**Areschougia congesta** *(Turner) J Agardh*

**Techniques needed and shape**

**Classification**

Phylum: Rhodophyta; Order: Gigartinales; Family: Areschougiaeace

*Descriptive name*

§ congested mopweed

**Features**

1. plants dark red-brown, 100-400mm tall, usually with a *single* main branch (axis) that may be *slightly* compressed 1-2mm wide
2. side branches are *radially arranged*, thin, *cylindrical* and *tapering* often to a point, narrowed at the base

**Occurrences**

from Hamelin Bay, W Australia to Tasmania, and possibly Lord Howe I., often common

**Special requirements**

1. cut a cross section and view microscopically to find
   - the single, *large* central thread (*c fil*)
   - the central core (medulla, *med*) of a mix of threads and rhizoids
   - the outer layer (cortex, *co*) of small, equal-sided (parenchymatous) cells
2. if possible find the products of fertilisation in female plants (cystocarps)
   - *swelling* the smaller side branches
   - with a prominent fusion cell
3. sporangial plants have tetrasporangia
   - *large*, cigar-shaped and scattered in the outer (cortex) sporangia
   - divided across (zonately) into 4 sporangia

**Usual Habitat**

on rough coasts, extending into calmer waters where it is generally slenderer

**Similar Species**

narrow forms may superficially appear like *Melanema*

**Description in the Benthic Flora**

Part IIIA, pages 356-359

**Details of Anatomy**

1. a hand-cut cross section of a preserved, bleached specimen of *Areschougia congesta* (*A3305*) showing the central thread (*c fil*), core (medulla, *med*) of threads and outer layer (cortex, *co*) of small equal-sided (parenchymatous) cells
2. a lengthwise view of the central thread extracted from a branch, showing the *single branches* arising from each thread cell, a diagnostic feature separating *Areschougia* from *Melanema* (*A3305*)
3. 4. *Areschougia congesta* stained blue and viewed microscopically (*A35026 slide 3861*)
   - surface view of cells and top view of the large tetrasporangia (*t sp*)
   - cross section showing a single large tetrasporangium divided into rows (zonate) in the cortex, and fine rhizoids of the medulla (*rh*)
5. a fusion cell (*f c*) and carposporangia (*ca sp*) extracted from a cystocarp of a female plant (*A2924 slide 3864*)
6. a cross section of an old branch, showing medulla threads and layered cortical cells (*co*) (*A34365 slide 3865*)

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

* Name used by Edgar, G (2008) in Australian Marine Life (2nd ed.).

Areschougia congesta (Turner) J Agardh, (A33305) from Grange, S Australia, on rock, 18m deep
a preserved, bleached specimen of Areschougia congesta, A35026 enlarged to show the irregular radial branching pattern and cylindrical branches not apparent in pressed specimens, narrow at the base.

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