



Two new Neotropical species of oak gall wasps of the genus *Loxaulus* Mayr (Hymenoptera: Cynipidae: Cynipini) from Panama

ENRIQUE MEDIANERO¹, JOSÉ LUIS NIEVES-ALDREY^{2,4} & GEORGE MELIKA³

¹Programa Centroamericano de Maestría en Entomología, Vicerrectoría de Investigación y Postgrado, Universidad de Panamá, C. P. 0824, Panama. E-mail: emedianero@ancon.up.ac.pa

²Museo Nacional de Ciencias Naturales (CSIC), Departamento de Biodiversidad y Biología Evolutiva, C/ José Gutiérrez Abascal 2, ES-28006 Madrid, Spain. E-mail: aldrey@mncn.csic.es

³Pest Diagnostic Laboratory, Plant Protection & Soil Conservation Directorate of County Vas, Ambrozy setany 2, 9762 Tanakajd, Hungary. E-mail: melikageorge@gmail.com

⁴Corresponding author. E-mail: aldrey@mncn.csic.es

Abstract

Two new species of *Loxaulus* Mayr, *Loxaulus championi* and *Loxaulus panamensis* (Hymenoptera: Cynipidae: Cynipini) are described from Panama. Both new species induce galls on *Quercus bumelioides* Liebm. (Fagaceae, sect. *Quercus*, White Oaks). The diagnostic characters, gall descriptions, distribution, biological data and a key for the identification of the new species are given. The new species represent the first records of the genus *Loxaulus* outside North America.

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

Introduction

The Nearctic genus *Loxaulus* Mayr, with 14 described species, was previously only known from the United States (Melika & Abrahamson 2000). Galls, similar to those of *L. boharti* Dailey & Sprenger, known from California (USA), were collected in Baja California Norte (Mexico), however, no adults were reared (Dailey & Sprenger 1983) thus the distribution of the species in Mexico is still questionable. The representatives of the genus are distributed across USA: 5 species known only from California, 3 species from Arizona and New Mexico, the rest of species distributed from Texas to Florida and northward along the Eastern Coast. The genus was recently reviewed by Melika & Abrahamson (2000, 2002) and according to these authors *Loxaulus* form a distinct morphological entity, that can be morphologically characterized as follows: the head is massive, broader than the mesosoma in dorsal view and usually higher than broad in anterior view; the gena broadened, visible behind the compound eye in anterior view; the malar sulcus always present, distinct; antennae with 11–12 flagellomeres; the mesosoma slightly compressed in lateral view; the mesoscutum usually finely transversely coriaceous; the mesoscutellum without foveae, with a transverse shallow depression; the central propodeal area is narrow, limited by parallel or only slightly outward bent lateral carinae and with a median longitudinal carina and/or longitudinal striae; the median longitudinal carina in some species is indistinct, fragmented but always present at least in the anterior half; the radial cell of the forewing 2.5–3.8 times as long as broad, the forewing margin with or without cilia, usually with brown, smoky spots (or stripes) along the areolet, 2r, Rs, and M; tarsal claws are simple, without a basal lobe; the ventral spine of the hypopygium is short, slender or needle-like; subapical setae are short and sparse, not reaching beyond the apex of the spine and the prominent part is never more than 3.0–3.8 times as long as broad. The genus resembles the palaeartic *Plagiotrochus* Mayr and the nearctic *Bassettia* Ashmead. Recent analyses, however, doubts the monophyletic nature of *Loxaulus* (*J. Nicholls pers. comm.*) and its closer phylogenetic relation with *Plagiotrochus* and *Bassettia* we shall discuss below.

In the framework of a field study of the oak gall wasps (Cynipidae) of Panama (see also Medianero & Nieves-Aldrey 2010, Nieves-Aldrey & Medianero 2010, 2011), this paper contains the first report of the genus *Loxaulus* in Central America and includes the descriptions of two new species from Panama.