

Techniques needed and shape



MACRO PLANT



Classification

Phylum: Rhodophyta; Family: Gigartinaceae

gristly finger-tips

*Descriptive name

Features



plants 50-150mm tall, red-brown, gristly when dry, *flat-branched*, upright, main branches *compressed*, irregularly alternately branched, ending in flat, hand-like tips with *finger like* stumps 1-2mm wide. Mature female structures (cystocarps) appear as round swellings near the tips



Unusual cystocarp features indicate this species may not truly belong in the Gigartinaceae.

Occurrences and Usual Habitat

most records are old (initially in 1898): Port MacDonnell and Port Elliott S. Australia, Port Phillip Heads, Victoria and Tasmania, all from drift material

Similar Species

fresh specimens of *Polycoelia laciniata*, but that species although firm is not gristly in texture, adheres to paper when dry, and has large thick-walled cells in the medulla.

Description in the Benthic Flora

Part IIIA, pages 309, 312-313

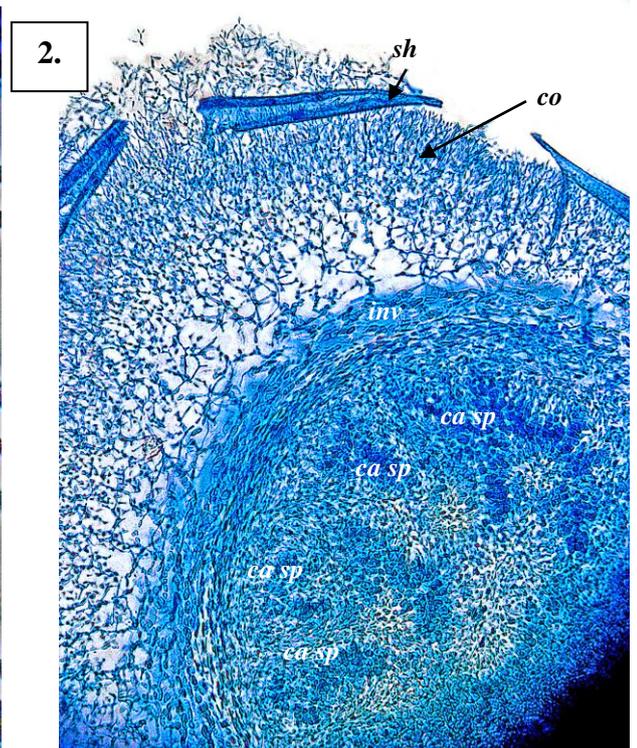
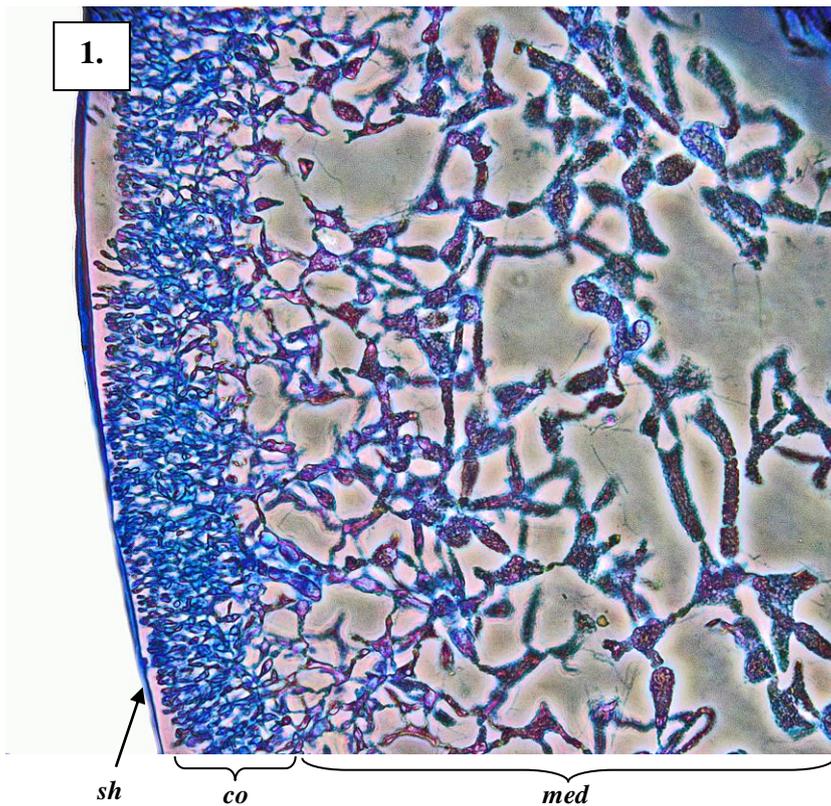
Special Requirements



cut cross sections of branches and view microscopically to find

- a rind-like (non-cellular) sheath, outer (cortical) layer of chains of *small* cells pointing outwards, core (medulla) of *inter-connected* (anastomosing) elongate cells (filaments), with larger filaments in a central mass
- in mature female structures (cystocarps): envelope of threads (*involucre*), central mass of threads with several scattered *patches* of spores that escape through a dimple in the outer layer that disintegrates

Details of Anatomy



Gigartina wehliae Sonder: cross sections stained blue and viewed microscopically

1. outer part of a blade (slide 12468): core (medulla, *med*) of inter-connected elongate cells; outer layer (cortex, *co*) of small cells in chains; sheath (*sh*) (slide 12465)
2. part of a cystocarp: dark patches of carposporangia, (*ca sp*) interspersed with threads; envelope (involucre, *inv*) of concentrically arranged threads; disintegrating cortical layer (*co*) fragmented sheath (*sh*) (slide 12465)



3, 4. Two magnifications of a specimen of *Gigartina wehliae*, Sonder, (A₃₆₀₅₃), from Port Elliott, collected in 1898, showing the finger-like (digitate) endings of branches