

Polysiphonia propagulifera Womersley

A SPECIES WITH FEW RECORDS

45.940.00

Techniques needed and plant shape



MACRO PLANT



Classification
*Descriptive name

Division: Rhodophyta; Family: Rhodomelaceae; Tribe: Polysiphonieae
red tendrill threads

Features



plants, red-brown, 60-220mm tall, of much branched threads, with rhizoids and tendrils

Special requirements



view microscopically to find

- threads often ending in colourless branched “hairs” (trichoblasts), central line of cells obscured by **4 box-shaped** flanking (pericentral) cells giving threads a **striped** or segmented appearance, lower branches developing into coiled **tendrils** often with rhizoids on the inside of the coil
- many-celled, elongate -egg-shaped, stalked structures (**propagules**) probably for vegetative reproduction (no other reproductive organs have been found)

Occurrences
Usual Habitat

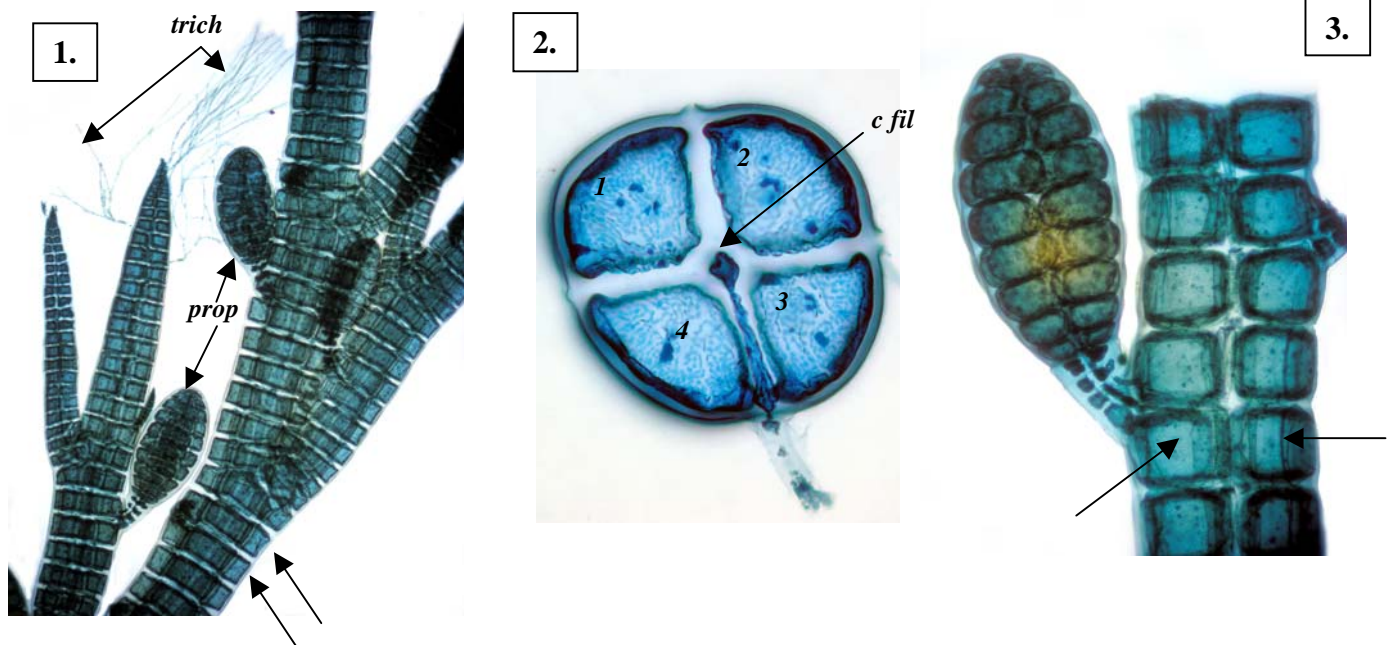
only from Troubridge I., Investigator Strait and Penneshaw, Kangaroo I. S. A.
found in water 11-33m deep

Similar Species



Unique because of the propagules. Specimens also bearing propagules have been collected from D'Entrecasteaux Channel, Tasmania and Lakes Entrance, Victoria. They may be a second species as the propagules are half the size of those of the S. Australian specimens, the threads are narrower and pericentral cells more elongate.

Description in the Benthic Flora Part IIID, pages 187, 190
Details of anatomy



Polysiphonia propagulifera (A33804 slide 5887), stained blue and viewed microscopically at different magnifications

1. forked branches with bands of pericentral cells (arrowed), terminal trichoblasts (*trich*) and stalked propagules (*prop*)
2. cross section of a branch showing the central filament (*c fil*) and 4 flanking cells (pericentral cells, 1-4)
3. stalked propagule and box-like shaped pericentral cells (arrowed)

4.

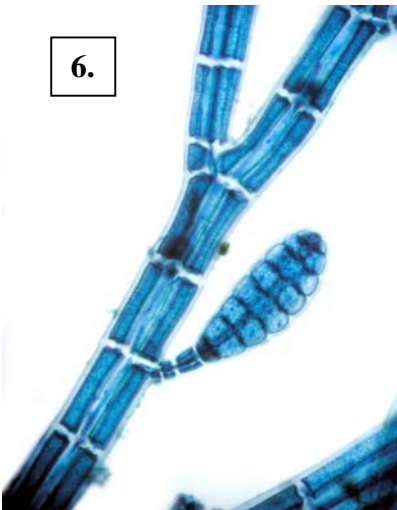


Polysiphonia propagulifera
Womersley, A33804

4. specimen from Troubridge I., S. Australia, 23m deep with tendrils arrowed
5. slide 5787 stained blue and viewed microscopically, showing detail of a tendril with smaller pericentral cells and rhizoids (*rh*) arising on the inside of the coil
6. a specimen, (A41684, slide 4292), from Satellite I., D'Entrecasteaux Tasmania, showing smaller propagule, narrower threads and more elongate pericentral cells than the S. Australian specimens



6.



5.

