

Techniques needed and shape



MACRO PLANT



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Nemastomataceae

*Descriptive name

soft tips

Features

1. plants 80-160mm tall, dark red-brown, **gristly**, but with **soft tips** that flatten in pressed specimens
2. branches forked, **compressed**, about 2mm wide, sometimes pinched every 1-3mm
3. mature female structures (carposporophytes) form scattered spots near branch ends

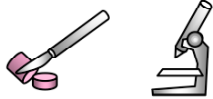
Occurrences

SW W Australia to Victoria

Usual Habitat

on rock in shaded intertidal pools or shallow water

Special requirements



1. cut a cross section to find a wide core (medulla) of **entangled threads** and outer layers (cortex) of outward-facing, branched chains of small cells and numerous, dark, pear-shaped cells (**glands**) in a single row
2. if possible cut a cross section through a post-fertilisation stage (carposporophyte) to find **inward-growing** bunches of carposporangia. At an earlier stage, an unbranched string of cells with dense cytoplasm (auxiliary cell thread) may be present.

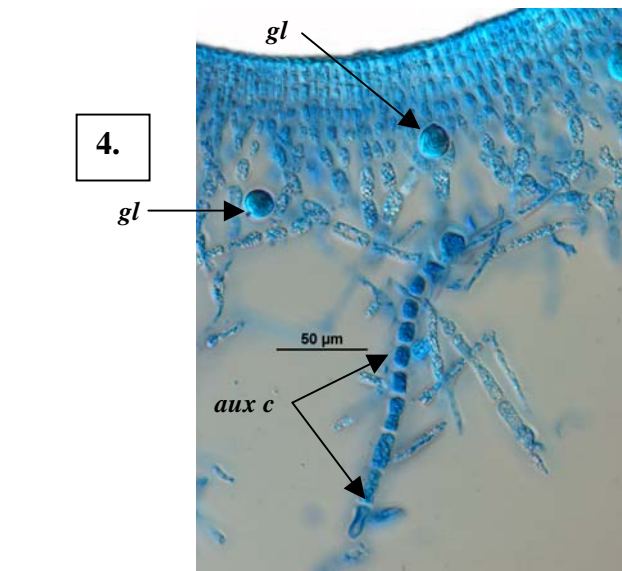
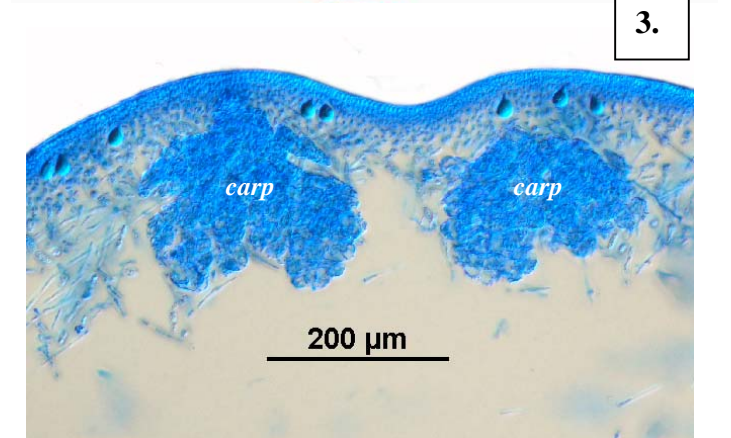
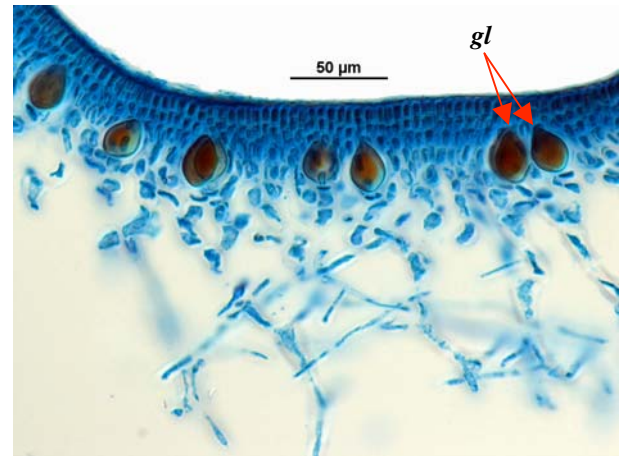
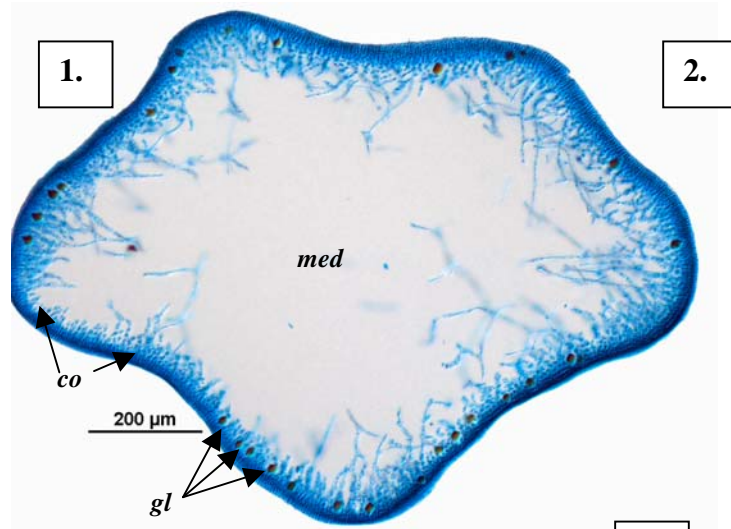
Similar Species

Tsengia feredayae has compressed forked branches, but is slimy, not gristly

Description in the Benthic Flora

Part IIIA, pages 268, 272-263

Details of Anatomy



Cross sections of *Adelophycus corneus* stained blue and viewed microscopically, showing:

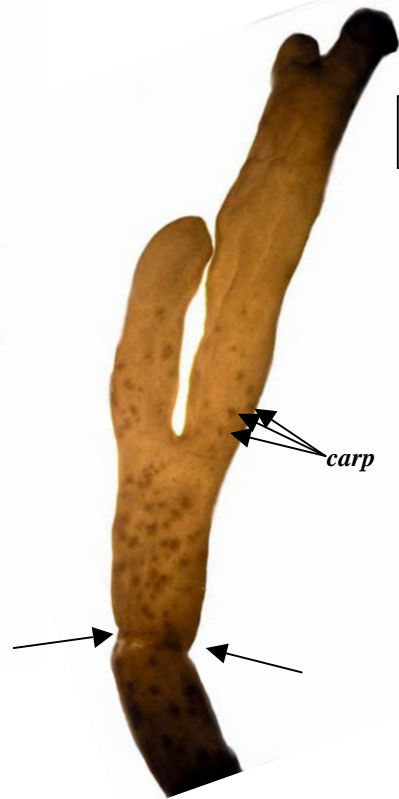
1. a slightly compressed branch with prominent glands (*gl*) in outer layers (cortex, *co*) and wide core (medulla, *med*) of branched threads (many lost in the slide preparation) (A19201 slide 12246)
2. detail of the cortex with pear-shaped glands and closely-packed, branched chains of small cells (A19201 slide 12246)
3. two inwardly-growing masses of cells (carposporophytes, *carp*) formed after fertilization (A13489 slide 12245)
4. an unbranched chain of cells (auxiliary cells, *aux c*); the sub-terminal cell produces the carposporophyte (A32982 slide 12248)

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

5.



7.



6.



5, 6. two magnifications of *Adelophycus corneus* (A69297) 10-15m deep from St. Francis Island, S Australia, showing the forked branching pattern, and softer tips flattening when pressed
 7. a preserved (bleached) specimen of *Adelophycus corneus* (A13489) viewed microscopically to show the scattered patches of carposporophytes (*carp*), and a pinched part of a branch (arrowed)