

## NOTE

### *Mylothris citius* Oremans, 2019 and *Mylothris beni* Warren-Gash, 2020 (Papilionoidea: Pieridae: Pierinae)

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Haydon Warren-Gash      E-mail: [haydonwg@hotmail.com](mailto:haydonwg@hotmail.com)      98 Overstrand Mansions, Prince of Wales Drive, London SW11 4EU.

**Abstract:** *Mylothris beni* and *Mylothris citius* are synonymised, with *M. beni* being the junior synonym.

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## INTRODUCTION

The revision of the genus *Mylothris* (Warren-Gash, 2020) took more than 5 years to complete. It involved much research, to which many readers of *Metamorphosis* contributed, and an extensive study of the phylogeny, which relied heavily on DNA analysis. At an early stage I was in contact with Philippe Oremans, a Belgian lepidopterist, and set for him a number of *Mylothris* specimens he had received from a collector in the eastern DRC. I flagged up a pair of unusual appearance as possibly new. These specimens were returned to him.

Our contact subsequently lapsed, but he remained aware that a full revision of the genus was under way. It was only after my book was published that I discovered that Oremans had proceeded to describe the pair in question as a new species *Mylothris citius* (Oremans, 2019). He designated the female as its holotype. The description relied solely on wing shape and colour patterns. Neither the genitalia of the type, nor the accompanying male paratype were dissected, and molecular sequencing was not done. However, the description was in accordance with ICZN rules and is therefore valid.

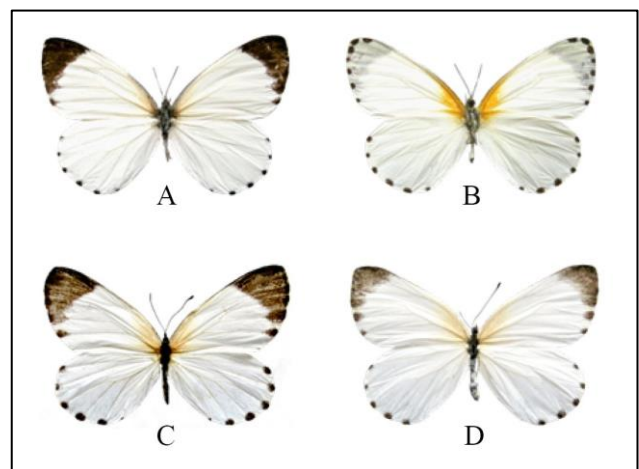
## DISCUSSION

Whether this course of action was appropriate would matter little if the new species could be shown to be distinctive, in a definable way. Unfortunately, it is not as simple as that. The distinguishing feature highlighted by Oremans was an unusually extended black apical patch on the forewing. However, that is not a reliable diagnostic character on its own in this genus, with many examples of infra-specific variation. Furthermore, the general wing pattern in his new species is shared by several other, superficially very similar, species which fly together in the eastern DRC. Some clues to help separate the various species, on the basis of superficial characters such as wing shape or markings can assist and, since it is a difficult group, these were discussed at some length in the revision, but I also highlighted that they could not always be relied upon. Nonetheless, having examined the image of

Oremans' (female) type carefully, and consulted the archives built up in the course of the revision, it matches a heavily marked female form – for which DNA evidence is conclusive – of the species I later described as *Mylothris beni*. The combination of an extended apical patch and the roseate forewing basal colouring found in this female form does not appear to occur in any other species from the same area. Furthermore, *M. beni* is relatively common in the type locality of *M. citius*. I therefore conclude that these two names refer to the same species and sink *beni* as a junior synonym of *citius* **syn. nov.**

Loose ends remain. In many cases, the forewing apical black scaling in females of this species is not especially pronounced, and the name is therefore based on an individual form. Nor can it be said with any confidence that Oremans' associated male belongs with this species. The male genitalia are diagnostic, but males cannot be separated with confidence from those of *M. zairiensis vanessae* Warren-Gash, 2020 on the basis of superficial characters alone.

Illustrated are the (male) type and two female forms of *M. beni* (as was) (Fig. 1). For copyright reasons, the type and allotype of *M. citius* are not shown here but can be accessed by reference to the original description.



**Figure 1** – *Mylothris beni* A: Male type, dorsal surface (Kenge, N. Kivu, v.2015, ABRI collection); B: Male type, ventral surface (Kenge, N. Kivu, v.2015, ABRI collection); C: Female form dorsal surface (Mamove, N. Kivu, ii.2011, author collection); D: Female form dorsal surface (Muleke, N. Kivu, viii.2012, author collection). Both female identities confirmed through DNA sequencing.

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