



A new genus and species of Pleidae (Hemiptera) from Venezuela, with notes on the genera of Pleidae

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Abstract

A new genus and species of Pleidae, *Heteroplea stictosoma* is described from Venezuela. The new genus *Heteroplea* differs from other genera in having a distinct callus on the occiput and an ovipositor without spines, as well as having a variable medial sternal carina. The genus resembles *Plea* in having three tarsomeres on each leg but appears closer to *Neoplea* in many other characters. This species was collected from a hydropterid habitat, which is different than other pleid species normally inhabit. With the addition of this new genus, an updated key to the genera of Pleidae is provided.

Key words: Venezuela, Pleidae, *Plea*, *Neoplea*, *Paraplea*, key, distribution

Introduction

The family Pleidae has a long history of taxonomic confusion. Members of this family were first recognized as being taxonomically distinct by Fieber (1851) when he erected the family Pleae, however this family was subsequently ranked as a subfamily of Notonectidae by most authors for the next three quarters of a century. Esaki and China (1927) erected the family Helotrephilidae separate from the Notonectidae, which left the pleids somewhat in limbo because they were obviously more closely related to Helotrephilidae, but still included in Notonectidae, although it was noted in this revision that the pleids and heterotrepheids could not be placed in the same family. This association was corrected the next year in revisionary work by Esaki and China (1928) where they revived Fieber's grouping and placed them in the family Pleidae. Throughout this time of changing families, all described pleids were placed in the genus *Plea* Leach. The first mention that this genus should be split was with the erection of the new subgenera *Neoplea* and *Paraplea* by Esaki and China (1928). These subgenera were based primarily on the formula of tarsal segment numbers. Thus, *Plea* had three tarsal segments on each leg, and a tarsal formula of 3,3,3. *Neoplea* was designated as those with a tarsal formula of 3, 2, 3 and *Paraplea* with 3, 2, 2. Drake and Maldonado-Capriles (1956) elevated the subgenera *Neoplea* and *Paraplea* to genus level to accompany *Plea* *sensu stricto*. Subsequent to the separation of *Plea* into three genera, Kerzhner (1977) also synonymized *Plea leachi* McGregor and Kirkaldy and *Plea minutissima sublaeris* Rey with *P. minutissima* (Fabricius). Herein, I discuss the current genera and the need for further study to properly refine these taxa.

Before the description contained in this paper there were 36 valid species and one subspecies in the family Pleidae. *Plea* currently has one valid species, *P. minutissima*, and a subspecies, *P. m. tassilii* (Poisson). *Neoplea* has 15 valid species and *Paraplea* has 20. Of the currently described species, all *Plea* are Palearctic and all *Neoplea* are New World, mostly Neotropical. The genus *Paraplea* is more cosmopolitan, with species from all continents except Europe and Antarctica. This paper adds a fourth genus of Pleidae.

The identification of pleids has always been problematic, making the taxonomy of this group uncertain. Some descriptions rely on characters such as color patterns and presence of a claval suture. However, these characters and others have proven to be highly variable in some species, thus creating a high degree of overlap between many species (Drake and Chapman 1953, Benzie 1989). Lundblad (1933) was the first to recognize the problem of using color patterns for species identification and this was later supported with work by Ellis (1950). Drake and Chapman