



MACRO  
PLANT

Techniques needed and shape

Classification

Phylum: Phaeophyta; Order: Sporochnales; Family: Sporochnaceae

\*Descriptive name

brown hairy-tufts

Features

plants light brown, of several upright *cylindrical* stalks (axes) 60-160mm long covered in *hairs*, stubby side branches with terminal tufts

Special requirements

view microscopically to see the

- *terminal* tufts of hairs that continue the growth of the axis 3-7 cell above their bases
- *box-like* (pseudoparenchymatous) *inner cells*, and coloured photosynthetic *hairs* on the surface in a cross section

Occurrences

only known from 2 sterile collections in deep water: Investigator Strait and Waldegrave I., S. Australia

Usual Habitat

a deep water species (22m, 31m)

Similar Species

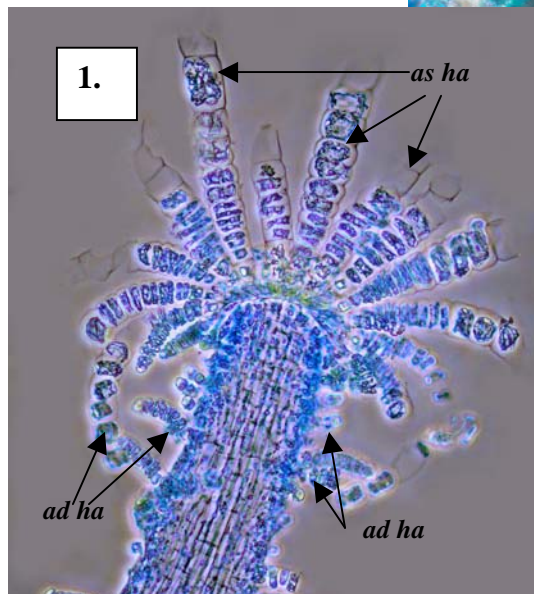
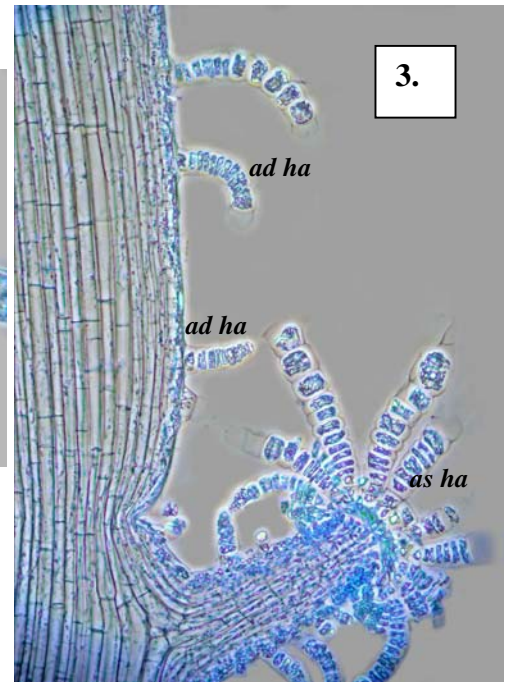
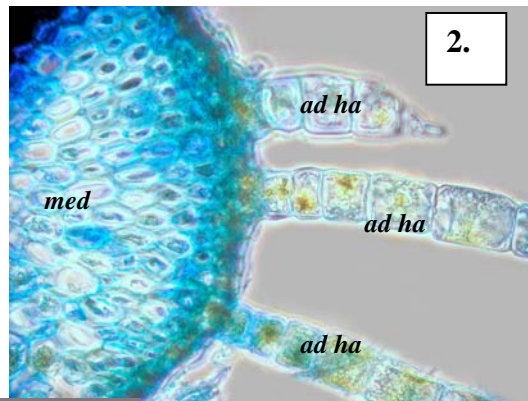
similar to other members of the Sporochnaceae but in *S. tomentosum*, surfaces are covered with simple coloured hairs

Description in the Benthic Flora Part II, pages 273-277

Details of Anatomy

Various magnifications of specimens (A38180, slide 9961) stained with aniline blue.

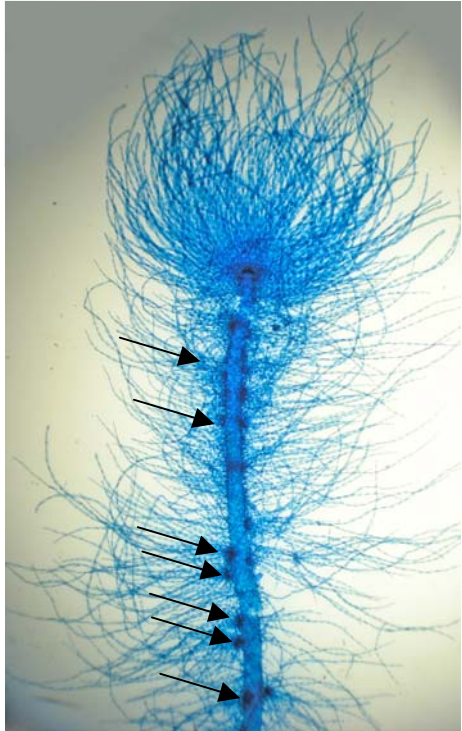
1. section through an apical tuft of photosynthetic (assimilatory) hairs (*as ha*) that divide at their base, and scattered hairs, formed later (adventitious hairs *ad ha*)



2. cross section of a stalk with a medulla of box-like cells (*med*), and adventitious hairs (*ad ha*)
3. longitudinal section showing a short side branch with an apical tuft of assimilatory hairs (*as ha*) that divide at their bases, and short adventitious hairs (*ad ha*) that give the plant an overall hairy or tomentose appearance
4. highly magnified assimilatory hair showing minute disc-shaped plastids



Two magnifications of *Sporochnema tomentosum* Womersley, A38180, 31m deep in Investigator Strait, S. Australia



**Left:** *Sporochnema tomentosum*, A38180, slide 9961, stained with aniline blue, showing the hairy surface due to the many short side branches with apical tufts (arrowed) and numerous simple adventitious hairs



\* Descriptive names are inventions to aid identification, and are not commonly used  
Prepared September 2005