

## Why “Tagala” Vines are NOT good for Richmond Birdwing Butterflies

Tagala vines (*Aristolochia acuminata*, formerly known as *A. tagala*) grow very quickly and produce more, softer leaves during the warmer, wetter months, than Birdwing Butterfly Vines (*Paraistolochia praevenosa* and *P. laheyana*).

Tagala vines are one of the food plants of the Cairns Birdwing Butterfly (*Ornithoptera euphorion*) and it occurs naturally from Mackay north to Cape York Peninsula.

Birdwing Butterfly vines occur naturally in south-eastern Queensland and northern New South Wales and are the only natural food plants for the Richmond Birdwing Butterfly.

In each geographical area, separated by up to 500 km, both food plants and the Richmond and Cairns birdwing butterflies, have co-evolved for more than 40,000 years. In this time each butterfly has become specialised in its food requirements and both have adapted to feed successfully on their local food plants.

Richmond Birdwing Butterfly larvae (caterpillars) are ideally adapted to their natural food plants in subtropical eastern Australia, the Birdwing Butterfly vine (*P. praevenosa*) and Mountain Aristolochia (*P. laheyana*)

When adults deposit their eggs on leaves of their natural food plants, eggs will hatch and larvae will develop normally when feeding on the leaves. However, when Richmond Birdwing butterflies lay eggs on northern Tagala vines (*A. acuminata*), instead of their natural food plants, the Tagala vines appear to be toxic to eggs, preventing them from hatching properly. These toxic compounds diffuse from the leaf into the Richmond Birdwing Butterfly eggs and often kill them.

Recent studies have shown that when the Richmond Birdwing larvae attach to the Tagala leaf, the toxic compounds diffuse into the terminal segments of the pupae, sometimes killing them, or preventing them from emerging as healthy adults. This occurs wherever the pupae and leaf make contact. As a result, many die.

### **Summary:**

Nurseries should not propagate Tagala vines as a food plant for the Richmond Birdwing Butterfly but continue to do so for the Cairns Birdwing (*Ornithoptera euphorion*).

While adult butterflies can feed on the nectar of many flowers, their young – larvae and pupae – often only feed on one species of plants with which they have co-evolved.