

Techniques needed and plant shape



MACRO PLANT



Classification

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

*Descriptive name

Features



1. dark red brown, 50-100mm long, free but lying *flat* on rock, irregularly *flat-branched* (branching from margins), branches *tough*, drying gristly, *irregular* in width, often wavy
2. *lower surfaces* usually covered in *sponge*, older blades about 1mm thick
3. mature female structures (cystocarps) ball-shaped, about 1.5–3.0mm across, scattered on blade surfaces usually near the margins

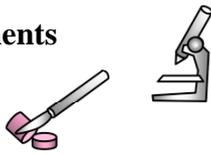
Occurrences

from Geraldton, W Australian to SE of South Australia

Usual Habitat

from shallow to deep water, in rough conditions

Special requirements



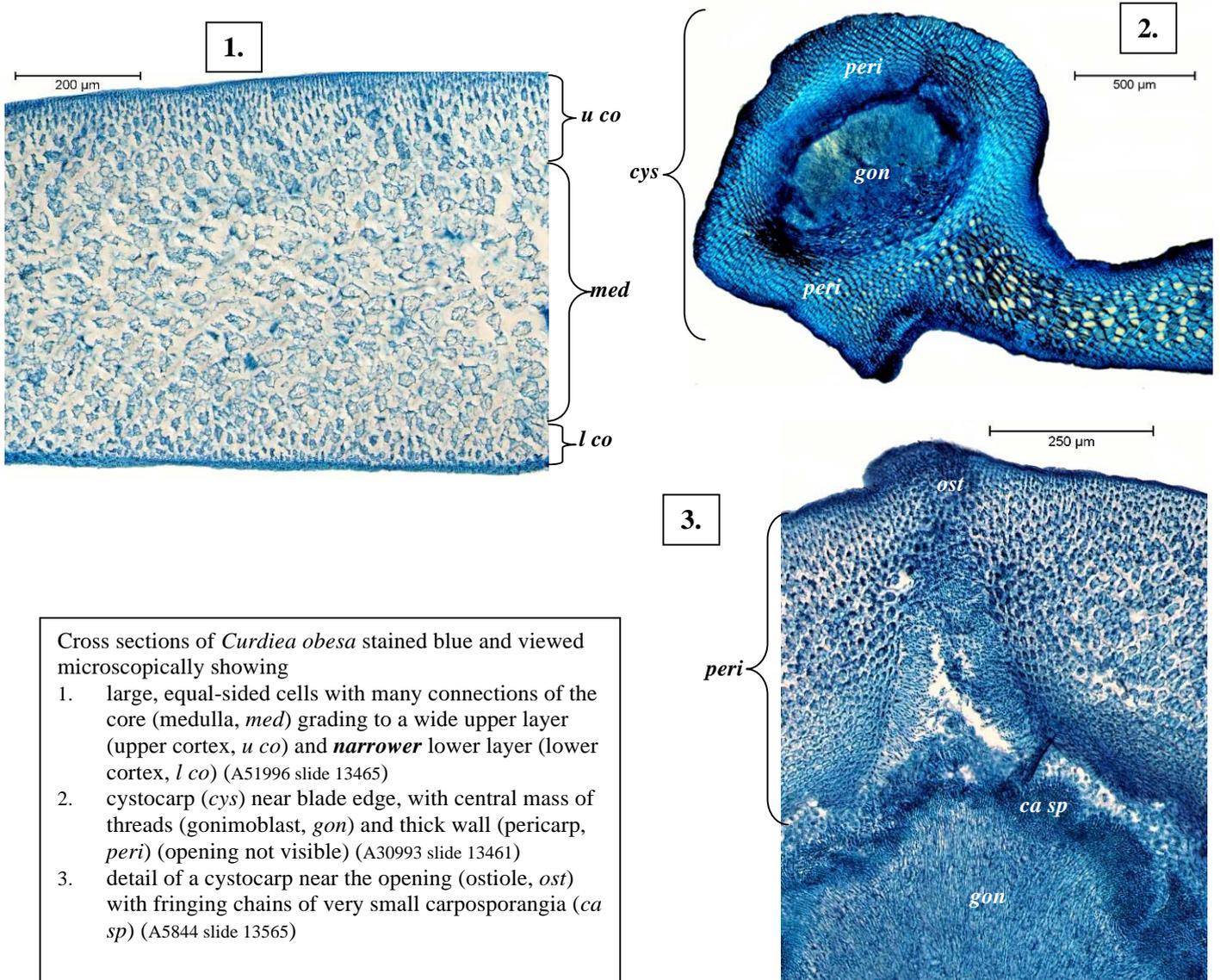
1. cut cross sections of blades and view microscopically the wide core of large, *equal-sided*, thick-walled cells with many side connections, grading to outer layers (cortex), of much smaller cells, *upper cortex wider* than the lower one
2. cut sections of cystocarps and view microscopically to find 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 obtusata, but plants are upright, the cortex is equal on both sides of a branch and cystocarps are at the branch edge, often in a line in that species

Description in the Benthic Flora

Part IIIB, pages 41, 42



Cross sections of *Curdiea obesa* stained blue and viewed microscopically showing

1. large, equal-sided cells with many connections of the core (medulla, *med*) grading to a wide upper layer (upper cortex, *u co*) and *narrower* lower layer (lower cortex, *l co*) (A51996 slide 13465)
2. cystocarp (*cys*) near blade edge, with central mass of threads (gonimoblast, *gon*) and thick wall (pericarp, *peri*) (opening not visible) (A30993 slide 13461)
3. detail of a cystocarp near the opening (ostiole, *ost*) with fringing chains of very small carposporangia (*ca sp*) (A5844 slide 13565)

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



4.



6.



5.

Different magnifications of pressed, specimens of *Curdiea obesa* (Harvey) Kylin from Yorke Peninsula, S Australia
 4, 5. two magnifications of specimens from 8m deep, Pandalowie Bay (A26598) showing irregular branching in one plane, branches of irregular widths, wavy surfaces and scattered cystocarps on upper surfaces near branch edges
 6. edge of a specimen (A65638) from 5m deep, Cable Hut Bay, with characteristic sponge (and hydroid) cover (arrowed) on the lower surface

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