



MACRO
PLANT



Techniques needed and plant shape

Classification

*Descriptive name

Features

Occurrences

Usual Habitat

Special requirements

Phylum: Rhodophyta; Order: Rhodymeniales; Family: Rhodymeniaceae
 §Poseidon's fingers; red sausage weed

1. plants dark red-brown fading to grey-red, 40-160mm tall, of one to several jelly-filled, sausage shaped sacs arising from a disc-shaped holdfast
2. female structures (cystocarps) form scattered spots on the surface
 Geraldton W Australia to southern NSW and around Tasmania
 shallow water to 22m deep, on hard surfaces, occasionally on sea grass or other algae



1. focus through the surface microscopically to find rings of secretory cells around inner, large, core (medulla) cells and prominent openings (ostioles) of female reproductive parts (cystocarps)
2. cut cross sections of the wall of the sac and view microscopically
 - a arrow band, wider in rough water plants, of small outer (cortical) cells
 - narrow inner layer (medulla) of large cells with small, scattered secretory cells protruding into the jelly-filled central core
 - branched threads occasionally growing inwardly from large medulla cells
 - tetrasporangia in patches of thickened cortex, attached by threads to middle cortical cells, decussately divided
 - mature female structures (cystocarps) only *slightly* protruding, with a single opening (ostiole). Internally, masses of sporangia mixed with threads joined basally to a small pyramid of feeding cells

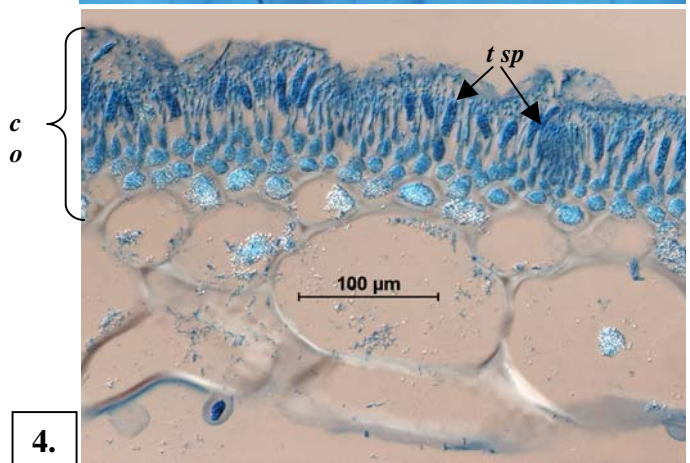
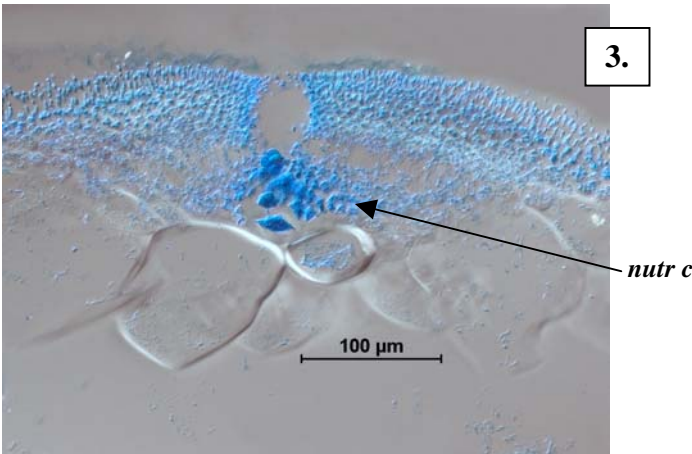
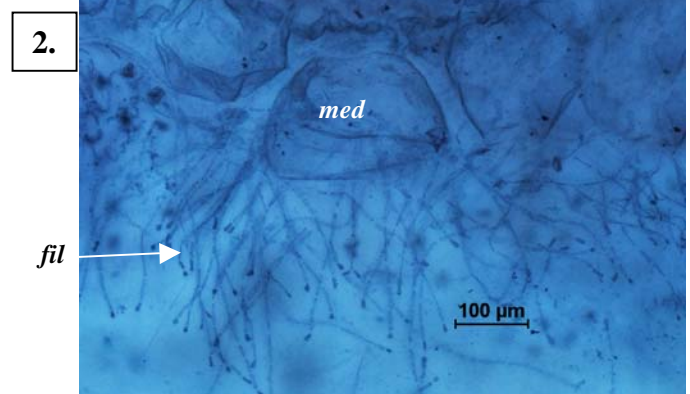
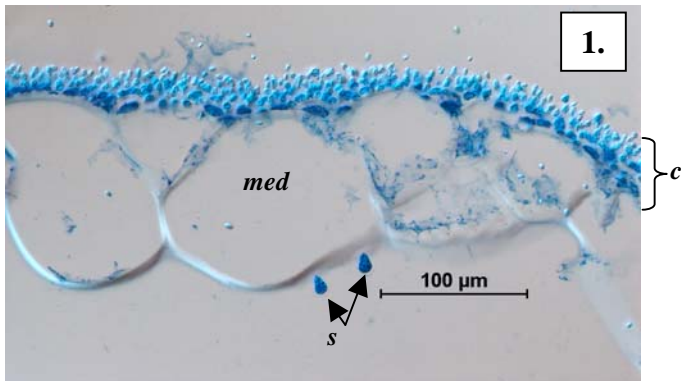
Similar Species

young *Webervanbossea tasmanensis* plants

Description in the Benthic Flora

Part IIB, pages 52-54

Details of Anatomy



Cross sections of the sac wall of *Gloiosaccion brownii* stained blue and viewed microscopically

- 1 outer layer (cortex, *co*) of small cells, large middle (medulla) cells, (*med c*) with secretory cells (*s c*) attached (A33000 slide 14225)
2. large medulla cells and threads (*fil*) projecting into the jelly-filled centre of the sac (A22372 slide 14226)
3. young female structure (cystocarp) with nutritive cells (*nutr c*) developing (A52848 slide 10120)
4. tetrasporangia (*t sp*) on threads connected to cells of a thickened cortex (*co*) (A22372 slide 14229)

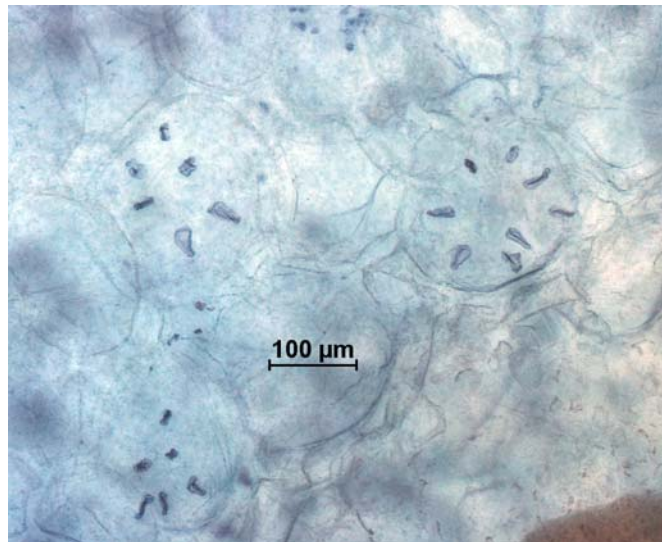
Descriptive names are inventions to aid identification, and are not commonly used

§ name used in Edgar, G. *Australian Marine Life, 2nd Ed.* (2008)

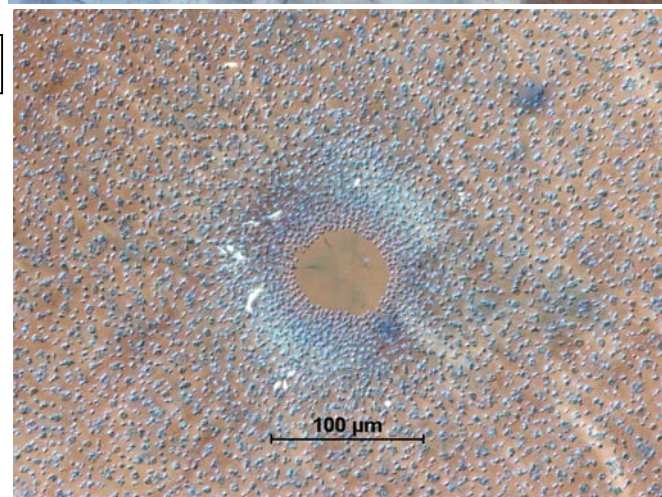
"Algae Revealed", R N Baldock, S Australian State Herbarium October 2010



5.



8.



9.



6.



7.

Gloiosaccion brownii Harvey from S Australia

5-7. underwater photos by D Muirhead:

5. female plant from Normanville,

6, 7 from Stokes Bay

8, 9 surface of the sac wall stained blue and viewed microscopically

8. rings of secretory cells around medulla cells (A22372 slide 14226)

9. opening (ostiole) of a cystocarp (A52848 slide 10120)

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