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Lectotype designation and taxonomic status of *Melanis electron herellus* (Snellen, 1887) (Riodinidae: Riodininae)

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LECTOTYPE DESIGNATION AND TAXONOMIC STATUS OF *MELANIS ELECTRON HERELLUS*
(SNELLEN, 1887) (RIODINIDAE: RIODININAE)**Additional key words:** Curaçao, lectotype, *Lymnas*, West Indies

The genus *Melanis* Hübner, [1819] (Riodinidae: Riodininae: Riodinini) is currently composed of 32 species, found from the southern USA to Argentina. Generally, they are relatively large (forewing length 19–24 mm) riodinids with a black or dark gray ground color and creamy white, yellow, orange or red spots or bands on the wings, a small head, long antennae and a robust abdomen (DeVries 1997, Warren et al. 2023).

Melanis electron (Fabricius, 1793) is found from Belize and Guatemala to SE Brazil and is considered to have seven subspecies (Callaghan & Lamas 2004, Warren et al. 2023):

- *Melanis electron electron* (Fabricius, 1793). Type locality “Cajennae” [French Guiana]. Range: Venezuela, Guyana, Suriname, French Guiana (Sambhu & Nankishore 2018, Warren et al. 2023).
- *M. e. auriferax* (Stichel, 1910). Type locality “Brasilien: São Paulo” [Brazil].
- *M. e. epijarbas* (Staudinger 1888). Type locality “Itaituba am Tapajoz” [Pará, Brazil].
- *M. e. herellus* (Snellen, 1887). Type locality Curaçao.
- *M. e. melantho* (Ménétriés, 1855). Type locality Nicaragua. Range: Belize & Guatemala to Colombia (DeVries 1997, Garwood et al. 2022, Warren et al. 2023).
- *M. e. pronostriaga* (Stichel, 1910). Type localities Colombia (Rio Magdalena sup.), Santarem [Pará, Brazil].
- *M. e. rabuscula* (Stichel, 1910). Type localities Teffé [Amazonas, Brazil], Itaituba [Pará, Brazil], Sarayacu [Ecuador], Manicore [Manicoré, Amazonas, Brazil], Juruty [Juruti, Pará, Brazil].

Melanis electron herellus was originally described as *Lymnas jarbus* var. *herellus* (Snellen 1887). *Lymnas jarbus* is probably a misspelling of *Lymnas iarbus* (Fabricius, 1787). Snellen mentioned that var. *herellus* was characterized by a small red-yellow stripe near the tornus of the forewing and by the “fiery yellow-red color” of the inner part of the hindwing submarginal band, but that “transitions of the type in various directions are not lacking and a specific difference ... is by no means indicated” (English translation from original Dutch text by first author). It was Stichel, who transferred *L. iarbus* var. *herellus* to subspecific status (*Lymnas iarbus herellus* (Snellen, 1887)), presumably

because of its occurrence on Curaçao (Stichel 1910). Hemming (1967) pointed out that the genus *Lymnas* Blanchard, 1840 is a junior synonym of *Melanis* Hübner, [1819] and, moreover, that *iarbus* was preoccupied and the earliest available replacement name was *Hesperia electron* (Fabricius, 1793). Thus, the current name of *Lymnas jarbus* var. *herellus* Snellen, 1887, is *Melanis electron herellus* (Snellen, 1887).

Snellen worked in the “Rijksmuseum der Natuurlijke Historie” (RMNH), now Naturalis Biodiversity Center, Leiden, Netherlands. Although in his paper he mentioned several specimens of *Lymnas jarbus* from Curaçao, only one of these was found in the Naturalis collection (Fig. 1). As he reported that “the ravages of time had begun to gnaw at the collection [from Curaçao]”, other specimens may have been discarded. He did not explicitly mention any type specimen for *herellus*, but must have worked with several syntypes. As the specimen shown in Fig. 1 is apparently the only syntype remaining, this specimen is hereby designated as the lectotype of *Lymnas jarbus* var. *herellus* Snellen, 1887, now *Melanis electron herellus* (Snellen, 1887), ensuring nomenclatural stability.

Naturalis has now embarked on a project to re-inventory the Lepidoptera of Curaçao, the neighboring islands of Aruba and Bonaire, as well as the other Dutch Caribbean islands of Saba, St. Maarten and St. Eustatius. As part of this project, Snellen’s specimens and paper were re-evaluated.

Melanis electron herellus was not found in Curaçao in the 136 years following Snellen’s description and the same holds for about 40 other species mentioned in Snellen’s paper (Debrot et al. 1999, Miller et al. 2003, Debrot & Miller 2017). It is extremely unlikely that all of these species were strays at the time Snellen’s specimens were collected and that they have not been observed over such a long span of time. Identification and analysis of these species show that they probably came from Venezuela (to be published). The habitus of the lectotype of *M. e. herellus* is very similar to that of the type specimen of *Lymnas echidna* Seitz, 1913 (type locality San Esteban, NE Venezuela), considered to be a junior synonym of *M. e. electron* (Seitz 1913; Callaghan & Lamas 2004, Warren et al. 2023).



FIG. 1. Designated lectotype of *Lymnas jarbus* var. *herellus* Snellen, 1887, now *Melanis electron herellus* (Snellen, 1887); forewing length 19 mm. **a**: dorsal side; **b**: ventral side; **c**: labels. Note that both labels are in the same handwriting. They were presumably made after arrival in the Netherlands, possibly by Snellen himself.

Therefore, we believe that the type locality of *M. e. herellus* was, in all probability, mainland Venezuela.

The available evidence suggests that the primary reason for considering *M. electron herellus* as a distinct subspecies, namely its occurrence on an island with a well-defined and relatively isolated population, cannot be upheld. We therefore synonymize *M. electron herellus* (Snellen, 1887) with *M. electron electron* (Fabricius, 1793) **revised synonym**.

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