



Description of a new genus, *Boucekinus* (Hymenoptera: Chalcidoidea: Torymidae), with two new species and a discussion of its placement

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Abstract

Boucekinus **gen. nov.** and two new species, *B. masneri* **sp. nov.** from Ecuador and *B. tatianae* **sp. nov.** from Costa Rica, are described; *B. tatianae* is designated as the type species. *Boucekinus tatianae* was reared from cecidomyiid galls on *Anemopaegma chrysoleucum* (Bignoniaceae) and *B. masneri* was collected by canopy fogging. The placement of this new genus within Torymidae is discussed.

Key words: *Boucekinus masneri*, *Boucekinus tatianae*, Torymoidini, Toryminae, *Anemopaegma chrysoleucum*, systematics, galls

Introduction

The last comprehensive study of the family Torymidae, specifically of the subfamily Toryminae, was by Grissell (1995). This author discussed the biology, phylogeny and diversity of the family and divided it into two subfamilies, Megastigminae and Toryminae, and the latter into seven tribes (Chalcimerini, Microdantomerini, Monodontomerini, Palachiini, Podagrionini, Torymini and Torymoidini) based on 24 morphological characters. Currently, 67 valid genera of Torymidae are recognized, Megastigminae (12) and Toryminae (55), with 1063 valid species (Bouček 1988, Grissell 1995, Noyes 2010). Where the biology is known, most species of Megastigminae are phytophagous (seed-feeders) with a few entomophagous species, whereas species of Toryminae are primarily entomophagous. As far as known, Toryminae are parasitoids of eggs of mantids, larvae of Lepidoptera and bees, and, most commonly, parasitoids of gall-forming Hymenoptera (mostly Cynipidae) and Diptera (mostly Cecidomyiidae).

Herein, we describe a new genus with two new species known only from Costa Rica and Ecuador. One of these species was reared from galls of Cecidomyiidae on *Anemopaegma chrysoleucum* (Kunth) Sandwith (Bignoniaceae). We also discuss the placement of this new genus in the tribe Torymoidini based on morphological characters.

Material and methods

Specimens were borrowed from the National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA. Environmental SEM micrographs of uncoated specimens were prepared at the Department of Paleontology of the National Museum in Prague using a Hitachi S-3700N scanning electron microscope. Habitus images were obtained using an EntoVision Imaging Suite, which includes a firewire JVC KY-75 3CCD digital camera mounted to a Leica M16 zoom lens via a Leica z-step microscope stand and Cartograph 5.6.0 software (Microvision Instruments, France) to capture a fixed number of focal planes; the resulting focal planes were merged into a single, in-focus composite image (adopted from Gates 2008).

Morphological terms and morphological abbreviations mostly follow Gibson et al. (1997), and terms for sculpture follow Harris (1979). F1–F7 = funicle segments 1–7; Gt1–Gt4 = gastral terga 1–4; HTE = height of eye; LTE = length of eye; MSP = length of malar space; OD = diameter of one posterior ocellus; OOL = distance between