# *Kallymenia spinosa*
**Womersley & Norris**

**A SPECIES WITH FEW RECORDS**

**45.320**

## Techniques needed and plant shape


MACRO PLANT


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

***Descriptive name** red thorny blades; §a red lettuce

**Features** plants rose red, 30-70mm tall, of a broad, ***firm*** , lobed blade arising from a short stalk, ***edges*** and often the ***surface*** of the covered with short, two-pronged ***spines***

**Special requirements**


make squashes of tissue of different plants and view under the microscope to find

- ***thread like*** cells at very thin ends of ***numerous*** star-shaped (***stellate***) cells in the core (medulla), ***small***, round cells in several layers in the outermost parts (cortex)
- numerous, amoeba-like female structures (carpogonial branch systems, *cbs*) with dense contents in the cortex with a ***single*** thread (carpogonium and trichogyne)
- ***scattered*** tetrasporangia divided in a cross (***cruciate***) pattern

**Occurrences** Islands off the West Coast, S Australia, poorly-collected

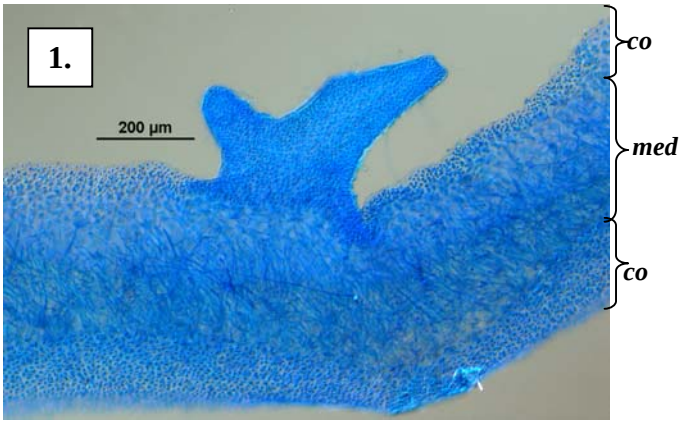
**Usual Habitat** apparently a deep water species (55m) on islands of rough water coasts

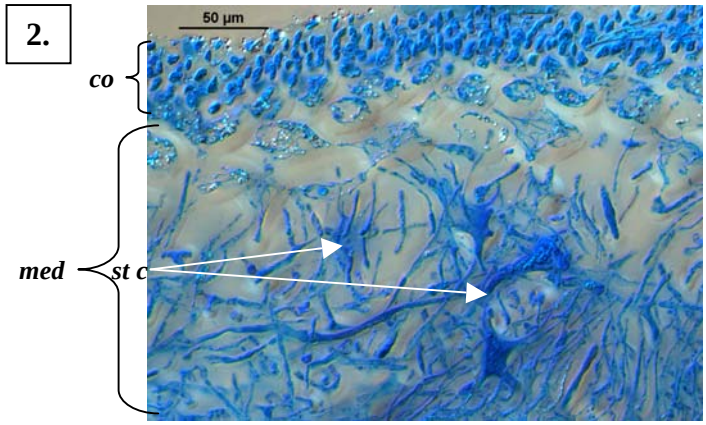
**Similar Species** Diagnosis can be difficult

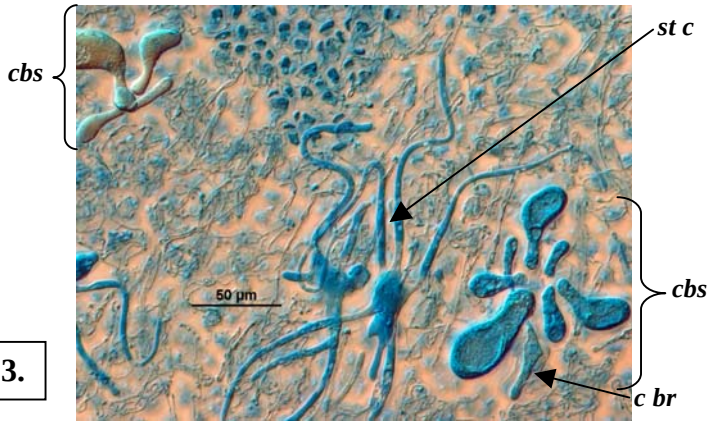
*Kallymenia rubra* also with single carpogonia per carpogonial branch systems but that species has toothed blade edges, ***small*** bumps on blade surfaces and fence-like layers of larger cells in outer (cortex) layers

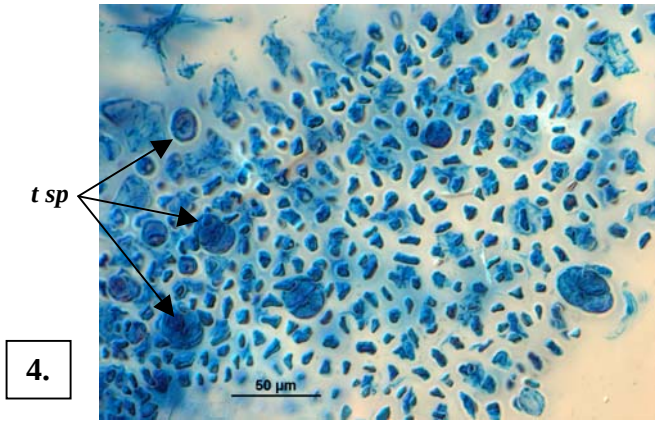
**Description in the Benthic Flora** Part IIIA, pages 237-239

**Details of Anatomy**



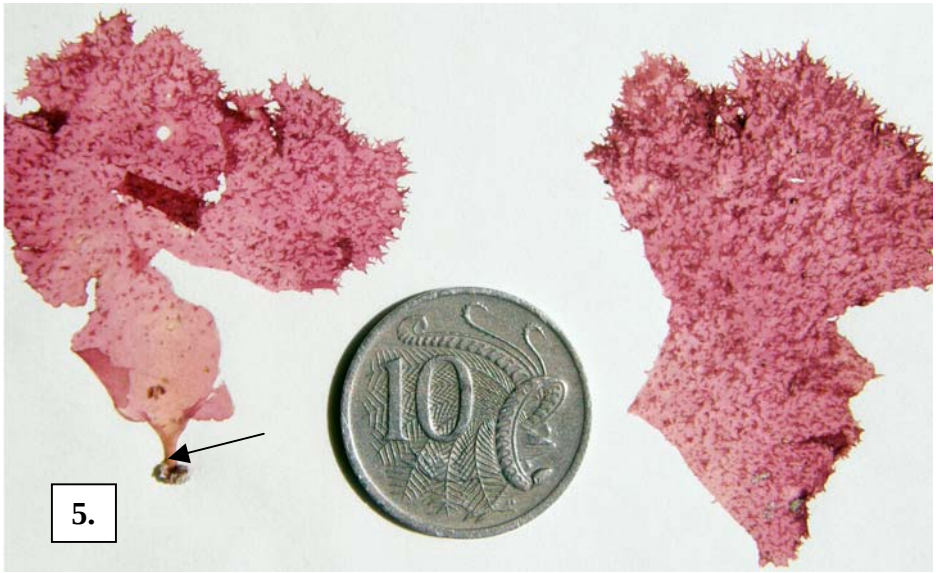

1, 2. cross sections and 3, 4. tissue squashes of *Kallymenia spinosa* (A33660) stained blue and viewed microscopically

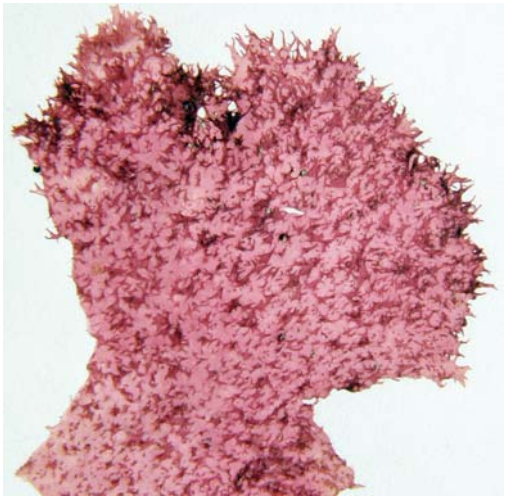
1. 2-pronged spine emerging from a blade surface and a window cut into part of the core(A33660, slide 2872)
2. core (medulla), star-shaped (stellate) cells (*st c*) with fine arms amongst fine threads and small cells of one outer layer (cortex, *co*) (A33660, slide 2872)
3. spider-like stellate cells (*st* c) of the medulla and 2 young female structures (carpogonial branch systems, *cbs*), one showing a single carpogonial branch (*c br*) characteristic of the species (A38079 slide 3487)
4. tetrasporangia (*t sp*) in various stages of dividing into a cross-shaped (cruciate) pattern(A38079 slide 3488)

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

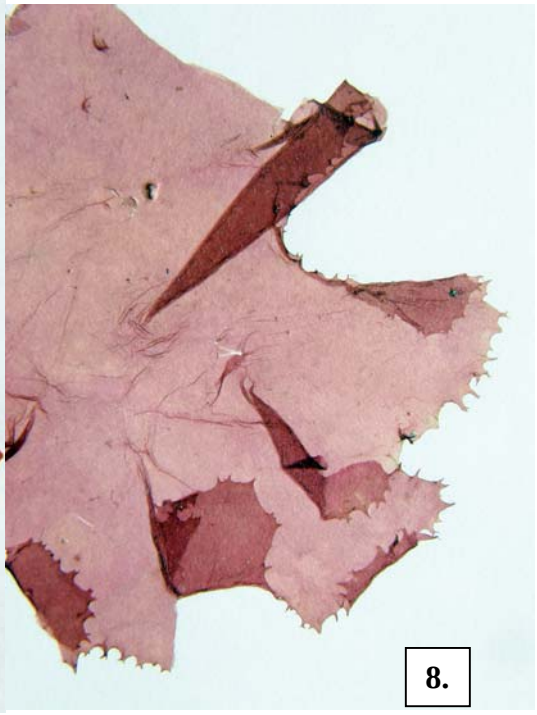
§a name used by Edgar, G (2008) in Australian Marine Life (2nd ed.) for *Kallymenia tasmanica* species

"Algae Revealed" R N Baldock, S Australian State Herbarium, November 2005, rewritten March 2009





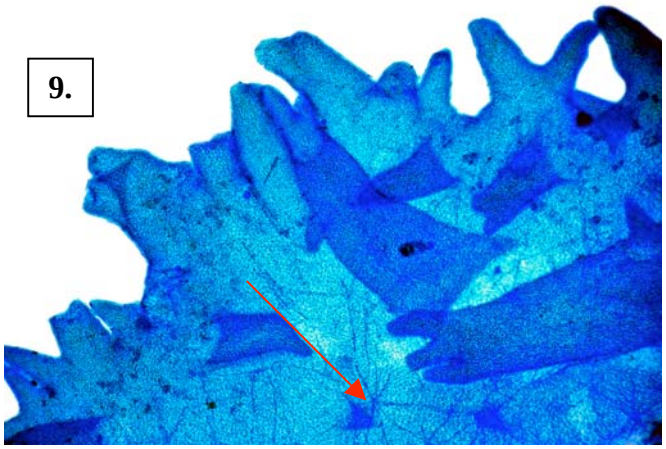



Different magnifications of West Coast, South Australian specimens of *Kallymenia spinosa* Womersley & Norris

5, 6. from a vertical rock face, 33m deep, Pearson I., (A33660) showing the short stalk (arrowed), and 2-pronged spines of the blade edge and face

7, 8. from 55m deep, St Francis Island (A38079), with only the blade edge showing pronged spines

9. microscope view of a specimen stained blue (A 33660 slide 2871) with surface spines, and spider-like stellate cells of the core showing through the cortex (arrowed)

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