Amansia mamillaris
Lamouroux ex C Agardh

**Techniques needed and plant shape**

**Classification**

Phylum: Rhodophyta; Order: Ceramiales; Family: Rhodomelaceae

*Descriptive name*

red-brown flat-strap

**Features**

plants brown, 100-300mm tall, main branches (axes) wiry, cylindrical with flat, oppositely branched blades, alternating along the axes

**Special requirements**

1. view plants microscopically in surface view to find:
   - oblong blade-cells with pointed ends, occurring in rows
   - scattered, tiny tufts of branched threads (trichoblasts)
   - blade tips curved inwards (circinnate), obscuring the single apical cells;
   - blade edges with minute, multicellular teeth from each row of blade cells
   - thread of cells (central filament) visible at the blade tips for a short way

2. cut a cross section to view microscopically a cell of the central thread, surrounded by
   - a pair of large, opposite, thick-celled flanking (pericentral) cells
   - one pericentral cell at the top dividing into 2 (pseudo-pericentral) cells
   - one pericentral cell below dividing into 2 (or 3) pseudo-pericentral cells
   - blade edges (wings) 2 cells thick, without thickening (cortication)

3. if possible, find the flat, oval-shaped sporangial structures (stichidia) on the blade surfaces containing pairs of tetrasporangia, in scattered groups of 2-5

4. if possible, find the products of fertilisation, stalked, egg-shaped cystocarps, arising from the cells of trichoblasts, scattered on the surface of blades

**Occurrences**

Port Denison to Eyre, W Australia

**Usual Habitat**

unknown, as collections have been from drift plants

**Similar Species**

distinctive because of multicellular spines from each cell row of blades

**Description in the Benthic Flora**

Part IIID, pages 395, 396

**ppcDetails of Anatomy**

1. **Amansia mamillaris** stained blue and viewed microscopically (1-5 surface view, 6-7 cross sectional view)

1. blade tip with a single tip cell (arrowed) and central thread (c fil) (A34238 slide 19838)

2. incurved blade tip (slide 1938)

3. cell rows and trichoblast (tr bl) (slide 1984)

4. scattered groups of tetrasporangial structures (stichidia, st) (slide 19845)

5. detached, enlarged stichidium with paired tetrasporangia (t sp) (slide 19848)

6. young blade showing a central thread (c fil), and wings (wg) 2 cells thick (slide 19840)

7. mature blade with central filament (c fil), paired pericentral cells (pc1, pc2) and pseudo-pericentral cells (ppc) (slide 19841)

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“Algae Revealed” R N Baldock, S Australian State Herbarium, March 2007
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