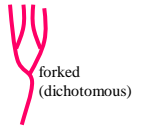


Techniques needed and shape



MACRO
PLANT



Classification

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

*Descriptive name

large, red bead-alga

Features



plants **light** red, 90-260mm tall, branches bead-like, **spreading**, forked **many** times; cells visible to the unaided eye, up to **6mm long**, **egg-** or **-sausage-shaped**, **gradually** becoming smaller towards plant tips

Occurrences

Perth, W Australia to Tasmania, and St Paul I., Indian Ocean

Usual Habitat

in estuarine conditions, often on seagrass

Special requirements



view plants microscopically to find

- vegetative cells **sausage-** or **egg-shaped**, in bead-like threads **gradually** narrowing towards the tips
- in female plants: mature female structures (cystocarps) forming lumps on **one side** of constrictions between vegetative cells. Two types exist:-
 - type A: involucrel cells 7-10, **regular**, incurved, radiating in a semicircle
 - type B: involucrel cells 5-6, **irregularly-lobed** or apically **notched, incurved**
- in male plants, cloud-like masses of spermatangia produced on minute branchlets in the constrictions of cells near plant tips, sterile involucrel cells **absent**
- in sporangial plants: tetrasporangia in minute branchlets massed in **constrictions** between vegetative cells near plant tips; peripheral branchlets with **swollen, sterile** cells forming a fence-like wrapping (**involucre**) around the tetrasporangial masses

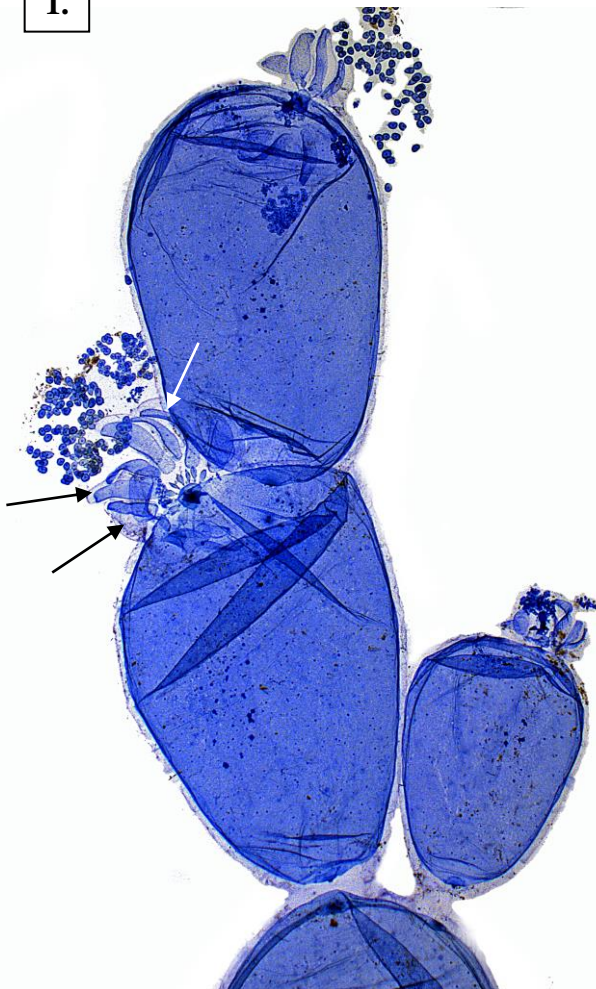
Similar Species

Griffithsia grandis, but unique because of its size, pale colour and estuarine distribution

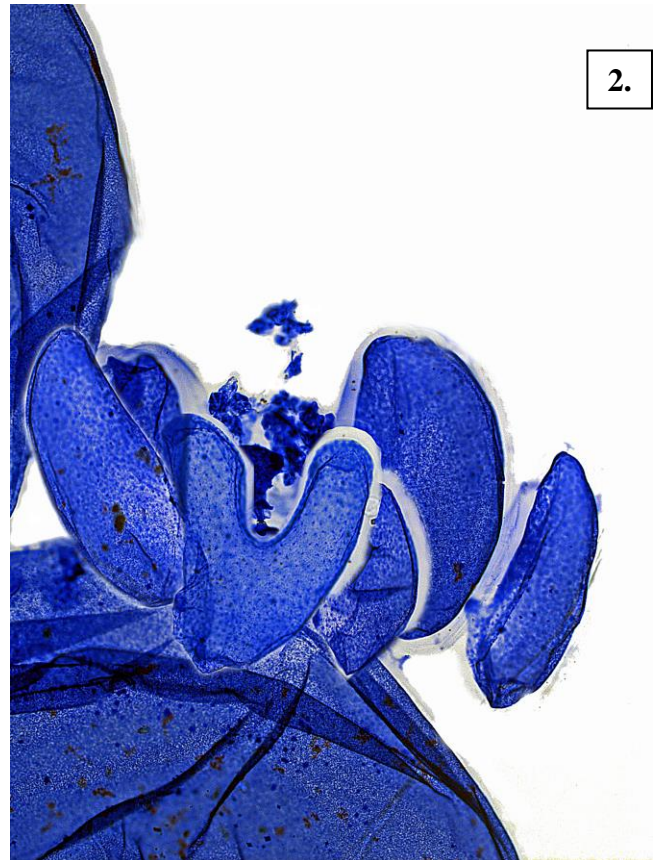
Description in the Benthic Flora Part IIIC, pages 327-330

Details of Anatomy

1.



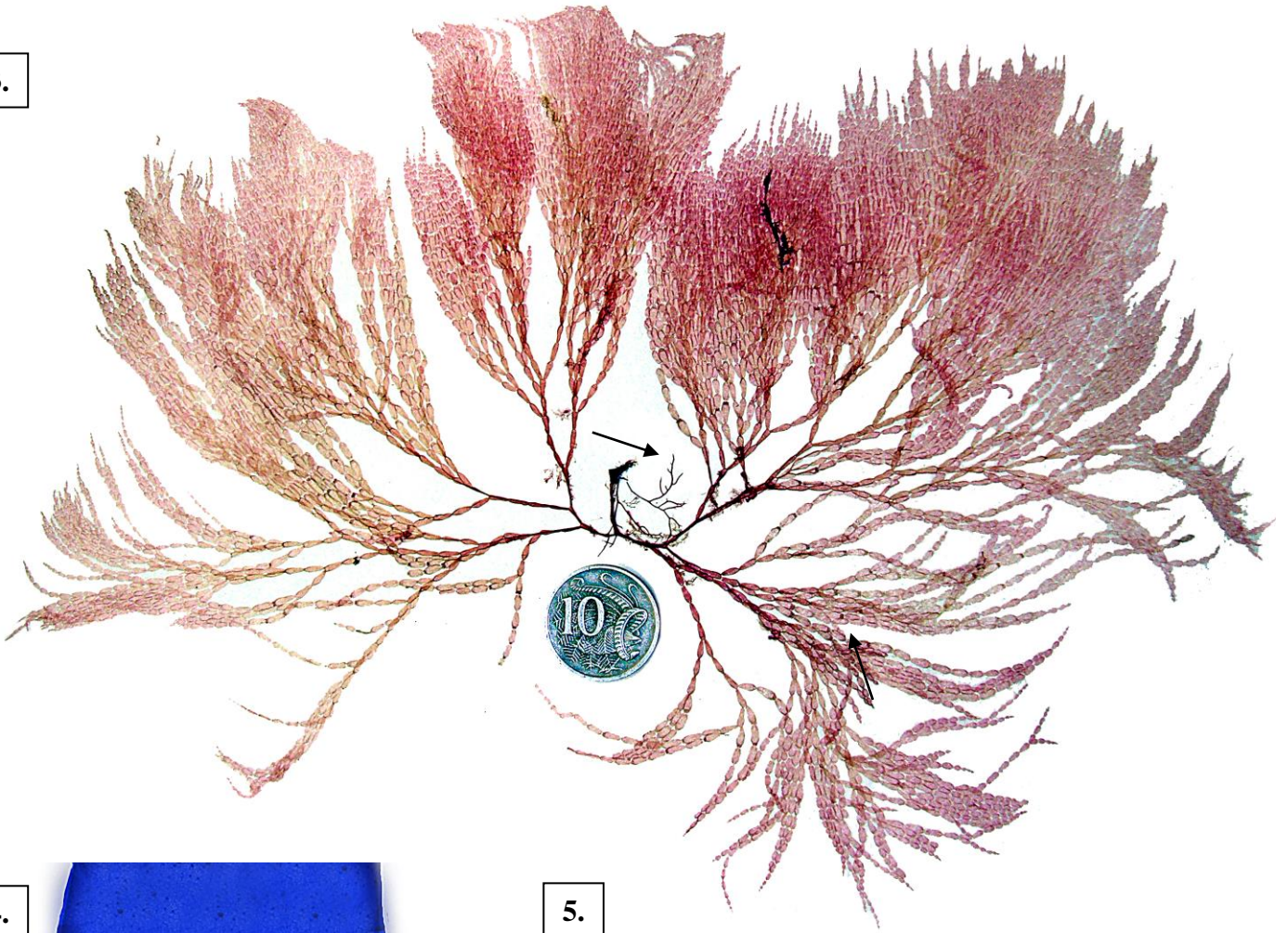
2.



Griffithsia crassiuscula: mature female structures (cystocarps) stained blue and viewed microscopically

1. type A (slightly squashed by the slide preparation): about 11, regular involucrel cells (**arrowed**, viewed from above) (slide 3113)
2. type B (at greater magnification, and viewed from the side): 6 swollen involucrel cells (*inv c*), one of which is notched at the tip (slide 3114)

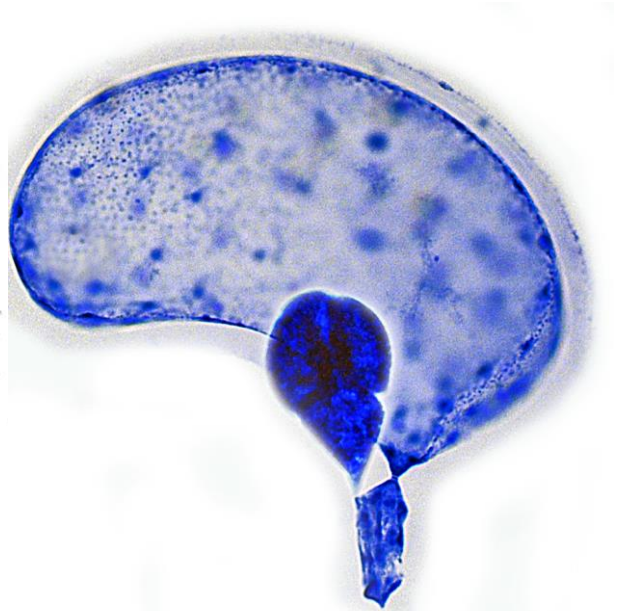
3.



4.



5.



Griffithsia crassiuscula C Agardh

- 3. from American River Inlet, Kangaroo I., S Australia , A26686, 3-4m deep
- 4. sporangial plant (slide 3115): minute tetrasporangial branchlets, slightly displaced from the constriction between vegetative cells by the preparation of the slide, outer branchlets with swollen sterile cells
- 5. outer sporangial branchlet highly magnified (slide 3115): single tetrasporangium, swollen sterile cell, single basal stalk cell