



## A review of *Eotrechus* Kirkaldy (Hemiptera: Heteroptera: Gerridae) of Thailand with descriptions of three new species

AKEKAWAT VITHEEPRAKIT & ROBERT W. SITES<sup>1</sup>

Enns Entomology Museum, Division of Plant Sciences, University of Missouri-Columbia, Missouri 65211, USA

<sup>1</sup>Corresponding author. E-mail: bugs@missouri.edu

### Abstract

Three new species of *Eotrechus* Kirkaldy were collected from vertical rock surfaces of waterfalls in northern and central Thailand. *Eotrechus siamensis* **sp. n.** was collected at Doi Inthanon and Doi Suthep National Parks in Chiang Mai Province, northern Thailand. *Eotrechus elongatus* **sp. n.** and *Eotrechus romglao* **sp. n.** were collected from waterfalls in Phu Hin Rongkla National Park in Phetchabun Province, central Thailand. These new species are described and illustrated here as is the female of *Eotrechus petraeus* Andersen. In addition, *Eotrechus kalidasa* Kirkaldy was discovered for the first time in Thailand. Finally, diagnostic and distributional information of all known species of this genus in Thailand are given.

**Key words:** *Eotrechus*, new species, Gerridae, Heteroptera, Thailand

### Introduction

Water striders of the genus *Eotrechus* Kirkaldy (Gerridae: Eotrechinae) are generally found in montane areas of Asia from India eastward to China (Andersen 1998). Members of this genus have distinctive morphological structures and behavior among water striders. They are hygropetric, whereas most other gerrids are hydrophilic (Andersen 1982a), and are found on wet rock surfaces of waterfalls, although they may also occur on the ground near water (a behavior unique to the genus). An atypical morphological attribute is the presence of claws inserted apically, like those of terrestrial insects, whereas most other gerrids have anteapical claws. The apical position of the claws in *Eotrechus* was suggested to be a reversed, or pseudoprimitive, adaptation for life in hygropetric habitats (Andersen 1982a). Based on the unique morphology and behavior of this genus, Andersen (1982a) stated that members of this genus represented a remarkable example of evolutionary reversal.

The genus was revised by Andersen (1982a) and seven species were recognized, with one based on a single female specimen (Andersen 1982a). The other six species were distinguished by male characters, but not by female characters (Andersen 1982a). Thus reliable identifications should be based on male specimens, a situation similar to that of other members in the subfamily Eotrechinae (Polhemus & Andersen 1984). Later, a new species of *Eotrechus* from China was described based on a single male specimen (Andersen 1998). More recently, two additional species were described based on male specimens from India, and in both male and female specimens from China (Tran & Zettel 2006); and a third species was described based on male and female specimens from Vietnam (Tran & Yang 2006).

Currently, two species are known from Thailand: *Eotrechus hygropetricus* Andersen and *E. petraeus* Andersen; however, the female of *E. petraeus* is unknown. Here we describe three new species from the Thanon Thong Chai Mountain Range in northern Thailand and Phetchabun Mountain Range in central Thailand;