



### Techniques needed and shape

#### Classification

Phylum: Rhodophyta; Order: Gelidiales; Family: Gelidiaceae  
 red star turf

#### Features

- plants grow as minute star-shaped tufts in thin, red-brown mats **on encrusting coralline algae**

#### Occurrences

several upright branches to 1.5mm tall arise from thin **runners** from the Top Gallant I., West Coast, S Australia to Point Lonsdale, Victoria

#### Special requirements



- view the tips of branches microscopically to find:
  - single apical cells forming a central thread
  - slightly swollen sporangial regions (stichidia) near the tips, with tetrasporangia in **regular** rows of about 6 sporangia on **each side** of the branch (that is, up to 12 in a complete ring)

#### Usual Habitat

on encrusting coralline algae (or calcareous shells) in shallow water to 10m deep *Gelidiella antipai*, which has taller but narrower upright branches and 4-7 sporangia in rings.

#### Similar Species

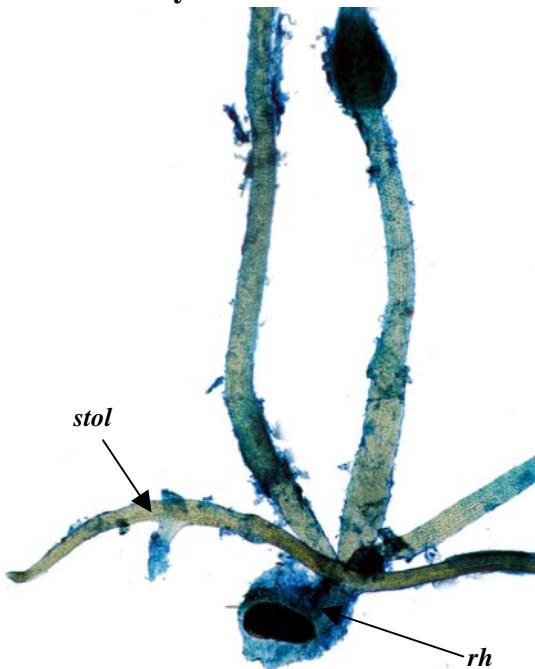


Diagnosis can be difficult

Separating *Pterocladiella* from *Gelidiella* requires (rare) mature female structures (cystocarps) – lopsided masses of spores (gonimoblast) form unequally on either side of the central filament and escape through only one opening in *Pterocladiella*

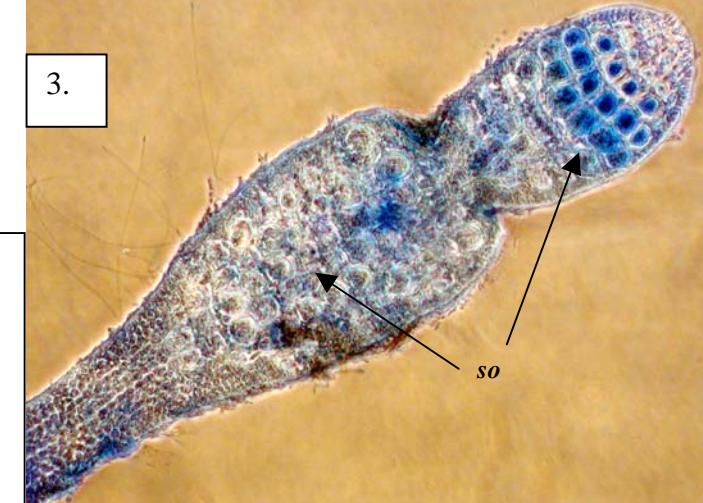
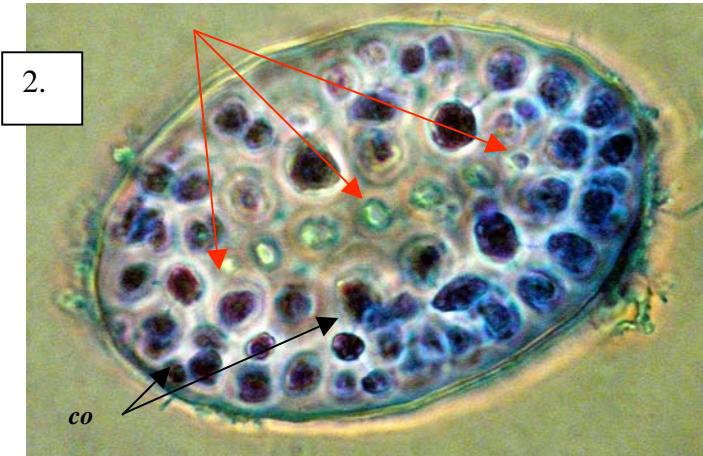
### Description in the Benthic Flora Part IIIA, pages 120, 122-3 (as *Gelidiella*)

#### Details of Anatomy



*Pterocladiella minima* stained blue and viewed microscopically

- A61679, slide 12951 showing the bunched upright branches with clusters of rhizoids at their bases (*rh*) and looping stolons (*stol*)
- A61679, slide 12950: slice across a branch showing the string of thick-walled cells (arrowed) and outer layer (cortex, *co*) 3 cells thick
- A60496 slide 12947; tetrasporangial patches (*sori*, *so*) near the branch tip, with regular rows of 6 sporangia (on each side)



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

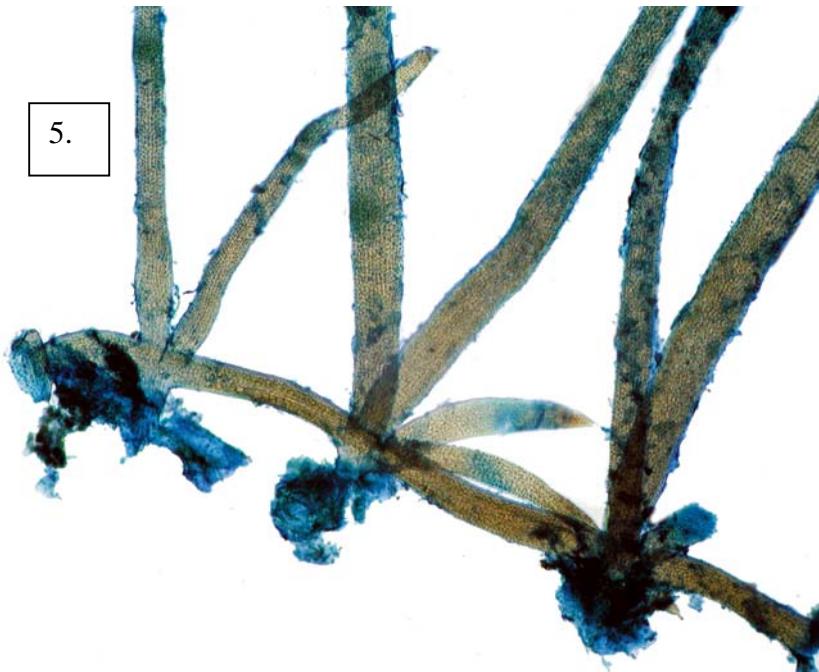
4.

*Pterocladiella minima* (Guiry & Womersley) Santelices & Hommersand  
from shallow water, Williamstown, Port Phillip Bay, Victoria. Photo: M.D. Guiry

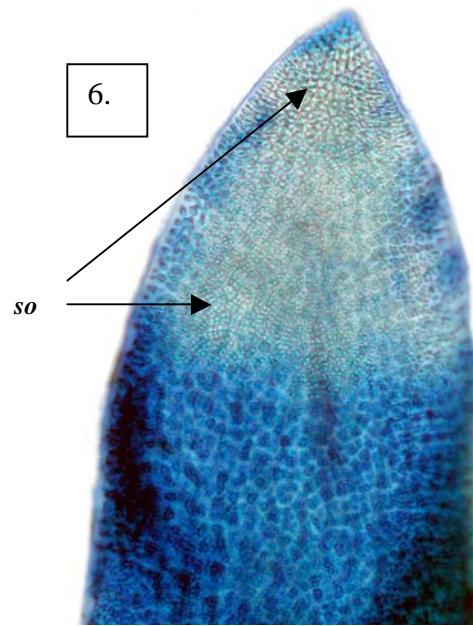
[www.algaebase.org](http://www.algaebase.org)



5.



6.



*Pterocladiella minima* (A61679) stained blue and viewed at different magnifications

5. showing the bunched upright branches with clusters of rhizoids at their bases (slide 12951)
6. tip of an upright branch, with clusters (sori., so) of spermatangial (slide 12951)

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