**Hypnea filiformis**
* (Harvey) Womersley

Techniques needed and shape

Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Hypneaceae

*Descriptive name*
narrow-branched Hypnea

Features

1. plants are dark red, 30-140mm tall, with **definite** upright branches bearing, radial side branches, dense in upper parts
2. unlike other Hypnea species short spine-like branches are **not** present
3. side branches **occasionally** with hooked ends (hamate)

Occurrences

Port Denison, W Australia to Nora Creina, S Australia

Special requirements

1. view plants microscopically to find a **single**, **minute** cell at the tip of branches producing a thread (axial filament) **visible** along the cylindrical branches
2. cut a cross section to view the central thread, large-celled middle and small-celled surface layers
3. the products of fertilisation in female plants (cystocarps) are globular with their bases embedded in side branches, with **no** opening (ostiolo) at the tip
4. male plants produce **scattered** spermatangia in the outer (cortex) layer of side branches
5. the products of fertilisation in female plants (cystocarps) are scattered and not on a basal swelling on side branches as in other species

Usual Habitat

attached by runners and small pads to rocks in shaded intertidal pools to 20m deep

Similar Species

lacks the many short spiny side branches of other Hypnea species although some tapering immature branches may be mistaken for them; tetrasporangia are scattered and not on a basal swelling on side branches as in other species

Description in the Benthic Flora

Part IIIA, pages 437, 438-440

Details of Anatomy

1. magnified views of preserved (bleached) specimens of Hypnea filiformis (*A39769*):
   1. slender side branches and stalkless cystocarps (cyst)
   2. swollen bases of branches (nemathecia, arrowed) bearing tetrasporangia
3-5. Hypnea filiformis stained blue and viewed microscopically
   3. branch tips showing very small but conspicuous protruding apical cells (*A54290 slide 12654*)
   4. cross section of a branch with central thread (**c fil**), large-celled middle layer (medulla, **med**) and small-celled outer layer (cortex, **co**) (*A38704 slide 12660*)
   5. surface view of cells with **no** grouping of cortex cells into rosettes about the underlying (deeply stained) medulla cells (*A26444 slide 12661*)

* Descriptive names are inventions to aid identification, and are not commonly used
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6. a specimen (A54290 slide 12654) stained blue showing an extruded bisporangiate (arrowed) released from the cortex of a side branch of a tetrasporangial plant

7, 8. *Hypnea filiformis* (Harvey) Womersley, (A42741), 3m deep from off St Kilda, S Australia

9. a preserved (bleached) specimen, (A19769), showing the slender side branches and ball-shaped cystocarps

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