Rhipidothamnion secundum
Huisman

A SPECIES WITH FEW RECORDS

45.800.40

Techniques needed and plant shape



MICRO PLANT to MACRO PLANT

Classification Phylum: Rhodophyta; Order: Ceramiales; Family: Ceramiaceae; Tribe: Spermothamnieae

***Descriptive name** red threads

Features plants dark red, upright, densely branched to 70mm tall

Special requirements view plants microscopically to find

- main branches (axes) of ***large***, naked (ecorticate) cells branching on one side (***secund***), tips may be curved
- ***large, stalkless***, tetrahedrally-divided tetrasporangia on the inner (***adaxial***) sides of branches in ***groups*** of up to 3
- female structures, initially of 3 small cells at the ***tips*** of side branches with 2 sterile flanking (periaxial) cells, and a 4-celled carpogonial branch, at first ***enclosed*** in a gelatinous sheath, characteristic of the Tribe: Spermothamnieae; forming after fertilisation, a lobed fusion cell bearing up to 4 bunches (***gonimolobes***) of ***terminal*** sporangia and ***inner*** wrapping (***involucre***) of 4 threads develops from sterile cells
- ***single***, ***stalkless*** male spermatangial heads on the ***inner*** sides of branches

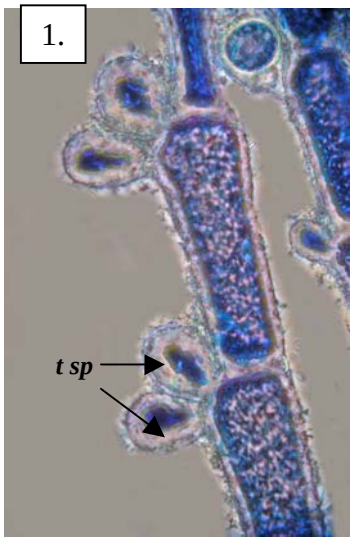
Occurrences One Tree I., Queensland to Jervis Bay, N.S.W. and Gellibrand Lighthouse, Port Phillip, Victoria

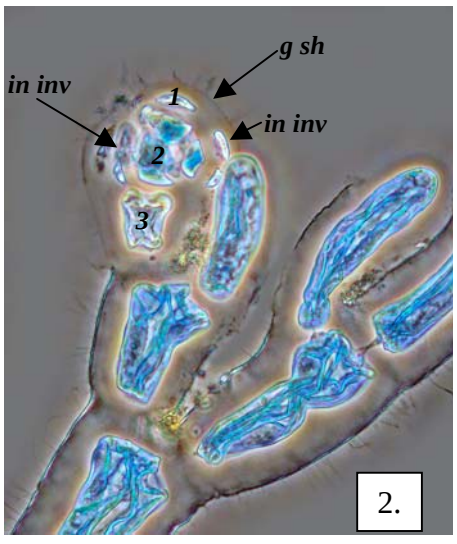
Usual Habitat widespread on the E coast, possibly introduced to Victoria where the plants are ten times larger

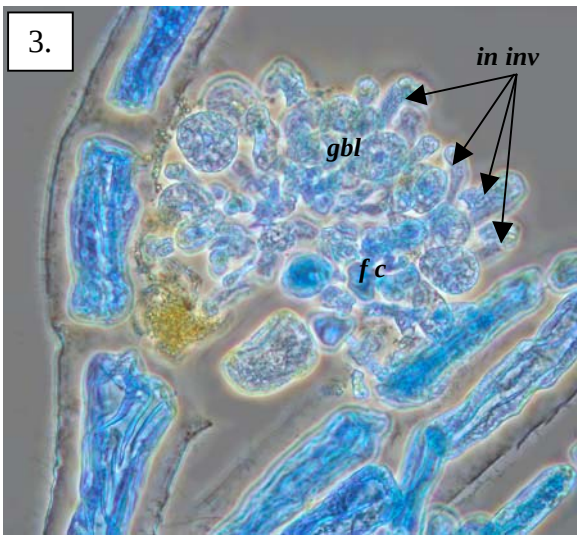
Similar Species *distinctive* 1-sided branching and loose inner involucre separate it from *Lejolisia*

Description in the Benthic Flora Part IIIC, pages 212-214

Details of Anatomy



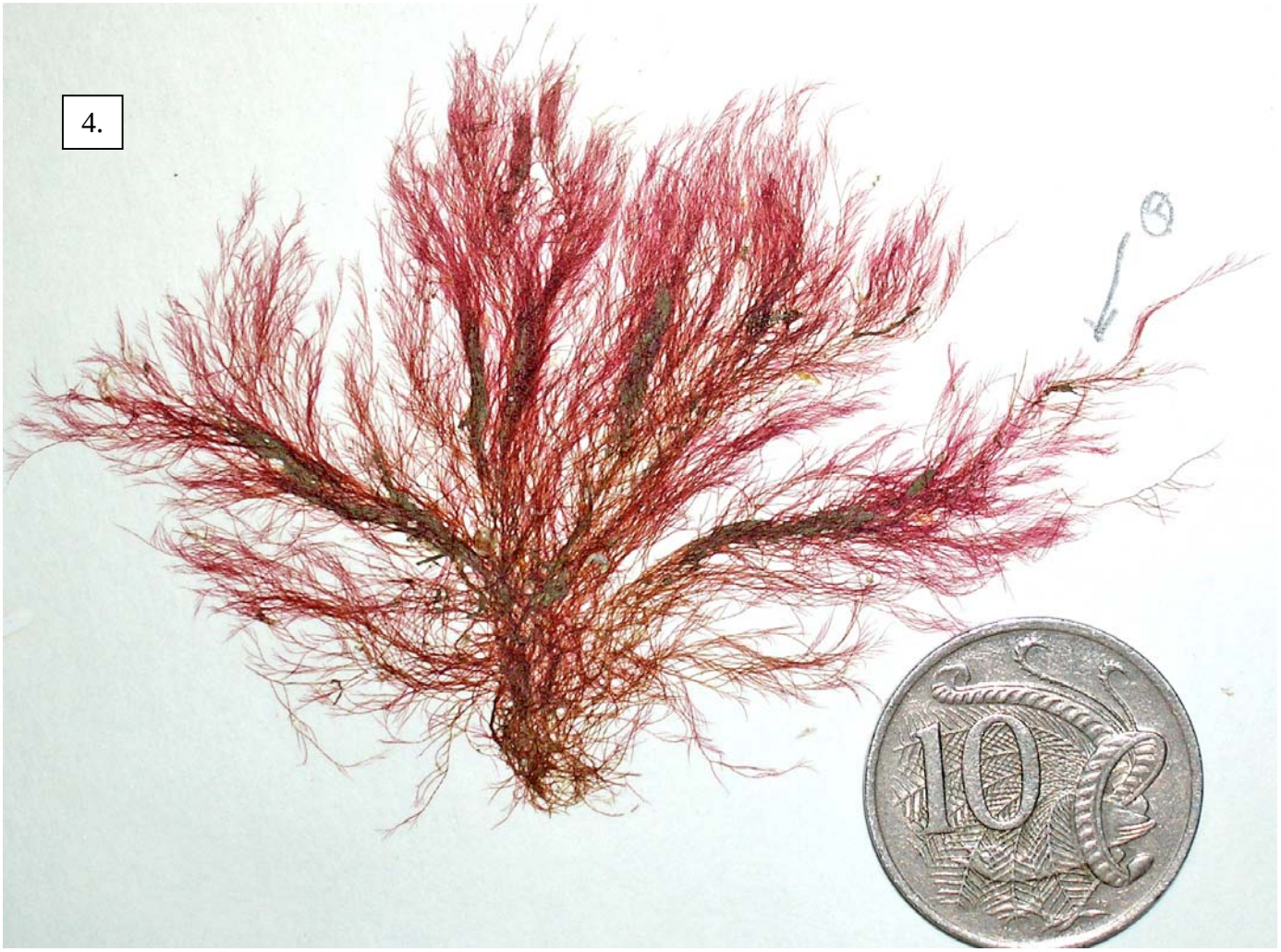


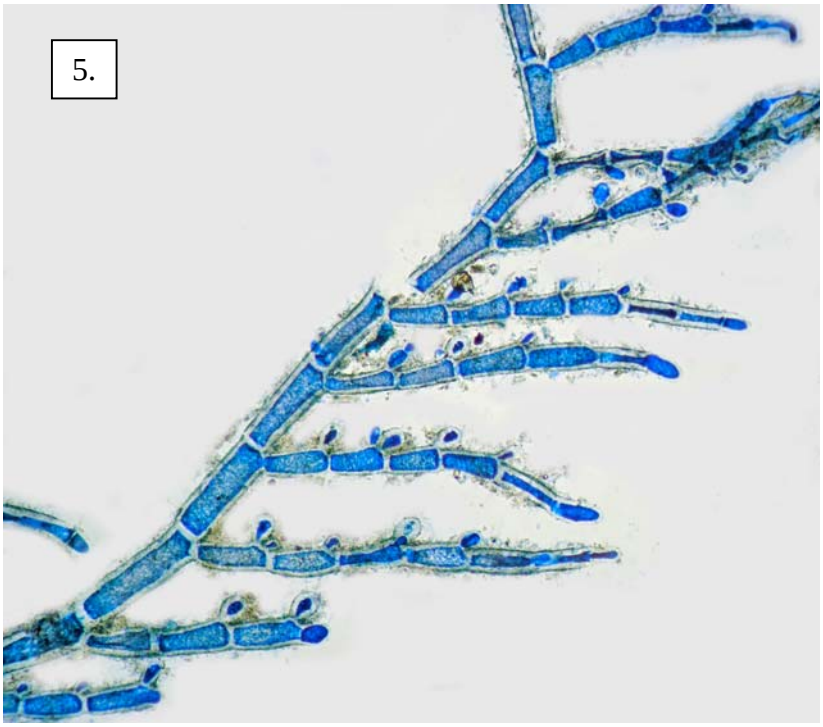


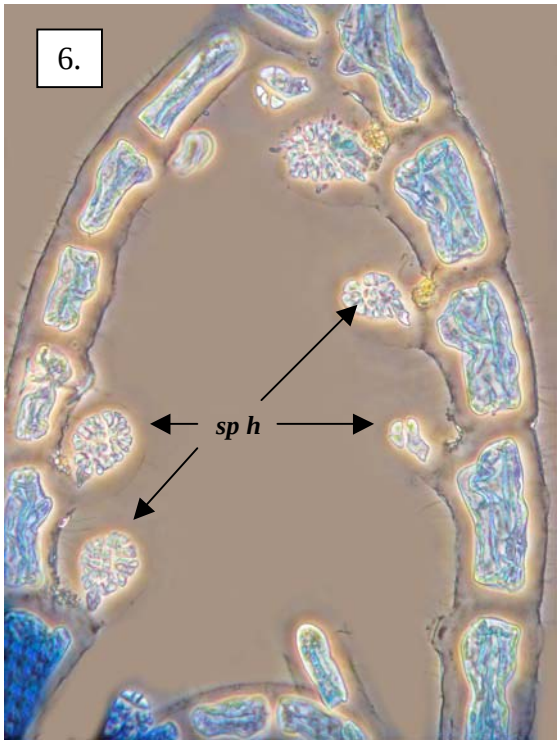
Rhipidothamnion secundum stained blue and viewed microscopically.

1. young groups of stalkless tetrasporangia (*t sp*) (A58706 slide 10703)
2. early developments after fertilisation. The 3-celled fertile branch (*1*,*2*,3) is still visible, but inner involucral threads (*in inv*) are developing from sterile cells inside the gelatinous sheath (*g sh*) that enclosed the young female structures (procarp) (A58709 slide 10710)
3. final stage after fertilisation. The gelatinous sheath around the procarp has disintegrated, sporangial masses (gonimoblast, *gbl*) and a fusion cell (*f c*) have developed and involucral threads loosely arranged

* Descriptive names are inventions to aid identification, and are not commonly used







4. *Rhipidothamnion secundum* Huisman A58707 from Pt Phillip Bay, Victoria
5, 6. Specimens stained blue and viewed microscopically
5. characteristic 1-sided branching pattern (A58706 slide 10703)
6. stalkless male (spermatangial) heads (*sp h*) on the inside of branches (A58709 slide 10710)

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"Algae Revealed" R N Baldock, S Australian State Herbarium, March 2007