

## INTRODUCTION TO ASSASIAN BUGS (HET.: REDUVIIDAE) IN MASHHAD REGION (KHORASAN RAZAVI PROVINCE) AND THEIR DISTRIBUTION

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ABSTRACT: Due to limited available studies information about Reduviidae is rare in Iran and the world (Dispons & Villiers, 1967; Maldonado-Capriles, 1990; Modarres Awal, 1997). Reduviidae family is one of the most important bugs in the world, especially in biological control of pests. Some of these bugs are predator of pest insects such as aphids, psylls and thrips. A survey was conducted during 2007-2009 and the results showed that 20 species of 8 genera, *Ectomocoris*, *Coranus*, *Reduvius*, *Oncocephalus*, *Rhynocoris*, *Holotrichius*, *Pirates* and *Nagusta* were collected from studied areas and among them *Coranus aegyptius* (Fabricius, 1775), was the predominant species. *Coranus subapterus* (De Geer, 1773), *Holotrichius mesoleucus* (Kiritshenko, 1914) and *Oncocephalus squalid* (Rossi, 1790) have never been recorded in Iran. These species are marked with an asterisk. Lack of the information about these insects was the reason to identifying them in Mashhad, Iran. These species could be very promising agents for pest biocontrol.

KEY WORDS: Fauna, Reduviidae, Mashhad, Iran.

Reduviidae is a large insect family in the world, with about 3000-6000 species, 29 subfamilies. Reduviidae, which also called assassin bugs, ambush bugs or thread-legged bugs, many of those are predators of pest insects such as aphids and thrips. Reduviid bugs are valuable predators in situation where a variety of insect pests occur and they should be conserved and augmented for their utilization in biocontrol programs (Ambrose, 1999). Reduviid predators are larger than other predaceous bugs, their nymphal instars and adults consuming considerable numbers of preys (Schaefer, 1988).

### MATERIAL AND METHOD

The study was conducted from 2007-2009 with collecting samples from different areas in Mashhad region. Methods sampling were used such as trap, net and hand. Various of studied location were Torogh, Bandegolestan, Golmakan, Razaviyeh, Ahmad Abad and Field of Agricultural College (FAC). The samples were identified by Dr. David Redei from Hungary Museum of Natural History.

### RESULTS

In total of 20 species from 8 genera in Reduviidae family were collected from the studies areas which are as following:

#### **Reduviidae Latreille, 1807**

#### **Subfamily Harpactorinae Amyot and Serville, 1843**

***Coranus aegyptius*** (Fabricius, 1775)

**Material studied:** Mashhad: 2 specimens, May 2008; 3 specimens, June 2008; Mashhad (Torogh): 3 specimens, August 2008. On ground and grasses.

**Note:** In Iran this species has been reported from East Azarbaijan province (Baroughi, 1978; Perrier, 1935; Modarres Awal, 1996).

***Coranus contraries*** (Reuter, 1881)

**Material studied:** Mashhad (FAC): 3 specimens, July 2008; Mashhad (Torogh): 2 specimens, October 2007. On grasses.

**Note:** In Iran this species has been reported from Khorasan Razavi province (Modarres Awal, 1997).

***Coranus subapterus*** (De Geer, 1773)\*

**Material studied:** Chenaran (Golmakan): 1 specimen, May 2008; Mashhad: 3 specimens, July 2008; Mashhad (Torogh): 2 specimens, October 2008. On alfalfa and ground.

***Nagusta goedeli*** (Stal, 1859)

**Material studied:** Mashhad (F A C): 2 specimens, June 2008; Mashhad (Torogh): 1 specimen, June 2007; 1 specimen, November 2007. On grasses and ground.

**Note:** In Iran this species has been reported from East Azarbaijan and Khorasan Razavi provinces (Modarres Awal, 1996, 1997).

***Rhynocoris christophi*** (Jakovlev, 1877)

**Material studied:** Chenaran (Golmakan): 1 specimen, August 2008; Mashhad: 2 specimens, March 2007. On grasses.

**Note:** In Iran this species has been reported from Semnan province from Putshkov, 2002.

***Rhynocoris ibericus*** (Kolenati, 1857)

**Material studied:** Mashhad (Torogh): 2 specimens, March 2009. On grasses.

**Note:** In Iran this species has been reported from Khorasan Razavi province (Modarres Awal, 1997).

***Rhynocoris iracundus*** (Poda, 1761)

**Material studied:** Mashhad: 2 specimens, October 2007; Mashhad (Ahmad Abad): 2 specimens, August 2008; Mashhad (Razaviyeh): 3 specimens, July 2008. On ground.

**Note:** In Iran this species has been reported from East Azarbaijan and Khorasan Razavi provinces (Modarres Awal, 1997).

***Rhynocoris punctiventris*** (Herrich-Schaeffer, 1848)

**Material studied:** Mashhad: 1 specimen, September 2007; Mashhad (Torogh): 2 specimens, April 2008. On ground.

***Rhynocoris rubricoxa*** (Bergroth, 1890)

**Material studied:** Mashhad (Bande Golestan): 2 specimens, September 2007. On ground.

**Note:** In Iran this species has been reported from East Azarbaijan province (Modarres Awal, 1997).

**Subfamily Peiratinae Stal, 1859**

***Pirates hybridus*** (Scopoli, 1763)

**Material studied:** Mashhad: 1 specimen, March 2009; 1 specimen, May 2008; Mashhad (Bande Golestan): 2 specimens, June 2008. On ground.

**Note:** In Iran this species has been reported from East Azarbaijan and Khorasan Razavi provinces (Modarres Awal, 1997).

***Ectomocoris ululans*** (Rossi, 1790)

**Material studied:** Mashhad (Bande Golestan): 2 specimens, August 2008; Mashhad (Torogh): 4 specimens, April 2008. On grasses.

**Note:** in Iran this species has been reported from Khorasan Razavi province (Modarres Awal, 1997).

### Subfamily Reduviinae Latreille, 1807

#### *Holotrichius apterus* (Jakovlev, 1877)

**Material studied:** Chenaran (Golmakan): 3 specimens, June 2008. On grasses.

**Note:** in Iran this species has been reported from Khorasan province (Modarres Awal, 1997).

#### *Holotrichius mesoleucus* (Kiritshenko, 1914)\*

**Material studied:** Mashhad (Ahmad Abad): 2 specimens, July 2008. On grasses.

**Note:** The female of this species is introduced for the first time in world and found in this study.

#### *Reduvius fedtschenkianus* (Oshanin, 1871)

**Material studied:** Mashhad: 1 specimen, May 2008; 1 specimen, July 2008; Mashhad (Ahmad Abad): 1 specimen, August 2008; Mashhad (Bande Golestan): 1 specimen, July 2007. On grasses and ground.

**Note:** In Iran this species has been reported from Khorasan Razavi province (Modarres Awal, 1996).

#### *Reduvius jakovleffi* (Reuter, 1892)

**Material studied:** Mashhad: 1 specimen, April 2008; 1 specimen, June 2007; Mashhad (Torogh): 2 specimens, June 2008. On grasses and ground.

**Note:** In Iran this species has been reported from East Azarbaijan and Khorasan Razavi provinces (Modarres Awal, 1996).

#### *Reduvius pallipes* (Klug, 1830)

**Material studied:** Mashhad: 2 specimens, July 2008. Mashhad (Ahmad Abad): 3 specimens, September 2008. On grasses.

**Note:** In Iran this species has been reported from East Azarbaijan and Khorasan Razavi provinces (Modarres Awal, 1996).

#### *Reduvius personatus* (Linnaeus, 1758)

**Material studied:** Mashhad (F.A.C): 2 specimens, March 2007. On ground.

**Note:** In Iran this species has been reported from East Azarbaijan province (Modarres Awal, 1987).

#### *Reduvius testaceus* (Herrich-Schäffer, 1845)

**Material studied:** Chenaran (Golmakan): 1 specimen, March 2008; Mashhad: 2 specimens, April 2007; Mashhad (Torogh): 2 specimens, September 2008. On alfalfa and grasses.

**Note:** In Iran this species has been reported from Ardabil and East Azarbaijan provinces (Baroughi, 1978; Modarres Awal, 1996).

### Subfamily Stenopodainae Amyot and Serville, 1843

#### *Oncocephalus squalidus* (Rossi, 1790)\*

**Material studied:** Mashhad: 2 specimens, July 2007; Mashhad (Ahmad Abad): 1 specimens, July 2008. On grasses.

#### *Oncocephalus impictipes* (Jakovlev, 1885)

**Material studied:** Mashhad: 3 specimens, April 2008.

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