

Polysiphonia brevisegmenta Womersley

A SPECIES WITH FEW RECORDS

45.940.00

Techniques needed and plant shape



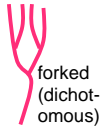
MICRO PLANT



epiphyte



filament



forked (dichotomous)

Classification

*Descriptive name

Features

Special requirements

Division: Rhodophyta; Family: Rhodomelaceae; Tribe: Polysiphonieae
squat-segmented red threads

plants found as tiny red tufts on the green siphonaceous alga, *Codium capitulatum*

view microscopically to find

- threads **forked** several times (dichotomous), ending in branched, colourless “hairs” (**trichoblasts**), each central cell flanked by 4 squat pericentral cells (**5x wider than long**) forming **compressed segments** along the length of each thread
- cystocarps the products of fertilisation, **egg-shaped** with an opening (ostiole) at the tip, on a **very short** stalk (pedicel),
- male structures (spermatangial heads in **clusters** at plant tips, replacing a trichoblast, **no** thread extending beyond the tip

Occurrences

Usual Habitat

Similar Species

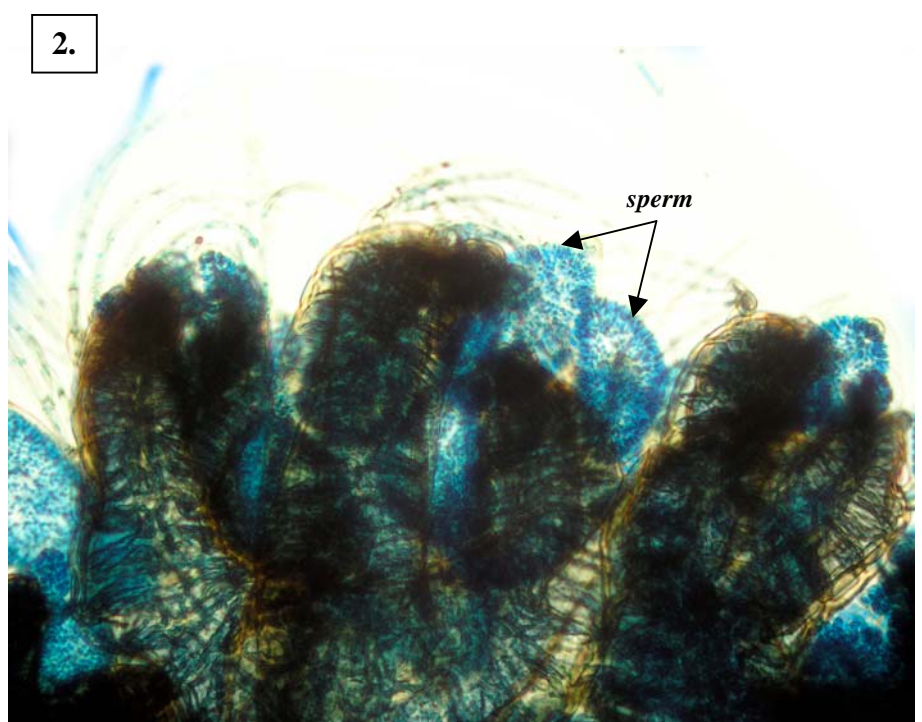
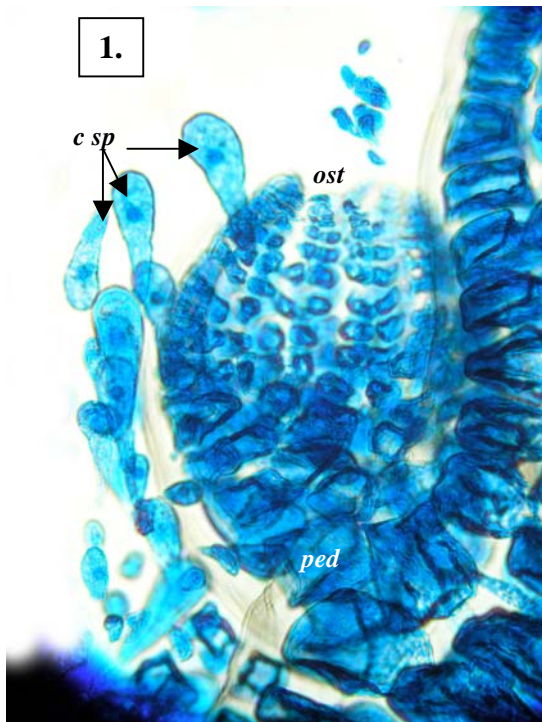
Elliston, S. A., but reported also from Lord Howe I.

on the green siphonaceous alga, *Codium capitulatum* in the upper subtidal

similar to *Polysiphonia forfex* in the compressed segments, but that species has **6** flanking (pericentral) cells, is **larger** and an epiphyte of larger brown and red algae

Description in the Benthic Flora Part IIID, pages 179, 180-161

Details of anatomy



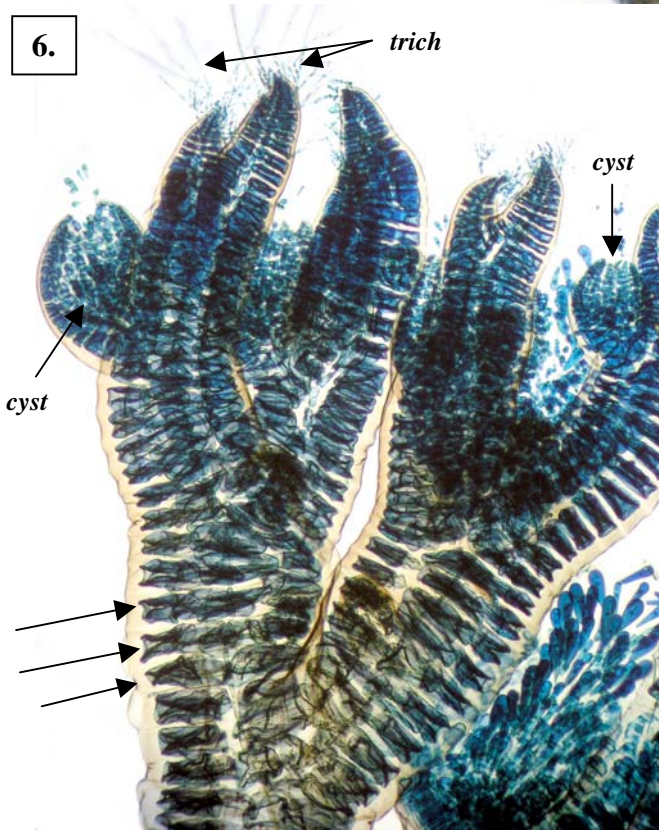
Polysiphonia brevisegmenta A32615 slide 1566 stained blue and viewed microscopically

1. cystocarp with very small stalk (pedicel, *ped*), opening (ostiole, *ost*) at the tip and club-shaped carpospores, *c sp* (extruded from inside the cystocarp)
2. male structures (spermatangial clusters, *sperm*) at the tips of branches (replacing trichoblasts)

3.



6.



Polysiphonia brevisegmenta A32615

3. whole plants on *Codium capitulum* mounted on a piece of mica
4. specimen stained blue and viewed microscopically showing forked upper threads, squat segments (arrowed), colourless branched "hairs" (trichoblasts, *trich*) at the tips, and the products of fertilisation (cystocarps, *cys*)

* Descriptive names are inventions to aid identification, and are not commonly used
 "Algae Revealed" R N Baldock, S Australian State Herbarium, May 2007