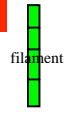


**Techniques needed and plant shape**



WARNING:  
diagnosis of this  
feature is best  
left to experts



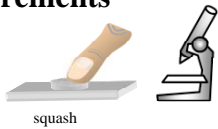
**Classification**

**\*Descriptive name**

Phylum: Rhodophyta; Order: Acrochaetales; Family: Acrochaetiaceae  
thread parasite of *Helminthocladia*

**Features**

**Special requirements**



plants consist of **microscopic** prostrate threads **mingled** with the outer forked branches of *Helminthocladia australis* and erect threads, often unbranched  
Squash a piece of the host, *Helminthocladia* species, and view microscopically the outer (cortical) host cells in which the parasite will be found. Notice:

- host threads **branched** several times, ending in **inflated**, club-shaped cells
- parasite plants of a very **thin** runner and erect thread of cylindrical cells, often unbranched; bunches of smaller cells (carposporangia) and stalkless, egg-shaped spores (monosporangia) scattered along the filaments may occur.

**Occurrences**

**Usual Habitat**



WARNING:  
diagnosis of this  
feature is best  
left to experts

known only from Antechamber Bay, Kangaroo I., S. Australia, probably more widespread but overlooked.

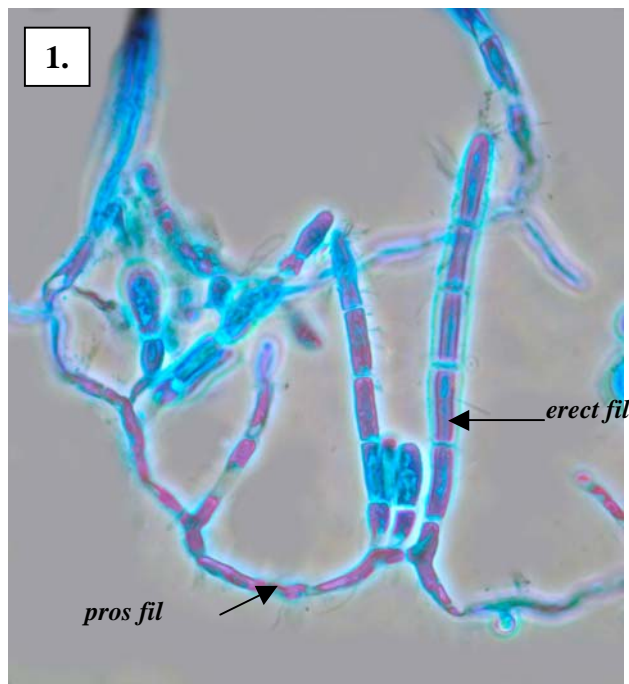
within tissues of *Helminthocladia australis* and *H. densa*, on jetty piles. The hosts can also be infested with *Audouinella liagorae*.

**Similar Species**

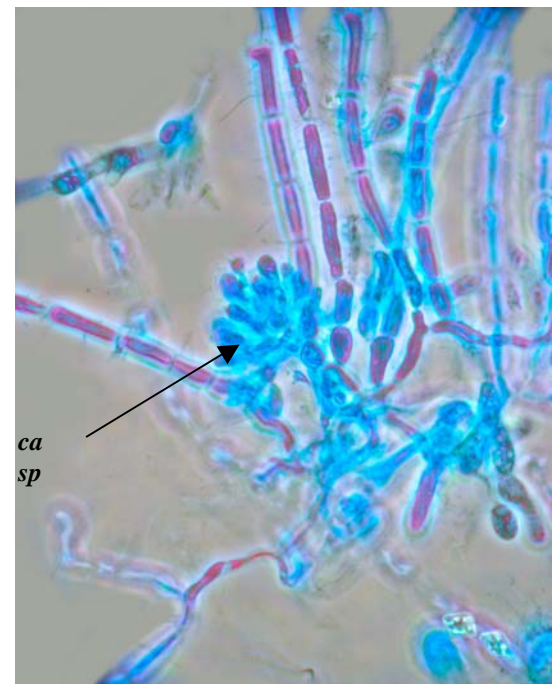
other endophytic *Audouinella* species. *A. blumii* has very **thin** prostrate runners.

**Description in the Benthic Flora** Part IIIA, pages 65-67

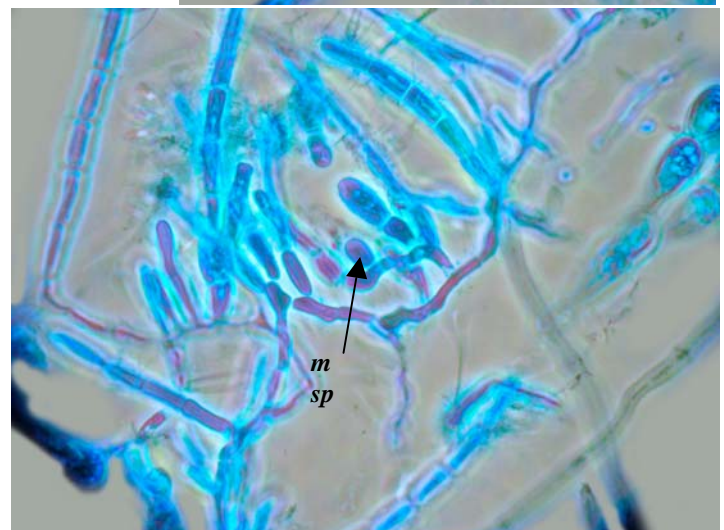
**Details of Anatomy**



2.



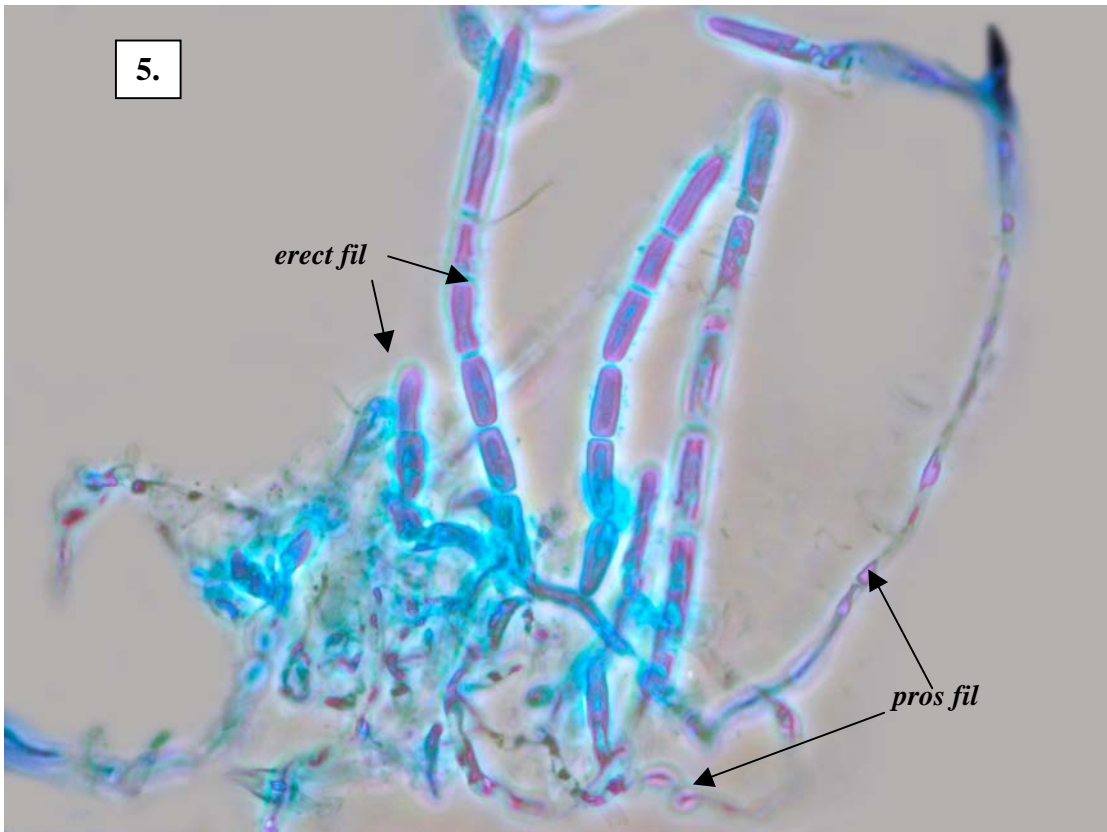
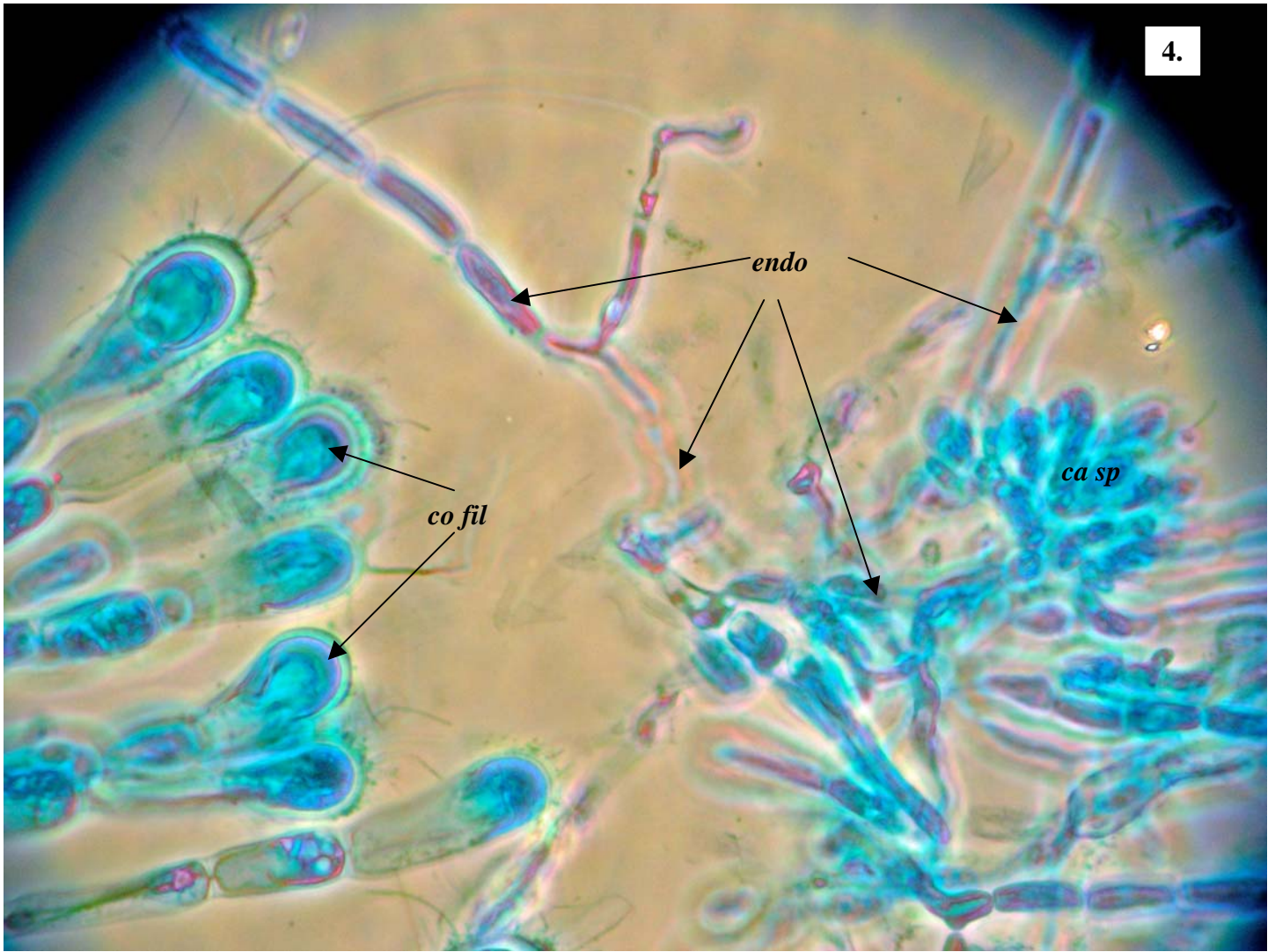
3.



*Audouinella blumii*, (A32121 slide 1731), teased out from the outer (cortical) layer of the host, stained blue and viewed microscopically at different magnifications

1. prostrate (*pros fil*) and erect (*erect fil*) threads showing the contrast in thickness
2. bunches of carposporangia (*ca sp*)
3. single monosporangium? (*m sp*)

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



*Audouinella blumii*,  
 Woelkerling A32121, slide  
 1731 from Antechamber  
 Bay, Kangaroo I., S.  
 Australia stained blue and  
 viewed microscopically at  
 different magnifications  
 4. comparison of filaments  
 of the outer layer of the  
 host (cortical filaments,  
*co fil*) with the  
 endophyte (*endo*)  
 portion of which shows  
 a bunch of  
 carposporangia (*ca sp*)  
 5. plant extracted from  
 host tissues, showing  
 the thin prostrate  
 threads (*pros fil*) and  
 erect filament (*erect fil*)

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