

Techniques needed and plant shape



MACRO PLANT



Classification

Phylum: Rhodophyta; Order: Gracilariales; Family: Gracilariaceae
flat red straps

*Descriptive name

Features

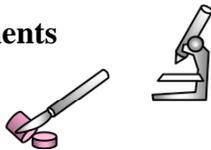


1. very dark red brown, 50-200mm long, lying *flat* on rock *attached* at one end of irregularly *lobed* branches, *tough*, drying gristly
2. *lower surfaces* usually covered in sponge, hydroids or bryozoans, older blades **2-4mm thick**
3. mature female structures (cystocarps) ball-shaped, about 2.0–3.0mm across, scattered on blade surfaces

Occurrences

Usual Habitat

Special requirements



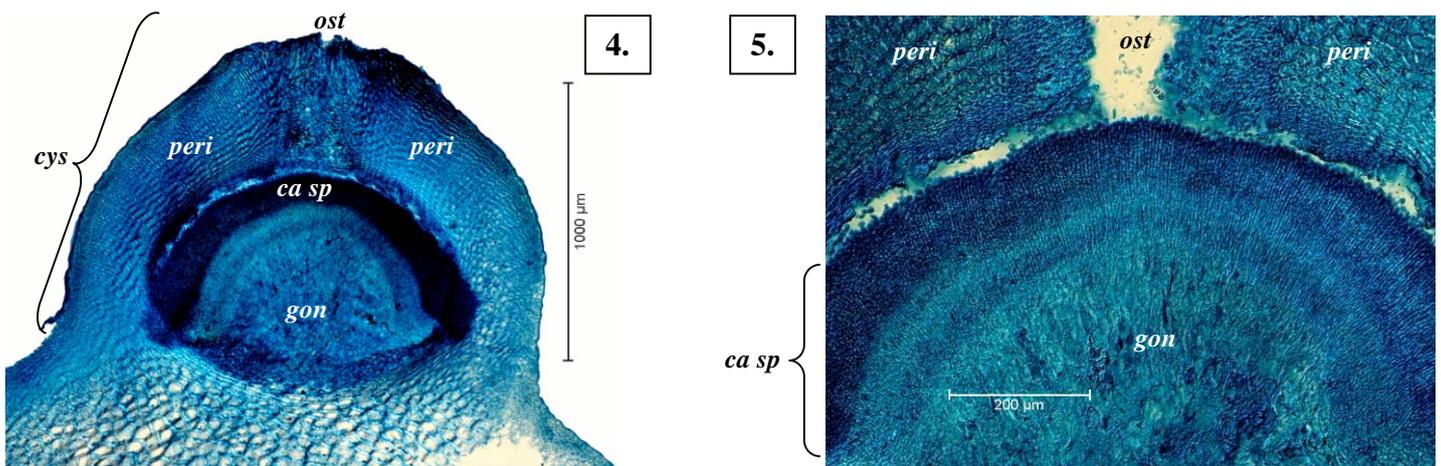
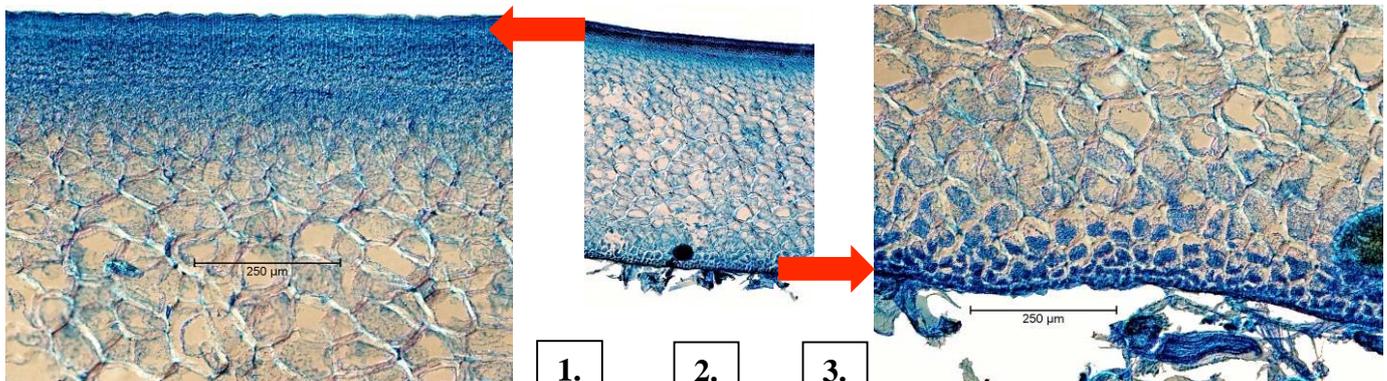
Solitary I., NSW to Victoria and E Tasmania
from shallow to deep water, in rough conditions

1. cut cross sections of blades and view microscopically the wide core of large, *equal-sided*, thick-walled cells with many side connections, grading to outer layers (cortex), of much smaller cells, *upper cortex much wider* than the lower one
2. cut sections of cystocarps and view microscopically to find a large, central mass of threads fringed with *short* bead-like *chains* of small carposporangia, surrounded by a thick wall of diamond-shaped cells and a single opening.
3. Tetrasporangia not found

Similar Species

Curdiea obesa, but plants are thinner and cystocarps are at the branch edge in that species
Part IIIB, pages 42-44

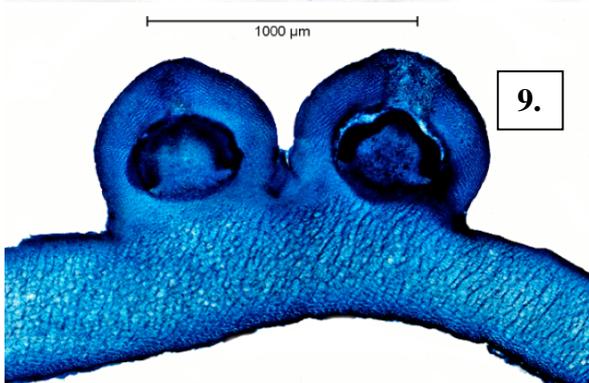
Description in the Benthic Flora



Cross sections of *Curdiea crassa* stained blue and viewed microscopically

- 1-3. different magnifications of a blade showing upper layers (upper cortex, *u co*) much thicker than lower layers (*l co*), core (medulla, *med*) of large, thick-walled cells and remnants of sponge and other animals on lower surface (A57393 slide 10241)
- 4, 5 two magnifications of a mature female structure (cystocarp, *cys*) with thick wall (pericarp, *peri*) punctured by an opening (ostiole, *ost*), central mass of threads (gonimoblast, *gon*) fringed with short chains of small carposporangia (*ca sp*) (A60291 slide 13467)

*Descriptive names are inventions to aid identification, and are not commonly used;
“Algae Revealed”, R N Baldock, S Australian State Herbarium April 2011



Different magnifications of pressed, specimens of *Curdiea crassa* Millar
 4, 5. whole plant and edge of a blade showing bryozoan coating on the underside from Waterfall Bay, Tasman Peninsula, Tasmania (A57393)
 6, 7, 8. from Cape Woolamai, Victoria showing details of scattered cystocarps on the blade surfaces (A60187)
 9. cross section through 2 cystocarps, stained blue and viewed microscopically (A60291 slide 13468)

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