

Polyopes constrictus
(Turner) J Agardh

45.280

Techniques needed and shape



**MACRO
PLANT**



Classification

Phylum: Rhodophyta; Order: Gigartinales; Family: Halymeniaceae

*Descriptive name

red Wiry-weed

Features



plants dark red-brown to olive-brown, 40-160mm long, **gristly**; branching in one **flat surface**, of irregularly forked, **narrow**, compressed branches 0.5-2.0mm broad forming terminal tufts slightly **pinched** near tips

Occurrences

South Africa. In Australia, West coast S Australia, around Tasmania to S NSW

Usual Habitat

moderately common, from shaded shallow water to 20m deep

Similar Species

Polyopes tenuis, but that species has narrower branches, and looser arrangement of microscopic threads in the core of branches. Superficially similar to *Gelidium*.

Description in the Benthic Flora

Part IIIA, pages, 174, 175-177

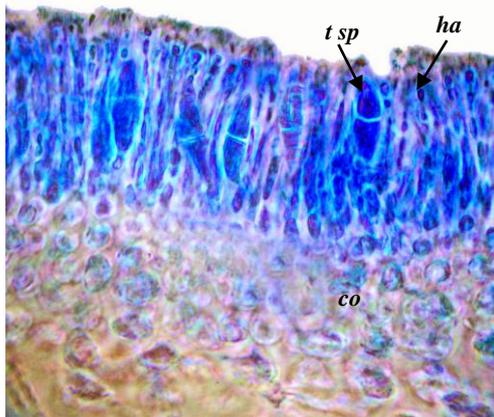
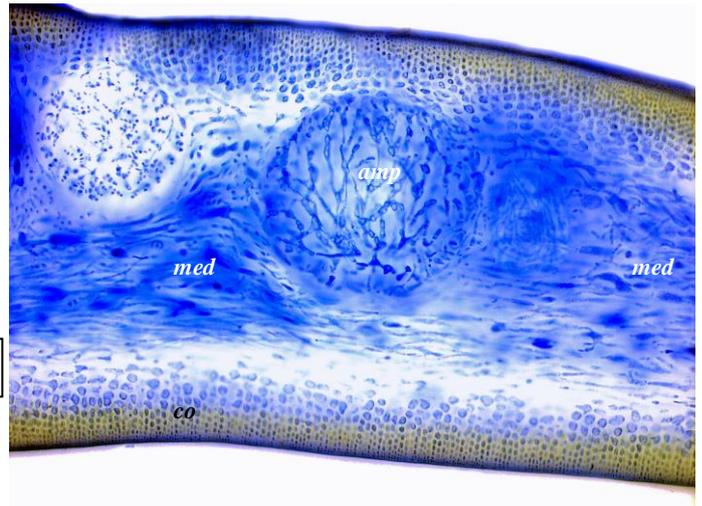
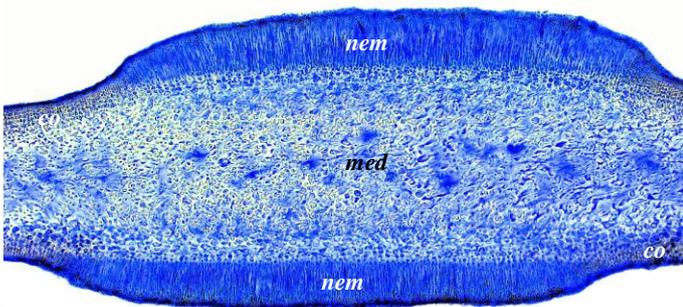
Special Requirements



view microscopically to find

- in a **lengthwise** section of a branch: a **firm** outer layer (cortex) of rows of small cells at right angles to the surface, a **wide** core (medulla) of numerous **compact** threads
- in a lengthwise section of female plants: **initially**, numerous, dense, cell clusters lying in small flask-shaped spaces (**ampullae**) opening to the surface, in the inner cortex, **later** developing into large ball-shaped ampullae protruding into the core (medulla), enveloped by a network of threads (involucre), **finally**, dense masses of carposporangia within the ampullae, that escape through the small openings
- in sporangial plants: elongate patches (nemathecia) near branch tips which in cross section reveal small, elongate tetrasporangia divided in a cross (cruciate) pattern, mixed with sterile chains of 4-8 elongate cells (hairs or paraphyses)

Details of Anatomy

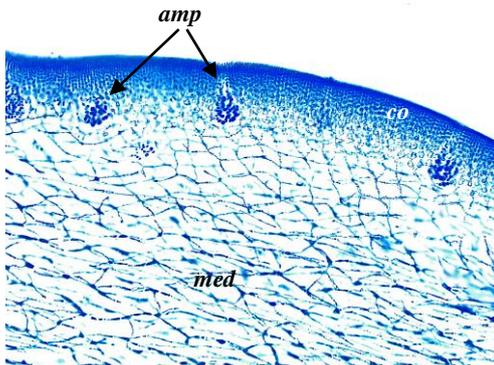


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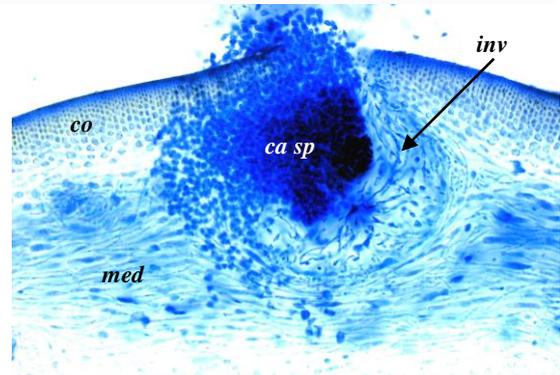
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2.

5.



3.



Polyopes constrictus: sections stained blue and viewed microscopically
 1, 2. two magnifications of a sporangial mass (nemathecium, **nem**): core (medulla, **med**), outer layer (cortex, **co**), tetrasporangia (**t sp**) divided in a cross-pattern (cruciate), chains of elongate cells (hairs, **ha**) (#1, slide 11759; #2, slide 11760)
 3. young female structures: flask-shaped cavities (ampullae, **amp**) (slide 12777)
 4. older ampullae growing into the medulla, prominent envelope (involucre) (slide 11763)
 5. mature ampulla: carposporangia (**ca sp**) escaping, involucre, (**inv**) (slide 11763)

* Descriptive names are inventions to aid identification, and are not commonly used
 "Algae revealed" R N Baldock State Herbarium S Australia, May 2008; revised March 2014



6.

7.



6, 7. two magnifications of *Polyopes constrictus* (Turner) J Agardh, A37796, from shallow water on rough coasts at Cape Lannes, S Australia, with some forked branches in the upper parts (arrowed) showing pinching or constrictions

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