

**Techniques needed and plant shape**



MACRO  
PLANT

**Classification**

Phylum: Rhodophyta; Order: Ceramiales; Family: Rhodomelaceae  
Tribe: Chondrieae

**\*Descriptive name**

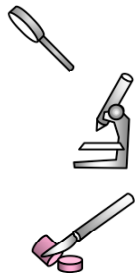
lance-tip Chondria

**Features**

plants small, red-brown, **densely** branched, **upper** branches **cylindrical** or tubular, **pointed** at tips, **lower** branches flattened (**compressed**)

**Special requirements**

view plants microscopically to find:



- a **thread** of 8-10 cells with a **dome-shaped** apical cell extending **beyond** pointed tips, and **lens- or ring-shaped** cell thickenings of flanking (pericentral) cells, just visible through the surface (cortex) cells
- cut a cross section of a main branch to view microscopically the central filament, surrounded by 5 flanking (pericentral) cells, **merging** into outer (cortical) layers of 2-3 cells dorsally and ventrally, and 10-15 cells laterally
- swollen tetrasporangial branches (“stichidia”), narrow at their bases, ending in a tuft of branched threads (trichoblasts)
- egg-shaped cystocarps the results of fertilisation, with a short stalk, the branch often **extending** for a short distance past it, open at the tips and producing club-shaped carposporangia within

**Occurrences**

Houtman Abroholos to Point Peron W. Australia. In S. A. only at Scott Bay on seagrass (*Posidonia*), or in shallow pools at the reef edge

**Usual Habitat**

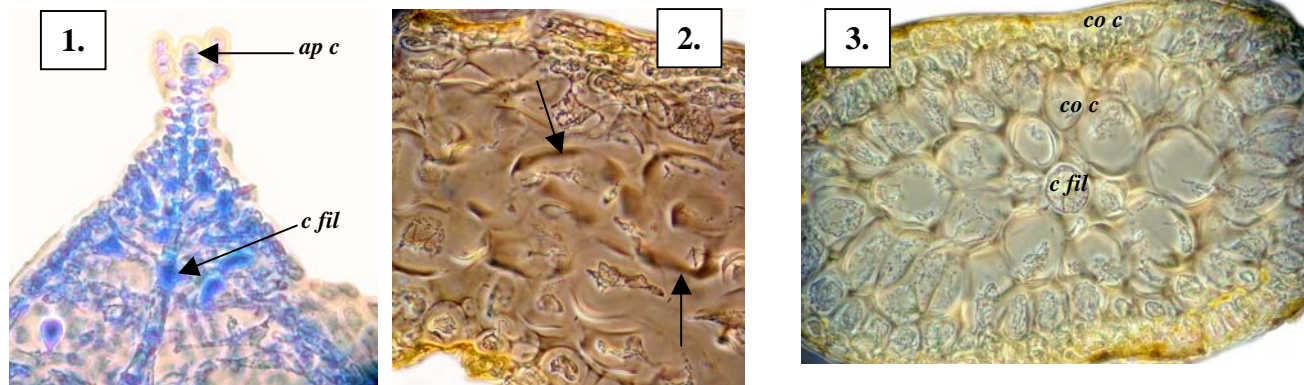
**Similar Species**

*Chondria foliifera* also with pointed branch endings, but branches are wider and well-compressed throughout

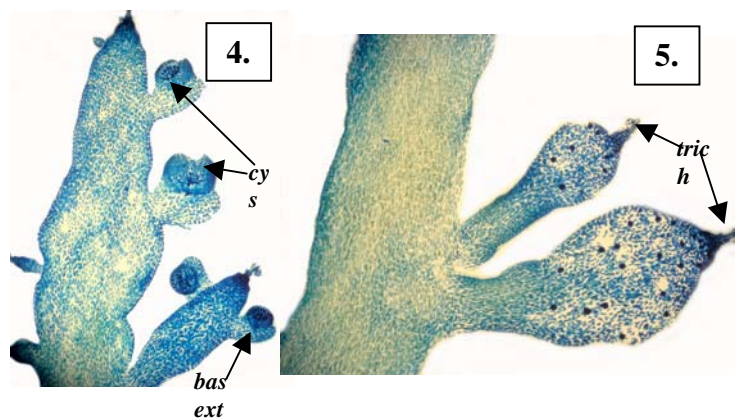
**Description in the Benthic Flora**

Part IIID, pages 446-448

**Details of Anatomy**



- Chondria lanceolata* A51015 stained blue and viewed microscopically
1. dome-shaped apical cell (*ap c*) and prominent central thread (central filament, *c fil*) extending beyond the tip of a branch (slide 7071)
  2. lengthwise section showing semicircular thickenings in flanking (pericentral) cells (some arrowed) (slide 7074)
  3. cross section of a lower, flattened (compressed) branch showing the central filament (*c fil*), flanking pericentral cells obscured by intermingling inner cortical cells, and outer cortical cells (*co c*) (slide 7074)
  4. lengthwise view showing cystocarps (*cys*) with basal extension of the branch (*bas ext*) (slide 7078)
  5. lengthwise slice through tetrasporangial branches (stichidia) with apical tuft of trichoblasts (*trich*) (slide 7075)

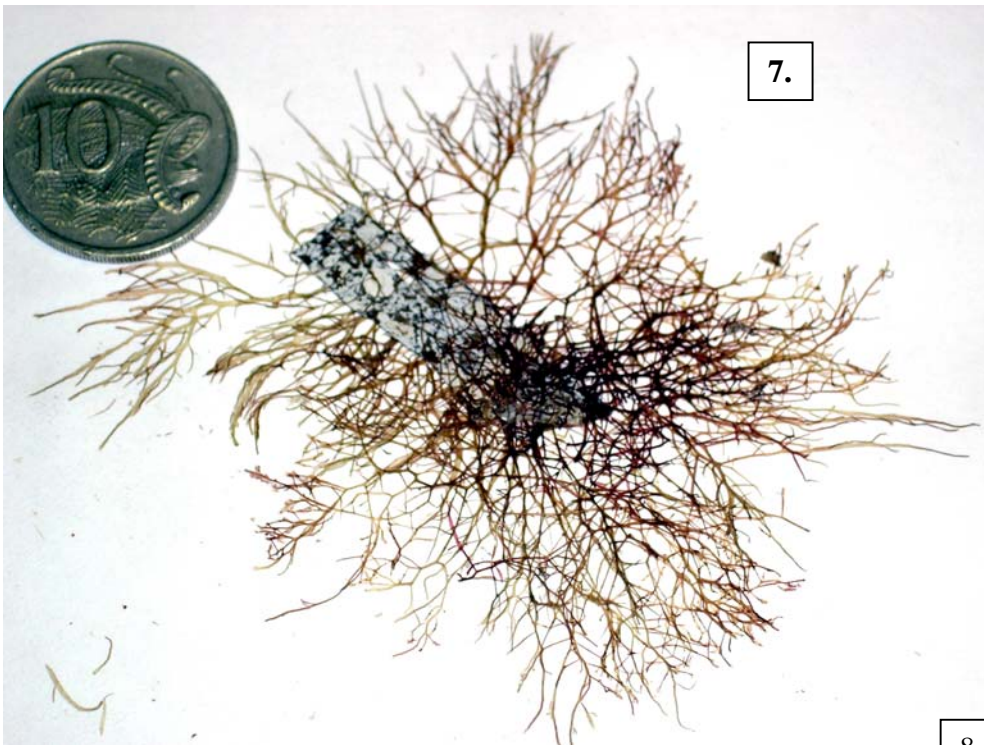


\* Descriptive names are inventions to aid identification, and are not commonly used  
“Algae Revealed” R N Baldock, S Australian State Herbarium, April 2007

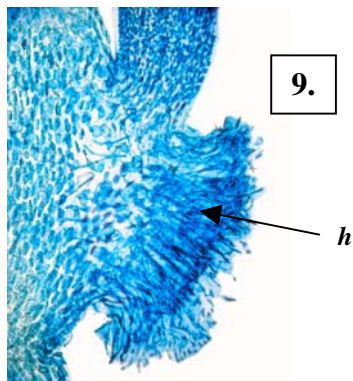
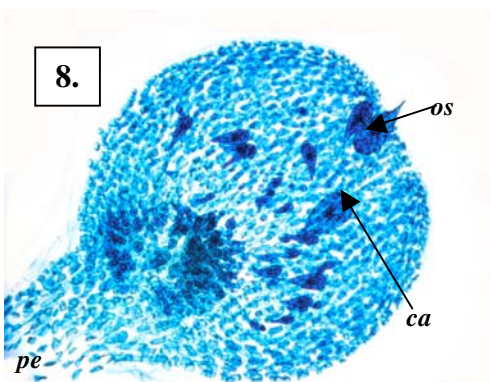


6.

- 6, 7. Specimens of *Chondria lanceolata* Harvey  
 6. from Scott Bay, S. Australia A51022b (6.5km W of Fowlers Bay, Eyre Peninsula), in shallow pools  
 7. from Point Peron, W Australia A51015, on *Posidonia*



7.



- 8, 9. *Chondria lanceolata*, A51015 stained blue and viewed microscopically:  
 8. lengthwise slice through a cystocarp showing the short stalk (pedicel, *ped*), opening (ostiole, *ost*) and club-shaped carposporangia (*ca sp*) (slide 7078)  
 9. cross section through a disc-shaped attachment pad (hapterum, *ha*) (slide 7711)