Griffithsia balara Baldock

A SPECIES WITH FEW RECORDS

45.800.68



Techniques needed and shape

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

***Descriptive name** shaggy and twiggy red alga

Features plants light or dark red, 80-140mm tall, of long threads (axes) consisting of ***cylindrical cells*** about 0.4mm long, irregularly branched, producing short, forked ("***twiggy")*** lateral branches; lower threads clothed with ***rhizoids*** giving the plant a shaggy appearance

Occurrences only sporangial plants known, from Hopetoun, W. Australia and W of Flinders I., S. Australia, 32m deep

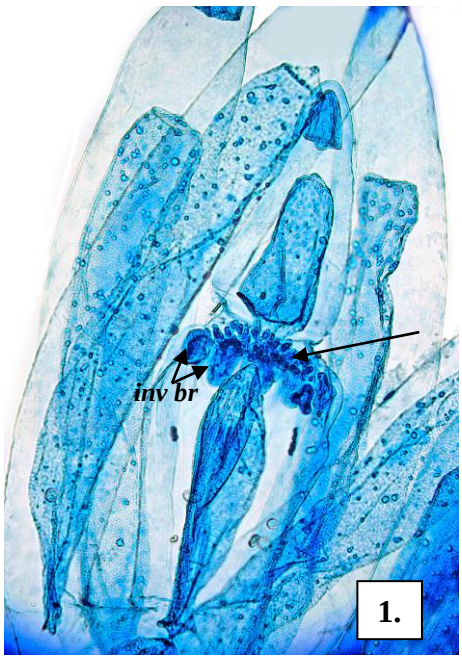
Special requirements view plants microscopically to find:

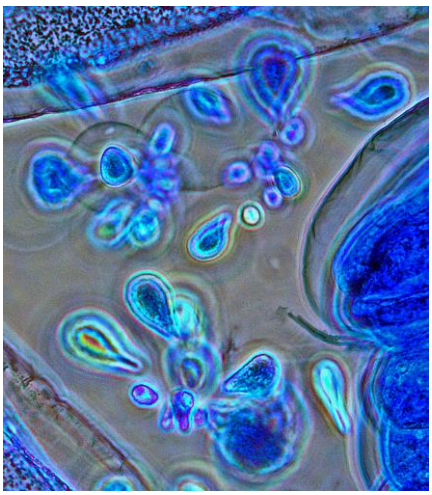
- cylindrical cells that narrow markedly to pointed apical cells; side tufts produced in ***rings of 4*** from the upper shoulder of main threads (axes)
- in spore plants: tetrasporangia are initially produced in ***minute clusters*** in constrictions between inflated cells about 2 cells from branch tips. Later, single rings of larger, closely-packed, incurved, cells (***involucral branches***), like palings in a fence, are generated from the lower swollen cells. Finally, the axial cells above the mature sporangial clusters fall off, leaving basket-shaped structures

Similar Species *Anotrichium towinnna* with 3 side tufts from each axial cell but that species has finer threads, sporangia are single on short stalks, and involucres are absent

Description in the Benthic Flora Part IIIC, pages 330, 335-336

Details of Anatomy

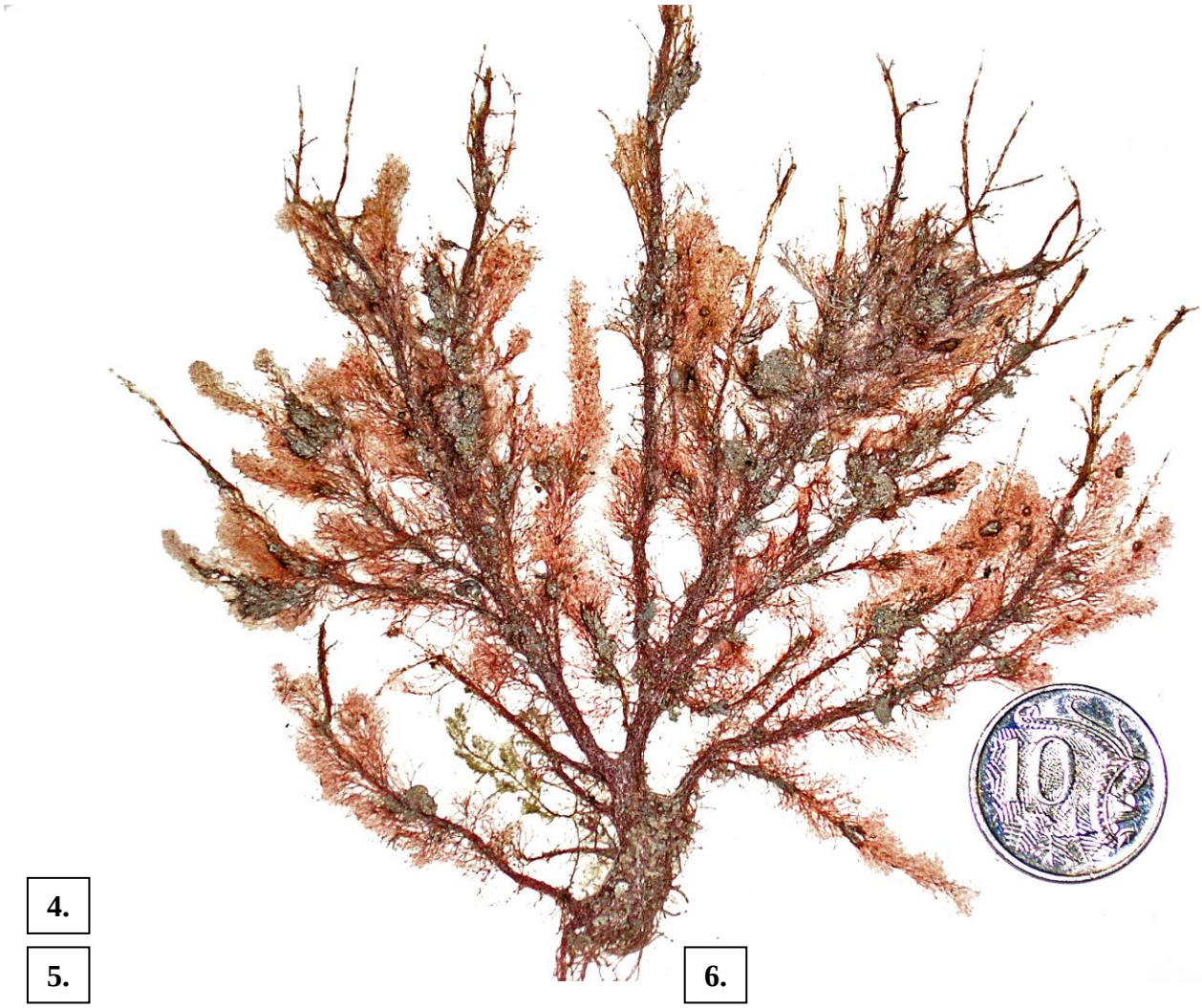




Griffithsia balara Baldock (A34133): various magnifications of specimens stained blue (note that the large cells collapse and crumple when stained)

1. immature tetrasporangial structure (slide 3181): ring of involucral branches (***inv br***) developing from the axial cell bearing rings of minute sporangial branches (***arrowed***)
2. mature basket-shaped sporangial structure (slide 3180): axial cells above the ring of involucral branches have been lost; some minute clusters of sporangia have been displaced
3. detail of some displaced tetrasporangial branches (slide 3179)

* Descriptive names are inventions to aid identification, and are not commonly used
"Algae revealed", R N Baldock, State Herbarium S Australia, October 2005; revised July 2014



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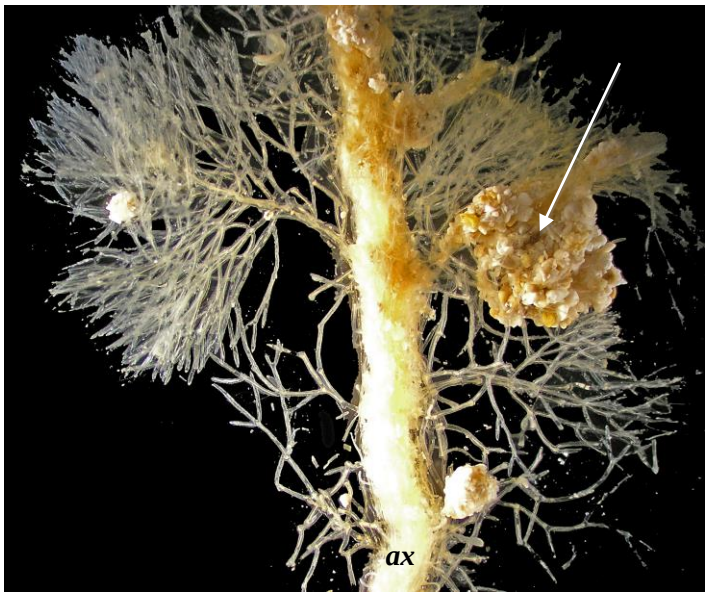
5.



6.

Griffithsia balara Baldock A34133,

4. whole specimen from Hopetoun, W. Australia

5, 6. preserved (bleached) specimen top lit and magnified to highlight features:

5. ropey main axis (***ax***) that has captured sediment (***arrowed***); and the 2-4 forked branches arising from each of the cells of side branches
6. higher magnification: basket-shaped structure (upper thread has been shed) holding mature tetrasporangial clusters

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