**Bangia atropurpurea**
subsp. *atropurpurea*
(Roth) C Agardh

Techniques needed and plant shape

Classification
- Phylum: Rhodophyta; Order: Bangiales; Family: Bangiaceae

*Descriptive name* dark red threads

Features
- Plants consist of unbranched, **fine, red-brown threads** attached to hard surfaces.

Occurrences
- Worldwide in temperate waters. In Australia, from Freemantle, W Australia to S Queensland.

Usual Habitat
- On mid intertidal rock or timber.

Special requirements
- View the threads microscopically to find:
  1. Threads are initially **unbranched** with single lines of cells **0.5-1.5 times long as broad**. Cells divide longitudinally several times forming outward facing cell clusters.
  2. Cells of threads have a common and **thick** sheath.
  3. Female plants have fertile cells (carpogonia) some of which show **beaked** protrusions (prototrichogynes) for capturing spermatia.
  4. The products of fertilisation (carposporangia) occur in packets of 8-16.
  5. Male plants have spermatia in **squamish** packets of 16-64.

Similar Species
- *Bangia atropurpurea* subsp. brevisegmenta, but that species is found **lower** in the intertidal on mussel shells. Spermatia are also in **elongate** packets.

Description in the Benthic Flora
- Part IIIA, pages 32, 34, 36

Details of Anatomy

1. Various magnifications of threads of *Bangia atropurpurea* subsp. *atropurpurea* stained blue.
   - Threads of different age (A28032 slide 0436)
   - Male and female threads: **squamish** packets of male spermatia (sperm); female carpogonia (carp) with **stubby** prototrichogynes (arrowed) (A29541 slide 10570)
   - Young threads with box-shaped cells and some dividing longitudinally (A28032 slide 0436)

2. Details of anatomy.

3. Further details on anatomy.

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

“Algae Revealed” R N Baldock, S Australian State Herbarium January 2010
4. *Bangia atropurpurea* subsp. *atropurpurea* (A53928) in the mid intertidal on jetty pylons, Port Stanvac, S Australia

5. Female threads stained blue and viewed microscopically showing stubby prototrichogynes that capture male spermatia (arrowed) (A29541 slide 10570)

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