**Techniques needed and shape**

### Classification

Phylum: Rhodophyta; Order: Ceramiales; Family: Ceramiaceae; Tribe: Griffithsieae

### *Descriptive name*

**Features**

- creeping, one-sided red threads

### Occurrences

Cosmopolitan in temperate and mixed temperate–tropic waters, variously divided into sub-groups reflecting distribution. In southern Australia, from Rottnest I., W Australia to S NSW, apparently absent in the colder waters of Tasmania.

### Usual Habitat

On rock, sand covered rock, seagrasses or algae, generally in shallow water

### Special requirements

View microscopically to find:

- creeping (procumbent) threads, attached by short cells ending in much-branched, root-like pads (*haptera*), producing erect threads from the lower ends of their cells; upper cells of branch tips bearing dense rings of hair-like branches produced simultaneously, becoming extremely elongated, finally shed.
- In sporangial plants: tetrasporangia on small stalks (*pedicels*) produced simultaneously in rings of 8-10 from several cells near erect branch tip, initially terminal, moving to just below the pedicel tips by the outward growth of the pedicel.
- In mature basket-shaped female structures (cystocarps): swollen basal cells each bearing a ring (*involucre*) of 12-13 incurved cells.
- In male plants: rings of 4-8 stalked heads of minute spermatangia near the thread tips.

### Similar Species

- *Anotrichium tenue* (C Agardh) Nägeli var. *thyrsigerum* Kim & Lee

### Description in the Benthic Flora

Part IIIC, pages 340-344

### Details of Anatomy

1. Branch tip (slide 3153): rings of hair-like structures (synchronous hairlike laterals, *sl*); young tetrasporangia (*t sp*) sub-terminal on stalks (pedicels, *ped*)
2. Male plant with hairlike branches (*sl*) and heads of minute spermatangia (*sperm*) on stalks (pedicels, *ped*) (A39034 slide 3596)
3. Detail of a cystocarp showing the large basal cell (*bas c*) ring of 12-13 curved cells (involucral branches, *inv br*) (A39034 slide 3592)
4. Upright branch arising from a creeping thread: rings of hairlike branches at the tip (*sl*), connection (*red arrowed*) to the lower part of a cell (not to the upper part as occurs in other species) (slide 3153)

*Anotrichium tenue* stained blue and viewed microscopically:

1. Branch tip (slide 3153): rings of hair-like structures (synchronous hairlike laterals, *sl*); young tetrasporangia (*t sp*) sub-terminal on stalks (pedicels, *ped*)
2. Male plant with hairlike branches (*sl*) and heads of minute spermatangia (*sperm*) on stalks (pedicels, *ped*) (A39034 slide 3596)
3. Detail of a cystocarp showing the large basal cell (*bas c*) ring of 12-13 curved cells (involucral branches, *inv br*) (A39034 slide 3592)
4. Upright branch arising from a creeping thread: rings of hairlike branches at the tip (*sl*), connection (*red arrowed*) to the lower part of a cell (not to the upper part as occurs in other species) (slide 3153)

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

“Algae revealed”, R N Baldock, State Herbarium S Australia, November 2007; revised July 2014
Anotrichium tenue (C Agardh) Naegeli var. thyrsigerum Kim & Lee
5. in the upper sublittoral, Coffin Bay, S Australia A32511
6. upright branch tip (slide 3153): characteristic rings of dense synchronous hairlike branches
7. a part of a creeping filament with attachment organs ending in many-branched pads (haptera, ha) (slide 3592)

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