

Techniques needed and plant shape

Classification

Phylum: Rhodophyta; Order: Ceramiales; Family: Ceramiaceae;
Tribe: Pterothamnieae

***Descriptive name**

slender threads

Features



plants rose-red, upright, slender (sometimes drying brown), 40-80mm tall, main branches flat-branched with hair-like side branches

Special requirements

view microscopically to find

- upright main branches (axes) of large, forked, unclad (*ecorticate*) cells flat-branched only in the *upper* parts of the plant
- 2 (or 4) opposite, narrow, *hair-like* side branchlets from each axial cell, *equal* in size, *initially* one-sided, finally *opposite*, some ending in *coiled* threads, acting as rhizoids for attachment, numerous, bright gland cells, *protruding* at an angle from the branchlet cells
- *stalked* tetrasporangia on lower cells of whorl branchlets, dividing eventually into 2 opposite pairs of spores (*decussate*).

Occurrences

Fitzgerald Bay, near Pt Lowly, and 20km WSW of Outer Harbour, S Australia

Usual Habitat

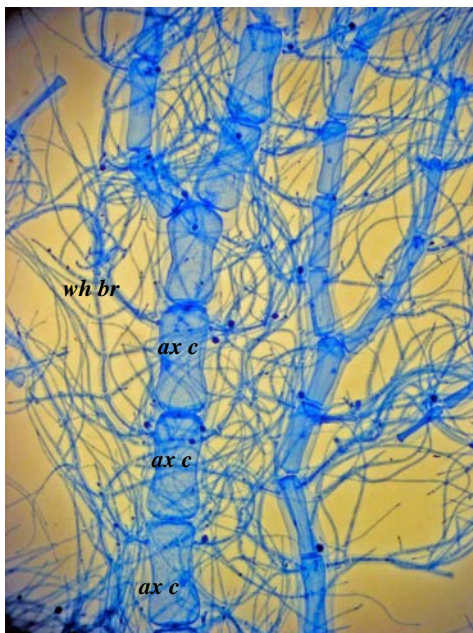
14m deep on a tyre reef and 22-25m deep on old shells

Similar Species

other *Pterothamnion* species with *equal-sized* whorl branchlets especially *P. ramulentum* which has coiled branchlet ends but these species have shorter branchlets.

Description in the Benthic Flora Part IIIC, pages 147-148

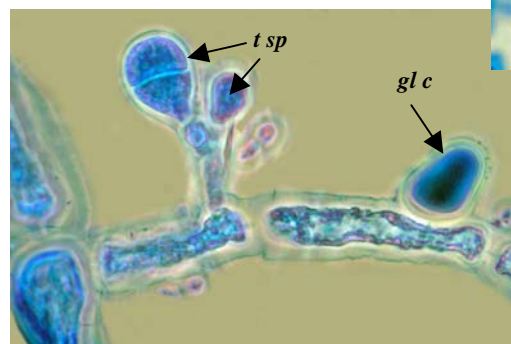
Details of Anatomy



1.

3.

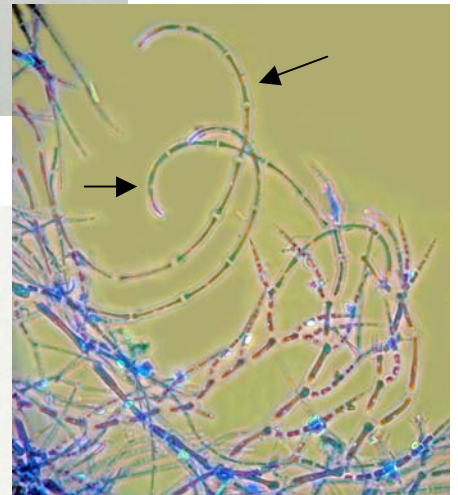
2.



- 1-3. *Pterothamnion flexile* A46637 slide 5357 stained blue and viewed microscopically
1. main branches (axis) of large, naked (ecorticate) cells (*ax c*) with 2 fine, hair-like whorl branchlets (*wh br*) from each cell
 2. stalked tetrasporangia commencing to divide in 2 opposite rows (decussate) and a prominent gland cell (*gl c*) protruding from a whorl branchlet cell
 3. tips of a whorl branchlet showing the initial one-sided branching pattern (arrowed) (A46637 slide 11036)



4.



6.



5.

Pterothamnion flexile (E M Wollaston) Athanasiadis & Kraft

- 4. A46637 from 20km WSW of Outer Harbour, S Australia, 22-25m deep on old shells
- 5. A59341 from Fitzgerald Bay, near Pt Lowly, S Australia, 14m deep on a tyre reef
- 6. specimen stained blue and viewed microscopically showing fine, curved ends (arrowed) to whorl branchlets and bright, egg-shaped glands (A46637 slide 11036)