

Techniques needed and shape



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Areschougiaceae  
sausage strings. §Sonder's bubbleweed

\*Descriptive name

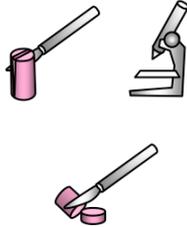
Features

1. plants are red, 100-150mm tall, ***much-branched*** with branches pinched into sausage-shaped ***segments***, 6-10mm long
2. lower parts are thickened and ***cylindrical*** although the position of the original pinched parts may still be visible

Occurrences

Dongara, W Australia to S Australia and N coast of Tasmania

Special requirements



1. ***slice*** the outer layer of one segment lengthwise forming a window to find:
  - the ***single, prominent*** central thread each cell of which produces 2 radiating ***much-branched*** threads crossing a central space
  - very thin rhizoids ***twisted*** in a spiral about the central thread
  - a "skin" (cortex) layer of ***small***, equal-sided cells
2. cut a cross section of a mature main branch and view microscopically to find
  - the central thread is still ***prominent***
  - the core (medulla) is now filled with ***rhizoids***
  - the cortex is ***wide*** and consists of cells in ***files*** of up to 12 cells
3. if possible, cut a cross section through the light swellings in the segments of a female plant to find the cystocarps ***embedded*** in the core, with a loose wrapping of ***threads*** and prominent ***fusion cell*** with short ***chains*** of spores
4. if possible, find sporangial plants and cut a cross section of a segment to find egg-shaped tetrasporangia, divided across (***zonately***) in the outer cell layer of the cortex but ***protruding*** markedly into the medulla

\*(male plants are unknown)

Usual Habitat

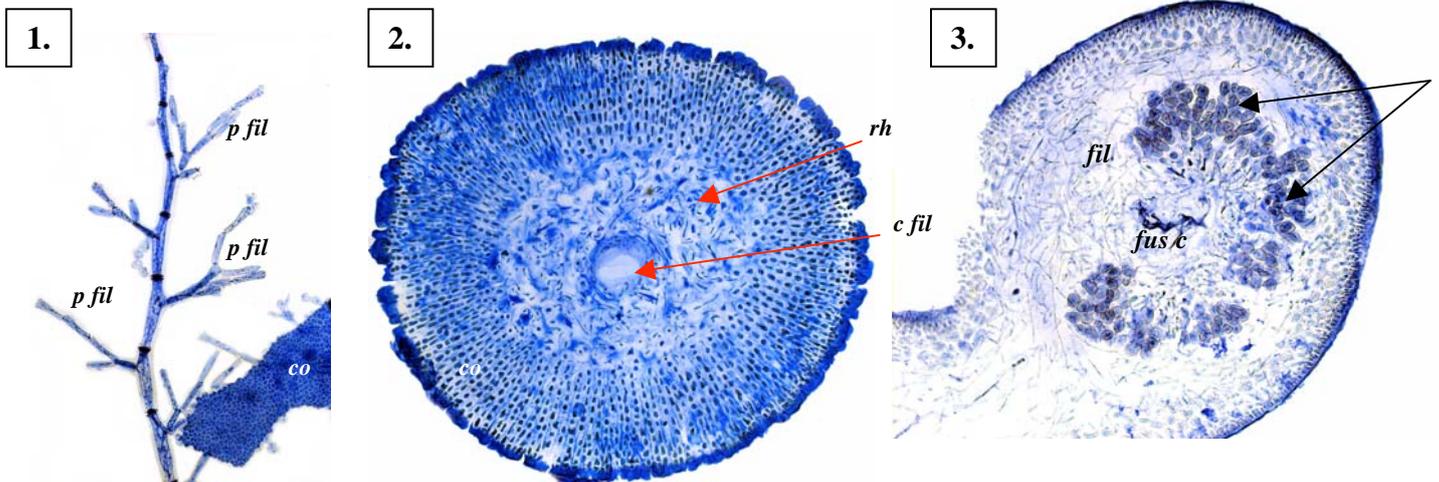
from shallow to deep water (3-40m)

Similar Species

*Rhabdonia clavigera*. In *Rhabdonia* the central filament is narrow and quickly obscured by a wrapping of similar-sized threads, and female reproductive features differ

Description in the Benthic Flora Part IIIA, pages 352, 355-356

Details of Anatomy



*Erythroclonium sonderi* (A6902) stained blue and viewed microscopically

1. a central thread dissected from a segment showing branches (periaxial filaments, *p fil*) arising at right angles, and surface view of a piece of "skin" (cortex, *co*) (A6902 slide 12629)
2. a cross section of a mature and thickened segment with central thread still prominent, the core filled with rhizoids (*rh*) and a thickened cortex (*co*) with cells in files (arrowed) (slide 12629)
3. a cross section of a cystocarp with fusion cell (*fus c*), chains of carposporangia (*ca sp*) and loose wrapping of threads (*fil*) in the medulla (A52489 slide 12632)
4. cross section of a fragment of the cortex (*co*) with a tetrasporangium (*t sp*) protruding prominently into the space of the medulla (A6902 slide 12633)

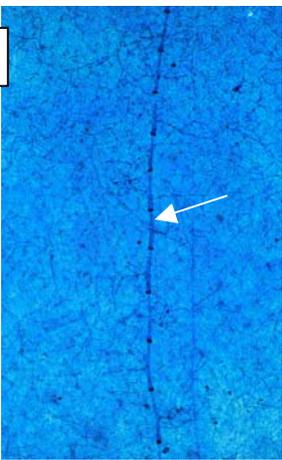
Descriptive names are inventions to aid identification, and are not commonly used

§§Name used by Edgar, G (2008) in Australian Marine Life (2<sup>nd</sup> ed.).

"Algae Revealed" R N Baldock, S Australian State Herbarium, March 2008



6.



5.

5. surface view of a piece of *Erythroclonium sonderi* stained blue and viewed microscopically to show the prominent central thread (arrowed) (A6902 slide 12629)



8.

6, 7. Two views of a drift plant of *Erythroclonium sonderi* Harvey, (A41728) from Dongara, W Australia



7.



9.

8, 9. Two views of *Erythroclonium sonderi* Harvey, (A33325), 24m deep, on rock, off Semaphore, S Australia

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 "Algae Revealed" R N Baldock, S Australian State Herbarium, March 2008