Amphiplexia hymenocladioides

J Agardh

45.460

Techniques needed and shape



MACRO PLANT
tubular

segmented


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

***Descriptive name** —

Features

1. plants ***red*** 50-150mm tall, of ***soft***, elongate sections (***segments***) 20-50mm long, ***3-6mm*** wide with rounded tops, ***bases pinched***
2. ***several*** main branches arise from a short stalk
3. shorter branches arise mainly from the ***upper*** parts of segments

Occurrences Rottnest I., W Australia to Victoria

Usual Habitat a relatively rare alga from shaded? shallow water to 31m deep

Similar Species *Amphiplexia racemosa* which has fewer, more prominent main branches, thinner segments and scattered surface cells, (not arranged in rings)

Description in the Benthic Flora Part IIIA, pages 369-372

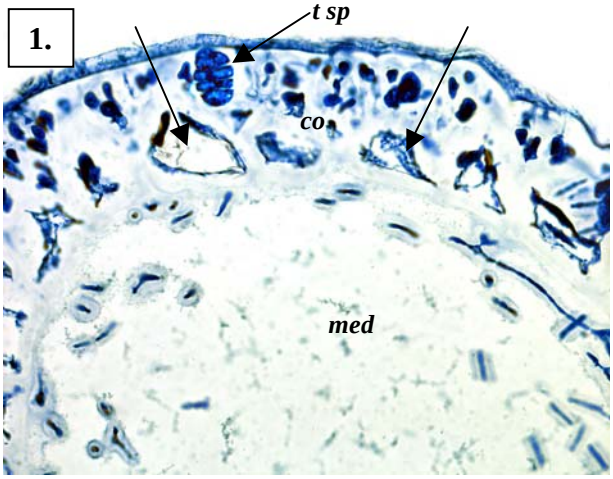
Special Requirements



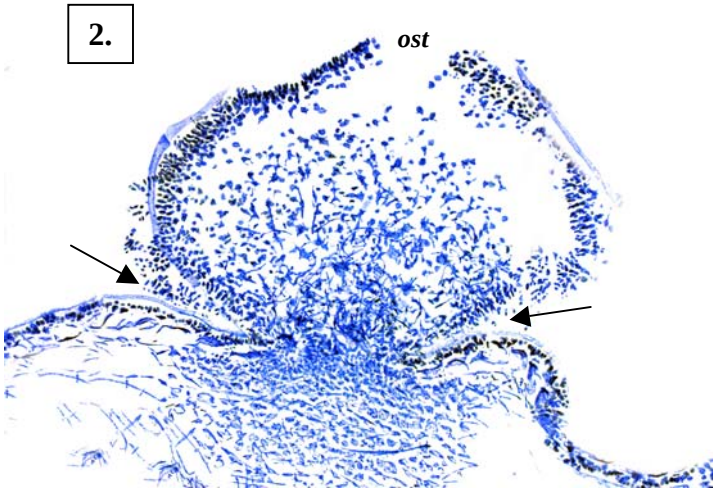
1. view the surface microscopically to see small cells arranged in rings (***rosettes***) around the edges of large, deeper cells
2. slice a cross section of a segment and view microscopically to find a ***broad*** core (medulla) filled with ***mucilage*** crossed by ***loose*** threads and narrow outer (cortex) layer of a ***single*** row of large cells with ***small*** surface cells arranged around their margins
3. find the ball-shaped ***protuberant*** female cystocarps ***pinched*** at the base. Slice a cross section of a cystocarp, and view microscopically to find the mass of ***threads*** producing carposporangia at their tips. Find spermatangia in tiny surface clusters ***on the same plant.***
4. cut a cross section of a sporangial plant and locate the small cigar-shaped tetrasporangia divided across (zonately) in the outer layer, often with 2 small cortical cells above

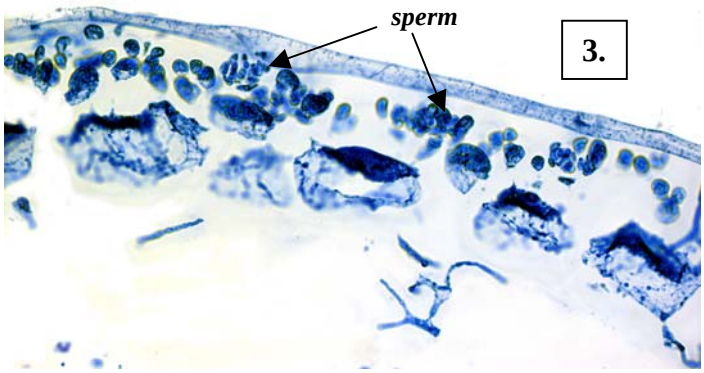
Details of Anatomy

1.



2.





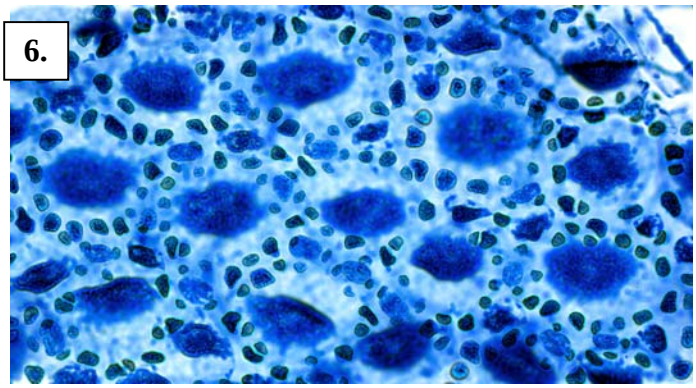
3.

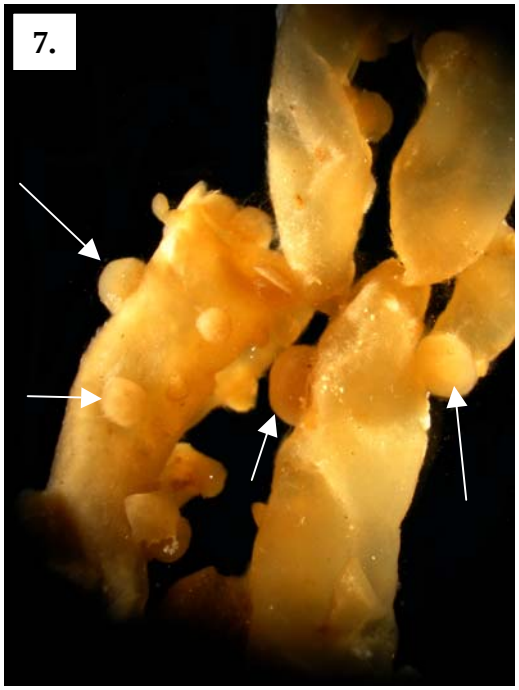
Cross sections of *Amphiplexia hymenocladioides* stained blue and viewed microscopically

1. a zonately divided tetrasporangium (*t sp*) in the outer layer (cortex, *co*) consisting of small cells and a single row of large cells (arrowed) with a broad core (medulla, *med*) of mucilage and loose threads (A44750 slide 3794)
2. a protuberant cystocarp with pinched base (arrowed) central mass of threads and opening (ostiole, *ost*) (A44750 slide 37924)
3. part of the cortex with spermatangial clusters (*sperm*) (A33017 slide 12687)

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

4, 5. two views of a pressed, fertile, drift plant of *Amphiplexia hymenocladioides* J Agardh, (A33017), from Vivonne Bay, Kangaroo I., S Australia, showing an obscure short stalk (arrowed) and ball-shaped cystocarps





6. a surface view of *Amphiplexia hymenocladioides* stained blue and viewed microscopically showing the distinctive rosettes of small cells around large deeper cells (A33017 slide 12687)
7. a preserved (bleached and slightly wrinkled) specimen (A44750) showing protuberant cystocarps (arrowed) and the cylindrical shape of segments narrowed at the base, not always discernible in pressed specimens

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