

Techniques needed and shape



**MACRO  
PLANT**



Classification

\*Descriptive name

Features

Occurrences

Usual Habitat

Similar Species

Phylum: Rhodophyta; Order: Gigartinales; Family: Halymeniaceae  
Z-weed (from a whim of the authors for a genus last in the alphabet!)

1. plants are soft, red to light red-brown with several cylindrical main branches (axes) about 3mm wide
2. shorter side branches *tapering at* both ends, arise *radially* from the axes
3. final branches about 1mm wide are *numerous* short and *spine-like* or elongate and curved upwards

Kangaroo I., S Australia to Victoria and SE Tasmania

in shallow pools on rough coasts, but common only in restricted localities

possibly *Lomentaria australis* **because** of the pinching at the base of branches, but that species is slippery and small surface cells are arranged in rings (rosettes) about larger ones

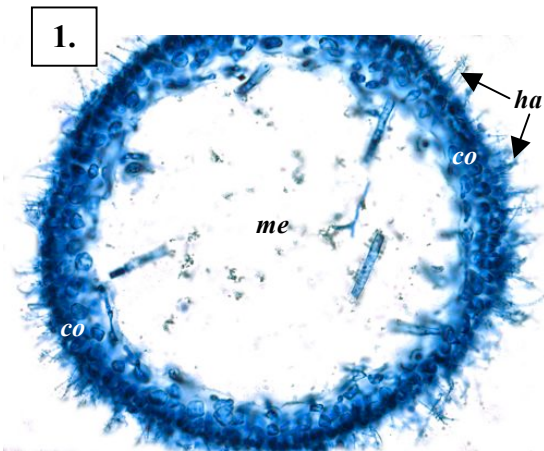
Description in the Benthic Flora Part IIIA, pages 183, 186-188

Special Requirements



1. focus microscopically through the branch tips to see the *several* apical cell producing:
  - 6-10 *rows* of small surface (cortex) cells often with very fine protruding hairs
  - *sparse* chains of thread-like cells lying in a *large space* in the central core (medulla)
2. focus microscopically through the side branches of female plants to find:
  - numerous *surface* openings (ostioles) with a definite *cell ring*
  - *clear* balls (auxiliary cell ampullae) beneath the rings, with a *few* spidery threads
  - mature products of fertilisation – cystocarps – with several compact masses of sporangia attached to *prominent* (auxiliary) cell
3. find sporangial plants with scattered tetrasporangia visible in surface view. These sporangia are divided in a cross (cruciate) pattern

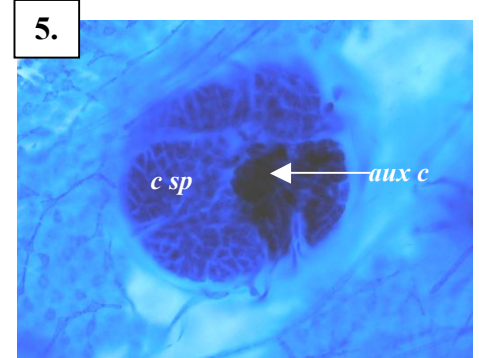
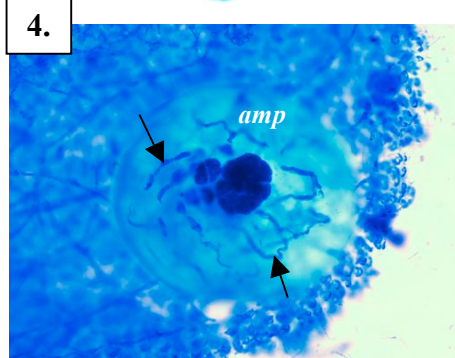
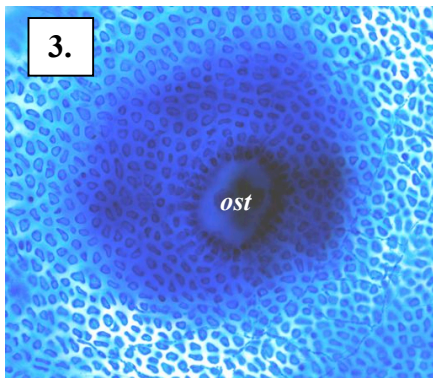
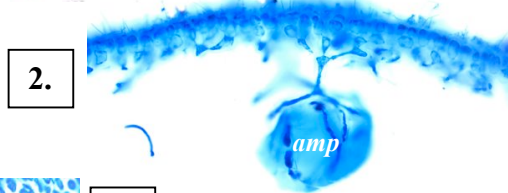
Details of Anatomy



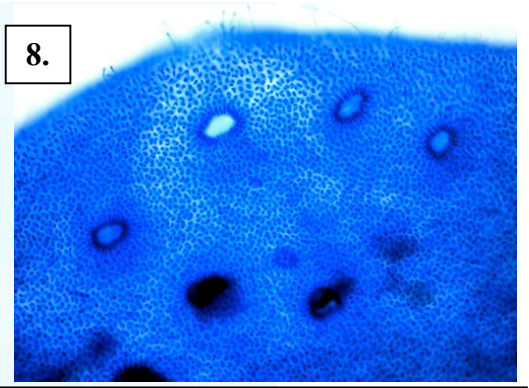
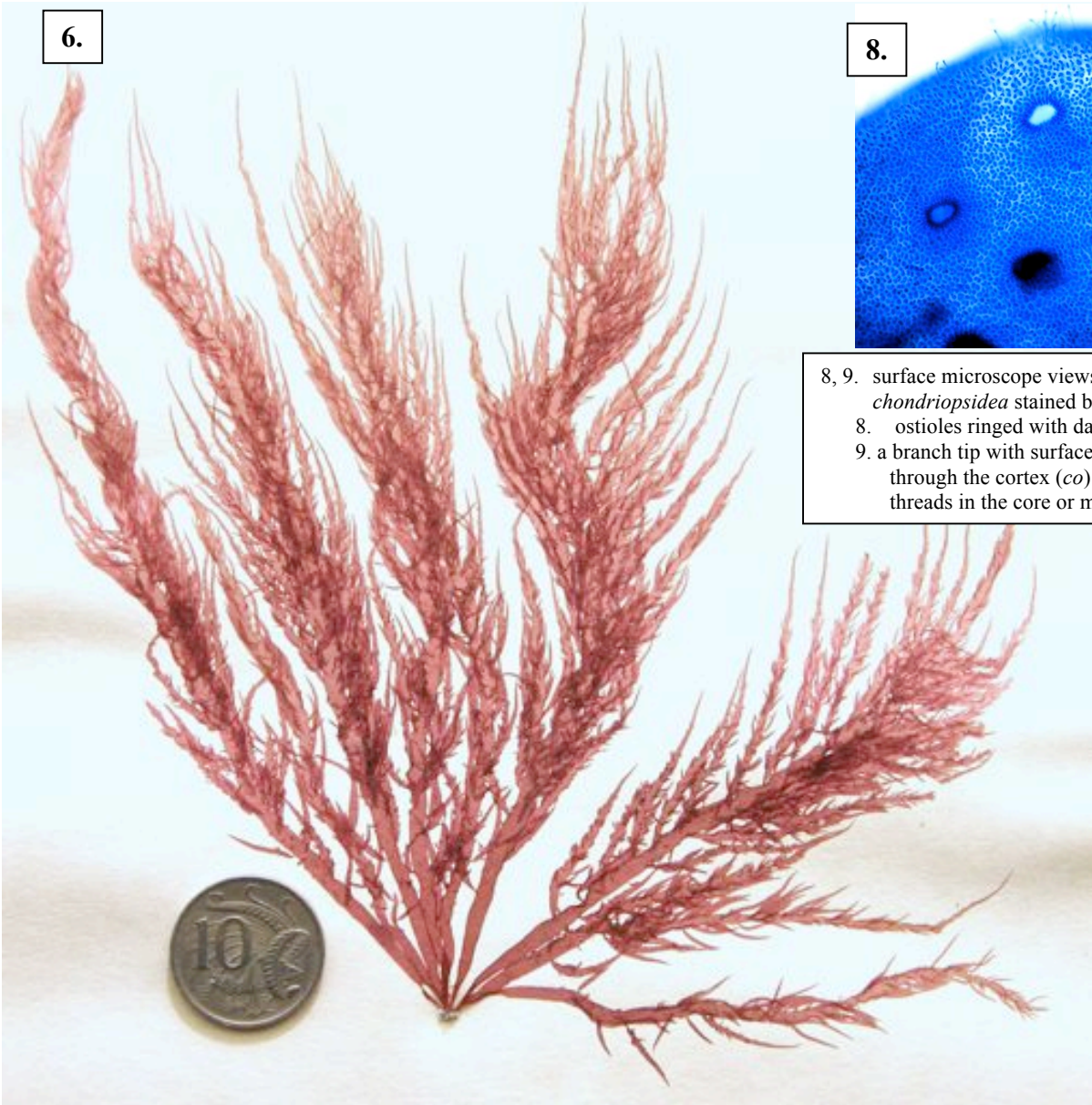
- 1-2. Cross sections of *Zymurgia chondriopsidea* stained blue and viewed microscopically:
1. showing the compact surface cells (cortex, *co*) with protruding hairs (*ha*) and large central space (medulla, *med*) with sparse, scattered threads (A28525 slide 11840)
  2. part of the cortex with a gelatinous ball (ampulla, *amp*) hanging into the medulla (A42761 slide 11846)

3-5. surface microscopic views of female structures

3. an ostiole (*ost*) with prominent ring of cells (A42761 slide 11845)
4. focussing into the medulla, a clear ball shape (ampulla, *amp*) with developing sporangia and sparse threads (arrowed) (A42761 slide 11845)
5. a maturing cystocarp with masses of carposporangia (*c sp*) and prominent auxiliary cell (*aux c*)

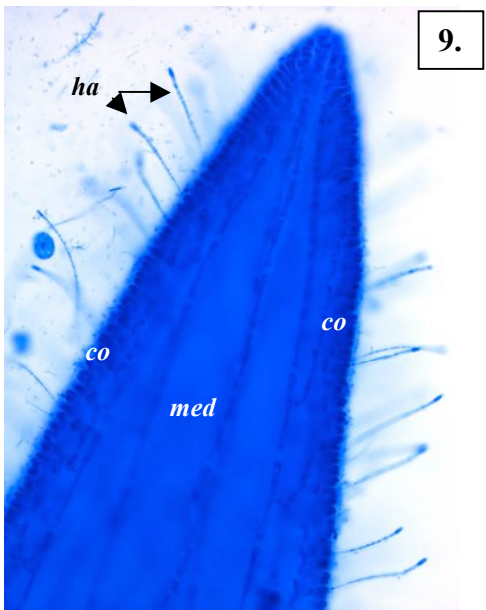


\* Descriptive names are inventions to aid identification, and are not commonly used.  
"Algae revealed", R N Baldock, State Herbarium, S Australia, June 2008



8, 9. surface microscope views of *Zymurgia chondriopsidea* stained blue (A28529 slide 11839)  
 8. ostioles ringed with darkly staining cells  
 9. a branch tip with surface hairs (*ha*), focussed through the cortex (*co*) to show the several threads in the core or medulla (*med*)

6, 7. Two magnifications of *Zymurgia chondriopsidea* (J Agardh) Lewis & Kraft, A19049, from shallow water at Robe, S Australia, showing curving side branches pinched off at the base (arrowed)



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