



MACRO
PLANT



Techniques needed and plant shape

Classification

Phylum: Phaeophyta; Family: Dictyotaceae; Tribe: Zonarieae

***Descriptive name**

chevron fork-tips; §southern forkweed

Features

1. plants brown, 100-300mm long, blades *flat*, forked (dichotomous), eroded to thin stalks at the plant base



2. *prominent* mid-rib present with *prominent* hair tufts arranged in a chevron-like pattern (*down-curved lines*) from the mid-rib to blade edge

Variations

small branches (proliferations) at right angles to the blades may occasionally occur. The row of apical cells at the tip may be obscure.

Special requirements

1. view the *row* of dividing cells (meristem) at the blade tips
2. slice across a blade to view the *gradation* from 1-cell thick to many cells thick in the mid-rib region

Occurrences

from W Australia to southern Australia and Queensland, Lord Howe I., Indian sub-continent and Hawaiian Is

Usual Habitat

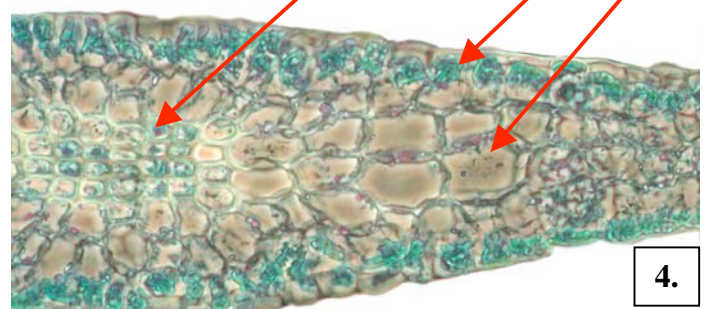
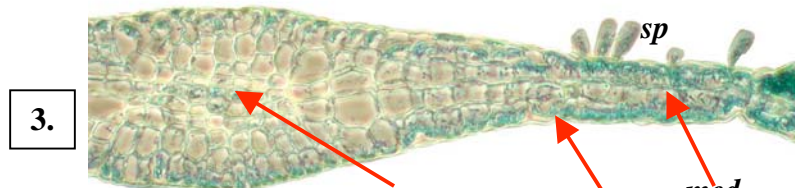
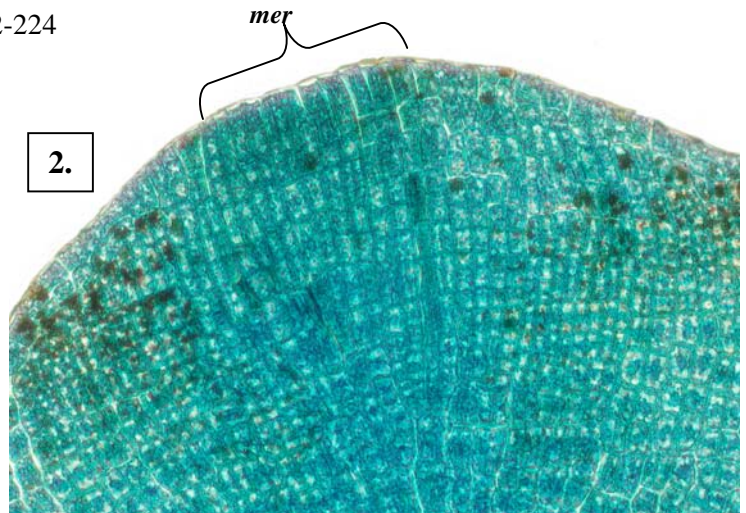
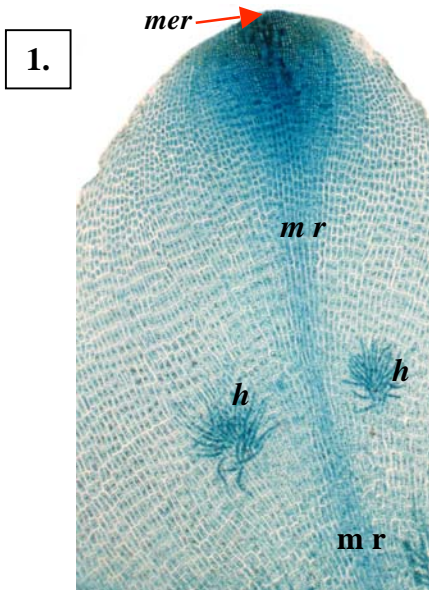
on hard surfaces, widespread

Similar Species

unique mid-line vein and hair patterns make this species easily recognised

Description in the Benthic Flora Part II, pages 222-224

Details of Anatomy



1, 2. microscope views of *Dictyopterus australis* stained blue
1. blade tip showing the region of the meristem, (*mer*), developing midrib (*m r*) and hair tufts (*h*) (slide 9696)
2. detail of a blade tip showing the row of growing cells (meristem, *mer*) (slide 9696)
3, 4. two cross sections of blades stained blue, showing
• outer coloured layers (cortex, *co*)
• sporangia (*sp*)
• colourless middle layer (medulla, *med*), a single cell thick at blade edges, with box-shaped cells in 4 rows, in the midrib (*m r*) (slide 9696)

* Descriptive names are inventions to aid identification, and are not commonly used
§ name used in Edgar, G. *Australian Marine Life, 2nd Ed.* (2008)
“Algae Revealed” R N Baldock, S Australian State Herbarium, July 2003

5.



6.



5, 6. Two magnifications of *Dictyopteris australis* (Sonder) Askenasy (A50865), from Investigator Strait, S Australia, 11m deep, showing blades with pointed tips, prominent mid-ribs and down-curved hair-tufts ("chevrons")