

Techniques needed and shape



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Acrotylaceae

***Descriptive name**

Features

1. plants are **red-brown** to almost **black**, 50-200mm tall, with many **narrow** upright branches and the attachment (holdfast) is **fibrous**
2. small, **slender**, cylindrical side-branches about 1mm across pinched at the base, and coming to a **point** arise **irregularly**

Occurrences

Yanhep, W Australia to Collaroy, NSW and the N coast of Tasmania

Usual Habitat

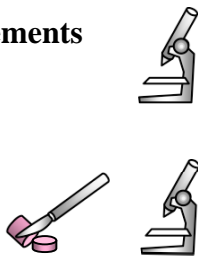
from shallow water to 18m deep, sometimes epiphytic on seagrasses


Similar Species

a variety of *Solieria* and *Areschougia* species with narrow, dark branches.

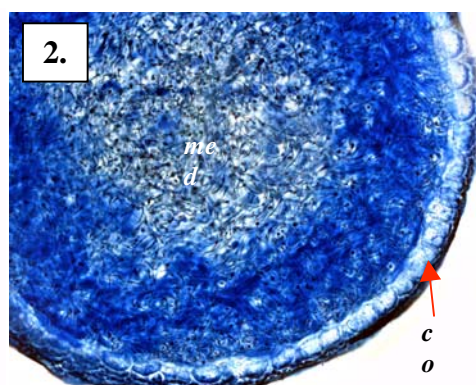
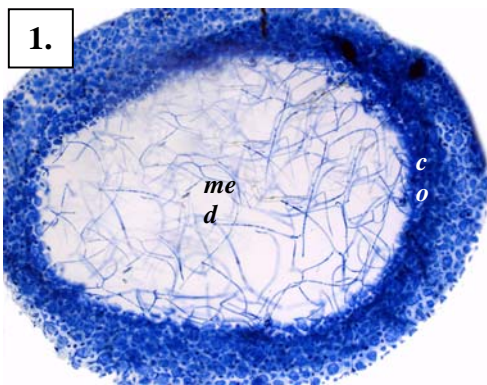
Description in the Benthic Flora Part IIIA, pages 371, 373-375

Special Requirements



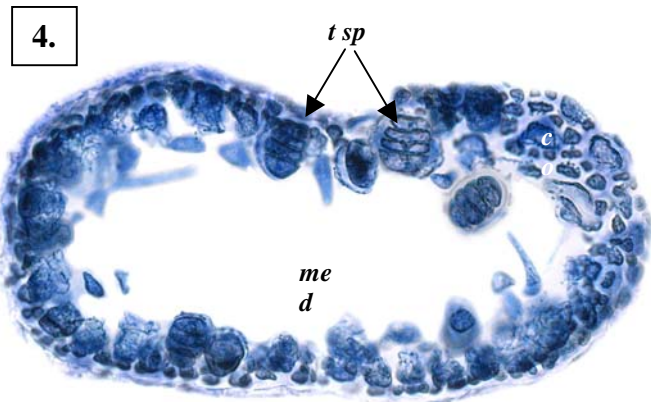
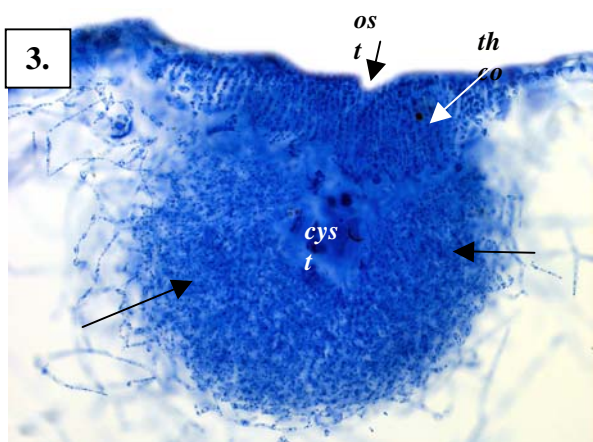
1. view the tips microscopically to find the **single** apical cell and small surface cells in rings (**rosettes**) around large lower cells  Diagnosis can be difficult
2. cut a cross section of main and side branches to view microscopically the core (medulla) with threads, tightly packed in older branches, and outer layers (cortex) of large cells **ringed** by small cells
3. find products of fertilisation (cystocarps) **embedded** in branches. Cut a cross section to view the **dense** envelope of threads and opening (ostiole) **thickened** by cortex cells
4. find sporangial plants with **scattered** tetrasporangia divided across (zonately) in the outer layers (cortex)

Details of Anatomy



cross sections of *Antrocentrum nigrescens* stained blue and viewed microscopically, showing

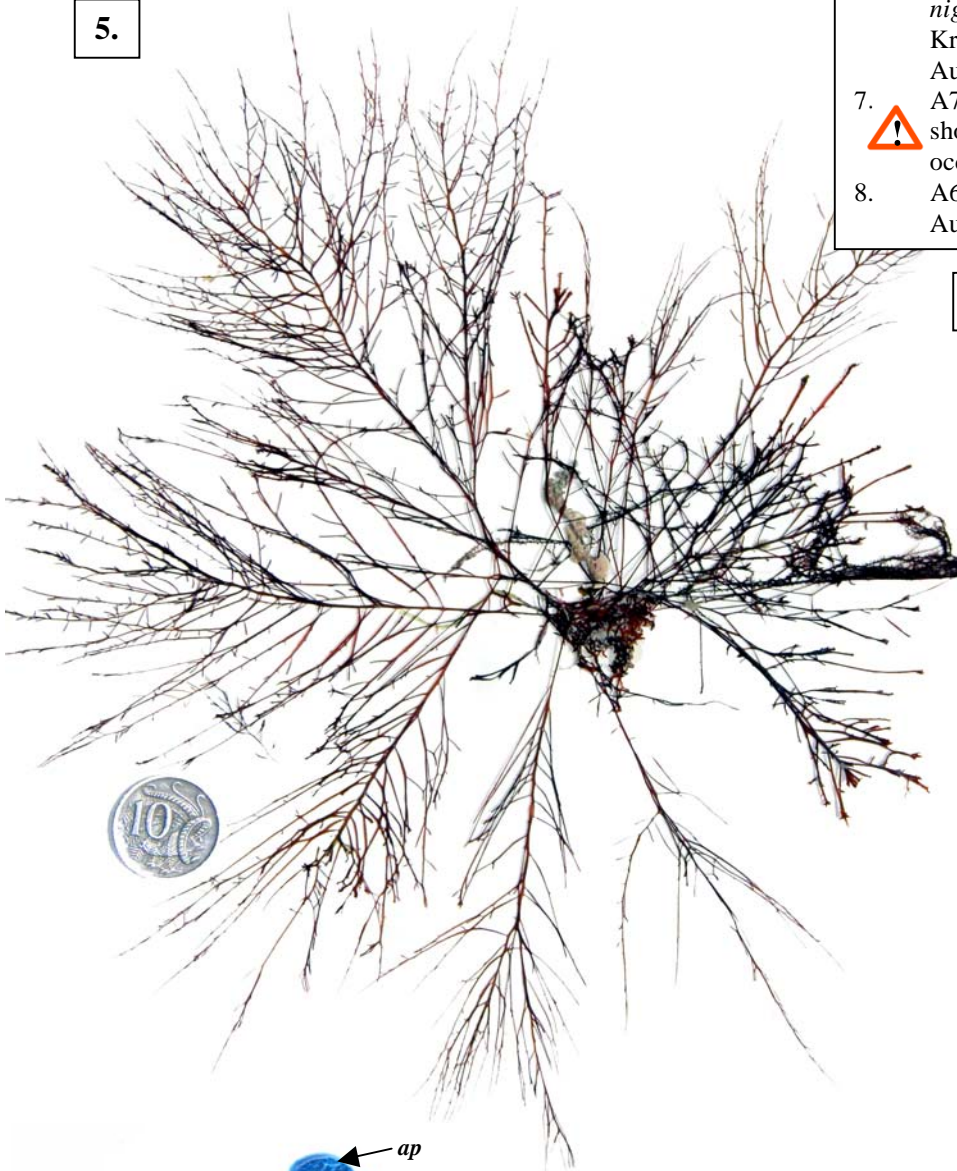
1. young branch with core (medulla, *me d*) of loose threads, and slightly folded outer layer (cortex, *co*) of large cells ringed by small ones (A33437 slide 4863)
2. mature branch with core tightly packed with threads and prominent outer layer of large cells (A67069 slide 16486)




3. cystocarp (*cys t*) embedded in the core, densely enveloped in threads (arrows) with the outlet (ostiole, *ost*) surrounded by a thickened cortex (*th co*) (A33437 slide 4862)
4. tetrasporangia (*t sp*) protruding into the core from the cortex (A60164 slide 11531)

* Descriptive names are inventions to aid identification, and are not commonly used
 "Algae Revealed" R N Baldock, S Australian State Herbarium, April 2008

5.



5, 6. two views of a drift plant of *Antrocentrum nigrescens* (Harvey in Hooker & Harvey) Kraft & Min-Thein, A29698, from Robe S Australia

7.  A72616 from Stony Point, S Australia showing the flattening of branches that may occur in pressed specimens

8. A64834 from Cable Hut Reef, Kangaroo I, S Australia showing detail of the fibrous base

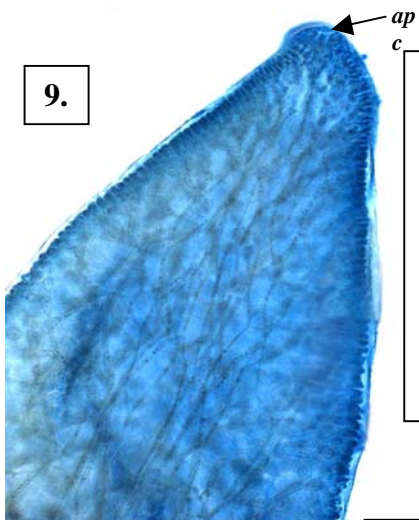
6.



7.



9.



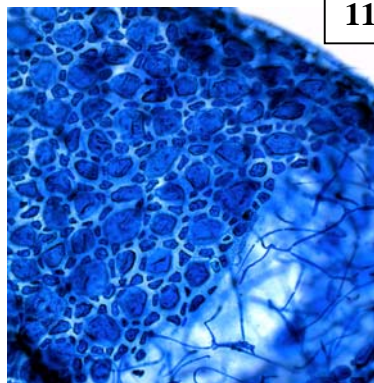
9-11. *Antrocentrum nigrescens* stained blue and viewed microscopically:

9. lengthwise view with single apical cell (*ap c*), initially forming a single thread in the core, but almost immediately obscured by further threads (A67069 slide 16486)

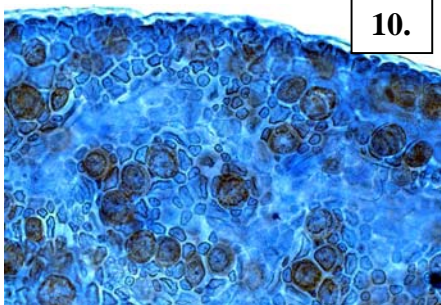
10. surface view showing prominent scattered tetrasporangia (*t sp*) (A67069 slide 16486)

11. a window cut lengthwise showing rings (rosettes) of surface cells and inner core threads (A67069 slide 16486)

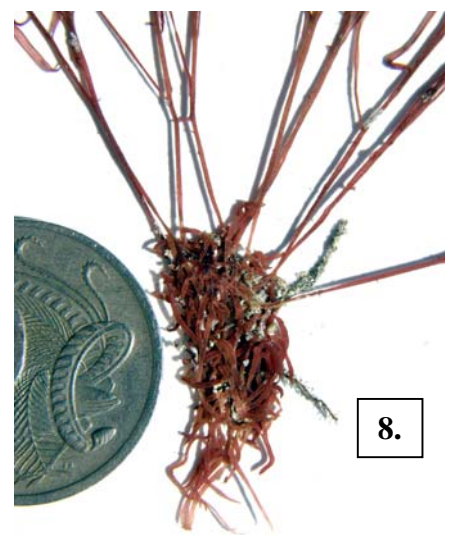
11.



10.



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