**Techniques needed and plant shape**

**Classification**
Phylum: Phaeophyta; Family: Dictyotaceae; Tribe: Zonarieae

*Descriptive name*
rolled-edge fan-plant

**Features**
1. plants brown, up to 250mm across, of fan-shaped lobes with some lime on the upper surface
2. blade edges are in-rolled upwards and inward.
3. concentric bands of hairs are prominent.
4. continuous or broken patches of sporangia occur on the underside of blades

**Variations**
blades may become divided into wedge-shaped pieces

**Special requirements.**
slice the blade across to view microscopically
• 2 rows of cells; the upper cells taller than the lower ones
• concentric bands of hairs on both sides of the blade
• sporangia in rows with a flimsy cover (indusium), clustered into concentric bands or broken patches (sori) on the lower side of the blade only

**Occurrences**
tropics and sub-tropics of E Atlantic and Japan. In Australia, from the west coast of W Australia and Pt Sinclair, S. Australia

**Usual Habitat**

**Similar Species**
*Padina elegans*, but that species has sporangia on the upper side of the blade; cells of the upper layer are shorter than those of the lower layer

**Description in the Benthic Flora**
Part II, pages 218, 219, 221

**Details of Anatomy**
1., 2. two views of a cross section of *Padina sanctae-crucis* (A13892 slide 9677) through a sporangial cluster (sorus) on the underside of a blade, stained blue and viewed microscopically, showing
• complete sporangia (sp) and empty sporangial cases (e sp)
• remnant of the flimsy covering (indusium, ind)
• taller upper cells (u c) than lower cells (l c)

3. surface view of a blade with a band of hairs (h) and a sporangial sorus with lines of sporangia (sp)

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

“Algae Revealed” R N Baldock, S Australian State Herbarium, July 2003
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Padina sanctae-crucis Børgesen
(A69287)