



Descriptions of two new species of Hemileucinae (Lepidoptera: Saturniidae) from the region of Muzo in Colombia—evidence from morphology and DNA barcodes

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Abstract

Two new species of Hemileucinae are described from the region of Muzo (Boyaca department) in the Eastern Cordillera of Colombia. *Leucanella bonillensis*, **new species**, is a small greyish species whose closest relatives are *L. newmani* (Lemaire) and *L. acutissima* (Walker). It can be distinguished from those two species by several subtle differences in wing pattern and coloration as well as a few characters of the male genitalia, which are overall very conserved within the genus. *Cerodirphia zulemae*, **new species**, belongs to the very uniform species-group of *C. speciosa* (Cramer), characterised by a pink ground colour and the presence of a “Y”-shaped discal mark on the forewing. Based on its male genitalia, the new species is related to *C. brunnea* (Draudt) and *C. apunctata* Dias & Lemaire. It may be distinguished from the former by its more vivid ground colour, but detailed examination of the male genitalia are necessary to differentiate it from *C. apunctata*. Colour pictures of the habitus of the new species and their relatives are provided, and their genital structures are figured as well, including both sexes for *C. zulemae*. We also provide additional support to these descriptions based on genetic data obtained in the context of a global DNA barcoding campaign recently initiated for saturniid moths. Both *L. bonillensis* and *C. zulemae* are unambiguously distinguished from closest relatives based on genetic distances (no intraspecific distances in either case; interspecific distance ranges 5.6–6.6% and 6.7–12.5%, respectively) and inference of phylogenetic hypotheses based on partial sequences of the COI mitochondrial gene. These results emphasize the potential of DNA barcoding to support taxonomic work in species-groups considered difficult to address through morphology.

Key words: Eastern Colombia, *Leucanella bonillensis* **n. sp.**, *Cerodirphia zulemae* **n. sp.**, Neotropical insects, cryptic species, DNA barcoding, COI

Résumé

Deux nouvelles espèces d'Hemileucinae sont décrites de la région de Muzo (département du Boyaca) dans la Cordillère Orientale de Colombie. *Leucanella bonillensis* **nov. sp.** est une espèce grisâtre de taille modeste, proche de *L. newmani* et de *L. acutissima*. Elle peut être distinguée superficiellement de *L. newmani* et *L. acutissima* par des différences subtiles dans l'ornementation et la couleur des ailes, ainsi que quelques caractères sur les genitalia mâles qui sont cependant très conservés au sein du genre. *Cerodirphia zulemae* **nov. sp.** est une espèce typique du groupe de *C. speciosa*, qui se caractérise par la coloration rose des ailes et la présence d'une structure discocellulaire en forme de “Y” sur les ailes antérieures. De part la structure des genitalia, elle se rapproche de *C. brunnea* et *C. apunctata*. Elle peut être différenciée de la première par sa coloration générale plus vive, mais une observation détaillée des genitalia est nécessaire pour la