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Adinopsis nippon, a new species of marsh-dwelling rove beetle (Coleoptera: Staphylinidae: Aleocharinae: Deinopsini) from Japan, with an annotated catalogue of Adinopsis species of the world

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Abstract

Adinopsis nippon sp. n. is described from Japan and represents the first discovery of the genus Adinopsis in the temperate zone of the East Palearctic region. It is closely related to A. myllaenoides (Kraatz) known from North and South America and is placed in the myllaenoides species group. An annotated catalogue of the world species of Adinopsis is presented.

Key words: Carex community, Japanese fauna, myllaenoides species group, rove beetles, Tone-gawa riverbed

Introduction

The rove beetle tribe Deinopsini embraces a small group of Aleocharinae and shares numerous plesiomorphic character states with the tribe Gymnusini (Hammond, 1975). Together these two tribes comprise the basal-most lineage within the Aleocharinae (Ashe, 2007). Deinopsini is composed of four genera and 51 species from all zoogeographical regions. The genus Adinopsis Cameron, 1919 currently contains 28 species (including the present new species) from Africa, Asia, Australia, North and South America, and one from Baltic amber. In Asia, only four Adinopsis species are known from tropical areas, namely, Sri Lanka, Nepal, Singapore and Hong Kong. Adinopsis species are inhabitants of marsh detritus and mud at the margins of ponds and streams (Klimaszewski 1979, Klimaszewski & Jansen 1994). Recently, we collected an undescribed species of Adinopsis at two sites of lowland marsh along the riverside of Tone-gawa, near Tôkyô. This represents the first record of the genus from the temperate zone in the East Palearctic region. In Japan, environmental conditions of lowland marshes have drastically worsened in recent decades. In light of this, the Tone-gawa riverbeds represent one of the most wellpreserved marshes in Japan, harboring various marsh-dwelling insects (e.g., Maruyama et al., 2000; Ohkawa, 2002). The present finding of Adinopsis rove beetles is biogeographically interesting given the species group the species belongs to, as discussed below, and reaffirms the importance of the Tone-gawa riverbeds as an important ecosystem for biodiversity. The Adinopsis fauna is still poorly known especially in Asian tropics. For the future research of Adinopsis, we provide an annotated catalogue of the world Adinopsis species as basic information of the genus.

Material and methods

In total six specimens were examined (see, Bionomics). Terminology of body parts follows Kilimaszewski (1979). The technical procedures used were generally as described by Maruyama (2006). Pictures of specimens were taken using a digital camera (Canon EOS 7D, Canon, Tôkyô, JAPAN) with an extreme macro lens (Canon MP-E 65 mm F2.8 1–5×, Canon) and a macro flash (Macro Twin Lite MT-24EX Flash, Canon). Then, focus stacking was conducted using the automontage software Combine ZM (Alan Hadley, UK, http://www.hadleyweb.pwp.blueyonder.co.uk/). All