Lomentaria monochlamydea
(Kützing) Levring

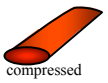
45.700

Techniques needed and plant shape



MACRO PLANT


tubular



Classification Phylum: Rhodophyta; Order: Rhodymeniales; Family: Lomentariaceae

***Descriptive name**

Features

1. plants red to red-brown, forming tangled ***clumps***, 20-50mm tall
2. basal branches (stolons) creeping, cylindrical, branched, sometimes curved, producing small, upright, flattened blades about 500µm across, pinched basally
3. sexual stage unknown

Occurrences near Adelaide, S Australia to Victoria and Coffs Harbour, NSW

Usual Habitat on rock or harbour facilities, in shallow water

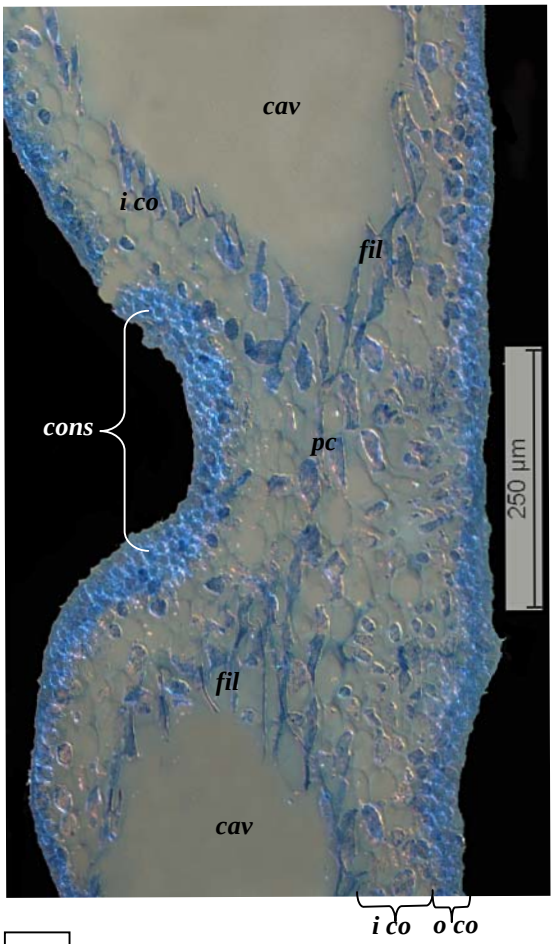
Special requirements

1. focus microscopically on and through the surface to find
   - outer layers (cortex) of large cells and scattered small cells (distinct rings or rosettes ***not*** apparent)
   - branch cores hollow, lined with interconnecting threads bearing tiny gland cells
   - branch constrictions ***solid***, of large cells with threads growing into cavities
2. sporangia in scattered patches (***sori***), divided tetrahedrally, ***growing from small, bunched cells*** protruding into the branch space

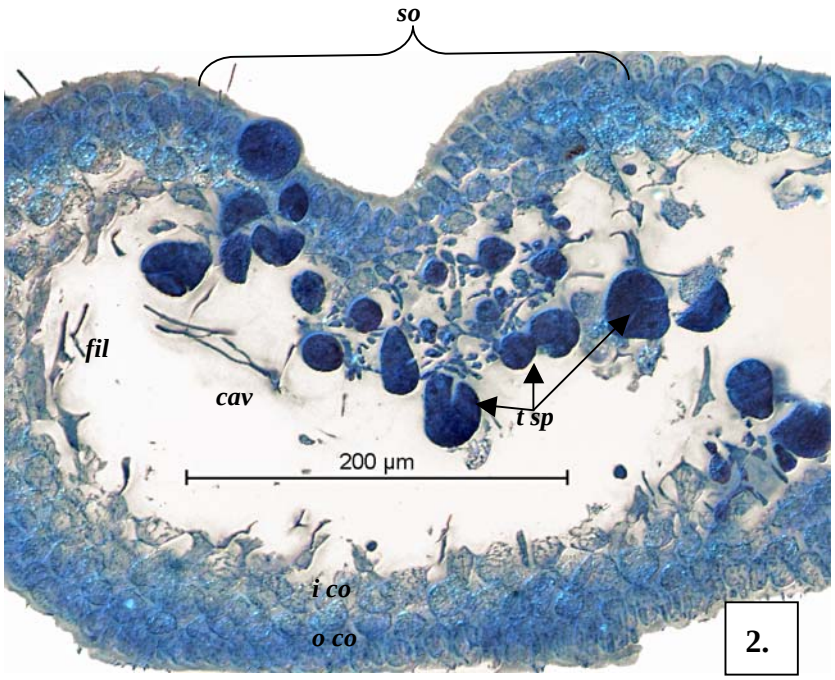
Similar Species *Lomentaria pyramidalis*, but that species is larger and grows on sea grasses

Description in the Benthic Flora Part IIIB, pages 140-142

Details of Anatomy



1.

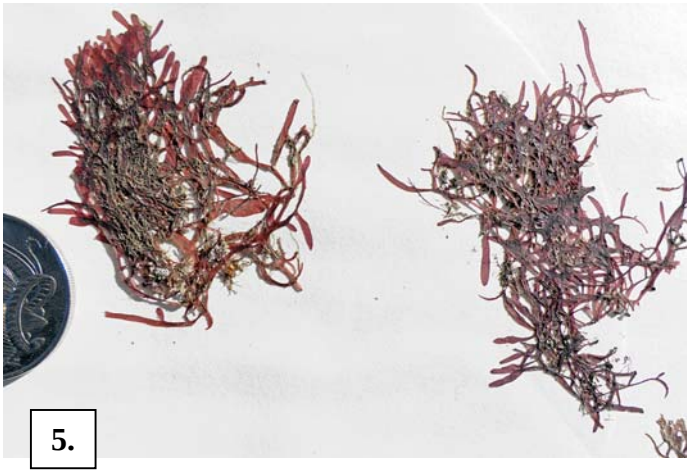


2.

Lomentaria monochlamydea (A39524) stained blue and viewed microscopically

1. lengthwise section through the constriction (*cons*) between branches showing branch cavity (*cav*) lined with branching threads (*fil*), surface layers (cortex) of large cells (*i co*) and small cells (*o co*), and solid constriction between branches of large cells (parenchyma, *pc*) (slide 14782)
2. section through a patch (sorus, *so*) of tetrasporangia (*t sp*) on a bunch of small cells protruding into the branch cavity (slide 14783)

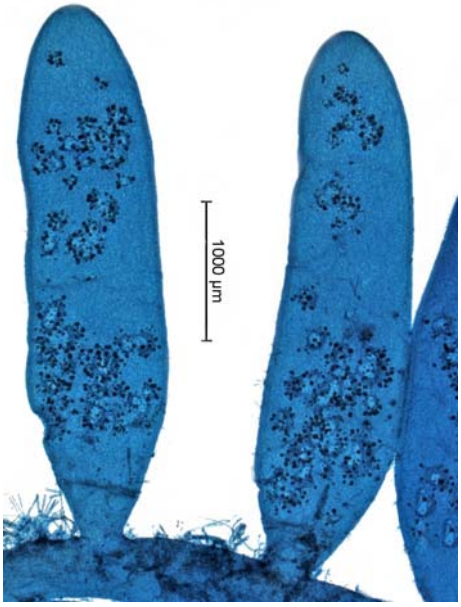
*Descriptive names are inventions to aid identification, and are not commonly used
"Algae Revealed", R N Baldock, S Australian State Herbarium, July 2011



5.

6.

7.



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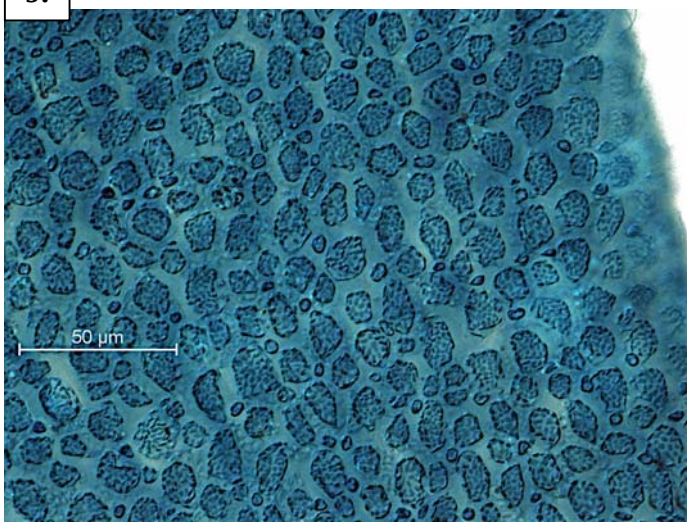

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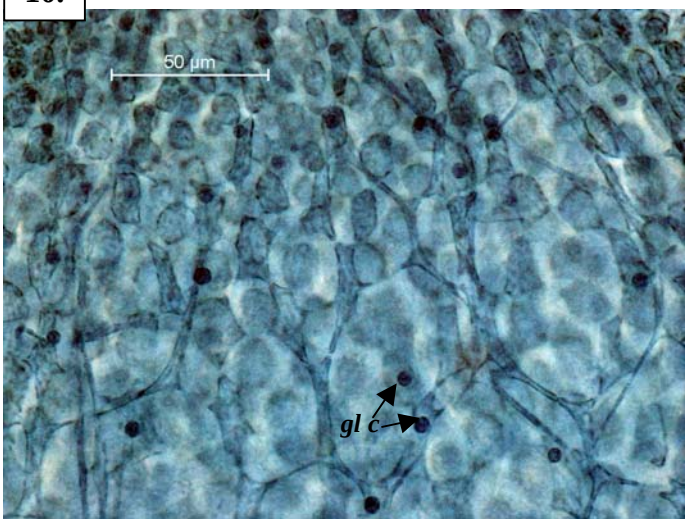

10.

Lomentaria monochlamydea (J Agardh) Kylin from dredge pipelines and ropes at Apollo Bay, Victoria

5-6. two magnifications of plants (A39524)

7. detail of fronds with sporangial patches (sori) arising from creeping branches (A63398)

8 -10 specimens stained blue and viewed microscopically

8. upright fronds with sporangial patches (A39524 slide 14781)

9, 10 surface view at two levels of focus (A62822 slide 13657):-

9. large surface cell with small cells from their corners

10. meshwork of interconnecting threads with gland cells (*gl c*), lining the central branch cavity

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