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

45.800.68

Techniques needed and shape

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

***Descriptive name** creeping, one-sided red threads

Features plants soft, dark red, small, 10-50mm tall, of tufted or straggling threads lying along the substratum give rise to short, erect branches on their ***upper side only***

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

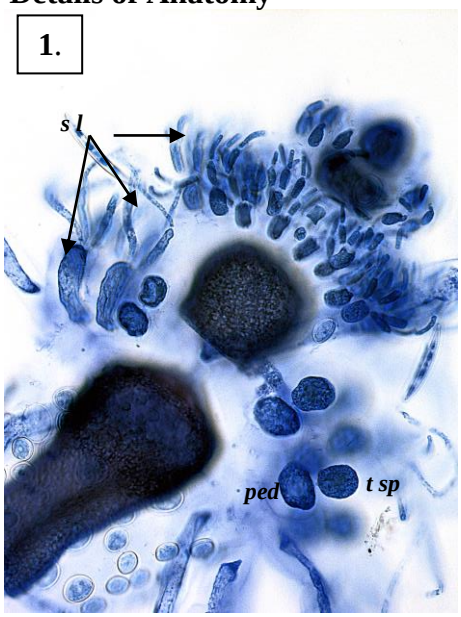
Similar Species Plants can show considerable variation

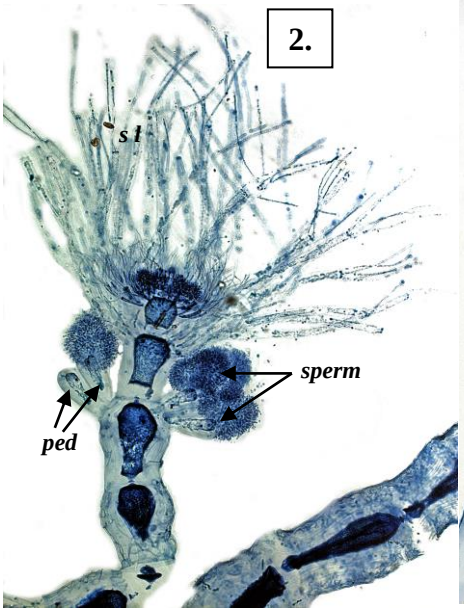
varieties (considered separate species under *Griffithsia* by some European workers) are separated on the number of stalked tetrasporangia in a ring

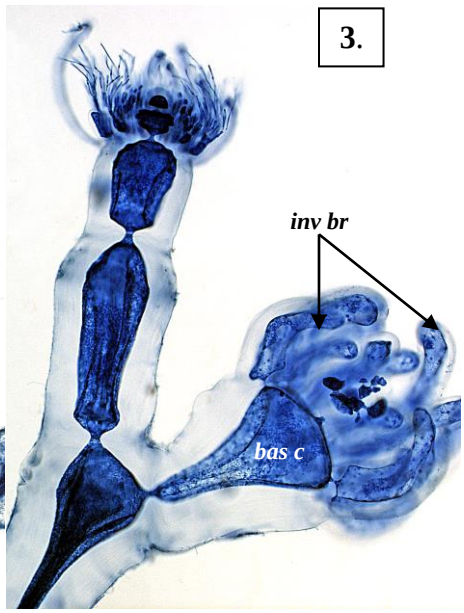
- var. *tenue* has up to 8 tetrasporangia, terminal on pedicels, largely tropical in Australia
- var. *thyrsigerum*, is intermediate in characters with 8-15 sub-terminal tetrasporangia
- var. *secundum* has larger cells with 30-40 sub-terminal tetrasporangia

Description in the Benthic Flora Part IIIC, pages 340-344

Details of Anatomy

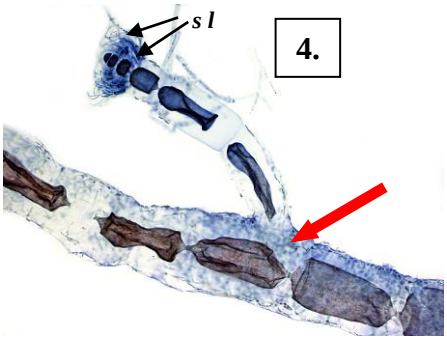






Anotrichium tenue stained blue and viewed microscopically

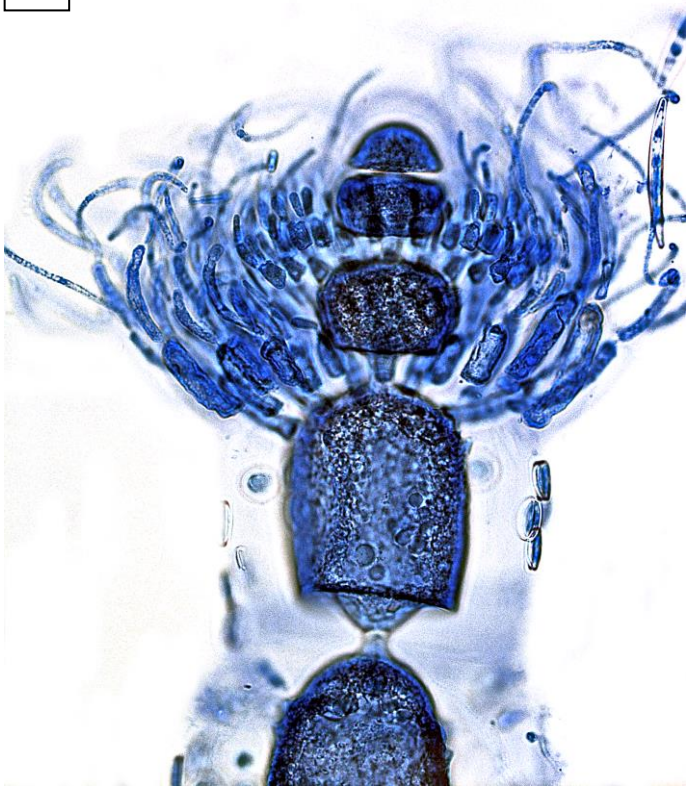
1. branch tip (slide 3153): rings of hair-like structures (synchronic hairlike laterals, ***s l***); young tetrasporangia (***t sp***) sub-terminal on stalks (pedicels, ***ped***)
2. male plant with hairlike branches (***s l***) and heads of minute spermatangia (***sperm***) on stalks (pedicels, ***ped***) (A39034 slide 3590)
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 (***s l***), connection (***red arrowed***) to the ***lower*** part of a cell (not to the upper part as occurs in other species) (slide 3153)

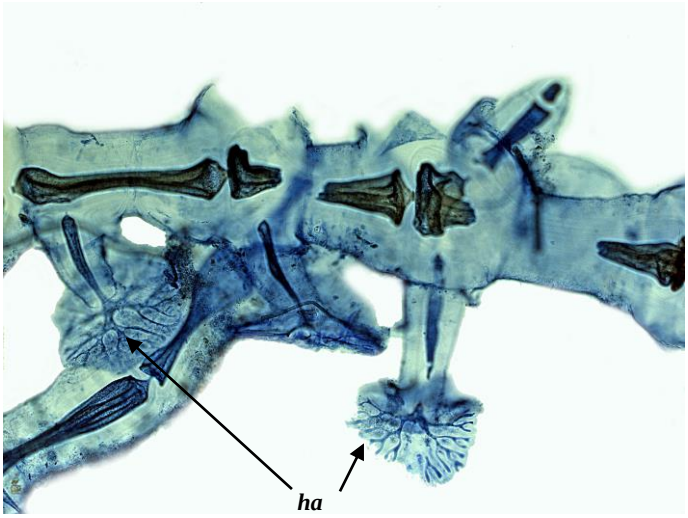


* Descriptive names are inventions to aid identification, and are not commonly used

"Algae revealed", R N Baldock, State Herbarium S Australia, November 2007; revised July 2014

5.





6. **7.**

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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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