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Revision of the alderfly genus *Indosialis* Lestage (Megaloptera: Sialidae)

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Abstract

Indosialis Lestage is a small Asian genus of alderflies. Herein, we describe a new species, *I. indicus*, and revise the three species in the genus. A key to males and a discussion of the phylogeny and biogeography of the genus is provided.

Key words: Sialidae, *Indosialis*, new species, Asia

Introduction

Indosialis Lestage, 1927 is a small alderfly genus in the family Sialidae. Two extant (Banks 1920; Lestage 1927; Liu *et al*. 2006) and one fossil species (Nel 1988) are known. Extant species occur in rainforests of Oriental Asia, but are rarely collected. The fossil species was found in Oligo–Miocene strata from Turkey. The genus is characterized by the orange or brownish head and prothorax, strongly prominent compound eyes, bifurcate R_{2+3} and R_{4+5}, and simple M_{1+2} and M_{3+4}.

During our examination of the megalopteran collection in the National Museum of Natural History, Washington, DC, four sialid specimens, collected from southern and southeastern Asia during 1930s to 1960s, were identified as *Indosialis*, including the two known species and one new to science. Herein, we describe the new species, revise all extant ones, and provide a fully illustrated key to the males of the genus. The adult female is described for the first time and the phylogeny and biogeography of *Indosialis* are discussed.

Material and methods

The specimens for the present study are deposited in the Entomological Museum of China Agricultural University (CAU), Beijing and in the National Museum of Natural History (NMNH), Washington, DC.

Genitalia were cleared in cold, saturated KOH for 8–10 hours. The abdomen was transferred to glycerin for further dissection and examination after rinsing the KOH from the genitalia by water. After examination genitalia were moved to fresh glycerin and stored in a microvial pinned below the specimen. The terminology of the adult genitalia follows Contreras–Ramos (2004).

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