

Techniques needed and plant shape



**MACRO
PLANT**



Classification

Phylum: Rhodophyta; Order: Rhodymeniales; Family: Rhodymeniaceae

***Descriptive name**

‡Tasmanian red forkweed; red wedge-blades

Features



1. plants dark red, 40-200 mm tall, broader than tall, of a blade, divided into broad **wedge-shaped** lobes, a short, narrow stalk basally, sometimes tattered (lacinate) or with small holes
2. **female** blades speckled with pustulate, dark cystocarps
3. tiny surface bladelets (spatula-shaped proliferations) **absent**

Occurrences

E and SE Tasmania

Usual Habitat

on rock or on the introduced gastropod *Maoriculpus roseus* 10-15m deep

Special requirements



1. cut cross sections of blades and examine microscopically to find
 - narrow outer (cortical) layers of small cells, grading rapidly to larger inner (medulla) of **2 irregular rows** of large, relatively thick-walled cells mixed with smaller cells, and some spaces between cells
 - pustulate mature female structures (cystocarps) protruding from blades with inner loosely arranged large cells and outer rows of small cells forming a wall (pericarp), single depressed external opening (ostiole), mass of carposporangia with a small group of basal nutritive cells
2. male and sporangial plants are unknown

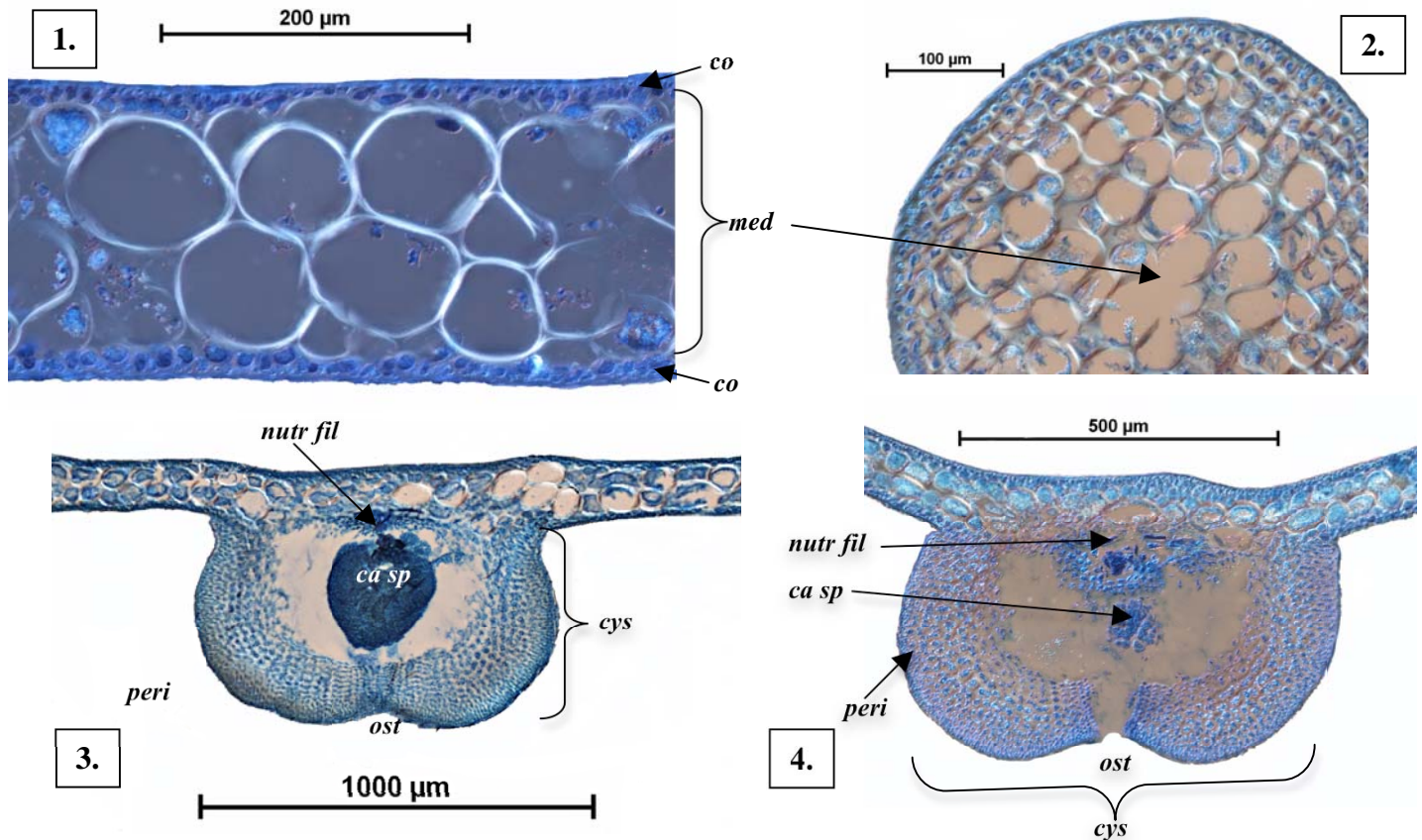
Similar Species



Rhodymenia halymenioides. Difficult to separate if sporangial proliferations are absent

Description in the Benthic Flora

Part IIIB, pages 84-86



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

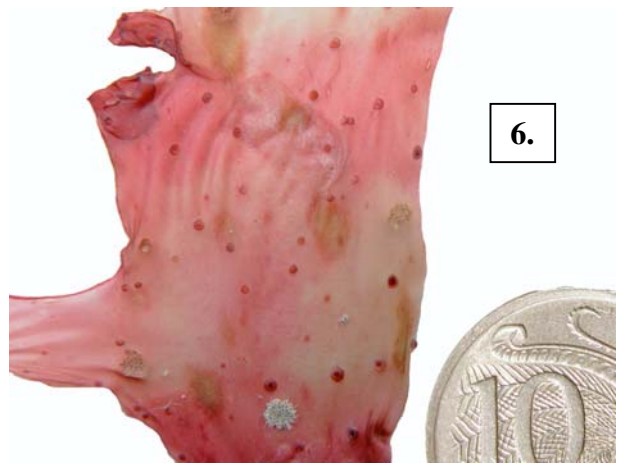
1. blade with narrow outer layers (cortex, *co*) of small cells and core of 2 irregular rows of **large**, relatively thick-walled cells mixed with smaller ones and some spaces between cells (A61375 slide 1234)
2. basal stalk with larger medulla (A42162 slide 14334)
- 3, 4. cystocarps protruding from blades (*bl*) with central masses of carposporangia (*ca sp*) attached to basal nutritive tissue (*nutr fil*), cellular wall (pericarp, *peri*) of rows of small cells and depressed opening (ostiole, *ost*) (A61375 slide 12342 & A64252 slide 15222 respectively)

‡name used by Edgar, G (2008) in Australian Marine Life (2nd ed.).

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



5.



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Variations in shape of *Rhodymenia cuneata* Harvey from Tasmania

- 5-7. on the gastropod *Maoriculpus roseus*, 12m deep, from Sloping I., Frederick Henry Bay, Tasman Pen., (A61375) showing, at different magnifications, tattered, wedge-shaped lobes speckled with mature female structures (cystocarps) and narrow basal stalk
- 8, 9. two magnifications of a plant 2-5m deep, Sarah I., Bathurst Channel showing many broad lobes and detail of cystocarps on lobes with holes (A64252)
- 10. from 19m deep, Great Taylor Bay, Bruny I., showing a wedge-shaped blade divided into lobes (A64252)

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