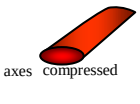
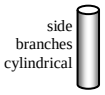
Mychodea ramulosa J Agardh

45.600





Techniques needed and shape

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

***Descriptive name** clumped Mychodea

Features

1. plants red, ***gristly***, tufted, 10-20mm tall; upright branches arise from a creeping base
2. main axes are 2-3mm wide and may be slightly compressed
3. side branches cylindrical, numerous, ***not*** pinched at the base, coming to a ***point*** and arising from axis edges

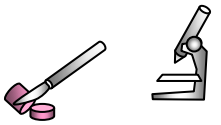
Occurrences Albany W Australia to Victoria

Usual Habitat on rocks, sea grass and sea-squirts, from shallow water to 12m deep

Similar Species *Mychodea carnosa* and *M. disticha* but in *M. ramulosa* there is a creeping base, branches are bent sharply at the site of cystocarps; tetrasporangia are terminal on cortical branches

Description in the Benthic Flora Part IIIA, pages 455-457

Special Requirements



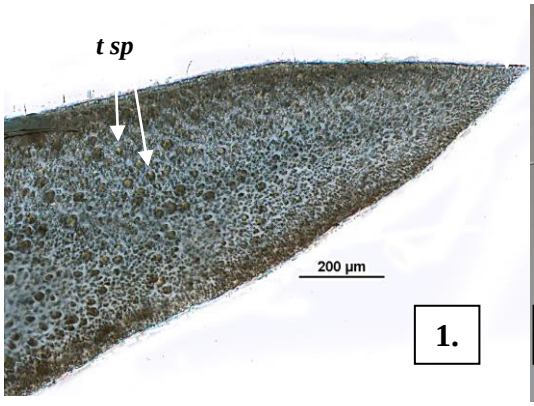
Diagnosis can be difficult

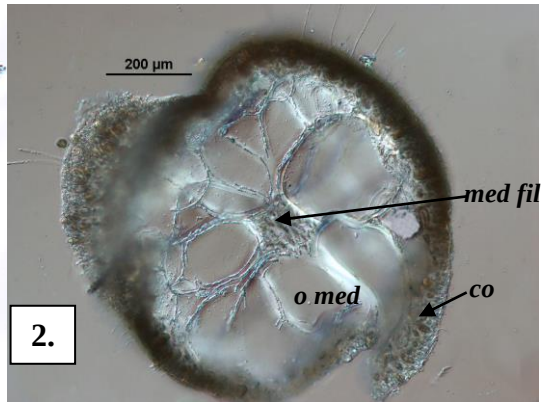
1. view plant tips microscopically to see the single, minute apical cell
2. cut a cross section of a branch and view microscopically to find:
   - the innermost parts of the cores (inner medulla) of slender ***threads***
   - rings of ***several, large*** cells in the outer parts of cores
   - outermost (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 on shorter branches and ***bending*** them sharply. Cut a cross section to view:
   - a central mass of threads and spores
   - practically no envelope of threads and ***no*** opening (ostiole) but a small dimple in the branch surface
4. if possible, find sporangial plants with ***scattered,*** cigar-shaped tetrasporangia, divided across into four sporangia (***zonate***). Tetrasporangia are found at the ***ends*** of the cortical branches (terminal), but this may be difficult to see.

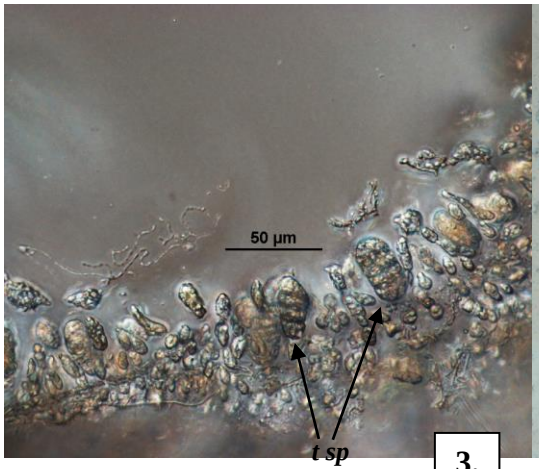
Details of Anatomy

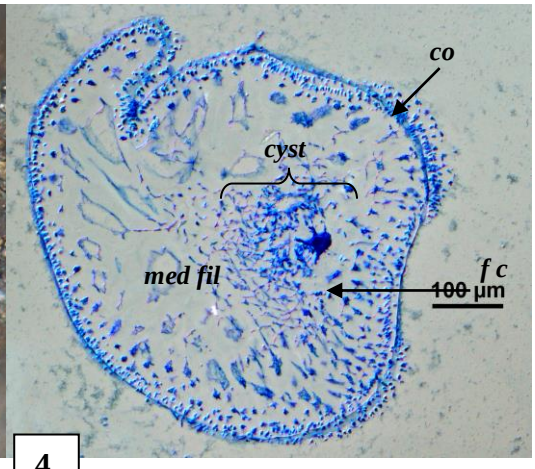
Mychodea ramulosa (slide A44701)

1. branch tip, surface view: minute apical cell (arrowed), scattered tetrasporangia (*t sp*) and pattern of surface cells
2. thick hand-cut cross section: central core of threads (medulla filaments, *med fil*), outer core of large cells (outer medulla, *o med*), outer layer (cortex, *co*) of small cells
3. part of a cross section of the cortex: tetra-sporangia (*t sp*)
4. cross section of a branch (slide 3718): embedded cystocarp (*cyst*) consisting of a central enlarged cell (fusion cell, *f c*), mass of loose threads (carposporophyte), and carposporangia. There is practically no sheath (involucre) of threads around the cystocarp



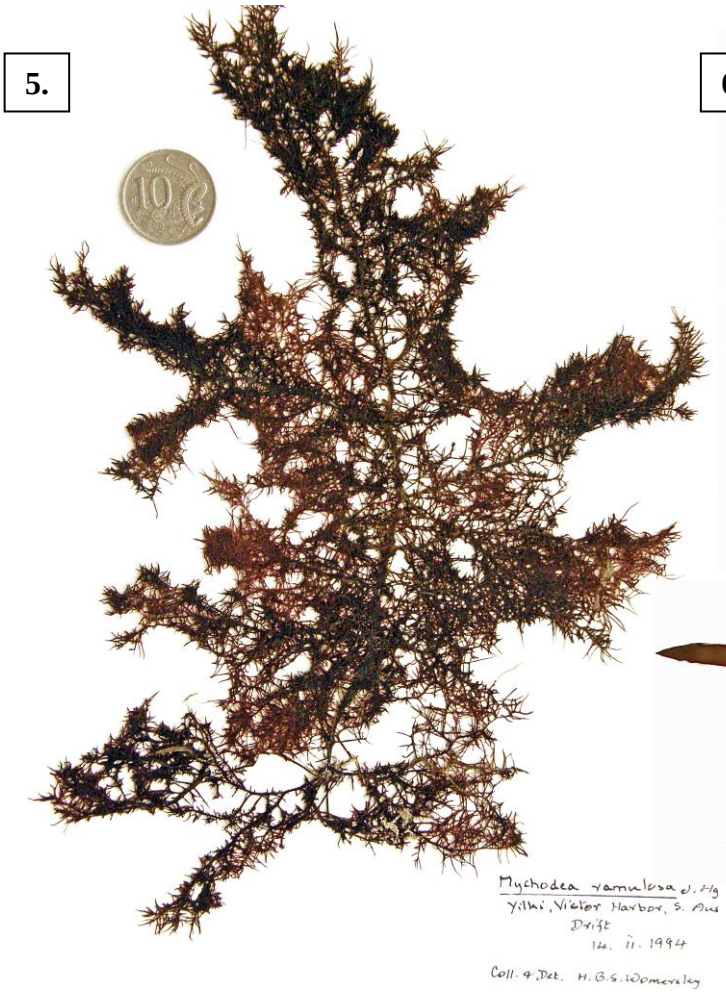






* Descriptive names are inventions to aid identification, and are not commonly used

"Algae revealed", R N Baldock, State Herbarium S Australia, December 2008: edited April 2014



Different magnifications of *Mychodea ramulosa* J Agardh, all from S Australia

5, 6. a much tufted drift plant from Yilki, Victor Harbor (A63337)

7, 8. a sparsely branched drift specimen from Victor Harbor (A9231c), showing the compressed main branches (axes), flattening accentuated during the pressing of the plant, with side branches arising from axis edges (arrowed)

9. tips of a female plant from Pennington Bay, Kangaroo I., (A44701) showing characteristic sharp bends in branches, due to the swollen cystocarps (arrowed) on one side

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