

Acetabularia calyculus
Lamouroux

50.760



MICRO
PLANT

Techniques needed and shape

Classification

Phylum: Chlorophyta; Order: Dasycladales; Family: Polyphysaceae

*Descriptive name

cup tops; §mermaid's cup.

Features

1. plants are pale green or whitish, due to calcified walls.
2. one to several upright stalks, 30-70mm tall, are attached to shell or limestone fragments

Variations



patches of fine fuzz may just be visible along upper parts of the stalks. These are rings of pale green or colourless, microscopic *hairs*. Occasionally 2 cups occur on a stalk.

Occurrences

world-wide distribution in warmer waters

Usual Habitat

In S. Australia it occurs in sheltered bays and relatively deep Gulf waters. on shell fragments

Special requirements:

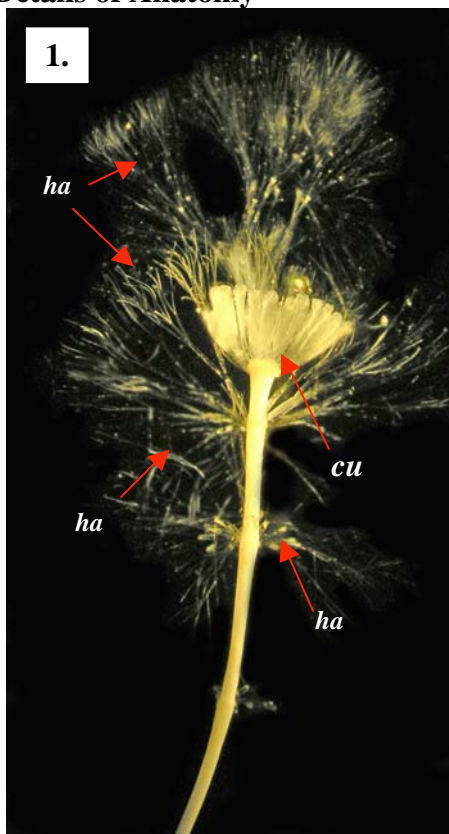


1. view the terminal ring of rays microscopically. The rays should be *joined into a cup*.
2. view the slender rings of hairs microscopically. Three to four branches arise at each of the forks along their length.
- (3. view the small bulge at the base of the rays sometimes bearing hairs microscopically. This is called a corona and occurs on both the *upper and lower sides* of the rays, which is a diagnostic feature of the genus, although difficult to find.)

Similar Species

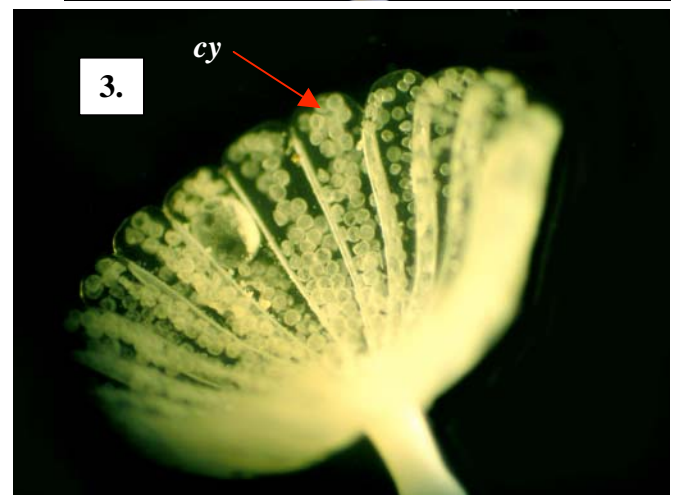
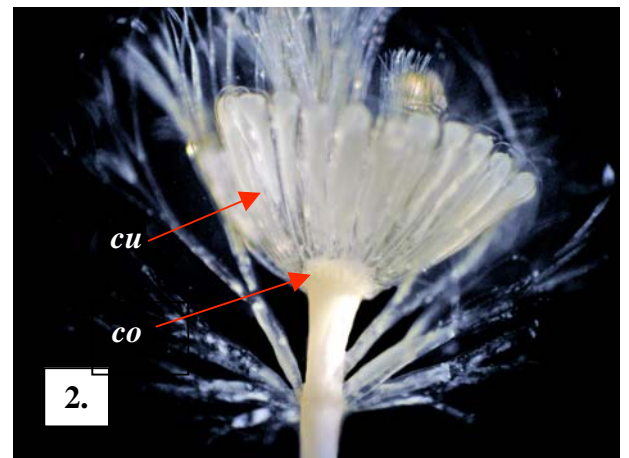
Polyphysa peniculus, but the rings of balloon-shaped rays are separate at their edges in that species.

Description in the Benthic Flora Part I, pages 294, 296-298
Details of Anatomy



Preserved and bleached specimens (A46702), from Kellidie Bay, Coffin Bay, S. Australia, viewed microscopically

1. upper part of a stalk with rings of hairs (*ha*) and a terminal cup-shaped ring of rays (*cu*)
2. detail of the cup and hairs, with outer ring or corona (*cor*) just visible
3. a mature cup with spherical cysts (*cy*) from which gametes escape



* 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, July 2005

Acetabularia calyculus,
(A33400), from Tapley
Shoal, off Edithburgh, S.
Australia, 13-15m deep,
on a piece of shell,



Mass of
preserved
(bleached)
specimens,
(A46702),
from Kellidie
Bay, Coffin
Bay, S.
Australia,
amongst shell
fragments,
showing
various views
of the
cupulate
discs

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