



NOTE

Further observations on Lepidoptera larval host plants in the Lowveld, Mpumalanga Province, South Africa

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Sharp, Ian C.

P. O. Box 1053, Hoedspruit 1380, South Africa. E-mail : galago23@gmail.com

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INTRODUCTION

The 'caterpillar rearing challenge' still continues to produce new butterfly larval host plant data. Observations in the Lowveld area have led to the discovery of four new larval host plant associations and the confirmation of new host plant species for two listed genera. One new larval host plant genus is also discussed, and a further note on clarification of a host plant species not recognised for a listed genus is provided.

OBSERVATIONS

The number of *Byblia anvataracheloia* (Wallengren, 1857) noted on the wing at the farm York was surprising. Generally, in the areas around Hoedspruit, the species *B. ilithyia* (Drury, 1773) has been found to be the most common. Many individuals of the latter have been reared on *Tragia rupestris* Sond., but *B. anvataracheloia* larvae were not observed on this plant.

During a foray into the surrounding veld a plant species was noted that resembled *T. rupestris* but did not show the large number of stinging cells associated with *Tragia* species. Initially it was thought that the habitat (sandy soils) was different and therefore probably the form of the plant also differed.

When collecting plant material for other larval feeding purposes some weeks later a small larva was noted on this plant. Closer inspection of the plant yielded an unusual seed pod unlike that of *T. rupestris*. A few larval specimens were collected to rear for species identification. Images of the host plant were posted on a Facebook page requesting an identification. The plant was quickly identified as *Plukenetia africana* Sond. (Euphorbiaceae) (Fig. 1). A Google search of this name revealed images and descriptions confirming the plant's identification.

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Figure 1 – *Plukenetia africana* showing the leaf, flower buds and fruit capsule.

All field guides and other relevant publications were consulted together with the 'Butterfly Encyclopedia' (Williams, 2017). No record of *P. africana* as a larval host plant for a *Byblia* species was listed.



Figure 2 – Larva and pupa of the reared *Byblia anvataracheloia*.

A few specimens were reared successfully as fortunately sufficient host plant material was found thanks to the early season rainfall. On pupation it was noted that the colouration and markings of the pupa were different to that of previously reared *B. ilithyia* specimens (Fig. 2), thus heightening interest in the host plant. On emergence of the first imago the species identification was confirmed as *B. anvataracheloia* (Fig. 3)

The **second observation** was made during a trip to the Mariepskop Mountain, with birding the main emphasis. Walking along a trail through the forest one of our party noticed some larval shelters on an ominous looking small bush. The shelters resembled those of some Hesperiidæ with *Coeliades* species coming to mind. As the plant was covered in stinging



Figure 3 – The eclosed imago of *Byblia anvatara acheloia*.

cells it was assumed that it could be a young *Obetia tenax* (N.E.Br) Friis., and that the larvae were from a *Telchinia* sp.

Some of the larvae were collected, together with sufficient plant material for feeding purposes. On closer inspection, while placing the larva in suitable containers at home, it was noted that the larvae resembled typical nymphalid specimens. Interest was immediately stimulated with special attention given to ensuring a successful rearing experiment. Food material was carefully rationed as it was a major excursion to head up the mountain to collect more.



Figure 4 – The larval shelter formed at the tip of the leaves.

Finally the larvae started to pupate, forming the most exquisite pupae (Fig. 5). Having no idea of the species of butterfly it was difficult to contain the need to know. Field guides were of no help as the host plant species it was thought to be (*O. tenax*), was not listed for any nymphalid.

Photographs of the larva and pupa were then forwarded by e-mail to Andre Coetzer for his opinion. The species was promptly identified as *Antanartia schaenia schaenia* (Trimen, 1879) as he had previously reared a specimen from KwaZulu-Natal. The larval host plant was still a mystery. As material was scarce only a single leaf was kept. This leaf had a different shape to that of *O. tenax*. The sample was taken to a local botanist J. Rushworth who could not shed any light on the mystery.

As a last resort an image of the leaf was forwarded to a contact at the Mpumalanga Tourism and Parks Agency. The image was then sent to a botanist at the

agency who came back with an identification: *Laportea alatipes* Hook. F. (Urticaceae). The field guides and encyclopaedia were again consulted for a reference to this plant. Only the genus *Laportea* was given therefore it is now recorded that the *Antanartia* population of Mariepskop (Fig. 6) are utilising the species *L. alatipes* as a larval host plant.



Figure 5 – The final instar larva and the pupa of *Antanartia schaenia schaenia*.



Figure 6 – Eclosed adult of *Antanartia schaenia schaenia*

A second trip to Mariepskop was arranged some months later to photograph the plants in the forest. The original and larger plant had been chopped down during trail maintenance but there were a number of smaller plants growing in the area. There were beautiful young plants, some of which carried inflorescences at the terminal points; ideal for the needed photographic record (Fig. 7).



Figure 7 – Typical leaves and inflorescence of *Laportea alatipes*.

The **third rearing experiment** to produce a new host plant data hails from the village Kampersrus at the foot of Mariepskop. A friend living in the village sent a message that he had found some larvae feeding on his bougainvillea bonsai trees. A photograph indicated that it was a larva of a *Coeliades* species. A specimen was forwarded to me and bred through on the host plant *Bougainvillea glabra* Choisy (Nyctaginaceae). Unfortunately, the eclosion of the



Figure 8 – Flowers of *Bougainvillea glabra* and the *Coeliades forestan* larva on the leaves.

adult was not entirely successful but the specimen was still good enough to identify it as *Coeliades forestan forestan* (Stoll, 1782). *C. forestan* larvae are polyphagous and have been found to feed on host plants from 13 different families (Williams, 2017). The *B. glabra* family Nyctaginaceae had not previously been recorded.

The **fourth observation** concerns the pierid *Eurema hecabe solifera* (Butler, 1875). Even though the family Fabaceae is well represented, with numerous host plant species recorded for *E. hecabe*, another genus is utilised by this species. Once again the record came from the Kampersrus source where larvae were found to be feeding on young seedlings of the tree *Faidherbia albida* (Delile) A. Chev (Fabaceae) (Fig. 9). This large tree species is fairly common in the farmland area north of the village. The odd phenology of *F. albida* possibly contributes to its host status. While most other trees of the family are busy shedding leaves for the winter, *F. albida* starts budding new leaves, presenting a bounty of fresh food for a number a Lepidoptera species (unpublished data).



Figure 9 – *Eurema hecabe* larva and pre eclosion pupa on a young *Faidherbia albida* plant.

The **fifth observation** concerns *Vanessa cardui* (Linnaeus, 1758). The larval host plant most often recorded in the Hoedspruit area for *V. cardui* is *Dicoma tomentosa* Cass. (Asteraceae). Records for this butterfly species indicate that it is highly polyphagous. During the past season *V. cardui* larvae have been found feeding on three different plant species in a small area (<50 ha) on the York farm. Two of these species are unrecorded.

The first species is *Hirpicium bechuanense* (S. Moore) Roessler (Asteraceae), a beautiful member of the Asteraceae that is often found growing in disturbed areas along road verges (Fig. 10). The striking yellow flowers make it easy to spot and it



Figure 10 – The new *Vanessa cardui* larval host plant *Hirpicium bechuanense*.

was found that many individuals were host to larvae of *V. cardui*. Another recent discovery is numerous *V. cardui* larvae feeding on a host plant from the genus *Lotononis* Eckl. & Zeyh. (Fabaceae) (Fig. 11). An earth dam recently constructed had a number of these plants growing on the well-compacted top surface of the wall. While searching for larvae on the variety of herbaceous plants growing on and around the newly constructed dam walls, my wife Tertia lifted some branches of one individual plant thereby discovering larvae of different sizes. On inspection it was noted that the larvae were of the Nymphalinae sub family and it was only once the first pupa was formed that it was realized that the species is probably *V. cardui*. The eclosion of the first imago confirmed the species.



Figure 11 – Close-up of flower and leaves of the *Lotononis* sp. and the typical prostrate growth form of the plant.

The **final observation** in this paper concerns *Danaus chrysippus* (Linnaeus, 1758). An odd, twining member of the Apocynaceae was noted in the gardens of the Tshukudu Bush Camp. A female *D. chrysippus* fluttered around the plant and oviposited on the young leaves. When the eggs were collected, milky latex exuded from the plant where the branches were severed. The peculiar flowers of this unknown plant were intriguing. Queries were sent to some botanists and it was identified as a member of the genus *Fockea* Endl. (Apocynaceae). Williams (2017) gives *F. edulis* (Thunb.) K. Schum. as a larval host plant for *D. chrysippus* but the specimen in question is that of *F. angustifolia* K. Schum., hence adding another species to the recorded larval host plants (Fig. 12). Finally, some thoughts on the larval host plant genus *Tricliceras* (Turneraceae). Most publications list the larval host



Figure 12 – The unusual flowers of *Fockea angustifolia* with young leaf buds and a *D. chrysippus* egg on the under surface of a leaf.

plant for *Acraea oncaea* Hopffer, 1855 as *T. longipedunculatum* (Mast.) R. Fern. However, J. Rushworth brought to my attention the fact that the species *T. schinzii* subsp. *laceratum* (Oberm.) R. Fern. occurs more commonly in the Lowveld region. Otto (2014) in his publication also listed this species and this author is cited as having reared *Acraea oncaea* on *T. longipedunculatum* in the central Lowveld. This is considered incorrect and should have been *T. schinzii* subsp. *laceratum* (Oberm.) R. Fern. (Fig. 13), as it has been postulated by J. Rushworth (pers. comm.) that *T. longipedunculatum* occurs only in the higher altitude areas but also down to the tallus zones of the escarpment.



Figure 13 – Example of *Tricliceras schinzii* subsp. *laceratum* showing the deeply lobed and serrated leaves.

In Manning (2009) the species *T. lacerata* (now *T. schinzii* subsp. *laceratum*) is depicted showing a distribution in the Lowveld areas of Mpumalanga and Limpopo provinces. The differences are described as *T. longipedunculatum* having “spreading reddish hairs, only slightly toothed leaves and hairless fruits” as opposed to that of *T. lacerata*

(now *T. schinzii* subsp. *laceratum*) that has “coarse greenish bristles, deeply lobed and toothed leaves, and minutely bristly fruits”.

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