



An annotated checklist of the psyllids of California (Hemiptera: Psylloidea)

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Abstract

A revised checklist to the species of Psylloidea (Hemiptera) from California is presented, with information on host plant data, distributions, introduced and pest species, parasites, parasitoids, and predators, and biological control programs. The list includes 164 species, of which six are newly recorded. In total, this comprises a 26% increase in the number of species recorded for California since the last published checklist in 1988. *Choricymoza* Bliven is a **new synonym** of *Phylloplecta* Riley, and 10 species previously in *Euphalerus* Schwarz are recombined under *Nyctiphalerus* Bliven. California has the richest native psyllid fauna in North America, and the influence of climatic and floristic diversity on this diversification is considered.

Key words: biogeography, host plant, jumping plant lice, species diversity, pest species.

Introduction

From a review of the literature and examination of specimens at the California State Collection of Arthropods (CSCA), the California Academy of Sciences (CAL), the Essig Museum of Entomology (EMEC), and the Bohart Museum of Entomology (UCDC) (all institutions in California, USA), we present an updated checklist of the psyllids (Psylloidea, Hemiptera) of California. The checklist updates the published records for California and includes all of the new records of species and host plants for California post-1988 (the date of the last published checklist, Hodkinson 1988). Synonymies are not provided, these can be found in prior publications (e.g., Hodkinson 1986, 1988; Hodkinson & Bird 2000; Hodkinson & Hollis 1987; Burckhardt & Lauterer 1997; Ouvrard 2010; and references therein).

This treatment includes 164 psyllid species for California (121 of these were included in Hodkinson 1988, 37 of these have been published since 1988, and 6 of these are previously unpublished records). These 164 species records represent an increase of 26% since 1988 (Hodkinson 1988). The increase of 43 additional species for California is due in large part to the addition of 16 introduced species since 1988. Table 1 provides a summary of Californian psyllid genera, species numbers, and host plant genera associations.

Several native Californian psyllid genera require further revisionary work, in particular *Neophyllura* Loginova, which has numerous colour and wing pattern variations. A more in depth look at the Californian *Calinda* Blanchard species would help to determine the range of variation and distribution in these species, and the genus *Calophya* Löw needs additional investigation as there are undescribed species and notable polymorphism in some specimen series. Further, undescribed *Calophya* species from southern California appear to be related to species described from Mexico (more information on this potentially under-explored biogeographic link is given below). *Aphalaroida* Crawford was revised by Hodkinson (1991a), and in his revision, four *Aphalaroida* species previously recorded for California were considered to be restricted to other US states; material in Californian collections needs to be reviewed, particularly the specimens now collectively placed under the widespread species, *A. pithecolobia* Crawford. Several other genera are taxonomically complex and/or require additional systematic work, these include *Aphalara*, *Bactericera*, *Cacopsylla*, and *Craspedolepta*.