

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.

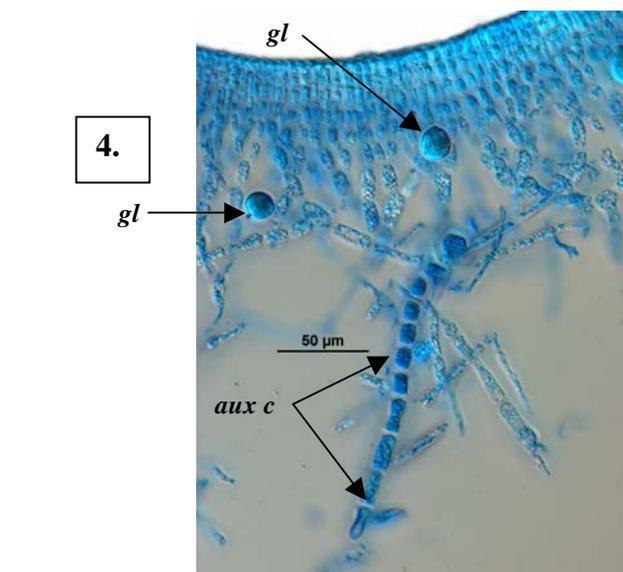
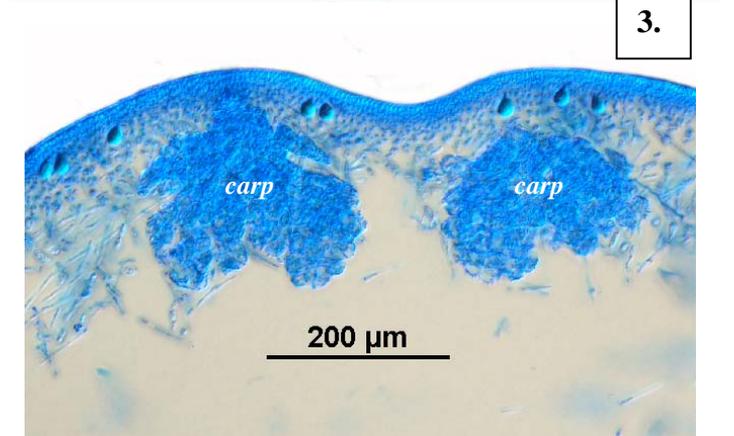
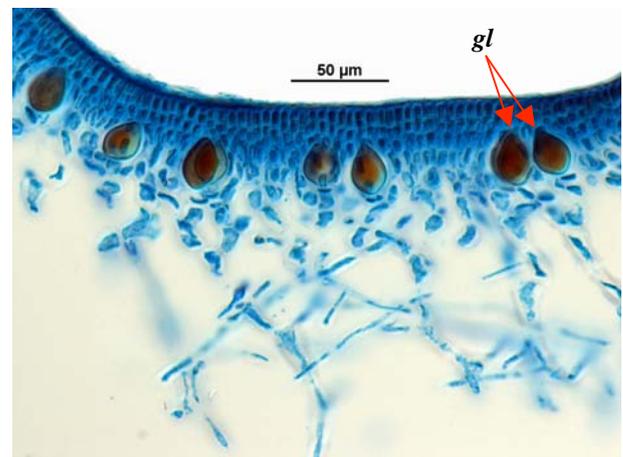
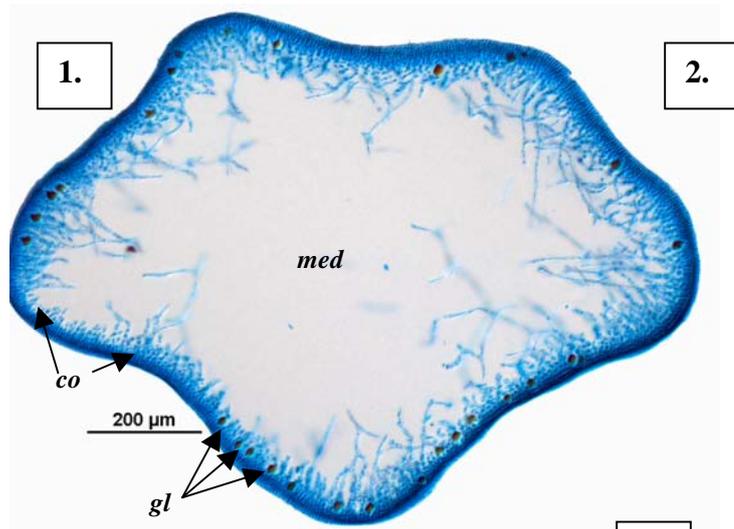
Similar Species

*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:

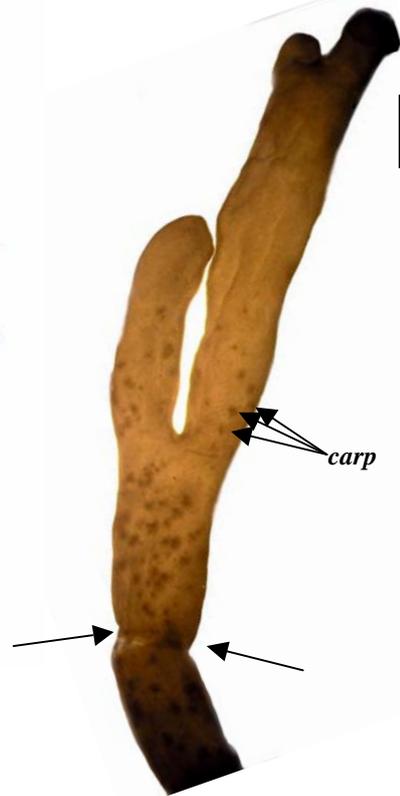
1. a slightly compressed branch with prominent glands (*gl*) in outer layers (cortex, *co*) and wide core (medulla, *med*) of branched threads (many lost in the slide preparation) (A19201 slide 12246)
2. detail of the cortex with pear-shaped glands and closely-packed, branched chains of small cells (A19201 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)