

First record of *Euscorpium (Polytrichobothrius) italicus* (Scorpiones: Euscorpidae) from Iraq

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Abstract. A disjunct scorpion population of *Euscorpium italicus* (Herbst, 1800) is reported for the first time from Iraq. Morphology, ecological conditions, and possible source of anthropochoric introduction are discussed.

Taxonomy, distribution, anthropochory, Scorpiones, *Euscorpium italicus*, Iraq, Palaearctic region

INTRODUCTION

Euscorpium italicus (Herbst, 1800) has a naturally disjunct geographic distribution divided in two unequal parts: it is found in southern Europe (mainly in Italy, Slovenia, Croatia, Montenegro, Albania, and northwestern Greece) and in a narrow coastal strip along the Black Sea coast of northern Turkey (from Istanbul in the west), Georgia and Russia (Krasnodar Region) (Fet & Sissom 2000). Populations outside of the main geographic range are assumed to have been introduced by man (Gantenbein et al. 2002). Here we report a new disjunct population of *Euscorpium italicus* from Iraq.

RESULTS

We examined one adult female and two adult males from Iraq in the collection of F. Kovařík (Prague, Czech Republic). These specimens were collected at Ash-Shabakah (Shabachah, Shabicha), Geophysics Brno base camp, 150 km SW of An-Najaf (Najaf), An-Najaf Province, Iraq; 262 m asl, 31° 06' N, 43° 95' E, 2M1FE, October–December 1978, leg. O. Jakeš. We scored the morphological characters of these three specimens as described in Vachon (1981) and Gantenbein et al. (2002).

The pectinal tooth count in the pinned specimens could be scored only on the right pectinal organ of the female and was 8. In six pedipalps analysed, the number of trichobothria (sensory bristles) on the ventral surface of the pedipalp chela (*V*) was 9 (n=4) and 10 (n=2); the number of trichobothria on the ventral surface of the pedipalp patella (*v*) was 12 in all six cases. The number of trichobothria in the *em* series on the external surface of the pedipalp patella was 5 (n=5) and 4 (n=1); the number of trichobothria in the *esba* series on the external surface of the pedipalp patella was 5 (n=1), 6 (n=2), 9 (n=2), and 10 (n=1). The number of trichobothria in the *et* (=7), *est* (=4), *esb* (=2), *eba* (=6), and *eb* (=4) series on the external surface of the pedipalp patella was constant.

According to the diagnostic criteria given by Vachon (1981) and Gantenbein et al. (2002), especially the trichobothrial numbers and pattern on the the ventral aspect of the pedipalp chela and the external aspect of the pedipalp patella, it is clear that this scorpion population from Iraq belongs to *Euscorpium italicus* (Herbst, 1800). The statistical data on pectinal teeth and trichobothria from the Iraqi specimens fall within the limits of those known for *E. italicus*.

DISCUSSION

The remarkable fact about the Iraqi record of *E. italicus* is its disjunct geographic location. Presence of three adult specimens indicates a reproducing population. There can be little doubt that this population was introduced by humans in historical times with trade routes. Another disjunct, reproducing population of *E. italicus* in the Middle East was reported from Sanaa, Yemen (Birula 1937). Such populations were also found in other places closer to the main range of this species, but still disjunct: lower Don in southern Russia (Zykoff 1912); southwestern Romania (Vachon 1981); and Sion in Valais, Switzerland (Braunwalder 2001). Other congeneric scorpion species were also reported to establish anthropochoric reproducing populations. Of these, well-known are obviously introduced populations of *Euscorpius flavicaudis* (DeGeer, 1778) in England (Cloudsley-Thompson & Constantinou 1983; Benton 1992) and Uruguay (Toscano-Gadea 1998). Also possibly introduced are *E. tergestinus* in Austria (Huber et al. 2001; reported as *E. capathicus* (Linné, 1767)) and in Bohemia (Kovařík & Fet in press).

The Ash-Shabakah locality lies on the crossroads of two major desert routes: one connects Baghdad to Saudi Arabia all the way down to the Red Sea coast, and the other leads from Basra northwest through the Syrian Desert toward Damascus and Beirut. The delivery by humans was possible along these routes from the Mediterranean or Red Sea coasts. The closest known populations of *E. italicus* are those in northern Turkey, which is the likely source of introduction; still, the distance to this source is impressive, over 1000 km. The distance from Ash-Shabakah to the introduced population in Yemen is almost 2000 km.

Meristic (trichobothrial) characters of the studied specimens lie within the limits known for the Anatolian populations (which, in turn, do not significantly differ from the populations in Italy and the Balkans). Values for chela ventral (*V*), patella ventral (*v*), and patella external *et*, *em*, and *eba* variable series of trichobothria are very close to average for the entire species (Gantenbein et al., 2002). Of patella external series, the highly variable series *esba* even within our three samples varied from 5 to 10. A loss of one trichobothrium in series patella external *em* in one instance is a rare event. Both types of variation were noted before for *E. italicus*.

Below, we characterize the ecological conditions in which this disjunct population survives. The collection site in Iraq was a base camp for oil and gas exploration by Geophysics Brno, at the edge of a limestone region called Al-Hajara. The terrain was described to us (O. Jakeš, pers. comm.) as rocky, partially weathered, with numerous limestone outcrops, locally with harder and more weathering-resistant cementstone layers up to 1 m thick. The camp itself was located in a broad depression which in the rain season received water from several otherwise dry riverbeds. In the rain season it formed extensive ephemeral lakes which took 2–3 weeks to dry out. After the rain season (which occurred between December and March) the locality had only sparse vegetation that by April was scorched by the sun. Climate of the area is that of a hot and dry subtropical desert, with daily fluctuation of temperatures up to 20 °C. From spring to fall sunny with frequent desert storms. In November a sudden temperature drop, in December–January frequent rains and thunderstorms. Water lasted for several days and depressions were filled by the above noted ephemeral ponds or lakes for 2–3 weeks. Daily temperatures reached 52 °C in July and only 12 °C in November and December. The highest night temperatures reached 40 °C in July and only 3 °C in November, when at 6 a.m. they were around freezing and frequently accompanied by fog. Other species of scorpions collected at this site belonged to the typical arid-desert fauna of the Middle East: *Androctonus crassicauda* (Olivier, 1807), *Buthacus tadmorensis* (Simon, 1892), *Compsobuthus* sp., *Orthochirus* sp. (all Buthidae), and *Scorpio maurus* Linné, 1758 (Scorpionidae).

A c k n o w l e d g e m e n t s

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