

Techniques needed and shape



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Halymeniaceae
false kallymenia weed

*Descriptive name

Features



1. plants are **tough**, light red-brown 50-150mm tall, with a **thick basal stalk** producing 1-5 blades with **jagged edges** (probably seasonally) that are collected as drift specimens
2. blades are up to 260mm long, 300mm broad, branched and lobed, with **minute teeth** on the margins
3. **stalks** are up to 150mm tall, 10mm broad, flattened in upper parts mainly W Australian. One S Australian record at Cannan Reef, 22-30m deep stalks grow vertically or horizontally on reef undercuts, 6-30m deep detached blades might be mistaken for a *Kallymenia* species

Occurrences

Usual Habitat

Similar Species

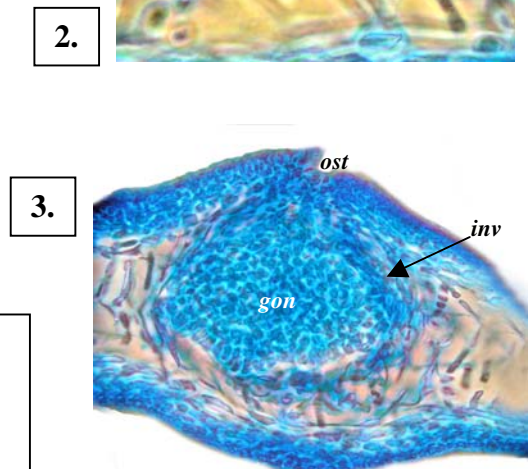
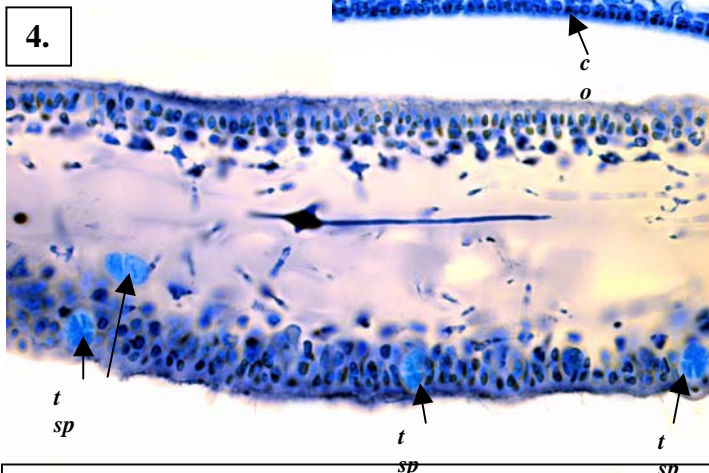
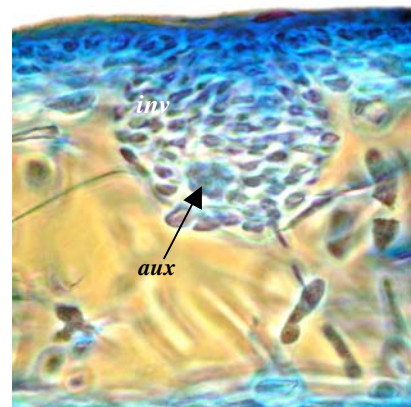
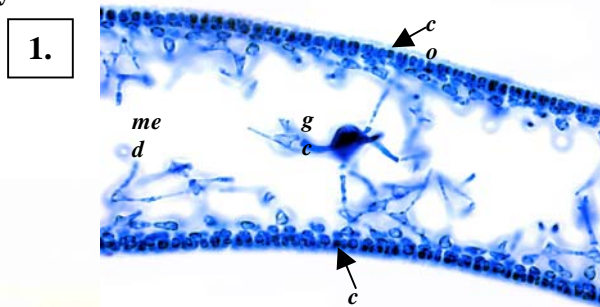
Description in the Benthic Flora Part IIIA, pages 183-185, 187

Special Requirements



1. focus microscopically on the surface and edge of a blade to see
 - conspicuous **mottling**
 - edges minutely **toothed**
 - bright (**refractive**) spidery (**ganglionic**) cells beneath clusters of tiny surface cells
2. if possible, cut cross sections of blades and view microscopically:-
 - a large, **loose core** (medulla) of thin, branched threads and **bright** ganglionic cells
 - thin outermost layers of outwardly facing, closely packed, **small cells**
 - inner layers (inner cortex) of **looser**, egg-shaped cells, becoming star-shaped
3. if possible find female plants, cut cross sections and view microscopically the flask-shaped structures (**ampullae**) protruding into the blade core from the cortex, in a **loose envelope** (involucre) of threads, with a **narrow** opening (ostiole) to the surface
4. if possible find spore plants, cut cross sections and view microscopically the **scattered** tetrasporangia in the outer layers, finally divided in a cross (**cruciate**) pattern

Details of Anatomy

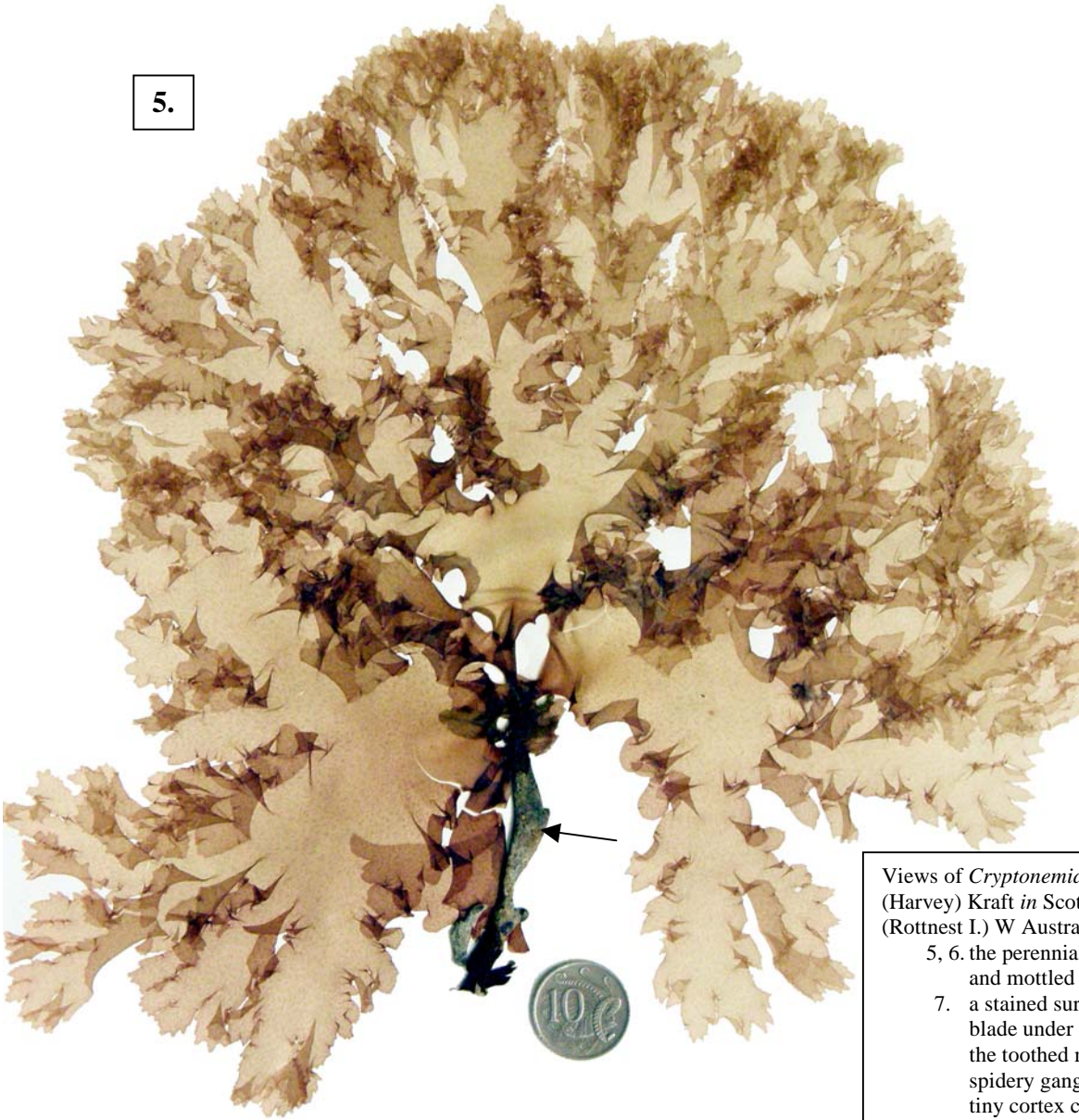


Cross sections of *Cryptonemia kallymenioides* stained blue and viewed microscopically showing:

1. the core of branched threads (medulla, *med*), a large, bright (ganglionic cell, *gc*) and thin outer layers (cortex, *co*) of small cells. (A18513 slide 11883)
2. a developing female structure (auxiliary cell ampulla, *amp*) with persistent auxiliary cell (*aux*) and enveloping threads (involucre, *inv*) (A18513 slide 11883)
3. a mature female structure using phase microscopy to better show the opening (ostiole, *ost*) envelope of threads (involucre, *inv*) and masses of spores (gonimolobes, *gon*) (A18513 slide 11883)
4. tetrasporangia (*t sp*; colour enhanced and one displaced to the medulla) in various stages of division in the outer layers (cortex) (A59774 slide 11800)

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Prepared July 2008

5.

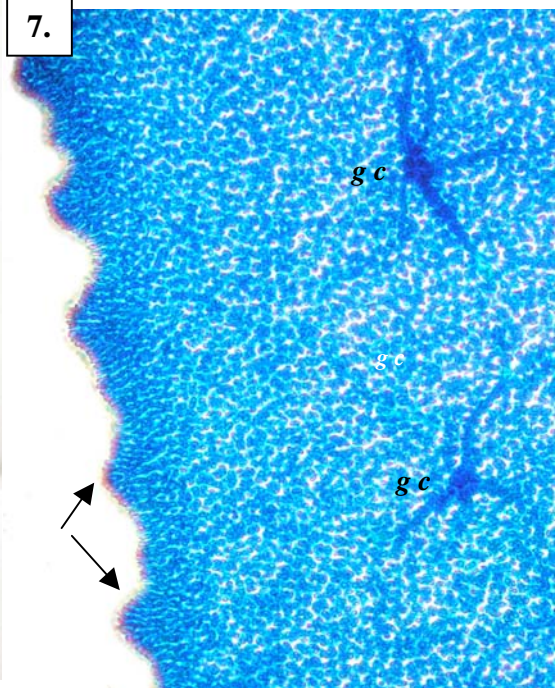


Views of *Cryptonemia kallymenioides* (Harvey) Kraft in Scott, A51043, Green I., (Rottnest I.) W Australia, 5m deep, showing
 5, 6, the perennial thick stalk (arrowed) and mottled blades with jagged edges
 7. a stained surface view (slide 11789) of a blade under the microscope showing the toothed margin (arrowed) and spidery ganglionic cells (*g c*) beneath tiny cortex cells

6.



7.



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