



MACRO
PLANT



Techniques needed and shape

Classification

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

*Descriptive name

Features

plants dark red-brown, leaf-like, 20-50 mm long, main branches 2-4 mm wide, flat and thin, flat-branched several times, tips rounded, blade edges slightly crinkled

Occurrences

Spencer Gulf, S Australia to Port Phillip, Victoria

Usual Habitat

often in dense masses on Sea nymph (*Amphibolis*) stems

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

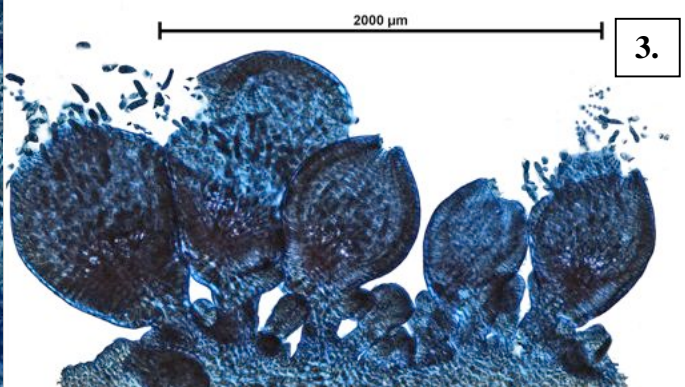
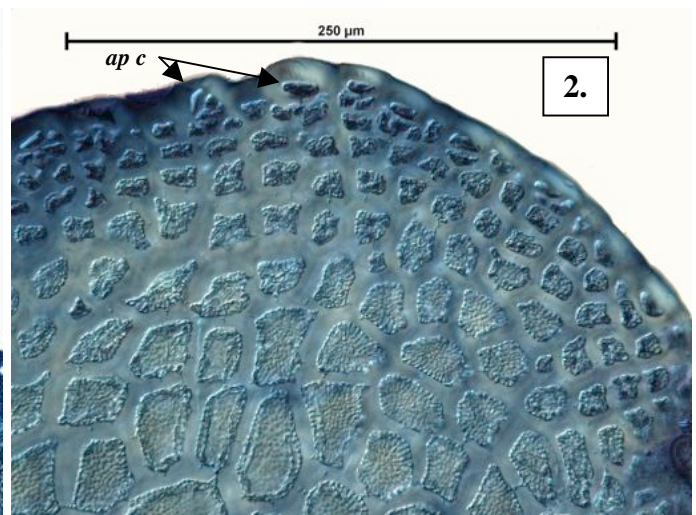
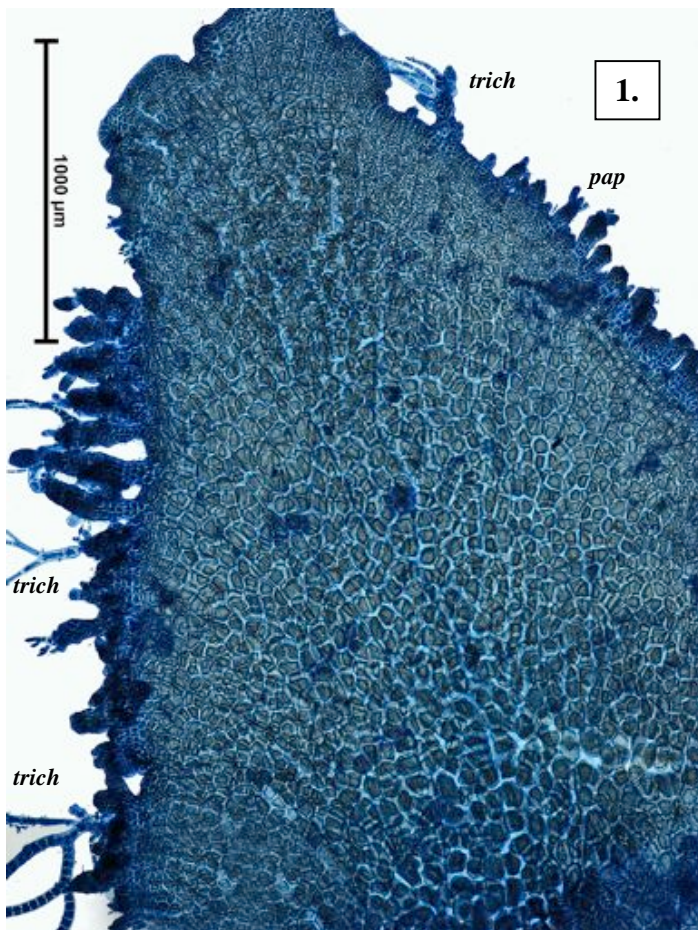
IIID, pp 357-359

Special Requirements



1. view plant edges microscopically to find: rows of squat edge cells producing forked columns of cell clusters resulting in a blade 2-cells thick with faint veins; occasional branched hairs (trichoblasts) near blade tips or associated with minute finger-shaped growths (papillae) along blade edges
2. find, in separate plants, reproductive organs *along blade edges*: (a). shortly stalked, egg-shaped mature female structures (cystocarps); (b). sporangia in a spiral pattern down thick-walled, cigar-shaped structures (stichidia); (c). minute sperm clusters on papillae

Details of Anatomy



Pollexfenia crispata A36013

1. blade tip: branched hairs (trichoblasts, *trich*) and outgrowths (papillae, *pap*) at edges; cell columns producing vague veins
2. detail of a rounded blade tip: squat edge cells (apical cells, *ap c*) dividing to form columns of cells forming the blade
3. cluster of mature female structures (cystocarps, *cys*), on the blade edge, some slightly squashed by the slide preparation

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

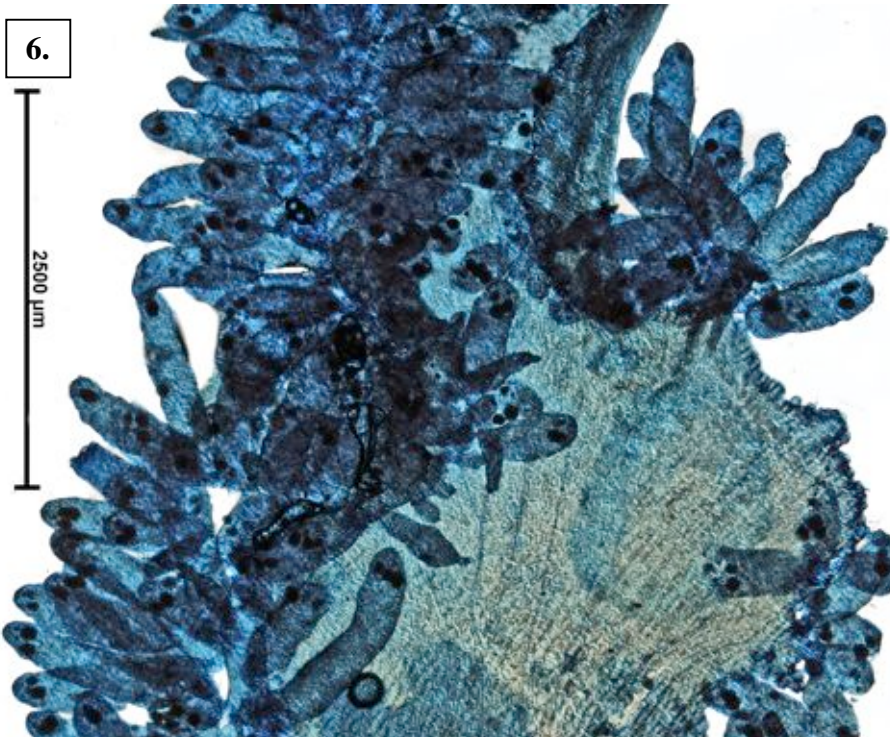
4.



5.



6.



4, 5. two magnifications of *Pollexfenia crispata* Harvey A01970 from Henley Beach S Australia on an *Amphibolis* stem, with slightly crinkled edges bearing finger-shaped outgrowths (papillae)
6. microscope preparation (A36013 slide 19552) of a blade with clusters of sporangial structures (stichidia)