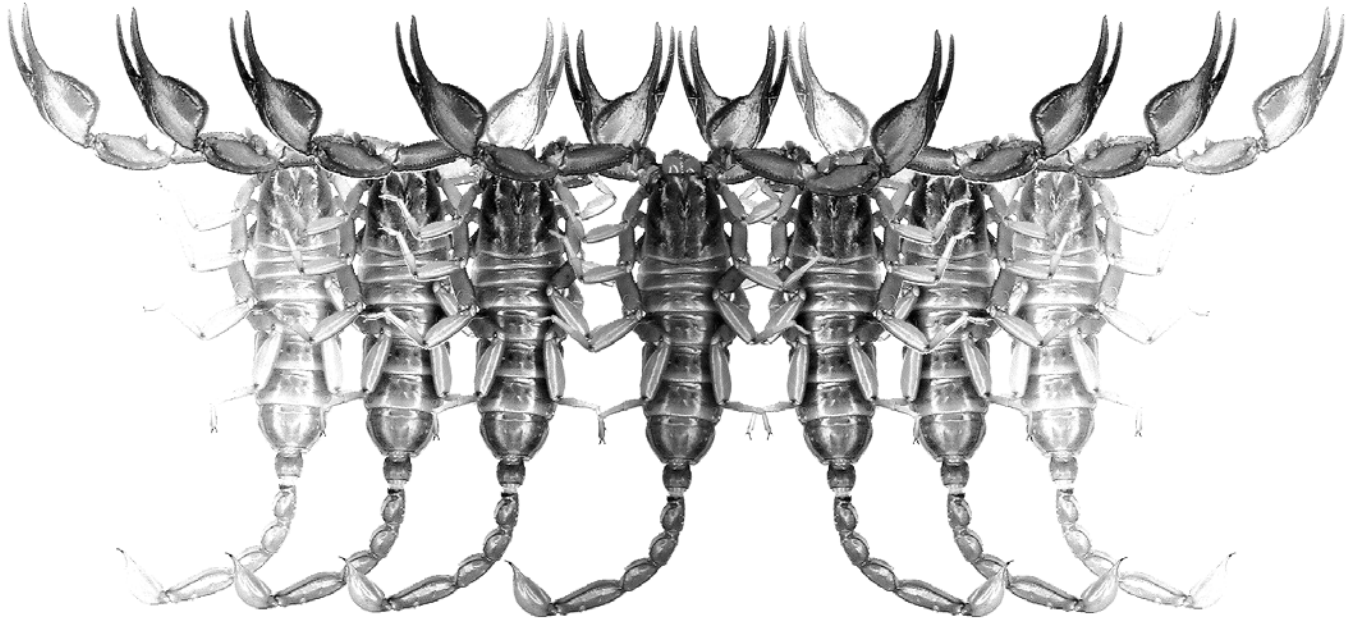


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(Scorpiones: Buthidae) in Turkey**

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- **ZISP**, Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia
- **WAM**, Western Australian Museum, Perth, Australia
- **NTNU**, Norwegian University of Science and Technology, Trondheim, Norway

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Distribution of *Hottentotta saulcyi* (Simon, 1880) (Scorpiones: Buthidae) in Turkey

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Summary

Distribution of *Hottentotta saulcyi* (Simon, 1880) (Scorpiones: Buthidae) in Turkey is investigated, and new distributional records are given. Formerly, this species was known only from Mardin Province; here, it is recorded for the first time from Batman, Şırnak, and Hakkâri Provinces.

Introduction

The genus *Hottentotta* Birula, 1908 is widely distributed in Africa, Middle East and Asia (Afghanistan, Pakistan and India). Recently, this genus was revised by Kovařík (2007). Kovařík (2007) listed 27 species of *Hottentotta* (including four new species). The following species are distributed in countries adjacent to Turkey (Iraq, Iran, and Syria): *Hottentotta scaber* (Ehrenberg, 1828), *H. schach* (Birula, 1905), *H. jayakari* (Pocock, 1895), *H. zagrosensis* Kovařík, 1997, and *H. judaicus* (Simon, 1872) (Kovařík, 2007), and two more species described more recently: *H. mesopotamicus* Lourenço et Qi, 2007, and *H. khozestanus* Navidpour et al., 2008. Of these, *H. mesopotamicus* was recorded from Zakhu in the northern Iraq, close to Turkish border. On the other hand, *H. judaicus* was also recorded from Turkey (Werner, 1902; Birula, 1910, 1914, 1917; Vachon, 1947a, 1947b). Werner (1902) received two female *H. judaicus* collected in Alaşehir from Manisa Province, western Turkey. The famous Russian scorpologist Alexei A. Birula and French arachnologist Max Vachon probably followed Werner (1902) as they recorded this species for Turkey from “Taurus”, “Turcia asiatica orientalis”, “Taurus-Gebiet”, and “the southeastern corner of Asia Minor”. This record is, however, suspicious and the occurrence of *H. judaicus* has not been confirmed until 2008. However, Lourenço & Cloudsley-Thompson (2008) recorded this species from owl pellets collected in Diyarbakır Province.

The distribution of *H. saulcyi* includes Turkey (Crucitti & Vignoli, 2002), Syria (Simon, 1880; Birula, 1914, 1917; Vachon, 1952), Iraq (Kraepelin, 1899; Birula, 1914, 1917, 1918; Pringle, 1960; Kovařík,

1992a, 1992b), Iran (Birula, 1918; Vachon, 1966; Habibi, 1971; Farzanpay, 1988; Kovařík, 1997), and Afghanistan (Kovařík, 2007). *Hottentotta saulcyi* (Simon, 1880) is the only species of this genus that is known from Turkey (Crucitti & Vignoli, 2002). This taxon is one of the oldest described *Hottentotta* species. It was first described from Mosul in north of the Iraq (Fet & Lowe, 2000). *H. saulcyi* was recorded from Turkey quite recently, first by Crucitti & Vignoli (2002) from Mardin Province, and then by Karataş & Gharkheloo (2006), also from Mardin Province.

The purpose of the this study is to give new information for *Hottentotta saulcyi* distribution in Turkey, including the first record for the Eastern Anatolia Region.

Material and Methods

Field studies were performed during the period between 2003 and 2007 in Southeastern Anatolia and Eastern Anatolia Regions. Turkey has seven main ecogeographic and climatic areas (Fig. 1). The first four are named by the adjacent seas (the Black Sea, the Marmara, the Aegean and the Mediterranean Regions). The other three areas are named by their position within Anatolia (Central, Eastern and Southeastern Anatolia Regions) (Atalay, 1997). Of these, the mountainous Eastern Anatolia Region is located in the east of Turkey. Southeastern Anatolia Region is located in the south of East Taurus Mountains in the southeastern Turkey. It is the northernmost part of the Arabian Platform (Fig. 1).

We have examined a total of 28 specimens collected from 10 different localities. Scorpions were collected during the night using an ultraviolet lamp (Sylvania



Figure 1: The main ecogeographic and climatic zones of Turkey.

F8T5/BLB). The specimens were fixed in 70 % ethanol and have been deposited in the private collection of Ersen Aydın Yağmur. Scorpions were studied using a XTL-3400E stereomicroscope.

Results and Discussion

Specimens examined:

1. Batman Province: 1♂, 3♀♀. Central District, 15 km south of Batman, 17 August 2007, 37°48'04"N, 41°13'43"E, 700 m asl., E.A. Yağmur, A. Kürşat. **2. Hakkâri Province:** 1♀. Çukurca District, Geçimli Village, 24 June 2007, 37°21'55"N, 43°30'40"E, 930 m asl., F. Kayraklı. **3.** 1♂. Çukurca District, Köprülü Village, 26 June 2007, 37°18'26"N, 43°30'32"E, 940 m asl., İ. Dinler. **4. Mardin Province:** 1♀, 1♂. Yeşilli District, 1 km North of Nahraza Quarter, 9 August 2006, E.A. Yağmur, A. Kürşat. **5.** 6♂♂, 5♀♀. Central District, Eskikale Village, 4 August 2006, E.A. Yağmur, M. Yalçın; same locality as in Crucitti & Vignoli (2002). **6.** 2♂♂, 2♀♀. Central District, Yolbaşı Village, 27 June 2007, 37°16'00"N, 40°48'00"E, 658 m asl., H. Koç, A.V. Gromov. **7. Şırnak Province:** 1 juv. Silopi District, 10 km east of Silopi, Çardaklı Village, 12 October 2003, 37°14'00"N, 42°35'14"E, 665 m asl., M. Mürsel. **8.** 1♀. Silopi District, Köşreli Village, lower slopes of Cudi Mountain (Kurtik Hill), 26 September 2004, 37°21'24"N, 42°25'30"E, 1155 m asl., M. Mürsel. **9.** 1♀. Beytüşşebab District,

Başaran Village, 25 June 2007, 37°28'50"N, 43°07'23"E, 1150 m asl., H. Koç, A.V. Gromov. **10.** 1♂, 1♀. İdil District, Yörük Village, 26 June 2007, 36°16'58,1"N, 42°01'10"E, 658 m asl. H. Koç, A.V. Gromov.

Localities cited in the literature:

11. Mardin Province: Deyrzafran Monastery, 10 km to SE of Mardin. **12.** Güngören (Midyat) (Crucitti & Vignoli, 2002).

Diagnostic Features

The genus *Hottentotta* is close to *Compsobuthus* and *Mesobuthus*, but it is easy to distinguish by the following characters:

- ventrolateral carinae of fifth metasomal segment are without enlarged denticles;
- pedipalp chela trichobothrium *db* is proximal to *est* on fixed finger and trichobothrium *db* is always between *est* and *et*
- ventromedian carapacial carina continue distally beyond origin of posteriolateral carapacial carina (Hendrixson, 2006; Kovařík, 2007).

According to Kovařík (2007), *Hottentotta saulcyi* differs from other species in having a very hirsute metasoma and a specific coloration pattern: completely dark yellow coloration but the anterior portion of carapace, fifth

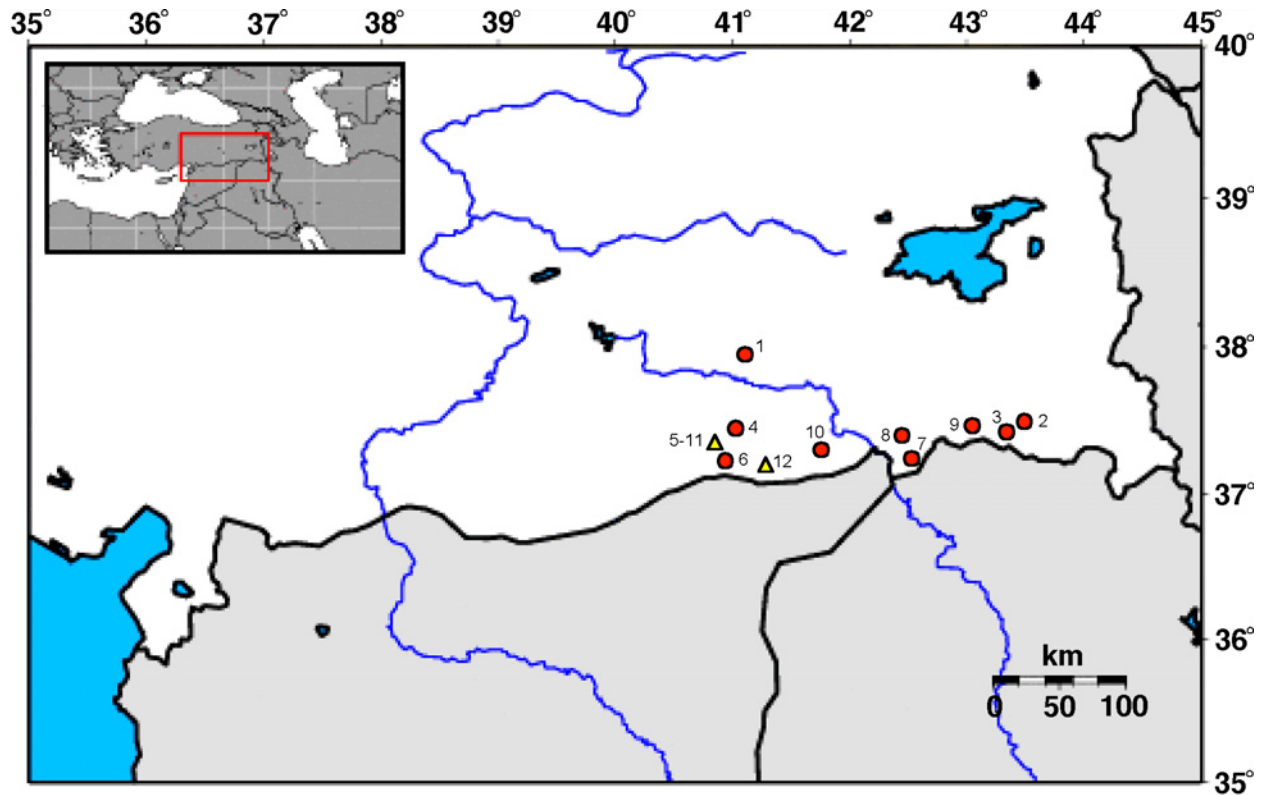


Figure 2: Distribution of *Hottentotta saulcyi* (Simon, 1880) in Turkey. Circles: new data; triangles: previous records of Crucitti & Vignoli (2002). See *Specimens examined* for the list of localities.

segment of metasoma and telson are distinctly black (Fig. 3).

Comments

Hottentotta saulcyi was known in Turkey previously only from Mardin Province (Crucitti & Vignoli, 2002; Karataş & Gharkheloo, 2006). Crucitti & Vignoli (2002) collected this species from Deyrulzafran Monastery (in Eski Kale Village, Central District) and Güngören Village (Midyat District). An additional new locality from Kayadibi Village, Nusaybin District, was reported by Karataş & Gharkheloo (2006).

In the present study, occurrence of *H. saulcyi* in Mardin Province is confirmed. However, we collected in Batman Province where they were found for the first time in the northern Mardin. Şırnak and Hakkâri records are the first for the Eastern Anatolia Region. The new data expand the geographic range of *H. saulcyi* within Turkey, which occupies more than 230 km along the Turkish border with Syria and Iraq (Fig. 2).

Habitat: *H. saulcyi* was collected in the localities which are not mountainous and do not have a high elevation (658–1155 m a.s.l.). In Mardin Province, this species is mostly found in yard walls, built of coarse stones; one

specimen was collected under large stones (Fig. 4). It has been collected near and inside village, and on the walls of farmhouses and some buildings, therefore it is an anthropotolerant species, like *Androctonus crassicauda*. In Batman and Şırnak, although there is a rocky area nearby, we were able to collect the specimens only under large stones near the bank of dried small streams. Probably, this species prefers habitats with soil cover to rocky area without soil. However, *H. saulcyi* is huge in size and prefers large stones for hiding. This survey shows that sampling of *H. saulcyi* specimens could be easily accomplished during night trips with a UV lamp. *Hottentotta saulcyi* was found in the same habitat as *Compsobuthus matthiesseni*, *Mesobuthus eupeus*, *Scorpio maurus*, and *Androctonus crassicauda* in Eastern Anatolia Region and Southeastern Anatolia Region.

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Figure 3: *Hottentotta sauleyi* from Yeşilli Village, Mardin Province, Turkey.



Figure 4: Habitat of *Hottentotta sauleyi*: Eski Kale, Mardin Province, Turkey.

Department, Gaziantep University) for their help in field trips.

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