Myriactula filiformis
Womersley & Skinner

A SPECIES WITH FEW RECORDS

34.130

Techniques needed and plant shape

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

***Descriptive name** slime patches

Features cushion-shaped, slimy brown patches about 2mm across on *Cystophora monilifera*

Special requirements tease out and view microscopically a *spreading* slimy patch of the entwined threads that make up the plant body (thallus) to find:

- a basal layer of filaments that only ***slightly*** penetrates the host
- an extensive middle (medullary) made of ***slimy***, colourless, threads of ***ovoid*** cells becoming ***cylindrical*** outwardly
- an outer (cortical) layer with slightly swollen, ***loose***, coloured, (photosynthetic) threads of about 60 cells long, arising in the basal layer
- colourless (phaeophycean) ***hairs*** arising from the inner medullary filaments but extending well beyond the general plant body
- ***thin*** sporangia with many compartments (plurilocular sporangia) in single rows on candelabra-like (***corymbose***) branches forming a ***definite layer***

Occurrences only known from Aldinga, S. Australia but probably more widespread and unobserved because of its diminutive nature.

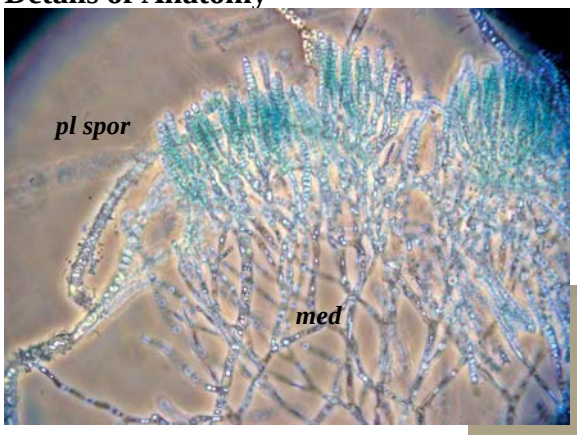
Usual Habitat on drift *Cystophora monilifera*

Similar Species other ***epiphytic/partially parasitic*** members of the Chordariales especially *Myriactula caespitosa*, but that species has significant host penetration, a smaller medulla and shorter assimilatory filaments. *M. filiformis* particularly resembles *Corynophloea* but this genus has closely associated (not free) cortical filaments embedded in mucilage.

The host plant (basophyte) can often be used to separate these groups.

Description in the Benthic Flora Part II, pages 93-95

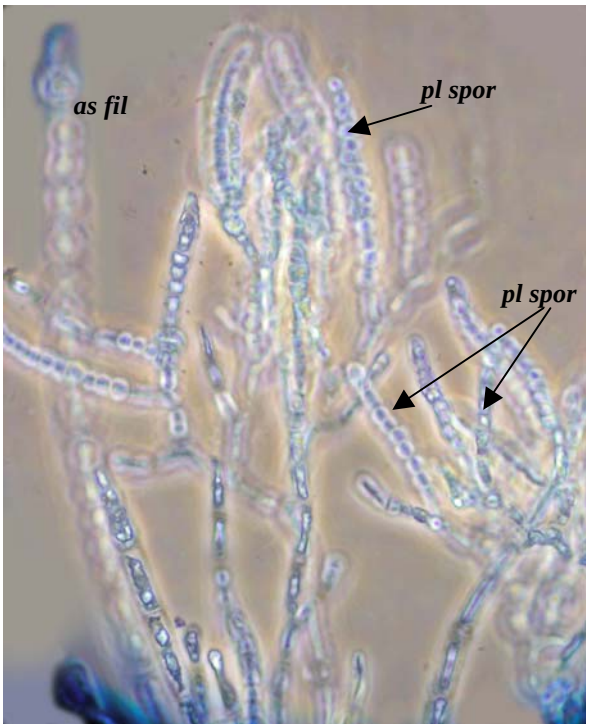
Details of Anatomy



1.

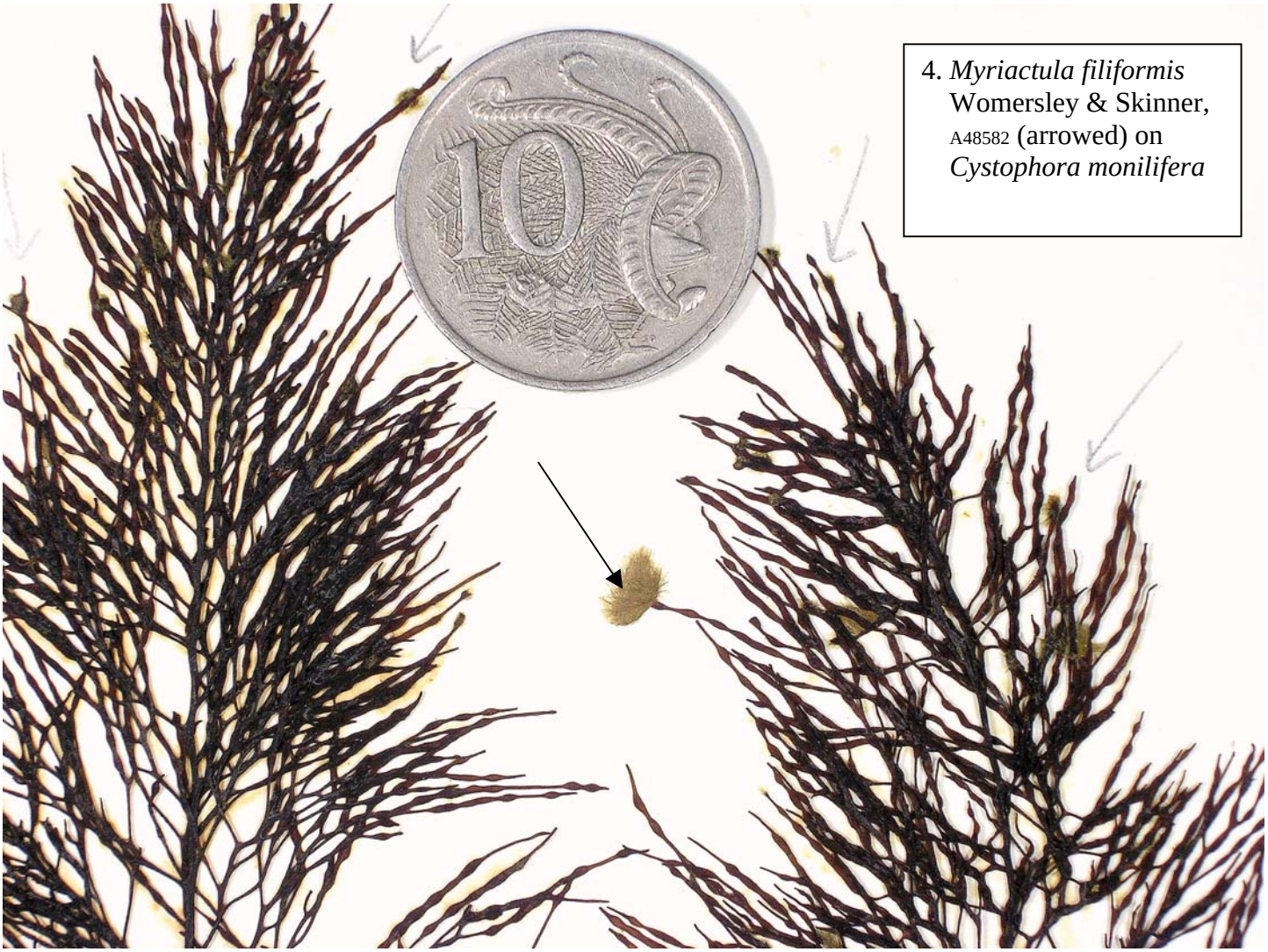
2.

3.

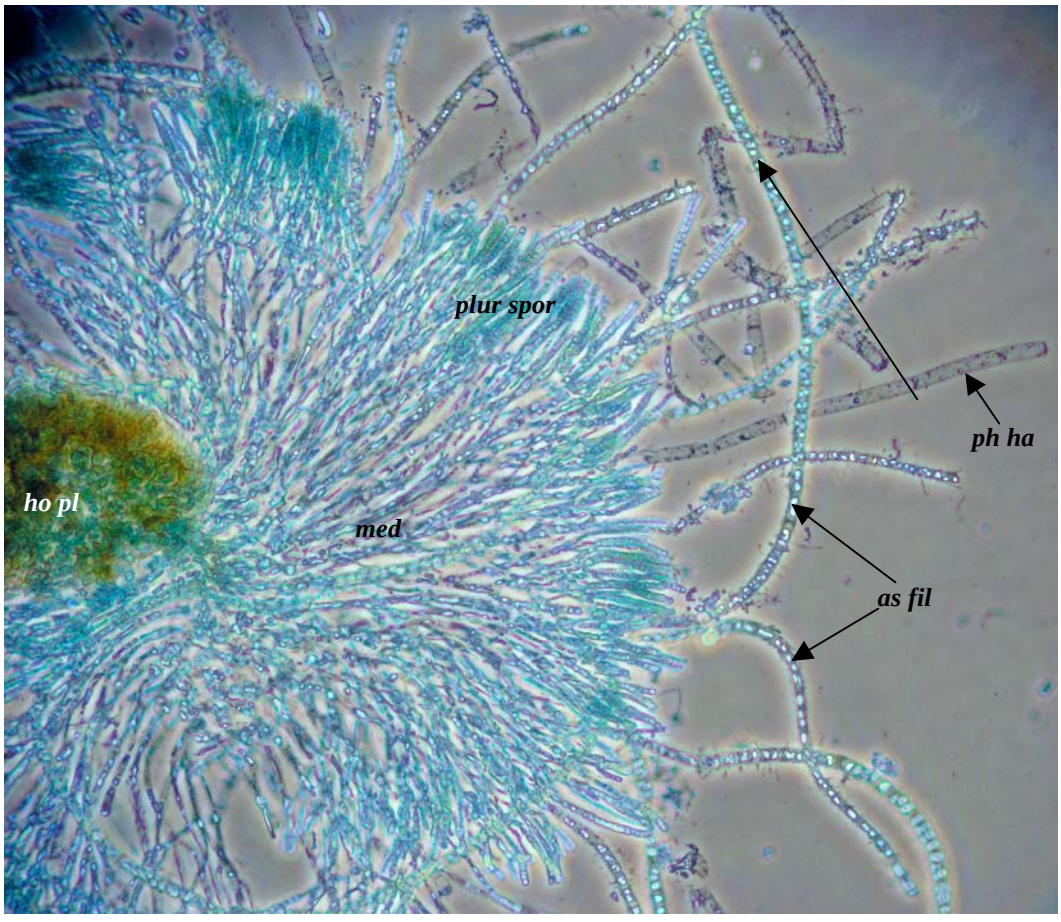


Fragments of *Myriactula filiformis*, (A48582, slide 6295), stained blue and viewed microscopically at different magnifications:
1. mass of middle filaments (medulla, *med*) and distinct layer of many-compartmented sporangia (plurilocular sporangia, *pl spor*) in the outer (cortex) layer
2. occasional short, many-compartmented sporangia (*sh spor*) on upper cortical filaments
3. detail of the plurilocular sporangia, (*pl spor*) arranged in a branching (corymbose) system and a photosynthetic thread (assimilatory filament, *as fil*)

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



4. *Myriactula filiformis* Womersley & Skinner, A48582 (arrowed) on *Cystophora monilifera*



5. Whole plant of *Myriactula filiformis*, A48582 slide 6295, attached to a piece of its host, stained blue and viewed microscopically, showing:-

- part of the host plant, *Cystophora monilifera* (*ho pl*),
- extensive middle part (medulla, *med*) of branching filaments,
- sporangial layer (*plur spor*),
- chains of coloured cells (assimilatory filaments, *as fil*)
- a few colourless hairs (phaeophycean hairs, *ph ha*)

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