



A new species for *Limulopteryx* from Cameroon with the first record of termitophilous Ptiliidae (Coleoptera) outside the Neotropics

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Abstract

A new and apparently termitophilous featherwing beetle *Limulopteryx hintelmanni* **sp.n.** from Cameroon is described and extensively illustrated. This is the first record of termitophilous Ptiliidae outside the Neotropical Region. Taxonomic position of the new species and that of the genus *Limulopteryx* are discussed. All records of Ptiliidae associated with termites are reviewed.

Key words: Taxonomy, beetle

Introduction

The family Ptiliidae is a cosmopolitan group of small beetles normally not exceeding 1.5 mm in body length. The family includes about 630 described species in some 85 genera (Newton & Thayer, 2007). Termitophily as a rare phenomenon was recorded for representatives of five genera: *Urotriainus* Silvestri with three species, as well as monotypic *Pycnopteryx* Dybas, *Xenopteryx* Dybas, *Dybasina* Lundgren, and *Limulopteryx* Hall (Fig. 15; see also Kistner, 1982, Hall, 2003). All termitophilous Ptiliidae are characterised by a limuloid body (Figs 6, 7), which is believed to co-evolve as an adaptation to life in the hostile environment of social insects' nests (Kistner, 1982). All these taxa are restricted to the Neotropical zoogeographical region and are known from a very few scattered records.

This paper reports the discovery of a new *Limulopteryx* species collected together with Nasutitermitinae termites in Cameroon, West Africa. Its association with termites, as well as the limuloid body shape suggest that this is the first record of termitophilous Ptiliidae outside the Neotropical Region.

Material and methods

Both known specimens of the new *Limulopteryx* species were collected by peeling tree bark over a beating sheet and then preserved in 70% ethanol. One specimen was attached by Hercules glue to a point on an entomological pin to allow its free rotation for environmental Scanning Electron Microscopy without metal coating (Figs 6–11). This specimen was later removed from the point, soaked with 70% ethanol, and photographed together with another specimen and termite hosts under a dissecting microscope in reflected light (Figs 1–2). Both beetles, along with two specimens of termite hosts, were macerated in 10% KOH, impregnated with iso-propanol, and mounted on two microscope slides in Euparal medium (one beetle plus one termite per slide under two separate cover slips). Cleaned beetles were photographed under a compound microscope in transmitted light (Figs 3–5).