

# Hymenocladia usnea

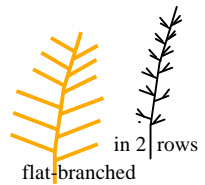
(R Br ex Turner) J Agardh

45.660

## Techniques needed and plant shape



MACRO PLANT



## Classification

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

## \*Descriptive name

## Features



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 near Perth W Australia, to Victoria and Bass Strait on seagrasses, possibly on rock, in shallow to deep water (22m)

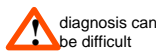
## Occurrences

## Usual Habitat

## Special requirements



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

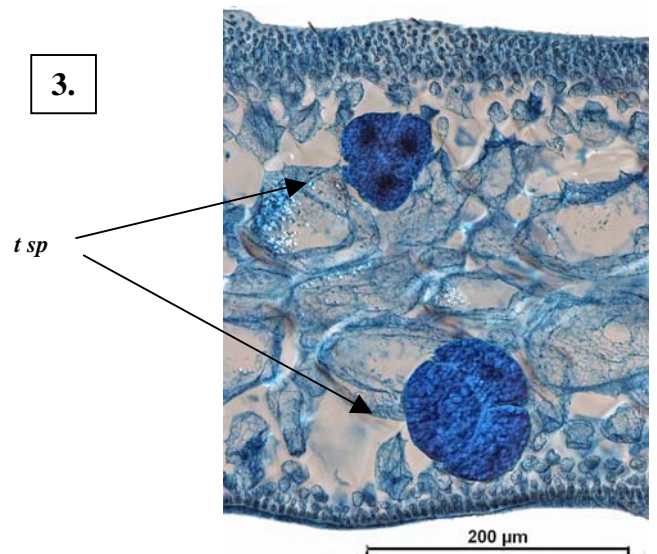
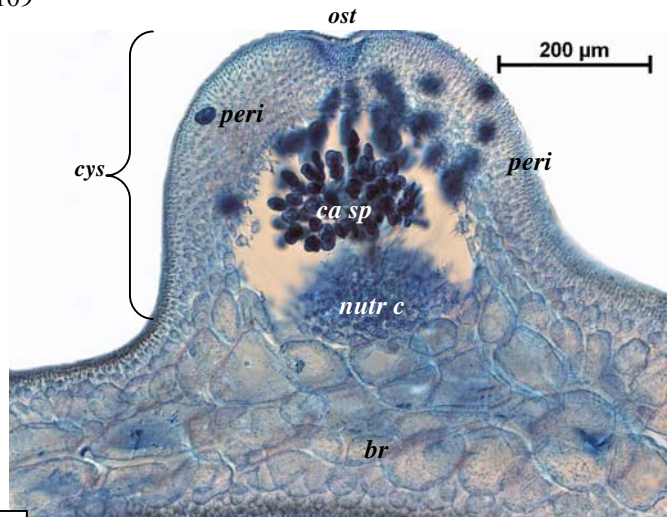
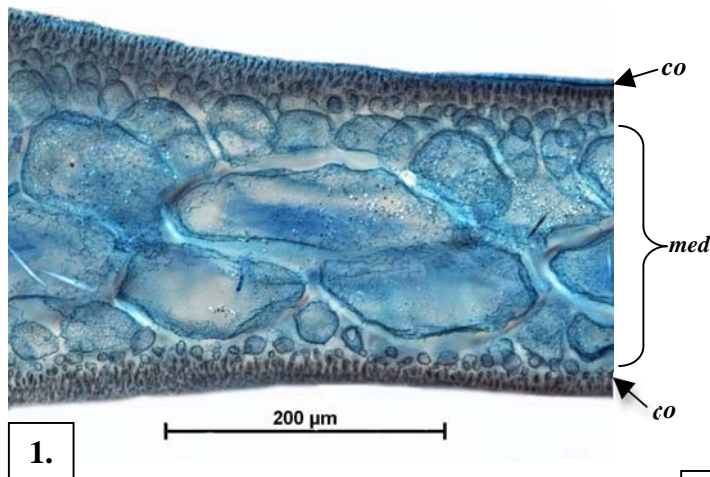


## Similar Species

*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



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 (*Amphibolis*) stems at North Point, Isles of Saint Francis showing the two rows of thin side branches along the compressed main branches (A69606)

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