



Rove beetles (Coleoptera: Staphylinidae) associated with *Aenictus laeviceps* (Hymenoptera: Formicidae) in Sarawak, Malaysia: Strict host specificity, and first myrmecoid Aleocharini

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Abstract

The fauna of myrmecophilous rove beetles associated with *Aenictus laeviceps* (sensu Wilson 1964) at Lambir Hills National Park, Sarawak, Malaysia was investigated. Eight species belonging to six genera of the subfamily Aleocharinae including the following new taxa are recorded and/or described: *Myrmecosticta exceptionalis* Maruyama **gen. et sp. nov.**, *Aenictocleptis hirsutoides* Maruyama **sp. nov.**, *Aenictocleptis lambirensis* Maruyama **sp. nov.**, *Mimaenictus matsumotoi* Maruyama **sp. nov.**, *Procantonnetia opacithorax* Maruyama **sp. nov.**, *Weissflogia pubescens* Maruyama **sp. nov.** Three morphotypes (L1, L2 and S) are recognized in *A. laeviceps*, and strict host specificity by the rove beetles for the morphotypes was observed. *Myrmecosticta exceptionalis* is the first known myrmecoid species of the tribe Aleocharini and belongs to the *Tetrasticta* generic group.

Key words: Aleocharinae, Aenictinae, Lambir Hills National Park, Borneo, new genus, new species, myrmecophily

Introduction

Many species of ant colony guests, so-called “myrmecophiles”, are known to be associated with army ants of the subfamilies Dorylinae, Aenictinae and Ecitoninae (Gottwald, 1995; Hölldobler & Wilson, 1990; Kistner, 1979; Rettenmeyer, 1962; Seevers, 1965). In the Asian tropics, ants of the genus *Aenictus* Schuckard, 1840 (Aenictinae) are the most prominent hosts and harbour numerous myrmecophile species, the majority of which are rove beetles (Staphylinidae) of the subfamily Aleocharinae. About 40 *Aenictus*-associated aleocharine rove beetle species have been described from the Asian tropics, but these taxa constitute a scattered group in material collected from several areas of South East Asia (see, Wheeler, 1932; Kistner & Jacobson, 1975; Kistner, 1993; Kistner, *et al.* 1997). Recently, one of us (T. Matsumoto) collected a large series of myrmecophilous insects from Lambir Hills National Park, Sarawak, Malaysia, whilst conducting an ecological study of *Aenictus* ants. Here, we document and describe the aleocharine rove beetles associated with the *Aenictus* species most commonly encountered at the study site, and indeed throughout Southeast Asia: *Aenictus laeviceps* (F. Smith, 1858). Furthermore, we present evidence for a strict host specificity of these myrmecophiles: whereas some myrmecophilous taxa are associated with single or a few ant species (e.g. *Dinarda* rove beetles (Wasmann, 1896; Zerche, 1989), *Maculinea* butterflies (Akino *et al.* 1999), *Microdon* hoverflies (Elmes *et al.* 1999; Schönrogge *et al.* 2002; Maruyama & Hironaga, 2006) and *Myrmecophilus* crickets (Maruyama, 2004; Komatsu *et al.* 2008) we find that these rove beetles associate with specific morphotypes of *Aenictus laeviceps*, distinguishable by body surface pilosity (Wilson, 1964).