Zonaria crenata J Agardh

34.390

Techniques needed and plant shape

MACRO PLANT

Classification Phylum: Phaeophyta; Family: Dictyotaceae; Tribe: Zonarieae

***Descriptive name** toothed fan-tips

Features

1. plants light-dark brown, 100-250mm long of flat branches with ***narrow wings***
2. branches are denuded at the base and felted with rhizoids
3. branch tips fan-shaped and ***notched*** (bluntly toothed) at the edges
4. a network of ***hydroid runners*** covers the surface

Variations very few specimens lack the hydroid runners on their surface

Special requirements

1. view the blade edges to see the ***line*** of dividing cells (meristem)
2. slice a section across a blade to view the 6 rows of ***equal sized*** cells
3. view the surface to find the runners and upright stalks (often denuded of bell-shaped polyps by fish) of the hydroid *Scoresbia daidala*

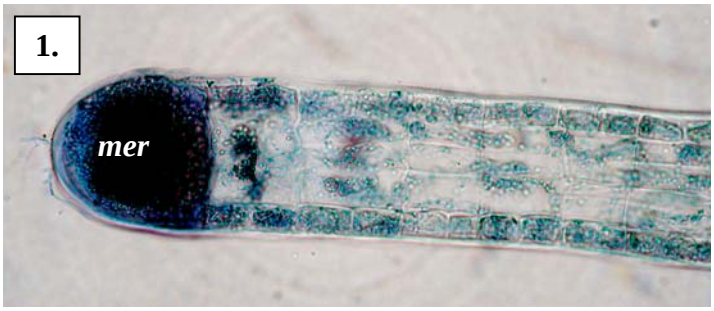
Occurrences from Fremantle W Australia to Southport Queensland

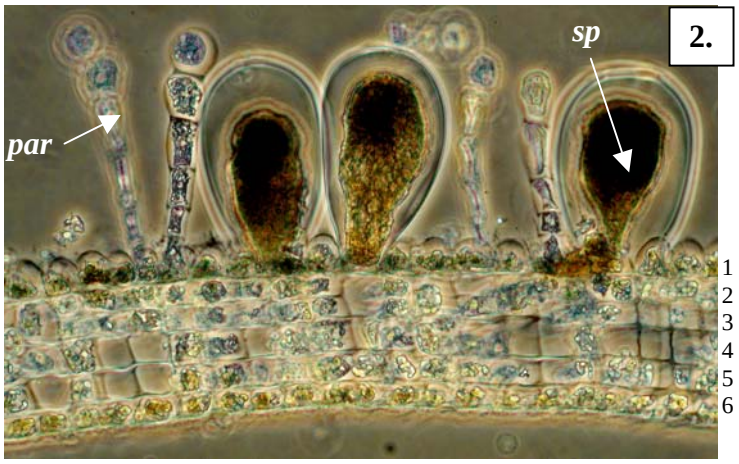
Usual Habitat on rock, often in deep water (25m)

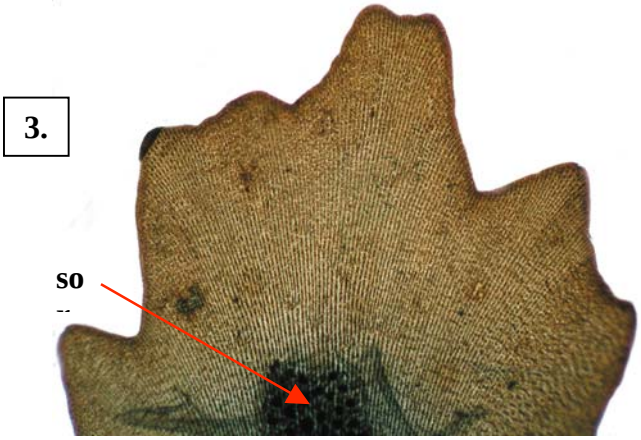
Similar Species *Chlanidophora microphylla* has small fan-shaped blades, but they are not notched, only 2 cells thick, and there are no encrusting hydroids

Description in the Benthic Flora Part II, page 250

Details of Anatomy







Zonaria crenata viewed microscopically.
1, 2. cross sections through blades
1. with a single dark cell from the line of edge cells (meristem, *mer*) that divide to continue the growth of the blade forming blades 6 rows of cells deep characteristic of the species (slide 9874)
2. showing sporangia (*sp*), hairs (paraphyses, *par*) and the blade is 6 rows of even sized cells deep (1 – 6) (slide 9875)
3. plant tip showing the notched or bluntly toothed edge of a fan-shaped blade with a patch (sorus, *sor*) of sporangia. The line of dividing cells (meristem) at the extreme blade edge is present but obscure (slide 9875)
4. surface view of a blade top lit to accentuate the network of runners of the associated hydroid (*hyd*) *Scoresbia* (slide 9875)

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

"Algae Revealed" R N Baldock, S Australian State Herbarium, July 2003

A57343

5.

6.

5 *Zonaria crenata* J Agardh (A57343), a drift plant from Kingston, S. Australia

6 enlarged surface view of a preserved frond showing the criss-cross of the highly specific hydroid *Scoresbia daidala*

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