Mychodea australis
(Zanardini) Kraft

45.600

Techniques needed and shape

MACRO PLANT

Classification Phylum: Rhodophyta; Order: Gigartinales; Family: Mychodeaceae

***Descriptive name**

Features

1. plants are dark red-brown, 100-200mm tall, flat-branched and gristly
2. compressed short side branches ending in spines arise at the margins of broad main branches 2-7mm wide

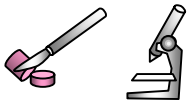
Occurrences Albany W Australia to Victoria and around Tasmania

Usual Habitat on rocks, wooden pilings and sea squirts, from shallow water to 60m deep

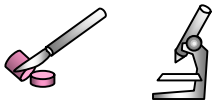
Similar Species distinctive because of its flat branching

Description in the Benthic Flora Part IIIA, pages 467-470

Special Requirements

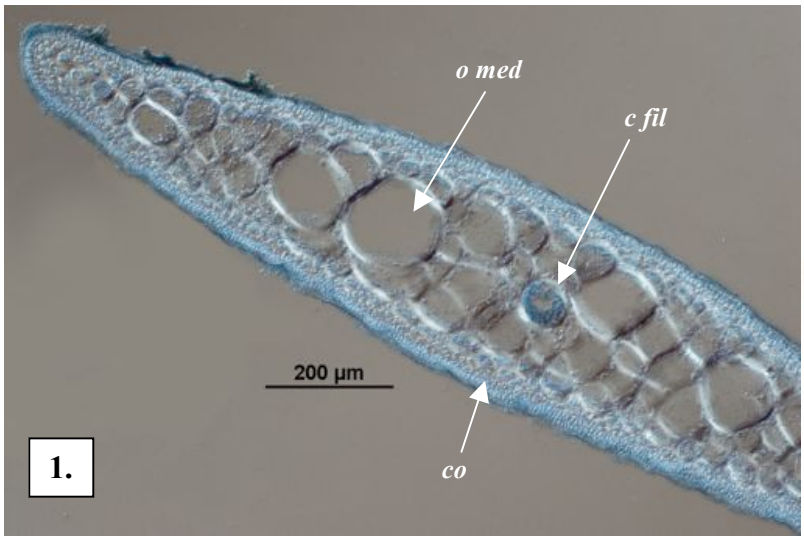


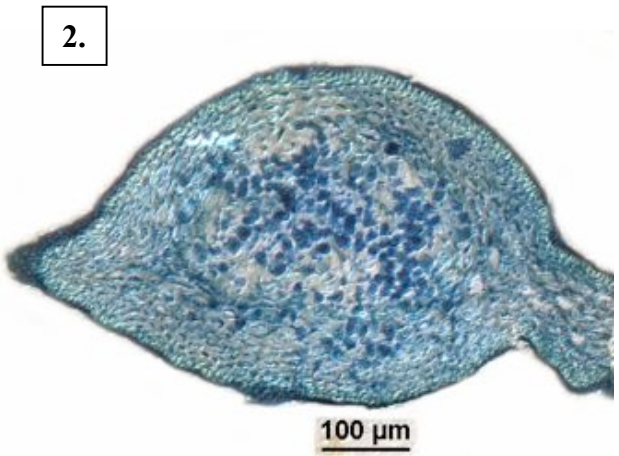
1. cut a cross section of a branch and view microscopically to find:
   - the core (medulla) with a single central thread innermost**,** surrounded by a few rhizoids
   - large cells in the outer part of the core
   - outermost (cortex) layers of very ***small*** cells in short rows, facing outwards

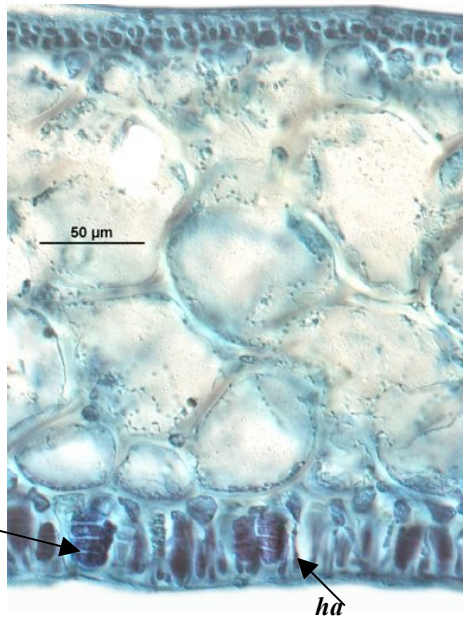


3. find female plants with swellings (cystocarps), near the ends of branches. Cut a cross section if possible to view:
   - clusters of spores
   - a poorly developed cellular wall (pericarp) disintegrating to release the spores
4. if possible, find sporangial plants with cigar-shaped tetrasporangia massed near the surface, divided across into four sporangia (***zonate***)

Details of Anatomy





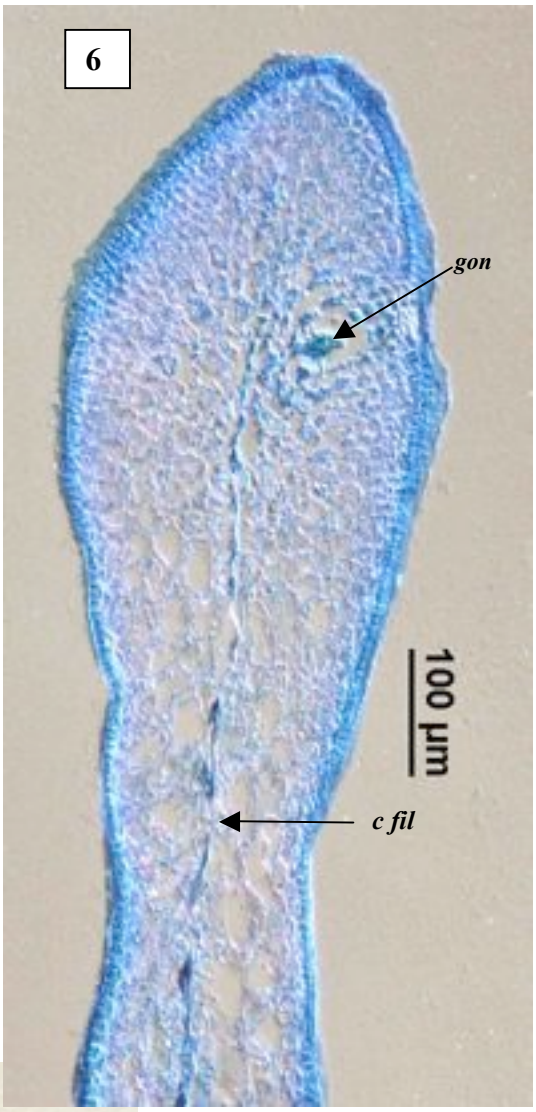


Cross sections of *Mychodea australis* stained blue and viewed microscopically showing

1. a compressed branch with prominent central thread (*c fil*) innermost, large cells of the outer part of the core (outer medulla, *o med*) and outermost layers (cortex, *co*) of small cells (A50921 slide 6453)
2. a cystocarp with central mass of sporangia (A41802 slide 3712)
3. a sporangial plant with mass (nemathecium) of tetrasporangia (*t sp*) on one side amongst elongate cells (hairs) of the cortex (A41802 slide 3713)

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

Prepared November 2008; edit. Aug. 2013



, 5. two magnifications of *Mychodea australis* (Zanardini) Kraft (A 44692) 3-6m deep on jetty piles at Vivonne Bay, Kangaroo I., S Australia. Cystocarps (arrowed) are visible in #5.

6. a lengthwise section stained blue and viewed microscopically of a developing female structure after fertilisation (gonimoblast, *gon*) with the central thread (*c fil*) of the core (medulla) visible (A41802 slide 3711)

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