

Techniques needed and plant shape



Classification

Phylum: Rhodophyta; Order: Ceramiales; Family: Rhodomelaceae
Tribe: Chondrieae

*Descriptive name

spiny red weed

Features

plants dark red-brown, 50-120mm tall, branches cylindrical, **radial**, about 1mm across, all bearing short **spines**

Special requirements



1. view plants microscopically to find:

- branches and spines grow from **pits** in their tips, in which bunches of “hairs” (**trichoblasts**) occur
- a line of cells (**central filament**) running from the branch tips down the branch can sometimes be seen
- some short, spinous side branches (stichidia) bear rows of sporangia

2. cut a cross section and view microscopically to find:

- a central thread, wrapped in rhizoids in older branches
- 5 large flanking (pericentral) cells, becoming thick-walled when mature
- outer (cortical) regions of compact cells decreasing in size outwards

Occurrences

widespread around the Indian Ocean; in W. Australia and NSW, but known only

Usual Habitat

S Australian plants occur in shallow water

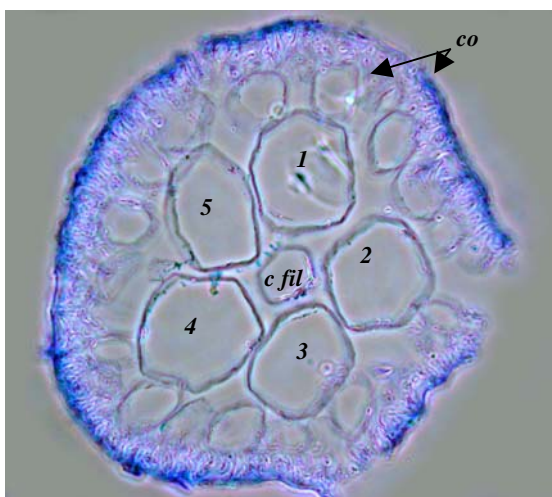
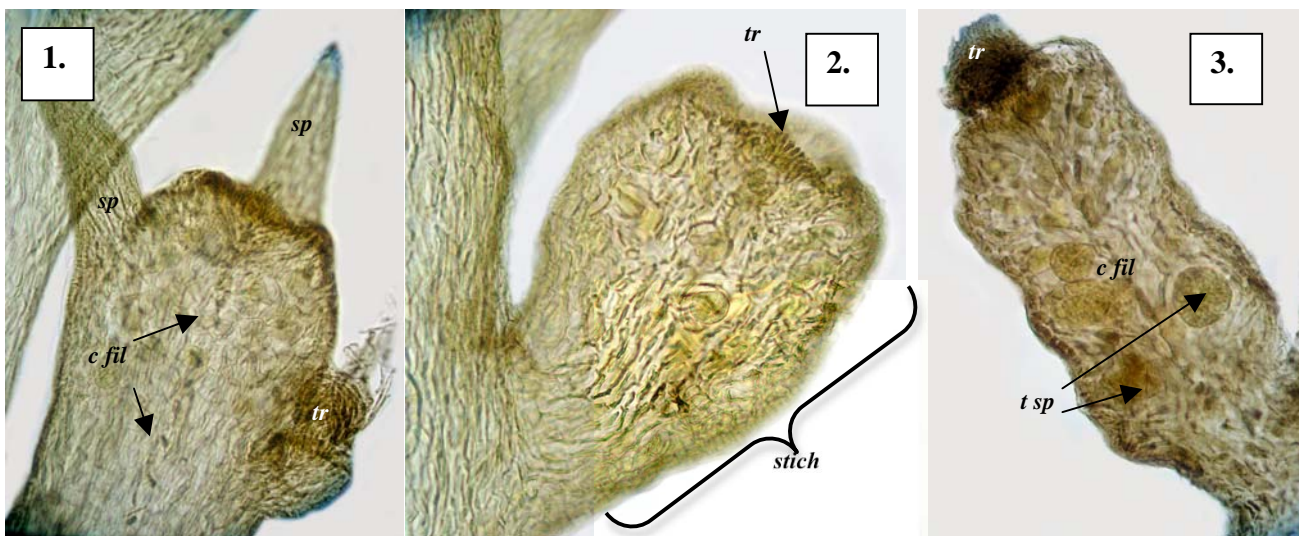
Similar Species

distinctive because of the sunken apical pits and spines

Description in the Benthic Flora

Part IIID, pages 408-409

Details of Anatomy



- 1-3. *Acanthophora dendroides* (A13658 slide 20111) stained blue and viewed microscopically
1. spines near a branch tip (*sp*), the faint line of the central filament (*c fil*) and tuft of “hairs” (trichoblasts, *tr*) at the tip of a developing side branch
 2. higher magnification of the apical pit (arrowed) with short trichoblasts of a short, fertile side branch (stichidium, *stich*) containing tetrasporangia
 3. mature stichidium with apical trichoblast tuft, vague central filament and rows of tetrasporangia (*t sp*)
 4. cross section of a branch (A13658 slide 20112) showing the central filament (*c fil*), flanking (pericentral cells, 1-5) and compact outer region (cortex, *co*)



5. *Acanthophora dendroides* Harvey A13658
from Denial Bay, S Australia.

* Descriptive names are inventions to aid identification, and are not commonly used
"Algae Revealed" R N Baldock, S Australian State Herbarium, March 2007