

Techniques needed



MACRO  
PLANT



Classification

Phylum: Chlorophyta; Order: Ulvales; Family: Ulvaceae

\*Descriptive name

green hair

Features

1. plants form light to dark green tangled masses of threads lying loosely on mangrove and samphire mudflats
2. threads are largely **unbranched**



Special requirements



view the branches under the microscope in surface view.

1. focus through the thread to see they are **hollow**, about the **same thickness** throughout and 3-15 cells wide
2. cells relatively large (14-20µm long), angular, square or rectangular in **lines** along the length of the tubular threads
3. chloroplasts with 3-5 bright bodies (pyrenoids)



Diagnosis can be difficult

Occurrences

from Europe, also in New Zealand. In S Australia, at Garden I., Port Adelaide.

Usual Habitat

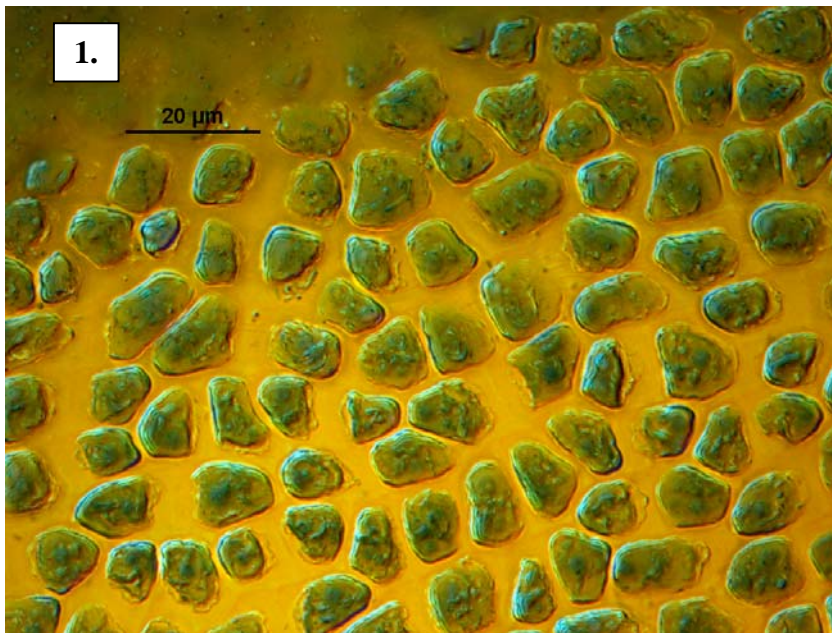
in S Australia, in the mid- intertidal amongst mangroves and samphires

Similar Species

superficially like loose lying *Chaetomorpha* spp but threads are hollow tubes many cells across in *E. ralfsii*

Description in the Benthic Flora Part I, pages 152-155

Details of Anatomy



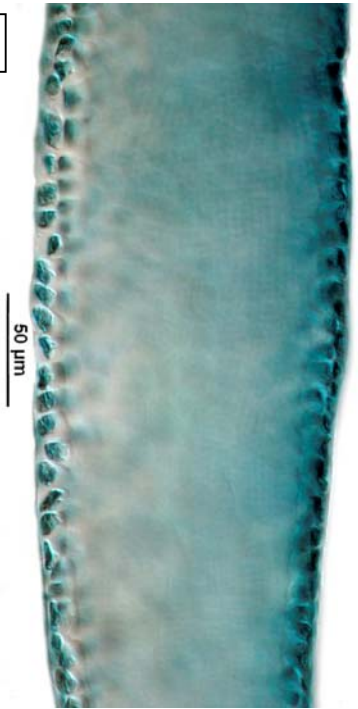
Surface microscope views of *Enteromorpha ralfsii* stained blue showing

1. cells using Nomarski interference microscopy to locate the several bright spots (pyrenoids) in the chloroplast of each cell (A47220 slide 5415)
2. a thread with lengthwise lines of cells (A47220 slide 5415)

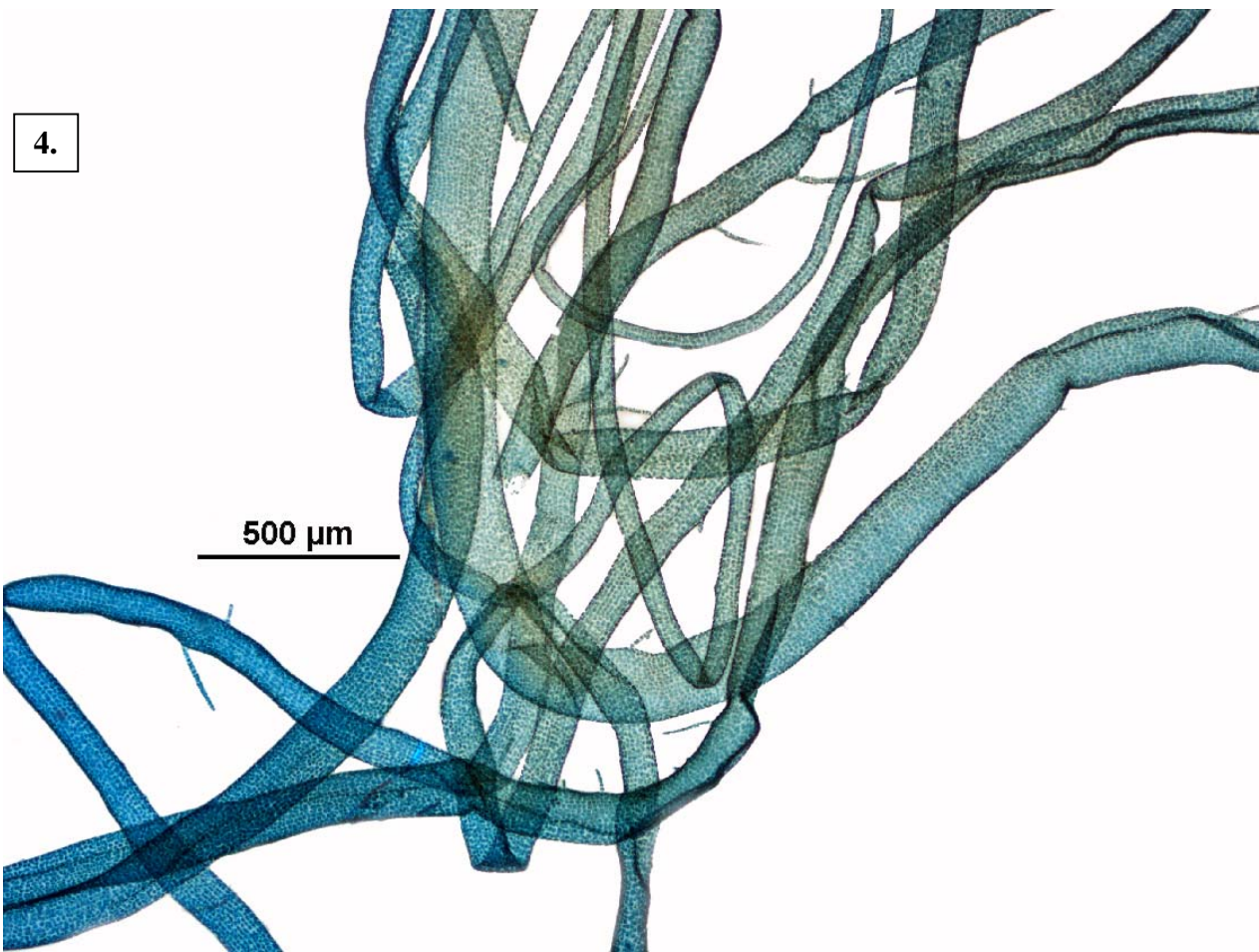




5.



4.



Specimens of *Enteromorpha (Ulva) ralfsii* Harvey

- 3. from Garden I., S Australia, under mangroves (A54642)
- 4, 5. (A47220) stained blue and viewed microscopically to show:
  - 4. the regular lengthwise lines of cells in threads that are practically un-branched
  - 5. focused to show the hollow nature of the threads

\* Descriptive names are inventions to aid identification, and are not commonly used  
 "Algae Revealed" R N Baldock, S Australian State Herbarium, March 2009, additions October 2009