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First record of *Onychogomphus assimilis* (Schneider, 1845) in northwestern Turkey

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Abstract

In 2011 a male *Onychogomphus assimilis* was recorded at the river Devrek in the province of Zonguldak in northwestern Turkey. Previously, the species in Turkey had only been found in rivers close to the Mediterranean Sea and some eastern provinces. The finding of *O. assimilis* indicates a population in the river systems of the Pontic Mountains in northern Turkey.

Zusammenfassung

Erstfund von *Onychogomphus assimilis* (Schneider, 1845) in der Nordwest-Türkei – In 2011 gelang der Zufallsfund eines Männchens von *Onychogomphus assimilis* an dem Fluss Devrek in der Provinz Zonguldak im Nordwesten der Türkei. Bisher ist die Art in der Türkei nur von der Mittelmeerküste und dem Nordosten bekannt. Der Fund wird als Indiz für ein Vorkommen in Fließgewässern im Pontischen Gebirge im Norden der Türkei gewertet.

Introduction

Onychogomphus assimilis is a West Asiatic species confined to cold running water often found at the foot of mountainous, wooded areas (Dumont et al. 1992; Kalkman 2006b; Boudot et al. 2009). Relatively little information is available on the ecology and biology of this species. The distribution of *O. assimilis* stretches from Turkey over Armenia, Georgia and Iran to Turkmenistan (Dumont et al. 1992; Boudot 2006; Ananian 2012). It is listed as vulnerable in the IUCN Red List of Threatened Species (Boudot 2006). The largest populations of *O. assimilis* are known to be in southwestern Turkey, "where the species is declining rapidly due to impact on the river banks by urbanization and agriculture, and due to impact on the river course by gravel mining, pollution and an increased water demand"(Boudot et al. 2009: 124). These threats could also be the case in other parts of the species' range.

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Figure 1. The location of the sighting at the river Devrek in northwestern Turkey (21--vi-2011). – Abbildung 1: Ort der Beobachtung am Fluss Devrek, nordwestliche Türkei (21.06.2011). Photo: MO

Figure 2. *Onychogomphus assimilis* male perching on a branch at the river Devrek (21-vi--2011). – Abbildung 2: *Onychogomphus assimilis* Männchen auf einem Ast am Fluss Devrek (21.06.2011). Photo: DI

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Methods

While investigating Odonata in a peat bog in the province of Bolu in northwestern Turkey (Olthoff & Ikemeyer 2012), an unrelated car trip was made to the northern province of Zonguldak on the 21-vi-2011. During a one hour stop, odonate fauna was observed at a 200 m long section of the river Devrek ('Devrek Çayı'; 41.186056°N, 31.931944°E; 96 m a.s.l.).

The river is characterized by fast flowing, apparently unpolluted water, partly shaded banks and a mountainous, wooded environment. At the investigated section, the river is between 10 and 20 metres wide, appears to be virtually unspoilt and is dominated by gravel and rocky substrate (Fig. 1).

Results

On the 21-vi-2011 a male *Onychogomphus assimilis* was recorded at the investigated section of the river Devrek perching on a branch at the bankside (Fig. 2). Other recorded species were *Calopteryx splendens* (6-10 individuals), *Epallage fatime* (2-5 ind.), *Platycnemis pennipes* (6-10 ind.), *Onychogomphus forcipatus albotibialis* (6-10 ind.) and *Orthetrum brunneum* (2-5 ind.).

Discussion

According to Boudot et al. (2009) in Turkey *Onychogomphus assimilis* is confined to rivers close to the Mediterranean Sea and some eastern provinces. In western Turkey no population is known to exist north of latitude 38°N, whereas in eastern Turkey the range of *O. assimilis* extends up to a latitude of 41°N. The sighting of *O. assimilis* at the river Devrek north of latitude 41°N indicates a population in the western Pontic Mountains, an under-investigated area as regards dragonflies. Both the habitat (Fig. 1) and the main ecological characteristics of the Pontic Mountains, i.e. it is a well-wooded, mountainous area rich in flowing waters, lead to the conclusion that the species may be indigenous. The new sighting in the west of the Pontic Mountains together with records from the east of the Pontic Mountains, primarily in the province of Artvin (Kalkmann & van Pelt 2006; Boudot et al. 2009; Miroglu et al. 2011; Schneider & Schneider 2013), suggest that the species extends throughout the mountain range. According to Kalkmann & van Pelt (2006) and Schneider & Schneider (2013) in the province of Artvin *O. assimilis* can be found at cold, fast flowing rivers only accompanied by *Epallage fatime*. Accordingly, future research should be directed at fast flowing rivers in the wooded, colline zone of the Pontic Mountains.

The sighting of *E. fatime* at the Devrek and records from other rivers in the western Black Sea Region (Hacet 2009) show that this species has a much wider

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distribution in northern Turkey than shown in the distribution maps of Boudot et al. (2009) and Kalkmann (2006a).

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