



First record of the genus *Disholcaspis* Dalla Torre & Kieffer (Hymenoptera: Cynipidae: Cynipini) in the Neotropics, with description of two new species from Panama

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Abstract

Two new species of *Disholcaspis* Dalla Torre & Kieffer 1910, *Disholcaspis bettyannae* and *D. bisethiae* (Hymenoptera: Cynipidae: Cynipini) are described from Panama. The two new species induce galls on *Quercus bumelioides* Liebm. and *Q. lancifolia* Schledl & Cham. (Fagaceae, sect. *Quercus*, White Oaks). Diagnostic characters, gall descriptions, distribution, biological data, as well as inquiline and parasitoid associated community data of the new species are given. The new species represent the first records of the genus *Disholcaspis* from the Neotropical region.

Key words: Cynipidae, oak gall wasps, *Quercus*, Chiriqui, Panama

Introduction

Disholcaspis Dalla Torre & Kieffer 1910 (= *Holcaspis* Mayr 1881) is a genus of oak gall wasps (Cynipidae: Cynipini) recorded as being confined to the Nearctic (Dalla Torre & Kieffer 1910; Weld 1952). To date, 52 species are known (Liljeblad *et al.* 2008): 41 from the United States and Canada, and 11 from Mexico (Burks 1979; Kinsey 1937, 1938; Melika & Abrahamson 2002). Although the genus was also mentioned as present in Costa Rica (Central America) by Pujade-Villar & Hanson (2006), no species have been described or recorded to date from the Neotropical region.

The nomenclature and classification within this genus has been unstable; Burks (1979) cited 38 species and one variety from the United States & Canada. Dailey & Menke (1980) transferred *D. truckeensis* Ashmead to *Andricus* Hartig. Melika & Abrahamson (2002) transferred three *Andricus* species to *Disholcaspis*: *A. lasius* Ashmead; *A. reniformis* McCracken & Egbert; and *A. spectabilis* Kinsey, but this taxonomic act was later considered erroneous (Pujade-Villar *et al.* 2010). Additionally *Disholcaspis. chrysolepidis* Beutenmüller; *D. canescens* Bassett; *D. conalis* Weld; *D. corallina* Bassett; *D. plumbella* Kinsey; *D. sulcata* Ashmead and *D. washingtonensis* Gillette differ in some aspects of the diagnosis typical of the genus (Weld 1952), and according to Burnett (1977), Melika & Abrahamson (2002), eventually could be transferred to other genera. More recently, one species described from Mexico, *D. lapiei* Kieffer, has been transferred to the new genus *Kinseyella* Pujade-Villar & Melika (Pujade-Villar *et al.* 2010).

All the known species of *Disholcaspis* induce galls on white oaks (Fagaceae, section *Quercus*) (Weld 1952; Liljeblad *et al.* 2008). Whereas the adults of *Disholcaspis* are quite uniform and difficult to differentiate morphologically (Weld 1952) (many species are based in differences of coloration), the galls of each species are usually quite distinctive (Weld 1952, 1957). The asexual generation of *Disholcaspis* species induce detachable galls, single or clustering in groups, on the twigs, roots and buds of various species of white oaks, whereas the sexual generation emerges from small, thin-walled bud galls (Weld 1952; Evans 1972; Melika & Abrahamson 2002).