

Techniques needed and plant shape



Classification

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

***Descriptive name**

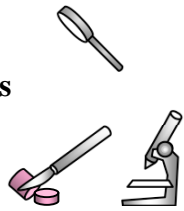
one-sided Chondrieae

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*

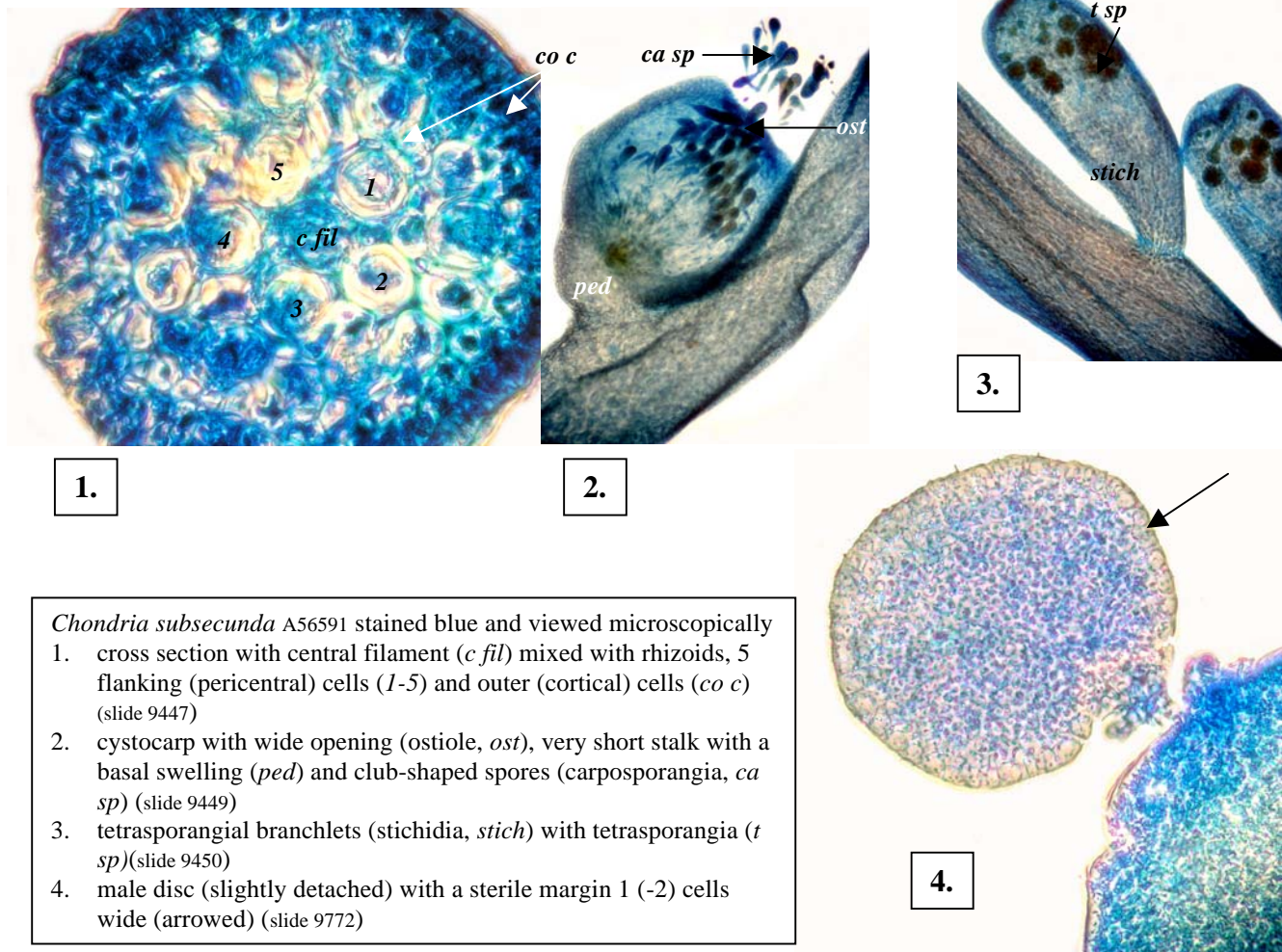
Similar Species

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

Description in the Benthic Flora

Part IIID, pages 435

Details of Anatomy



1.

2.

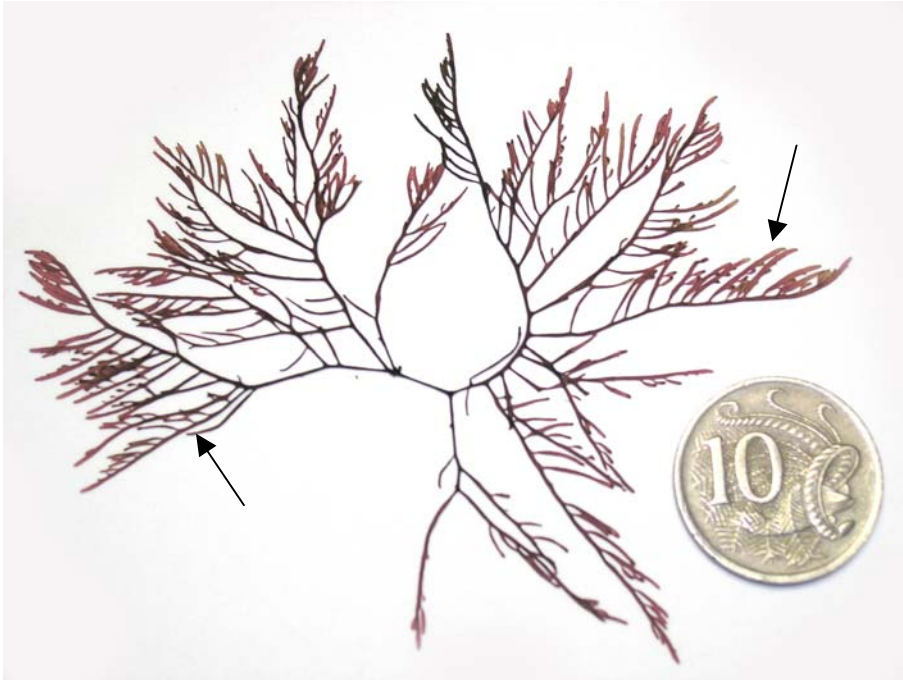
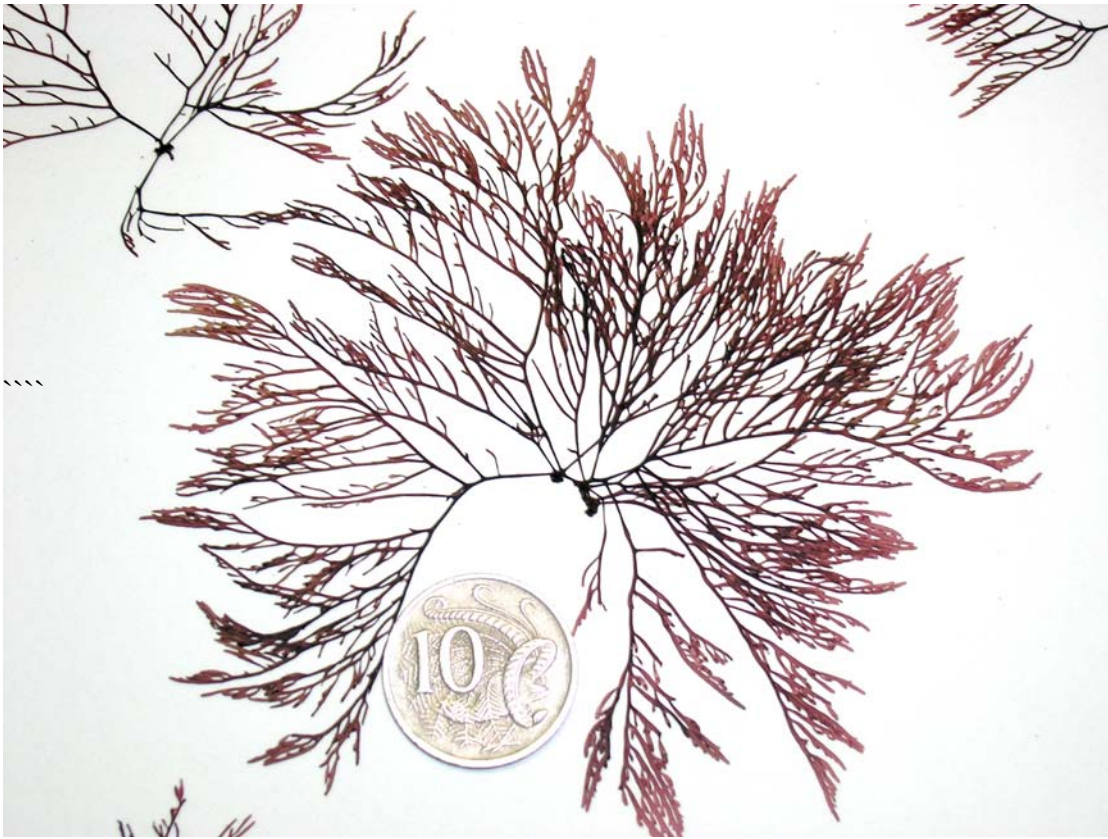
3.

4.

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, 7. 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)

