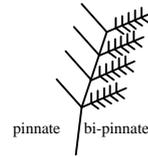


Callophycus dorsifera
(C Agardh) Silva
(as *C. dorsiferus* in the Flora)

45.440



MACRO
PLANT



Techniques needed and shape

Classification

***Descriptive name**

Features

Phylum: Rhodophyta; Order: Gigartinales; Family: Areschougiaceae
toothed red sea fern. § Broad-leaved fishbone

1. plants are dark red-brown, 100-250mm tall, with a short cylindrical basal stalk when mature producing *several* flat main branches, **5-8mm wide** sometimes completely thickened



2. side branches are *flat, thin*, in *two rows*, in one *flat surface* (complanate), **1-2mm wide** with *toothed edges* but *no* mid-vein

Occurrences

probably a species with only a western Australian distribution, from Port Denison to Hamelin Bay, W Australia

Special requirements



1. cut a cross section and view microscopically to find
 - the central core (medulla) of *threads*, mainly running *lengthwise*
 - outer layers (cortex) of inner large and outer small cells
2. if possible find the products of fertilisation in female plants (cystocarps)
 - *crowded, protruding* in the smaller side branches, with an opening (ostiole)
 - with a *large* fusion cell connecting to an *enlarged* central thread
3. if possible, cut a cross section through a sporangial plant to view the scattered, small, cigar-shaped tetrasporangia in the outer (cortex) layers, amongst elongate cells ("hairs"), divided in rows (zonately)

Usual Habitat

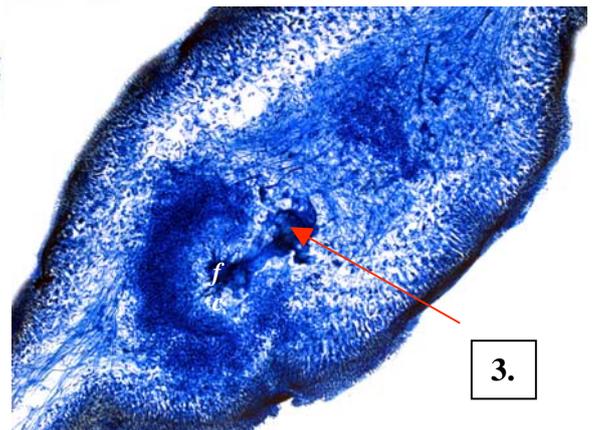
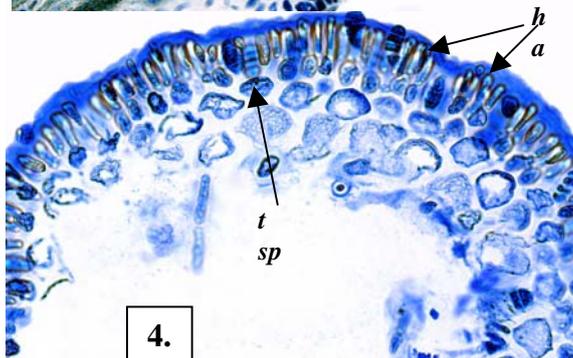
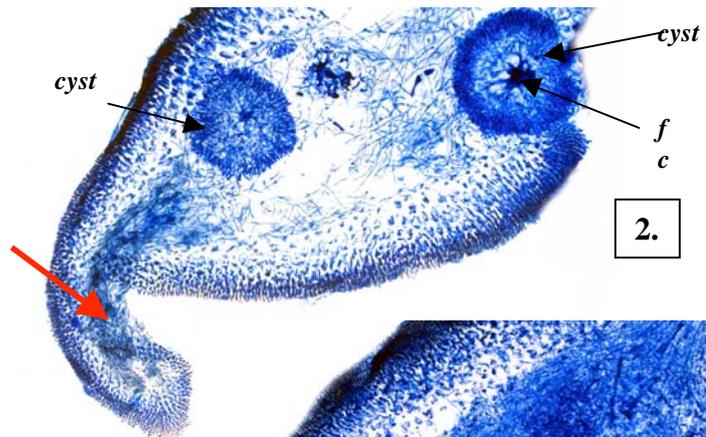
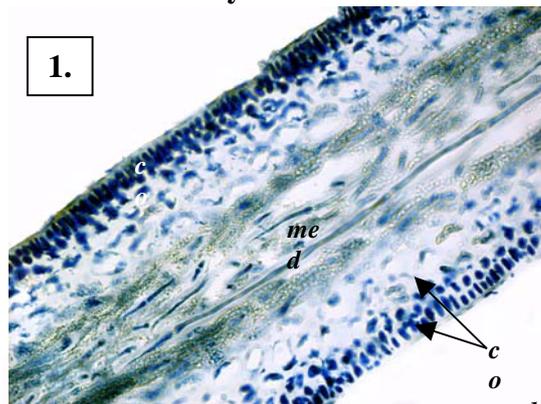
from shallow water, but often collected as drift material

Similar Species

Callophycus costatus, a species restricted to tropical regions, with a vein in all but the smallest branches which are also serrated. Side branches are uniform in width and length

Description in the Benthic Flora Part IIIA, pages 333-336

Details of Anatomy



- 1-3. *Callophycus dorsiferus* (C Agardh) Silva (A18369 slide 3812): cross sections stained blue and viewed microscopically to show:
1. lengthwise threads of the central core (medulla, *me*) and outer layer (cortex, *co*) of inner large and outer small cells
 2. cystocarps (*cyst*), swelling a compressed branch (arrowed), with prominent fusion cell (*fc*)
 3. detail of a cystocarp, with enveloping threads and fusion cell (*fc*) extending into a swollen medulla thread (arrowed)
 4. a cross section of a sporangial plant (A60803 slide 12584) with small, cigar-shaped tetrasporangia (*t sp*) divided into rows (zonately) scattered in the cortex between elongate cells ("hairs", *ha*)

5.



6.



7.



8.

5, 6. Views of *Callophycus dorsiferus* (C Agardh) Silva, (A50803), Rottne I., W Australia
 5. general habit
 6. detail of the plant base showing the short stalk (arrowed)
 7, 8. details of a female plant of *Callophycus dorsiferus* (A51353) from near Dongara, W Australia showing the serrated, flat-branched pattern and terminal cystocarp swellings (arrowed)

Descriptive names are inventions to aid identification, and are not commonly used
 name used by Edgar, G (2008) in Australian Marine Life (2nd ed)
 "Algae Revealed" R N Baldock, S Australian State Herbarium, February 2008