Odontobuthus tirgari sp. nov. (Scorpiones, Buthidae) from the eastern region of the Iranian Plateau

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Abstract

A new species of scorpions in the genus Odontobuthus (Scorpiones, Buthidae) is described from Khorasan Province, Iran. Currently, Odontobuthus includes two species in Iran, Odontobuthus doriae Thorell, 1876, which is restricted to high elevations of the central Iranian Plateau and Odontobuthus bidentatus Lourenço & Pezier, 2002 from the Zagros Mountains. The results of morphological comparisons, univariate and multivariate statistical analyses and phylogenetic analysis of COI sequence data clearly confirm a deep split between populations from the eastern Iranian Plateau and O. bidentatus Lourenço & Pezier, 2002 and O. doriae Thorell, 1876. Therefore, according to comparative morphological and molecular analyses, a new species, Odontobuthus tigari sp. nov. (♀♂) was described from eastern Iran. This addition represents the third species of this genus from Iran.

Key words: Scorpion, fauna, Khorasan, new species, COI

Introduction

In 1950, Dr. Max Vachon at the Museum National d’Histoire Naturelle, France, created a new buthid genus named Odontobuthus after his revision of the traditional genus Buthus Leach, 1815. He partitioned this large taxon into several genera primarily based on differences in carination of prosoma, tergites and metasomal segments. The genus Odontobuthus is characterized by sharing prominent, enlarged dentition on metasomal segments II–III. Vachon (1950) considered O. doriae and O. odonturus as distinct species, O. doriae which was recorded from high elevations of western and central Iran and O. odonturus from the Indus River drainage of eastern Pakistan and the Rajasthan desert of western India. Lourenço & Pézier (2002) confirmed the taxonomic validity of these taxa as separate species in their revision of the genus Odontobuthus. They also described the third species, namely O. bidentatus from the Tigris-Euphrates River drainage of eastern Iraq and the western foothills of the Zagros Mountains in Iran. Lowe (2010) described the fourth species, O. brevidigitus, from northern Oman. The discovery of this species represents a significant range extension of this genus across the Persian Gulf into the Arabian Peninsula (Lowe, 2010). All Odontobuthus species are fossorial animals with distinct morphological adaptations for burrowing in consolidated sandy or silty substrates on alluvial plains (Lowe, 2010; Farzanpay, 1987). The genus Odontobuthus is known by two species in Iran, namely, O. doriae and O. bidentatus (Lourenço & Pézier, 2002; Navidpour et al., 2008a,b,c,d; Lowe, 2010). All of the previous records of O. odonturus from Iran (Farzanpay, 1987; Kovářík, 1997) are now considered as O. bidentatus (Lourenço & Pézier, 2002), therefore, the record of O. odonturus from Iran requires further investigations.

Systematic studies on the scorpion fauna have not been performed intensively in much of central, eastern and southern Iran because of lacking comprehensive sampling from the distribution ranges of Odontobuthus. Therefore, confirmed records of the genus Odontobuthus in eastern parts of Iran are lacking. For example, Birula