

Techniques needed and shape



MACRO  
PLANT



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Acrotylaceae

\*Descriptive name

crisp weed

Features



1. plants **red-brown**, 50-200mm tall, with a thick, **stocky base**,
2. branching **gristly**, forked and **flat-bladed**, partly obscured in fresh material because blades are **crinkled** with crisped edges
3. tiny **notches** occur in tips of blades

Occurrences

W Australia to Pearson I. (West coast), S Australia

Usual Habitat

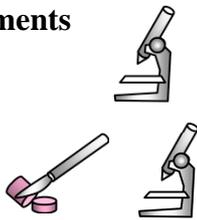
a deep water species (7-24m) of western distribution

Similar Species

upper parts may resemble *Cryptonemia undulata* or *Carpopeltis phyllophora* but the woody stalk, notched blades and large cells of the cortex layer are unique to *Hennedya*

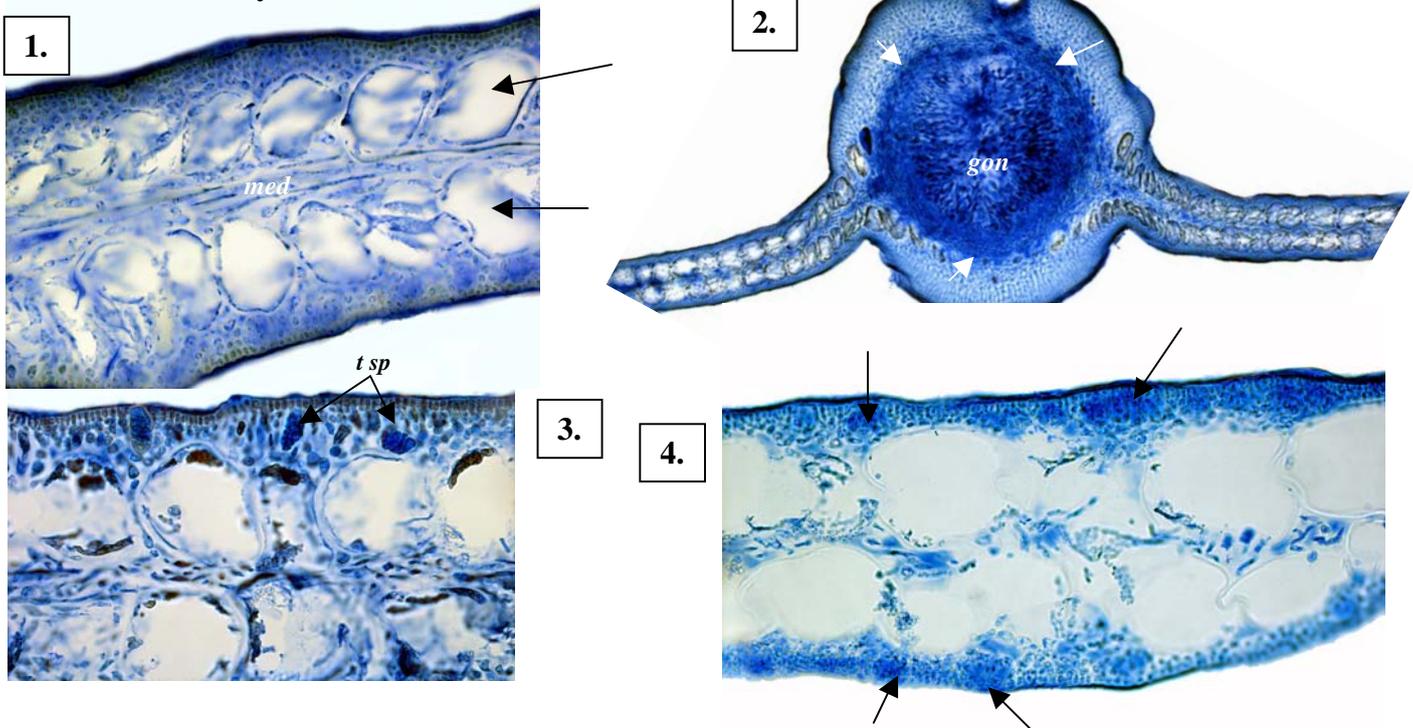
Description in the Benthic Flora Part IIIA, pages 365, 366-369

Special Requirements



1. view the blades microscopically to find the tiny **notched** tips and **large cells** just visible beneath the very small surface cells
2. slice a cross section of a blade and view microscopically to find a **narrow** core of **threads**; **wide** outer (cortex) layers consisting of single inner rows of **very large cells** and many outer, **very small** cells
3. if possible, slice a cross section of a sexual plant through swollen female cystocarps near the edge of a blades and view microscopically to find
  - a central cavity **lined by threads** with central, **radiating threads** producing carposporangia at the tips and an outlet (ostiole) formed by **breakdown** of the surface cells
  - obscure tiny **sunken** packets of male spermatangia in the cortex **of the same plants**
4. if possible, find a sporangial plant to find scattered tetrasporangia, and cut a cross section to view small cigar-shaped tetrasporangia divided across (zonately)

Details of Anatomy



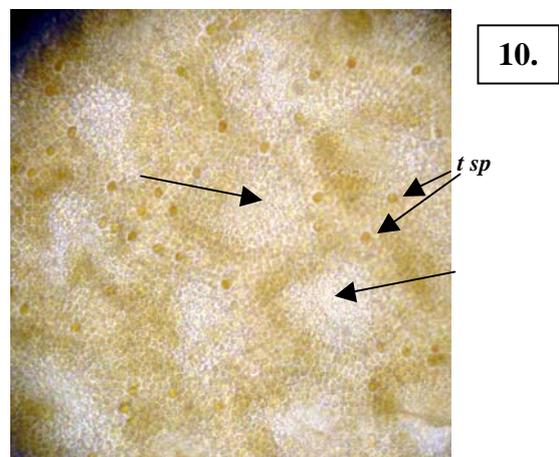
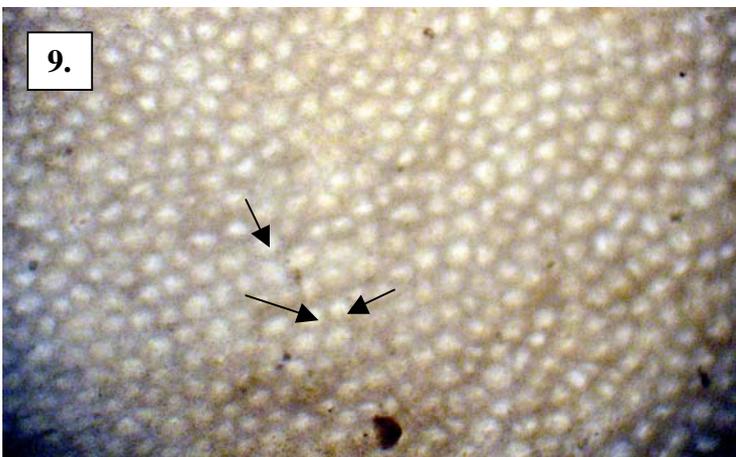
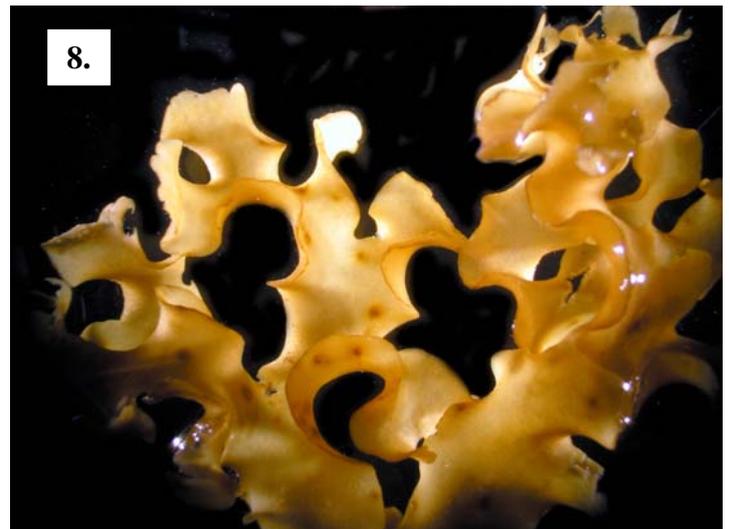
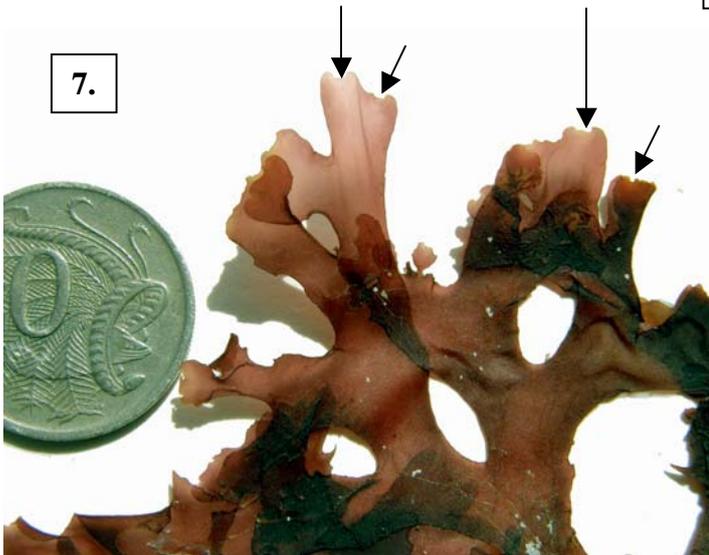
Cross sections of *Hennedya crispa* stained blue and viewed microscopically

1. a blade showing the narrow core (medulla, *med*) of several threads and wick-like and very small outer layers (A44748 slide 3788)
2. a cystocarp, with cavity lined by threads (arrowed), radiating fertile threads (gonimoblast, *gon*) and opening (ostiole, *ost*) (A44749 slide 12680)
3. scattered cigar-shaped tetrasporangia (*t sp*) divided across (zonately) and sunken in the outermost layers of a part of a blade (A44749 slide 12680)
4. sunken packets (arrowed, obscure) of spermatangia in the blade adjacent to a cystocarp (A44749 slide 12680)

\* Descriptive names are inventions to aid identification, and are not commonly used  
"Algae Revealed" R N Baldock, S Australian State Herbarium, October 2008



5, 6. two views of *Hennedya crista* Harvey, A51579, from Pt Moore, Geraldton, W Australia, with the characteristic dark brown colour and thick, stocky base, denuded of blades.  
 7. detail of the tips of a specimen (A61086) from Cannan Reef, Isles of St Francis, S Australia showing the loss of crisping on pressing, and the tiny apical notches (arrowed)



8-10. preserved (bleached) specimens of *Hennedya crista*, A44749  
 8. the crisped nature of the blades when un-pressed, with dark cystocarps showing near the blade edges  
 9, 10. low and higher magnifications of blade surfaces with inner, large cortex cells (arrowed) vaguely showing under the very small surface cells, and scattered tetrasporangia (*t sp*)

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