

Techniques needed and shape



MACRO
PLANT



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Halymeniaceae
tiny-stalked red blades

*Descriptive name

Features

1. plants are dark red, consisting of a conspicuous *single, oval, slimy* blade 300-400mm tall
2. blades are attached by a *tiny disk and stalk* about 10mm long rapidly expanding into the blade from Nora Creina, S Australia to Warrnambool, Victoria

Occurrences

Usual Habitat

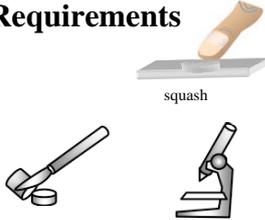
most specimens are from drift material; found in 5m of water on rock at Nora Creina

Similar Species

Aeodes nitidissima but that species has conspicuous wrappings about the female structures

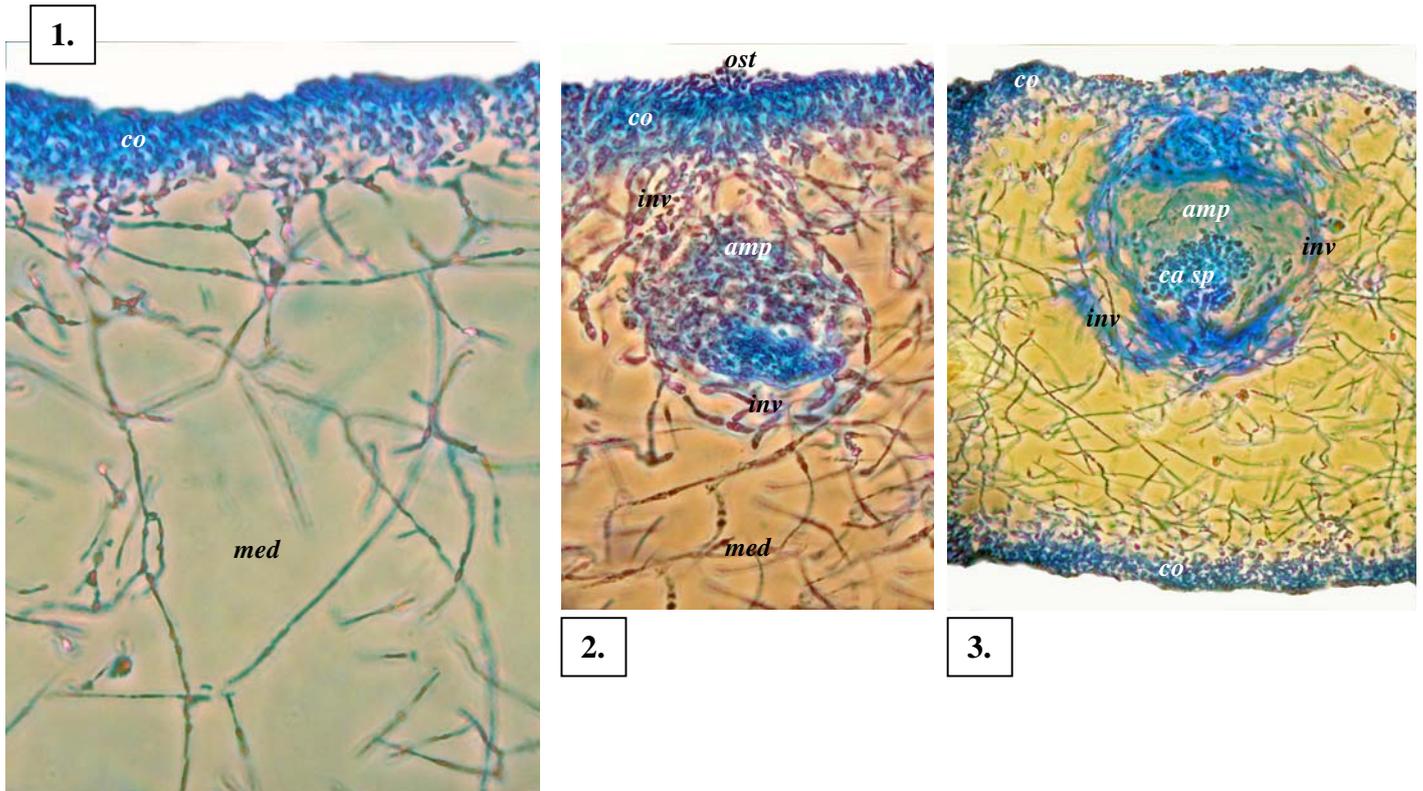
Description in the Benthic Flora Part IIIA, pages 202-205

Special Requirements



1. focus microscopically on a squash of surface cells to see the thin outer layer (cortex) of chains of *small* cells and inner layer (core or medulla) of *sparse*, thin threads
2. if possible, cut cross sections of blades and view microscopically:-
 - a wide core (medulla) of *sparse*, branched threads but *no* spidery cells (ganglionic cells found in other genera of the Family)
 - *thin* outermost layers of *forked* chains each of up to 6, *equal-sided* to slightly elongate, closely packed *small cells*
3. if possible find female plants, cut cross sections (or make squashes) and view microscopically the flask-shaped structures (*ampullae*) protruding into the blade core from the cortex, finally with a *prominent envelope* (involucre) of threads, with *inconspicuous* opening (ostiole) to the surface

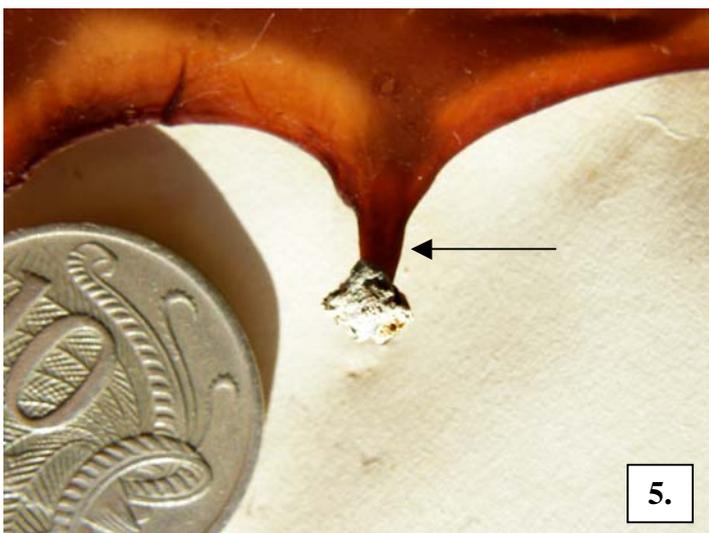
Details of Anatomy



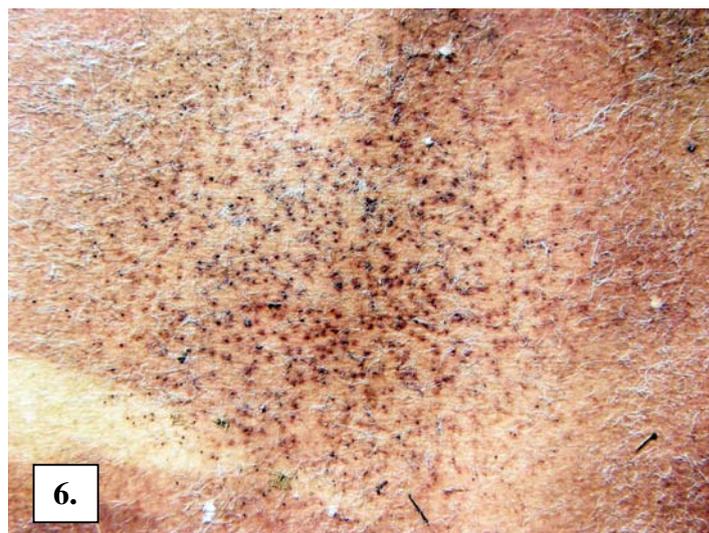
Cross sections of *Grateloupia ovata* stained blue and viewed with phase microscopy at different magnifications, showing:

1. a view of half of a section with sparse threads of the wide core (medulla, *med*) and narrow outer layer (cortex, *co*) of forked chains of small cells (A24382 slide 12009)
- 2, 3. flask-shaped female structures (ampullae, *amp*) with envelopes (involucre, *inv*) of threads, developing sporangia (carposporophyte, *ca sp*) inside and inconspicuous opening (ostiole, *ost*) (#2:A37821 slide 11751; #3: A21216 slide 12083)

4.



5.



6.

Various views of a drift specimen of *Grateloupia ovata* Womersley & Lewis, A22973 from Wrights Bay (Guichen Bay) S Australia, showing:

* Descriptive names are inventions to aid identification, and are not commonly used
Prepared August 2008