

Techniques needed and shape



**MACRO
PLANT**



Classification

*Descriptive name

Features

Occurrences

Usual Habitat

Special requirements

Phylum: Rhodophyta; Order: Gigartinales; Family: Kallymeniaceae
soft flat red blades

1. plants are dark red, **soft** in texture, to 120mm tall, and **flat-bladed**

2. branches are about 15mm wide, and **forked**

apparently restricted to SE Tasmania

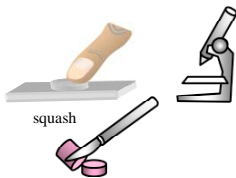
from shallow to deep water (23m) on rough water coasts

1. make squashes of tissue of different plants under the microscope to see

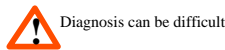
- a network of branching threads in a broad and loosely-packed core (medulla) with some darkly staining spidery (**stellate**) cells
- outermost (cortex) parts of 5-7 layers of small, **tightly-packed** cells
- young, female structures (carpogonial branch systems, **cbs**) consisting **lobed** cells with dense contents found in inner parts of the cortex

2. if possible, cut a cross section through the mature female structures (cystocarps) containing **patches** of carposporangia **separated** by threads

Kallymenia species; all have a soft texture, but *C. polycoelioides* is more forked. Since tetrasporangia needed to separate the two genera have not been found the position of this species needs confirmation.



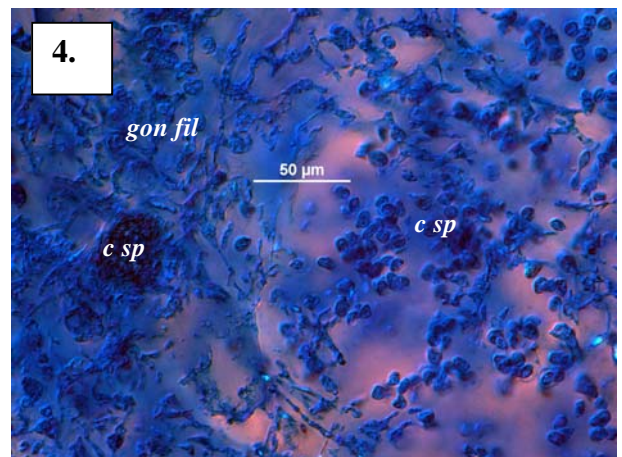
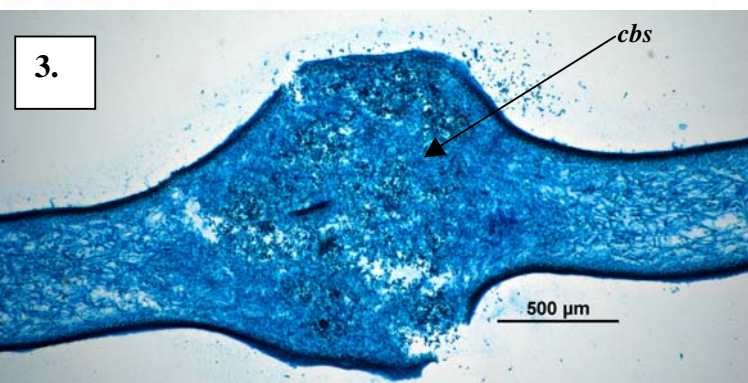
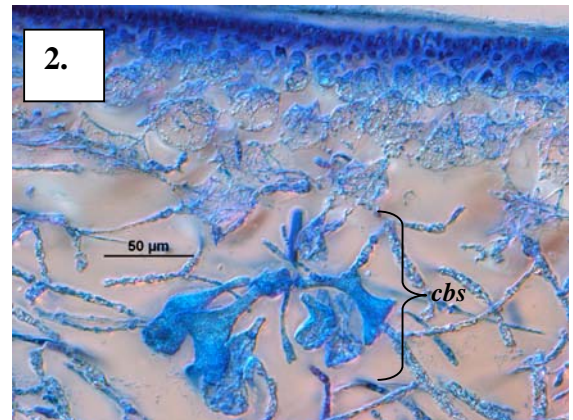
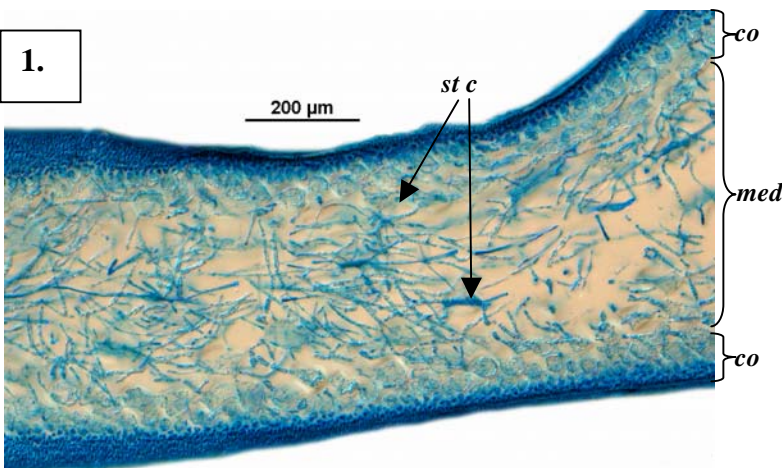
Similar Species



Diagnosis can be difficult

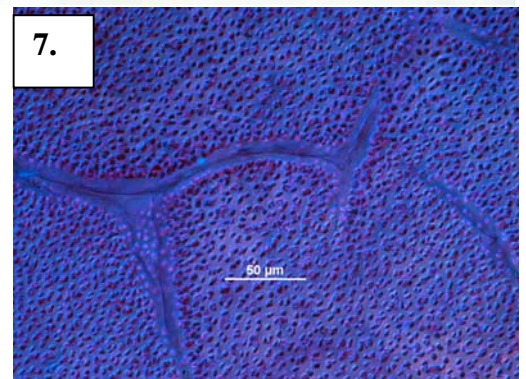
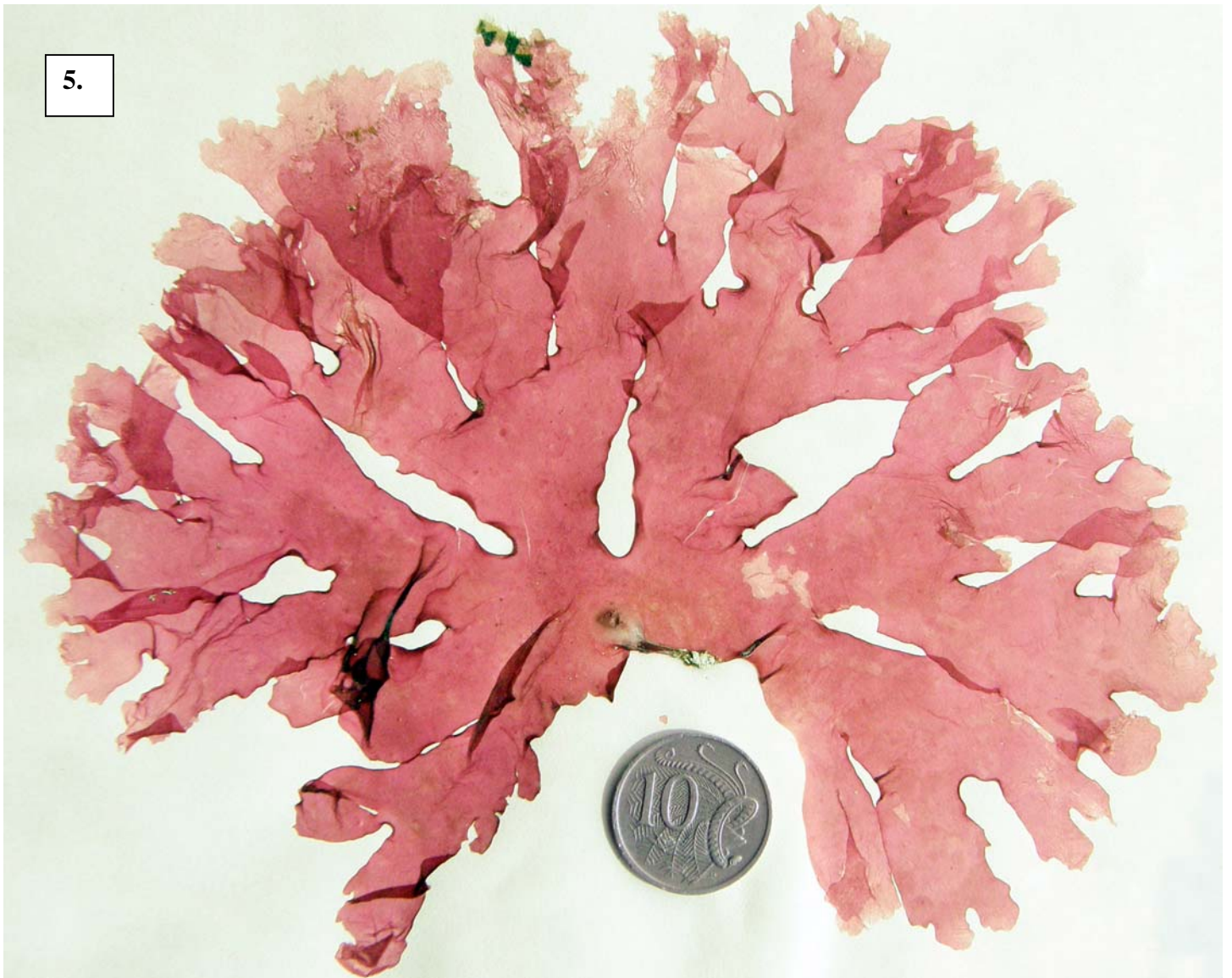
Description in the Benthic Flora Part IIIA, pages 2412-244

Details of Anatomy



Cirrularcarpus polycoelioides stained blue and viewed microscopically

1. a cross section showing a wide core of loose threads (medulla, *med*) with spidery stellate cells (*st c*) and outer layers (cortex, *co*) of rows of small cells (A41925 slide 4303)
2. cross section of a part of the cortex showing a developing female structure (carpogonial branch systems, *cbs*) of lobed cells (A41925 slide 4304)
3. a cross section of a mature female structure (cystocarp, *cyst*) producing a swelling in a blade (A 64455 slide 15416)
4. detail of a cystocarp with patches of carposporangia (*c sp*) in packets between threads (gonimoblast threads, *gon fil*) (A64455 slide 15416)



5, 6.. Different magnifications of a specimen of *Cirrularcusp polycoelioides* (J Agardh) (A41925) from 23m deep, Great Taylor Bay, Bruny I., Tasmania showing the deterioration of some tips that occurs

7. microscope surface view of closely packed cortex cells stained blue (A68207 slide 18098)