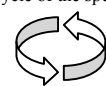


***Asparagopsis taxiformis***  
 (Delile) Trevisan  
 (including *Falkenbergia* spore stage)

45.760

two stages in the whole life cycle of the species

MACRO PLANT



MICRO PLANT

**Techniques needed and plant shape**



**Classification**

Phylum: Rhodophyta; Order: Bonnemaisoniales; Family: Bonnemaisoniaceae  
 red asparagus weed (sexual plants only); ♀ foxtails

**\*Descriptive name**

**Features of the sexual plants**



1. pink to red when fresh, drying grey-brown to dark red, 100-300mm tall, with long, feathery main branches covered with dense, irregular, radial, short tapering side tufts
2. attached mainly to rock by runners and rhizoids, hooked attachment branches **absent**

**Features of the sporangial plants**

probably indistinguishable from *A. armata* (tufted, threadlike, 20mm tall on rock or algae)

**Occurrences**

tropical/subtropical oceans. In Australia, N Australia to near Perth, W Australia, S Queensland and the Gulf Region of S Australia

**Usual Habitat**

sexual plants: mainly on rock, in shallow to relatively deep water.

**Special requirements**

1. practically indistinguishable from that of *A. armata*
2. view mature branches of the large, feathery sexual plants microscopically:-
  - in cross section, showing prominent, thick-walled thread in a central space, focussing through or cutting a lengthwise section to expose elongate cells lying in a space each with 5 arm-like cells at right angles from their upper ends, 2 opposite ones in single view
3. find cigar-shaped heads of spermatangia to 280 wide x 650µm long, on short stalks some on the same plant as female structures (plants monoecious)
4. find globose mature female structures on long stalks, each with a single opening, amoeba-like central fusion cell and radiating chains of carposporangia internally

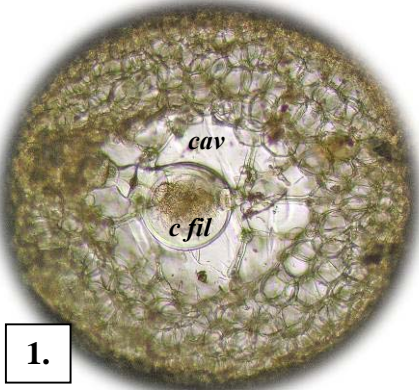
**Similar Species**



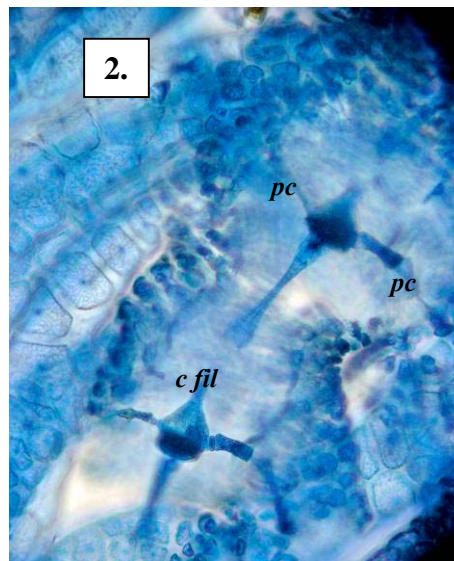
*Asparagopsis armata* but that species is attached by spiny branches usually to other algae, and male heads are smaller (to 280µm long)

**Description in the Benthic Flora**

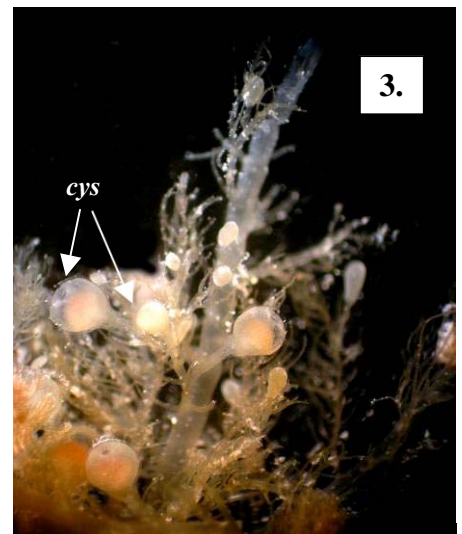
Part IIIB, pages 330-331



1.



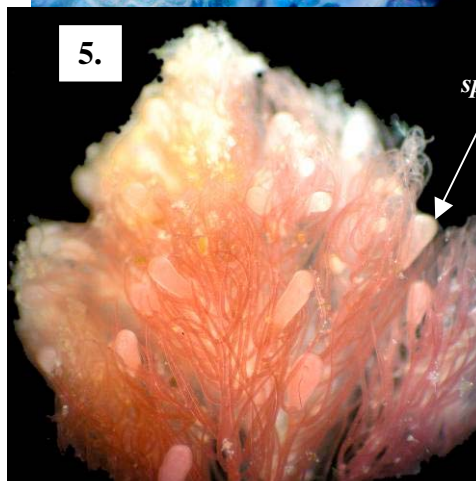
2.



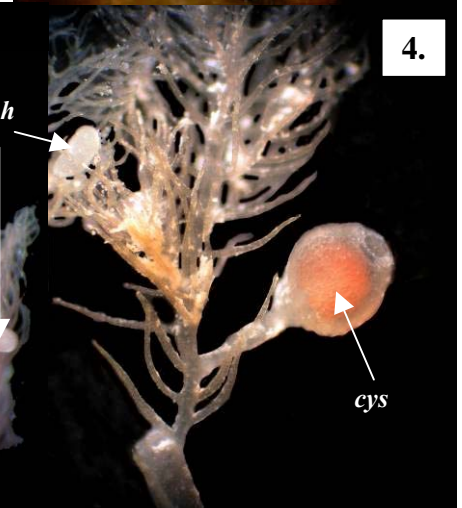
3.

**Sexual plants of *Asparagopsis taxiformis* stained blue and viewed microscopically:**

1. cross section showing central thread (*c fil*) and cavity (*cav*) (PB09b Pt Bonython Mar 2005)
2. lengthwise section with central thread, 2 side branches (pericentral cells, *pc*) visible (Pt Pirie 2006)
- 3, 4. two magnifications of mature female structures (cystocarps, *cys*) on long stalks (PB09b Pt Bonython); a single male (spermatangial) head (*sp h*) is also present in one image
5. male (spermatangial) heads (*sp h*)

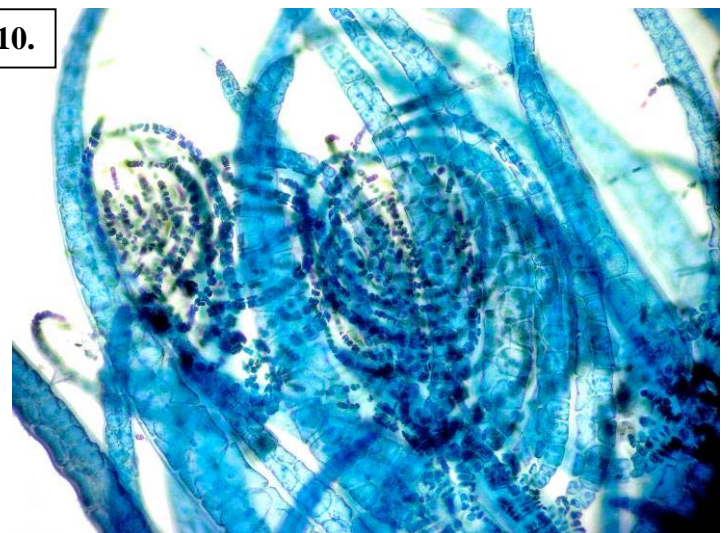
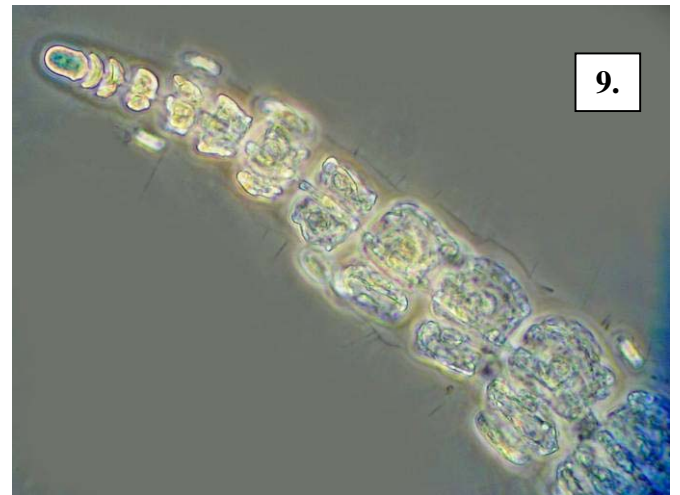
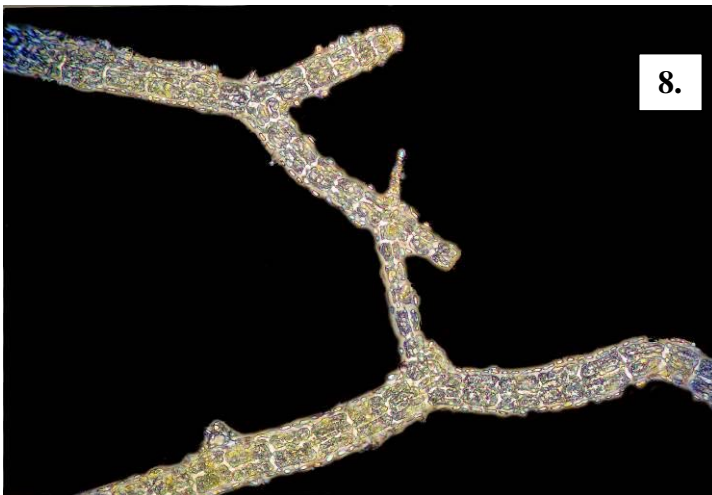
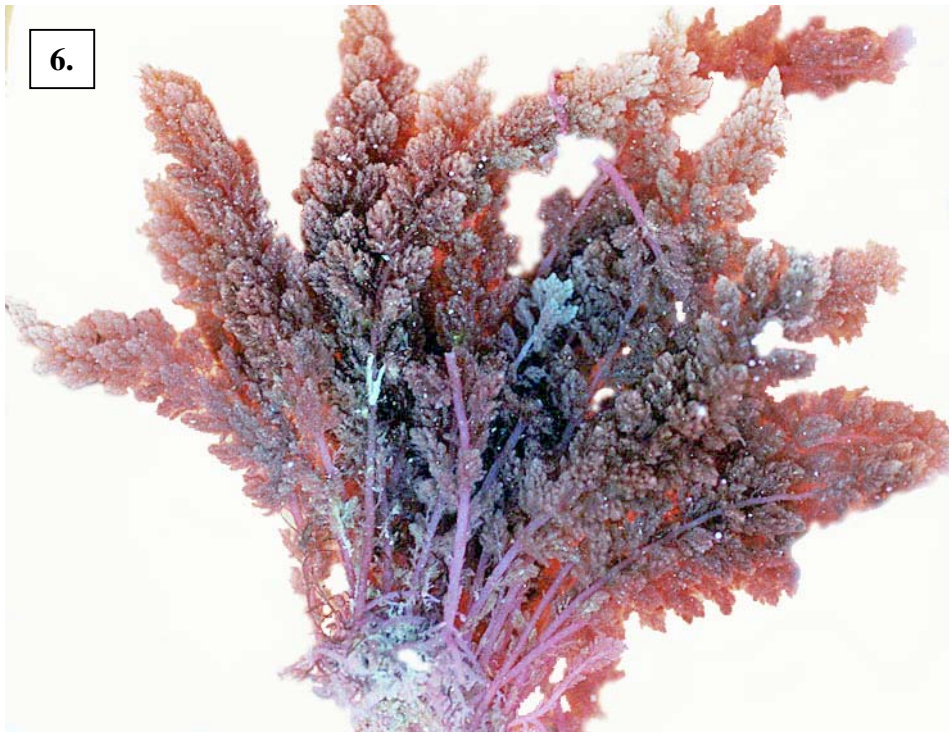


5.



4.

\*Descriptive names are inventions to aid identification, and are not commonly used  
 ♀ name used in Huisman, J *et al*, *Marine Plants of the Perth Region* (2006)  
 "Algae Revealed", R N Baldock, S Australian State Herbarium November 2011



Specimens of *Asparagopsis taxiformis* (Delile)  
 Trevisan  
 5, 6 feathery **sexual** plant: live, pink specimens compared with a dried pressed specimen (A72196) from Fleurieu Peninsula, S Australia) both exhibiting basal root-like runners characteristic of the species  
 8, 9 two magnified views of the **spore** plant (*Falkenbergia*) stage from settlement sheets, site D35 Pt Bonython  
 10. branch tips of the **sexual** stage from Pt Pirie showing curved, tapering radial side branches

\*Descriptive names are inventions to aid identification, and are not commonly used  
 $\phi$  name used in Huisman, J *et al*, *Marine Plants of the Perth Region* (2006)  
 "Algae Revealed", R N Baldock, S Australian State Herbarium November 2011