Semnocarpa corynephora
(J Agardh) Huisman, Foard & Kraft

45.700

Techniques needed and plant shape

MACRO PLANT

tubular

compressed

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

***Descriptive name**

Features

1. plants red to red-grey, slimy, 60-100mm tall, upright main branches single or several, slightly flattened, side branches irregularly radially arranged, ***basally constricted***
2. ultimate branches ***cigar- or club-shaped*** up to 1mm wide, with narrow ***basal stalk***, from branch edges
3. reproductive stages forming scattered spots mainly in ultimate branches

Occurrences near Perth, W Australia to Victoria

Usual Habitat on rock or other algae, in deep water (32m)

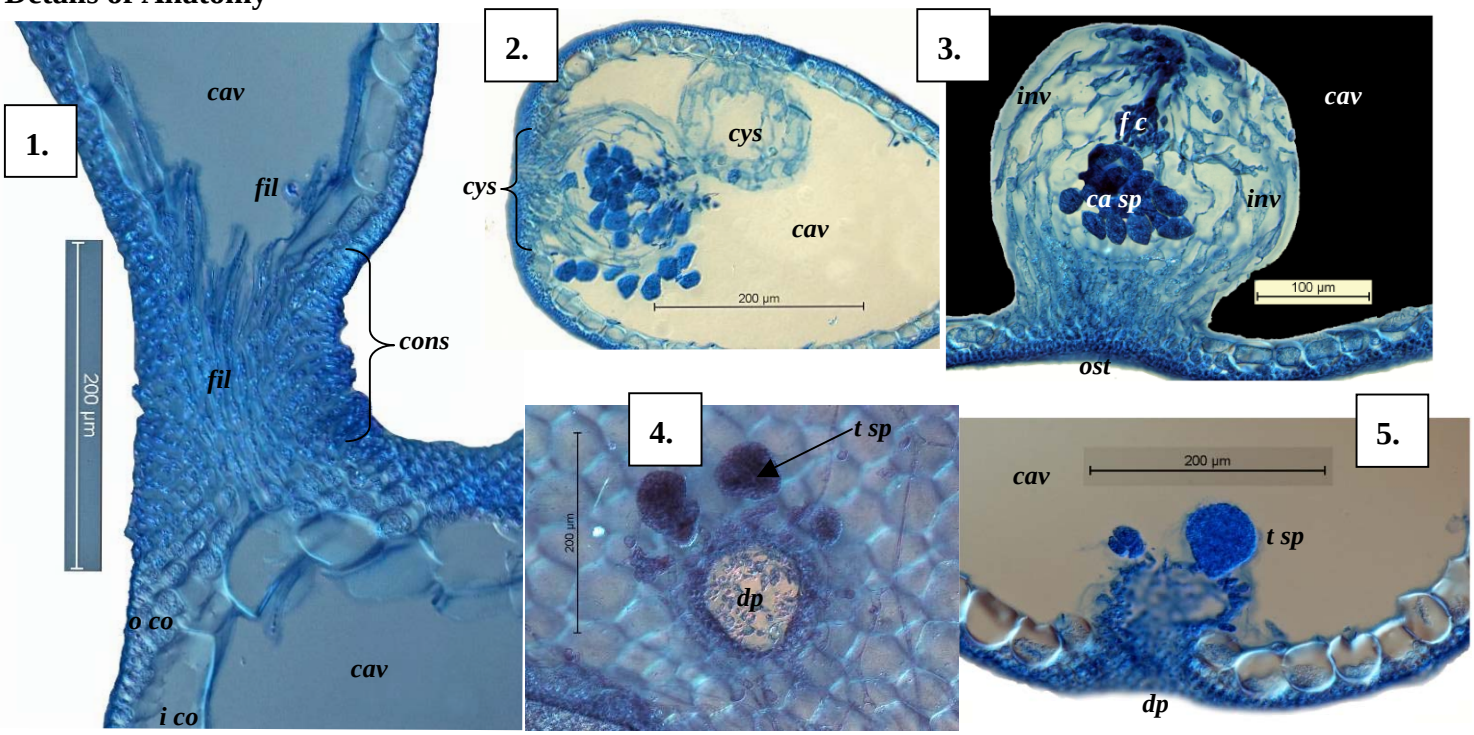
Special requirements

1. focus microscopically on and through the surface to find
   - outer layer (cortex) of inner large. many-sided cells completely covered by outer small cells (rings or rosettes ***absent***)
   - branch cores hollow, lined with thin threads bearing tiny gland cells
   - branch constrictions ***solid***, of large cells, pierced by threads growing into cavities
2. mature female structures (cystocarps) scattered, ball-shaped, growing into the branch cavity, with a wall of interconnecting threads (involucre)
3. sporangia in scattered, ***depressed*** patches (***sori***), divided tetrahedrally, ***growing from small, bunched cells*** protruding into the branch space

Similar Species *Lomentaria* spp, but cystocarps protrude, and have no involucre in *Lomentaria*

Description in the Benthic Flora Part IIIB, pages 142-144

Details of Anatomy

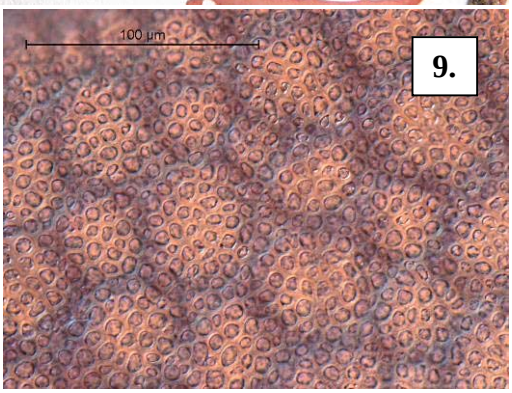


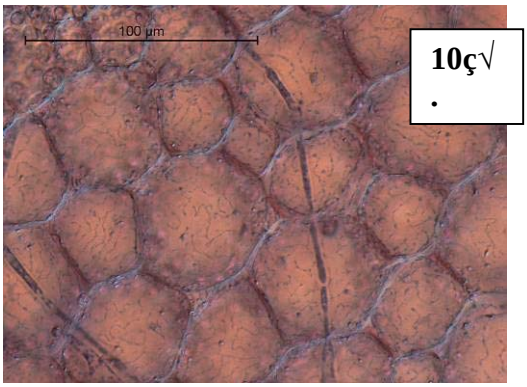
Semnocarpa corynephora (A14704) stained blue and viewed microscopically

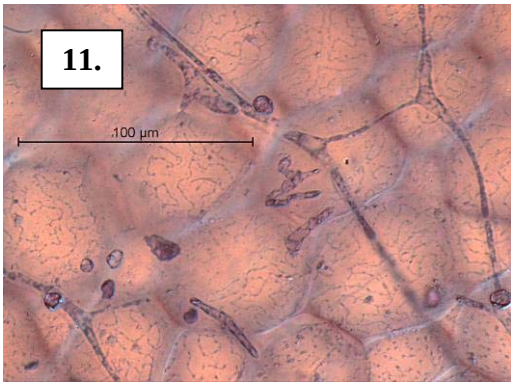
1. lengthwise section through the constriction (*cons*) between branches showing branch cavity (*cav*) lined with branching threads (*fil*), surface layers (cortex) of inner large cells (*i co*) and outer small cells (*o co*), and solid constriction between branches of large cells pierced by filaments (*fil*) (A6850 slide 14704)
2. section through a branch with 2 cystocarps (*cys*) protruding into the core space (A33693 slide 14707)
3. detail of a cystocarp (A33693 slide 14707) with fusion cell (*f c*), carposporangia (*ca sp*), wall (involucre, *inv*) and ostiole (*ost*)
4. surface view of a sporangial cluster (sorus, *so*) looking through the depression (*dp*) in the cortex, with tetrasporangia (*t sp*) (A29644 slide 14701)
5. section through a cluster (sorus) of tetrasporangia (*t sp*) on a bunch of small cells protruding into the branch cavity showing the depression (*dp*) in the cortex (A6850 slide 14704)

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

"Algae Revealed", R N Baldock, S Australian State Herbarium, July 2011







Semnocarpa corynephora (J Agardh) Huisman, Foard & Kraft from South Australia

6-7. two magnifications of a drift plant (A46891) from Pt Avoid, West Coast, showing flattened main branches and cigar- or club-shaped ultimate branches with narrow basal stalks spotted with spore patches

8. detail of fronds with sporangial patches (sori) (A41068) of a plant 33m deep, from Investigator Strait

9-11. series of surface views focussing from outermost to innermost layers (A29644 slide 14701): outer cortex of small cells; inner cortex of large many-sided cells; several fine threads bearing gland cells lining the core cavity

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