Elachista claytoniae Skinner

A SPECIES WITH FEW RECORDS

34.110

Techniques needed and plant shape

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

***Descriptive name** Sargassum tufts

Features plants form tiny, basal cushion-shaped masses of threads about 0.5mm tall, on the basal leaves of *Sargassum*

Special requirements view microscopically the ***cushion shaped masses*** to find

- the colourless basal layer (medullary threads) and outer fringe of branched, brown (photosynthetic or assimilatory) cortical threads with fine filaments extending below the more compact mass
- absence of colourless hairs (no phaeophycean hairs)

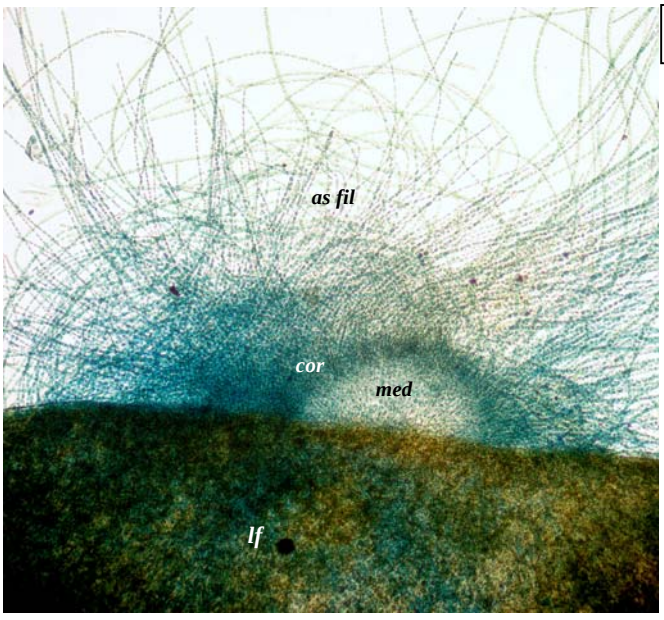
Occurrences only known on *Sargassum* basal leaves from Pt Phillip Heads, Victoria, but probably more widespread but unobserved because of its diminutive nature

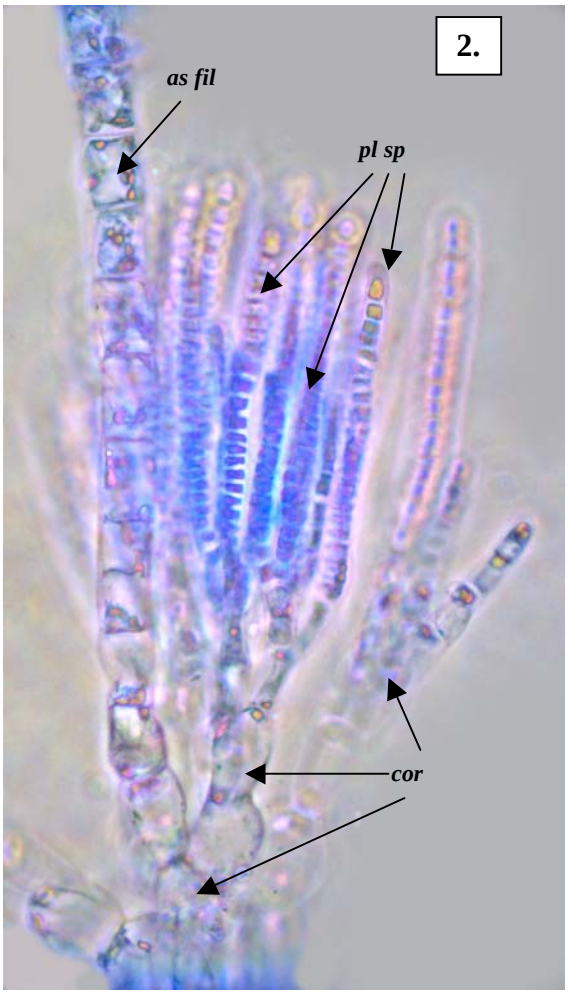
Usual Habitat on *Sargassum*

Similar Species other ***epiphytic*** members of the Chordariales such as *Halospongidion* and *Halothrix*.
The host plant can often be used to separate these groups.

Description in the Benthic Flora Part II, pages 78-80

Details of Anatomy



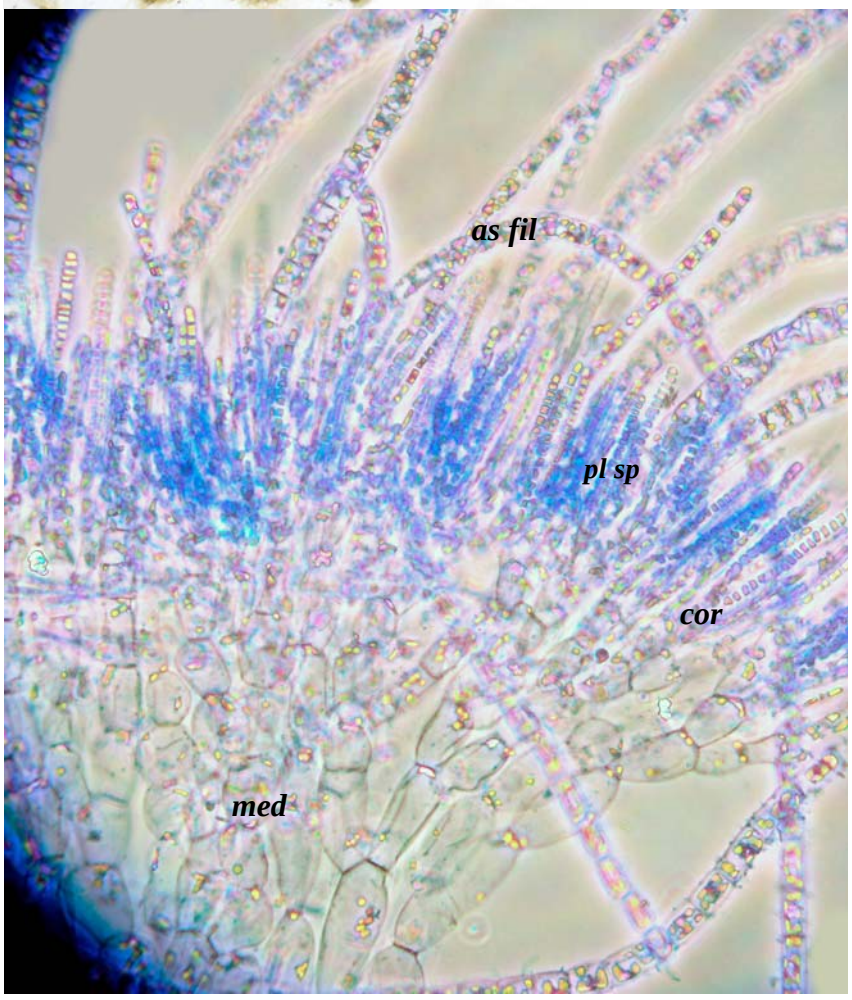


Microscope views of *Elasticha claytoniae* stained with blue (A50332 slide 6245)

1. side view of the cushion-shaped mass on a Sargassum leaf (*lf*) showing the colourless inner (medulla, *med*) layer, outer (cortical, *cor*) layer and long, emergent photosynthetic (assimilatory) filaments, (*as fil*)
2. highly magnified view of the outer (cortical) threads (*cor*), one continuing as an assimilatory filament (*fil*), and bearing sporangia with many compartments (plurilocular sporangia, *pl sp*) laterally

* Descriptive names are inventions to aid identification, and are not commonly used
"Algae Revealed" R N Baldock, S Australian State Herbarium, August 2005

Elachista claytoniae Skinner, A57874, (arrowed) on *Sargassum* basal leaves.



Elachista claytoniae, A50331, slide 6248: phase microscopy detail of cell layers, showing cortical filaments (***cor***) bearing sporangia with many compartments (plurilocular sporangia, ***pl sp***), assimilatory filaments (***as fil***),) and colourless medullary filaments (***med)***

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