

New records of *Leucorrhinia pectoralis* in Turkey (Odonata: Libellulidae)

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Abstract

In June 2008, a male *Leucorrhinia pectoralis* was observed perched on a waterside plant beside a canal, in an area known as Koca Çalış, situated on the Mediterranean coast near Fethiye, Muğla province, Turkey. In the same month, another male *L. pectoralis* was photographed at Köyceğiz, 80 km to the west of Fethiye. These two sightings extend the previously known range of *L. pectoralis* 200 km further south to the Mediterranean coast.

Zusammenfassung

Neue Nachweise von *Leucorrhinia pectoralis* in der Türkei (Odonata: Libellulidae) — Im Juni 2008 wurde ein Männchen von *L. pectoralis* bei Koca Çalış, an der türkischen Mittelmeerküste bei Fethiye, Provinz Muğla beobachtet. Im selben Monat gelang der Nachweis eines weiteren Männchens der Art bei Köyceğiz, 80 km westlich von Fethiye. Diese beiden Nachweise erweitern das bislang bekannte Verbreitungsgebiet der Art um 200 km nach Süden bis an die Küste des Mittelmeers.

Introduction

Leucorrhinia pectoralis is a Euro-Siberian species that can be found further south than other members of the genus. Its European range extends from southern Scandinavia to the Pyrenees, northern Italy and the Balkans in the south. Further to the records from the Balkans, other Palaearctic populations are known considerably further to the south in the Anatolian part of Turkey (SAHLÉN 2006). The distribution map in SAHLÉN (2006) only covers western Turkey and shows two localities, one at Bolu and the other around Isparta.

Populations of *L. pectoralis* in Turkey are generally uncommon and, where they do occur, are usually local and small. The species was hitherto only known from Artvin, Kars and Erzurum in north-eastern Turkey, from Ayfon, Isparta and Konya in the lake area of the south-west, and from Bolu in the north-west (KALKMAN et al. 2004; VAN PELT 2004; KALKMAN & VAN PELT 2006a, b).

In this study new records of *L. pectoralis* in Turkey are presented that extend its known range 200 km to the south of its hitherto southernmost recording site at Eğirdir near Isparta, in the central Anatolian lake district. *Leucorrhinia pectoralis* has reached the shores of the Mediterranean Sea.

Observations

On 25 June 2008, whilst leading a dragonfly tour of south-west Turkey in Muğla province, we were investigating a drainage canal at Koca Çalış near Fethiye (GPS: UTM 35S; E 0686373; N 4062003; sea level). A tour member spotted a male *Leucorrhinia pectoralis* perched on top of a plant at the water's edge. It made several flights from its perch over the canal, returning each time to the same point. Voucher photographs were taken by several members of the group (Fig. 1). The Koca Çalış site was a drainage canal, 4-5 m wide and approximately 1 m deep, running parallel with the Mediterranean Sea, some 400 metres away, for a distance of about 1.5 km before turning and entering the sea. The main aquatic vegetation was *Nymphaea alba*, *Potamogeton crispus* and *Typha angustifolia*. The banks of the canal had recently been cleared of shrubby plants, making access easier. The water was clear and showed no sign of pollution.



Figure 1: Perched male *Leucorrhinia pectoralis*. Koca Çalış, Mediterranean coast near Fethiye, Muğla province, Turkey, 25-vi-2008. — Abbildung 1: Männchen von *Leucorrhinia pectoralis* auf Sitzwarte. Koca Çalış, Mittelmeerküste bei Fethiye, Provinz Muğla, Türkei, 25.06.2008. Photo: Roy Woodward

The second record was taken by Ilker Erkan on 13 June 2008 at Köyceğiz (GPS: UTM 35S; E 0648093; N 4091758; sea level), approximately 80 km west of Fethiye and 33 km further to the north. I received an e-mail in July 2008, informing me of the record together with a photograph of the observed individual. It was a male perched on a lily leaf close to the side of a pond. The Köyceğiz site was situated within a palm nursery with several quite large man-made ponds containing specimen water lilies. Alongside the nursery there was a drainage ditch with *Nymphaea alba* as dominant aquatic plant running into Lake Köyceğiz some 300 m away.

Discussion

The first record of *Leucorrhinia pectoralis* for Turkey was given by RIS (1919: 1191) who lists one specimen collected near Akşehir in Konya province, where the species was found again between 30 May and 3 June 1928 (SCHMIDT 1954: 77). A female, collected on 5 June 1962 at a second recording site – Eğridir near Isparta – was presented by ST. QUENTIN (1964). Based on these three records, *L. pectoralis* was listed as part of the Turkish dragonfly fauna in a review article by DUMONT (1977) and later in a book on Turkish dragonflies by DEMIRSOY (1982). DUMONT (1977) regarded the species as «apparently restricted to the great West-Anatolian freshwater lakes».

Further records by VAN PELT (2004) showed it recorded in 1993 at four locations around Erzurum in eastern central Anatolia, in 1997 at Artvin in north-eastern Anatolia close to the Black Sea, and in 2001 at Afyon in western central Anatolia. VAN PELT & KALKMAN (2004) state that it «mainly has been found in North East Turkey and in western Turkey near the great lakes, but records from the area in between are lacking». KALKMAN et al (2004) list *L. pectoralis* at Afyon, and KALKMAN & VAN PELT (2006b) recorded it in 2003 in north-eastern Turkey in the Artvin and Kars provinces – at the latter site a strong population of estimated >1000 individuals – as well as in Bolu in the north-west.

On the other hand, during six years of dragonfly research in Muğla province, where the new records came from – with 22 species of Odonata recorded at Koca Çalış and 47 species in the Köyceğiz area – I had never recorded *L. pectoralis* previously (HOPE 2007). The scarcity of the species in Turkey is supported by SAHLÉN (2006). The currently known range of *L. pectoralis* in the Mediterranean is mapped in the atlas by BOUDOT et al. (2009), where the two records presented in this study have already been included.

V.J. Kalkman (pers. comm.) supposes that the Mediterranean coast is too hot to have suitable habitats for *L. pectoralis* and the two males may be just vagrants from the marshes at Eğridir near Isparta. The question of whether the two observed individuals were in fact just migrating or whether they pertain to a hitherto undetected or newly colonised reproduction site in the region must remain unsolved for the time being.

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