



An Annotated Catalog of the Iranian Lygaeoidea (excluding Berytidae and Piesmatidae) (Hemiptera: Heteroptera: Pentatomomorpha)

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Abstract

The Iranian fauna of the Lygaeoidea (excluding Berytidae and Piesmatidae) is summarized in this paper. In total, 9 families, 7 subfamilies, 87 genera and subgenera, and 238 species and subspecies are listed from Iran. One species, *Dieuches armatipes* (Walker, 1872), is newly recorded from Iran.

Key words: Heteroptera, Lygaeoidea, Catalog, Iran, Palearctic region

Introduction

Lygaeoidea or seed-bugs are a worldwide group of Pentatomomorpha, distributed in 15 families (Henry 1997); only the Miridae are more numerous. In the Palearctics, the group consists of nearly 500 species, 130 genera, and 13 subfamilies (Péricart 1998a; Aukema & Rieger 2001). The subfamily Rhyparochrominae is the most numerous, containing, in the Palearctic region, 12 tribes (Aukema & Rieger 2001).

The size of Lygaeoidea varies from 1.5 to 12 mm, and their coloration is mainly brown, brownish, blackish with cream and red tinge; this coloration helps to facilitate mimetism in their biotopes; and the clear-cut red and black coloration is aposematic. The bucculae are well developed and the antennae are inserted before the eyes. The hemelytra are fully developed (except in brachypterous forms) and chitinised. There are only 4–5 veins without anastomosis in the membrane, and this separates sharply lygaeioids from Coreoidea, which possess numerous veins. The trichobothria are essentially in a ventral position. Male genitalia are symmetrical and quite diverse by families and subfamilies. In females, the lacinate ovipositor is well developed and the spermathecae are diverse but always have a distinct apical bulb. The eggs of Lygaeoidea have no operculum and the chorion bears some ornamentations as spines or mushroom-sculptures, etc. Micropyles, in variable numbers, are present on the cap (Putshkov 1969; Schuch & Slater 1995; Péricart 1998a, 2001).

Generally Lygaeoidea are phytophagous (feeding on seed, stems, leaves, root-suckers, or mycetophagous) a few are predators (Geocorinae), and very few are ectoparasites on warm-blooded vertebrates (in tropical regions). Some are agricultural pests, attacking crops (Oxycarenidae), cotton (Blissidae), wheat (Lygaeidae), and other crops (Putshkov 1969; Péricart 1998a).

The family rank was recognized at the beginning of the 19th century by Duméril (1806). During this period there were many taxonomic contributions (particularly by Puton (1875) and Horváth (1875)), but few on systematics and fewer on phylogeny. Stål (1868, 1872, 1874) studying the European and American faunas, recognized the great groups (our families and subfamilies) among Lygaeidae (*sensu* Stål). In his study on the phylogeny of Pentatomomorpha, Henry (1997) presented a very important contribution to the taxonomy and classification of the former Lygaeidae, which he considers the superfamily Lygaeoidea. Henry (1997) erected many subfamilies of the former Lygaeidae at the family level, and included in the Lygaeoidea *sensu* Henry, the Piesmatidae, Berytidae, Colobathristidae, and Malcidae; the Henry's (1997) classification is used in this catalog.

Palearctic catalogs were edited by Puton (1875), Oshanin (1906), Stichel (1959), and Péricart (2001); world-scale ones by Lethierry & Severin (1894), Slater (1964), and Slater & O'Donnell (1995) in addition, many other