

Techniques needed and shape



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Halymeniaceae
mottled, many-lobed red blades

***Descriptive name**

Features

plants are red, 100-300mm tall, with slippery, **mottled**, puckered **lobed** blades arising from a small stalk (stipe)

Occurrences

Eucla, W Australia to Victoria and around Tasmania

Usual Habitat

from shallow to deep water on open coasts under shaded rock ledges

Similar Species

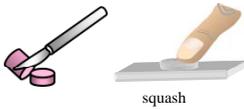
Halymenia muelleri but *H. plana* is more lobed and cells of the outer layer (cortex) are more compact

Description in the Benthic Flora Part IIIA, pages 194-196

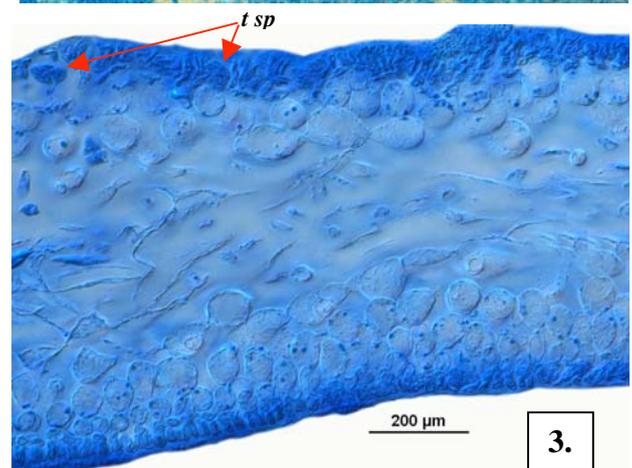
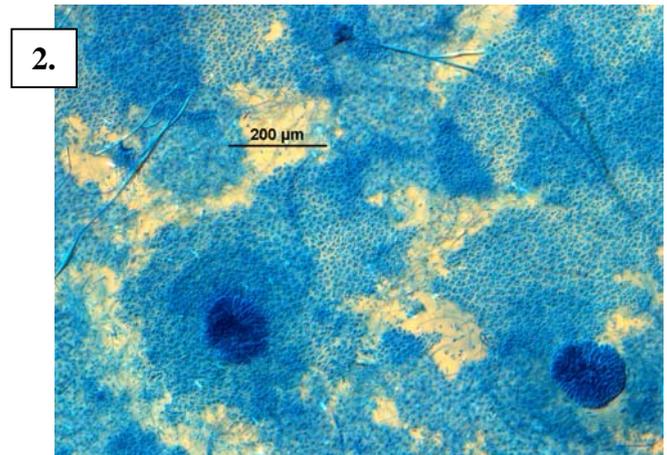
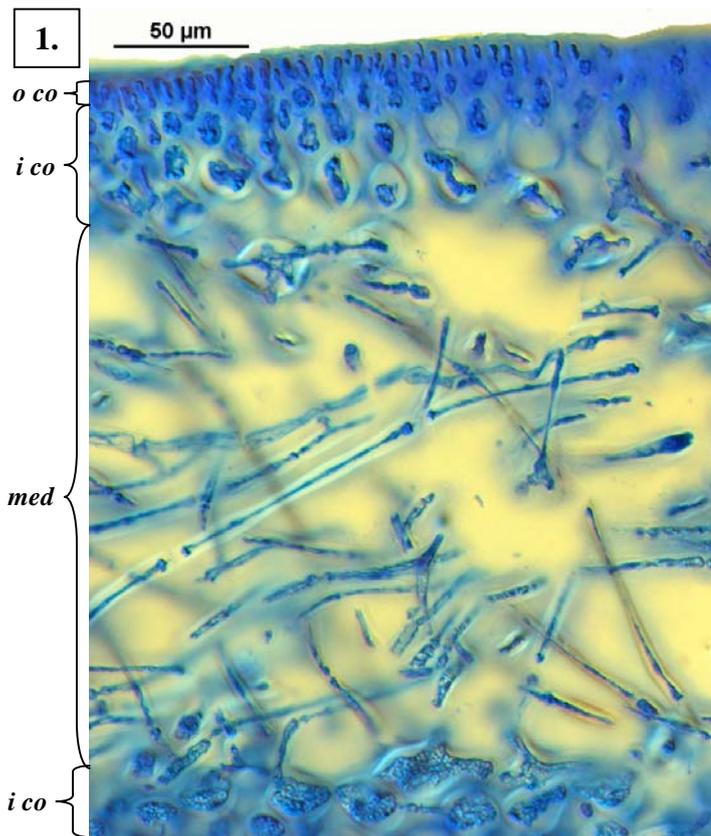
Special Requirements



- view the surface microscopically or make a tissue squash to find
 - prominent **mottling**, spidery, **bright** (refractive) ganglionic cells, **compact** surface (cortical) cells
 - 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 **irregularly** arranged threads mixed with bright, spidery (ganglionic) cells with very long arms
 - outer (cortex) layers of inner, **compact**, larger cells mainly equal-sided (**parenchymatous**) and **single** outer layer of small cells facing outwards



Details of Anatomy



Halymenia plana stained blue and viewed by interference microscopy to contrast cell details:

- cross section showing the core (medulla, *med*) of irregular threads and outer layer of inner, larger **parenchymatous** cells (inner cortex, *i co*) and **single row** of small cells on the surface (outer cortex, *o co*) (A21208 slide 11792)
- tissue squash, surface view, showing patches of tiny compact outer (cortical) cells, 2 spidery bright (refractive) ganglionic cells from the core (medulla) and 2 post-fertilisation structures (carposporophytes) with compact sporangia (A30585 slide 11793)
- cross section with tetrasporangia (*t sp*) in the cortex (A60757 slide 11959)

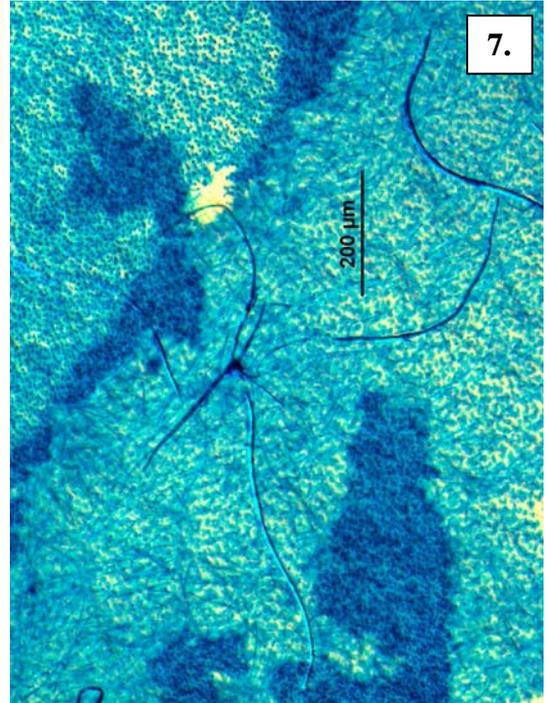
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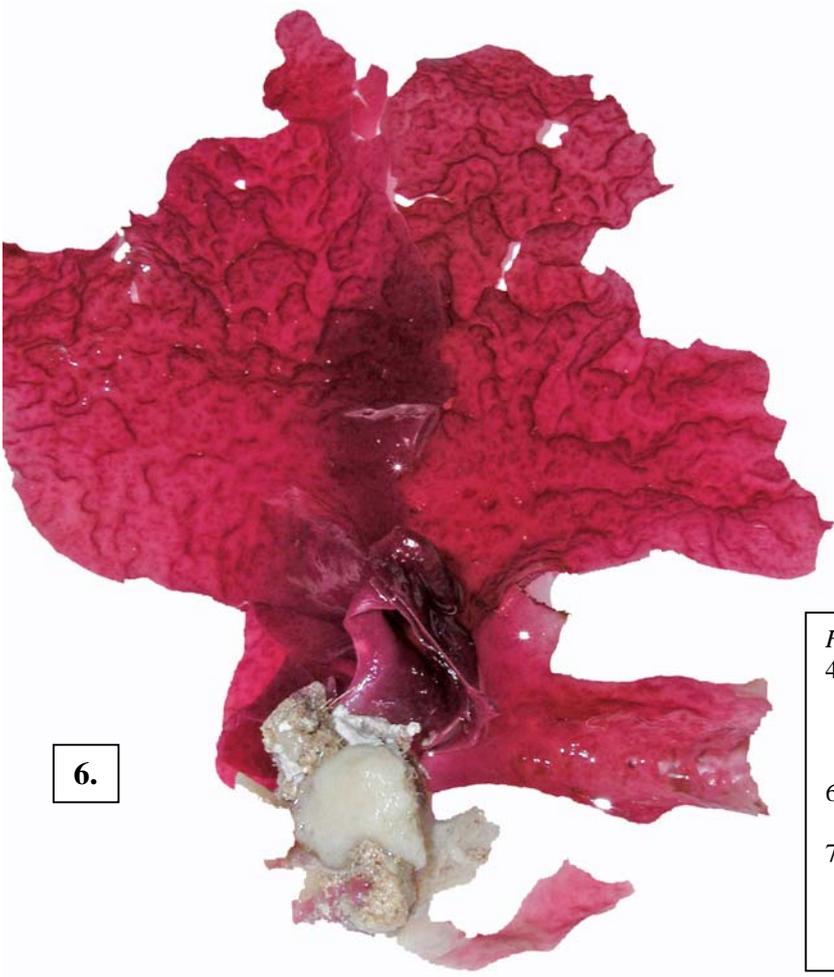
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7.



6.



Halymenia plana Zanardini
 4, 5. two magnifications of a specimen (A60759) 4-6m deep on rocky bottom, 1.5km S of Southend, S Australia showing the pronounced surface mottling from 2m deep inside a sea cave at Althorpe Islands S Australia (A70000)
 6.
 7. microscope surface view of a tissue squash stained blue showing compact cortex cells in upper left and a single a spidery ganglionic cell from the medulla