

Aristolochia acuminata and the Richmond Birdwing

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For ten years I lived on Mt Tamborine where my wife and myself operated the Tamborine Mountain Butterfly Farm. Mt Tamborine is prime Richmond Birdwing country and we had the Birdwings breeding in our garden all the time as well as breeding large numbers for the flight cage and sale of specimens and pupae.

There has been a lot of hype going around claiming that *Aristolochia acuminata* (tagala) is not suitable for this species. In all this time I rarely used *Pararistolochia praevenosa* for one simple reason – it is far too slow growing and takes years to develop into a large vine. I can only imagine that the huge vines that are growing on the mountain are many hundreds of years old.

The species I mainly used were *A. acuminata* and an *Aristolochia* species from Rabaul that has huge soft leaves, as big as a dinner plate. It is the host plant of *O. urvillianus*. I also used *A. indica* which has naturalised near Darwin.

The problem with the soft leaved species of *Aristolochia* is the situation in which they are grown. When Birdwing eggs are laid on the younger leaves (and this includes Cairns as well as Richmond Birdwings) the leaf reacts to the glue that holds the egg in place which causes it to weep juices onto the egg. These juices then often go mouldy and the resulting mould kills the egg. This is simply the plant fighting back. Because of this Birdwings have evolved the habit of mostly not laying their eggs directly on the host plant but on the leaves of the plant over which the *Aristolochia* is growing. I have seen both richmondia and euphorion eggs up to a metre away for the host leaves, and this is in a straight line meaning the tiny larva has to go much further before it finds the plant. This problem is not limited to *A. acuminata* and other soft leaved species as many eggs laid on the soft new growth of *P. praevenosa* suffer the same fate. Below is a Cairns Birdwing egg that was laid on *P. praevenosa* and killed by fungus.



The solution is very simple, you should never grow Birdwing host plants on a trellis/fence in the open as a monoculture. I never recommend trellis growing of *Aristolochia* unless they are harvested very regularly to feed larvae in a laboratory situation. If there are several layers of foliage the vines usually become infected with mealybug and the leaves are excluded from good light die.

The best way to grow the vines in the garden is to let it climb up through a tree and you will find the Birdwings lay most of their eggs on the tree foliage. The only way you can overcome the problem of a trellis is to plant at least two species of vines, one being something other than *Aristolochia*. A Passion Fruit vine is good as you can get some fruit and the second plant is not wasted. For best results you should have about three times more other plant than *Aristolochia*.

Claims that richmondia larvae do not develop well on *A. acuminata* are complete rubbish and I would guess that most breeders use nothing else. A local breeder of richmondia has always used *A. acuminata*. *A. indica* is better than *A. acuminata* for both richmondia and euphorion simply because it is more nutritional and the larvae develop to maturity by consuming less than half the amount of foliage. The main problem with *A. indica* is that it is somewhat cold sensitive and while some people in Brisbane have had success with it others have not.

I have even seen a claim that *A. acuminata* kills the pupae of richmondia. This is even more fanciful – probably a pupa died from virus and a post-mortem fungus developed. Again if you do not have a monoculture of Aristolochia the larvae will not pupate on the host plant. This is also a natural survival technique. Birdwing larvae almost always leave the host plant to moult and pupate if the foliage of another plant is nearby. I have seen a moulting Cairns Birdwing larvae three metres from the Aristolochia.

By all means plant *Pararistolochia praevenosa* in the wild to encourage the spread of the Richmond Birdwing but if you want a result in your garden in less than about five years plant *A. acuminata*.

Birdwings and South American Aristolochias.

In the seventies we found that the Bureligh Heads National Park was infested with *Aristolochia elegans*. Moves were made at the time to get the Parks people to undertake an eradication program but to no avail. I assume the problem still exists. I have found that if a Birdwing larva finds the flower of *A. elegans* it will continue to search for flowers and can actually survive on these. Near Mt Maroon and in the Goodnight Scrub where there is a massive *A. elegans* problem in a these dry rainforests Cressida larvae survive on the seedlings and are quite prolific there.

I have been doing some experiments with *A. odoratissima* and have found that Cairns Birdwing larvae can survive on the flowers, seedlings and coppice shoots (when a big vine is cut off low down). This plant has infested some coastal rainforests in north Queensland and spreads just as fast as *A. elegans*. Even though hundreds if not thousands of Birdwing eggs are wasted on these exotic vines the butterfly still survives in these localities. In Burleigh Heads *P. praevenosa* is very common and enough larvae find these vines to keep the population going. Of course they would do much better if the *A. elegans* vines were exterminated.