Papenfussiella extensa
Womersley & Bailey

A SPECIES WITH FEW RECORDS

34.150

Techniques needed and plant shape

MACRO PLANT

multi-seriate

Classification Phylum: Phaeophyta; Order: Chordariales; Family: Chordariaceae

***Descriptive name** branched slime strands

Features plants slimy, main branches (axes) 100-150mm long, with side branches at right angles, growing on rock or the red alga *Laurencia*

Special requirements

cut cross *and* lengthwise sections of main branches and view microscopically to see:-

- the ***compact*** middle layer (medulla) of threads, surface layer (cortex) of coloured or assimilatory threads of 2 types (short ***hooked*** ones and long ones, ***narrow*** at the base, extending well beyond the plant surface.
- single-compartmented (unilocular) sporangia in a ***definite layer*** in the cortex, often on 2-celled stalks (pedicels)
- colourless hairs ***absent***

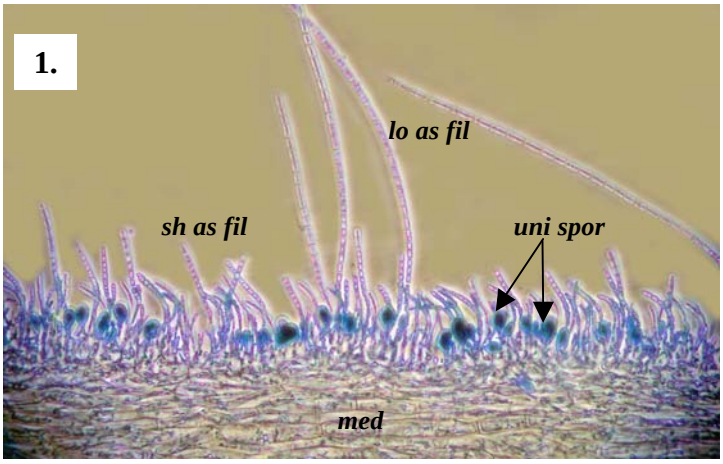
Occurrences only from Pt Peron, W. Australia, strictly outside of the southern Australian marine biogeographical region, but suspected to be more widespread.

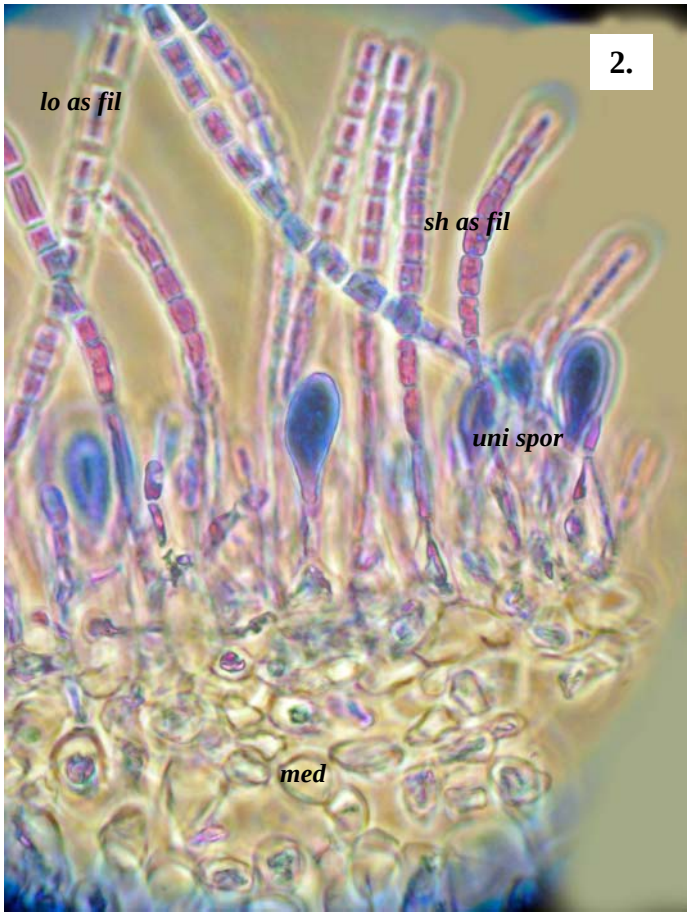
Usual Habitat in crevices on the reef edge, or on *Laurencia*

Similar Species other members of the Chordariaceae (*Myriogloea*, *Suringariella*, *Mesogloiopsis*) but *Papenfussiella* has ***no*** colourless (phaeophycean) hairs, and has a ***small*** middle(medulla) layer of ***compact*** filaments

Description in the Benthic Flora Part II, pages 93-95

Details of Anatomy





Sections of *Papenfussiella extensa* (A51033 slide 6169), stained blue and viewed microscopically at different magnifications

1. lengthwise section showing the middle (medulla, *med*) layer of ***compact*** threads and outer (cortical) layer of ***short*** coloured threads (short assimilatory filaments, *sh as fil*), ***long*** coloured threads (long assimilatory filaments, *lo as fil*) and ***distinct layer*** of single-compartmented sporangia (unilocular sporangia, *uni spor*)
2. higher magnification of a cross section showing similar features as the above

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

3. *Papenfussiella extensa* Womersley & Bailey A51033

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"Algae Revealed" R N Baldock, S Australian State Herbarium, August 2005