

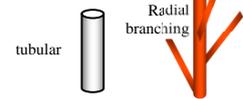
Lomentaria australis
(Kützing) Levring

45.700

Techniques needed and plant shape



MACRO
PLANT



Classification

Phylum: Rhodophyta; Order: Rhodymeniales; Family: Lomentariaceae

*Descriptive name

Features



1. plants red, *slimy*, 50-200mm tall, much-branched radially or with several main axes and radial side tufts
2. branches cylindrical, *hollow*, older ones slightly flattened, pinched basally, small branches *bean-shaped*
3. mature female structures (cystocarps) *urn-shaped*, protruding, about 0.5mm wide, often in the *axils* (angle) between branches

Occurrences

Usual Habitat

Special requirements



West Coast, S Australia to Victoria and around Tasmania. Possibly New Zealand on rock, harbour facilities or sea grasses, in shallow to deep water (0.5-22m)

1. focus microscopically on the surface and internally to find
 - outer layers (cortex) of rings (*rosettes*) of outer small cells about deeper egg-shaped cells and numerous, extremely fine *hairs*
 - branch cores hollow, surrounded by threads with tiny gland cells
 - branch constrictions *solid*, of large cells with threads growing into cavities
2. mature female structures (cystocarps) with
 - mass of *club-shaped* cells (carposporangia) attached to a large fusion cell
 - inner cells of wall (pericarp) *star-shaped*, widely spaced
 - external opening (ostiole) *present*
3. sporangia in scattered patches (*sori*), divided *tetrahedrally*, *growing from small, bunched cells* protruding into the branch space

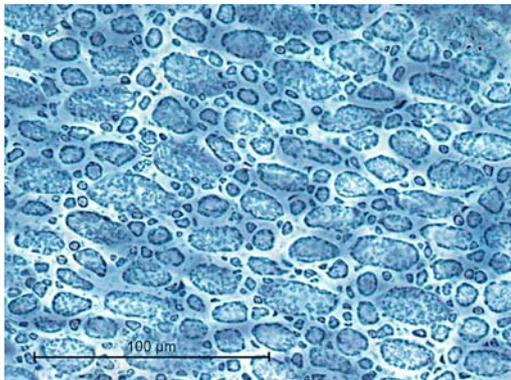


Similar Species

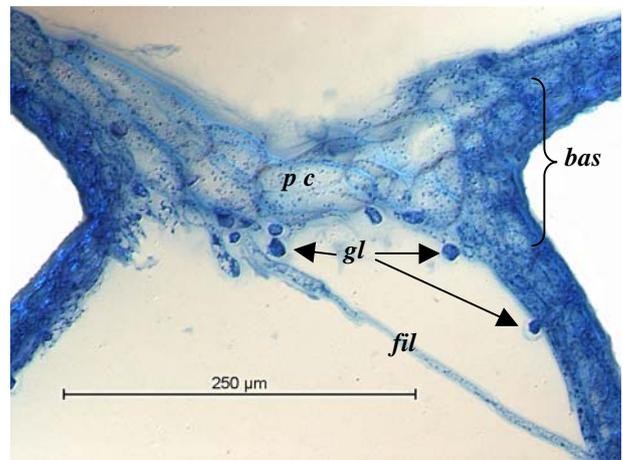
Description in the Benthic Flora

Details of Anatomy

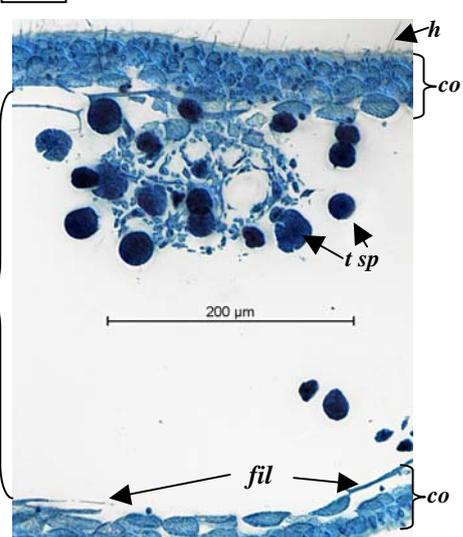
Champia spp, but each branch in these have many internal segmented
Part IIIB, pages 135-138



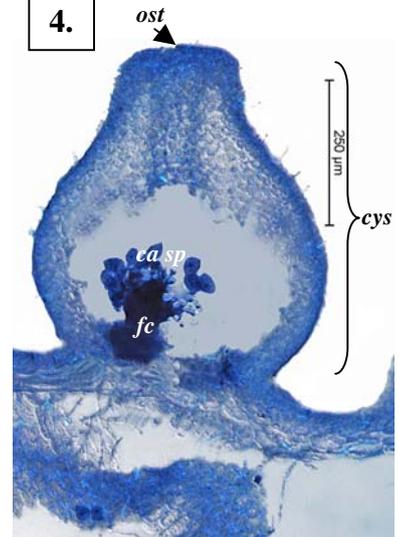
1. 2.



3.



4.



Lomentaria australis (Kützing) Levring stained blue and viewed microscopically

1. surface view of cell rosettes (A39522 slide 14724)
2. lengthwise section through the solid base (*bas*) of a branch showing large (parenchymatous) cells (*pc*), a thread (filament, *fil*) protruding into the branch cavity, and darkly staining glands (*gl*) (A43784 slide 14722)
3. lengthwise section showing hairs (*h*), cortex (*co*) of outer small and inner large cells connecting with threads (*fil*) and cluster of small cells bearing tetrasporangia (*t sp*) protruding into the branch cavity (*cav*) (A37519 slide 14718)
4. cystocarp (*cys*) with carposporangia (*ca sp*), fusion cell (*fc*) and opening (ostiole, *ost*) (A37519 slide 14716)

*Descriptive names are inventions to aid identification, and are not commonly used
"Algae Revealed", R N Baldock, S Australian State Herbarium, June 2011



5.



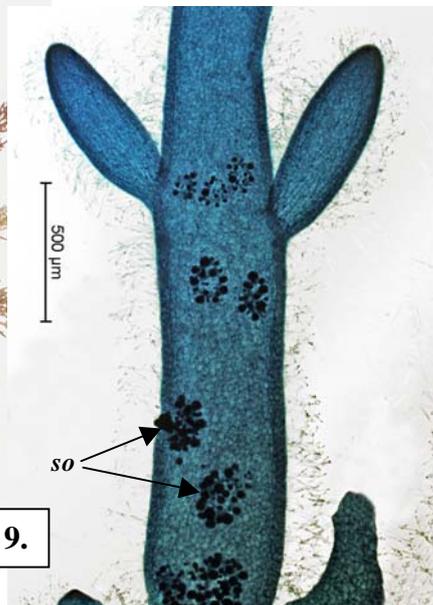
6.



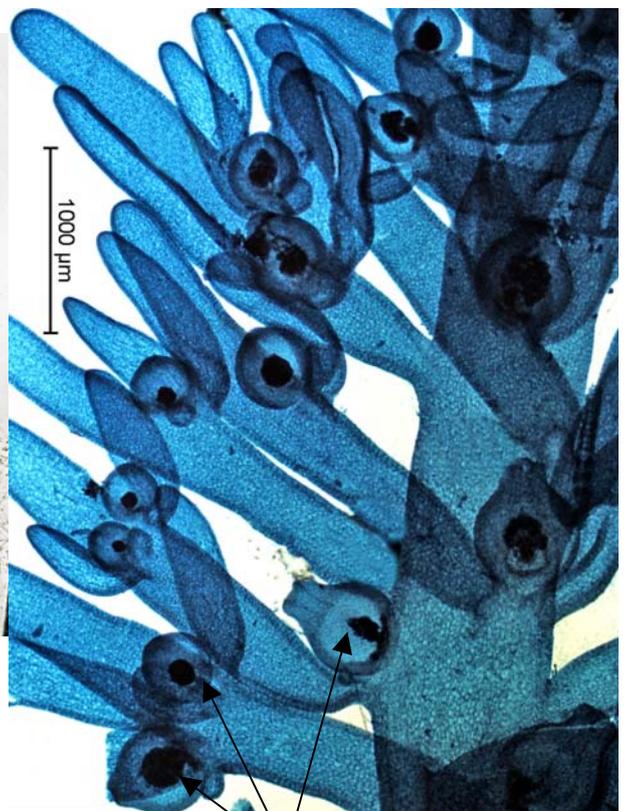
8.



7.



9.



10.

Lomentaria australis (Kützinger) Levring
 5-6. two magnifications of a plant (A16492) from Low Head, Tas.
 7, 8. two magnifications of a plant (A27916) from Cape Portland, Tas.
 9, 10 specimens stained blue and viewed microscopically
 9. tetrasporangial patches (sori, *so*), bean-shaped side branches and numerous fine hairs (A37519 slide 14717)
 10. numerous cystocarps (*cys*) in axils of branches (A37519 slide 14714)

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