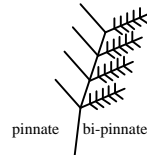


*Callophycus laxus*  
(Sonder) Silva

45.440



MACRO  
PLANT



Techniques needed and shape

Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Areschougiaceae

\*Descriptive name

red sea fern (§sea fern, a common name used by Huisman for some pinnate red algae)

Features

1. plants are dark red-brown, 100-300mm tall, usually with *many thin, compressed* main branches (axes) 1-1.5mm wide
2. side branches are in *two rows* and in one *flat surface* (complanate), *about 1mm wide*

Occurrences

probably with an eastern Australian distribution, from Kangaroo I., S Australia to Tasmania

Special requirements

1. cut a cross section and view microscopically to find
  - the central core (medulla) of *threads*,
  - an outer layer (cortex) of inner large and outer small cells
2. if possible find the products of fertilisation in female plants (cystocarps)
  - *sunken* in the smaller side branches
  - often in *scattered* patches some *distance* from the branch tips

Usual Habitat

from shallow water to 19 deep

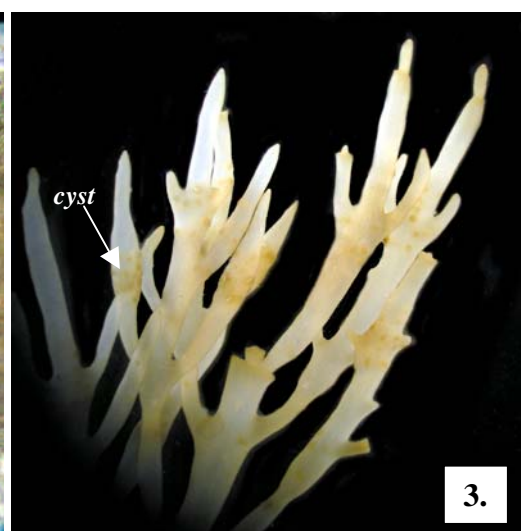
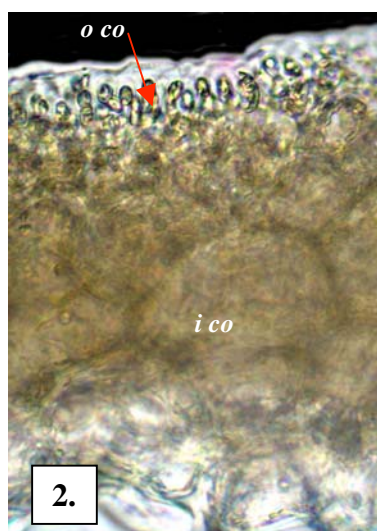
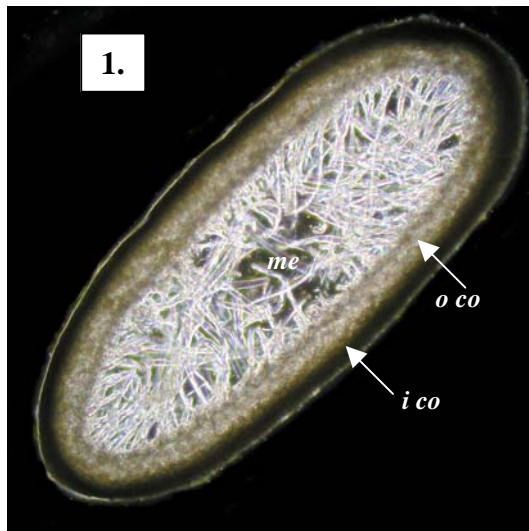
Similar Species

*Callophycus harveyanus*, but that species may be restricted to western parts of Australia, and has broader branches and generally a single main axis

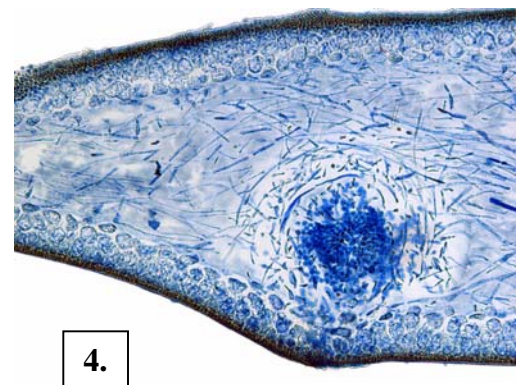
Description in the Benthic Flora

Part IIIA, pages 334, 338-339

Details of Anatomy

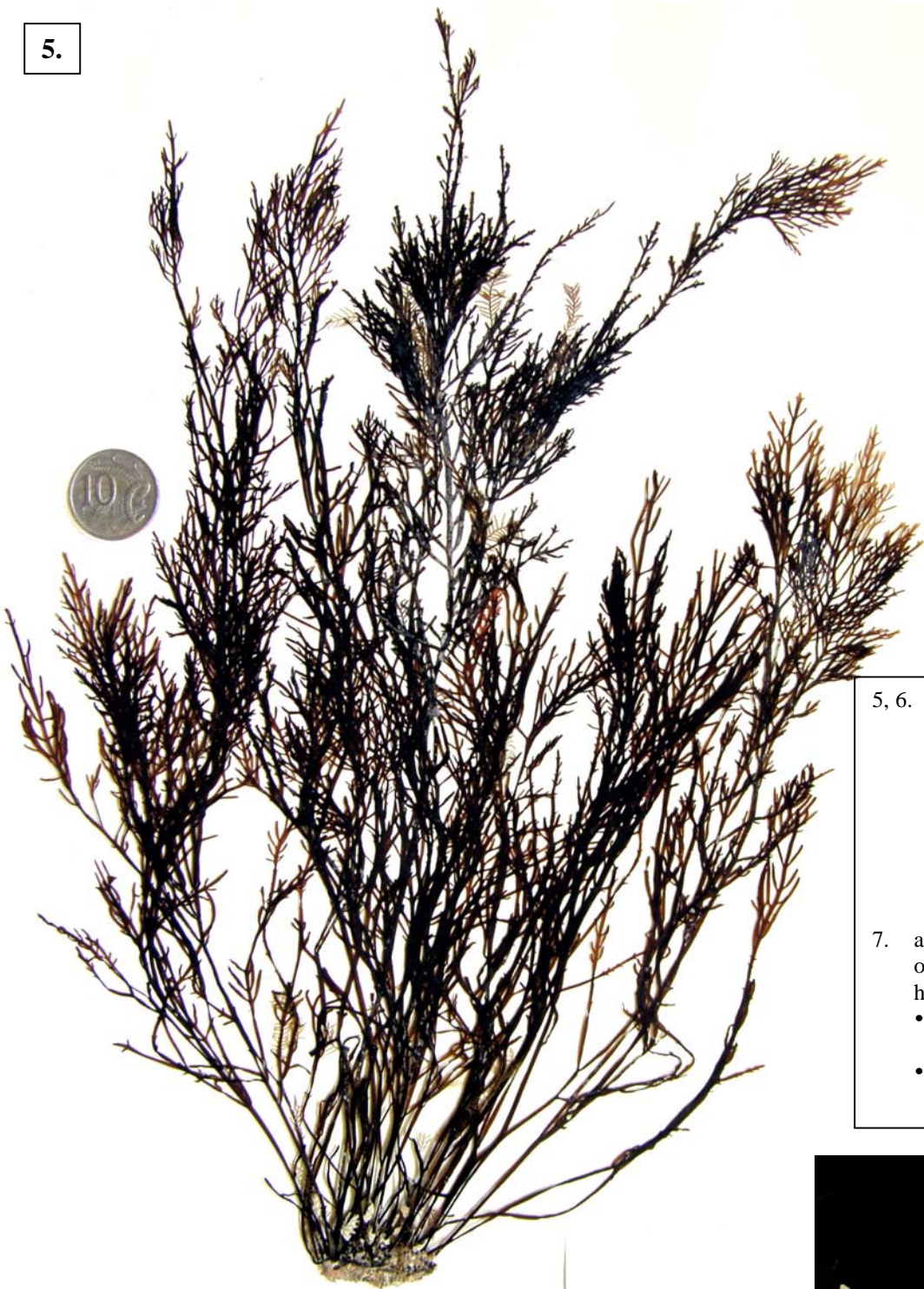


- 1-3. Preserved, bleached specimens of *Callophycus laxus*, (A38565) highlighted by dark field illumination:
1. a thick, hand-cut cross section showing:
    - the flattened or compressed branch shape
    - a central core (medulla, *med*) of threads
    - the outer layer (cortex, *co*) with inner and outer layers (*i co*; *o co*)
  2. detail of the cross section showing the cortex of outer small cells and inner large cells
  3. a female plant with *scattered, embedded* cystocarps (*cyst*)
  4. a cross section of *Callophycus laxus* (A38565 slide 3824) stained blue and viewed microscopically showing a cystocarp
    - *embedded* in the medulla
    - wrapped in threads
    - with a central fusion cell



\* Descriptive names are inventions to aid identification, and are not commonly used  
 § name used by Edgar, G (2008) in Australian Marine Life (2<sup>nd</sup> ed.).  
 "Algae Revealed" R N Baldock, S Australian State Herbarium, October 2009

5.



5, 6. two magnifications of *Callophycus laxus* (Sonder) Silva, (A31610), from West I., S Australia 6-19m deep, showing:

- many main upright branches from the base
- irregular pinnate branching pattern of upper parts

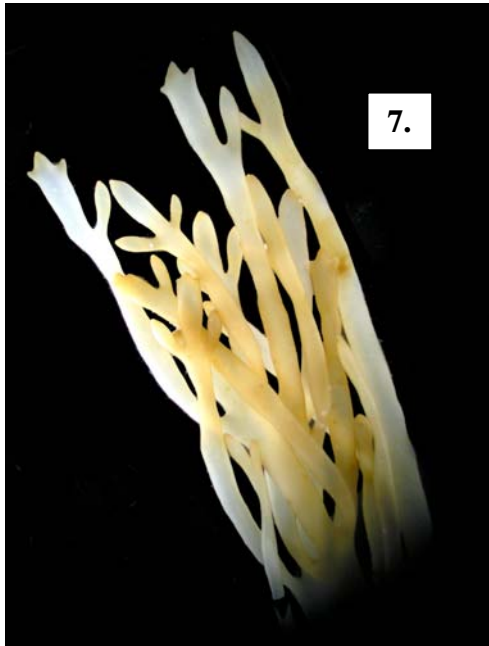
7. a preserved, bleached specimen of *Callophycus laxus*, (A38565), highlighting

- the flat-pinnate branching pattern
- narrow, compressed branches

6.



7.



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 “Algae Revealed” R N Baldock, S Australian State Herbarium, October 2009