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Systematics, revisionary taxonomy, and biodiversity of Afrotropical Lithocolletinae (Lepidoptera: Gracillariidae)

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Abstract

Afrotropical Lithocolletinae are known from 26 described species, mainly from southern Africa. In the present study we describe 41 new species, bring to 66 the number of species from this geographical region. The new species include: *Hyloconis luki* De Prins, **n. sp.**, *Neolithocolletis mayumbe* De Prins, **n. sp.**, *N. nsengai* De Prins, **n. sp.**, *Cameraria fara* De Prins, **n. sp.**, *C. landryi* De Prins, **n. sp.**, *C. perodeaui* De Prins, **n. sp.**, *C. sokoke* De Prins, **n. sp.**, *C. torridella* De Prins, **n. sp.**, *C. varii* De Prins, **n. sp.**, *C. zaira* De Prins, **n. sp.**, *Phyllonorycter aarviki* De Prins, **n. sp.**, *P. achilleus* De Prins, **n. sp.**, *P. acutulus* De Prins, **n. sp.**, *P. adderis* De Prins, **n. sp.**, *P. agassizi* De Prins, **n. sp.**, *P. albertinus* De Prins, **n. sp.**, *P. dombeyae* De Prins, **n. sp.**, *P. fletcheri* De Prins, **n. sp.**, *P. gato* De Prins, **n. sp.**, *P. grewiaepilos* De Prins, **n. sp.**, *P. hibiscicola* De Prins, **n. sp.**, *P. ipomoellus* De Prins, **n. sp.**, *P. jabalshamsi* De Prins, **n. sp.**, *P. kazuri* De Prins, **n. sp.**, *P. maererei* De Prins, **n. sp.**, *P. mida* De Prins, **n. sp.**, *P. mwatawalai* De Prins, **n. sp.**, *P. ocimellus* De Prins, **n. sp.**, *P. lolua* De Prins, **n. sp.**, *P. rongai* De Prins, **n. sp.**, *P. ruizivorus* De Prins, **n. sp.**, *P. ruwenzori* De Prins, **n. sp.**, *P. silvicola* De Prins, **n. sp.**, *P. trochetellus* De Prins, **n. sp.**, *P. tsavensis* De Prins, **n. sp.**, *P. turensis* De Prins, **n. sp.**, *P. umukarus* De Prins, **n. sp.**, *Cremastobombycia morogorene* De Prins, **n. sp.**, *C. kipepeo* De Prins, **n. sp.**, *Porphyrosela desmodivora* De Prins, **n. sp.**, *P. gautengi* De Prins, **n. sp.** Furthermore, *Cameraria hexalobina* (Vári, 1961), **n. comb.** is transferred from *Phyllonorycter* to *Cameraria*, and a neotype for *Porphyrosela homotropha* Vári, 1963 is designated. *Lithocolletis aurifascia* Walker, 1875, previously placed in *Phyllonorycter*, is excluded from Lithocolletinae. We designate lectotypes where necessary and provide morphological descriptions of males and females, information on host plants, and detailed distribution data. We also include dichotomous keys to species groups and species, accompanied by DNA barcode sequences of 19 species. We also discuss generic relationships within Lithocolletinae based on both morphology and molecules with a special emphasis on Afrotropical taxa.

Key words: Afrotropics, *Cameraria*, *Cremastobombycia*, DNA barcode, *Hyloconis*, lectotype, *Neolithocolletis*, molecular character, new species, *Phyllonorycter*, *Porphyrosela*, taxonomy