Albany Pitcher Plant

Cephalotus follicularis

***Cephalotus follicularis* – Albany Pitcher Plant. Photo: Sophie Xiang**

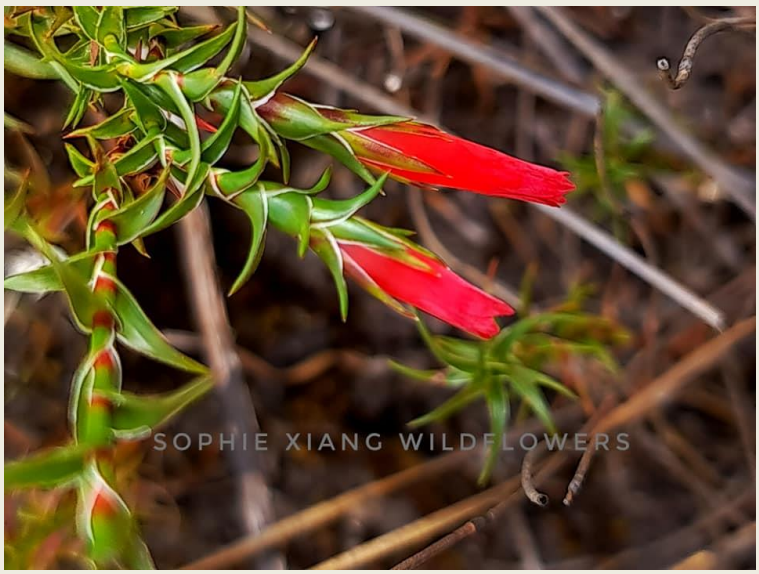
Like dinosaurs, carnivorous plants fascinate a great diversity of people who have absolutely no interest in the natural world whatsoever! Of course, the concept of plants eating animals is hard to swallow! Carnivorous plants have evolved to grow in nutrient-poor environments, usually in high light conditions in waterlogged soils, where they attract, trap and eat insects, protozoans, and other small organisms to supplement their recommended daily intake of nitrogen and phosphorus although carnivorous plants can grow quite normally, using mineral uptake through their roots and without having to resort to carnivory.

Pitcher plants are specialised carnivorous plants with leaves modified into deep vase-like cavities, or pitchers, that contain a liquid in which trapped insects are dissolved by bacterial action and enzymes secreted by the plant itself. Victims are attracted to the pitchers by nectar produced in the rim of the pitcher (the *peristome*) and by the colourful patterning of the pitcher itself. Prey are eventually dissolved in the liquid, releasing amino acids, ammonium, urea and phosphates, thereby providing various minerals necessary for plant nutrition.

The Albany Pitcher Plant, *Cephalotus follicularis*, is an ecologically unique carnivorous plant that only grows in wetlands of very restricted areas of coastal south-western Australia. It can usually be found in swamps associated with two Myrtaceous species,

Callistemon glaucus and *Homalospermum firmum*, and also the Spindle Heath, *Cosmelia rubra.* Owing to habitat loss, changes in land use and fire regimes, it is not nearly as common now as it was previously.

Botanically, *Cephalotus follicularis* is of particular interest as it's the ***only*** species in the Cephalotaceae**,** a plant family which has its origins in the Late Cretaceous (~ 70 million years ago), an isolated, extant descendent of an ancient plant lineage.



***Cosmelia rubra* – Spindle Heath, often found growing with Albany Pitcher Plants. Photo: Sophie Xiang**

Although the pitchers may superficially resemble those of *Sarracenia* (North America) and *Nepenthes* (tropics, particularly SE Asia), molecular biologists tell us that *Cephalotus* is not even closely related to either, and belongs in the plant order Oxalidales, so it is more closely related to *Oxalis*, Blueberry Ash, Christmas Bush and Coachwood than it does to its international superficial doppelgängers!

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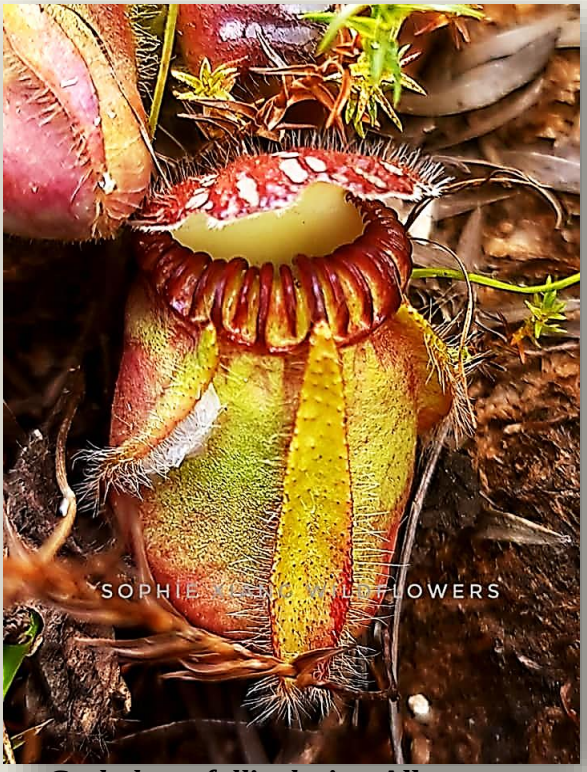
Curiously, the larvae of a wingless fly, *Badisis ambulans* have an obligate relationship with the pitcher plant, feeding on prey decaying in the pitchers. Like *Cephalotus*, they are highly localised to sites where the pitchers are available. The larvae do not succumb to the pitchers' enzymes, leaving before they pupate.

Carnivorous plants, pitcher plants, and the Albany Pitcher plant in particular, are so extraordinary that we can only include a brief snapshot of some of their unusual characteristics.

We thank Sophie Xiang for permission to use her superb photographs of *Cephalotus follicularis*, *taken with a mobile phone*, believe it or not! We recommend you visit her *Facebook* page:

***Wildflower Phone Photography*, @SophieXiangWildflowers,**
https://www.facebook.com/pg/SophieXiangWildflowers/photos/



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