# *Cryptonemia wilsonii* J Agardh

**45.280**

**Techniques needed and shape**


MACRO PLANT


**Classification** Phylum: Rhodophyta; Order: Gigartinales; Family: Halymeniaceae

***Descriptive name** red paddle blades

**Features**

1. plants are dark red, flat-bladed with an ***inconspicuous*** stalk, somewhat ***filmy*** when fresh
2. blades are ***paddle-shaped*** or lance-shaped and ***sparsely*** branched, about 15mm wide, 0.2mm thick

**Occurrences** Port Phillip Heads, Victoria and SE Tasmania

**Usual Habitat** on rock? and shells, to 31m deep

**Similar Species** *Grateloupia* species for example, the introduced *G. turuturu* from Japan, but there are no bright (refractive) spidery (ganglionic) cells in *Grateloupia*

**Description in the Benthic Flora** Part IIIA, pages 179-181

**Special Requirements**



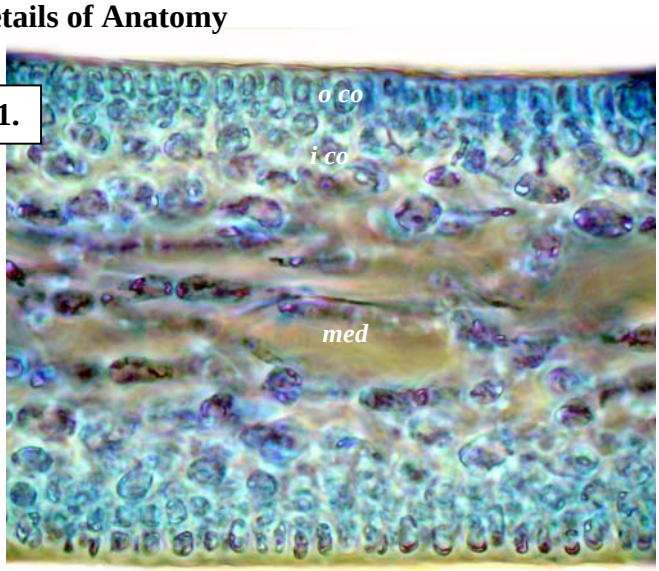
1. focus microscopically on a squash of surface cells to see bright (***refractive***) spidery (***ganglionic***) cells with ***swollen*** central regions and long slender arms in contact with adjacent ganglionic cell arms beneath clusters of tiny surface cells
2. if possible, cut cross sections of blades and view microscopically:-
   - a narrow core (medulla) of threads and ***bright, interconnected*** ganglionic cells
   - outermost layers of ***equal-sided*** to slightly elongate, closely packed ***small cells***
   - inner layers (inner cortex) of ***looser***, egg-shaped cells some becoming star-shaped
3. if possible find female plants, cut cross sections and view microscopically the flask-shaped structures (***ampullae***, images unavailable) protruding into the blade core from the cortex, in a ***loose envelope*** (involucre) of threads, with a ***narrow*** opening (ostiole) to the surface

Diagnosis can be difficult

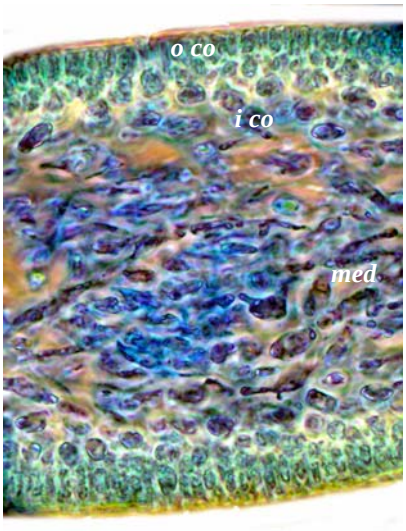
4. if possible find spore plants, cut cross sections and view microscopically the ***sparse***, ***scattered*** tetrasporangia in the outer layers (images unavailable), finally divided in a cross (***cruciate***) pattern

**Details of Anatomy**

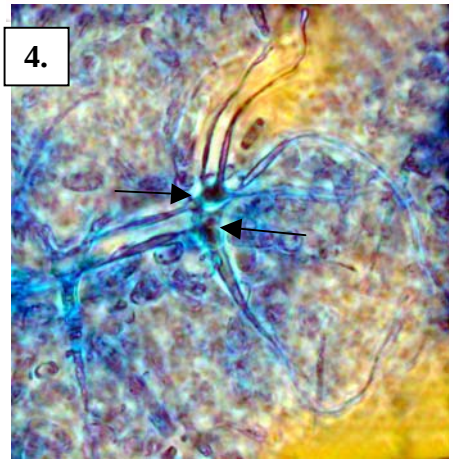
**1.**



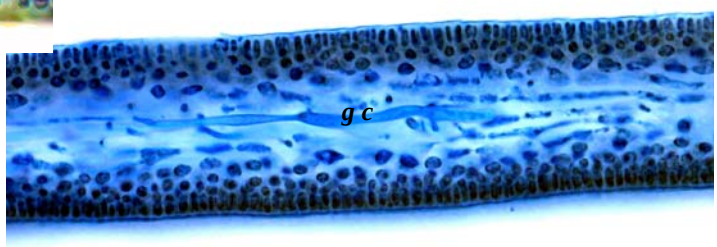

**2.**




**4.**



**3.**




*Cryptonemia wilsonii*, stained blue and viewed microscopically at different magnifications.

1-3. cross sections of blades showing the narrow core (medulla, *med*) of threads with connected ganglionic cells (*g c*), outer layers of inner, larger, egg-shaped cells (inner cortex, *in c*) and outer, smaller, equal-sided cells (outer cortex, *o c*) (1,2: A28026, slide 11715; 3: A68063, slide 17767)

4. a squash of tissue viewed from above, showing ***inter-connecting*** ganglionic cells with swollen inner parts (arrowed) (A28026 slide 11714)

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

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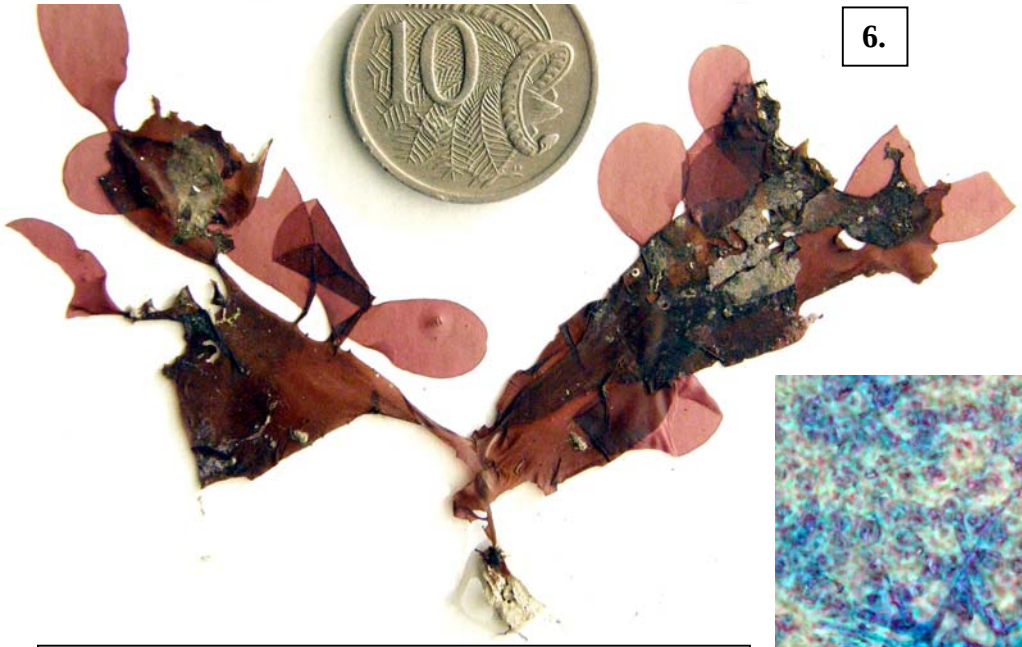
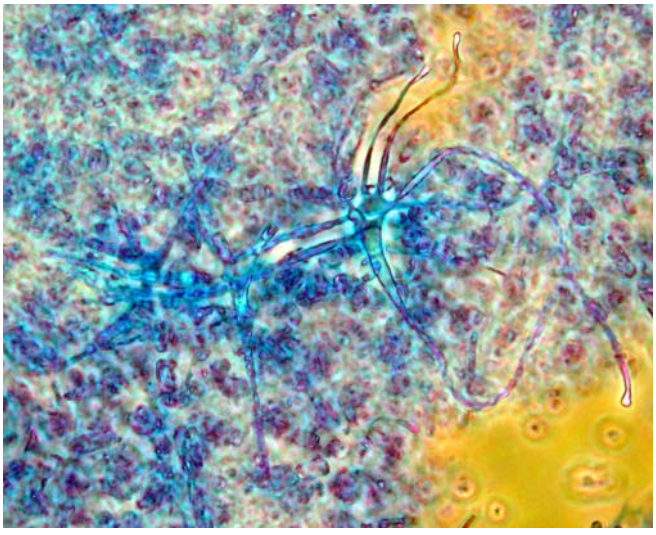
**5.**

**6.**



**7.**



5,6. Two specimens of *Cryptonemia wilsonii* J Agardh
- 5. 31m deep on the introduced Screw-shell, *Maoriculpis roseus* from Trumpeter Bay, Bruny I., Tasmania (A68063)
- 6. 3-6m deep, on cockle shells, Ninepin Point, SE Tasmania (A68345 a)

7. a squash of tissue stained blue and viewed microscopically to show the prominent inter-connecting ganglionic cells with swollen bases and slightly swollen ends (A28026 slide 11714)

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