Polysiphonia teges Womersley

A SPECIES WITH FEW RECORDS

45.940.00

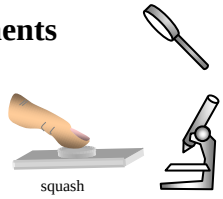
Techniques needed and plant shape

Classification Division: Rhodophyta; Family: Rhodomelaceae; Tribe: Polysiphonieae

***Descriptive name** creeping threads

Features plants form dense, dark-brown hair-like mats about 10mm tall on rocks near low tide

Special requirements



view microscopically the box-shaped cells, arranged in bands, forming threads or filaments, if necessary by making tissue squashes in order to separate cells. Find:-

- creeping (prostrate) filaments) attached to the substrate by thin ***rhizoids*** whose contents are ***continuous*** with cells of the filament and whose tips end in a branched holdfast (hapteron)
- erect filaments, often ***curved,*** sometimes branched, arising ***irregularly*** from the prostrate filaments, ending in dense branched "hairs" (***trichoblasts***), filaments with central strings of cells (often obscured) each cell of which is ringed by ***6*** equal-sized cells (pericentral cells) producing distinct ***broad*** bands (segments) along the filaments
- large tetrasporangia in an extended ***spiral*** along erect filaments, slightly ***distorting*** the branch (other reproductive structures unknown)

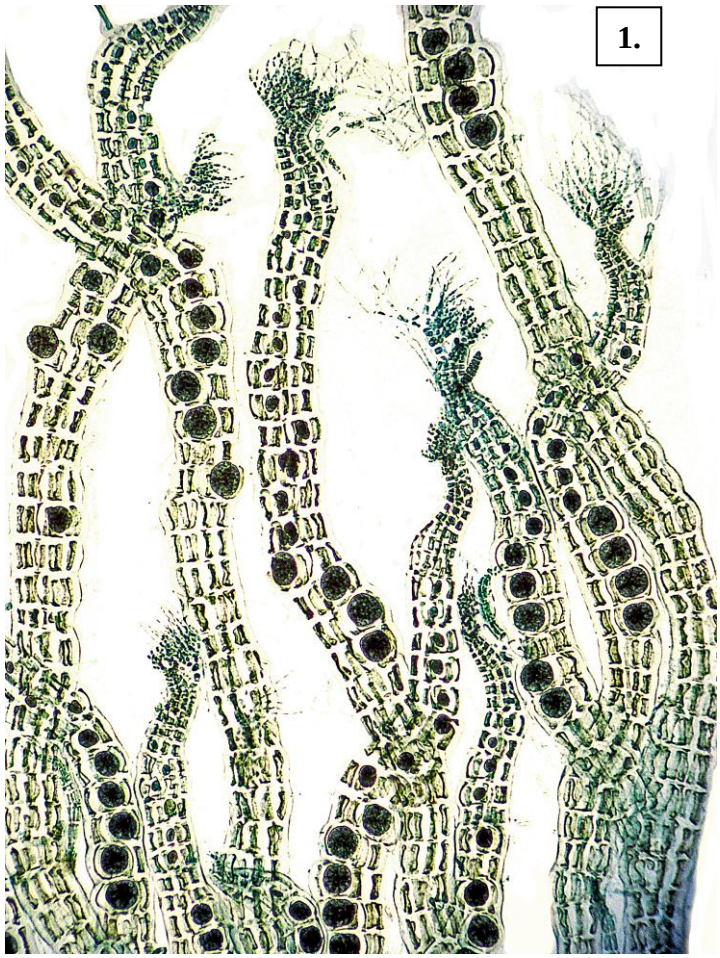
Occurrences only known from Frenchman Bay, W Australia and Mangrove Point, N Spencer Gulf, S Australia but possibly overlooked at other sites

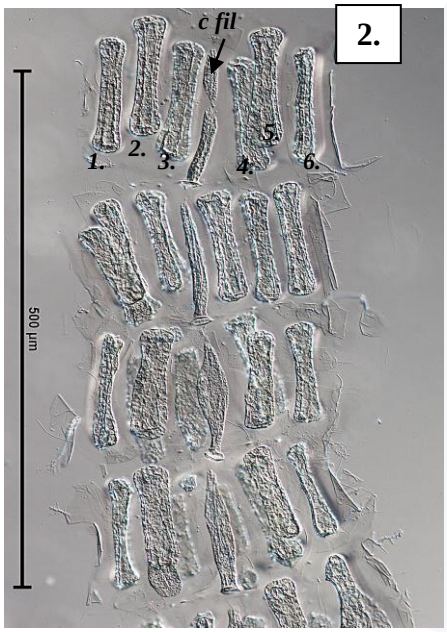
Usual Habitat found in shallow water (upper sublittoral) on rock, partly covered with sand

Similar Species *Polysiphonia scopulorum* but that has ***4*** pericentral cells and *Herposiphonia calothrix* but that has ***7-8*** pericentral cells and a ***sequence*** of 3 erect branches of limited growth then one of unlimited growth along the prostrate filament

Description in the Benthic Flora Part IIID, pages 200-202

Details of anatomy





Polysiphonia teges stained blue and viewed microscopically

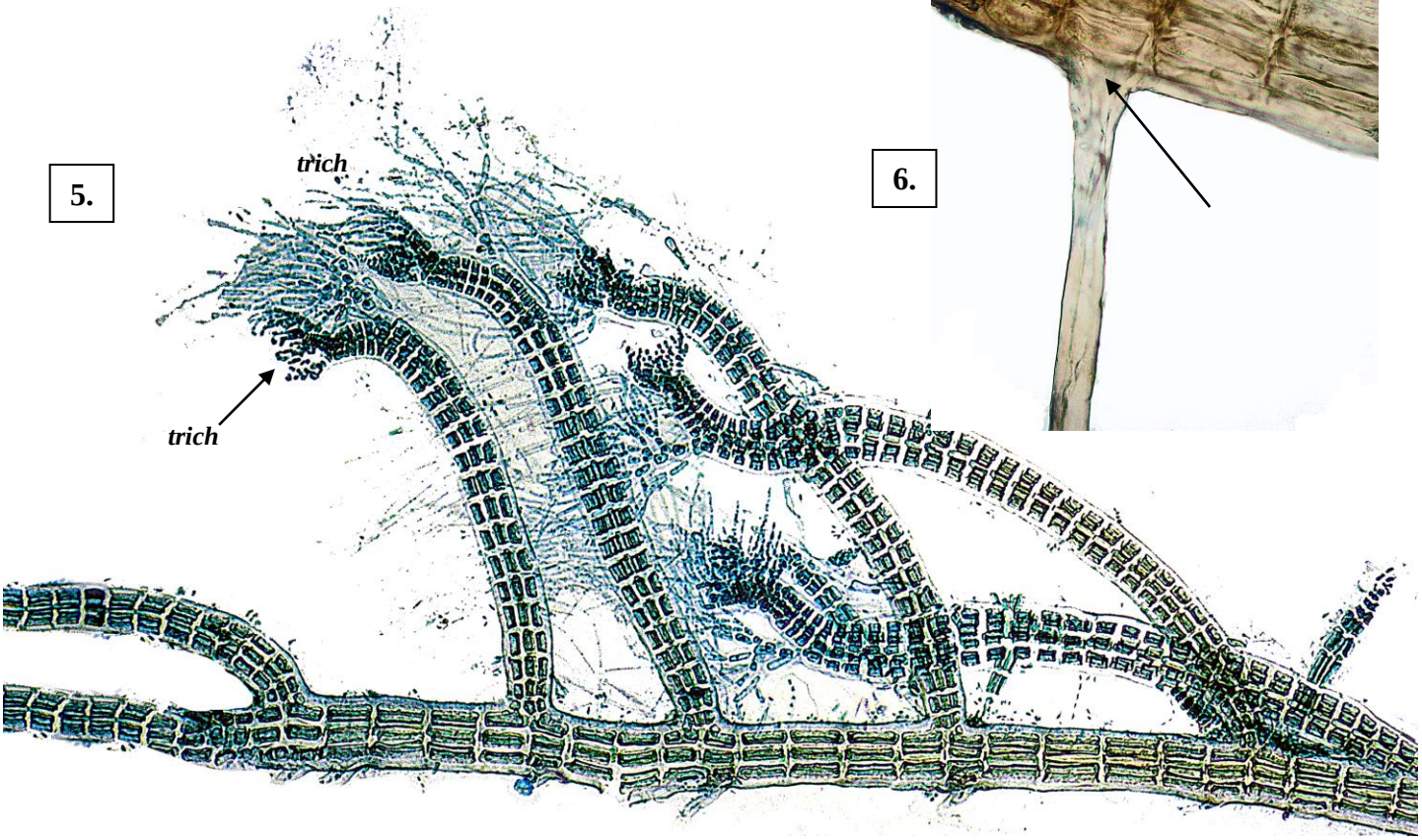
1. erect filaments, bearing tetrasporangia (***t sp***) in spirals, ending in colourless branched trichoblasts (***trich***) (slide 4494)
2. tissue squash: central filament (***c fil***), 6 flanking pericentral cells (***1-6***) (slide 4495)
3. single rhizoid (***rh***) ending in a branched holdfast (hapteron, ***ha***) (slide 4481)

* Descriptive names are inventions to aid identification, and are not commonly used

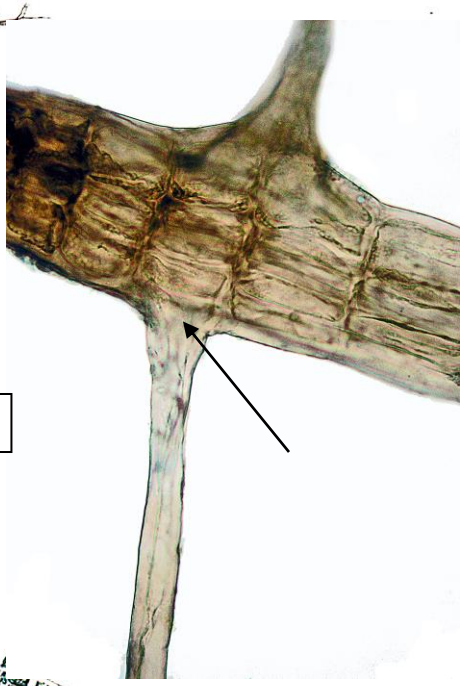
"Algae Revealed" R N Baldock, State Herbarium S Australia, May 2007; revised August 2014

4.

5.



6.



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4. from Frenchmans Bay, Albany W. Australia A49279 in shallow water on sand covered rocks

5, 6. specimens viewed microscopically

5. creeping thread (prostrate filament), upright branches, slightly curved, numerous colourless branched "hairs" (trichoblasts, *trich*) at the tips of growing branches (slide 4494)

6. direct cellular connection (arrowed) of rhizoid contents with prostrate filament cell (slide 4481)

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