# **SHORT COMMUNICATION**

KISA ARAŞTIRMA

# First record of *Limnoporus rufoscutellatus* (Hemiptera: Gerridae) from Turkey, with some ecological notes

Limnoporus rufoscutellatus (Hemiptera: Gerridae)'un Türkiye'den ilk kaydı ve bazı ekolojik notlar

# Esat Tarık Topkara\* • M. Ruşen Ustaoğlu • Süleyman Balık

Ege University, Faculty of Fisheries, TR-35100 Bomova, Izmir-Turkey \*Corresponding author: esattopkara@gmail.com

Özet: Limnoporus rufoscutellatus (Latreille, 1807) Ağustos 2006'da Türkiye'nin Doğu Karadeniz Bölgesi'ndeki bir dağ gölü olan Kuzeyaksu Gölü'nden iki erkek birey ilk kez kaydedilmiştir ve lokaliteye ait bazı ekolojik özellikler hakkında bilgi verilmiştir.

Anahtar kelimeler: Doğu Karadeniz Bölgesi, Kuzeyaksu Gölü, Hemiptera, Gerridae, Limnoporus rufoscutellatus, Türkiye.

Abstract: Limnoporus rufoscutellatus (Latreille, 1807) is reported for the first time from Turkey. Two male specimens were collected from the Lake Kuzeyaksu, where is a mountain lake located in the Eastern Black Sea Region of Turkey, in early August 2006. Some ecological features of the lake were given as well.

Keywords: Eastern Black Sea Region, Lake Kuzeyaksu, Hemiptera, Gerridae, Limnoporus rufoscutellatus, Turkey.

### INTRODUCTION

Water striders (Gerridae) live on the water surface of ponds, marshes and slow-flowing streams (Savage, 1989). As Andersen (1995), the family Gerridae was represented by only three genera (*Limnoporus* Stål, 1868; *Aquarius* Schellenberg, 1800 and *Gerris* Fabricius, 1794) for Europe.

According to the review of the Turkish water bugs (Fent et al., 2011; Dursun, 2012), the Turkish water striders fauna includes 10 confirmed taxa Aquarius ventralis (Fieber, 1860), A. paludum paludum (Fabricius, 1794), Gerris (Gerris) argentatus Schummel, 1832; G. (G.) caucasicus Kanyukova, 1982; G. (G.) costae fieberi Stichel, 1938; G. (G.) lacustris (L., 1758); G. (G.) maculatus Tamanini, 1946; G. (G.) kabaishanus Linnavouri, 1998 and G. (G.) thoracicus Schummel, 1832, Gerris (Gerriselloides) asper (Fieber, 1860). Fent et al. (2011) also listed an additional species, Limnoporus rufoscutellatus (Latreille, 1807), referring to the preliminary version of this manuscript. Here we present the details considering the record.

#### **MATERIALS AND METHOD**

The material used in this study was collected mainly on 4th August 2006. The samples were collected by ladle and net with a mesh diameter of 0.5 mm from the water surface of the Kuzeyaksu mountain lake. The specimens were killed with ethylacetate solution and put into small bottles. The water striders were identified using the keys by Poisson (1957),

Southwood and Leston (1959), Savage (1989), Andersen and Spence (1992) and Kanyukova (2006). The materials are stored in the collection of Ege University, Faculty of Fisheries Museum (ESFM), Izmir, Turkey.

# **RESULTS AND DISCUSSION**

Infraorder: Gerromorpha Popov, 1971

Family: Gerridae Leach, 1815

Limnoporus rufoscutellatus (Latreille, 1807)

Material examined and ecological notes: TURKEY: Rize Province: 2  $\circlearrowleft$ , 04/08/2006, Lake Kuzeyaksu (Kazançukuru plateau-İkizdere-Rize) (40°39'19"N 40°50'57"E), leg. Esat T. Topkara, ESFM-INS/2006-040 (Figure 1,2); alt. 3070 m, water pH 7.65, conductivy 37.1  $\mu$ S<sub>25°C</sub>, water temperature 17.9°C.

Distribution: Palaearctic Region: Europe: Austria, Belarus, Belgium, Britain, Bulgaria, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Moldova, Norway, Poland, Romania, Slovenia, Sweden, Switzerland, the Netherlands, Ukraine Asia: Armenia, Azerbaijan, Central Asia, Georgia, Japan, Northern China, Mongolia, Russian Far East, Siberia Nearctic Region: Alaska, North-western Canada (Andersen 1995; Kanyukova 1982, 2006; Fent et al., 2011).

Ecology: According to Savage (1989), this species can be found in rivers, lakes ponds or pools. Nummelin et al. (1988) reported that, *Limnoporus rufoscutellatus* occurs in ditches, temporary and permanent waters, ponds and lakes. Similarly, we found this species among the aquatic macrophytes of a small mountain lake. Poisson (1957) indicates that, the species has less crowded populations than that of *Gerris* species. We observed three specimens at the sampling site but could only collect two of them, in the field.

After reporting this new record, the exact number of the taxa belonging to Gerridae reported from Turkey so far has reached to 11.

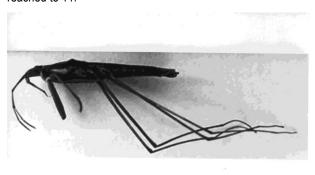


Figure 1. Lateral view of Limnoporus rufoscutellatus (3)

## REFERENCES

Andersen, N.M., 1995. Gerromorpha. Catalogue of the Heteroptera of the Palearctic Region. Vol.1: Enicocephalomorpha, Dipsocoromorpha, Nepomorpha, Gerromorpha and Leptopodomorpha, B. Aukema, and C. Rieger (eds.), *The Netherlands Entomological Society*, Amsterdam, pp 77–114.

Andersen, N.M., Spence, J.R., 1992. Classification and phylogeny of the Holarctic water strider genus *Limnoporus* Stål (Hemiptera, Gerridae). *Canadian Journal of Zoology*, 70(4): 753-785. doi: 10.1139/z92-110

Dursun, A., 2012. Additional records of Gerromorpha (Hemiptera: Heteroptera) and redescription of *Rhagovelia nigricans nigricans* (Burmeister, 1835) from Anatolia (Turkey). *Turkish Journal of Zoology*, 36(5): 652-661.

Fent, M., Kment, P., Çamur Elipek, B., Kırgız, T., 2011. Annotated catalogue of Enicocephalomorpha, Dipsocoromorpha, Nepomorpha, Gerromorpha and Leptopodomorpha (Hemiptera: Heteroptera) of Turkey with new records. Zootaxa, 2856: 1-84.



Figure 2. Ventral view of the apical abdominal segments of Limnoporus rufoscutellatus (♂)

#### **ACKNOWLEDGEMENTS**

We thank to Technological and Scientific Research Council of Turkey TÜBİTAK (ÇAYDAG-104Y183) for financial support of this work. The authors wish to thank Dr. Murat ÖZBEK (Ege University, Faculty of Fisheries) for his critical reading the MS and assistance during the field study. We also wish to thank Dr. Berend Aukema for identification of Gerridae specimens and to Dr. Petr Kment for his valuable comments.

Kanyukova, E.V., 1982, Water-striders (Heteroptera, Gerridae) of the fauna of the USSR, Trudy Zoologicheskogo Instituta, Akademiya Nauk SSR, Leningrad, 105: 62-93 (in Russian).

Kanyukova, E.V., 2006. Aquatic and semiaquatic bugs (Heteroptera: Nepomorpha, Gerromorpha) of the fauna of Russia and neigbouring countries, *Dalnauka*. Vladivostok (in Russian).

Nummelin, M., Spence, J.R., Vespäläinen, K., 1988. Infection of gerrid eggs (Heteroptera:Gerridae) by the parasitoid *Tiphodytes gerriphagus* Marchal (Hymenoptera: Scelionidae) in Finland. *Annales Zoologici Fennici*, 25: 299-302

Poisson, R. 1957. Faune De France 61 Heteropteres Aquatiques. Paul Lechevalier (Ed.), 12 rue de Tournon (VIe), Paris.

Savage, A.A. 1989. Adults of the British Aquatic Hemiptera Heteroptera. A Key With Ecological Notes. Freshwater Biological Association, Scientific Publication No. 50., Ambleside, Cumbria, 173 p.

Southwood, T.R.E., Leston, D. 1959. Land and Water Bugs of the British Isles. Frederick Warne and Co. Ltd. London and New York.