



MACRO
PLANT



Techniques needed

Classification

Phylum: Phaeophyta; Family: Dictyotaceae; Tribe: Zonarieae

*Descriptive name

banded chisel-tips

Features

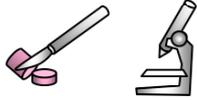
1. plants light brown, flat; fan-shaped when young, later becoming split into long straps with *chisel-shaped* tips
2. a *dark line* of dividing cells (meristem) occurs at the edges of blades
3. concentric *bands* of hairs may be prominent on both sides of blades



Variations

Special requirements

1. view the prominent line of dividing, dark cells at the blade tip which continue the growth of the blade
2. slice across a blade to view the inner (medulla) layer of several cell layers in a jumbled pattern, small outer (cortex) cell layer, and the sporangia with stalks consisting of 1-3 cells a diagnostic feature for the genus



Occurrences

from Kangaroo I. to Coffs Harbor NSW and Lord Howe I.

Usual Habitat

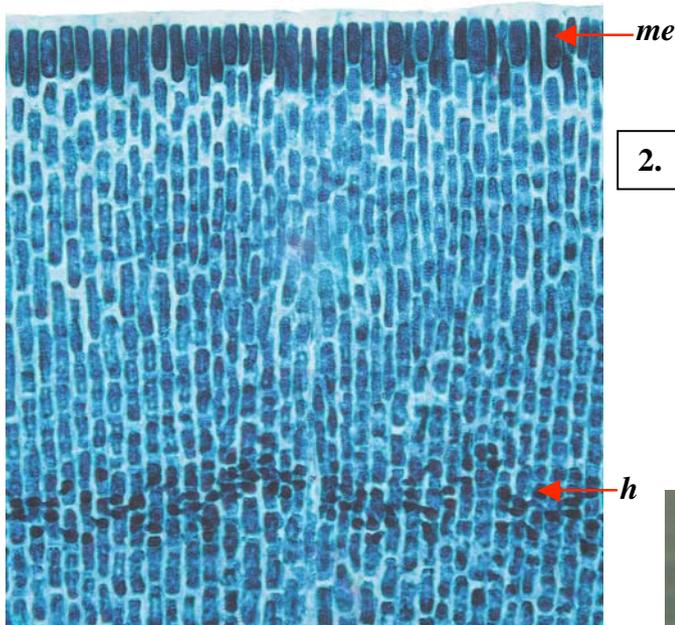
on hard surfaces, in shallow water

Similar Species

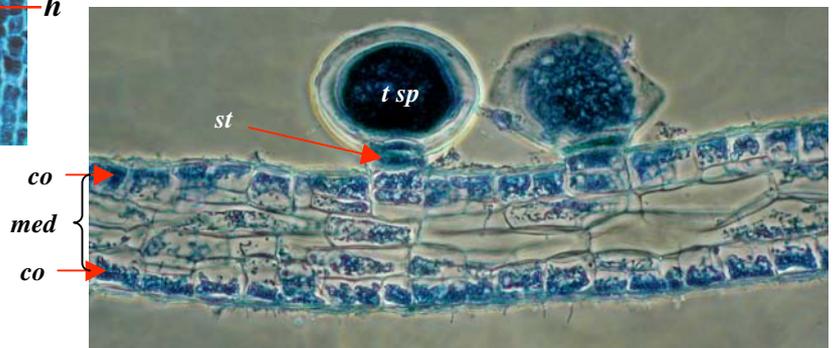
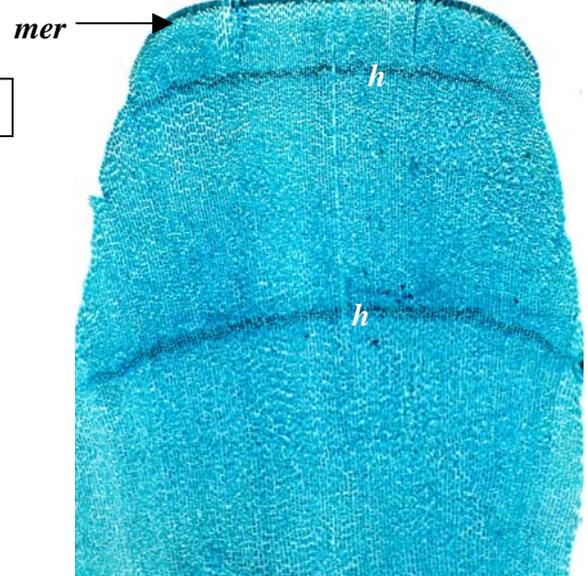
Spatoglossum, but growing cells occur in small groups and hair tufts are scattered in that genus

Description in the Benthic Flora Part II, page 238

Details of Anatomy



1.



Specimens of *Taonia australasica* stained blue and viewed microscopically

1. a chisel shaped blade tip with the dark line of dividing cells (meristem, *mer*) at the edge, and 2 bands of hairs (*h*) (slide 9828)
2. detail of a meristem of dark dividing cells at a blade edge, and the first band of hairs (*h*) developing (slide 9828)
3. cross section showing the jumbled arrangement of the inner (medulla, *med*) layer, more regular surface (cortical, *co*) cells and two sporangia (*t sp*) on 2-celled stalks (*st*) characteristic of the genus (slide 9898)



Taonia australasica J Agardh, (A50866), 8m deep, Christies Beach, S Australia

* Descriptive names are inventions to aid identification, and are not commonly used
"Algae Revealed" R N Baldock, S Australian State Herbarium, July 2003