

**Techniques needed and shape**



**Classification**

**\*Descriptive name**

**Features**

Phylum: Rhodophyta; Order: Gelidiales; Family: Gelidiellaceae  
rare red turf alga

1. plants red-brown, about 100mm tall, growing as sparse **turf** amongst coralline algae
2. upright branches are cylindrical (**terete**) and arise from **runners** (stolons)
3. side branches are relatively **long**, with tips coming to a short point
4. branches bearing tetrasporangia (stichidia) are **bullet-shaped**, clustered near the **bases** of side branches

**Occurrences**



known for certainty only from the original collection from W. Australia (exact location unknown). A collection from Cape Carnot near Ceduna, S. Australia (A14955) figured below, is probably this species.

**Special requirements**



1. view the tips of branches microscopically to find:

- angular, elongate outer (cortical) cells, in vague rows
- inner cells that are **elongate** and **in lines**, seen by focussing through the surface to the deeper (medulla) layer
- **single**, tiny apical cells at branch and stichidial tips

2. if possible, cut across a branch to view microscopically the

- outer, tough sheath,
- small outer (cortical) cells
- inner elongate (medulla) cells that are **not** mixed with thick walled threads (rhizines) a feature that separates this genus from others in the Family.



**Usual Habitat**

**Similar Species**

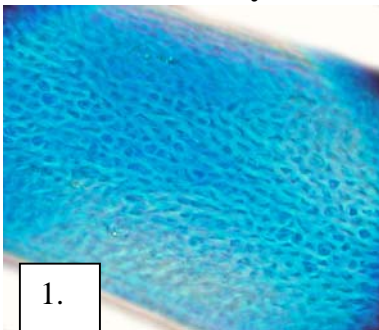
growing as sparse **turf** amongst coralline algae

superficially like *Gelidium*, but *Gelidiella ramellosa* is generally more robust and the stichidia are in clusters at the base of side branches and not at their tips

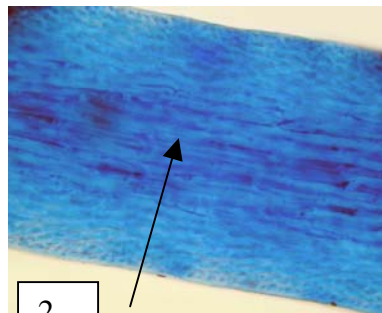
**Description in the Benthic Flora**

Part IIIA, pages 120-122

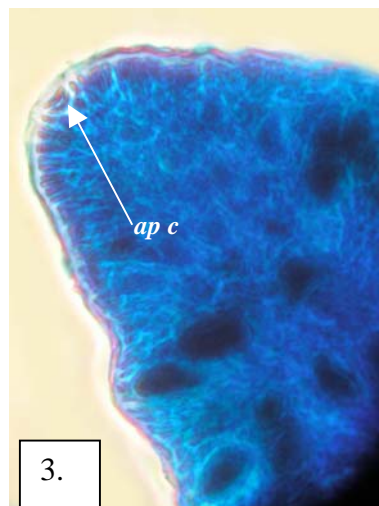
**Details of Anatomy**



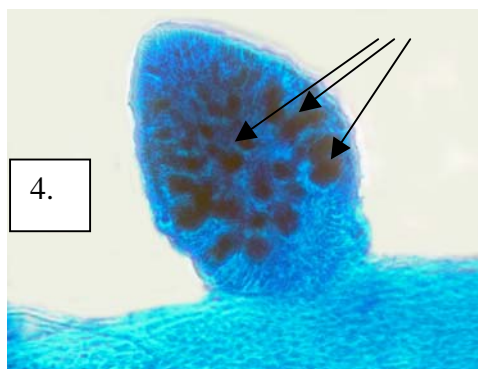
1.



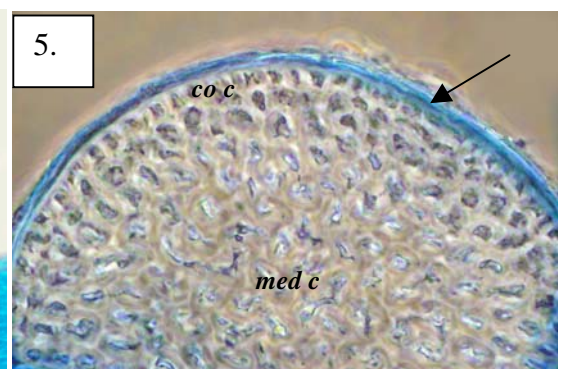
2.



3.



4.

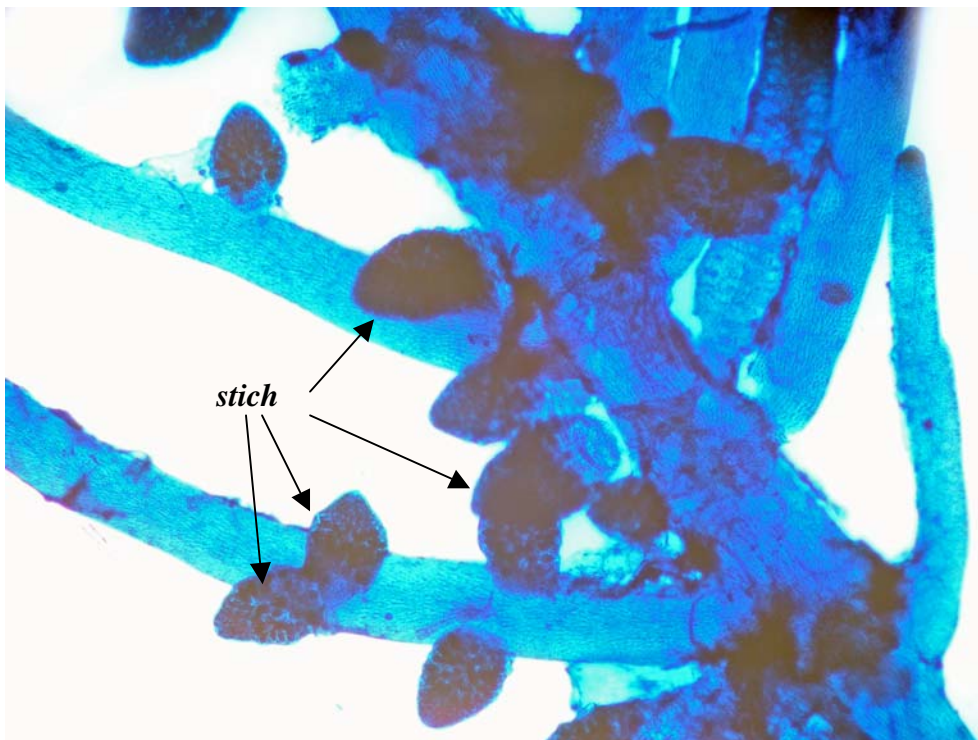


5.

Different magnifications of *Gelidiella ramellosa*, stained with aniline blue (#1-4, A18515 slide 10657):

1. surface view of angular, elongate outer (cortical) cells, in vague rows
2. focusing through the surface cells to view lines of elongate middle (medulla) cells (arrowed)
3. detail of the single apical cell (**ap c**) at the tip of a stichidium
4. a stalkless stichidium with more than 8 tetrasporangia (arrowed) in a ring
5. cross section of a branch, showing its cylindrical shape, outer rind or sheath (arrowed), small, angular outer (cortical) cells (**co c**) and elongate inner (medulla) cells (**med c**) **without** thick-walled threads (rhizines) (slide 10658)

Turf  
appearance of  
*Gelidiella*  
*ramellosa*  
(Kützing)  
Feldmann &  
Hamel,  
A14955, from  
Cape Carnot,  
S. Australia



a fragment of the original  
collection from W.  
Australia of *Gelidiella*  
*ramellosa* (Kützing)  
Feldmann & Hamel,  
(A18515, slide 10657), stained  
with aniline blue and  
viewed microscopically  
to show the bullet-  
shaped stichidia (*stich*)  
near the base of long side  
branches