Stictosporum nitophylloides
(Harvey) J Agardh

45.540

Techniques needed and shape

MACRO
PLANT

Classification Phylum: Rhodophyta; Order: Gigartinales; Family: Cystocloniaceae

***Descriptive name** spiny-edged blades

Features

1. plants are dark red to red-brown, 80-150mm tall, ***not*** jelly-like, ***flat-branched*** with ***forked*** flat blades edged with ***tin, evenly*** spaced, forked points about 1mm long
2. lower blades are 50-100mm wide

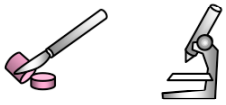
Occurrences near Perth, w Australia to Kangaroo I., S Australia

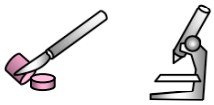
Usual Habitat a deep water species (30m) mainly from western waters

Similar Species *Gloiophyllis*, but in *Stictosporum* the fronds are wider, more leathery (***not*** jelly-like) and have characteristic marginal spines

Description in the Benthic Flora Part IIIA, pages 428-431

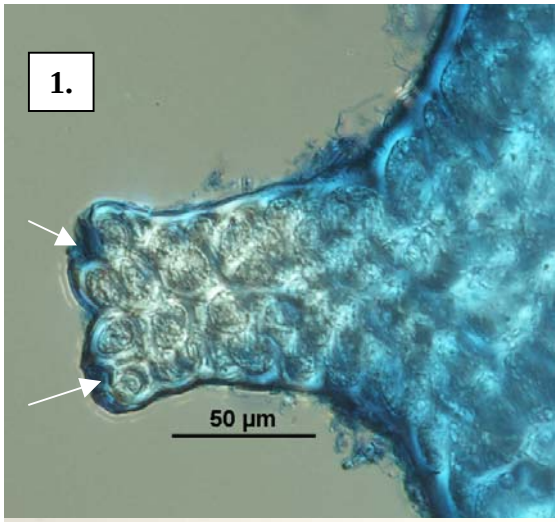
Special Requirements

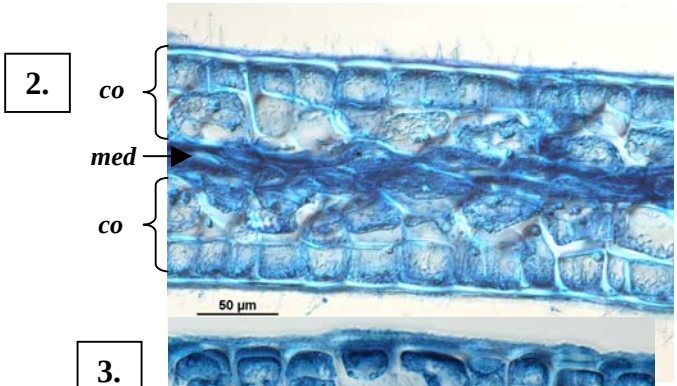


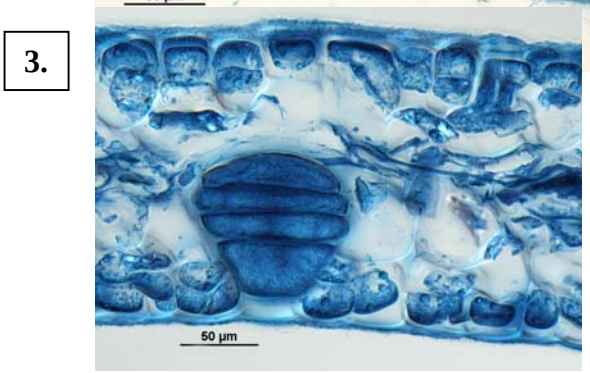


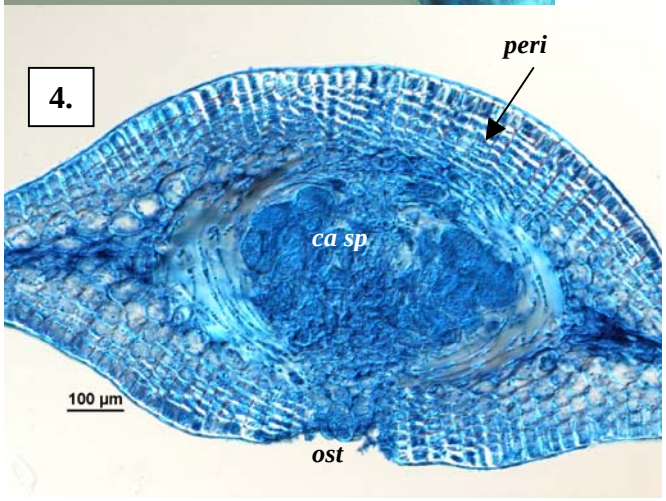
1. view fronds microscopically to see
   - ***lack*** of cell rings (rosettes) on the surface
   - ***single*** cells at the tips of spines, ***sunken*** in minute pits
2. cut a slice of a blade and view microscopically to find:
   - central threads forming a core or medulla
   - flanking, outer or cortex layers each of***, large*** many-sided cells
3. find female plants with large, spherical swellings protruding on ***both*** sides of the fronds. Cut a cross section if possible to view:
   - central masses of angular sporangia
   - a ***distinct wall*** (pericarp) of rows of outwardly facing cells
   - a single opening (ostiole)
4. if possible, find ***large***, characteristically squat (ovoid) tetrasporangia scattered near the surface, divided across into four sporangia (***zonate***)

Details of Anatomy





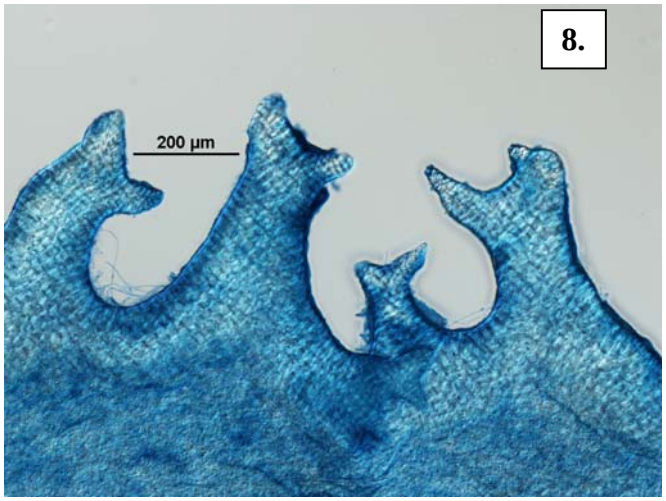




Stictosporum nitophylloides stained blue and viewed with interference microscopy to highlight cell walls

1. surface view of marginal spines with pits containing apical cells arrowed (A57600 slide 13150)
2. a cross section showing entwined threads and rhizoids of the core (medulla, *med*) and large cells of outer layers (cortex, *co*) (A57600 slide 13152)
3. a cross section showing a squat, zonately divided tetrasporangium (A13567 slide 13146)
4. a cross section of a cystocarp showing central mass of large sporangia (*ca sp*), wall (pericarp, *peri*) of rows of cells facing outwards and single opening (ostiole, *ost*) (A57600 slide 13152)

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



Specimens of *Stictosporum nitophylloides* (Harvey) J Agardh

5. 6. from 25m deep, 1km S of Dog I., Nuyts Archipelago, S Australia (A69527). # 6 shows detail of regular edge -spines
7. a drift plant from Vivonne Bay, Kangaroo I., S Australia (A68414)
8. an interference microscope surface view of a blue stained specimen showing detail of the forked spines and lack of cell rings (rosettes) (A54023 slide 13147)

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