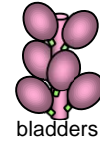


Techniques needed and plant shape



MACRO  
PLANT



Classification

Phylum: Rhodophyta; Order: Rhodymeniales; Family: Rhodymeniaceae  
§ red grape weed

\*Descriptive name

Features

1. plants dark brown-red, stiff, 100-300mm tall, commonly overgrown with encrusting coralline red algae
2. main branches cylindrical, bearing clusters of radially arranged, hollow, thin but stiff-walled bladders 5-20 x 3-10mm, often open at tips, with tears in the bladder walls. Bladders often lost from lower parts of branches.

SW W Australia to Victoria and N coast Tasmania  
shallow water to 24m deep

Occurrences

Usual Habitat

Special requirements



1. view the surface of bladders microscopically to find raised patches of sporangia and vague rings (rosettes) of surface cells
2. cut cross sections and examine bladder walls to find
  - outer (cortical) cells small, grading to larger inner (medulla) cells
  - scattered and rare small secretory cells protruding into the bladder space
  - raised patches of tetrasporangia, sporangia divided in a cross-shaped (cruciate) pattern, and mixed with hairlike outer (cortical cells)
  - mature female structures (cystocarps) protruding on both sides of the bladder, with rows of cells in their walls, and a single opening (ostiole)



cruciate

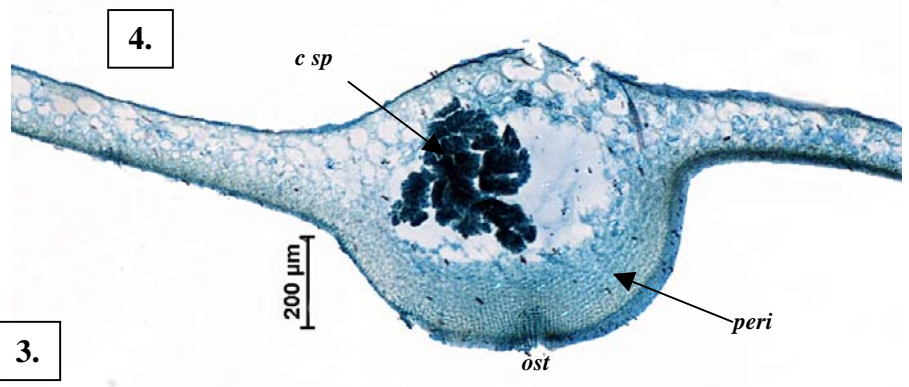
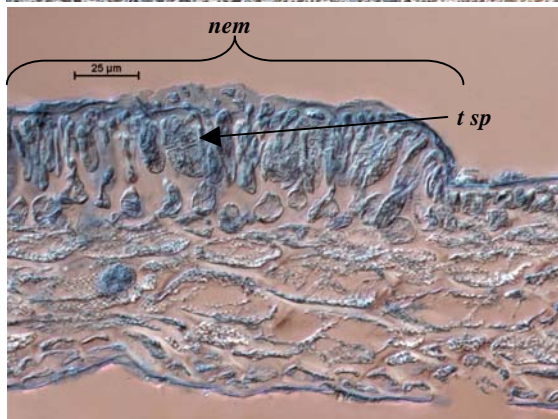
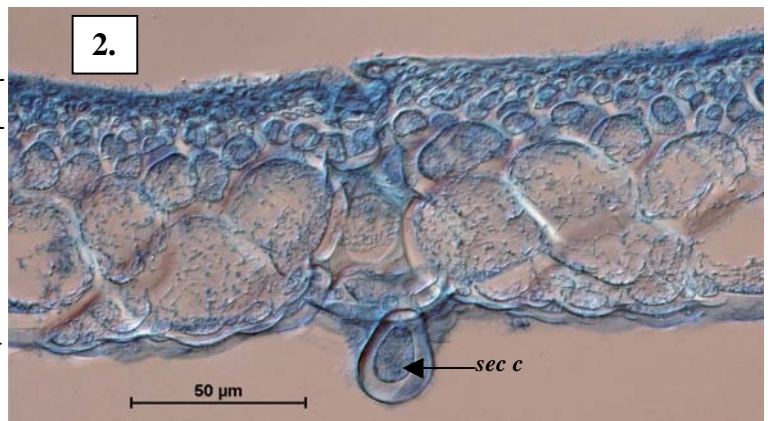
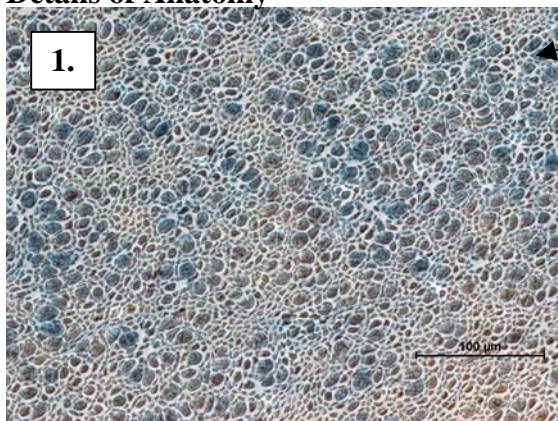
Similar Species

*Clavicolonium ovatum* has numerous but much smaller bladders

Description in the Benthic Flora

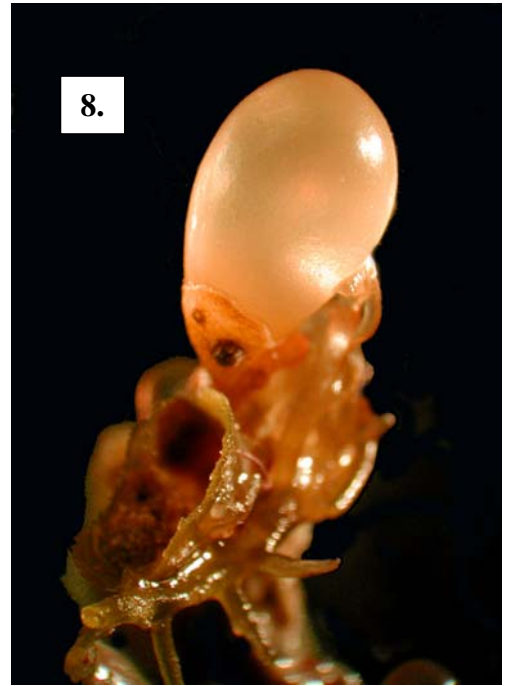
Part IIIB, pages 47-49

Details of Anatomy



*Botryocladia sonderi* stained blue and viewed microscopically

1. surface view of a patch of sporangia (*t sp*) (A30818 slide 14213)
2. small outer cells (cortex, *co*) grading to larger inner cells (medulla, *med*) and a single secretory cell (*sec c*) protruding into the hollow of the bladder (A59848 slide 14210)
3. sporangial patch (nemathecium, *nem*) with tetrasporangia and elongate (hair like) cortical cells (A34914 slide 14219)
4. cystocarp with rows of small cells (pericarp, *peri*), opening (ostiole, *ost*) and mass of spores (carposporangia, *c sp*) (A59848 slide 14211)



*Botryocladia sonderi* Silva

- 5. from Stokes Bay, Yorke Peninsula S Australia, amongst coralline algae (photo: D Muirhead)
- 6-7. drift specimen (A64542) from Kingscote, Kangaroo I., S Australia showing two magnifications of a pressed specimen with collapsed bladders and white epiphytes
- 8. dissected bladder of a preserved (bleached and colourised) specimen (A70529)