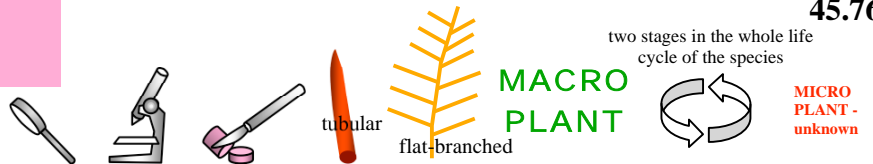


***Bonnemaisonia australis* Leving**  
(encrusting spore stage unknown)

45.760

**Techniques needed and plant shape**



**Classification**

Phylum: Rhodophyta; Order: Bonnemaisoniales; Family: Bonnemaisoniaceae

**\*Descriptive name**

**Features**



1. red, delicate 40-120mm tall, much branched and spreading
2. main branches tubular, flat-branched, side branches in opposite pairs, one member short often ending in a fertile structure or later elongating, the other long, lower ones hooked, attaching the plant to other algae

**Occurrences**

Gulf regions, S Australia, Pt Phillip Victoria, Low Head Tasmania

**Usual Habitat**

usually a deep water pant, probably epiphytic.

**Special requirements**

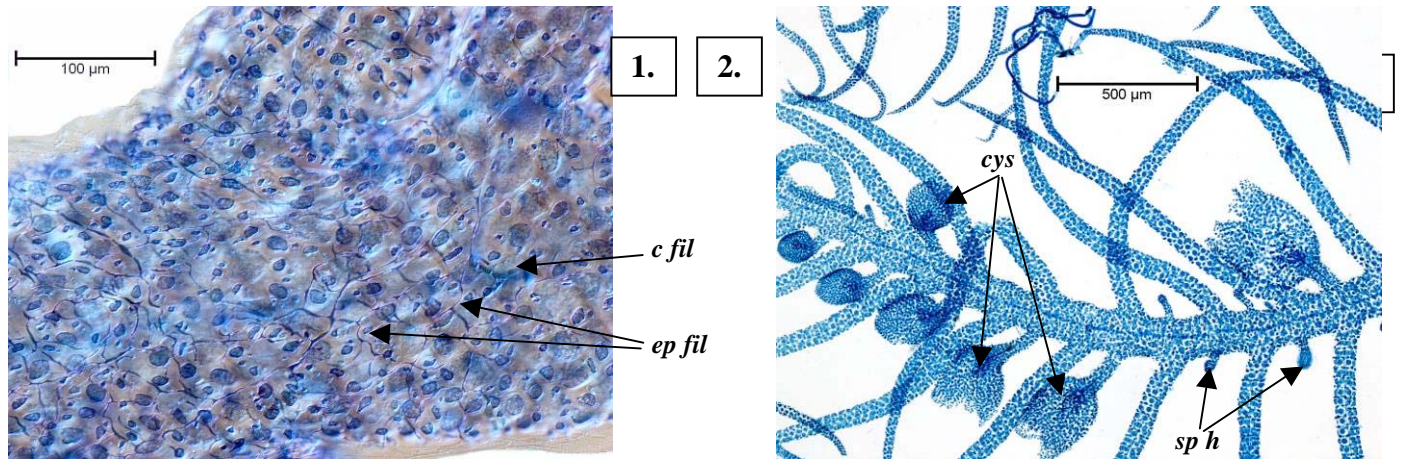
1. view the surface view of plants microscopically to find:-
  - single tiny tip cell forming a **thin** central thread initially with characteristic alternating curved branches then with pairs of long and short side branches
  - large outer (cortical) cells flanking the central thread producing tiny, **rounded** cells in weak rings (rosette pattern)
  - ⚠ • often threads of the epiphyte *Audouinella* sp form a surface cob-web pattern
2. find oval-shaped heads of spermatangia on short stalks on the same plant as female structures (plants monoecious)
3. find urn-shaped mature female structures (cystocarps) on long stalks, each with a single opening, central fusion cell and **large** carposporangia internally

**Similar Species**

*Asparagopsis* sp but those species do not have hooked lower branches, and branches are more heavily corticated

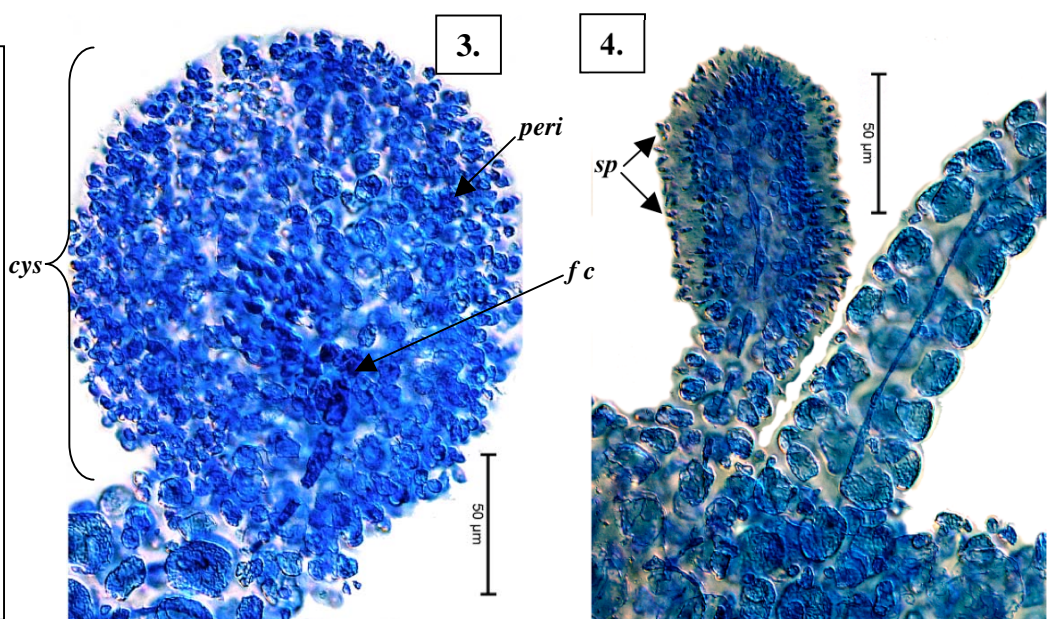
**Description in the Benthic Flora**

Part IIIB, pages 332, 333,335



Surface microscope views of *Bonnemaisonia australis* stained blue:

1. central thread (*c fil*), weak rings of tiny outer cells about inner cells, and threads of the epiphyte *Audouinella* (*ep fil*) (A29661 slide 640)
2. cystocarps (*cys*, some flattened out of shape) and male (spermatangial) heads (*sp h*) on the same plant (A59340 slide 11035)
- 3, 4. details of a cystocarp (*cys*) and male head (*sp h*) (A59340 slide 11035): wall (pericarp, *peri*) fusion cell (*f c*), spermatangia (*sp*)



\*Descriptive names are inventions to aid identification, and are not commonly used; "Algae Revealed", R N Baldock, S Australian State Herbarium November 2011

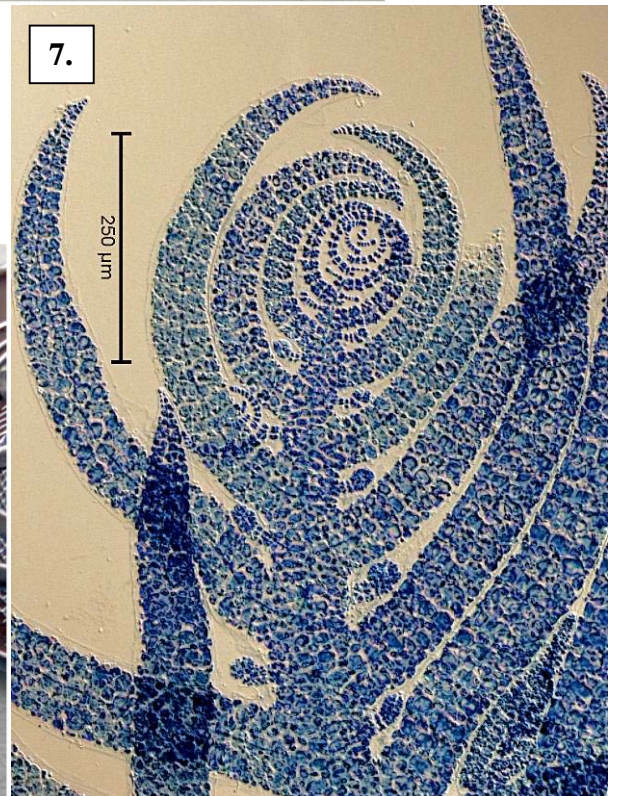
5.



6.



7.



Specimens of *Bonnemaisonia australis* Levring from Gulf waters, S Australia

5, 6. two magnifications adrift plant from Pennington Bay, Kangaroo I. (A8744)

7. tip of a specimen stained blue and viewed microscopically showing the alternating long and short branching pattern, curved branches, developing cystocarps and male heads (A29661 slide 640)

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