**Sphacella subtilissima** Reinke

**AN INTRODUCED OR ADVENTIVE SPECIES**

**A SPECIES WITH FEW RECORDS**

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**Techniques needed, and shape**

**Classification**

*Descriptive name*

Phylum: Phaeophyta; Order: Sphacelariales; Family: Sphacelariales

**Features**

plants dark brown, drying lighter brown, forming felty tufts about 8mm long on other Brown algae (*Bellotia* in S. Australia)

**Occurrences**

originally from Western Mediterranean, found in S. Australia on algae at Pearson I. and Investigator Strait

**Usual Habitat**

on *Bellotia eriophorum*, 16-34m deep

**Special requirements**

tease out threads from the host plant and view microscopically to find

- apical cells have *dense contents*, a characteristic of the Order Sphacelariales
- branching filaments consist of *single* lines of cells, unusual for this Order in which longitudinal walls forming bands of cells are common
- single-compartmented spore sacs (*unilocular sporangia*) are borne on a *single* stalk cell or at the tips of short branches

**Similar Species**

many filamentous brown algae, but *Sphacella* has distinctive apical cells, disc-like chloroplasts, unique sporangia and appears to be restricted to a single host species

**Description in the Benthic Flora**

Part II pages 147-150; Part IIID Appendix (of introduced species)

**Details of Anatomy**

*Sphacella subtilissima* (A33698 slide 2816) stained blue and viewed microscopically:

1. filaments with single-compartmented sporangia and clusters of bright bodies (physodes) in cells
2. apical cells with dense contents

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

“Algae Revealed” R N Baldock, State Herbarium S Australia, September 2005; revised November 2014
Sphacella subtilissima Reinke,

3 on Bellottia eriophorum from Investigator Strait, S. Australia, 34m deep (A39199) (arrowed)
4. detached plant (A33698, slide 2816) from Pearson I., S. Australia, 16-23m deep
5. microscope view of stalked single-compartmented spore sacs (A33698, slide 2816)

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