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Sigara (Halicorixa) stagnalis stagnalis (Leach, 1817), A New Record for the Corixidae (Insecta, Hemiptera) Fauna of Turkey

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ABSTRACT

The corixid species, *Sigara (Halicorixa) stagnalis stagnalis* (Leach, 1817) was reported for the first time from Turkish brackish waters and some physico-chemical parameters of the living area were given.

Key words: Corixidae, Brackish Water, *Sigara (Halicorixa) stagnalis stagnalis*, Gediz River, Turkey.

INTRODUCTION

The family Corixidae inhabit in ponds, pools, lakes, stream, temporary waters. Some species are euryhaline, and they may live in salt-marsh and dykes near the sea. Most corixids are omnivorous, with a wide range of food preferences. Many species are largely phytophagous, many are carnivorous, and feed on the bottom microfauna as well as on zooplankton (Brooks and Kelton, 1967; Popham et al., 1984), and some big species attack Culicides and Chironomides (Poisson, 1957; Southwood and Leston, 1959). According to Hungerford (1919), some corixid species are algal and detritus feeders.

Poisson (1957) mentioned the existence of *Sigara (Halicorixa) stagnalis stagnalis* in the supralittoral zones of the brackish waters placed in Northern Africa and France.

To date, 41 species and subspecies were reported as the members of the family Corixidae from Turkey (Hoberlandt, 1948; Seidenstücker, 1957, 1958; Linnavouri, 1965; Wagner, 1966; Önder and Adıgüzel, 1979; Özesmi and Önder, 1988; Jansson, 1995; Kıyak and Özsaraç, 2001; Önder et al., 1981, 1984, 2006; Kment et al., 2005; Kıyak et al., 2004, 2006, 2007).

MATERIAL AND METHODS

The specimens were collected in February 1998 from a brackish water channel connected with Gediz river (near Maltepe village), in the Izmir province of Turkey. The samples were collected by ladle and net with a mesh diameter of 0.5 mm. The

water boatmens were killed within 70% alcohol solution. The male genital capsules were dissected under the stereomicroscope and examined. The materials are stored in Ege University, Faculty of Fisheries Museum (ESFM), Izmir.

RESULTS AND DISCUSSION

Sigara stagnalis stagnalis (Leach, 1817)

Materials Examined: Gediz River, near Maltepe village (Menemen-Izmir-Turkey), 4 males, 25.II.1998, (38°35'37"N 26°50'45"E), Leg. Esat T. Topkara, ESFM-INS/1998-001. Some of the physico-chemical characteristics of sampling station were as follows: temperature, 16.0°C; pH, 7.49; salinity, 10.24‰; dissolved oxygen, 6.0 mg/l.

Distribution: Algeria, Austria, Belgium, Britain, Czech Republic, Denmark, France, Germany, Ireland, Italy, Morocco, Poland, Spain, Sweden, The Netherlands, Tunisia (Poisson, 1957; Southwood and Leston, 1959; Savage, 1989; Jansson, 1995).

In this study *Sigara (H.) stagnalis stagnalis* (Leach, 1817), which is known in the Central and Western Europe and North Africa, is recorded for the first time in Aegean region of Turkey. *S. (H.) stagnalis pontica* Jaczewski, 1961, the other subspecies, is known from the western and northern coasts of the Black Sea (Kerzhner and Yachevskii, 1964).

Poisson (1957) mentioned the existence of *S. (H.) stagnalis stagnalis* in the supralittoral zones of the brackish waters placed in Northern Africa and France.

Sigara (H.) stagnalis stagnalis is a brackish water species and the occurrence of this species in the saline lakes or ponds may be possible (Macan, 1954; Poisson, 1957; Southwood and Leston, 1959; Rabitsch, 2004; Savage, 1989, 1990a,b). The salinity of the sampling station is also measured (10.24‰).

S. (H.) selecta (Fieber, 1848), *S. (H.) mayri* (Fieber, 1860) and *S. (H.) stagnalis* are very similar species. But, the palae of male of *S. (H.) selecta* comparatively narrow, proximal part of its dorsal margin is almost paralel to ventral margin. The proximal part of dorsal margin of palae of males of *S. (H.) mayri* and *S. (H.) stagnalis* are strongly curved. In addition, palae of male of *S. (H.) stagnalis* is semi-ovoid and proximal part of its dorsal margin forming a less convex arc, although palae of male of *S. (H.) mayri* is half-heart-shaped and proximal part of its dorsal margin forming a strongly convex arc. *S. (H.) stagnalis* has two subspecies. One of these is *S. (H.) stagnalis stagnalis* and the other is *S. (H.) stagnalis pontica*, which differs from *S. (H.) stagnalis stagnalis* in the narrower palae of the male (Kerzhner and Yachevskii, 1964) (Fig. 1a, b, c).

According to Krebs (1982), *S. (H.) selecta* and *S. (H.) stagnalis stagnalis* live in water which have almost the same ecological parameters. Although *S. (H.) stagnalis stagnalis* is a brackish water species, *S. (H.) selecta* is found mostly in salt-water (Southwood and Leston, 1959).

The authors think that further studies on the subject will result in finding many new records of Corixid and other aquatic insects for Turkish fauna.

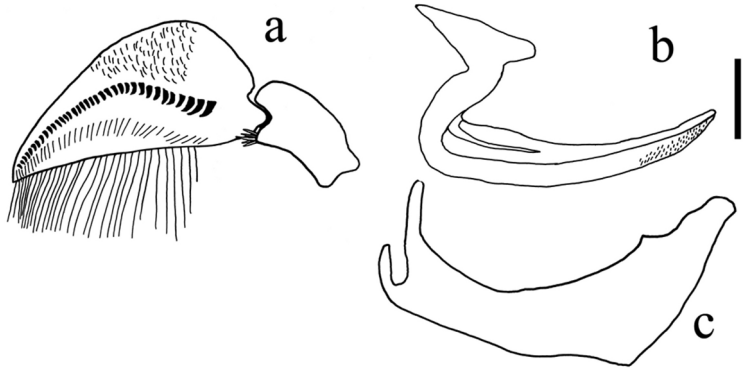

Fig. 1. Male of *Sigara (Halicorixa) stagnalis stagnalis*: a) Pala, b) Left paramere, c) Right paramere, (scale: 250 µm).

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