

**Techniques needed and shape**



**Classification**

Phylum: Rhodophyta; Order: Gigartinales; Family: Nemastomataceae  
leafy red weed

**\*Descriptive name**

**Features**



1. red, fading to yellow, 100-350mm tall, of slightly slippery single or several broad blades, expanding abruptly from a narrow stalk
2. surface faintly blotched or streaked

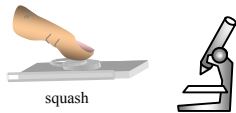
**Occurrences**

West Coast S Australia to Bass Strait and SE Tasmania

**Usual Habitat**

on hard rocks in deep water on rough coasts

**Special requirements**



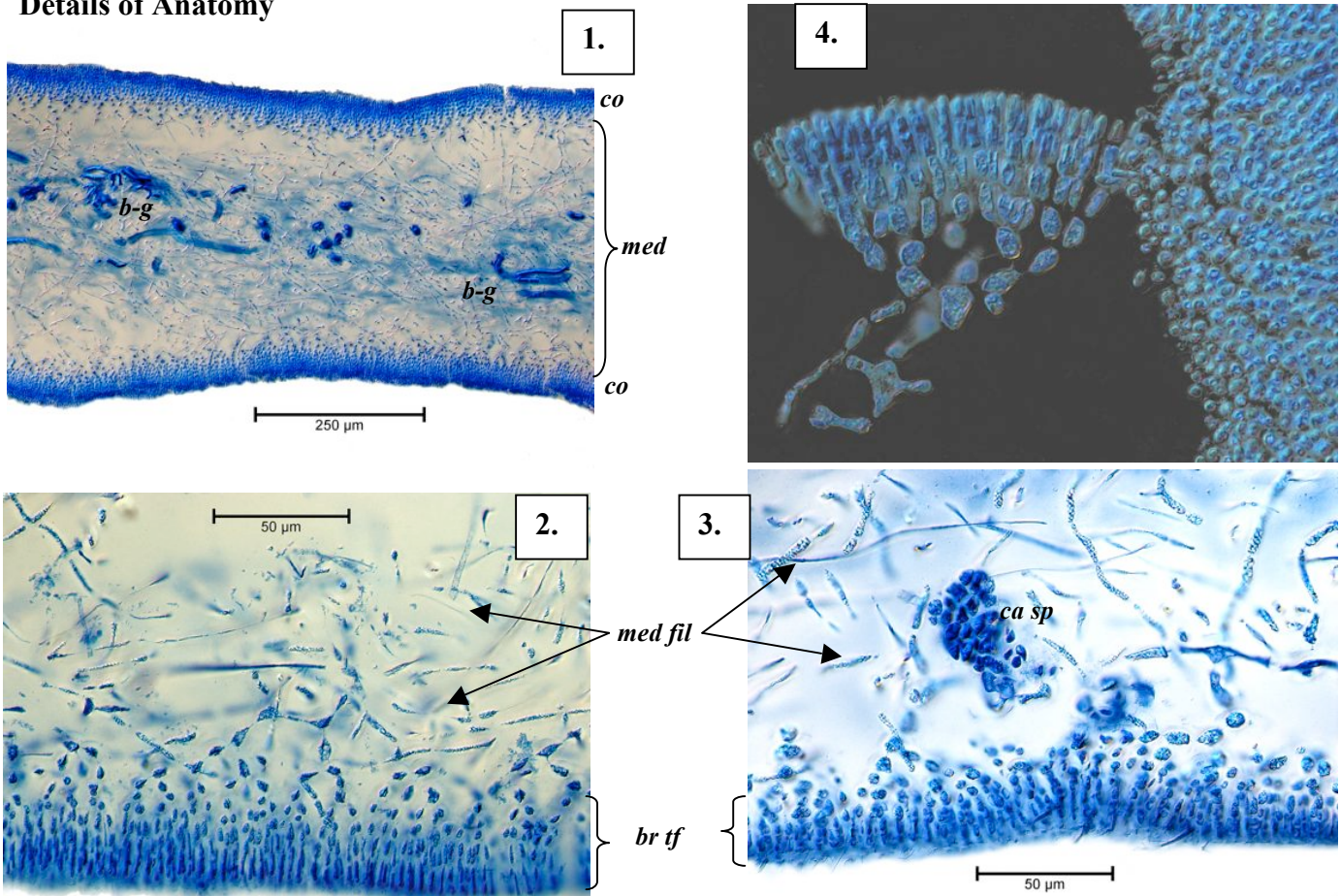
1. prepare a tissue squash under a coverslip and view microscopically to find
  - central mass (medulla) of intertwined threads
  - **narrow** outer layers (cortex) of branched tufts facing outwards, inner cells slightly larger grading to small, elongate outermost cells in **straight** chains of about **7 cells**
  - patches each containing few **angular** carposporangia, lying beneath breaks in the outer layers or **slight** depressions in the blade surface (minute male spermatangia on outermost cells also possibly present on the same plant (monoecious condition))
2. sporangial plants (encrusting rocks) unknown in Australia

**Similar Species**

*Platoma foliosa* but that has marginal lobes and a narrower cortex; *Schizymenia dubyi* but outer branch tufts are more compact, resisting separation when squashed, and patches of carposporangia lie beneath definite openings and depressions in the cortex

**Description in the Benthic Flora** Part IIIA, pages 282, 284,285

**Details of Anatomy**



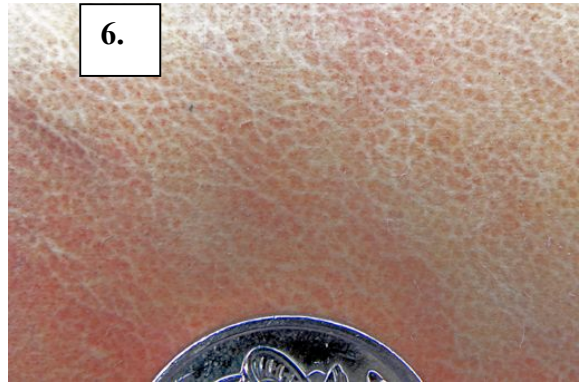
1-3. Cross sections of *Platoma australicum* stained blue and viewed microscopically

1. blade showing narrow outer layer (cortex, *co*), core (medulla, *med*) of intertwined threads and anomalous, deeply staining threads of a blue-green bacterium (*b-g*) infesting the medulla (A47226 slide 12278)
2. blade edge with cell detail: medulla threads, (*med fil*), cortical branch tufts, (*br tf*) (A47226 slide 12278)
3. blade edge with carposporangial patch (*ca sp*) lying beneath a slight depression in the cortex (A46962 slide 12277)
4. Single cortical branch tuft and piece of cortex in surface view (A45120 slide 12281)

\* Descriptive names are inventions to aid identification, and are not commonly used  
"Algae Revealed", R N Baldock, S Australian State Herbarium, December 2011



5.



6.



8.

7.



Drift plants and surface features at different magnifications of *Platoma australicum* Womersley & Kraft from S Australia showing blotchy surface patterns

5, 6.. from Encounter Bay (A46962)

7, 8. from Elliston, West Coast (A47863)

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