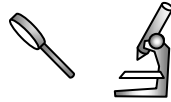


Griffithsia gunniana

J Agardh

45.800.68

Techniques needed and shape



MACRO
PLANT



Classification

Phylum: Rhodophyta; Order: Ceramiales; Family: Ceramiaceae
Tribe: Griffithsiae

*Descriptive name

dark red twiggy tufts

Features



plants **dark** red, 25-190mm tall, branching densely **forked** near tips, basally sparsely branched with spreading “twiggy” side tufts main branches often matted with rhizoids into a ropey mass

Occurrences

widespread from Eyre Peninsula, S Australia to Tasmania

Usual Habitat

in shallow water, often on sea grasses

Special requirements



view plants microscopically to find

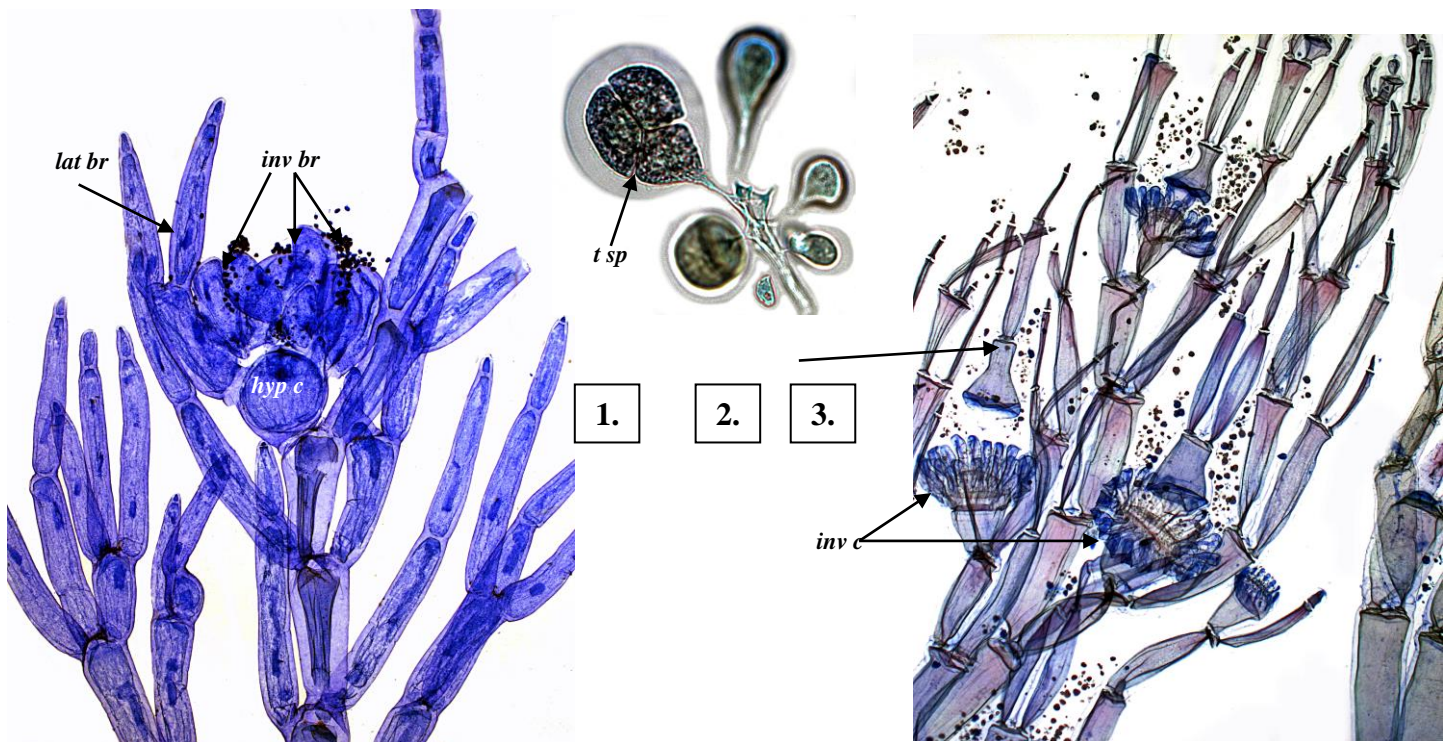
- **cylindrical** cells about 4 times longer than broad, in threads, plant tips **pointed**, plant axes obscured by **rhizoids** at the base
- in female plants: mature female structures (cystocarps) basket-like, near branch tips, the vegetative cell below cystocarps noticeably **swollen** and ball-shaped, 10-12 large, incurved cells forming an **involucre** on one side of a branch
- in male plants: cloud-like masses of spermatangia in minute branchlets in the constrictions of **pairs of swollen cells** near plant tips, a fence-like **ring** (involucre) of cells produced from the lower swollen cell enclosing the spermatangial masses
- in sporangial plants: tetrasporangia in masses of minute branchlets similar to the situation for spermatangia, between **pairs of swollen cells**, the lower swollen cell producing a **fence-like** involucre, the thread above sometimes forked and often shed, a cup-like structure then remaining

Similar Species

denuded specimens resemble *Griffithsia teges*, but that species has a coarser texture with wider threads

Description in the Benthic Flora Part IIIC, pages 330, 336-338

Details of Anatomy



Griffithsia gunniana stained blue and viewed microscopically. (Cell contents may shrink or crease during preparation)

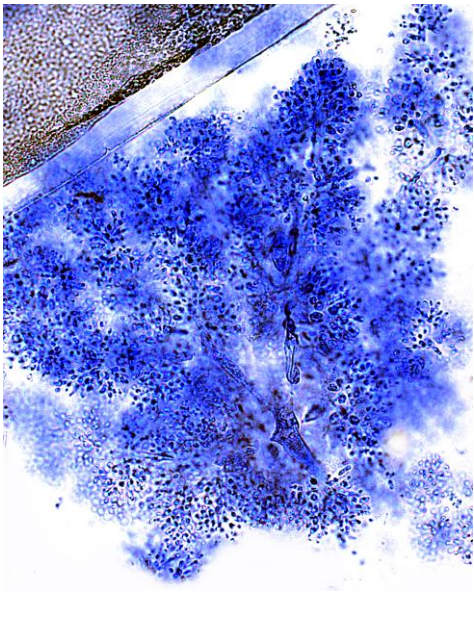
1. female plant: pointed tips, forked threads of cells, mature female structure (cystocarp) producing incurved involucre cells (**inv c**); swollen vegetative cell below (**hyp c**) producing a vegetative side branch (**lat br**) (slide 3122)
2. detail of a minute tetrasporangial branchlet showing a mature sporangium (**t sp**)
3. sporangial plant: fence-like rings of involucre cells (**inv c**) enclosing microscopic tetrasporangial branchlets (extruded from the constrictions between pairs of swollen cells in this preparation) with the thread above being shed in one case (**arrowed**) (slide 3123)

4.



5.

6.



Griffithsia gunniana J Agardh
 4. drift plant, A19933, from Robe S Australia with ropey basal part
 5, 6. male plant (slide 3123) stained blue and viewed microscopically
 5. minute spermatangial branchlets enclosed by a ring of involucral branches (*inv br*) in the constriction between 2 swollen vegetative cells
 6. highly magnified spermatangial branchlet

* Descriptive names are inventions to aid identification, and are not commonly used
 "Algae revealed", R N Baldock, State Herbarium, S Australia, December 2007; revised August 2014