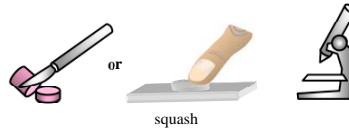


Techniques needed and shape



MACRO  
PLANT



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Halymeniaceae  
red lettuce; §Kraft's red alga

\*Descriptive name

Features

plants are red, fading to yellow, with a thin, slippery, ruffled, split or lobed lettuce-like blade 100-250mm tall arising from a small stalk (stipe) about 10mm long  
SE Tasmania and Jervis Bay NSW.

Occurrences

Usual Habitat

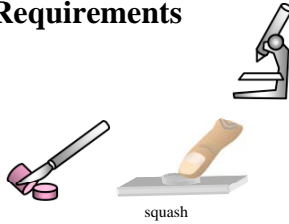
on rock or shells in relatively deep water (10m)

Similar Species

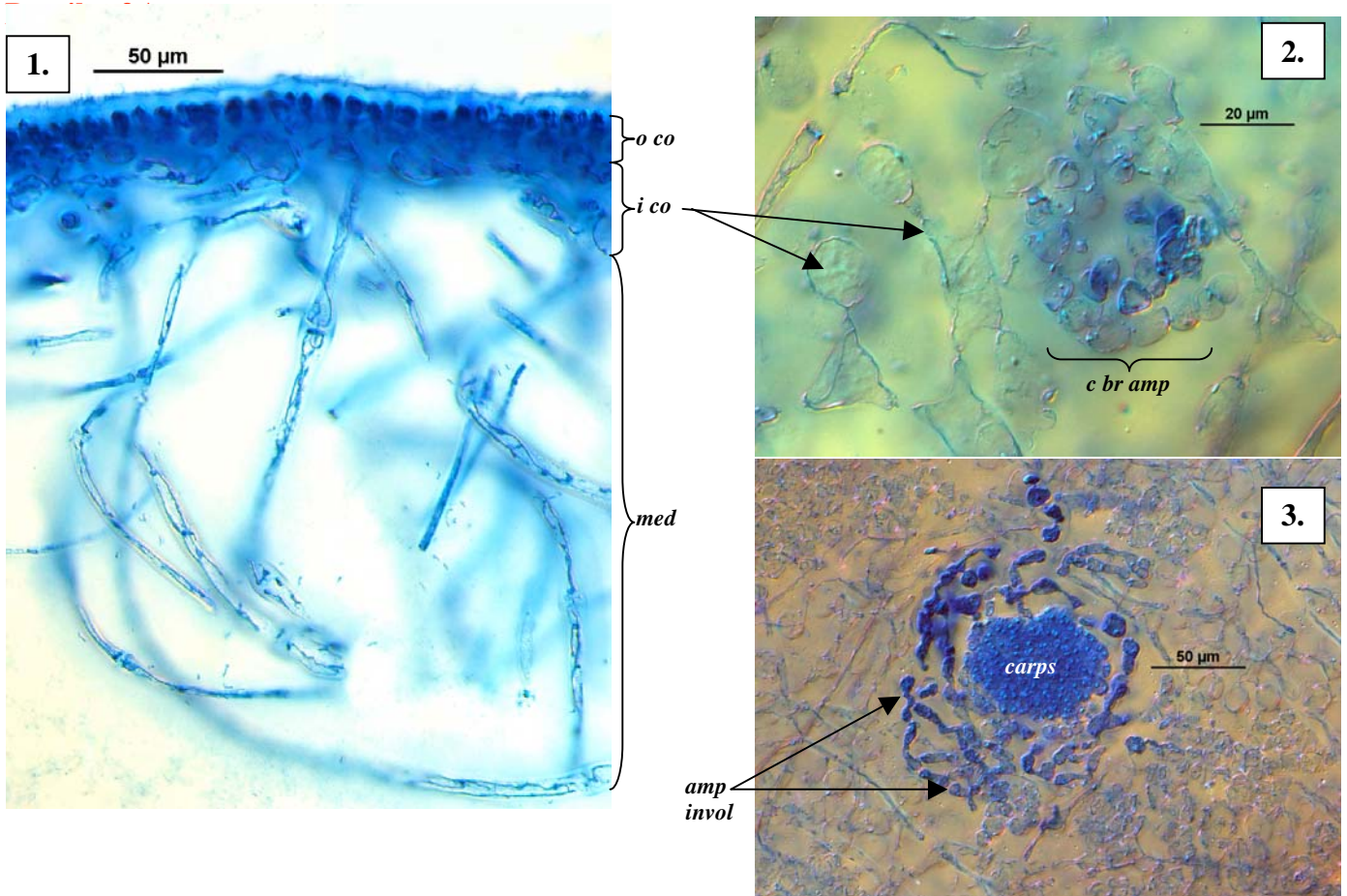
*Halymenia plana* but the blade of that species is thicker and mottled

Description in the Benthic Flora Part IIIA, pages 190, 192-193

Special Requirements



- view the surface microscopically or make a tissue squash to find
  - no mottling** as in other species of *Halymenia*
  - numerous** small spots (*ampullae*) in females
  - scattered, tiny cross-shaped (cruciate) tetrasporangia in sporangial plants
- a cross section or tissue squash of a blade shows:
  - a core (medulla) of **loosely packed** threads mostly running across the blade but **absence** of bright, amoeba-like (ganglionic) cells found in other *Halymenia* species
  - outer (cortex) layers of inner, larger cells becoming star-shaped and smaller, elongate cells facing outwards



Cross sections of *Halymenia kraftii* stained blue and viewed by interference microscopy to contrast cell details:

- a cross section showing the core (medulla, *med*) of threads, outer layers (cortex) of inner larger cells becoming star-shaped (inner cortex, *i.co*) and outer narrow cells facing outwards (outer cortex, *o.co*) (A61374 slide 12339)
- tissue squash looking down on a bottle-shaped pit of an early female reproductive stage (carpo-gonial branch ampulla, *c br amp*) (A41636 slide 11712)
- tissue squash looking down on a post-fertilisation stage with central mass of developing spores (carposporophyte, *carps*) and loose surrounding threads (ampullary involucre, *amp invol*) (A41636 slide 12865)

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

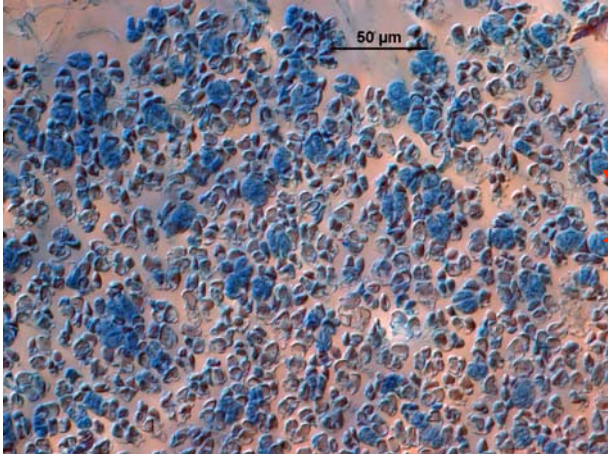
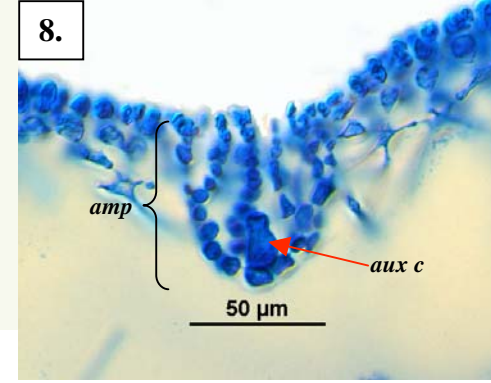
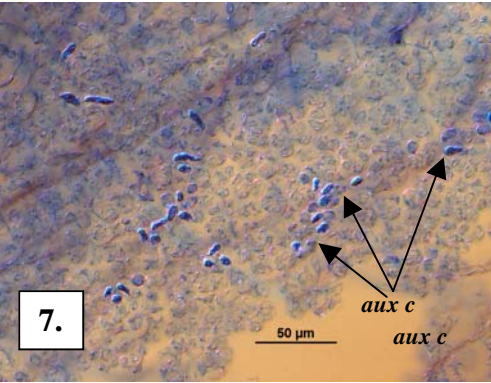
§name used by Edgar, G (2008) in Australian Marine Life (2<sup>nd</sup> ed.).

Prepared October 2009

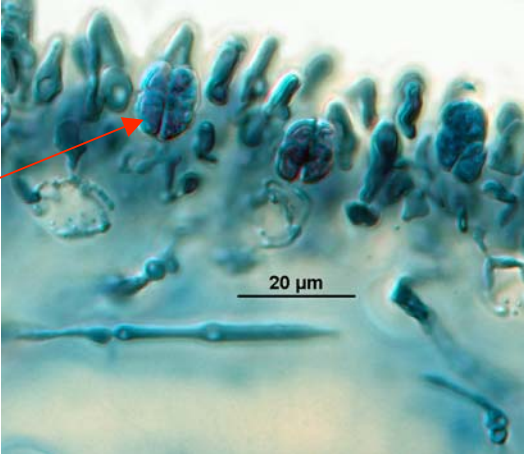
4.



- Halymenia kraftii*
4. a specimen (A68626) from 2-9m deep, Deceitful Cove near Georgetown, Tasmania
  - 5-8. specimens stained blue and viewed microscopically:
    5. a surface view of darkly stained tetrasporangia (*t sp*) amongst small cortical cells (A68713 slide 19300)
    6. a cross section of the cortex with cruciately divided tetrasporangia (A61374 slide 12341)
    7. surface view of darkly stained post-fertilisation auxiliary cells (*aux c*) (A41636 slide 11712)
    8. cross section through a bottle-shaped ampulla (*amp*) developing around the auxiliary cell (A61374 slide 12340)



5. 6.



Descriptive names are inventions to aid identification, and are not commonly used;  
 §name used by Edgar, G (2008) in Australian Marine Life (2<sup>nd</sup> ed.).  
 Prepared October 2009