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## An annotated catalog of the Iranian Pyrrhocoridae (Hemiptera: Heteroptera: Pentatomomorpha: Pyrrhocoroidea)

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### Abstract

The species diversity of Pyrrhocoridae is cataloged in this paper. Seven species (from three genera: *Aderrhis* Bergroth 1906, *Pyrrhocoris* Fallén 1814, *Scantius* Stål 1866) are given as the fauna of Iran.

**Key words:** Hemiptera, Heteroptera, Pentatomomorpha, Pyrrhocoroidea, Pyrrhocoridae, catalog, Iran

### Introduction

Heteroptera show a wide array of ecological, behavioral, and morphological adaptations to a plethora of microhabitats and life-history strategies in virtually all ecosystems (Weirauch & Schuh 2011). With more than 42,000 described species, Heteroptera are part of the most successful radiation of nonholometabolous insects (Henry 2009). Systematic research on Heteroptera has made significant progress since the first review on the influence of cladistics on heteropteran classification more than two decades ago (Schuh 1986, Weirauch & Schuh 2011).

The superfamily Pyrrhocoroidea Amyot & Serville, 1843 is closely related to the Lygaeoidea and the Coreoidea (Henry 1997), and was previously placed by many earlier authors as a subfamily of the Lygaeidae (e.g., Puton 1878). It was recognized as a separate family by Amyot and Serville (1843) under the name “Cécigènes” and they divided it into two groups, ‘Pyrrhocorides’ and ‘Largides.’ These two names became recognized as subfamilies of the Pyrrhocoridae, the family name being established by Fieber (1861) (see Robertson 2004) and China (1954) raised them at family level. The most important morphological characters to typify the Pyrrhocoroidea were established by China & Miller (1959). These are i) abdominal trichobothria present; ii) scutellum small, shorter than the clavus, a distinct claval commissure present; iii) antenniferous tubercles (= antennophores) visible from above; iv) antennae four-segmented; v) ocelli always absent; vi) membrane of the hemelytra usually with two basal cells, from which 7–8 branching longitudinal veins extend to the apical margin; vii) medium to large, brightly colored, usually phytophagous bugs (although not often true of Largidae).

The family Pyrrhocoridae is a small family of nearly 33 genera and around 340 species worldwide (Henry 2009), but only 15 genera and subgenera and 44 species occur in the Palearctic Region, mostly in transitional areas with Afrotropical and Oriental Regions (Yemen, southern China) (Stehlík & Kerzhner 1999; Kerzhner 2001; Stehlík & Jindra 2006). Pyrrhocoridae are widespread chiefly in tropical and intertropical zones. Generally, pyrrhocorids are red and black colored but variations of colors (particularly in *Pyrrhocoris apterus* (Linnaeus, 1758)) are very common. Pyrrhocorids are phytophagous to predaceous, phytophages feeding generally on seeds, fruit juices, or sap of a great numbers of plants but they mainly prefer Malvaceae, especially in the Old World. One of them (*Dysdercus fasciatus* Signoret, 1861) can destroy crops, particularly cotton, and is known as “cotton stainer” (Schaefer & Ahmad 2000). Pyrrhocorids are sometimes predaceous (Moulet 1995), and some are real predators e.g., *Antilochus* against *Dysdercus* (another Pyrrhocorid) (Kohno 2003; Kohno *et al.* 2002).