

Fig. 1. *Z. karsandra* under side – MamukalaWetlands, about 31 km (by road) W of Jabiru, NT, 05 June 2008; one of many seen near the birdhide feeding at flowers amongst low herbage between 1210 -1310 h (AEST).

Fig. 2. *F. alsulus* male under side – MamukalaWetlands,NT, 05 June 2008, perched on seed head amongst low herbage along the walking trail to the birdhide.

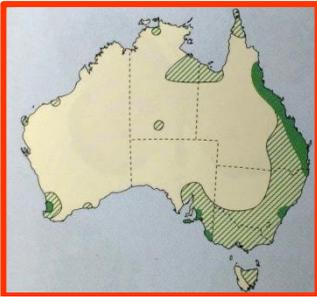
Photos by Kelvyn Dunn

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## Raising Monarch (*Danaus plexippus*) Caterpillars – Paul Klicin

For each BOIC magazine issue I plan to write an article that features a different species of butterfly and information about my own personal experience in raising these particular caterpillars. While I am no expert in the field of Lepidoptera I am hoping my own personal experiences will inspire others interested in raising caterpillars to butterflies.

I have a 6 year old daughter and I have, for the last couple of years, got a huge thrill out of teaching her about nature and the life cycle of butterflies. It's fun to watch caterpillars eat and grow and you get a sense of accomplishment when finally a butterfly emerges from its chrysalis and you get to release it into nature. Meanwhile, there is a lot to learn along the way.



Monarch distribution within Australia

Source: Braby. The Complete Field Guide to Butterflies of Australia

I have personally found some caterpillars more difficult to raise than others and sometimes you just get lucky or unlucky. Obviously depending on what part of the world you come from will depend on what butterflies you will encounter in your particular area.

I am starting off with the Monarch butterfly as I believe it is relatively easy for anyone starting out. You have probably seen this butterfly as it is often found visiting suburban gardens. It is quite a common and widespread butterfly and one that I believe is a great way for beginners starting out.

As a kid I grew up in the country in northern New South Wales just outside of Lismore. We called this butterfly a Wanderer, however it is more commonly called a Monarch which is not to be confused with the Lesser Wanderer.

We had plenty of wild cotton bushes growing throughout our farm so it was natural that we would come across the Monarch caterpillars. Once you are able to readily identify this host plant they are easy to find growing alongside roads and paddocks in not only rural areas but often your local suburb or park. Some wild cotton or



milkweed plants have round seed pods or long narrow seed pods (*Gomphocarpus physocarpus* and *Asclepias curassavica*). You can either dig up and pot them so you have a constant supply of fresh caterpillar food or you can grow your own from seed which is very easy to do. If you are unable to find this plant I am sure someone would be willing to send you some seeds. Once the plant is established butterflies will soon find your plant.

I recommend growing your own, if you have the patience, as introducing potted plants may be introducing diseased or parasitic affected plants. Interestingly enough I have rarely experienced parasites amongst healthy looking plants. Recently I had a shortage of plants as my seedlings were not mature enough to sustain the caterpillars I had, so I dug up some local plants and put the potted plants within an enclosure. The result was disastrous as I lost over 50% of the caterpillars while they were in their chrysalises. Often caterpillars in the wild have eggs laid on them by the tachnid fly. If you look closely you can sometimes see one or more tiny white eggs stuck to the caterpillar. Forget about trying to remove them. In my situation I suspect that eggs from parasites had been laid on the mature plant's leaves then ingested by the caterpillar as all of my caterpillars were brought in while either at egg stage or only a couple of days old and still very tiny. Previous to this I have had an almost 100% success rate raising caterpillars from eggs in captivity and feeding them on fresh leaves and good healthy looking live plants.



Three varieties of Milkweed I grew from seed.

Above *Gomphocarpus physocarpus*

Left above and below *Asclepias curassavica*





Early in 2016 I collected between 50-60 eggs off host plants found in a local park. I carefully pinned the leaves to prevent them curling up once the leaves began to dry out.



The eggs don't take long to hatch and under warm and humid conditions the caterpillars grow quickly.



Monarch caterpillars are easy to raise on cut leaf as long as it is fresh.

As the caterpillars grow they will obviously eat more and excrete more so it is important to clean out your enclosure regularly. I learned this the hard way as I missed a day or two of cleaning out my enclosure and due to it being overcrowded in the first place and not clean the caterpillars caught a virus. The first sign of

this was that the caterpillars stopped eating and growing. You will notice this as suddenly the caterpillars don't seem to be growing as quickly they would normally. Ultimately I lost over 90% of my caterpillars. Under the right conditions it is quite surprising how quickly healthy caterpillars will grow. If you are only raising a dozen



or so this should not be a big issue for you. I just happened to go a bit over the top and raised a lot and learned the hard way. I had to start all over again and next time raised even more (approximately 80) with an almost 100% success rate. This was more due to the fact that after about a week I transferred the early instar caterpillars onto healthy live potted plants. This way I was able to leave them to their own devices and all the caterpillar frass just dropped to the floor or ground of the enclosure. If there is a shortage of food or they eat all the leaves before you have a chance to top up their supply I have seen these caterpillars eat fresh plant stem and also the plant's flower. They have quite the appetite!



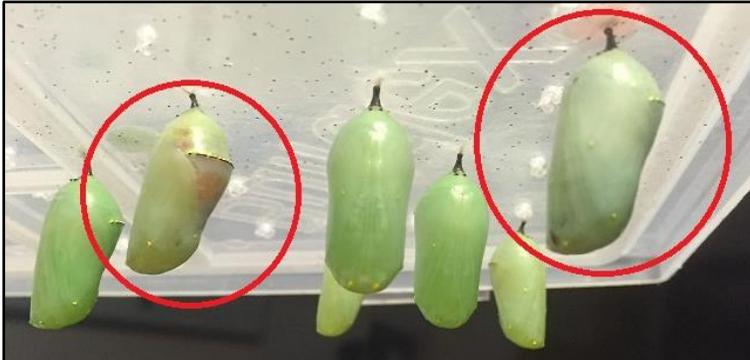
Although collecting caterpillars from the wild can be fun if you find some host plants, it can be a hit and miss affair as quite often these caterpillars have already been parasitised and basically a dead caterpillar walking. They have no chance of becoming a butterfly. I have personally found that on average at least 50% of wild caught caterpillars have already been infected. It can be heart breaking for the beginner, but that is nature. The same can often be said about plants that are dug up from the wild and potted so make sure your plants are young and healthy looking. Under the right conditions these

caterpillars grow very quickly and will consume a lot of food and will easily strip a plant of leaves, so if you have a lot of small caterpillars you had better have a lot of food ready for them.





When ready to pupate, caterpillars will sometimes do so on other plants or almost anything they feel like (including furniture) and will often travel a fair distance in doing so if not kept in an enclosure.



2-3 of these chrysalises have been infected with parasites. Once this is established it is better to remove them and destroy them.



Healthy chrysalises (You can see the wings on the butterfly already forming.)





A Monarch butterfly showing its colours and about to emerge very soon.



When things go right you can end up with a butterfly explosion. At one stage I was releasing about 8 butterflies per day for over a week. I had a very happy daughter.

If you have more questions please go to:

<https://www.facebook.com/butterfliesandcaterpillars/>

or: <https://www.facebook.com/groups/187619097411/>

Next Issue: Raising Common Crow caterpillars with some surprising results.

#### References

Braby, M. 2016. *The complete field guide to butterflies of Australia*. Second Edition. CSIRO Publishing.

Jordan, F. and Schwencke, H., 2005. *Create More Butterflies. A guide to 48 butterflies and their host-plants for South-east Queensland and Northern New South Wales*. Earthling Enterprises.

Photos Paul Klicin

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### **The Scent of Spitfires – Densey Clyne**

It is during a day trip to the Blue Mountains west of Sydney that I notice a female *Perga affinis* doing something interesting on a gum leaf. Sawflies have always been favourites of mine though it is mostly their caterpillar-like larvae I'm familiar with. However, I am able to identify this female, whose larvae are common around Sydney's suburban streets and gardens where eucalyptus trees have survived.

