**Mychodea pusilla**  
(Harvey) J Agardh

**Techniques needed and shape**

**Classification**
- *Descriptive name*
- **Features**
  - Plants red-brown, **gristy**, tufted, 10-30mm tall, **restricted** to the wiry stems of the seagrass, *Amphibolis*
  - Branches **cylindrical, thin**, about 0.5mm wide, and **forked**

**Occurrences**
- Albany W Australia to Victoria

**Usual Habitat**
- Specifically on the sea grass, *Amphibolis* from shallow, rough water, to 20m deep

**Similar Species**
- *Dicranema cincinnalis* which also grows in clumps on *Amphibolis* but is smaller

**Description in the Benthic Flora**
- Part IIIA, pages 461, 464-465

**Special Requirements**
1. Cut a cross section of a branch and view microscopically to find:
   - The innermost parts of cores (inner medulla) of slender threads
   - Rings of **several, large** cells in the outer parts of cores
   - Outermost (cortex) layers of very **small** cells in 2-3 rows, facing outwards, **not** forming rings in surface view
2. Find female structures (cystocarps), forming swellings near the **tips** of shorter branches that end in a **spine**. Cut a cross section to view:
   - Central **clusters** of spores
   - Practically no envelopes of threads and **no** openings (ostioles)
3. If possible, find sporangial plants with **scattered**, cigar-shaped tetrasporangia divided across into four sporangia (**zonate**) (not illustrated below)

**Details of Anatomy**

1. Handcut (thick, unstained) cross section (A38290)
2. Embedded cystocarp (cyst), stained blue (A44705 slide 3720)
3. Part of the cortex showing spermatangial branches (sp) (A44705 slide 3720)

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

“Algae revealed”, R N Baldock, State Herbarium S Australia, December 2008; corrected April 2014
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4, 5. Two magnifications of plants (A68423) on the stem of an Amphibolis, in shallow water, Dolphin Beach, Innes National Park, S Yorke Peninsula S Australia.

6, 7. Female plants (A69570) from 20m deep on Amphibolis, Isles of St Francis S Australia, with cystocarpic swellings (arrowed) causing bending of the thin, cylindrical branches.

8, 9. Preserved (bleached) specimens (A38290) on Amphibolis stems from Tiparra reef, S Australia, magnified to show branching pattern and cystocarpic swellings (arrowed) ending in a spine.

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