

***Hysteropterum severini* Caldwell & DeLong, 1948,
a synonym of *Agalmatium bilobum* (Fieber, 1877)
(Hemiptera: Fulgoroidea: Issidae)**

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Abstract. A species described twice from California is a previously described species of Mediterranean origin. *Hysteropterum severini* Caldwell & DeLong, 1948 and *H. beameri* Doering, 1958 are placed in synonymy under *Agalmatium bilobum* (Fieber, 1877). Data on distribution and host plants of *A. bilobum* in the Western Palaearctic and Nearctic Regions are summarized.

Key Words. Insecta, Issidae, synonymy, introduced species.

INTRODUCTION

The taxonomic problem of introduced species from the Palaearctic Region to the Nearctic Region and back is not new. Hamilton (1983) recorded 61 European leafhopper species introduced into North America with ornamental plants, and two Nearctic species have been introduced into Europe. In 1980 and 2004 two planthopper species of Nearctic origin were discovered in Europe: *Metcalfa pruinosa* (Say) (Flatidae) and *Acanalonia conica* (Say) (Acanaloniidae) (Wilson & Lucchi 2001, D'Urso & Uliana 2004). The present paper concerns an issid species of Mediterranean origin introduced into the USA.

Until 2003, 33 issid species distributed in different parts of the World had been treated as members of the genus *Hysteropterum* Amyot & Serville *sensu lato*. According to recent studies, the genus *Hysteropterum sensu stricto* only includes six Mediterranean species (Gnezdilov 2003) and the systematic position of all other species belonging to *Hysteropterum sensu lato* requires reassessment. Gnezdilov (2004a) erected two new genera for five Nearctic species: *Kathleenium* Gnezdilov, including *K. cornutum* (Melichar), *K. sepulcrale* (Ball) and *K. bufo* (VanDuzee) and *Exortus* Gnezdilov, including *E. punctiferus* (Walker) and *E. fuscomaculosus* (Doering).

Hysteropterum severini Caldwell & DeLong described from California (Caldwell & DeLong 1948) is one of the Nearctic species belonging to *Hysteropterum sensu lato*. Subsequently, *H. beameri* Doering was described from the same region (Doering 1958). The latter was placed in synonymy with *H. severini* by O'Brien (1988). Examination of the holotype (♂) and paratype (♀) of *H. severini* and original descriptions of both species showed that *H. severini* and *H. beameri* are junior synonyms of *Agalmatium bilobum* (Fieber), a widely distributed Mediterranean species.

The genus *Agalmatium* Emeljanov is a western Palaearctic genus comprising seven species, most of which are restricted to the Mediterranean region, although two species are also known from Central Europe (Gnezdilov 2003, 2004b). *Agalmatium* is characterized as follows: metope (frons in issids) with only distinct median keel; transverse coryphe (vertex in issids); fore wing with wide hypocostal plate, radius bifurcate, median trifurcate, anterior cubitus simple; hind wing rudimentary; hind tibia with 2 lateral teeth, first metatarsomere with 2 intermediate sole setae; phallobase with a pair of subapical

processes; aedeagus with a pair of ventral hooks; wide and rounded female anal tube; median field of gonapophyses IX forming a large turned-down process (Emeljanov 1971, Gnezdilov 2002, 2003).

Agalmatium belongs to the subtribe Agalmatiina Gnezdilov of the tribe Issini Spinola. The subtribe includes four Mediterranean genera and is characterized by a peculiar ovipositor structure and acoustic signals (Gnezdilov 2002, 2003; Tishechkin 2003). *Agalmatium bilobum* (Fieber) clearly differs from all other species of the genus by the long apical processes of the male anal tube (Logvinenko 1975: fig. 194, 5, Holzinger et al. 2003: fig. 253). Since Schlinger (1958) found mud egg-cases attached to the woody stems of grape vines and grape vines stakes, we assume that *A. bilobum* was introduced into the USA from one of the Mediterranean countries through eggs attached to something wooden.

***Agalmatium bilobum* (Fieber, 1877)**

Hysteropterum bilobum Fieber 1877: 16.

Hysteropterum angustum Melichar 1906: 130 (Dlabola, 1980, syn.).

Hysteropterum dubium Melichar 1906: 131 (Dlabola, 1984, syn.).

Hysteropterum inconspicuum Matsumura 1910: 27 (Dlabola, 1984, syn.).

Hysteropterum severini Caldwell & DeLong 1948: 176, **syn. nov.**

Hysteropterum beameri Doering 1958: 101, **syn. nov.**

Hysteropterum grylloides (nec Fabricius, 1794): Melichar 1914: 133.

Hysteropterum grylloides (nec Fabricius, 1794): Kusnezov 1926: 282, figs 5, 6.

Hysteropterum grylloides (nec Fabricius, 1794): Batiashvili & Dekanoidze 1967: 874.

This species was described from southern France (Fieber 1877, Holzinger et al. 2003). In the Palaearctic Region it is distributed only in the western part and is recorded from the following countries: France, Spain including the Canary Islands, Italy including Sardinia and Sicily (Syracuse), Greece including Islands, Ukraine including Crimea, Romania, Bulgaria, Russia (Krasnodar Territory), Georgia, Lebanon, Israel, Palestine, and Turkey (Melichar 1906, 1914; Matsumura 1910; Linnavuori 1962, 1965; Batiashvili & Dekanoidze 1967; Logvinenko 1975; Kartal 1985; Bayryamova 1991; D'Urso 1995; Gnezdilov 2000; Gnezdilov et al. 2004).

The species occurs in dry habitats (Linnavuori 1962, Logvinenko 1975, Bayryamova 1991), particularly in the Northwestern Caucasus in submediterranean forests and foothills and low-mountain steppe meadows up to 500 m above sea level, feeding on Poaceae (Gnezdilov 2000). The first record in the Nearctic Region was in 1946 from Geyserville and Cloverdale in California (USA) (Caldwell & DeLong 1948). Later a large population of the species was discovered in a restricted vineyard area south of Cloverdale (Schlinger 1958).

In the Western Palaearctic Region, the species is recorded as polyphagous (Logvinenko 1975). In California the nymphs of this species "... were seen feeding on the small stems of several species of grass, of which cultivated oats (*Avena sativa* L.) (Poaceae) was the most common host." (Schlinger 1958). Also in California abundant mud egg cases of the species were recorded on grapevine stakes and adjacent telephone poles, trunks and branches of olive trees and occasionally on apple, plum, *Quercus garryana* (Douglas), *Toxicodendron diversilobum* (Torrey & A. Gray) Greene (Caldwell & DeLong 1948, Schlinger 1958, Doering 1958).

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