

Expanded molecular phylogeny of the genus *Bicyclus* shows the importance of increased sampling for detecting semi-cryptic species and highlights potentials for future studies

KWAKU ADUSE-POKU, PAUL M. BRAKEFIELD, NIKLAS WAHLBERG & OSKAR BRATTSTRÖM

Supplemental data S5: Notes on the taxonomic history and available types in the *auricruda*-group.

According to Hewitson's original description the specimens forming the type series of *Mycalesis mandanes* were collected in Angola and Gabon (Hewitson, 1873). However, it appears his syntypes belonged to two different species. The specimen depicted in the description is definitely a male of what would currently be treated as *B. mandanes*, but in the text he notes that the hindwing has three brushes, matching the morphologically similar species *B. auricruda*, as *B. mandanes* has four brushes. It should be noted that Hewitson frequently omitted androconial details in his descriptions and might therefore have overlooked the additional small brush at the end of the discal cell setting *B. mandanes* apart from *B. auricruda*. In the type specimen (details below) this brush is small and dark compared to the other three brushes that are shared with *B. auricruda* making a mistake even more likely. According to Kirby (1879) Hewitson had four specimens that he considered to be *B. mandanes* in his collection at the time of his death, but we don't know if all of these were available to him when making his description in 1873. One male and one female of these four original specimens kept at BMNH are currently treated as types of *Mycalesis mandanes*. The specimen currently recognized as the male type of *M. mandanes* (BMNH(E)1054543) (Fig. S5 1) is labelled as being from 'Angola (Rogers)'. This specimen is a good match to the original drawing in Hewitson's description. It has a large forewing androconia and only a small tail on the hindwing and corresponds well with the large androconial type of *B. mandanes*. However, the female specimen from Hewitson's collection identified as part of his type series (BMNH(E)1054544) (Fig. S5 2) and labelled as 'Gaboön (Ansell)' is actually a female of *B. auricruda*. Also, Hewitson's description of the female morphology corresponds better to *B. auricruda* than *B. mandanes*. We have not been able to study the two further specimens that belonged to Hewitson's collection, and it is possible that at least one of them is a male of *auricruda* explaining the three brushes in the original description. Hewitson must have been aware of Butler's type specimen of *B. auricruda* as they were kept in the London museum and he had tight links with the Lepidoptera taxonomists in the museum at the same time he did his own taxonomic work. When Hewitson's collection were incorporated in the London holdings soon after his death in 1878 the catalogue produced by Kirby (1879) treated Hewitson's *mandanes* as a junior synonym of *auricruda*.

The only currently recognised junior synonym of *B. mandanes* is *Dichothyris graphidhabra* described by Karsch (1893) from material collected in Yégué (Bismarcksburg) in western Togo. At least one male from Karsch's original type series is placed in Stockholm (NHRS-GULI000011376) (Fig. S5 3) and just like all other investigated specimens from West Africa (excluding Cameroon) it belongs to the large androconial. As the type *M. mandanes* belongs in the same group the name *M. graphidhabra* cannot be used for the new eastern

species with the small androconial type. The new species *Bicyclus collinsi* **sp. nov.** is shown in figure S5 4.

References

- Hewitson, W.C. (1873) *Illustrations of new species of exotic butterflies* (vol 4, plate Mycalesis IX). John van Voorst, London.
- Karsch, F. (1893) Die Insecten de Bergenlandschaft Adeli im Hinterlande von Togo (Westafrika). *Berliner Entomologische Zeitschrift*, 22, 1–266.
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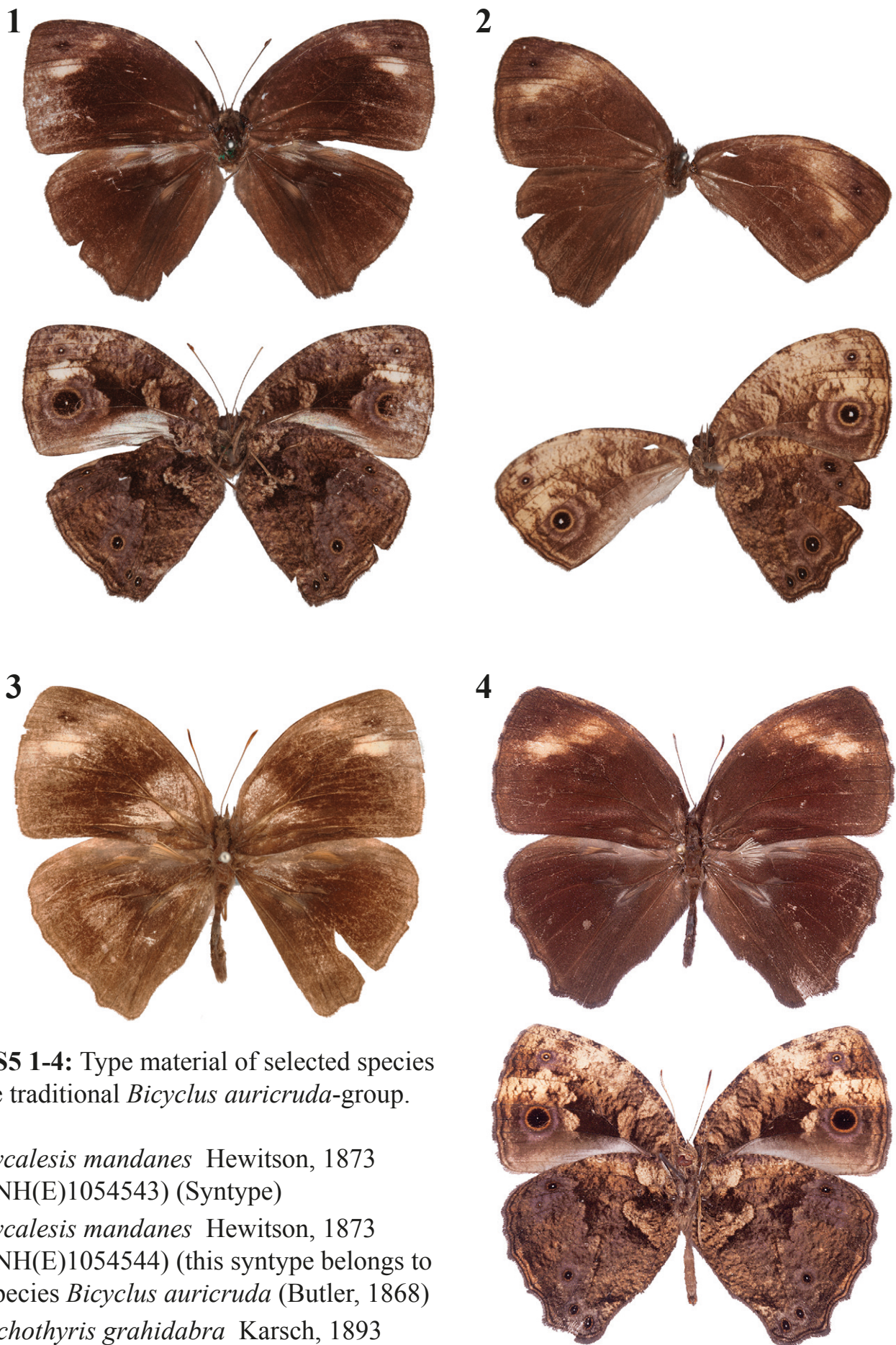


Fig. S5 1-4: Type material of selected species in the traditional *Bicyclus auricruda*-group.

1. *Mycalesis mandanes* Hewitson, 1873 (BMNH(E)1054543) (Syntype)
2. *Mycalesis mandanes* Hewitson, 1873 (BMNH(E)1054544) (this syntype belongs to the species *Bicyclus auricruda* (Butler, 1868))
3. *Dichothyris grahidabra* Karsch, 1893 (NHRS-GULI000011376) (Syntype)
4. *Bicyclus collinsi* Aduse-Poku **sp. nov.** (SZS-KW-007) (Holotype)