**Techniques needed and plant shape**

**Classification**

Phylum: Rhodophyta; Order: Ceramiales; Family: Rhodomelaceae

*Descriptive name*

Tribe: Chondrieae

Features

plants are light red, side branches arising on the inner (adaxial) sides of main branches

Special requirements

view plants microscopically to find

- **rounded** tips, and growing points in a **pit**
- in a cross section a central filament, obscured by rhizoids in old branches, **5** flanking (pericentral) cells with **thick** bands on walls and outer (cortical) layers (in 2 zones in old branches)
- tetrasporangial branches ("stichidia"), narrow at their bases, **blunt** often with a **pit** at the tip
- egg-shaped cystocarps the results of fertilisation, with **swollen** bases, practically stalkless, **wide** opening (ostiole) at the tip, producing club-shaped carposporangia internally
- **disc-shaped** male organs on short, narrow **stalks**, with a **sterile ring**, 1 (-2) cells thick

**Occurrences**

only from Warrnambool, Victoria and Port MacDonnell, S. Australia

**Usual Habitat**

on a drift specimen of the brown alga, *Acrocarpia*

**Similar Species**

unique because of its one-sided (secund) branching pattern

**Description in the Benthic Flora**

Part IIID, pages 435

**Details of Anatomy**

* Chondria subsecunda A56591 stained blue and viewed microscopically
  1. cross section with central filament (c fil) mixed with rhizoids, **5** flanking (pericentral) cells (1-5) and outer (cortical) cells (co c) (slide 9447)
  2. cystocarp with wide opening (ostiole, ost), very short stalk with a basal swelling (ped) and club-shaped spores (carposporangia, ca sp) (slide 9449)
  3. tetrasporangial branchlets (stichidia, stich) with tetrasporangia (t sp) (slide 9450)
  4. male disc (slightly detached) with a sterile margin 1 (-2) cells wide (arrowed) (slide 9772)

* Descriptive names are inventions to aid identification, and are not commonly used

"Algae Revealed" R N Baldock, S Australian State Herbarium, April 2007
5. Two views of specimens of *Chondria subsecunda* Gordon-Mills & Womersley, A56591 from Warrnambool, Victoria, showing the one-sided branching pattern (arrowed).

6. Specimens stained blue and viewed microscopically:

   6. tetrasporangial branch (stichidium) showing tetrasporangia (*t sp*) and the growing point in a depression (arrowed) (A56591, slide 9450)

7. Male disc (arrowed) on a side branch (A56844 slide 9772)

* Descriptive names are inventions to aid identification, and are not commonly used.

“Algae Revealed” R N Baldock, S Australian State Herbarium, April 2007