How to separate specimens of Bicyclus mesogena and Bicyclus mesogenina in the field in Kibale and Semuliki

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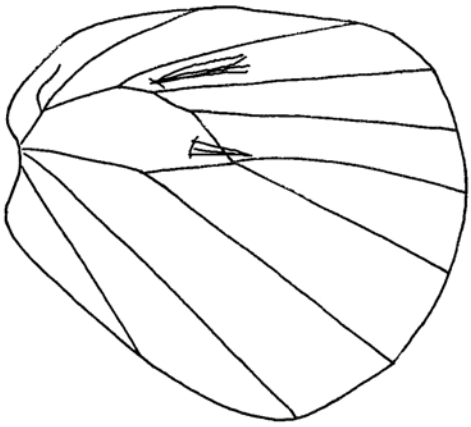
What has previously been called *Bicyclus mesogena* in the studies from Kibale is in reality two species called *Bicyclus mesogena* and *Bicyclus mesogenina*. This document is aimed to show the main differences that can be used in the field to separate the two species from each other. The males have several differences but the one best used in the field is the androconial brushes. For the females an inspection of the wing veins is needed, but this can be done with good lights and sharp eyes. It can also be done with the wings held close with a forceps. *Bicyclus mesogena* is sometimes called *Bicyclus mesogenus* but the two names refer to the same species while *Bicyclus mesogenina* is a unique name and a separate species. It was described already in 1923, but the name was never much published and then removed in the 1960:s. We will now reinstate it and give it full species status. The name *Bicyclus mahale* that is described from Tanzania is the same species as *Bicyclus mesogenina* and the name *mahale* is now considered a synonym and should not be used anymore.

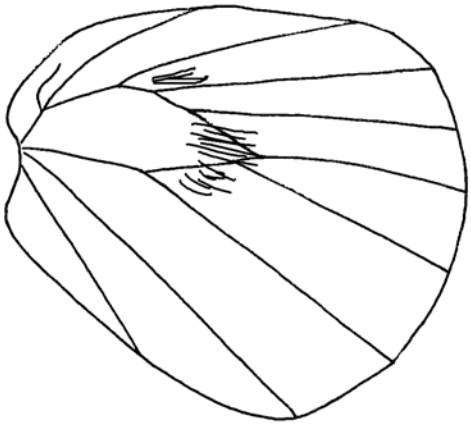
Bicyclus mesogena ***Bicyclus mesogenina***

Upperside of two males from Kibale shown above. The wing shapes are different, and can be used as an identification character by an experienced observer (note that he left specimen has part of the hindwing missing from a bird attack).

The underside pattern is extremely variable and should NOT be used to identify any specimens of these two species! The best character is the **androconial brushes** on the **hindwing upperside** shown in the next figure.



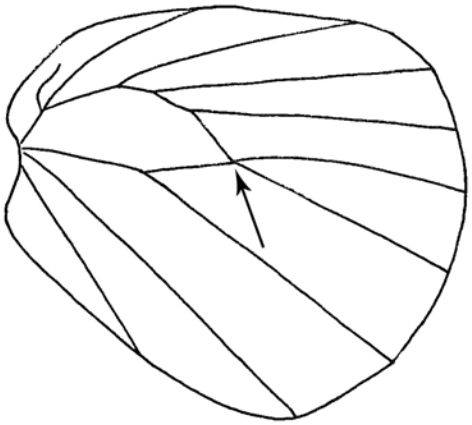
Bicyclus mesogena



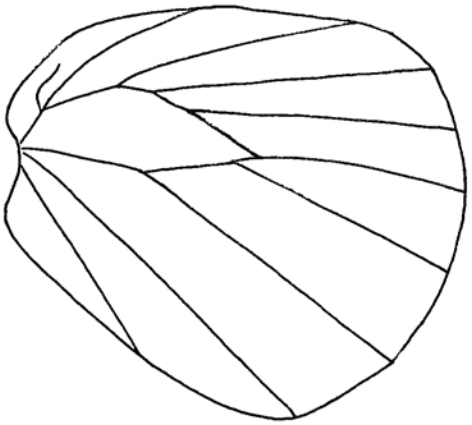
Bicyclus mesogenina

The difference in the **male** hindwing brushes shown for *B. mesogena* (Left) and *B. mesogenina* (Right). These figures only show the two brushes that are used to separate the two species from each other. There are more brushes on the wings that are not included in this figure to avoid confusion. The upper brush is large in *B. mesogena* and small in *B. mesogenina*. The lower brush is small in *B. mesogena* and large in *B. mesogenina*. The large lower brush is pushing one of the wing veins outwards, and this is also visible in the females even if they have no brushes.

The **females** can only be separated by looking at how the veins in the hindwing are arranged. In *B. mesogena* the quite weak vein that closes the round area called the wing cell is merging up in a fore-way junction of veins (see arrow). In *B. mesogenina* this closing vein is pushed outwards so that there are two three-way junctions instead. The difference in position is only about one or two millimetres but with good light it can still be seen. There are no other know differences in the females that can be used. The underside pattern should NOT be used since it is very variable.



Bicyclus mesogena



Bicyclus mesogenina

Bicyclus mesogena **FEMALE**

Bicyclus mesogenina **FEMALE**