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Two new genera of tube-making spittlebugs (Hemiptera: Machaerotidae: Enderleiniini)

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Abstract

Two new monotypic spittlebug genera and their type species in the family Machaerotidae, subfamily Enderleiniinae, are described and illustrated: *Labramachaerota korupa* **gen. & sp. n.** (with type locality in Cameroon) and *Kyphomachaerota maaia* **gen. & sp. n.** (with type locality in Sarawak, Malaysia).

Key words: Auchenorrhyncha, Cercopoidea, Enderleiniinae, froghoppers

Introduction

Machaerotidae is one of the five spittlebug families described within the superfamily Cercopoidea (Hemiptera: Auchenorrhyncha: Cicadomorpha). Members of Cercopoidea are commonly referred to as spittlebugs due to the nymphal habit of concealing themselves in a matrix of digested plant sap and additional proteins secreted by specialized Malpighian tubules, with air bubbles introduced (Rakitov 2002) to generate a frothy mass superficially resembling saliva. Species of Machaerotidae differ from the other spittlebugs by constructing a hard, calcareous, clear fluid-filled tube in which they seclude themselves as nymphs, emerging only at ecdysis, during which they produce a typical spittle mass just outside of their tube; after ecdysis, the nymphs return to their tubes (Evans 1940, Marshall 1966).

The distribution of extant Machaerotidae is unique within Cercopoidea in that the family is strictly Paleotropical, whereas species of Cercopidae and Aphrophoridae are found worldwide and Epipygidae and Clastopteridae are restricted to the New World (with the exception of the clastopterid genera *Iba* and *Parahindoloides*, occurring in the Philippines and Borneo, respectively; Maa 1962). Approximately half of the described species of Machaerotidae are endemic to the island of Borneo (Maa 1961), making Southeast Asia the center of machaerotid distribution. The described African fauna, currently including only seven species in four genera, is much less speciose than is the Asian fauna.

Machaerotidae was originally described by Stål (1866), who defined the family based on the presence of a long, spine-like extension of the scutellum, superficially resembling the posterior pronotal process of some treehoppers (Hemiptera: Membracidae). The machaerotid scutellar process, coupled with the nymphal tube-building behavior, significantly differentiated Machaerotidae as a distinct taxonomic group within Cercopoidea. Subsequently, other spittlebug species were described (Melichar 1903) that produced calcareous tubes as nymphs, but lacked the scutellar spine in their adult stage; those taxa necessitated a redefinition of Machaerotidae (Schmidt 1907) to include two subfamilies: Machaerotinae, in which the scutellum is produced into a spine-like process, and Enderleiniinae, in which the scutellum is not produced into a spine-like process. The current classification scheme for Machaerotidae was refined by Maa (1963) and divides the family into two subfamilies, four tribes, and 28 genera. Machaerotinae includes the tribes Machaerotini, which are relatively long and slender with a weakly humpbacked pronotum, and Maxudeini, which are more robustly built with a strongly humpbacked pronotum of which the lateral edge is often pronounced into large acute lamina. Enderleiniinae includes the tribes Hindoloidini,