**Carpopeltis phyllophora**  
(Hooker & Harvey) Schmitz

**Techniques needed and shape**

**Classification**

*Descriptive name*

**Features**

Phylum: Rhodophyta; Order: Gigartinales; Family: Halymeniaceae

**red forked blades**

1. plants are dark red-brown, 40-250mm long, of flat-branched, alternately forked blades 2-5mm wide
2. in some plants, blades may be denuded back to a thickened midrib at the base
3. some sponge may grow on plant bases

**Occurrences**

Geraldton W Australia to Victoria and Tasmania

**Usual Habitat**

on rough coasts from shallow water in shade to deep water (38m)

**Similar Species**

*Rhodymenia australis*, but that species has a core of large equal-sided cells. *Carpopeltis elata* has narrow blades and often longer, denuded basal branches

**Description in the Benthic Flora**

Part IIIA, pages 169-171, 173

**Special Requirements**

1. cut a cross section of a branch and view microscopically:
   - the firm outer layer (cortex) of equal-sided cells, inner ones large, outer small
   - a narrow core (medulla) of densely entwined threads
2. cut a section of the swollen ends of branches (products of fertilisation - cystocarps)
   - at first, small, flask-shaped spaces (auxiliary cell ampullae) enveloped by threads, form in the inner cortex
   - the envelopes become prominent, and a dense mass of carposporangia form inside, escaping through a small opening (ostiole)
3. find sporangial plants with patches (nemathecia) of spores in branch tips and cut a cross section revealing small elongate tetrasporangia divided in a cross (cruciate) pattern, lying between the short threads (paraphyses) in the cortex

**Details of Anatomy**

Cross sections of *Carpopeltis phyllophora* stained blue and viewed microscopically:

1. showing the relatively narrow core (medulla, med) of tightly packed threads, and outer layer (cortex, co) of inner large and outer small equal-sided cells (A 26462 slide 11780)
2. part of a frond with a flask-shaped space (ampulla) lying in the cortex, containing a dividing auxiliary cell (aux c) enveloped by threads (involucres, inv) (A 55120 slide 11875)
3. mature ampullae (some empty) forming cystocarp extending to the medulla, with masses of carposporangia (c sp) released through a small ostiole (ost) (A21115 slide 11781)
4. a sporangial plant with elongate tetrasporangia (t sp) in the outer cortex, lying amongst short hairs (paraphyses, par) (A1763 slide 11865)

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

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5, 6. Drift plants of *Carpopeltis phyllophora* (Hooker & Harvey) Schmitz.
5. A10652, from Vivonne Bay, Kangaroo I., S Australia, with a thickened mid-rib arrowed
6. detail of the base of A21115 from Port Elliot, S Australia, showing encrustations of sponge

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