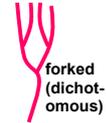


Techniques needed and shape



MICRO PLANT



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Dicranemataceae

\*Descriptive name

wire-weed; coiled mini-tufts

Features



plants form *tiny*, red-brown *ball-shaped tufts*, 3-5mm across on wire weed (*Amphibolis*) stems; branching *dense, forked* and *coiled*; branches cylindrical, about 0.2mm wide

Occurrences

from Elliston (West coast) S Australia to Victoria

Usual Habitat

growing only on *Amphibolis* stems (an obligate epiphyte)

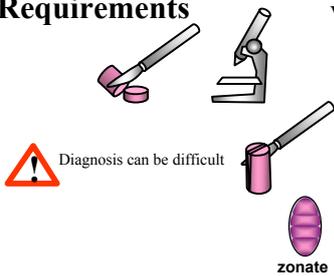
Similar Species

*Dicranema revolutum* - often growing together, but *D. cincinnalis* is smaller, tightly coiled, and female cystocarps have no openings

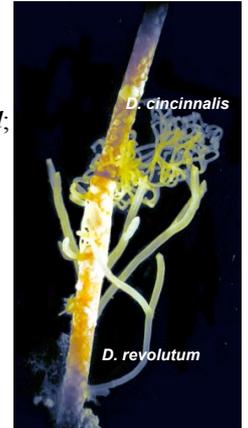
Description in the Benthic Flora Part IIIA, pages, 323, 324-325

Special Requirements

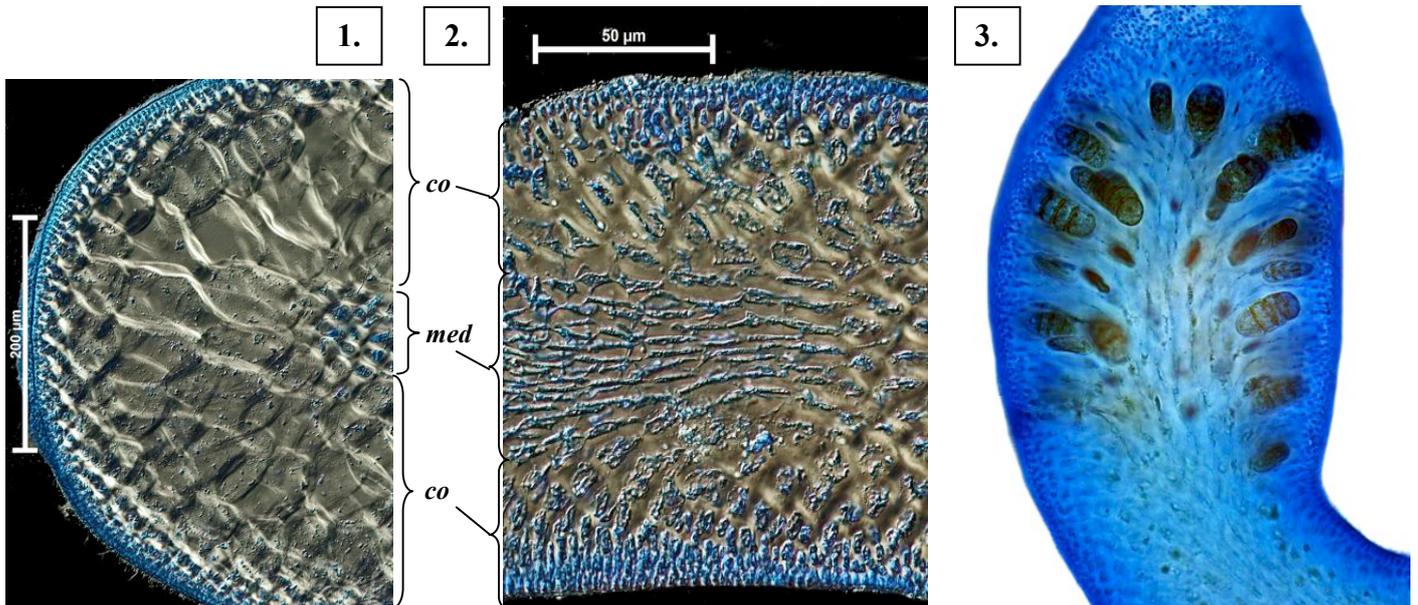
view microscopically to find



1. in cross sections: a small core (medulla, *med*) of fine threads, wide outer layer (cortex, *co*) of inner large and outer very small cells
2. in female plants: mature structures (cystocarps) forming swellings near the ends of branches with *no* openings (ostioles); in longitudinal sections, *inwardly pointing* fertile threads (gonimoblast, *gon*) with *single* carposporangia (*ca sp*) at their tips. Male spermatangia occur in minute packets in the outer layers of the *same plants*
3. in sporangial plants: tetrasporangia clustered near branch tips, divided across (zonately)



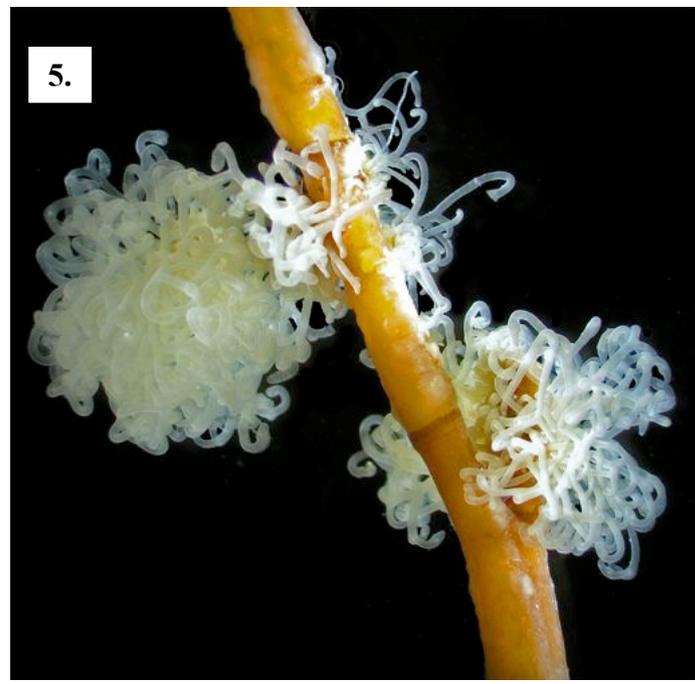
Details of Anatomy



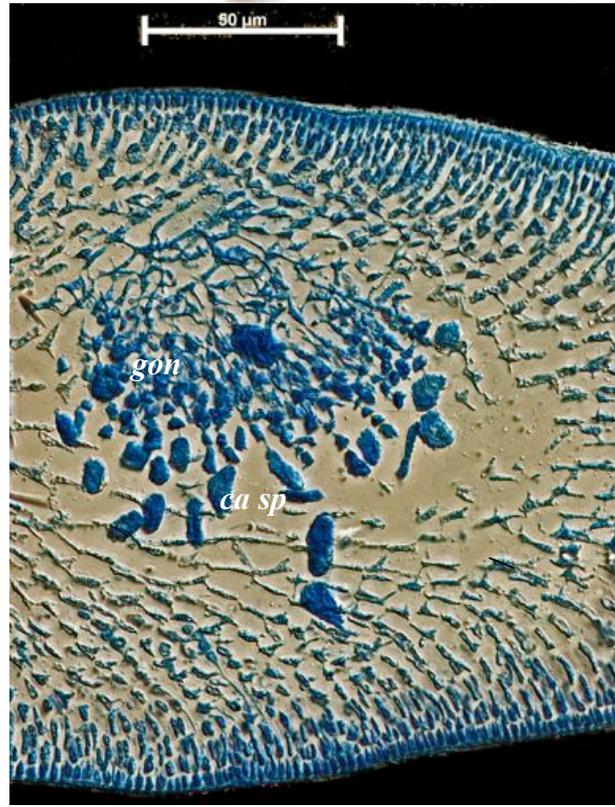
*Dicranema cincinnalis* stained blue and viewed microscopically

1. cross section: small core (medulla, *med*) of fine threads, wide outer layer (cortex, *co*) of inner large and outer very small cells (slide 3760)
2. lengthwise section through a cluster (nemathecium) of tetrasporangia near a branch tip: tetrasporangia divided across (zonately), attached to the inner cortex (slide 19072)

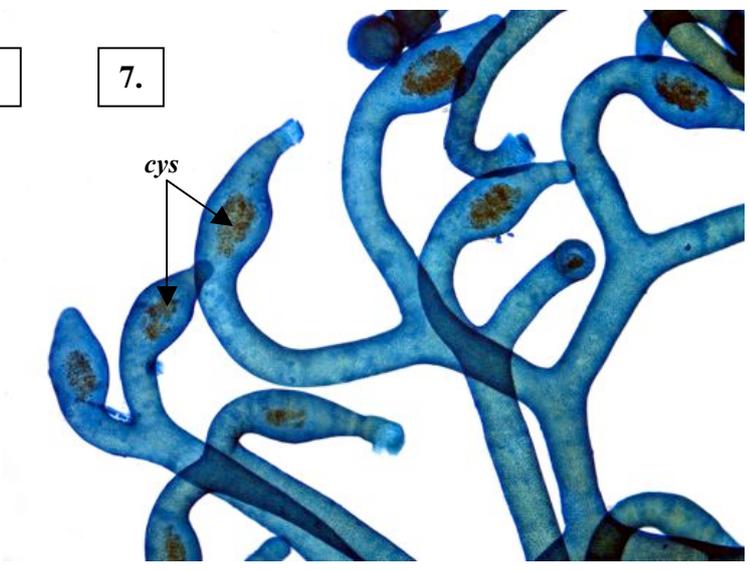
4.



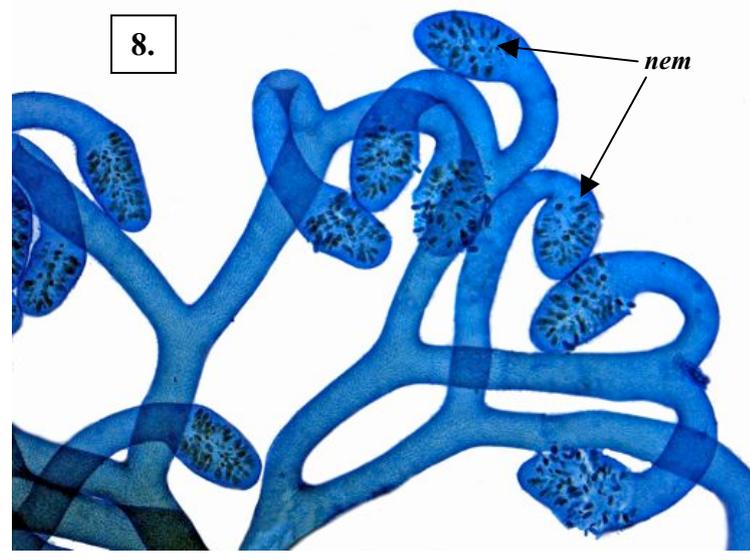
5.



6.



7.



8.

*Dicranema cincinnalis* Kraft

4. on *Amphibolis* stems, from reef pools, Flour Cask Bay, Kangaroo I., S Australia (A68479)

5. magnified preserved (bleached) specimen (A12697), from an outer reef pool, D'Estrees Bay, Kangaroo I., S Australia: dense tufts and partly coiled branching pattern

6. longitudinal section through a cystocarp: *inwardly* growing fertile cells (gonimoblast, **gon**) ending in a single carposporangium (**ca sp**) (slide 3763)

7, 8. specimens (A68479) stained blue and viewed microscopically

7. cystocarps (**cys**) forming swellings near the ends of branches (slide 19073)

8. patches (nemathecium, **nem**) of tetrasporangia (slide 19072)

\* Descriptive names are inventions to aid identification, and are not commonly used  
 "Algae Revealed" R N Baldock, State Herbarium S Australia, May 2008; corrected May 2014