# *Acetabularia peniculus*

**(R. Brown ex Turner) Solms-Laubach**
**(as *Polyphysa peniculus*)**

**50.760**

**Techniques needed and shape**



MICRO PLANT



**Classification** Phylum: Chlorophyta; Order: Dasycladales; Family: Polyphysaceae

***Descriptive name** balloon tops

**Features**

1. plants pale green or whitish, due to calcified walls of many upright stalks, 20-60mm tall, arising from rhizoids attached to shell or limestone fragments
2. stalks capped by a ring of 11-18 green, club-shaped rays, which although often jammed together are ***separate*** to their bases

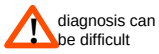
**Variations**

patches of fine fuzz may just be visible along the stalks. These are rings of pale green or colourless, microscopic ***hairs***. Occasionally some rays may be partly joined at their base. This has led workers to merge the species of *Polyphysa* (bearing free rays) with *Acetabularia* (bearing joined rays) ([§]see below)

**Special requirements:**

1. view the terminal ring of rays microscopically. The ***rays should be separate***, at least for most of their length.
2. view the slender rings of ***branched*** 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 mainly on the ***upper side*** of the rays, which is a diagnostic feature of the genus, although difficult to find.)

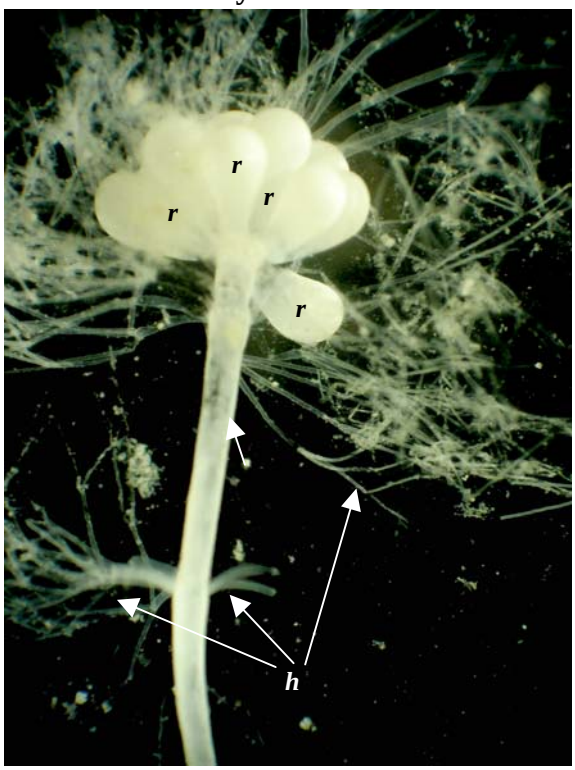


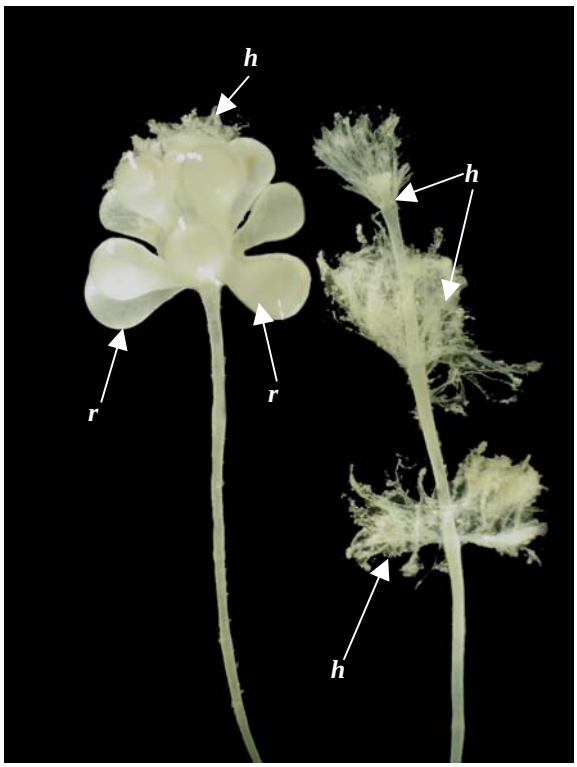

**Usual Habitat** from N W. Australia, S. Australia to Pt Phillip Bay, Victoria, and Tasmania, on shell and limestone fragments in shallow water of sheltered bays and inlets.

**Similar Species** found in similar habitats to *Acetabularia calyculus*, but separated from this species on the ring of ***free*** rays.

**Description in the Benthic Flora** Part I, pages 294, 296-298 ([§]as *Polyphysa peniculus* (R. Brown ex Turner) C. Agardh)

**Details of Anatomy**




1. 2. preserved, bleached specimens of *Acetabularia peniculus* (A13656), showing rays(*r*) and branched hairs (*h*)

* Descriptive names are inventions to aid identification, and are not commonly used
"Algae Revealed" R N Baldock, S Australian State Herbarium, July 2005


*Acetabularia peniculus* (R. Brown ex Turner) Solms-Laubach (A19475) from Venus Bay, West coast, S. Australia, on a piece of calcified sponge

* Descriptive names are inventions to aid identification, and are not commonly used
"Algae Revealed" R N Baldock, S Australian State Herbarium, July 2005