Techniques needed and shape

**Classification**

*Descriptive name*

**Features**

Phylum: Rhodophyta; Family: Sarcodiaceae

1. plants are red, 570-170mm high, with upright, forked blades, flat and slightly thicker at the edges
2. small, ball-shaped mature female structures (cystocarps) line the edges of blades

**Occurrence**

Port Elliott, S Australia to Victoria

**Usual Habitat**

on rocks in deep water or in shaded pools on rough-water coasts

Stenogramme interrupta but that species does not have cystocarps on the blade margins; Curdiea angustata has marginal cystocarps but is irregularly branched

**Description in the Benthic Flora**

Part IIIA, pages 315-317

**Special Requirements**

1. cut a cross section of a branch and view microscopically
   - a core of tangled threads formed from star-shaped cells of the outer layers
   - outer layers (cortex) of large inner cells decreasing to small closely-packed outermost cells
2. find mature, ball-shaped female structures (cystocarps) about 1-2mm across on at the edge of blades. Cut a cross section to view microscopically
   - a base of a network of threads
   - spreading threads bearing short chains of carposporangia
   - a thick wall of cells (pericarp) and a definite opening (ostiole)
3. tetrasporangia form slightly raised clusters (sori) on blade surfaces and are divided across (zonate)

**Details of Anatomy**

1. Cross sections of *Sarcodia marginata* stained blue and viewed microscopically showing
   1. a mature female structure (cystocarp) from the edge of a blade showing a netlike base (bas) radiating threads (gonimoblast, gon), short chains of carposporangia (ca sp), thick wall (pericarp, peri) and opening (ostiole, ost) (A46370 slide 12232)
   2. outer part of a blade with large-celled inner cortex (in co) small-celled outer cortex (o co) and tetrasporangia (t sp) divided across (zonate) (A46570 slide 12233)
   3. a blade with core of intermingled threads (medullary filaments, med fil), inner cortex and outer cortex (A27946 slide 12214)

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

Prepared March 2009
Different magnifications of *Sarcodia marginata* J Agardh

4. from the lower intertidal in Evans Cave, Cape Lannes, S Australia (A63264) with scattered patches of tetrasporangia on some of the blades (arrowed)

5-7. from 15m deep, 1300m off Cape Northumberland, S Australia (A66370) showing cystocarps on the blade edges (arrowed)

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

Prepared March 2009