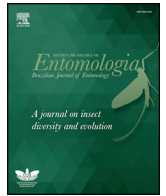




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## Short Communication

## The taxonomic identity of *Heliconius melpomene* f. *pyritosa* var. *fumigata* Zikán (Lepidoptera: Nymphalidae)



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## ABSTRACT

The taxonomic identity of the butterfly *Heliconius melpomene* f. *pyritosa* var. *fumigata* Zikán, 1937 (Nymphalidae: Heliconiinae) is discussed based on the discovery of the specimen based on which this name was assigned. The specimen is not a variation of *Eueides tales surdus* Stichel, 1903, as previously stated, but is in fact a variation of *H. melpomene* f. *pyritosa*, which is a synonym of *Heliconius erato amalfreda* Riffarth, 1901.

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In 1937, J.F. Zikán described seven new Heliconiini forms from Brazil and Peru, including *Heliconius melpomene* f. *pyritosa* var. *fumigata* Zikán, 1937, based on a single specimen from Mr. Ferdinand Dissmann's collection (Zikán, 1937). Subsequently, Mielke and Casagrande (1987), in an effort to locate all lepidopteran types deposited in Brazilian museums, found what they believed to be the individual based on which *H. melpomene* f. *pyritosa* var. *fumigata* had been described, in the Zikán collection (Fundação e Instituto Oswaldo Cruz, Rio de Janeiro). This specimen, illustrated by Mielke and Casagrande (1987) and Warren et al. (2013), was identified as *Eueides tales surdus* Stichel, 1903 by Lamas (2004). In 2011, the F. Dissmann collection was donated to the Campinas State University (Unicamp). The collection exceeds 2500 butterfly specimens that come from the all over the world, and includes 11 alleged type specimens, among them six specimens of *Heliconius* Kluk, 1780. One of these individuals is clearly labeled as the "holotype" of *Heliconius melpomene* f. *pyritosa* var. *fumigata* (Fig. 1). The collection also includes the two "cotypes" of *Heliconius melpomene* f. *pyritosa* Zikán, 1937 mentioned by Zikán in the same publication. The specimen here figured as *H. melpomene* f. *pyritosa* var. *fumigata* (Fig. 1) clearly fits the description provided by Zikán (1937), including the "sooty" nature of the yellow markings in the forewing, not present in the specimen figured by Mielke and Casagrande (1987). In addition, the double series of submarginal white dots, clearly visible in the specimen illustrated by



Fig. 1. Male individual (with labels) described under the name *Heliconius melpomene* f. *pyritosa* var. *fumigata* Zikán, 1937.

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Mielke and Casagrande (1987), was not mentioned in the original description of Zikán (1937). It is worth mentioning that J.F. Zikán was a great connoisseur of butterflies, and it is unlikely that he would have confused two such different genera of Neotropical butterflies as *Eueides* Hübner, 1816 and *Heliconius*. Based on the present evidence, it is clear that the specimen used by Zikán (1937) to describe *H. melpomene* f. *pyritosa* var. *fumigata* is the one figured here (Fig. 1). Therefore, *H. melpomene* f. *pyritosa* var. *fumigata* is not a variation of *Eueides tales surdus*, but alternatively, just a variation of *H. melpomene* f. *pyritosa*, which is a synonym of *Heliconius erato amalfreda* Riffarth, 1901. Finally, although this specimen has no value as a name bearing type (this is an infrasubspecific name; ICZN, 1999, Article 10.2), this publication is important both from an historical point of view (correcting a perfectly excusable mistake in the literature), and also by clarifying the identity of a local variation of an important and well-studied species of *Heliconius*.

**Additional information:** Labels with the individual are shown in Fig. 1: The male individual is deposited in the Museu de Zoologia da Universidade Estadual de Campinas (ZUEC), Campinas, São Paulo, Brazil, with the following four labels (separated by transverse bars):/Holotype/*Helicon. melpomene* H.T. f. *pyritosa*. ♂Zik. Var. *fumigata*/Amazonas Acré [sic]? 1935/♂/

#### Conflicts of interest

The authors declare no conflicts of interest.

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