

Techniques needed and shape



**MACRO
PLANT**



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Kallymeniaceae

*Descriptive name

wide prong-tips

Features

1. plants are pink, 100-300mm tall and flat-branched
2. branches are flat, **10-20mm** wide, forked or irregularly branched, narrower at the base and towards the tips
3. mature female structures (cystocarps) form **scattered**, protruding swellings SE of S Australia to Victoria and E Tasmania from shallow to moderately deep water

Occurrences

Usual Habitat

Special requirements

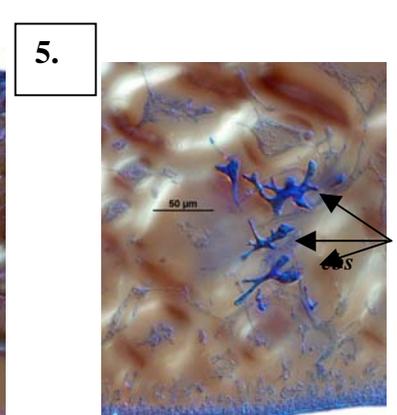
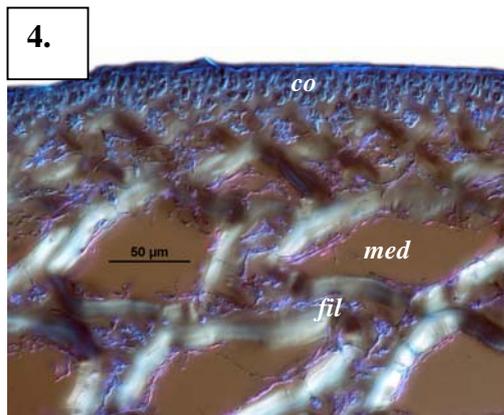
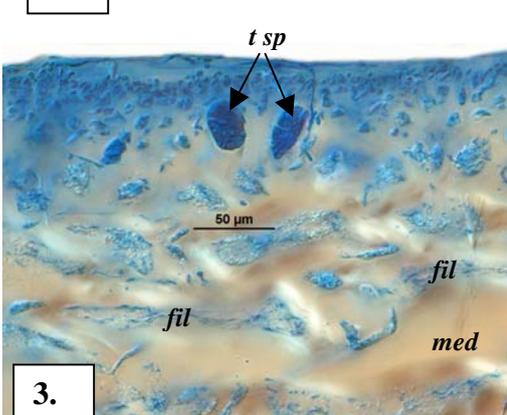
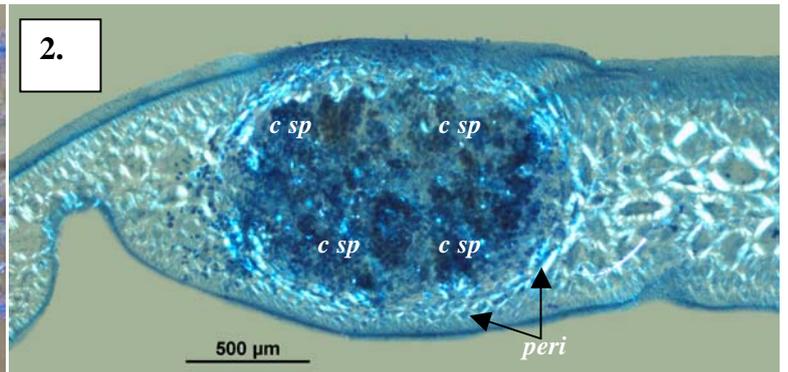
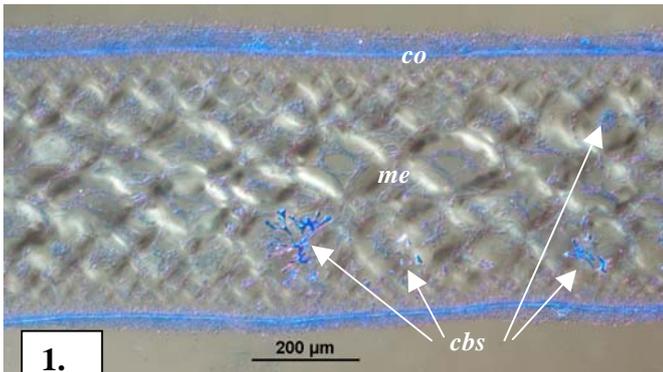


1. cut a slice across a branch and view under the microscope to find the **wide** core (medulla) of **large compact cells** with **few** delicate threads running around their margins, and a narrow outer-most (cortex) layer of **very small**, egg-shaped cells facing outwards
 3. find tiny, ball-shaped mature female structures (cystocarps) **scattered** through most branches. Cut a cross section to see a several masses of carposporangia mixed with a few threads, cellular wall (**pericarp**) with an opening (**ostiole**) (an very early stage will show an **amoeba-like** group of cells with dense contents)
 4. view the surface of sporangial plants under the microscope to see **scattered** tetrasporangia divided in a cross (cruciate) pattern
- Austrophyllis alcornis* but that has thinner branches and cystocarps are more confined to end branches

Similar Species

Description in the Benthic Flora Part IIIA, pages 251-253

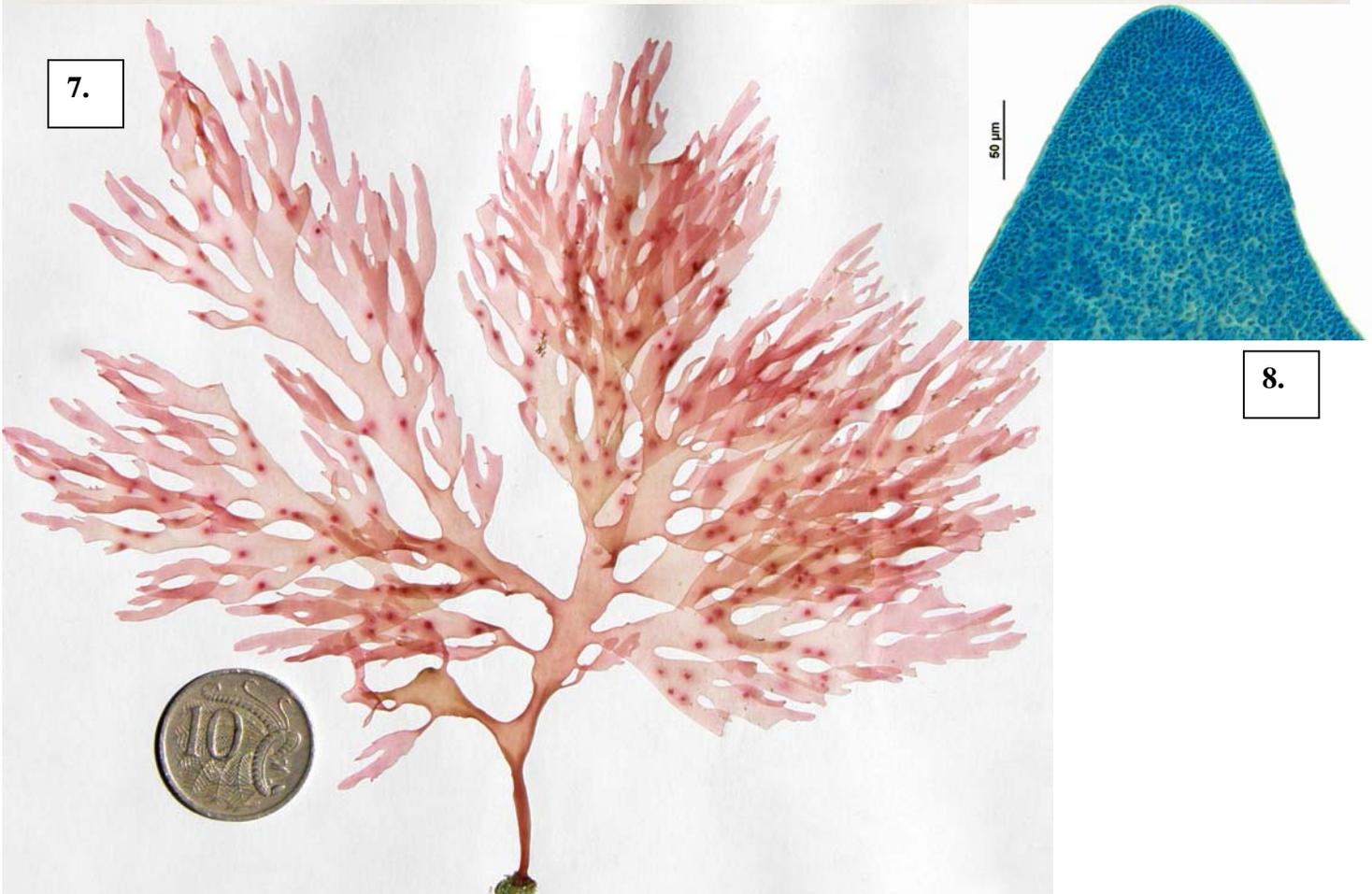
Details of Anatomy



Sections of *Austrophyllis harveyana* stained blue and viewed microscopically showing:

1. a large core (medulla, *med*) cells decreasing in size to the outer layers (cortex, *co*) of very small cells, and several deeply staining amoeba-like cell groups (carposporangial branch systems, *cbs*) in outer part of the core (A45024 slide 5029)
2. a mature female structure (cystocarp) with cellular wall (pericarp, *peri*) and groups of carposporangia (*c sp*) (A45024 slide 5029)
3. part of a frond with tetrasporangia (*t sp*) in the cortex, egg-shaped medulla cells (*med*) with thin threads (filaments, *fil*) lying between (A36080 slide 3393).
4. half of a blade (A55139 slide 12615)
5. detail of early female structures (*cbs*) (A45024 slide 5029)

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



- 6, 7. Specimens of *Austrophyllis harveyana* (J Agardh) Womersley & Norris at different magnifications
 6. 3-5m deep from Lady Bay, Southport, Tasmania (A56524)
 7. a drift plant from Ocean Beach, Goolwa (A20509) showing scattered cystocarps over most of the branches
 8. tip of a specimen stained blue, with surface cells viewed microscopically (A56524 slide 11589)

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 Prepared March 2009