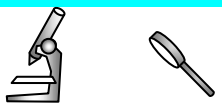
Sphacella subtilissima Reinke

AN INTRODUCED OR ADVENTIVE SPECIES

A SPECIES WITH FEW RECORDS

34.320

Techniques needed, and shape



Classification Phylum: Phaeophyta; Order: Sphacelariales; Family: Sphacelariales

***Descriptive name** micro felt tufts

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

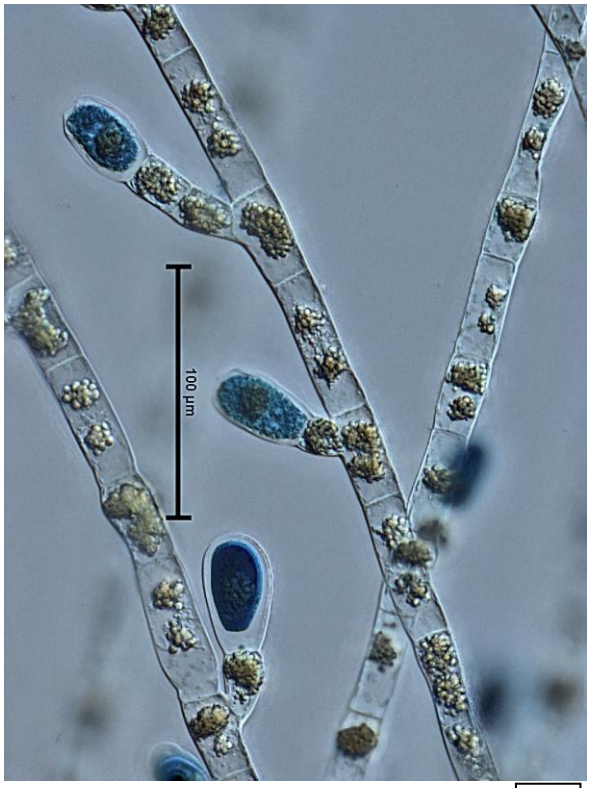
Special requirements tease out threads from the host plant and view microscopically to find

- 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

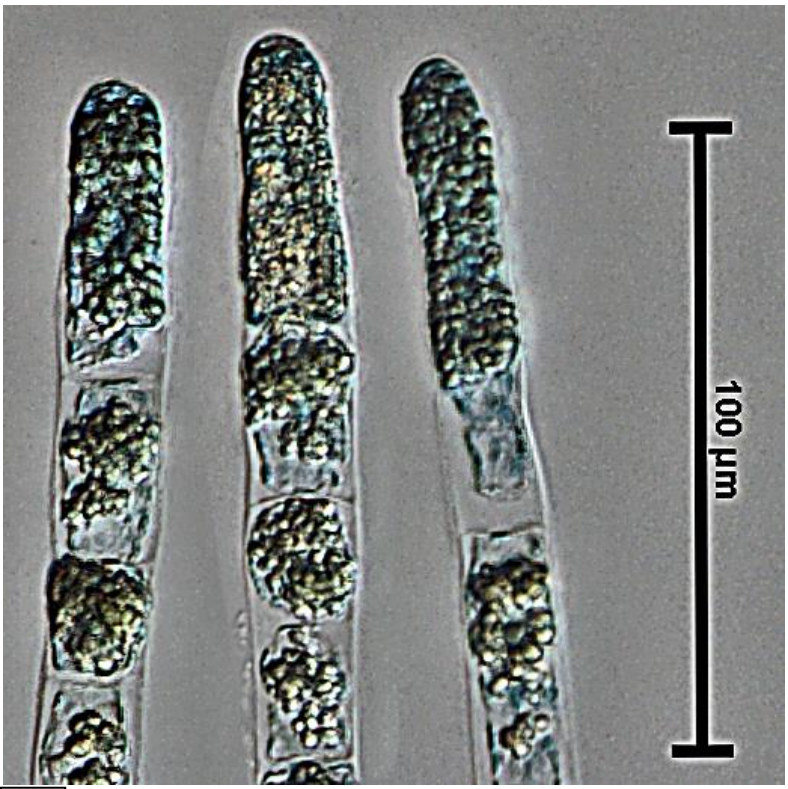
Similar Species many filamentous brown algae, but *Sphacella* has distinctive apical cells, disc-like chloroplasts, unique sporangia and appears to be restricted to a single host species

Description in the Benthic Flora Part II pages 147-150; Part IIID Appendix (of introduced species)

Details of Anatomy



1.



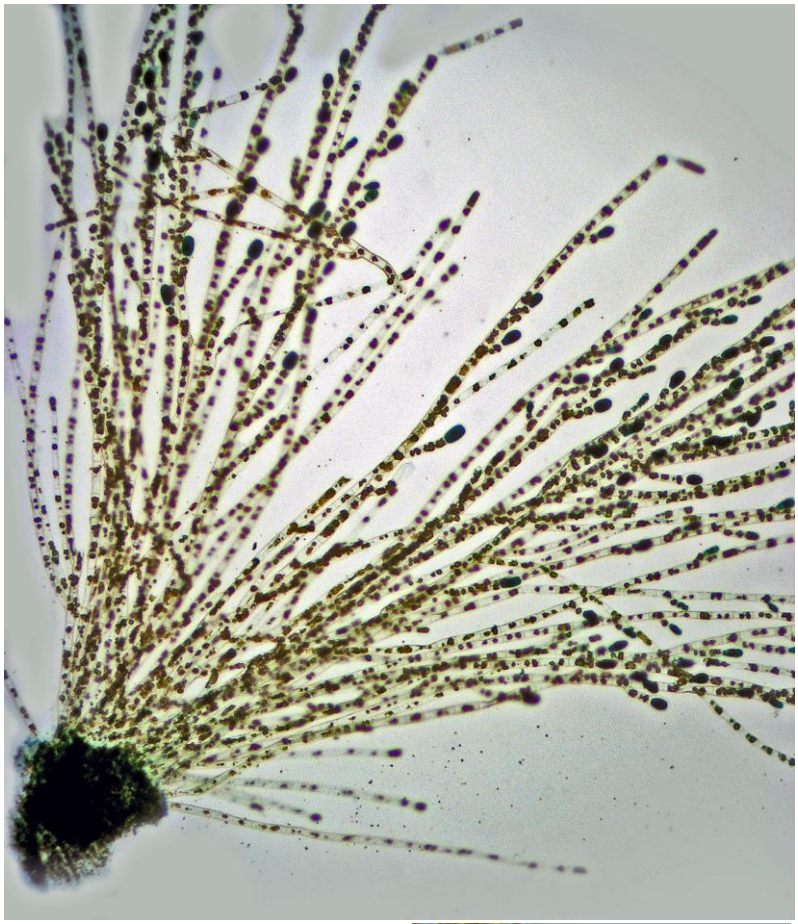
2.

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

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

3.



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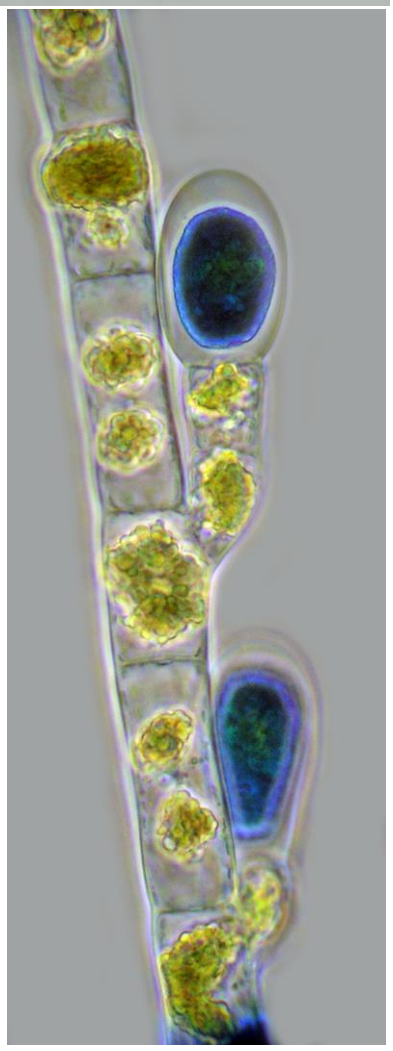

5.

Sphacella subtilissima Reinke,
3 on *Bellotia 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)