**Classification**

*Descriptive name*

**Features**

1. plants are dark red-brown, 100-200mm tall, flat-branched and gristly
2. compressed short side branches ending in spines arise at the margins of broad main branches 2-7mm wide

**Occurrences**

Albany W Australia to Victoria and around Tasmania

**Usual Habitat**

on rocks, wooden pilings and sea squirts, from shallow water to 60m deep

**Similar Species**

distinctive because of its flat branching

**Description in the Benthic Flora** Part IIIA, pages 467-470

**Special Requirements**

1. cut a cross section of a branch and view microscopically to find:
   - the core (medulla) with a single central thread innermost, surrounded by a few rhizoids
   - large cells in the outer part of the core
   - outermost (cortex) layers of very small cells in short rows, facing outwards
2. find female plants with swellings (cystocarps), near the ends of branches. Cut a cross section if possible to view:
   - clusters of spores
   - a poorly developed cellular wall (pericarp) disintegrating to release the spores
3. if possible, find sporangial plants with cigar-shaped tetrasporangia massed near the surface, divided across into four sporangia (*zonate*)

**Details of Anatomy**

Cross sections of *Mychodea australis* stained blue and viewed microscopically showing

1. a compressed branch with prominent central thread (*c fil*) innermost, large cells of the outer part of the core (outer medulla, *o med*) and outermost layers (cortex, *co*) of small cells
   (AS0921 slide 6453)
2. a cystocarp with central mass of sporangia
   (A41802 slide 3712)
3. a sporangial plant with mass (nemathecium) of tetrasporangia (*t sp*) on one side amongst elongate cells (hairs) of the cortex
   (A41802 slide 3713)

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

4. two magnifications of Mychodea australis (Zanardini) Kraft (A 44692) 3-6m deep on jetty piles at Vivonne Bay, Kangaroo I., S Australia. Cystocarps (arrowed) are visible in #5.
5. a lengthwise section stained blue and viewed microscopically of a developing female structure after fertilisation (gonimoblast, gon) with the central thread (c fil) of the core (medulla) visible (A41802 slide 3711)

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