Strepsithalia aemula
Womersley & S G Skinner

A SPECIES WITH FEW RECORDS

34.130

Techniques needed and plant shape

WARNING: Diagnosis is best left to experts

Classification Phylum: Phaeophyta; Order: Chordariales; Family: Leathesiaceae

***Descriptive name** micro threads

Features a ***tiny epiphyte*** of short branched threads barely emerging from the surface of the red alga threads of its host, *Helminthocladia*

Special requirements

tease out threads from the surface of the host and view microscopically to find

- ***branched*** outer (cortical) threads of cylindrical cells about as long as broad, mixed with ***occasional*** long, colourless hairs
- basal threads (*bas fil*) intermingled with the threads of the host
- single-compartmented (unilocular) sporangia ***about as tall*** as cortical filaments

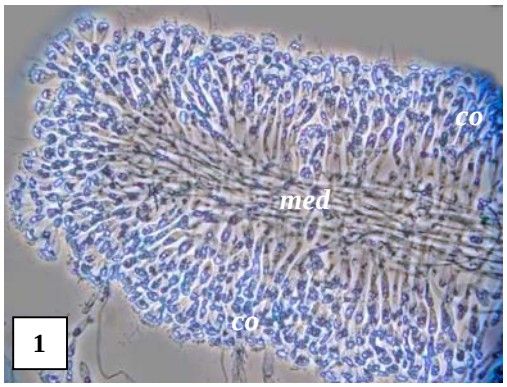
Occurrences only known from Sou' West River mouth, Kangaroo I., S Australia, but possibly more widespread and overlooked because of its size.

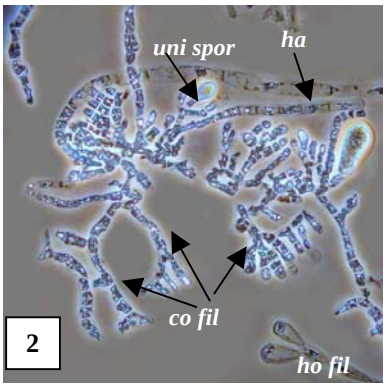
Usual Habitat in the lower intertidal on the red alga, *Helminthocladia australis*

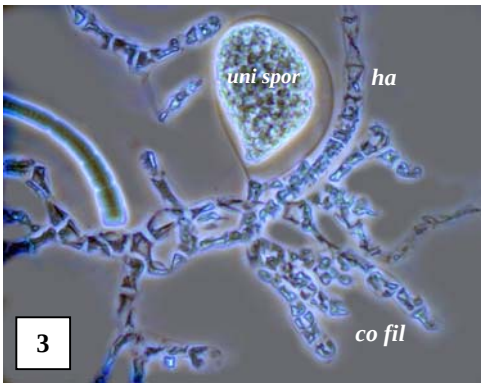
Similar Species other *Strepsithalia* sp and epiphytic members of the Leathesiaceae, (*Acrotrichium*, *Myriactula*). Details of the middle (medullary) and outer (cortical) layers are needed to separate the genera.

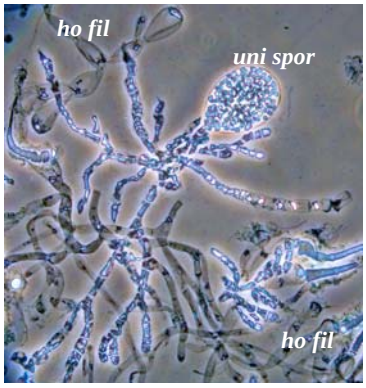
Description in the Benthic Flora Part II, pages 84, 87-88

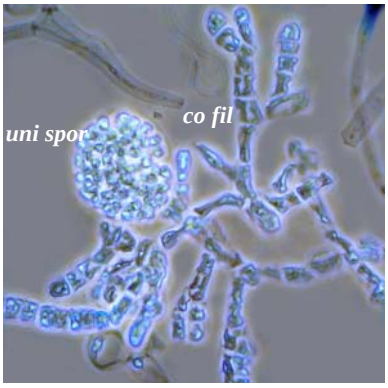
Details of Anatomy











Strepsithalia aemula and its host (A49564 slide 6263) stained blue and viewed microscopically at different magnifications.

1. lengthwise section of the *Helminthocladia* host showing the mass of central threads (medulla, *med*) and outer layer ending in club-shaped cells (cortex, *co*) of the host

2-5 fragments *Strepsithalia aemula* dissected from the outer filaments of its host, showing

- outer (cortical) filament of the host with a swollen or club-shaped end cell (*ho fil*)
- hair (*ha*), branched outer filaments (cortical filaments, *co. fil*) and single-compartmented spore sacs (unilocular sporangia, *uni spor*) as long as the cortical filaments of *Strepsithalia aemula*

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

"Algae Revealed" R N Baldock, S Australian State Herbarium, January 2007

Strepsithalia aemula Womersley & S G Skinner (A49564 slide 6263)

Dissected portion of a plant stained blue and viewed under phase contrast microscopy, showing

- outer (cortical) filament of the host with a swollen or club-shaped end cell (*ho fil*)
- hair (*ha*)
- branched outer filaments (cortical filaments, *co. fil*)
- branched basal filaments (*bas fil*)
- single-compartmented spore sacs (unilocular sporangia, *uni spor*) that are as long as the cortical filaments (a species characteristic)