

## ADDITIONAL INFORMATION ABOUT HEMIPTERAN GUILD WHICH STORED IN THE IRAQ NATURAL HISTORY MUSEUM

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**ABSTRACT :** In the current study, there are 13 species diagnosed that belonging to 11 genera and 8 families for unknown specimens stored in Iraq Natural History Museum; these species are: *Deraeocoris punctulatus* (Fallén), *Orthotylus caprai*, *Wagner*, *Beosus maritimus* (Scopoli), *Nysius ericae* (Schilling), *Nysius graminicola* Kolenati, *Horvathiolus superbus* (Pollich), *Engistus exsanguis* Stål, *Eysarcoris inconspicuus* (Herrich-Schaeffer), *Fromundus pygmaeus* Dallas, *Arenocoris intermedius* (Jakovlev), *Liorhyssus hyalinus* (Fabricius) and *Oxycarenus pallens* (Herrich-Schaeffer). *Deraeocoris ruber* (Linnaeus) and *Orthotylus caprai* Wagner. The last three species are a new record of the faunal insect of Iraq; the geographical distribution of the species was given; the specimens are figured, furthermore; the first records in Iraq are supported by a brief description.

**Key words :** Hemiptera, Iraq, museum, new record.

### INTRODUCTION

Hemiptera is one of the largest order of insects (Grimaldi and Engel, 2005; Cameron *et al*, 2006) with at least 82.000 described species (Arnett, 2000); this group is divided into suborder (Homoptera and Heteroptera) (Siwi, 2005); most members of this guild are terrestrial, but many are aquatic (Nieser and Melo, 1997). Their feeding habits vary from phytophagous to predacious, including ectoparasitic and hematophagous (Forero, 2008).

Some of which are serious agricultural and silvicultural pests; on the other hand, predator Hemiptera, used in biological control because of reducing the number of agricultural pests, therefore of these reasons; identification of this group is very important (Linnavuori and Hosseini, 2000).

There are many specimens collected from different regions of Iraq throughout the field surveys, the most of them were kept in the collection without identification; so that the aim of this study to identify the un-known species that belonging to the order of Hemiptera that stored in the Iraq Natural History Museum.

### MATERIALS AND METHODS

The materials were collected from different localities of Iraq during the present and previous field surveys that preserved in the private collections of the authors. The

specimens were collected by searching them on plants, sweeping the grasses and light traps; the photos were taken with a Samsung Galaxy A7, SM-A720F.

For the identification of the families, genera and species were used (Anufriev *et al*, 2001; Steill and Meyer, 2003; Forero, 2008; Linnavuori, 2011; Ghahari *et al*, 2013).

The geographical distribution and taxonomic status of the identifying species and diagnostic characters are given.

### RESULTS AND DISCUSSION

In the present study, there are 13 species recorded that belonging to 11 genera and 8 families; these species are:

#### 1. Family : Miridae

*Deraeocoris ruber* (Linnaeus, 1758) (Fig. 1)

**Synonym :** *Cimex rubra* Linnaeus, 1758

**Body :** Medium-size species, length with 7 mm at average; remarkably wide and glossy. head and pronotum variant from light brown to blackish, scutellum with orange color; cuneus orange in dry specimens and red in alive members; forewings with fine and scattered punctures, black and shiny color; femora banded, tibiaespiny with an un-banded.

**Materials examined :** (2 specimens) Dohuk province, Amadiya district, 25.V.1979.

**Distribution :** Holarctic (Popov, 2013). newly recorded for Iraq.

*Deraeocoris punctulatus* (Fallén, 1807) (Fig. 2)

**Synonym :** *Lygaeus punctulatus* (Fallen, 1807)

**Materials examined :** (2 specimens) Baghdad, Waziriya, 3.VII.1978.

**Distribution :** Iraq (Linnavuori, 1993), Austria, Belarus, Belgium, Cyprus, Estonia, Russia, Poland, Romania, Slovakia, Sweden, Switzerland, Netherlands, Ukraine, Czech Republic, Turkey, Japan, France, Germany, Hungary, Latvia, Lithuania, Nearctic region (Kerzhner and Josifov, 1999); Iran (Linnavuori, 2009); Euro-Siberian (Havaskary *et al*, 2010); Holarctic region (Ghahari and Cherot, 2014).

*Orthotylus caprai* (Wagner, 1955) (Fig. 3)

**Description :** Length 3.0 mm; body and appendages greenish, with whitish and shining hairs. Antennae pale and greenish covered with short black setae. Rostrum elongated and reaching to posterior coxae. Legs covered with very short and pale setae.

**Materials examined :** 6 specimens, Diyala province, (Al Khalis, 2018).

**Distribution :** Sardinia Wagner (1955b) and recorded from Sicily by Carapezza (1997), Croatia, Germany, Switzerland (Simon, 2007); Great Britain (Nau, 2007a; 2007b), Spain (Goula and Mata, 2011) Italy (Carapezza and Cusimano, 2014); Turkey (Çerçi and Koçak, 2016). This species newly recorded for Iraq.

## 2. Family : Lygaeidae

*Beosus maritimus* (Scopoli, 1763) (Fig. 4 A)

**Material examined :** 1 specimen, Diyala province, 5.VII.2017.

**Distribution :** Albania, Austria, Belgium, Bulgaria, Corsica, Crete, Czechoslovakia, England, France, Germany, Greece, Holland, Hungary, Italy, Poland, Portugal, Romania, Russia, Spain, Sweden, Switzerland, Yugoslavia, Wales, Algeria, Canary Is., Morocco, Tunisia, Caucasus, Iraq, Iran, Israel, Syria, Turkestan and Turkey (Slater, 1964).

*Nysius ericae* (Schilling, 1829) (Fig. 4 B)

**Materials examined :** (8 specimens): 3 specimens, Erbil province, Shaqlawa, 3.V.2017, 5 specimens, Baghdad, 11.VI.2017.

**Distribution :** Iraq (El-Haidari, 1974) Holo-Palaeartic, extending to tropical Africa (Linnavuori, 2011).

*Nysius graminicola* (Kolenati, 1845) (Fig. 4 C)



Fig. 1 : *Deraeocoris ruber* A: Dorsal surface, B : Lateral side (Yellow pointer on hind femur)



Fig. 3 : *Orthotylus caprai*.



Fig. 2 : *Deraeocoris punctulatus*.



Fig. 4 : A- *Beosus maritimus* , B- *Nysius ericae*, C- *N. graminicola*.

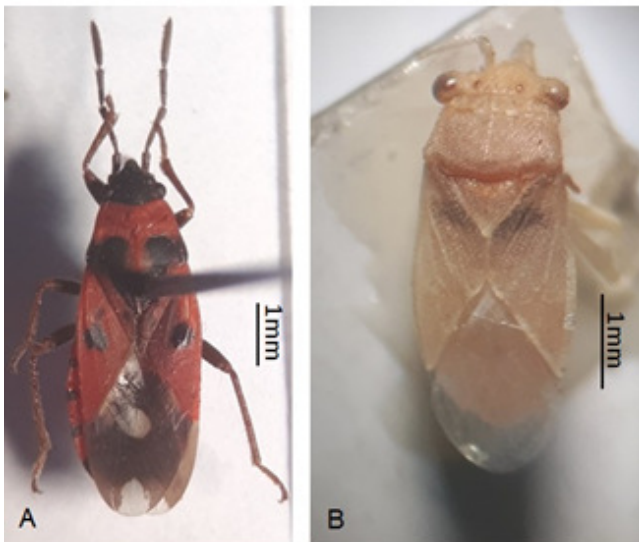


Fig. 5 : A- *Melanocoryphus superbus*, B- *Engistus exsanguis*.



Fig. 6 : A- *Eysarcoris inconspicuus*, B- *Fromundus pygmaeus*.

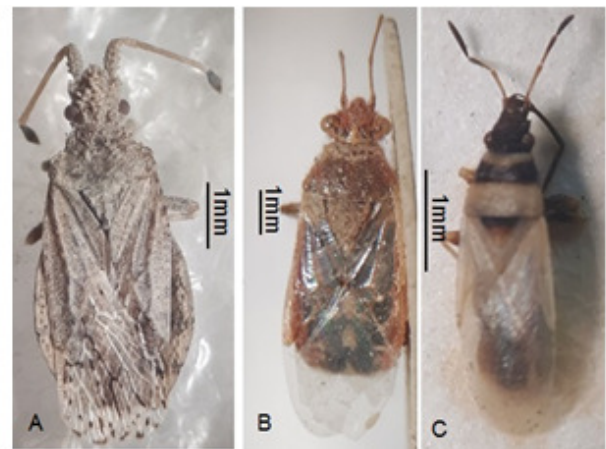


Fig. 7 : A- *Arenocorisin termedius*, B- *Liorhyssus hyalinus*, C- *Oxycarenus pallens*.

**Materials examined** : 2 specimens, Diyala province, Al Khalis, 11.V.2018.

**Distribution** : Iraq (Carapezza, *et al.*, 2017) Belgium, Bulgaria, France, Germany, Italy, Russia, Spain, Egypt, Morocco, Tunisia, Syria, Turkey and Israel (Linnavuori, 2007), Iran (Khalaf, 1959).

*Melanocoryphus superbus* (Pollich, 1781) (Fig. 5A)

**Materials examined** : 14 specimens, Baghdad province, Zaufaraniya district, 7.II.1967

**Distribution** : Iraq (Péricart, 1998) Morocco, Spain, Syria, Algeria and Egypt (Linnavuori, 2007).

### 3. Family : Geocoridae

*Engistus exsanguis* (Stål, 1872) (Fig. 5 B)

**Body length** : 4.0-4.4 mm; color: in general yellowish to pale especially the legs, with exception the thorax

reddish and markedly with blackish color behind the thorax dorsally.

All body appears densely punctate from above. The second antennomere being longer than the first; ocelli reddish and very distinguished.

**Materials examined :** 6 specimens, Diyala province, Nahrawan, 29.V.2018.

**Distribution :** Widely distributed species and known in Europe from Spain, Ukraine, Russia and Greece as well as from North Africa, Middle East and Central Asia (Al-Houty, 2011). Eremian, extending to the Mediterranean and Sudanese regions and western Pakistan, Iran (Khalaf, 1959). Kuwait (Al-Houty, 2011). Newly recorded for Iraq.

#### 4. Family : Pentatomidae (Leach, 1815)

*Eysarcorisin conspicuous* (Herrich-Schaeffer, 1844) (Fig. 6A)

**Materials examined :** 4 specimens, Baghdad, Karradadistrict, 5.VI.2016.

**Distribution :** Pakistan, India, Turkey, Mediterranean region, Central Asia and South Africa (Ullah *et al*, 2017). Iraq (Derwesh, 1965)

#### 5. Family : Cydinidae

*Fromundus pygmaeus* (Dallas, 1851) (Fig. 6 B)

**Synonym :** *Geotomus pugmaeus* Dallas, 1851

**Materials examined :** 6 specimens, Baghdad, Waziriya district, 22.III.1967.

**Distribution :** Iraq (Kaddou, 1967) Australia, Burma, Brunei, Cambodia, China, Fiji, Hawaii, Hong Kong, India, Indonesia, Iran, Israel, Japan, Jordan, Korea, Laos, Malaysia, Maldive Islands, Micronesia, Nepal, New Caledonia, Pakistan, Papua New Guinea, Philippines, Samoa, Saudi Arabia, Singapore, Sri Lanka, Thailand, Vietnam and Yemen (Linnavouri, 2004) (Aukema *et al*, 2006).

#### 6. Family : Coreoidea (Leach, 1815)

*Arenocoris intermedius* (Jakovlev, 1883) (Fig.7 A)

*Arenocoris angustus* (Reuter, 1891)

**Materials examined :** 1 specimen, Baghdad, Karrada, 5.VI.2016.

**Distribution :** Egypt, Algeria, Morocco, Sudan, Canary Islands, Libya, Kuwait, Iran, Israel and Iraq (Linnavouri, 1978; Dolling, 2006; Aukema *et al*, 2006; Aukema *et al*, 2013), UAE Carapezza *et al* (2017)

#### 7. Family : Rhopalidae (Amyot and Serville, 1843)

*Liorhyssus hyalinus* (Fabricius, 1794) (Fig. 7 B)

**Materials examined :** 4 specimens Baghdad, Waziriya 14.XI.1978.

**Distribution :** Iraq Abdul-Rassoul (1976) Tunisia, Morocco, Yemen, Egypt, United Arab Emirates, Turkey, Thailand, Pakistan, Palestine, Israel, Jordan, India (Yuman and China *et al*, 2007).

#### 8. Family: Oxycarenidae

*Oxycarenus pallens* (Herrich-Schaeffer, 1850) (Fig. 7 C)

**Materials examined :** 1 specimen collected from Baqubah, Diyala province 5.VII.1977.

**Distribution :** Iraq Carapezza *et al* (2017); Algeria, Bulgaria, Egypt, former Czechoslovakia, France, Germany, Greece, Hungary, India, Israel, Italy, Morocco, Portugal, Romania, Russia, Spain, Syria, Tunisia, Turkestan and Turkey (Linnavouri, 2007). Iran (Kalaf, 1959).

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