Geoparnus rhinoceros sp. nov., a new edaphic dryopid with unusual sexual dimorphism (Coleoptera: Dryopidae)

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Abstract

Adults of Geoparnus rhinoceros sp. nov. (Dryopidae) are described from Borneo (Sarawak, Malaysia). The male of the new species possesses a distinct horn-like process on the clypeus, a character, which has so far not been reported from Dryopidae. The type material was collected in primary rain forest by sifting forest floor debris. Analysis of variance of metric characters was performed.

Key words: Coleoptera, Dryopidae, Geoparnus, new species, sexual dimorphism, Borneo, Sarawak, Malaysia

Introduction

Dryopidae with 32 described genera and 263 species represent a beetle family of relatively low diversity (Kodada & Jäch 2005). Adults of most species occur in aquatic or riparian habitats, whereas a small percentage is known to be terrestrial (edaphic or arboreal). The genus Geoparnus was established by Besuchet (1978). The description was based on two males and one female of Geoparnus setifer Besuchet, sifted from forest humus in the Cameron Highlands (peninsular Malaysia), and so far the genus includes only this single species. Besuchet (1978) discussed the differences between Geoparnus and the edaphic Afrotropical Oreoparnus Delève (1965), which he regarded to be its closest relative. Besides Geoparnus and Oreoparnus, the following eight genera are supposed to be strictly edaphic: Sosteamorphus Hinton, Ghiseliniius Perkins and Momentum Perkins from the Neotropical Region (Hinton 1936, Perkins 1997), Parnida Broun from New Zealand (Broun 1880), Drylichus Heller from New Caledonia (Heller 1916), Spalacosostea Kodada and Monstrosostea Kodada & Boukal from the Oriental Region (Kodada 1996, Kodada & Boukal 2000), and Pedestrodryops Kodada from South Africa (Kodada 2001).

Specimens of edaphic Dryopidae are rarely collected in large number and description of the new species is in most cases based on few specimens. Fortunately, the species described herein is an exception since the type material comprises 382 specimens, most of which were collected in 1994, by I. Löbl, D. Burckhard and the first author. The material collected appears to be sufficient to provide an analysis of size variability of the different populations.