



MACRO PLANT



Techniques needed and plant shape

Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Dumontiaceae

Descriptive name

\*red slime strands

Features

plants 50-200 mm tall, spore plants larger and less branched than sexual plants, of *soft*, red, *slimy*, cylindrical strands branched irregularly several times, branches narrowing from base to tips

Special requirements



1. view the tips of the strands microscopically to find:

- a **single** but inconspicuous central thread of cells (axial filament) runs through strands
- **each** filament cell produces a ring of **4** branched side threads radiating outwards and ending in chains of small making up a **compact** outer layer (cortex) bearing colourless long, hairs and thick-walled **icicle-like** short hairs
- **extremely fine** threads (rhizoids) from the inner (medullary) cells



zonate

2. large tetrasporangia in the cortex of spore plants, divided across (zonately)

Occurrences

West Coast SA to Victoria and around Tasmania

Usual Habitat

on rock or the sea grass *Amphibolis*, 2-17 m deep

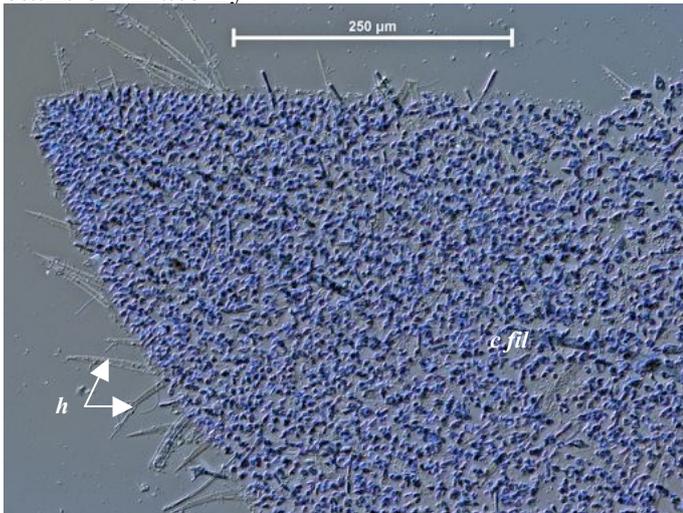
Similar Species

*Dudresnya* but the cortex of that species has loosely arranged cells, icicle-shaped hairs *absent*

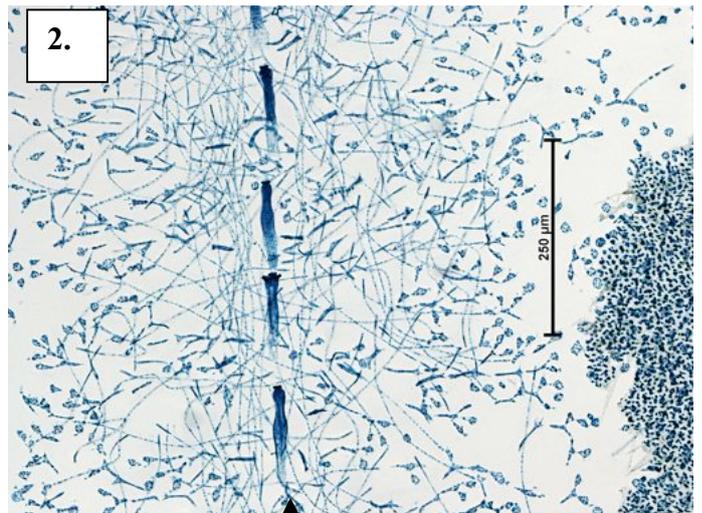
Description in the Benthic Flora

Part IIIA, pages 223-225

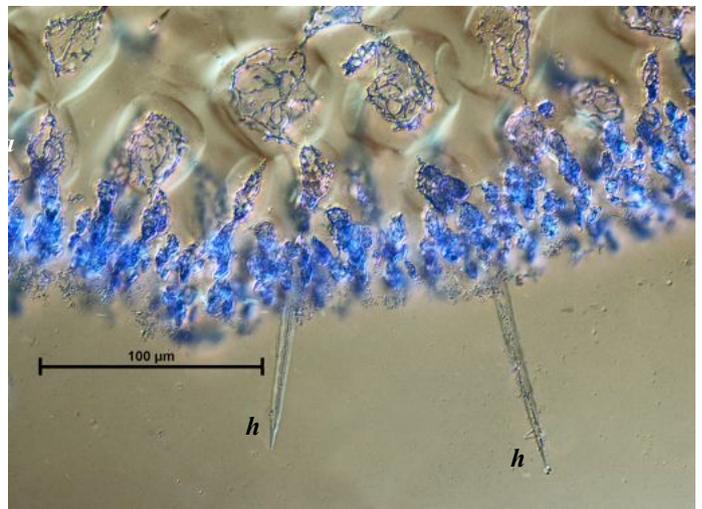
Details of Anatomy



1.



3.



*Dasyphloea insignis*  
 1, 2. A29958 slide 04870:  
 1. branch tip, hairs (*h*), inconspicuous central thread (*c fil*)  
 2. tissue squash, central thread wrapped in fine threads (rhizoids, *rh*) and radiating branches ending in small surface cells (*co*) viewed from the side, surface view of cortical cells (*sv co c*)  
 3. A64627 slide 15555, detail of surface cells with icicle-like (acicular) hairs (*h*)

\* Descriptive names are inventions to aid identification, and are not commonly used "Algae Revealed" R N Baldock, State Herbarium S Australia, July 2013

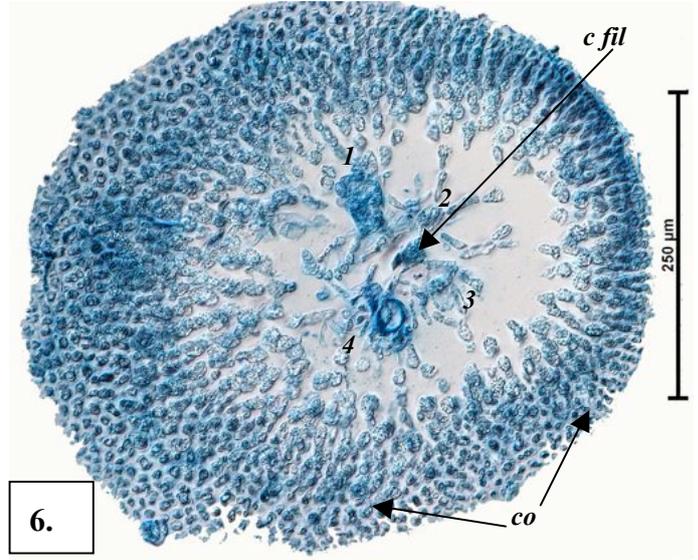
4.



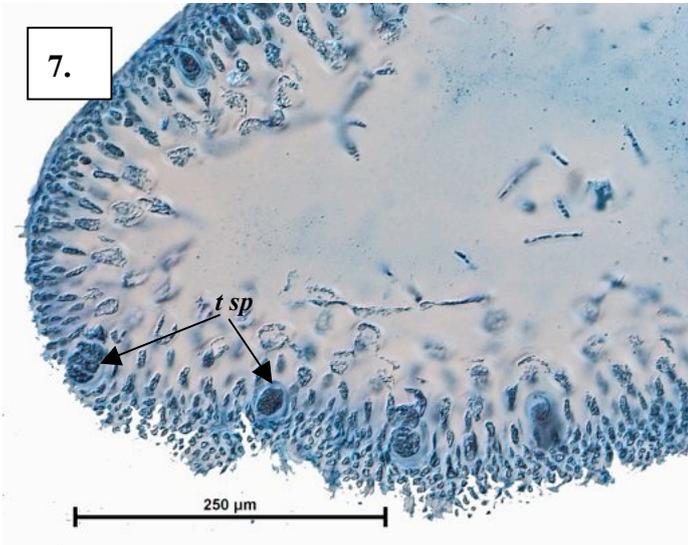
4, 5. two magnifications of *Dasyphloea insignis* Montagne A67061 from Kangaroo Head, Kangaroo I., SA



5.



6.



7.

6, 7. *Dasyphloea insignis* A52196 slide 12599, cross section:  
 6. central thread (*c fil*), radiating side threads (*1-4*), compact outer layer (cortex, *co*) of outward-facing branches of small cells  
 7. branch edge, large tetrasporangia (*t sp*) divided across (zonate) in the outer layer (cortex)

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