**Bonnemaisonia australis** Levring  
(encrusted spore stage unknown)

**Techniques needed and plant shape**

**Classification**  
*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**

**Usual Habitat**

usually a deep water pant, probably epiphytic.

**Special requirements**

1. view the surface view of plants microscopically to find:  
   a. single tiny tip cell forming a **thin** central thread initially with characteristic alternating curved branches then with pairs of long and short side branches  
   b. large outer (cortical) cells flanking the central thread producing tiny, **rounded** cells in weak rings (rosette pattern)  
   c. 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

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**Surface microscope views of *Bonnemaisonia australis***

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**)
Specimens of *Bonnemaisonia australis* Levring from Gulf waters, S Australia
5. 6. two magnifications adrift plant from Pennington Bay, Kangaroo I. (A38744)
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)

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