Techniques needed and shape

Classification
*Descriptive name
Features

Phylum: Phaeophyta; Order: Sphacelariales; Family: Sphacelariaceae

Plants brown, of dense tufts of feathery (pinnate) threads up to 12mm tall, on Cystophora botryocystis

Occurrences

Only one specimen known, from Brighton, Pt Phillip bay, Victoria, but possibly more widespread due to its diminutive nature

Usual Habitat

On Cystophora botryocystis

Special requirements

View microscopically to find

- Feathery (pinnate) branching
- Apical cells with dense contents but unusually small for this species
- Filaments with cells divided lengthwise and in bands (segments). Cells of some segments divide again (with secondary transverse or cross walls)
- Single-compartmented (unilocular) sporangia in rows of 2-5 on upper sides of short side branches

Similar Species

Distinctive because of the pinnate branching and rows of sporangia

Description in the Benthic Flora

Part II, pages 149, 151-152

Details of Anatomy

1. Opposite, paired (pinnate) branching pattern
2. Characteristic rows of single-compartmented (unilocular) sporangia (uni sp) on the upper (adaxial) side of a short side branch
3. Banding (segmentation) and secondary divisions across cells (arrowed)

Species names used in the Flora have been retained as they rely solely on the shape and anatomy of plants. The genus *Herpodiscus* has been proposed for some species of *Sphacelaria* by Draisma, S. G. A., Prud’Homme van Reine, E. F. & Kawai, H. (2010). A revised classification of the Sphacelariales (Phaeophyceae) inferred from a *psbC* and *rbcL* based phylogeny. *European Journal of Phycology* 45(3): 308-326. It is based on genetic markers and life cycle considerations, which, of course, are unavailable to field workers.

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

“Algae Revealed” R N Baldock, State Herbarium of S Australia, September 2005; revised November 2014
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*Sphacelaria spuria*
Sauvageau, (A18448, slide 0508) removed from *Cystophora botryocystis*, stained blue and viewed microscopically.
The main branches (axes) are about 30μm wide.