

Some Observations on *Poecilmitis turneri* Riley* (Lepidoptera : Lycaenidae), with a description of a new race

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When studying *Poecilmitis turneri* Riley it is found that marked variation occurs in this butterfly through its wide range in the Cape Province (the extreme eastern end of which actually penetrates Basutoland (Lesotho)), with considerable divergence from the nominate race, from Matjesfontein, taking place in the more easterly portion of the Eastern Cape Province. The butterfly is very localised and its distribution is very far from continuous, extremely wide gaps occurring between its habitats in much of its range from west to east, judging by observations which have been made up to the present. As the populations at either end of its range are not linked by contiguous, intervening ones, the former are effectively separated from one another and must have been so over a prolonged period. The butterfly is exacting as regards its type of habitat and prefers elevated situations. In the Western Karroo it has been found on rocky ridges (generally their slopes) where its food-plant, *Zygophyllum* sp. (Zygophyllaceae), a succulent-leaved shrub, generally with yellow flowers, has been growing in some profusion.

Specimens of *P. turneri* which have been taken at Karbonaatjes Kraal, beyond the top of the Hex River Pass, near Matroosberg (Triangle) Railway Station, and on Tafelberg, have been the same as the Matjesfontein ones, as also have been examples from Oudtshoorn. The butterfly has been found too on the hills above the Huis River Pass, W. of Calitzdorp. From personal observations, the flight-period extends from early September to late April, but under particularly dry conditions the insect may not be found continuously throughout this period.

The Eastern Cape representative of *P. turneri*, of which a description has been prepared, is sufficiently distinct from specimens from the type-locality (Matjesfontein) as to constitute another easily recognised race of this butterfly.

Poecilmitis turneri amatola subsp. nov.

Male.

The forewing is more elongated than in *P. turneri turneri* Riley and is of a less "square" shape.

Upperside.

Forewing. The white dashes on costa, towards the apex, more distinct than in nominate race (in which they are often absent, or virtually so); the white divisions of the cilia, as a whole, more clearly defined and more pointed inwardly.

Hindwing. Black spotting about as well developed as in forewing (in nominate race frequently less so, in the males); white spaces of cilia alternating more sharply with the dark division at vein-ends.

Underside.

Forewing. Orange field of a deeper tone than in nominate race and

* *Poecilmitis turneri* Riley, Trans. R. ent. Soc. Lond. 87 : 241-242 (1938).

the orange a little more extensive towards apex. Steely scaling of the black spotting nearer costa far more restricted and not extending downwards as far from costa as in nominate race, and the submarginal dark streak devoid of steely scaling (which is always present, in upper portion of streak, in nominate race). The dark streak not broken up into more or less separate markings between the veins, but here reduced in width, and broadened (and inwardly pointed) where crossed by the veins. Terminal area of a darker tone than in nominate race, but pierced by sharp, light incisions extending from the light spaces in the cilia.

Hindwing. More darkly marked than in the nominate race and with the contrast between the light and dark markings as clear as in specimens of *P. thysbe* (L.) in which the underside pattern is fully developed. The anal-angular projection of the hindwing is well produced.

Length of forewing: 9.75-12.5 mm. (11.5 mm., in holotype).

Female.

Forewing, as in the male, more elongated than in nominate female, but with the termen more or less rounded, as is usual in this sex.

Upperside.

Features as mentioned for the male.

Underside.

As in male, generally.

Forewing. Practically as in male and reduction of the steely scaling of the black spots at once noticeable, as is the complete absence of such scaling from the dark submarginal streak; formation of the streak as in male.

Hindwing. As darkly marked as in the male and with sharply defined silvery liturae.

Length of forewing: 10.75-14.25 mm. (13.0 mm., in allotype).

In both sexes, the legs and the underside of the palpi and of the body are, on the whole, of a less light tone than in the nominate race.

♂ Holotype, CAPE PROVINCE: Kologha Mountain (as labelled); full data: Amatola Mnts., above Kologha Forest Station, near Stutterheim, 23.i.1965 (J. C. McMaster); British Museum Reg. No. Rh. 18584.

♀ Allotype, data as holotype; British Museum Reg. No. Rh. 18585.

Paratypes in Coll. C.G.C.D., CAPE PROVINCE: as holotype, 27.xi.1966, 1 ♂, 1 ♀.

Paratypes in Coll. J. C. McM., CAPE PROVINCE: as holotype, 28.xi.1964, 4 ♂♂; 23.i.1965, 1 ♂; 28.iv.1964, 1 ♀. Mt. Kubusie, 15.ix.1963 (J. C. McM.), 1 ♂, 1 ♀; 31.xii.1965 (J. C. McM.), 1 ♂, 1 ♀. Elandsberge, 1.xii.1966 (J. C. McM.), 1 ♂; Gaikas Kop, 26.xii.1965 (J. G. McM.) 1 ♀; 29.i.1966 (J. C. McM.), 1 ♀.

The black spotting of the upperside is less well developed in some of the paratypes; also, even males of the nominate race do in some cases have the spotting of the hindwing upperside about as fully developed as in the forewing, but this feature is more prevalent in the males of *amatola*. There is less difference between most of the females of the two races in this respect. If all the characters which have been mentioned in the description are considered as a whole, *amatola* is readily separable from nominate *turneri* from Matjesfontein. As remarked upon by Mr K. M. Pennington, the hindwing underside of certain specimens from the Nieuwveld Mountains is practically as dark as that of the present race (this point having been checked from our own specimens from this

locality); but, on general grounds, these other high-altitude specimens are not referable to *amatola*. In two of the male paratypes most of the spots of the hindwing upperside, which are very fully developed, are much elongated inwardly, while some small black dots are present in the central portion of the wings in one of these specimens (with one dot in the right wing of the other example).

A few small specimens which have been taken near Steynsburg by Mrs R. J. Southey agree fairly closely with those under discussion and are quite as distinct from the nominate race. A similar pair of specimens, from Burghersdorp, in the collection of the South African Museum, was collected by Dr. D. Kannemeyer in March, 1882 (both females, and located with the help of Mr. F. W. Gess); and a female from this locality is referred to by Trimen (under *Zeritis palmus*. (Cram.)) in "South African Butterflies", Vol. II, p. 185 (1887).

P. turneri amatola has been collected, also, in the area from which the type-material was obtained, by Mr. C. D. Quickelberge of East London; and he was the first to have collected it there. Some field observations on this race are included in this paper.

This race occurs in isolated colonies on the peaks of the Amatola Mountains in the Stutterheim and Cathcart districts, from an altitude of 4700 ft. on Dohne Peak to an altitude of 6300 ft. on Gaika's Kop. It has so far only been observed on the summits of the peaks, always confined to the highest points throughout the range. It is never numerous, and is usually observed singly or in pairs. On two stations, namely, Mnt. Kubusie and Gaika's Kop, it flies together with *P. penningtoni* Riley, but is outnumbered by the latter in these two localities. However, it appears to be more widespread on this mountain range than *P. penningtoni*. It flies from September to April.

It flies rapidly when disturbed, circling for a few yards, then settling on the short mountain scrub, or on stones, with its wings open. It has not yet been observed on flowers.

The peculiar climatic conditions prevailing on the Amatola peaks (very high rainfall in the summer with frequent mist, and severe frost and snow in the winter), probably account for the differences that have developed in this race, when compared to the nominate race from the dry Karroo areas.

Some remarks relating to *P. turneri* have been published in a paper of Pennington's in J. ent. Soc. S. Afr.: Vol. XVI, No. 2, pp. 106-107 (1953). Very good notes on the Butterfly may be found in Swanepoel's "Butterflies of South Africa", pp. 139-140, Pl. VI, figs. 18, 19 (1953).

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