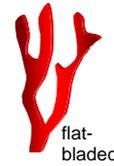




MACRO
PLANT



Techniques needed and shape

Classification

Phylum: Rhodophyta; Order: Ceramiales;
Family: Rhodomelaceae; Tribe: Pterosiphonieae
§ leafweed

*Descriptive name

Features

plants red-brown, 100-300 mm long, main branches 10-20 mm wide with a distinct midrib, often denuded below, then with ragged, thin wings or numerous small side blades; otherwise plants flat-branched, irregular side branches broadly lobed and tips rounded
NW W Australia to Victoria and around Tasmania, doubtfully from Queensland

Occurrences

Usual Habitat

on rocks in intertidal shaded pools to 30 m deep

Similar Species

filmy members of the Family: Delesseriaceae, but these are usually lighter red in colour, 1-cell thick, with no specialist hairs (trichoblasts) or sporangial structures (stichidia) and female structures (cystocarps) form pustules and are not flask-shaped as in *Pollexfenia*

Description in the Benthic Flora

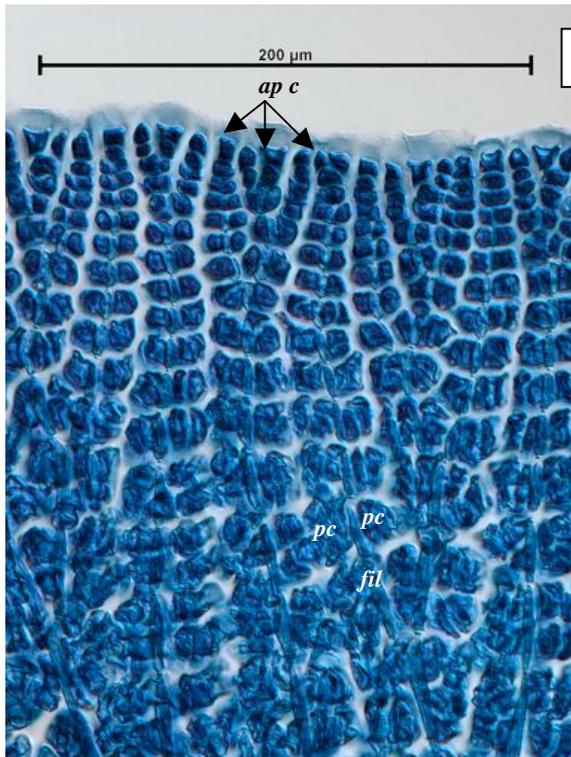
IIID, pp 355-357

Special Requirements



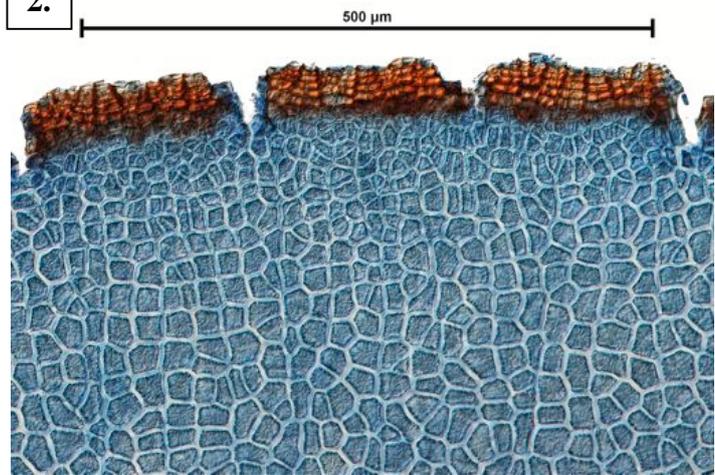
1. view plant edges microscopically to find:
 - edge cells producing forked threads (*fil*), each cell flanked by 2, later 4 (pericentral) cells adhering together, forming a blade 2-cells thick with faint veins
 - inactive blade edges with dark blocks of cells and irregularly arranged surface cells
 - tufts of branched hairs (trichoblasts) on *surfaces* of blades
2. find, in separate plants, reproductive organs on blade *surfaces*:
 - egg-shaped mature female structures (cystocarps) on short stalks, walls thin
 - sporangia in a spiral pattern down clusters of *thick-walled*, structures (stichidia)
 - cigar-shaped clusters of sperm on basal cells of trichoblasts (not illustrated)

Details of Anatomy

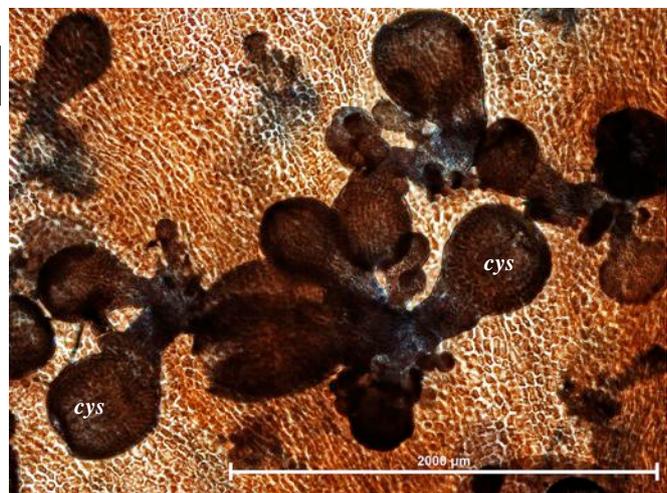


1.

2.



3.

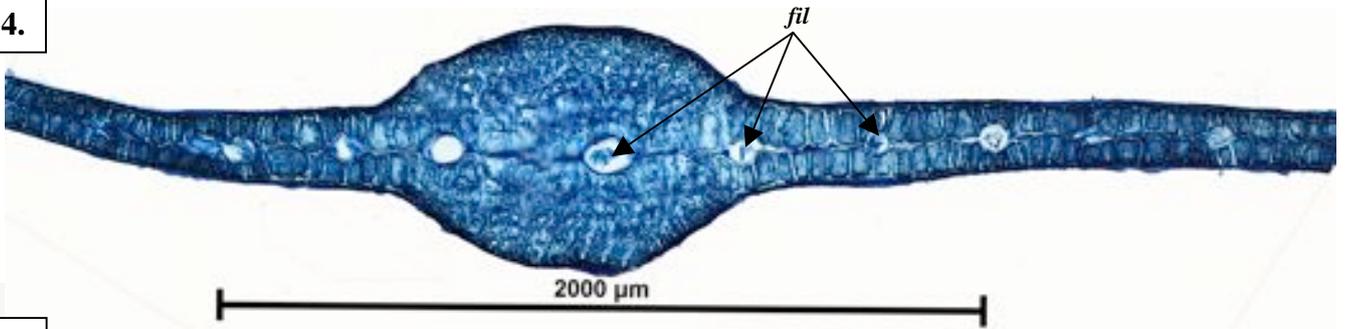


Pollexfenia lobata

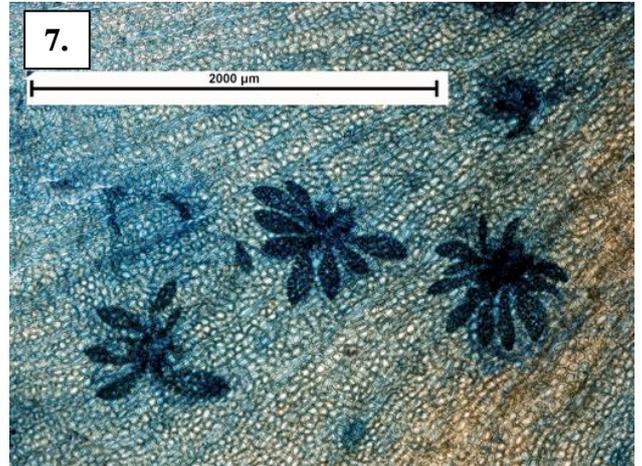
1. detail of a actively growing blade edge (slide 19504): edge cells (apical cells, *ap c*), forked thread (*fil*) each cell flanked by 2, later 4 (pericentral) cells, (*pc*)
2. inactive blade edge(at lower magnification): dark red-brown blocks of cells, irregularly arranged surface cells (slide 18703)
4. blade surface: clusters of stalked mature female structures (cystocarps, *cys*) (slide 19528)

§ name used in Edgar, G. *Australian Marine Life, 2nd Ed.* (2008) for *Pollexfenia*; "Algae Revealed", Robert Baldock, State Herbarium S Australia, November, 2013

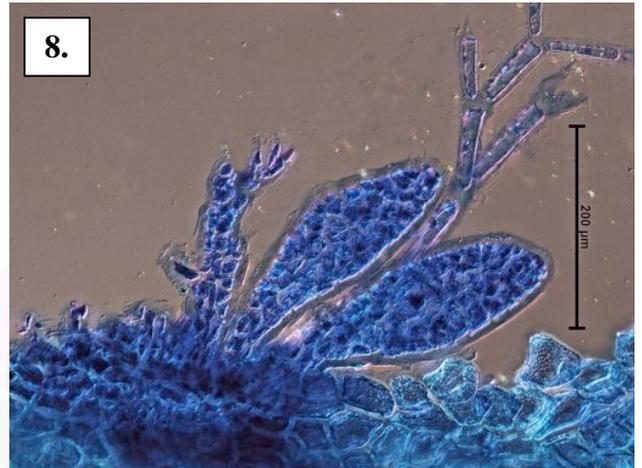
4.



5.



8.



6.



Pollexfenia lobata (Hooker f. & Harvey)

Falkenberg from S Australia

4. cross section through a midrib (slide 19507): thread cells (*fil*), blade 2-cells thick
5. from Elliston, (A34976) with broad lobes
6. from Port Elliot with denuded base bearing ragged wings and upper narrow winged branches (A01336)
7. blade surface with clusters of sporangial structures (stichidia) (slide 19504)
8. side view of a blade: thick-walled stichidia at the base of a branched hair (trichoblasts (slide 19504)