

Techniques needed



Classification

Division: Rhodophyta; Family: Delesseriaceae; Tribe: Nitophylloideae
Group: *Nitospinosa*

*Descriptive name

Winged Film-plant

Features



plants red-purple, 30-100mm tall, growing on other red algae (*epiphytic*) of long, narrow blades, 3-8mm wide, consisting of *midribs* and thin flat wings; blade edges *smooth* or with microscopic teeth, branching produced from blade *edges* in one flat surface smaller bladelets and short teeth may be produced at blade edges and blades may be eroded basally, leaving the midrib as a stalk

Variations

Special requirements



1. view blades microscopically to find: blades are a *single cell thick* except in the midrib region, fine veins are *absent*. At tips, *several to many* obscure dividing cells occur that continue the growth of blades. In surface view, cells may occur in short lines
2. correct identification requires a cross section of mature female structures (cystocarps) to find single club-shaped spores produced at the ends of threads

Occurrences

SE of S Australia, Victoria and Tasmania.

Usual Habitat

attached (epiphytic) to the membranous red alga *Nitospinosa pristoidea* and the regularly-toothed red alga *Phacelocarpus peperocarpus*,

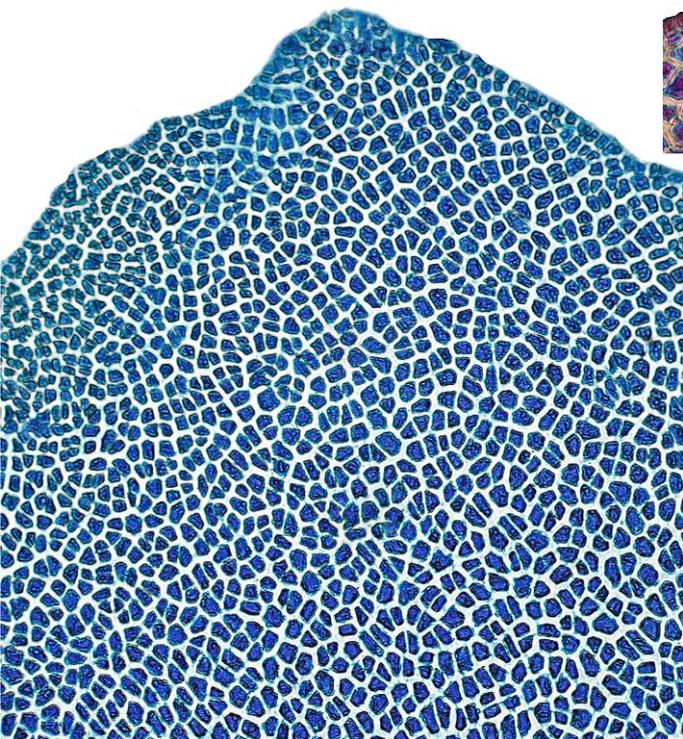
Similar Species

Crassilingua also has winged mid-ribs, obscure apical cells, and no side veins, but blades are mostly more than 1-cell thick

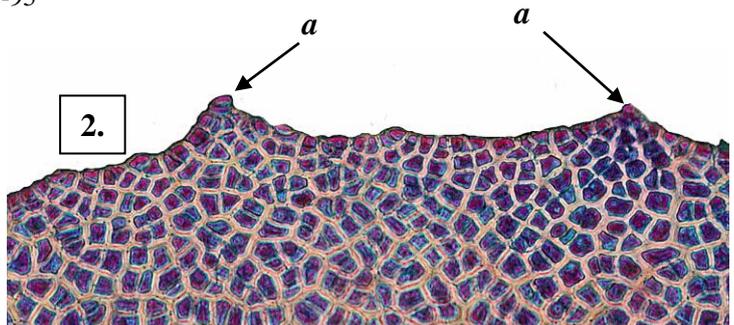
Description in the Benthic Flora Part IIID , page 93-95

Details of Anatomy

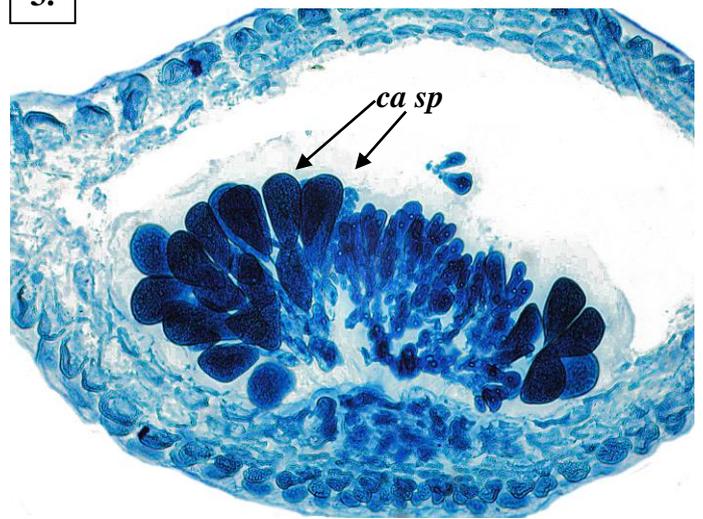
1.



2.

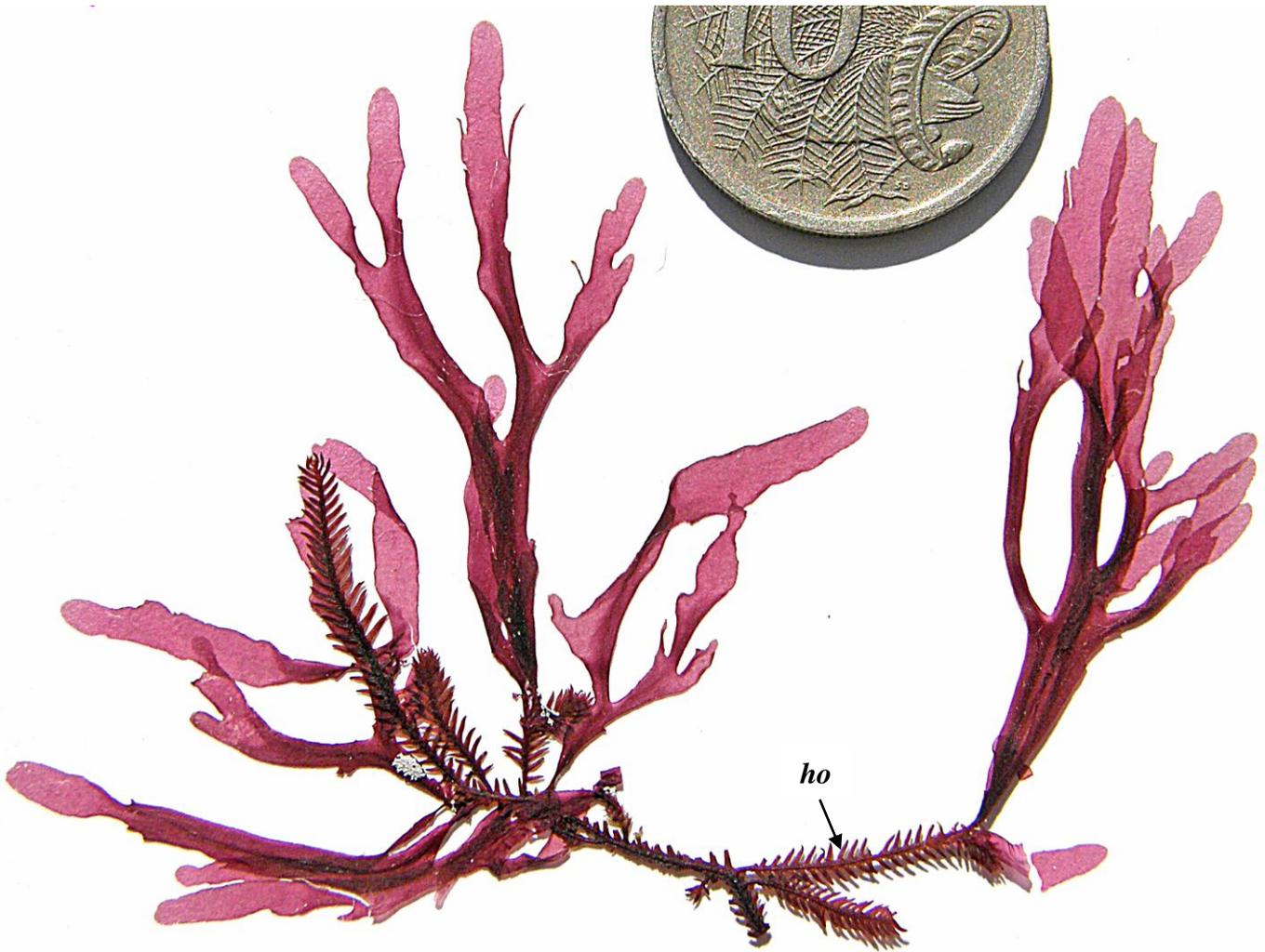


3.



Robea costata stained blue and viewed microscopically:

1. blade tip surface view (slide 15153): lack of definite apical cells, cells in short lines, veins absent
2. detail of blade edge (slide 15150): multiple apical cells (*a*)
3. cross section of a mature female structure (cystocarp) (slide 15149): single club-shaped spores (*ca sp*) at tips of fertile threads



4.

5.



4, 5. Two specimens of *Robea costata* Womersley A68149, on the host *Phacelocarpus peperocarpus* (*ho*), from Cathedral Cave, Waterfall Bay, Tasman Peninsula, Tasmania, 6-15m deep

* Descriptive names are inventions to aid identification, and are not commonly used
 "Algae revealed" R N Baldock, State herbarium S Australia, March 2003; additions August 2007; edited July 2014