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Discovery of new species and country records for the North American sap beetle fauna (Coleoptera: Nitidulidae)

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Abstract

Brachypeplus habecki Cline and Skelley, sp. nov. is described from southern Texas, and *Brachypeplus glaber* LeConte is rediagnosed and discussed. *Cylloides thomasi* Cline and Skelley, sp. nov. is described from southern Arizona, and *Cylloides biplagiatus* is discussed. Habitus and genitalic photographs are provided as well as images of key diagnostic features for these species. An identification key is provided to distinguish the *Brachypeplus* and *Cylloides* present in North America. *Cryptarcha omisitoides* Reitter, a previously unreported Central American nitidulid, is newly recorded from Arizona; and *Carpophilus ophthalmicus* Murray, a previously unreported Caribbean species, is newly recorded from Florida. A discussion of *Cryptarcha omisitoides* and *Carpophilus ophthalmicus* is also provided.

Key words: Nitidulidae, taxonomy, new species, biodiversity, fungivore

Introduction

The New World Nitidulidae fauna comprises an interesting blend of Global, Holarctic, and endemic genera. The widespread genera *Epuraea* Erichson and *Carpophilus* Stephens are well-represented in the Holarctic (Parsons 1943; Jelínek & Audisio 2007), but not diverse in the Neotropics (Blackwelder 1945). Conversely, the widespread genus *Cylloides* Erichson is depauperate in the Nearctic (Parsons 1943), but species-rich in the Neotropics (Blackwelder 1945). *Cryptarcha* Shuckard, which also has a cosmopolitan distribution, is similar to *Cylloides* with a majority of species present in the Neotropics but proportionately underrepresented in the Nearctic. The Meligethinae did not undergo a major radiation in the New World, and only a few species are present in the Nearctic with some ranges extending into parts of Mexico bordering the Neotropics. The Nitidulinae flourished in the New World, and no other region can boast the generic diversity present in the Western Hemisphere. The endemic genus *Camptodes* Erichson possesses more than 100 species with numerous new species awaiting formal description. The new distribution records below are indicative of Neotropical elements extending into southern portions of the United States, which has been previously reported for other nitidulid taxa (Cline 2004), as well as other Cucuoidea (Cline & McHugh 2010). Invasive Palearctic species have also entered the Nearctic, but less frequently (Majka & Cline 2006; Cline & Audisio 2011) although historical accounts of introductions are not readily available.

Brachypeplus Erichson (Coleoptera: Nitidulidae) is a large genus of sap beetle, comprising approximately 100 described species (Grouvelle 1913; Cline unpub. catalogue). The genus occurs in most major biogeographic zones with highest species diversity in tropical areas. These small beetles are typically less than 7 mm long, and possess a body form that is moderately to distinctly compressed dorsoventrally. This attribute undoubtedly is coupled to their prevalence in subcortical spaces. Two identification keys (Parsons 1943; Habeck 2002) for the nitidulids of North America use the following combination of characters to delimit this genus: body form elongate and dorsoventrally flattened, hypopygium and pygidium short and depressed, elytra shortened exposing pygidium and preceding