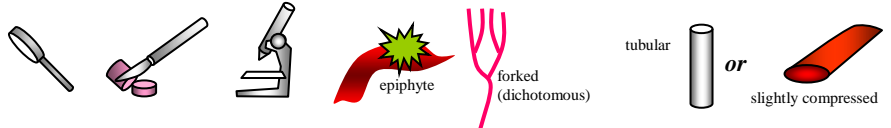


Techniques needed and shape



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Mychodeaceae
spiny Mychodea

*Descriptive name

Features



1. plants are dark red-brown, 40-360mm tall, forked, covered with conical *spines*
2. found on the wiry stems of the seagrass, *Amphibolis*
3. branches are *cylindrical* or *slightly compressed*, about 2mm wide

Occurrences

Usual Habitat

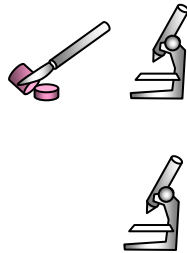
Similar Species

Description in the Benthic Flora

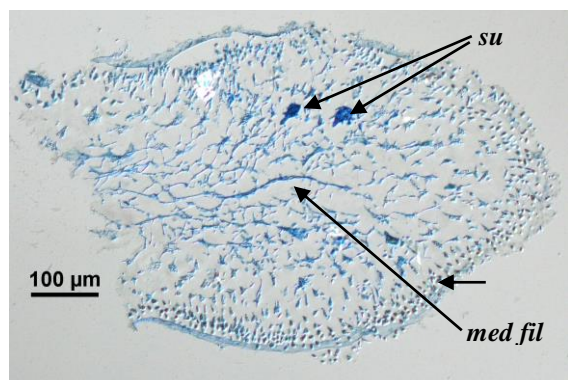
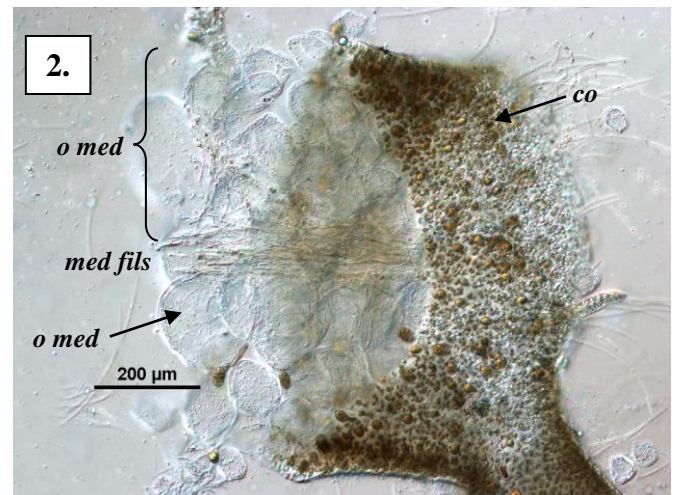
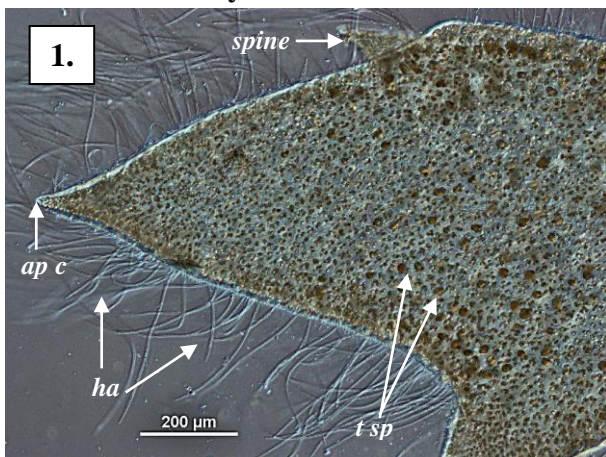
Special Requirements

possibly a restricted distribution, from Eucla W Australia to Fowlers Bay S Australia on the sea grass, *Amphibolis* mainly known from drift plants
Mychodea acicularis but the short branches of this species, although pointed, are longer
Part IIIA, pages 460-463

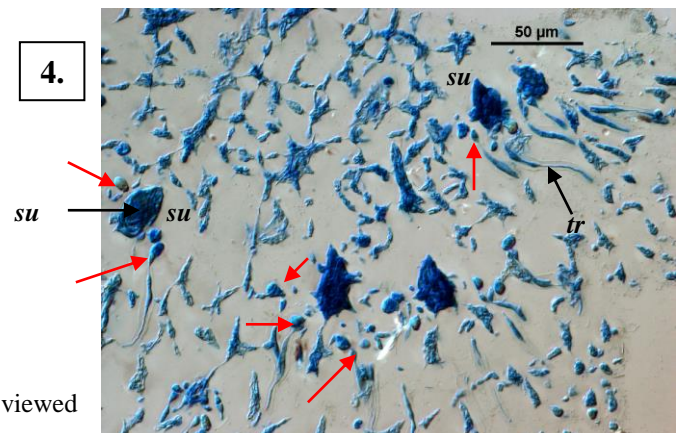
1. view a branch or spine tip microscopically to find a single apical cell, and **no** ring pattern of cells on the surface
2. cut a cross section of a branch and view microscopically to find:
 - the innermost part of the core (inner medulla) of 3 slender *threads*
 - a ring of *large* cells in the outer part of the core (outer medulla)
 - outermost (cortex) layers of very *small* cells facing outwards, **not** forming rings in surface view
3. several developing female structures (procarpis) occur on the one (supporting) cell. Mature female structures (cystocarps) are unknown.
4. if possible, find sporangial plants with cigar-shaped tetrasporangia *scattered*, divided across into four sporangia (*zonate*) (illustrated below only in surface view).



Details of Anatomy



3.



4.

1-2. preserved (bleached) specimen of *Mychodea spinulifera* (A34189) viewed microscopically

1. surface view of a tip, with single apical cell (*ap c*), spine (*sp*), surface hairs (*ha*) and scattered tetrasporangia (*t sp*)
2. a lengthwise view of window cut in a branch showing the inner core of threads (*med fils*), outer core of large cells (outer medulla, *o med*) and outermost layer (cortex, *co*) of small cells with scattered tetrasporangia

3-4 sections of developing female structures stained blue and viewed microscopically (A34186 slide 3724)

3. lengthwise view with prominent supporting cells (*su*).
4. detail of s 3-cell carpogonial branches (arrowed), ending in hair-like trichogynes (*tr*) on each supporting cell (*su*)

* 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

5.



6.



7.

- 5, 6. two magnifications of a drift plant of *Mychodea spinulifera* J Agardh (A34189) from the Head of the Great Australian Bight, S Australia showing the several main branches (axes) attached to the stem of *Amphibolis*, and detail of branch-spines
7. colourized detail of tips and spine-covered branches of a preserved (bleached) specimen (A72289)

* 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