Antrocentrum nigrescens
(Harvey in Hooker & Harvey)
Kraft & Min-Thein

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

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

Usual Habitat

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

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
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

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

1. young branch with core (medulla, med) 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 (A60164 slide 11531)

3. cystocarp (cyst) embedded in the core, densely enveloped in threads (arrowed) 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. 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

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)

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