

# New records of black flies (Diptera, Simuliidae) for the Turkish fauna

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**Abstract.** We here record eight black fly (Simuliidae) species for the first time in Turkey. Six of them, *Simulium (Wilhelmia) equinum* (Linnaeus, 1758), *S. (Nevermannia) costatum* Friederichs, 1920, *S. (Eusimulium) angustipes* Edwards, 1915, *S. (Boophthora) erythrocephalum* (De Geer, 1776), *S. (Simulium) noelleri* Friederichs, 1920 and *S. (Simulium) fontanum* Terteryan, 1952, are from the tribe Simuliini. The other two are *Prosimulium (Prosimulium) rufipes* (Meigen, 1830) and *P. (Prosimulium) tomosvaryi* (Enderlein, 1921), from the Prosimuliini. Brief descriptions of larval and pupal stages of these species are given.

**Kurzfassung.** Wir haben acht Arten von Kriebelmücken (Simuliidae) erstmals für die Türkei nachgewiesen. Davon gehören sechs, nämlich *Simulium (Wilhelmia) equinum* (Linnaeus, 1758), *S. (Nevermannia) costatum* Friederichs, 1920, *S. (Eusimulium) angustipes* Edwards, 1915, *S. (Boophthora) erythrocephalum* (De Geer, 1776), *S. (Simulium) noelleri* Friederichs, 1920 und *S. (Simulium) fontanum* Terteryan, 1952, zum Tribus Simuliini. Die anderen beiden Arten, nämlich *Prosimulium (Prosimulium) rufipes* (Meigen, 1830) und *P. (Prosimulium) tomosvaryi* (Enderlein, 1921), gehören zu den Prosimuliini. Es werden kurze Beschreibungen der Arten mit ihren Larval- und Puppenstadien gegeben.

**Key words.** Simuliidae, black flies, Turkey, Anatolia, fauna, taxonomy, new records.

## Introduction

Black flies are one of the most widespread groups of insects that occur in running waters. The habitats of their larvae and pupae range from spring waters down to river estuaries, and they play an important role in running water ecosystems. Females of most species are blood-suckers, such as *Simulium erythrocephalum* which is discussed later in this paper. They may be severe pests and may cause great economic losses to farmers by attacking their livestock (CROSSKEY 1990).

Within the Palaearctic region, Turkey is one of the most neglected countries in terms of its Simuliidae fauna. The first paper dealing with Turkish Simuliidae fauna was published by JEDLICKA (1975), which included only one species from two different sites in western Anatolia. KAZANCI & CLERGUE-GAZEAU (1990) recorded 22 species from 21 sites, mostly in the western and central parts of the country. In that study, however, there is no indication of which species was found at which site. For this reason, it is not possible to interpret the geographic distribution of simuliids in Turkey.

The checklist of World Simuliidae prepared by CROSSKEY & HOWARD (1997) and updated by CROSSKEY (1999, 2002a) and CROSSKEY & HOWARD (2004) lists 24 species from Turkey, including the species recorded by JEDLICKA (1975) and KAZANCI & CLERGUE-GAZEAU