



MACRO
PLANT



tubular



Techniques needed and plant shape

Classification

Phylum: Chlorophyta; Order: Bryopsidales; Family: Caulerpaceae

*Descriptive name

feathery Caulerpa; §fern caulerpa”

Features

1. plants dark green, 50-400mm tall
2. upright branches (axes) arise from a **coarse**, runner, covered with **forked spines**
3. short side branches in **2 rows** along axes are covered with numerous, cylindrical ultimate branches (ramuli) **forked** at their **bases**

Variations

there are two varieties

upright branches (axes) are occasionally branched

Caulerpa flexilis var. *flexilis* is delicate, more flexible with ramuli 200µm wide and separated on the branches

Caulerpa flexilis var. *muelleri* (Sonder) Womersley is robust, ramuli denser, overlapping, 300µm wide. Short- side branches are clearly **in 2 rows** (distichous)

Special requirements

view the ultimate branches (ramuli) under the microscope. They are forked near their bases and may have tiny spines at their tips

Occurrences

from southern W. Australia to Victoria and Tasmania

Usual Habitat

common in rock pools to 40m deep, on rough water coasts

Similar Species

Caulerpa obscura, but in that species spines on the runner are forked **several** times.

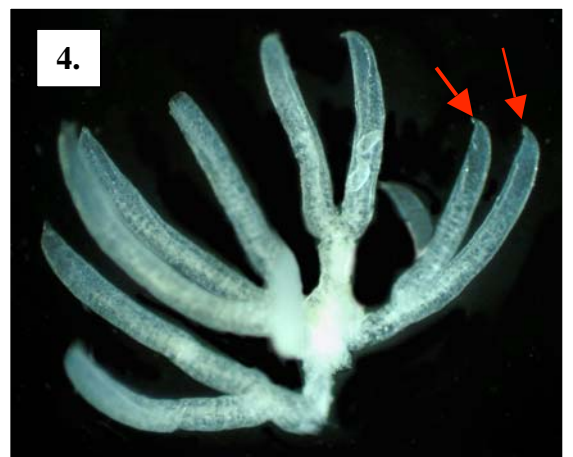
Description in the Benthic Flora Part I, pages 263, 266-267

Details of Anatomy



Images at various magnifications of a preserved (bleached) and coloured specimen of *Caulerpa flexilis flexilis* (A6121):

1. near the tip of an upright branch (*u br*), showing the side branches (*s br*) clothed in ramuli
2. detail of a runner (stolon) with dense, forked spines



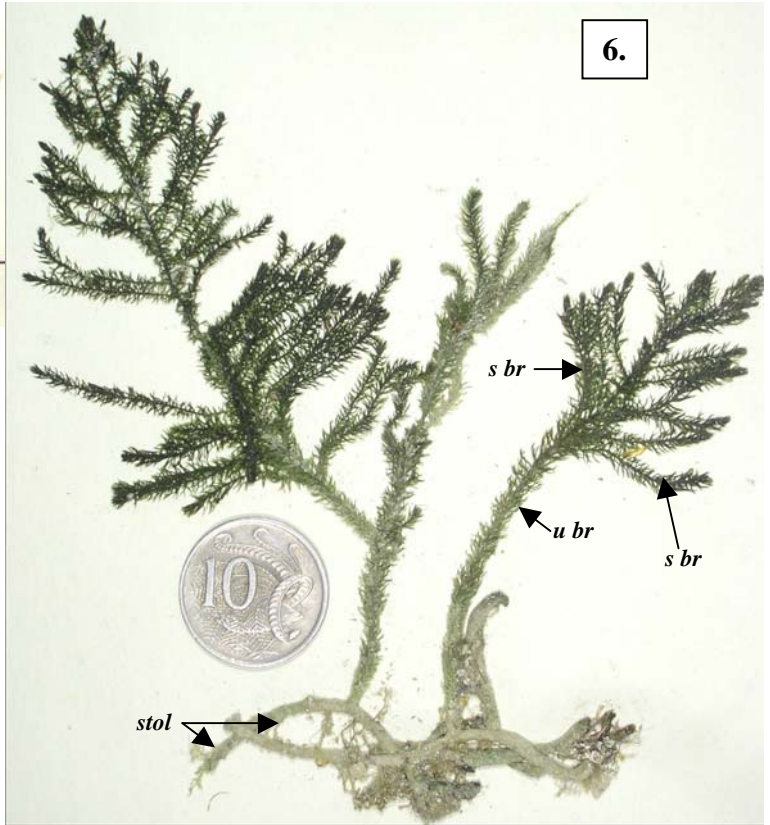
3. the tip of a side branch, clothed in overlapping ramuli (**ram**)
4. partial cross section showing ramuli forked 1-2 times near their bases. Tiny points at the tips of the ramuli are just visible (red arrows)

Descriptive names are inventions to aid identification, and are not commonly used
 § name used in Edgar, G. *Australian Marine Life, 2nd Ed.* (2008)
 “Algae Revealed” R N Baldock, S Australian State Herbarium, prepared June 2005



5.

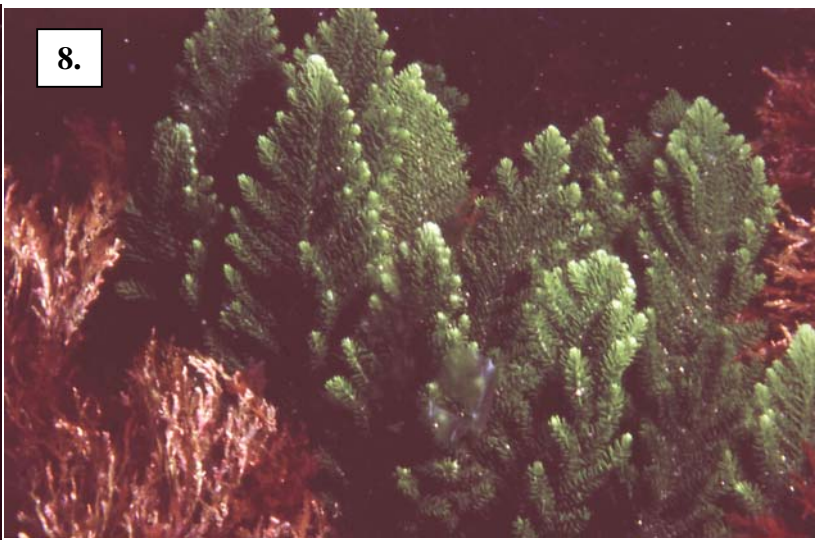
5. *Caulerpa flexilis flexilis* (A9402b), showing dense side branches (*s br*) arising from the narrow upright branches (*ax*), and the coarse runners (stolons, *stol*) (clothed in forked spines)



6.

6. *Caulerpa flexilis flexilis* (A26439) showing the characteristic 2-sided (distichous) pattern of side branches, and the dense clothing of ramuli to the bases of upright branches (axes)

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Specimens of *Caulerpa flexilis* var *muelleri* (Sonder) Womersley from S Australia showing the features of this variety — the more robust branches, the regular 2-sided (distichous) arrangement of side branches and dense clothing of axes branches and stolon with ramuli/spines.

- 7. at Encounter Bay, Victor Harbour
 - 8. Cape Jaffa
 - 9. Snug Cove, Kangaroo I.
 - 10. from Pennington Bay, Kangaroo I (A4387)
- (photos 7-9, D Muirhead)