



## On the taxonomy of Afrotropical Coleophoridae (II) (Lepidoptera, Coleophoridae)

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### Abstract

Eight new species of the genus *Coleophora* Hübner, 1822 are described: *Coleophora kenyaensis* sp. nov., *C. vansoni* sp. nov., *C. elegans* sp. nov., *C. namaqua* sp. nov., *C. kamiesella* sp. nov., *C. kunenensis* sp. nov., *C. creola* sp. nov., and *C. hirsutella* sp. nov. The genitalia of three previously described species are described and illustrated for the first time: *Coleophora niphocrossa* Meyrick, 1920, *C. enchitis* Meyrick, 1920 and *C. textoria* Meyrick, 1921. The larval case of *C. enchitis* is illustrated and data about its biology are given.

**Key words:** Lepidoptera, Coleophoridae, *Coleophora*, new species, Afrotropical Region, Cape Verde Islands

### Introduction

After the publication of our paper “On Afrotropical Coleophoridae (I)” (Baldizzone & van der Wolf 2011) and of the description of *Coleophora mirabibella* Baldizzone, Mey & van der Wolf, 2011 (Baldizzone *et al.* 2011), more material and data from the Afrotropical Region have become available, in particular thanks to collecting by Wolfram Mey, David Agassiz and Graziano Bassi. Over 200 additional specimens were examined and many genital preparations were made. The material included a mix of already known species, of which we illustrated the genitalia in our earlier works, as well as several undescribed species. This indicates that the fauna of Afrotropical Coleophoridae still contains a significant amount of unknown diversity. For some species there were no problems to associate the two sexes; but for many it was not possible to match with certainty the males with the females, either because of their uniform habitus across many species, or occasionally because of the poor condition of the specimens. Legs from nearly 100 specimens have been sent to Jean-François Landry (Ottawa) for DNA barcoding. Results of the barcode analysis were not yet available at the time of writing for incorporation into the present study but when they are, they will enable to verify the association of conspecific sexes (providing that DNA sequences are successfully recovered) as well as provide the first baseline barcode data for future work on Afrotropical Coleophoridae.

This paper presents the descriptions of eight new species, seven of them based on both sexes. Also, for the first time, genitalia descriptions are given for three species described by Edward Meyrick, based either on the original material, or on specimens recently received: *Coleophora niphocrossa* Meyrick, 1920, *C. textoria* Meyrick, 1921 and *C. enchitis* Meyrick, 1920.

The species are not presented in an order based on phylogenetic analysis. The small number of species studied so far and the great number of new species awaiting description make such an approach premature. We tried to associate the new species with the species-group arrangement introduced by Toll (1953, 1962). Even though not phylogenetic and based on incomplete sampling of the Palearctic fauna, Toll’s system remains hitherto the only classification framework for the family. In due time a new phylogenetic classification will be necessary.