**Platoma australicum**
Womersley & Kraft
(as *P. australica* in the Benthic Flora)

**Techniques needed and shape**

**Classification**
*Descriptive name*

**Phylum:** Rhodophyta; **Order:** Gigartinales; **Family:** Nemastomataceae

**Features**

| 1. | red, fading to yellow, 100-350mm tall, of slightly slippery single or several broad blades, expanding abruptly from a narrow stalk |
| 2. | surface faintly blotched or streaked |

**Occurrences**

**Usual Habitat**

West Coast S Australia to Bass Strait and SE Tasmania

on hard rocks in deep water on rough coasts

1. prepare a tissue squash under a coverslip and view microscopically to find
   - central mass (medulla) of intertwined threads
   - narrow outer layers (cortex) of branched tufts facing outwards, inner cells slightly larger grading to small, elongate outermost cells in straight chains of about 7 cells
   - patches each containing few angular carposporangia, lying beneath breaks in the outer layers or slight depressions in the blade surface (minute male spermatangia on outermost cells also possibly present on the same plant (monoecious condition)

2. sporangial plants (encrusting rocks) unknown in Australia

**Similar Species**

*Platoma foliosa* but that has marginal lobes and a narrower cortex; *Schizymenia dubyi* but outer branch tufts are more compact, resisting separation when squashed, and patches of carposporangia lie beneath definite openings and depressions in the cortex

**Description in the Benthic Flora**

Part IIIA, pages 282, 284,285

**Details of Anatomy**

1-3. Cross sections of *Platoma australicum* stained blue and viewed microscopically

| 1. | blade showing narrow outer layer (cortex, *co*), core (medulla, *med*) of intertwined threads and anomalous, deeply staining threads of a blue-green bacterium (*b-g*) infesting the medulla (*A47226 slide 12278*) |
| 2. | blade edge with cell detail: medulla threads (*med fil*), cortical branch tufts, (*br tf*) (*A47226 slide 12278*) |
| 3. | blade edge with carposporangial patch (*ca sp*) lying beneath a slight depression in the cortex (*A46962 slide 12277*) |
| 4. | Single cortical branch tuft and piece of cortex in surface view (*A45120 slide 12281*) |

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

“Algae Revealed”, R N Baldock, S Australian State Herbarium, December 2011
Drift plants and surface features at different magnifications of *Platoma australicum* Womersley & Kraft from S Australia showing blotchy surface patterns

5, 6. from Encounter Bay (A46962)
7, 8. from Elliston, West Coast (A47863)

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

"Algae Revealed", R N Baldock, S Australian State Herbarium, December 2011