

Mychodea marginifera
(Areschoug) Kraft

45.600

Techniques needed and shape



MACRO
PLANT



Classification
*Descriptive name

Phylum: Rhodophyta; Order: Gigartinales; Family: Mychodeaceae
spatula-fringed Mychodea

Features



1. dark red-brown, 50-150mm tall, of *strap-like, flat-bladed*, forked main branches
2. *numerous*, small, side branches 2-4mm wide, *pinched* at their bases and *rounded* at the tips grow from edges and surface of mature blades

Occurrences

SW W Australia to Victoria and E Tasmania

Usual Habitat

on sea grasses (mainly *Amphibolis*), algae and hard surfaces, 1-13m deep

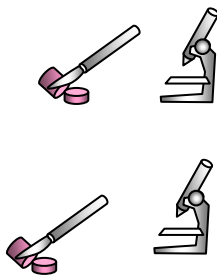
Similar Species

Mychodea australis but that species has pointed tips and no surface proliferations

Description in the Benthic Flora

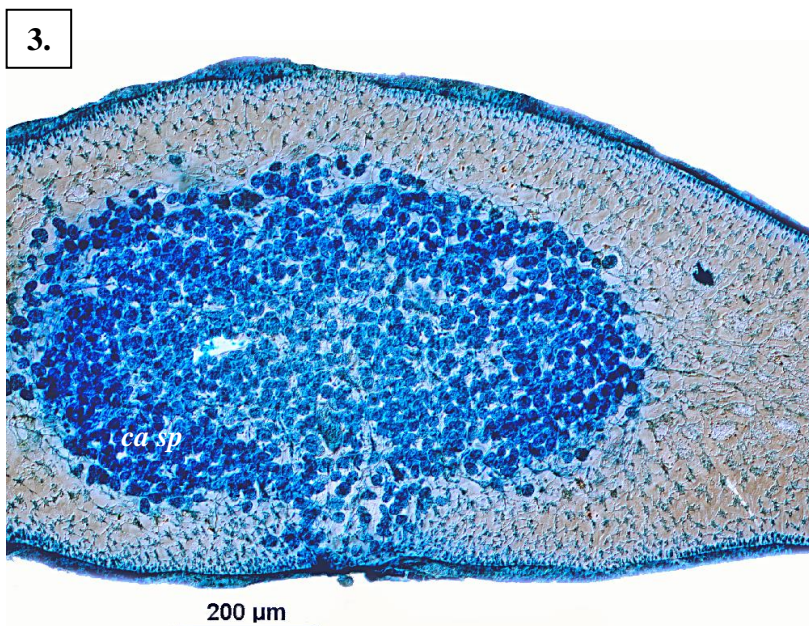
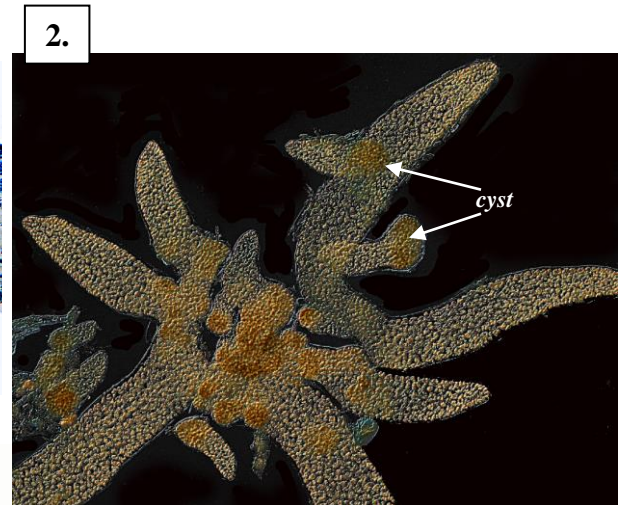
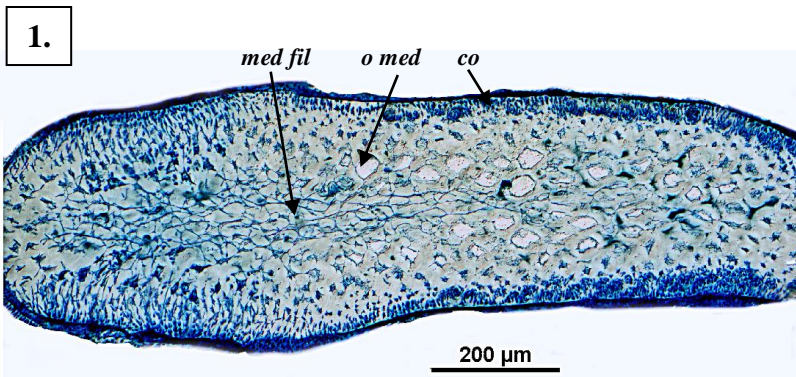
Part IIIA, pages 466-469

Special Requirements



1. cut a cross section of a branch and view microscopically to find:
 - innermost parts of the core (inner medulla) consist of slender *threads*
 - *large* cells in the outer part cores
 - outermost (cortex) layers of very *small* cells in 2-3 rows, facing outwards, *not* forming rings in surface view
3. find female structures (cystocarps) forming swellings near the *tips* of the short side branches. Cut a cross sections to view:
 - central *clusters* of spores
 - envelopes (involucres) of threads, but *no* openings (ostioles)
4. if possible, find sporangial plants with cigar-shaped tetrasporangia *scattered* or grouped on both surfaces of fronds, divided across into four sporangia (*zonate*) (not illustrated below)

Details of Anatomy



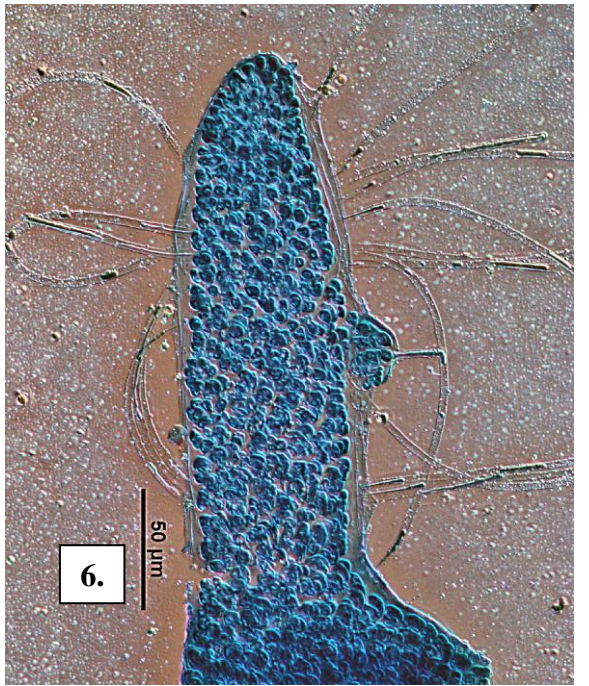
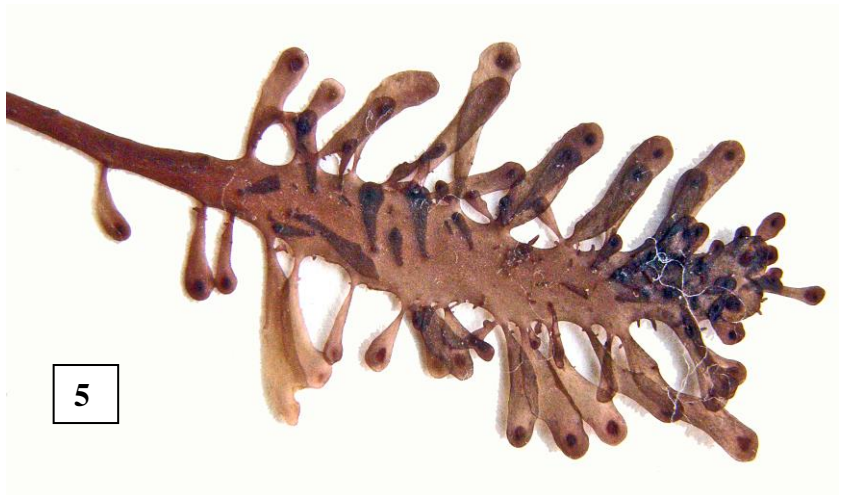
Mychodea marginifera (A44723) viewed microscopically

1. cross section showing inner core of fine threads (medullary filaments, *med fil*), outer medulla of large cells (*o med*) and outermost layer of small cells (cortex, *co*) (slide 3741)
2. tissue squash of detached short branches (marginal proliferations) with female structures (cystocarps, *cyst*) forming dark swellings (slide 3740)
3. a cross section of a cystocarp with carposporangia (*ca sp*) escaping through a rupture in the cortex of the blade (slide 3744)

4.



5.



6.

50 μ m

Mychodea marginifera (Areschoug) Kraft (A44723) from Pennington Bay, Kangaroo I., S Australia on *Acrocarpia* in shallow water at the reef edge

- 4, 5. two magnifications, showing blade-like main branches and spatula-shaped short branches bearing dot-like cystocarps arising from blade edges; some smaller proliferations also from the blade surface
- 6. surface microscopic view of a specimen stained blue to show numerous fine hairs and rounded tips of blades (slide 3739)

* Descriptive names are inventions to aid identification, and are not commonly used
 "Algae revealed", R N Baldock, State Herbarium S Australia, December 2008; edited April 2014