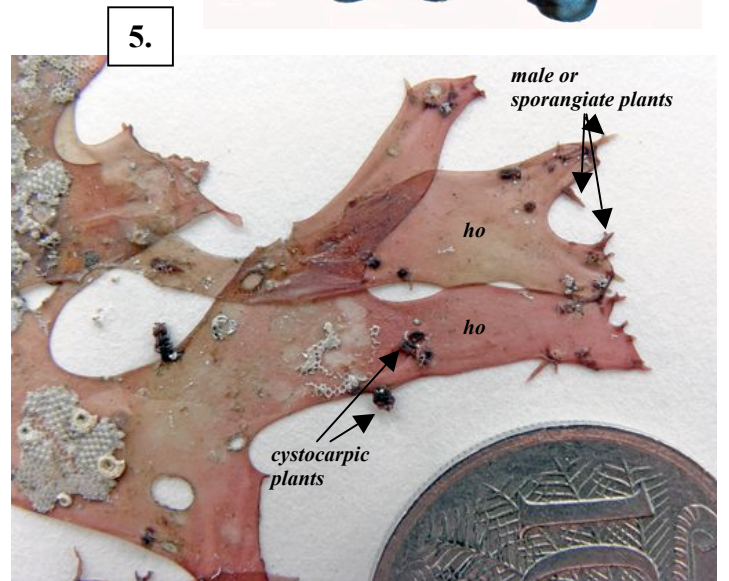
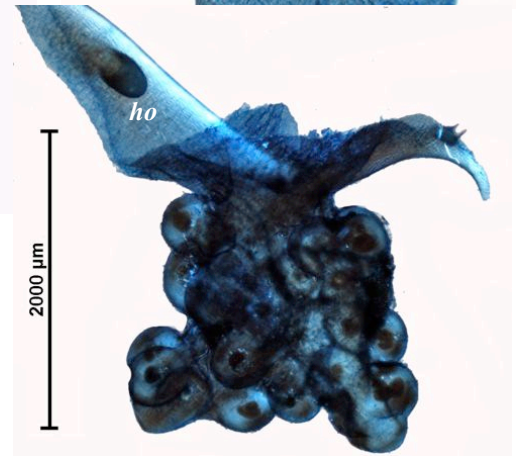
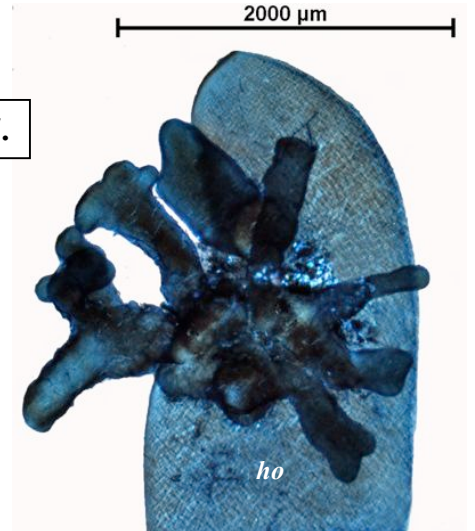
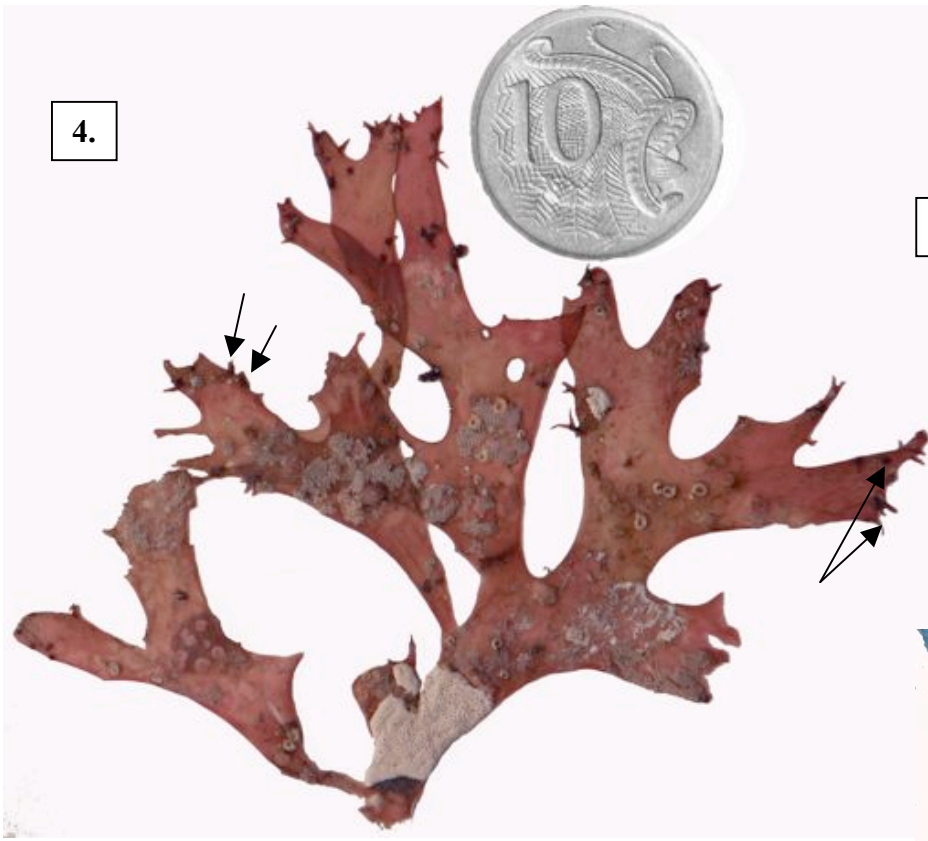


Cross sections of *Rhodymenicolax australina* (A44823) stained blue and viewed microscopically

1. sporangial branch showing the narrow outer layer (cortex, *co*) of small cells, with scattered tetrasporangia (*t sp*) amongst elongated cortical cells, and core (medulla, *med*) of large cells (slide 15174)
2. pad (*pd*) attaching the parasite to the host (*h*) with cells (*pen c*) penetrating those of the host's medulla (slide 15174)
3. globose, protruding mature female structures (cystocarps, *cys*) with cellular walls (pericarp, *peri*) one shown punctured by an ostiole (*ost*) and internally a mass of spores (carposporangia, *ca sp*) and basal nutritive tissue (*nutr c*) (slide 15170)



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



*Rhodymeniocolax australina* Womersley

- 4, 5. two magnifications of plants on *Rhodymenia australis*? from Crawfish Rock, Westernport Victoria, some individual plants indicated (A44823)
- 6. magnified view of plants from 26m deep, N Point St Francis I. S Australia (A69697)
- 7, 8. microscopic views of specimens (A44823) removed from hosts and stained blue
  - 7. top view of a single plant near the tip of a *Rhodymenia* blade (host, *ho*) (slide 15176)
  - 8. side view of a plant with globose cystocarps (A44823 slide 15176)