

# Ant-Plant *Myrmecodia beccarii*

## SPECIES PROFILE

### CONSERVATION STATUS

Commonwealth: **Vulnerable**

*Environment Protection and Biodiversity Conservation Act, 1999 (EPBC Act)*

Queensland: **Vulnerable**

*(Nature Conservation Act, 1992)*

### WHY IS IT A THREATENED SPECIES?

*Myrmecodia beccarii* was declared **Vulnerable** under Queensland's *Nature Conservation Act, 1992* because its population is decreasing due to key threats (primarily habitat loss due to clearing of coastal *Melaleuca* forests for development). Historically, ant-plants were destroyed or removed from their habitat by plant and butterfly collectors.

### OUR RESPONSIBILITIES TO PROTECT

To enable an up-to-date assessment of the conservation status of *M. beccarii* we need information on population size, distribution, and the relative impacts of threats.

### WHAT DOES IT LOOK LIKE?

Ant-plants are epiphytes (plants that grow on host trees) with characteristic bulbous tuber-like structures (domatia) that provide ants with a nesting space.

### WHERE DO ANT-PLANTS LIVE?

Paperbark swamps, mangroves and rainforest of North Queensland provide the host trees for epiphytic ant-plants. However, *Myrmecodia beccarii* does not occur in rainforest; it is found in lowland woodland dominated by paperbarks, usually broad-leaved tea tree, *Melaleuca viridiflora* (an endangered ecological community under the EPBC Act)<sup>1,2</sup> and mangroves. Our knowledge of Australia's seven ant-plant species is mostly from the Wet Tropics region - less is known about their distribution and habitat requirements within Cape York Peninsula.

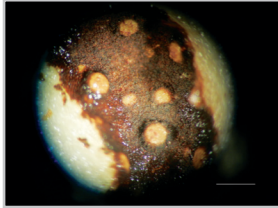


The ant-plant epiphyte, *Myrmecodia beccarii*. Photo: Garry Sankowsky

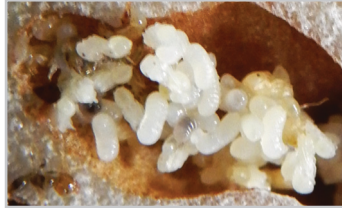
## FASCINATING ECOLOGICAL FACTS

### 1. The Ant-plant and the Golden Ant

Hidden within the characteristic bulbous tuber is a network of chambers that are home to the Golden Ant, *Philidris cordata*. A mutualistic (both species benefit) relationship exists between the ant-plant and the Golden Ant; yellow-walled tunnels provide shelter for the ants and their brood, black chambers are where ants deposit their waste<sup>3</sup>, and brown ventilation chambers are for air circulation<sup>4</sup>. The waste chambers have wart-like structures that help the ant-plant to absorb nutrients<sup>2,3</sup>.



Waste chamber



Nursery chamber



*Myrmecodia beccarii* ant-plant cross-section showing the different types of chambers and their functions within the domatium. Photo: Melinda Greenfield

### 2. The Golden Ant and the Butterfly

*Myrmecodia beccarii* is the sole habitat for the larval life stage of the Apollo Jewel Butterfly (*Hypochrysops apollo apollo*) - also listed as vulnerable to extinction. Like the ant-plant, this butterfly has a mutualistic relationship with the Golden Ant<sup>5</sup>. After the butterfly

lays its eggs on the outside of the ant-plant, the ants carry them inside the ant-plant chambers. The butterfly eggs are protected and feed on the plant tissue and ant waste. In return, the ants receive a sweet substance (honeydew) from special glands on the back of the caterpillar<sup>5,6</sup>.



Top (recto) view, female, 42mm wingspan.  
Photo: Clive Pratt



Underneath (verso) view.  
Photo: Geoff Walker



Top (recto) view, male, 40mm wingspan.  
Photo: Clive Pratt

## REFERENCES

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- Sankowsky G (2020) A field guide to butterflies of Australia. Reed New Holland Publishers. 400pp.

## HOW YOU CAN HELP

Report your sightings of an Ant-Plant or the Apollo Jewel Butterfly at:  
[www.capeyorknrm.com.au/citizen-science/record-sighting](http://www.capeyorknrm.com.au/citizen-science/record-sighting)

