

Hymenocladia usnea

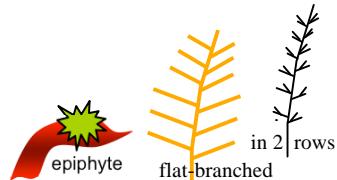
(R Br ex Turner) J Agardh

45.660

Techniques needed and plant shape



MACRO PLANT



Classification

*Descriptive name

Features



Phylum: Rhodophyta; Order: Rhodymeniales; Family: Rhodymeniaceae
§ fringed strapweed

1. red to dark red fading to yellow, 100-300 mm tall, flat-branched, *variable* in shape
2. main parts (axes) compressed, 2-8 mm wide, fringed with side branches and long, compressed ultimate branches (ramuli) 1-2 mm wide, in 2 rows, forked at tips
3. mature female structures (cystocarps) pustulate, scattered

Occurrences

Usual Habitat

Special requirements



near Perth W Australia, to Victoria and Bass Strait

on seagrasses, possibly on rock, in shallow to deep water (22m)

1. cut sections of blades and examine microscopically to find outer (cortical) layers of 2-3 layers of small cells grading in size over 1-2 cells to a core (medulla) of large, oval, *thick-walled* cells *mixed with smaller cells*
2. cut sections of hemispherical or egg-shaped mature female structures (cystocarps) to find chains of small cells forming a wall (pericarp), single **prominent** external opening (ostiole), mass of carposporangia, nutritive cells basally, initially threads present, but *disintegrating*
3. sporangia scattered in the *outer part of the medulla*, divided tetrahedrally

⚠ diagnosis can be difficult

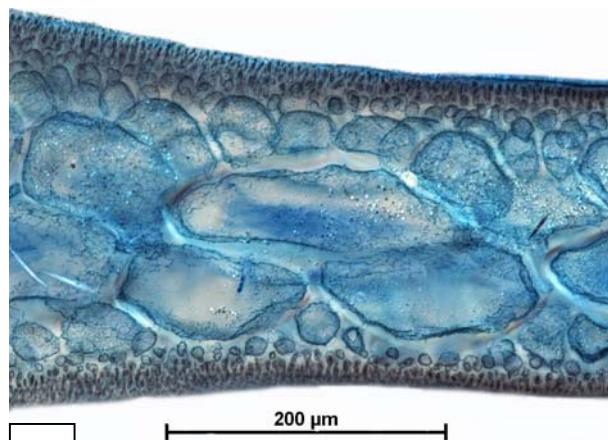


Similar Species

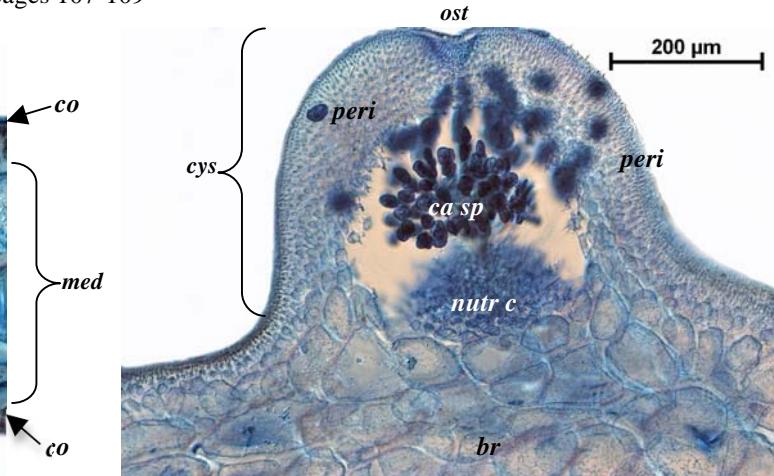
Hymenocladia divaricata but main branches are narrower in that species, ultimate branches (ramuli) short and almost cylindrical

Description in the Benthic Flora

Part IIIB, pages 107-109

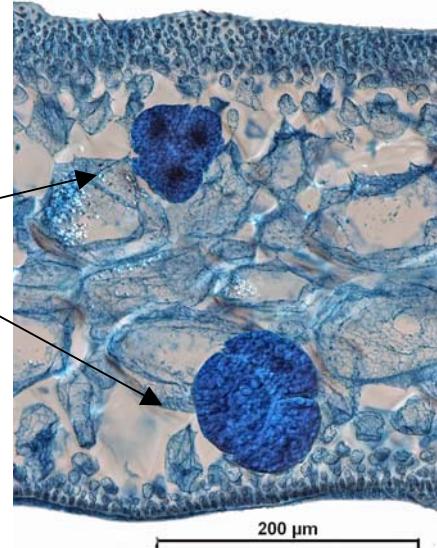


1.



2.

3.



Sections of *Hymenocladia usnea* stained blue and viewed microscopically (#1, 2 A63564 slide 14517; #3 A63664 slide 14560)

1. branch showing thin outer layers (cortex) of small cells and wide core (medulla, *med*) of large, thick-walled oval cells mixed with a few smaller cells (slide 14517)
2. mature female structure (cystocarps, *cyst*) protruding from a branch (*br*), with prominent opening (ostiole, *ost*), cellular wall (pericarp, *peri*), central mass of carposporangia (*ca sp*) basal nutritive layer (*nutr c*). Network of threads absent (slide 14517)
3. tetrasporangia (*t sp*) in the outer part of the medulla

§ name used in Edgar, G. *Australian Marine Life*, 2nd Ed. (2008)

*Descriptive names are inventions to aid identification, and are not commonly used
“Algae Revealed”, R N Baldock, S Australian State Herbarium December 2010

4.



5.



6.



Hymenocladia usnea (R Br ex Turner) J Agardh from South Australia

4. dredged from 25 m deep, at Dog I., Nuyts Archipelago (A65931)
- 5, 6. Two magnifications of a plant 17-20m deep on seagrass (*Amphibolus*) stems at North Point, Isles of Saint Francis showing the two rows of thin side branches along the compressed main branches (A69606)

[§] name used in Edgar, G. *Australian Marine Life*, 2nd Ed. (2008)

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