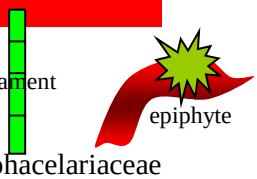
Sphacelaria §(*Herpodiscus*) *multiplex* Womersley

A SPECIES WITH FEW RECORDS

34.320



Techniques needed and shape

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

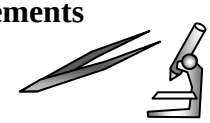
***Descriptive name** *Platythalia* tufts

Features plants form brown, dense, tangled threads about 10mm long

Occurrences only known from Sarge Bay, E. side of Cape Leeuwin, W. Australia, but possibly more widespread due to its diminutive nature

Usual Habitat on *Platythalia*

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

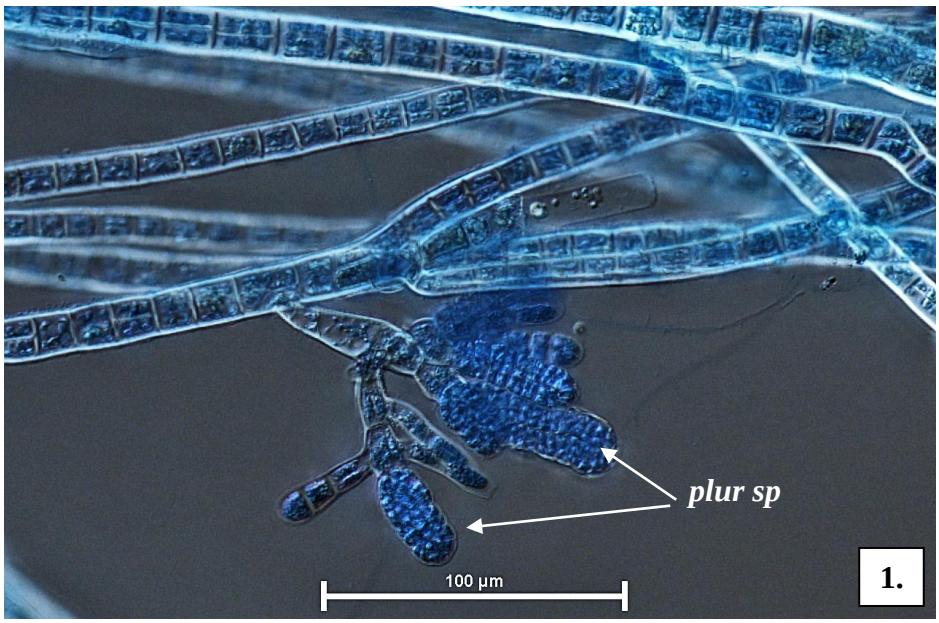


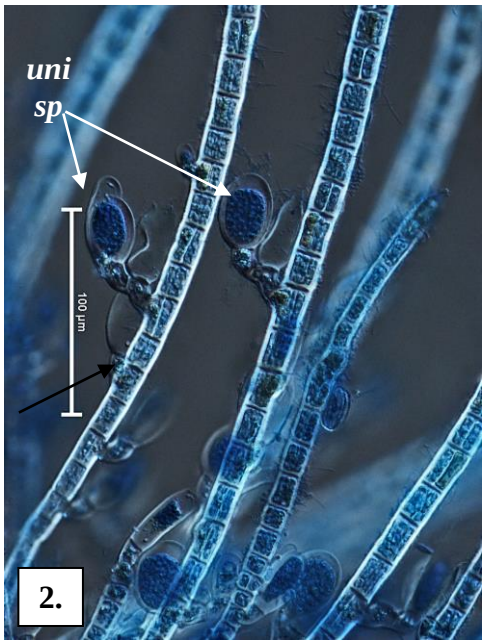
- apical cells with ***dense*** contents, ***narrow*** filaments (18-22µm across) of cells divided lengthwise into bands (***segments***) some divided again with ***cross*** walls; prominent fine, colourless ***hairs***
- single-compartmented (unilocular) sporangia on one-celled ***stalks*** (pedicels)
- many-compartmented (plurilocular) sporangia in ***clusters*** of 5-20 in short side branch systems in the lower parts of the plant

Similar Species other *Sphacelaria* species, but *S. multiplex* has very narrow filaments, long hairs, and unique clusters of plurilocular sporangia

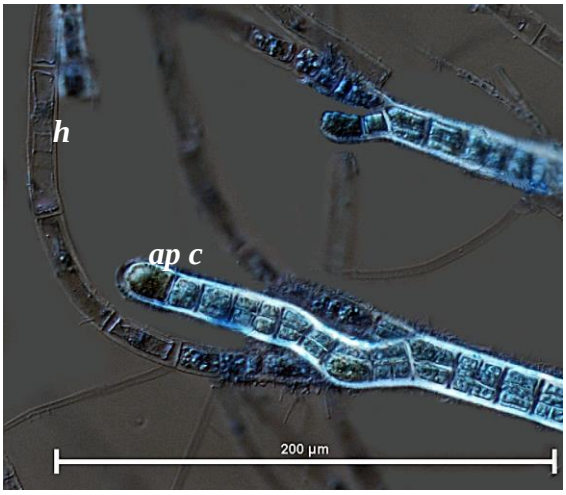
Description in the Benthic Flora Part II, pages 152-153

Details of Anatomy





3.



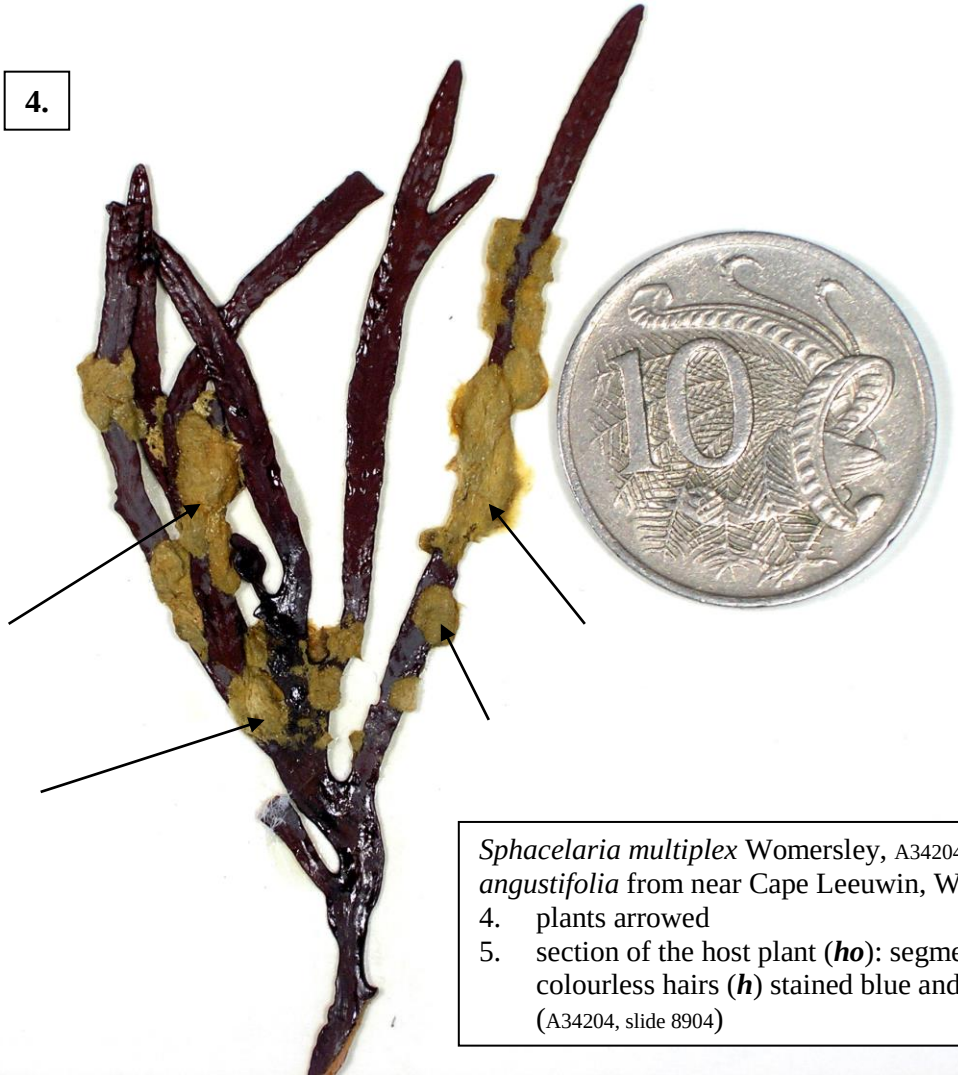
§Species names used in the Flora have been retained as they rely solely on the shape and anatomy of plants. The genus *Herpodiscus* has been proposed for some species of *Sphacelaria* by Draisma, S. G. A., Prud'Homme van Reine, E. F. & Kawai, H. (2010). A revised classification of the Sphacelariales (Phaeophyceae) inferred from a *psb*C and *rbci* 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.

Sphacelaria multiplex, (A34204, slide 8904) stained blue and viewed microscopically

1. cluster of many-compartmented sporangia (plurilocular sporangia, ***plur sp***) on a characteristic short, side branch-system
2. single-compartmented (unilocular) sporangia (***uni sp***) on single-celled stalks (pedicels)
3. highly magnified filament tip showing the apical cell (***ap c***) with dense contents, cells in bands (segments), hairs (***h***)

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

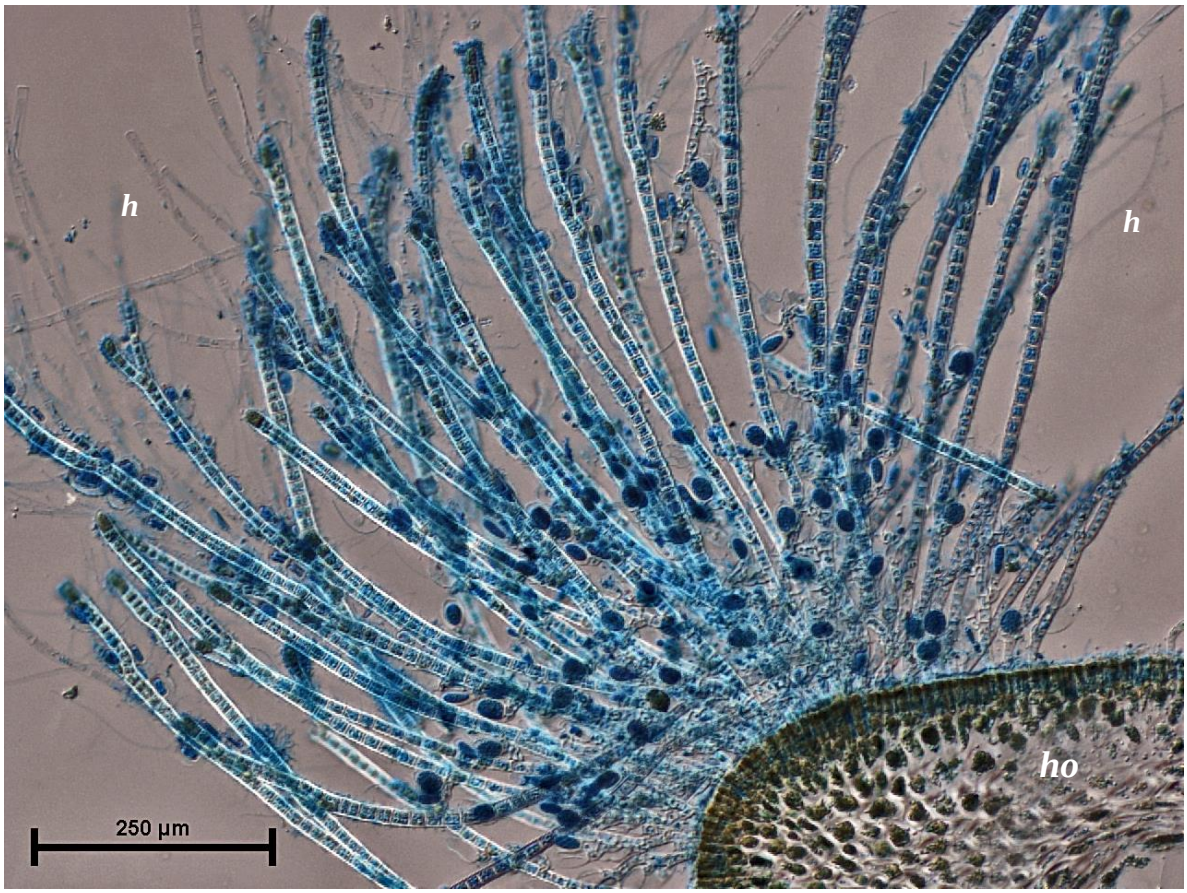
4.



Sphacelaria multiplex Womersley, A34204, on *Platythalia angustifolia* from near Cape Leeuwin, W. Australia

4. plants arrowed
5. section of the host plant (***ho***): segmented filaments and fine colourless hairs (***h***) stained blue and viewed microscopically (A34204, slide 8904)

5.



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