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NOTE

Observations on the rearing of *Petovia marginata* Walker, 1854 (Lepidoptera: Geometridae: Oenochrominae)

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INTRODUCTION

During October 2010, the author came across a cloud of orange insects flying around a medium sized bush above the banks of the Olifants river at Presidentsrus, Mpumalanga. One was caught and the photographs submitted to the Virtual Museum of the Animal Demography Unit. In due course it was identified as a day-flying moth, *Petovia marginata* Walker, 1854 (Clouded Orange). The larval host plant of this species had previously been recorded as *Vangueria infausta* Burch. (Pratt 1921; Kroon 1999). A fascination with the unusual arrangement of deposited eggs led to a four to five year effort to rear the moth. The length of time taken to achieve success was due to an intervening prolonged drought, subsequent road works, and an inability to keep the host plant alive and fresh due largely to a total lack of expertise. Placing the vegetation in the fridge did not help as it kept wilting. Even collecting the leaves or branches at night did not improve the palatability of the host plant or prevent it wilting. Many trips were undertaken, some with branches stuffed into coke bottles with iced water and supported by knees and feet while driving peering through foliage loaded with larvae. Trying not to be the cause of accidents with surprised motorists, and getting festooned with larvae fleeing to all corners of the interior of the vehicle, (and one's own being) was not something to be repeated. In one effort, a net was used to cover the entire branch but on arrival back home, all the larvae had dropped off and were in a seething mass at the base of the net where it was tied to the stem. So the rearing had to be observed largely in the veld. However, over those few years, the lessons learned and the knowledge gained, finally produced results.

OBSERVATIONS

The larval host plant, *Vangueria madagascariensis* J.F.Gmel – Smooth Wild Medlar (Fig. 1) (Coates Palgrave 2002), is deciduous, losing leaves during winter and not producing any during severe droughts. When disturbed during road works the shrubs failed to leaf as well. The bushes grow only

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Figure 1 – *Vangueria madagascariensis* J.F.Gmel

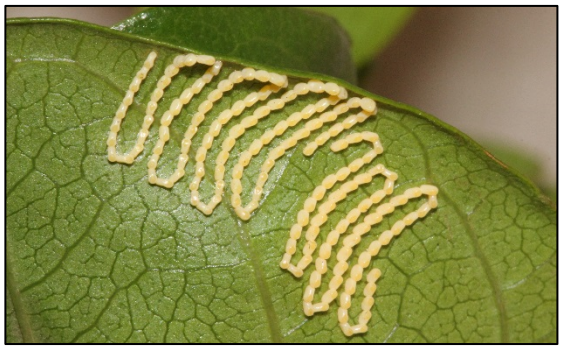

Figure 2 – Ova of *P. marginata* on leaf of *V. madagascariensis*

Figure 3 – Ova of *P. marginata* on stem of *V. madagascariensis*, just before hatching.

in the warmer parts of the valley around 1400m alt. When leaves or branches are picked or cut from the main plant, they become unpalatable to larvae which then vacate the plant in haste! Later in the season when the berries are ripe, monkeys feed on them.

Eggs are deposited on twigs and upper or undersides of leaves, in long strings of up to 250 at a time in a back-and-forth, zigzag pattern (Figs 2–3). They are creamy in colour turning slightly milky opaque before emergence, when a tiny black spot can be seen. The larvae emerge in large numbers and commence feeding on young buds and leaf tips, moving on to the more mature vegetation as they develop. Complete defoliation often occurs.

Figure 4 – Final instar larva of *P. marginata*

The larvae do not change much from the first instar. Towards the final stage, the markings along the body are darker, and a darker orange shade appears behind the head (Fig. 4). They do not appear to shed and although some silk threads are present they do not use them to escape predators. After a feeding period they rest by hanging down from leaves and stems and if disturbed, flick from side to side, Prior to pupating, the larvae either work their way down to the moist

Figure 5 – An unknown larva also found on *V. madagascariensis*

Figure 6 – Pupae of *P. marginata*

soil below, or just drop off the plant. Another larva – probably from a different species was found on the same plant (Fig. 5). The pupae are brown (Fig. 6). At one stage during efforts to rear the moth, and being thoroughly discouraged at the constant lack of results, the contents of a batch of containers were discarded into a parsley pot and dug over. Surprisingly, some time later an adult emerged (Fig. 7).

Figure 7 – Adult male of *P. marginata*

Having been unsuccessful in being able to find an alternative food plant, and having learned many lessons, success was only achieved by collecting larvae at the stage just prior to pupating and kept in moist soil until the adults emerged. (Fig. 8).

Figure 8 – Adult female of *P. marginata*

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LITERATURE CITED

COATES PALGRAVE, M. 2002. *Trees of southern Africa*. Struik, Cape Town.

KROON, D.M. 1999. *Lepidoptera of southern Africa: Host-plants & other associations.* Lepidopterists' Society of Africa, Johannesburg.

PLATT, E.E. 1921. Food-plants of South African Lepidoptera. *S. Afr. J. Nat. Hist.* **3**: 65–138.