

Areschougia ligulata
Harvey ex J Agardh

45.440

Techniques needed and shape



MACRO PLANT



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Areschougiaceae

***Descriptive name**

mini red straps

Features

plants red, **leathery**, 100-350 mm tall, of narrow, **strap-like** blades, 2-3 mm wide, in 2 **rows** from edges of main branches; attached by a short stalk

Occurrences

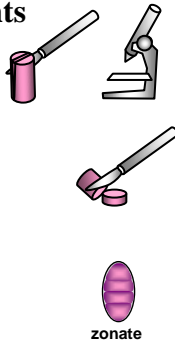
SW Australia distribution, from W Australia to Kangaroo I., S Australia

Usual Habitat

possibly a deepwater species on rough water coasts, drift plants only available

Special requirements

view microscopically to find



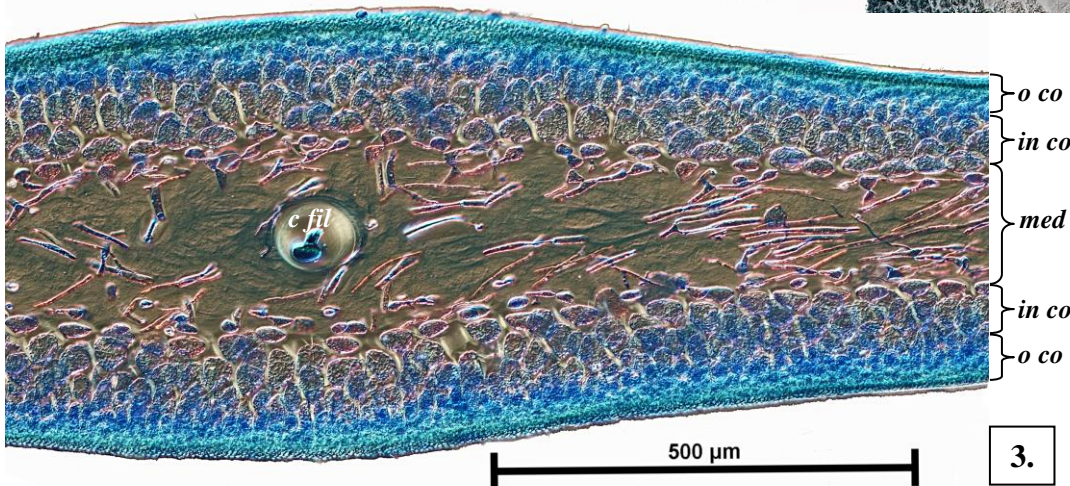
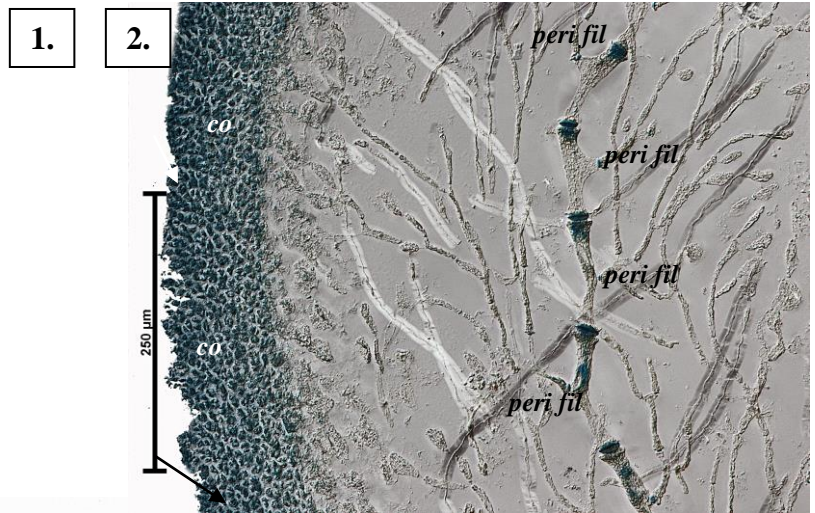
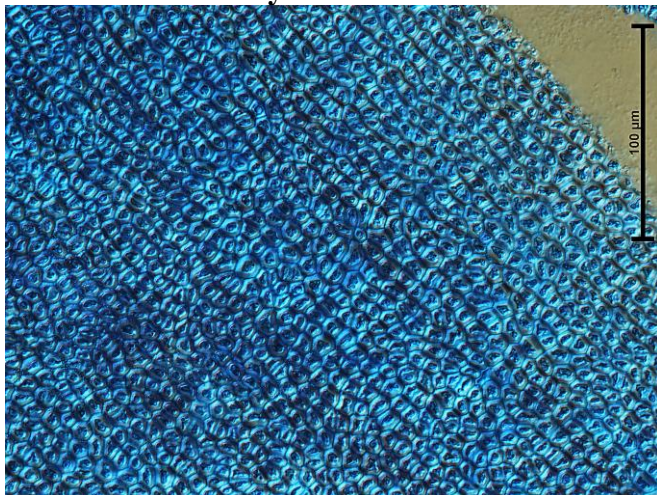
1. in windows cut lengthwise along a branch: single, **prominent** central threads, **single** branched threads spreading outwards from each thread cell
2. in cross sections: single, prominent, **thick-walled** central threads (**c fil**), central core (medulla, **med**) of a mix of **threads** and rhizoids, outer layers (cortex, **co**) of inner large, outer small, **equal-sided** (parenchymatous) cells
3. in cross sections of clusters of 2-5 **swellings** (cystocarps) on small side branches of female plants: prominent **fusion cell**, cells with dense contents (gonimoblast), **loose** envelope (involucre, **inv**) of threads
4. in sporangial plants: cigar-shaped tetrasporangia scattered in the cortex, divided across (zonately) into 4 sporangia

Similar Species

superficially like other narrow-bladed red algae, including *Rhodophyllis* and *Stenogramme*

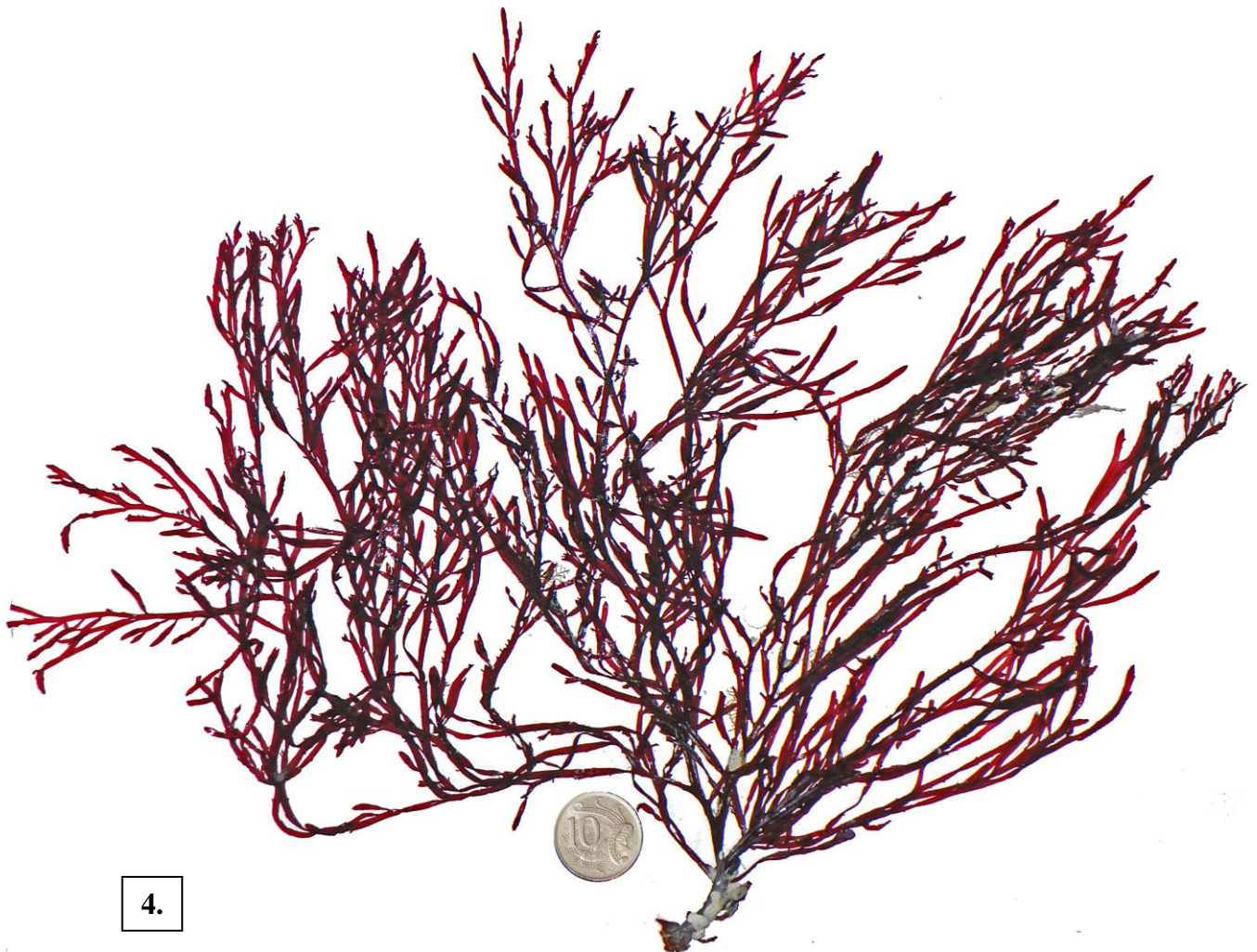
Description in the Benthic Flora Part IIIA, pages 357, 358, 360

Details of Anatomy

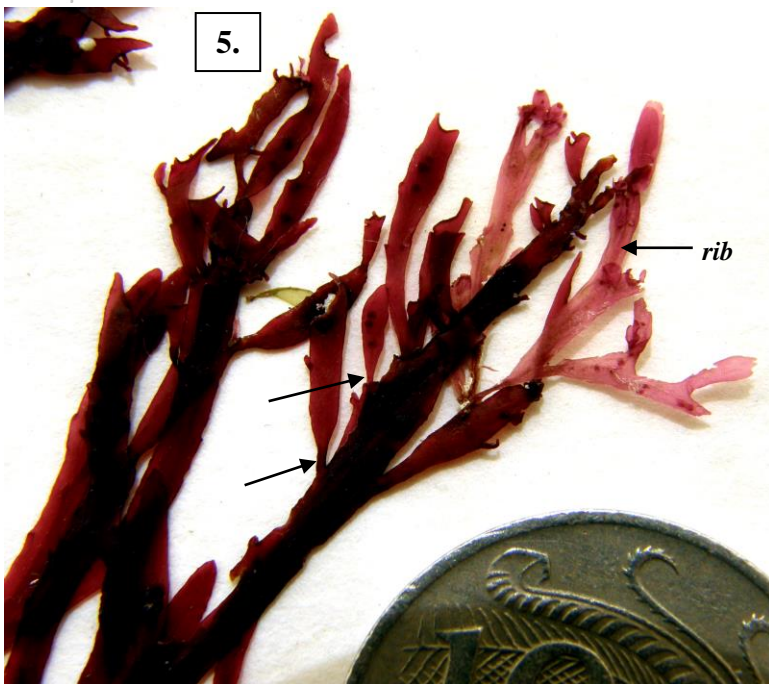


Areschougia ligulata stained blue and viewed microscopically.

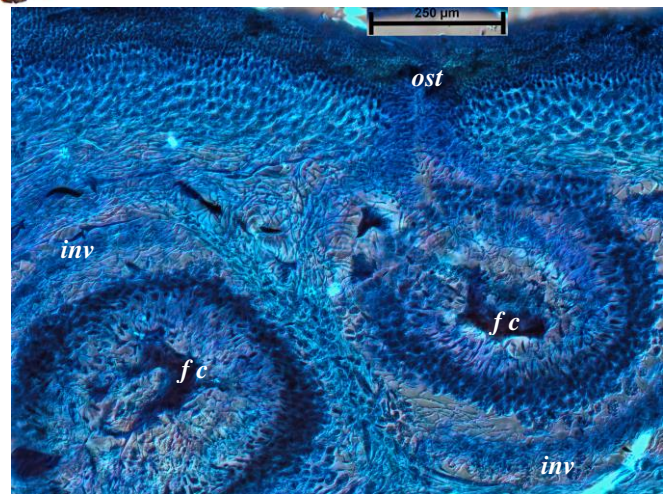
1. closely packed, equal-sided surface cells (slide 3865).
2. lengthwise window cut in a branch: central thread (**c fil**) with single, spreading, branching threads (periaxial filaments, **peri fil**) from each cell, crossing the core (medulla, **med**) to the outer layer (cortex, **co**) (slide 3870)
2. cross section of blade: central thread, loose core (medulla, **med**) of periaxial threads and rhizoids, inner cortex cells (**in co**) large, grading to smaller outer ones (**o co**) (slide 12639)



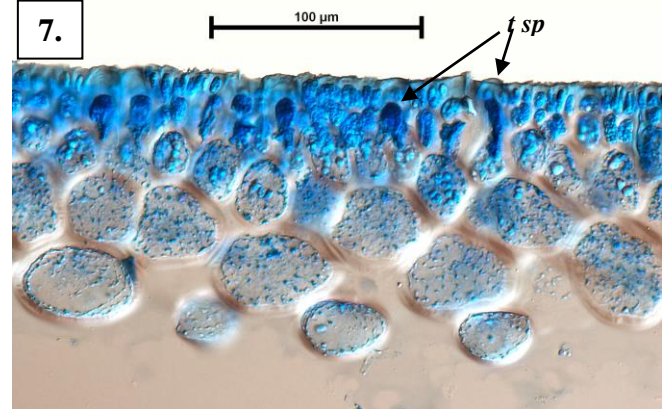
4.



5.



6.



7.

- 4, 5. *Areschougia ligulata* Harvey ex J Agardh, (A42421), from Seal Bay, Kangaroo I., S Australia: side branches narrow basally (arrowed), faint mid-rib (*rib*)
6. cross section through 2 mature female structures (cystocarps): fusion cell (*fc*), envelope (involucre, *inv*), opening (ostiole, *ost*) (slide 3870)
7. section through the outer layers (cortex) of a sporangial plant: young (undivided) tetrasporangia (*t sp*) (slide 3871)

* Descriptive names are inventions to aid identification, and are not commonly used
 "Algae Revealed" R N Baldock, State Herbarium S Australia, March 2008; revised May 2014