



MACRO
PLANT



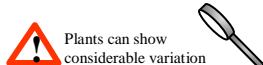
Techniques needed and shape

Classification

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

*Descriptive name

Features



fan-tufted red threads

plants soft, light red, 50-230mm tall, of forked main branches consisting of cells just visible to the unaided eye, about 4 times longer than wide, bearing **regular**, alternating **fan-like** side tufts

Occurrences

from near Garden I., W Australia to Western Port, Victoria

Usual Habitat

on other larger or on seagrass, generally in deep water (12m)

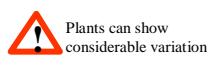
Special requirements



view microscopically to find

- **regular** fan-shaped side tufts with significantly **narrower** cells to those of the main branches (axes), apical cells coming to a point (**mucronate**), downward growing rhizoids usually near the base, some attached to axes by many-branched pads (haptera)
- in sporangial plants, tetrasporangia on small stalks (**pedicels**), usually single on **one side** of the upper ends of cells near the ends of fan-shaped side tufts, occasionally on rhizoids
- **basket-shaped** mature female structures (cystocarps) towards the ends of fan-shaped tufts, sometimes flanked by extremely fine branched hairs, each with a swollen basal cell bearing a ring (**involute**) of **12-13** incurved cells
- in male plants, **head-shaped masses** of minute spermatangia, on club-shaped stalks (**pedicels**) towards the ends of fan-shaped side tufts

Similar Species

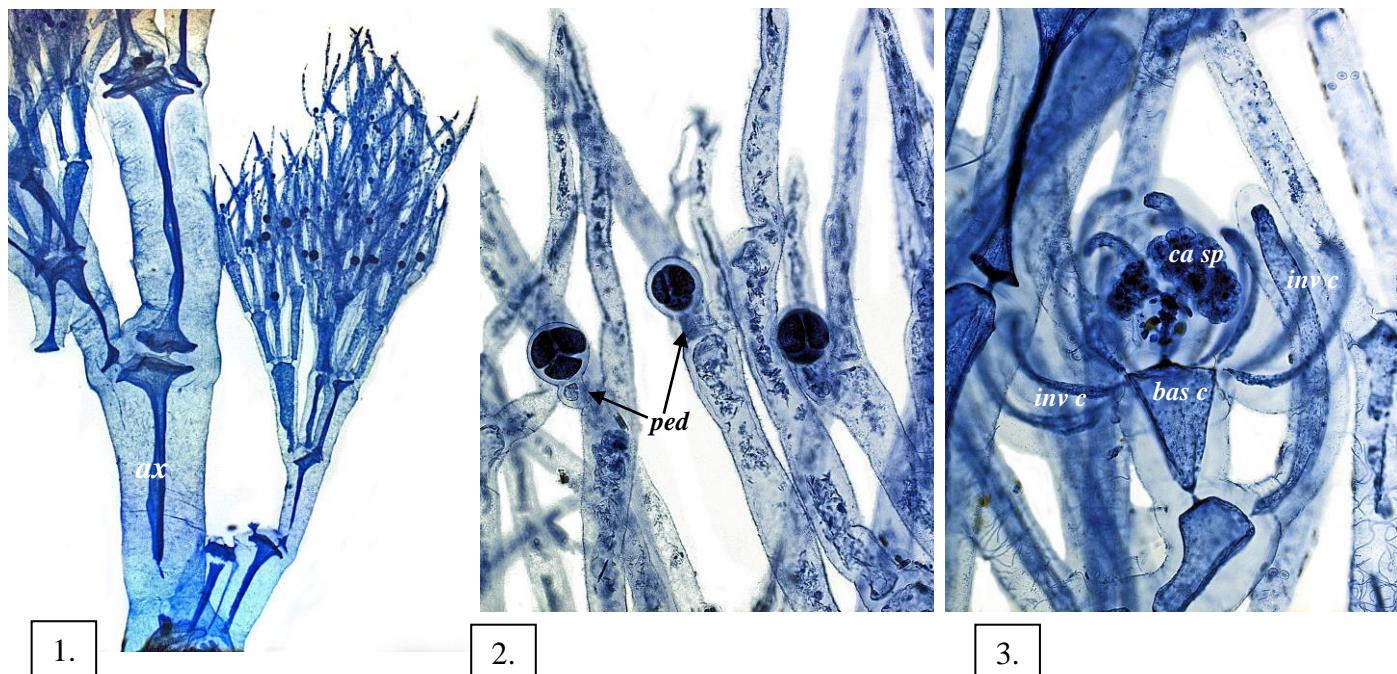


small plants with few side tufts are virtually indistinguishable from *Anotrichium elongatum* unless tetrasporangia (single in *A. lichenophorum*, in groups of 3-7 in *A. elongatum*) are present.

Description in the Benthic Flora

Part III C, pages 347-349, 350

Details of Anatomy



1.

2.

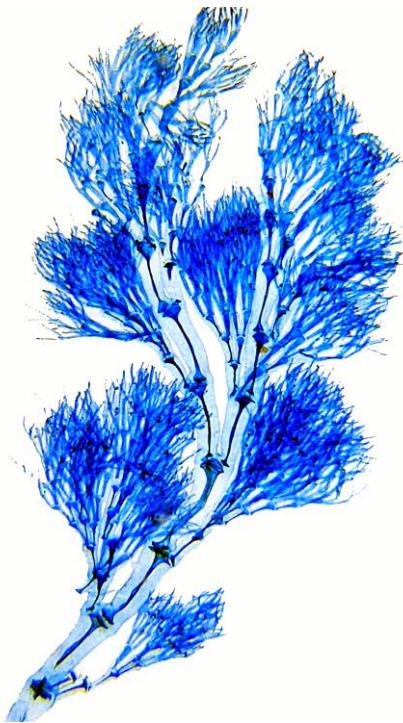
3.

Anotrichium lichenophorum stained blue and viewed microscopically:

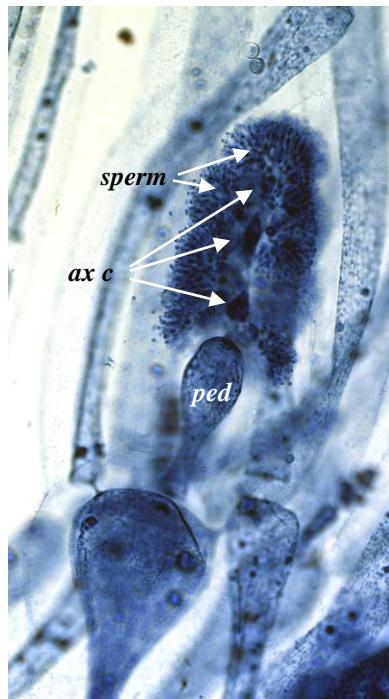
1. main branch (axis, *ax*) and fan-shaped side tufted bearing tetrasporangia, showing the sudden decrease in width of cells (slide 3147)
2. **solitary** sporangia on short stalks (pedicels, *ped*) (slide 3145)
3. mature female structure (cystocarp): swollen basal cell (**bas c**), ring of about 11 in-turned cells (**involucre, inv c**), masses of spores (carposporangia, *ca sp*) (slide 3148)

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

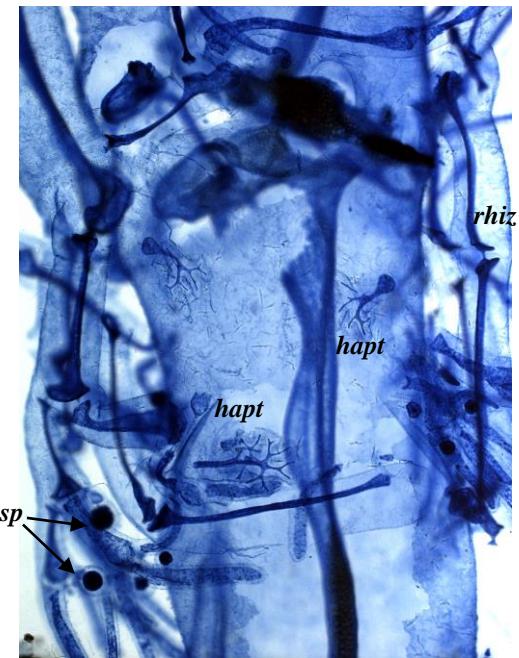
"Algae revealed" R N Baldock, State Herbarium S Australia, November 2007; revised July 2014



4.



5.



6.



Anotrichium lichenophorum (Harvey) Baldock, (#4-#6 stained blue and viewed microscopically at different magnifications):

4. a specimen from Seal Bay, Kangaroo I., showing the regular alternating pattern of fan-shaped side tufts (A28579, slide 3147)
5. spermatangial head (slide 3148): club-shaped stalk (pedicel, *ped*), central string of cells (*ax c*), clusters of spermatangia (*sperm*)
6. lower axis (slide 3147): downward growing rhizoids (*rhiz*) ending in much-branched attachment pads (haptera, *hapt*) (attached to the sheath of the axial cell), tetrasporangia (*t sp*) in an anomalous downward-pointing side tuft
7. from Seal Bay, Kangaroo I., S Australia A28579