

Contributions to the Reduviidae (Hemiptera: Heteroptera) Fauna of the Thrace Region with a New Record

İlhan Asal¹ Meral Fent^{2*}

¹Baraj District, Selçuk Bey Street, Toki Houses, 18H/6, Altındağ, Ankara, Türkiye.

E-mail: feedback32@hotmail.com

²Trakya University, Faculty of Science, Department of Biology, 22030, Edirne Türkiye.

E-mail: m_fent@hotmail.com; ORCID iD: 0000-0001-5787-6714

*Corresponding author

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ABSTRACT: In this study, which was conducted to determine the Reduviidae fauna of Edirne Province, the material collected between 1992-2014 was evaluated and as a result, 6 genera and 11 species belonging to 4 subfamilies (Harpactorinae Peiratinae Reduviinae Stenopodainae) were identified. Of these species, *Coranus kerzhneri* P.V. Putshkov, 1982 from the Harpactorinae subfamily is the first record for the Thrace Region.

KEYWORDS: Reduviidae, *Coranus kerzhneri*, fauna, first record, Turkish Thrace, Türkiye.

INTRODUCTION

infraorder.

Reduviidae is a family of Heteroptera The Reduviidae family is one of the most (Hemiptera) suborder, some of which are populous families of Heteroptera, with bloodsucking ectoparasite species but over 6800 species belonging to the majority of which are predatory approximately 930 genera worldwide. It species, belonging to the Cimicomorpha is represented in the Palearctic Region

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with 808 species belonging to 12 sub-families and 145 genera, and in Türkiye with 65 species belonging to 6 sub-families and 20 genera (Putshkov & Moullet, 2010; Çerçi et al., 2024).

The first studies on the Reduviidae fauna in Türkiye began towards the end of the 19th century with foreign researchers and these studies were first presented as a list by Hoberlandt (1956).

The first comprehensive list of Reduviidae was presented by Önder (1980) in his study titled “The first Reduviidae list of Turkey” and 54 species were given in this study.

Dursun & Salur (2013) reported this number as 57 with a new record in their check-list of the Reduviidae family in Türkiye.

Finally, Çerçi et al. (2024) updated this number to 65. Six Reduviidae species (*Vachiria natolica* Stål, 1859, *Oncocephalus ocularis* Horváth, 1898, *Oncocephalus biguttula* Horváth, 1901, *Empicoris mediterraneus* Hoberlandt, 1956, *Rhynocoris hierapolitanus* Dispons, 1964 and *Reduvius nigrinus* Moullet, 2020) were described from Türkiye. Of these species, *O. biguttula*, *R. hierapolitanus* and *R. nigrinus* are endemic to Anatolia (Dursun & Fent, 2017, Moullet, 2020).

Table 1. Studied localities in Thrace Region, altitudes, coordinates and sampling dates

Loc. No	Locality	Altitude	Coordinate	Sampling date
1	Edirne (Süloğlu-Tatarlar village)	41°46'8N 26°54'36E	236m	30.08.1992
2	Edirne (Keşan-Center)	40°51'21N 26°37'49E	91m	10.06.2002 07.07.2013
3	Edirne (Uzunköprü-Center)	41°15'58N 26°41'19E	32m	08.07.2009 20.05.2010
4	Edirne (Center)	41°40'33N 26°33'31E	41m	26.12.2009 30.05.2013 06.06.2013 25.06.2013 12.09.2013 25.09.2013 28.09.2013 13.10.2013 11.07.2014
5	Edirne (Center-Balkan Campus)	41°38'59N 26°37'24E	41 m	20.05.2010
6	Edirne (İpsala-Sultanköy)	41°59'31N 26°27'9E	74m	04.07.2010
7	Edirne (Lalapaşa-Hamzabeyli)	41°57'54N 26°38'38E	369 m	02.07.2013
8	Edirne (Lalapaşa-Hacılar village)	41°55'60N 26°46'60E	401m	02.07.2013
9	Edirne (Center-Uzgaç)	41°47'27N 26°26'14E	159m	04.07.2013
10	Edirne (Center-İskenderköy)	41°37'48N 26°40'23E	34m	15.10.2013
11	Edirne (Center-Bosnaköy)	41°37'35N 26°36'12E	41m	29.05.2014
12	Edirne (İpsala-Korucuköy)	40°54'1N 26°29'50E	75m	01.06.2014
13	Edirne (Uzunköprü-Çöpköy)	41°13'8N 26°49'18E	87m	03.07.2014
14	Edirne (Uzunköprü-Kırcasalih)	41°23'33N 26°48'11E	98m	03.07.2014
15	Edirne (İpsala-Pazardere)	40°58'40N 26°34'52E	125m	13.08.2014
16	Edirne (Keşan-Karahisar)	40°45'0N 26°30'0E	21m	26.08.2014

The studies carried out on the family Reduviidae in the Thrace Region so far belong to Reuter (1891), Horváth (1918), Fahringer (1922), Hoberlandt (1956), Seidenstücker (1958), Wagner (1966), Önder (1980), Önder et al. (1981, 1984), Davidová-Vilimová & Kment (2003), Yıldırım et al. (2010), Putshkov & Moulet (2010), Dursun & Salur (2013), Fent (2011) and Çerçi & Koçak (2016) and as a result of all these studies, 19 species belonging to 11 genera have been recorded.

MATERIALS AND METHODS

The research material was obtained from short herbaceous plants with the help of insect traps, from trees and shrubs with the help of Japanese umbrellas. In addition to these methods, light traps were used for night-active species. Putshkov (1994), Putshkov & Moulet (2010) were used for species identification. This study aims to contribute to the Reduviidae fauna of the Thrace Region.

Family REDUVIIDAE Latreille, 1807

Subfamily HARPACTORINAE Amyot & Serville, 1843

Tribus: HARPACTORINI Amyot & Serville, 1843

Genus RHYNOCORIS Hahn, 1833

Rhynocoris (Rhynocoris) punctiventris (Herrich-Schaeffer, 1846)

Material examined: Edirne: İpsala – Sultanköy, 04.07.2010, 1♀; Keşan – Karahisar, 26.08.2014, 1♀.

Rhynocoris (Rhynocoris) iracundus (Poda, 1761)

Material examined: Edirne: Lalapaşa – Hacılar village, 02.07.2013, 1♀; Center-Uzgaç village, 04.07.2013, 6♀♀, 1♂; İpsala–Korucuköy, 01.06.2014, 1♀, 1♂.

Genus CORANUS Curtis, 1833

Coranus griseus (Rossi, 1790)

Material examined: Edirne: Center, 09.11.2005, 1♀; Balkan Campus, 20.05.2010, 2♀♀; Uzgaç village, 04.07.2013, 1♂; İskenderköy, 15.10.2013, 1♂; Uzunköprü – Center, 08.07.2009, 1♂; Lalapaşa–Hamzabeyli, 02.07.2013, 3♀♀.

Coranus kerzhneri P. V. Putshkov, 1982

Material examined: Edirne: Süloğlu – Tatarlar village 30.08.1992, 1♂; Center, 06.06.2013, 1♀, 2♂♂; İskenderköy, 15.10.2013, 3♀♀; Lalapaşa – Hamzabeyli, 02.07.2013, 1♀, 1♂.

Distribution in Türkiye: European Türkiye: This species was recorded for the first time in this study from Turkish Thrace. **Asian Türkiye:** Amasya, Bursa, Çanakkale (Biga, Bozlar), Erzurum, Manisa, Muğla, Tunceli (Putshkov, 1994; Yıldırım et al., 2010).

Distribution in Palearctic Region: Europe: Albania, Austria, Belgium, Bosnia Hercegovina, Bulgaria, Byelorussia, Corsica, Crete, Croatia, Czech Republic, European Kazakhstan, France, Greece, Hungary, Italy, Moldavia, Netherlands, Romania, Russia (ST), Sardinia, Sicily, Slovakia, Slovenia, Spain, Ukraine. **North Africa:** Canary Islands? Egypt? **Asia:** Azerbaijan, Asian Türkiye (Aukema, 2018).

Coranus tuberculifer Reuter, 1881

Material examined: Edirne: Center, 11.07.2014, 1♀; Balkan Campus, 20.05.2010, 2♀♀, 1♂; Lalapaşa-Tatarlar village, 30.08.1992, 1♂; Uzunköprü-Çöpköy, 03.07.2014, 1♀; Kircasalih, 03.07.2014, 1♂; İpsala-Pazardere, 13.08.2014, 1♂.

Genus NAGUSTA Stål, 1859**Nagusta goadelii (Kolenati, 1857)**

Material examined: Edirne: Center, 26.12.2009, 2 ♂♂.

Subfamily PEIRATINAE Amyot & Serville, 1843**Genus PEIRATES Serville, 1831****Peirates hybridus (Scopoli, 1763)**

Material examined: Edirne: Center, 25.06.2013, 2♀♀, 1♂.

Subfamily REDUVIINAE Latreille, 1805**Genus REDUVIUS Fabricius, 1775****Reduvius personatus (Linnaeus, 1758)**

Material examined: Edirne: Keşan-Center, 07.07.2013, 1♂.

Reduvius pallipes Klug, 1830

Material examined: Edirne: Keşan-Center, 10.06.2002 1♀.

Subfamily STENOPODAINAE Amyot & Serville, 1843**Genus ONCOCEPHALUS Klug, 1830****Oncocephalus acutangulus Reuter, 1882**

Material examined: Edirne-Center (41m): 30.05.2013, 1♂.

Oncocephalus squalidus (Rossi, 1790)

Material examined: Edirne: Center, 30.05.2013, 1♀; 25.06.2013, 2♀♀ 1♂; 12.09.2013, 1♀; 25.09.2013, 6♀♀, 2♂♂; 28.09.2013, 16♀♀, 21♂♂; 13.10.2013, 3♀♀, 1♂.

RESULT AND DISCUSSION

In this study conducted on the Reduviidae family in Edirne Province of the Thrace Region, a total of 6 genera and 11 species were identified, including 3 genera and 6 species belonging to the Harpactorinae subfamily, 1 genus and 1 species belonging to the Peiratinae subfamily, 1 genus and

2 species belonging to the Reduviinae subfamily, and 1 genus and 2 species belonging to the Stenopodainae subfamily.

Coranus kerzhneri, recorded for the first time for the Thracian fauna, was detected in a total of 4 localities in Edirne. This species, previously known from a few

localities in Anatolia, has been recorded from many European countries, especially Edirne's neighbors Bulgaria and Greece, and in Asia only from Anatolia and Azerbaijan. Its presence in North Africa is uncertain and needs to be confirmed.

Coranus griseus and *C. tuberculifer* previously recorded in Tekirdağ and İstanbul in the Thrace Region, are widespread in Anatolia and in Palearctic Region. They generally live on the soil, in plant rosettes or under stones, sandy areas, and steppe biotopes in arid habitats (Wachman et al., 2006). During this study, they were also detected on the soil among plant roots, in rosettes of the *Verbascum densiflorum* plant, and on weeds. Their brown, grayish brown colors allow them to be well hidden in the soil.

Oncocephalus acutangulus has been identified in previous studies, in Edirne in Thrace Region and in Adana, Bursa and Hatay in Anatolia (Puton, 1892; Puton & Noualhier, 1895; Hoberlandt, 1956; Önder, 1980; Önder et al., 1981, 1984). It is also not very common in its Palearctic distribution (Aukema, 2018). It has also been identified only in Edirne-Center in the study area. *O. squalidus* is a more common species both in Türkiye and in the Palearctic distribution (Önder et al., 2006; Aukema, 2018). In this study, many specimens of this species, which is active at night and is attracted to light, were caught with light traps at different dates in Edirne-Center.

Other species identified during the study from the Reduviidae family are *Rhynocoris iracundus*, *R. punctiventris*, *Nagusta goadelii*, *Peirates hybridus*, *Reduvius pallipes*, *R. personatus*, although they were identified in a small number of

localities and in small numbers during the study, they stand out as fairly common species both in their known distribution in Türkiye and in their Palearctic distribution. *R. iracundus* and *R. punctiventris* are quite predatory hunters and are known to hunt various insect larvae and adults, and even insects generally larger than themselves (Wachman et al., 2006). In this study, *R. iracundus* was encountered feeding on *Carpocoris* sp. from the Pentatomidae (Heteroptera) family. *Peirates hybridus*, which is active at night, hides in the soil among plant roots or under rocks during the day (Wachman et al., 2006). During the study, it was found in the soil among plant roots during the day. *Reduvius personatus* has a very interesting behavior and lives in very different habitats. It can be found in human living spaces, in dry rural habitats, in trees, under loose tree bark, and in abandoned bird nests. They are active at night and these insects, attracted by light, enter houses through open windows (Wachman et al., 2006). During the research, one of the specimens was found inside the house at night.

When the data obtained as a result of the research were evaluated, the number of known species belonging to the Reduviidae fauna of the Thrace Region increased to 21 with the addition of one new record. This number constitutes approximately 1/3 of the Reduviidae fauna of Türkiye.

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