

## NOTE

### A new locality for three threatened butterfly species in the Bewaarkloof Reserve of the Limpopo Province, South Africa

Published online: 21 August 2020

DOI: <https://dx.doi.org/10.4314/met.v31i1.12>

J. Etienne Terblanche

P O Box 220, Haenertsburg, 0730, South Africa. Email: [jetpapermoon@gmail.com](mailto:jetpapermoon@gmail.com)

Copyright © Lepidopterists' Society of Africa

## INTRODUCTION

Three threatened butterfly species were found in October 2019 at a single locality that was new for each of the species, in the Bewaarkloof Reserve within Limpopo Province, South Africa: *Aloeides stevensoni* (Tite & Dickson, 1973) (Lycaenidae: Aphnaeinae); *Orachrysops regalis* (Henning & Henning, 1994) (Lycaenidae: Polyommatainae); and *Dingana clara* (Van Son, 1940) (Nymphalidae: Satyrinae).

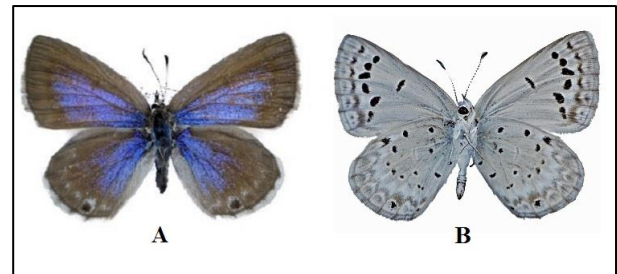
*A. stevensoni*, the Wolkberg Russet (Fig. 1), was listed as Vulnerable by Henning *et al.* (2009), Endangered by Mecenero *et al.* (2013), and Critically Endangered during SALCA (Mecenero *et al.* 2020). Its extinction risk is therefore increasing. *A. stevensoni* usually flies on steep, grassy, south-facing slopes at altitudes of 1750–1800 metres (Mecenero *et al.*, 2013).



**Figure 1** – *Aloeides stevensoni* ♂: A recto; B verso  
Wingspan c. 24 mm.

*O. regalis*, the Royal Cupid (Fig. 2), is a distinctive butterfly species with a restricted range (Henning & Henning, 1994), but was listed as Endangered during SALCA (Mecenero *et al.*, 2020). *O. regalis* flies on steep, grassy, south-facing slopes, similar in this respect to *A. stevensoni*. Its host plant was recorded by Edge (2005) as *Indigofera accepta* N.E.Br.

*D. clara*, the Wolkberg Widow (Fig. 3), was listed as Vulnerable by Henning *et al.* (2009), Endangered by Mecenero *et al.* (2013) and unchanged during SALCA (Mecenero *et al.*, 2020). *D. clara* occurs in the vicinity of



**Figure 2** – *Orachrysops regalis* ♀: A recto; B verso  
Wingspan: c. 38 mm



**Figure 3** – *Dingana clara* ♂: A recto; B verso  
Wingspan: c. 65 mm

Haenertsburg, Serala and Lekgalameetse (Mecenero *et al.*, 2013). Current knowledge of its distribution places it in a type of mist-belt vegetation described by Mucina & Rutherford (2006) as Gm 23 Northern Escarpment Quartzite Sourveld.

## OBSERVATIONS

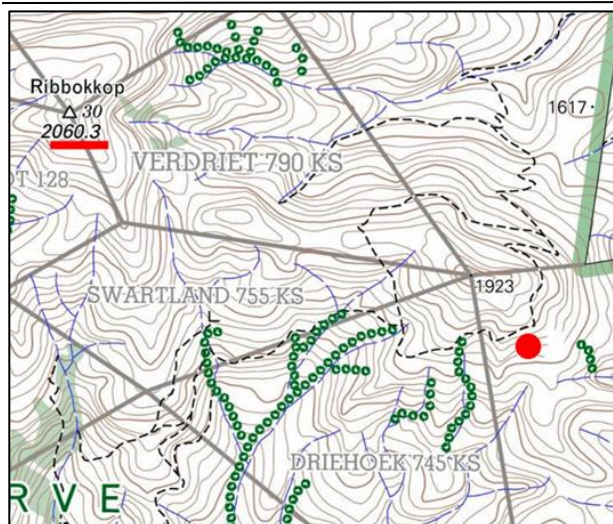
As part of a larger project surveying butterfly fauna in the Bewaarkloof Reserve of Limpopo, South Africa, the author and V. Jessnitz visited a peak three kilometres east of Ribbokkop in the Strydpoort mountains, which form part of the Wolkberg complex towards the west. The peak is situated around 22 kilometres south-southwest (SSW) of Haenertsburg. The locality (Figs 4, 5 & 6) is in a vegetation type that Mucina & Rutherford (2006) described as Gm 27 Strydpoortberg Summit Sourveld, at coordinates 24.134079°S; 29.879103°E.

The three species were flying together on the south-facing slope of this peak (Fig. 5), as reported in *African Butterfly News* (2019–6), including further notes about the Bewaarkloof project initiated by the author. The dates of our visit were 19–20 October 2019. On 27 October and 3

Received: 6 June 2020

Published: 21 August 2020

Copyright: This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License. To view a copy of this license, send a letter to Creative Commons, Second Street, Suite 300, San Francisco, California, 94105, USA, or visit: <http://creativecommons.org/licenses/by-nc-nd/3.0/>



**Figure 4** – New locality (red dot) as illustrated on the 1:50 000 map.



**Figure 5** – Google Earth polygon illustrating the extent and boundaries of the *A. stevensoni* colony at the new locality. The size is c. 4 000 m<sup>2</sup>.



**Figure 6** – The steep slope where the three species were flying

December 2019 the author revisited the site to make further observations. The site lies at an altitude of 1750–1850 metres. The slope is steep and long, descending 400 metres over approximately one kilometre's worth of slanting. At least one *Protea* species (of which the individuals are relatively short) occurs on the slope, along with grass tussocks and loose rocks. Burnt patches

were present, resulting from activity in a previous season, whether natural or induced by humans, where *A. stevensoni* preferred to perch on the bare ground, rocks, flowers of legumes forbs, or fronds of bracken fern.

On 19, 20 & 27 October 2019, *O. regalis* individuals were conspicuous in considerable numbers, covering a wider expanse than *A. stevensoni*, flying up to the area just below the summit. They were active from early in the morning on 20 October 2019, when a female was spotted flying out of a grassy patch (without being disturbed) at 07:00 am. Soon after the sighting of this female, males were criss-crossing the slope, with their erratic flight patterns, from top to bottom (and vice versa) or horizontally and diagonally.

*D. clara* individuals, though striking, were fewer than *A. stevensoni* and *O. regalis*. No more than five were seen from time to time. They were out from at least 10:30 am on 19 October 2019, when we first arrived at the site, and were on the wing in equal numbers by 2:30 pm. On that day, an individual was observed flying at 5 pm. On 20 October 2019, our hopes for more of these butterflies did not materialise, and on 27 October 2019 we only saw a single individual in flight. By then, the adult stage of this insect had come to its end for 2019 at this locality.

## DISCUSSION

The discovery of three threatened species at this new locality boosts the prospects of their conservation and conducting critical research on their life cycles, host plants, and behaviour. The addition of this single site, whilst not transforming the conservation status of any of these species, is encouraging.

Finding a site where *A. stevensoni* flourishes is particularly significant since it is extinct at the first of its two formerly known sites (S. Kremer-Köhne, personal communication) and has been dwindling at the second of these (J. Dobson, personal communication). As indicated, it flies in healthy numbers at the newly discovered site discussed here.

The site is difficult to access and situated within the Bewaarkloof Reserve under legislated protection of the Limpopo Department for Economic Development, Environment and Tourism (LEDET). Illegal mining activities around it appear to have been abandoned for the most part over the past years. No intrusive-, exotic-, or problem plants were found at the site except for a small patch of bracken-fern (*Pteridium aquilinum*), as well as a clump of wattle trees (species to be determined) on the opposite slope, approximately 400 m away. No cattle or dung were found, though this should be monitored, since the origin of the burnt patches is not certain. Effective fire management should be performed to ensure the flourishing of the host plants, which are to be identified. The ethology and life cycles of the three species as well as the intra- or interspecific nature of the *Dingana* population should be examined.

## ACKNOWLEDGEMENTS

The Limpopo Department of Economic Development, Environment and Tourism (LEDET) is thanked for

permission to carry out research in Bewaarkloof and Sylvie Kremer-Köhne for information about the Wolkberg Russet's first known site. Jeremy Dobson provided valuable notes on its localities and conservation status, and Graham Henning confirmed its identification. Vaughan Jessnitz and his student, Jono Yates, provided two crucial lifts to the site (which is preferably reached in a 4x4 vehicle). Limpopo conservationist John Lategan gave information about properties in the area and Ernst Von Finckenstein, owner of a farm deep inside Bewaarkloof offered advice on how to navigate the road. Further thanks are due to Christien Terblanche, Reinier Terblanche, and the Editor and a reviewer for improving the text.

## LITERATURE CITED

- EDGE, D.A. 2005:46. *Ecological factors influencing the survival of the Brenton Blue butterfly, Orachrysops niobe (Trimen) (Lepidoptera: Lycaenidae)*. North-West University, Potchefstroom: (Thesis–D. Phil.).
- EDGE, D.A. 2011. Custodians of rare and endangered Lepidoptera (COREL). *Metamorphosis* **22(3&4)**: 81–96.
- HENNING, G.A., TERBLANCHE, R. F., and BALL, J.B. (eds). 2009. *South African red data book: butterflies*. SANBI, Pretoria.
- HENNING, G.A. & HENNING, S. F. 1994. A review of the genus *Orachrysops* Vári (Lepidoptera: Lycaenidae) with descriptions of seven new species and one new subspecies pp. 260–272. In: Pringle, E.L.L., et al. *Pennington's butterflies of southern Africa* (2<sup>nd</sup> edition). Struik Winchester, Cape Town.
- MECENERO, S., BALL, J. B., EDGE, D.A., HAMER, M. L., HENNING, G.A., KRÜGER, M., PRINGLE, E.L., TERBLANCHE, R. F., WILLIAMS, M. C. 2013. *Conservation assessment of butterflies of South Africa, Lesotho and Swaziland: Red list and atlas*. Saffronics and the Animal Demography Unit.
- MECENERO, S., EDGE, D.A., STAUDE, H.S., COETZER, B.H., COETZER, A.J., RAIMONOD, D.C. & WILLIAMS, M.C. 2020. Outcomes of the Southern African Lepidoptera Conservation Assessment (SALCA). *Metamorphosis* **31(4)**: in press.
- MUCINA, L. & RUTHERFORD, M.C. (eds). 2006. *The vegetation of South Africa, Lesotho and Swaziland. Strelitzia* **19**. SANBI, Pretoria.
- PRINGLE, E. L. L., HENNING, G. A., and BALL, J. B. 1994. *Pennington's butterflies of southern Africa* (2<sup>nd</sup> edition). Cape Town: Struik.
- WILLIAMS, M. C. 2019. Afrotropical butterflies. Online resource: [www.metamorphosis.org.za](http://www.metamorphosis.org.za).