

The herpetofauna of the east Turkish province of Iğdır

General information about the herpetofauna of Anatolia was provided by BODENHEIMER (1944), BIRD (1936), MERTENS (1952), CLARK & CLARK (1973), BAŞOĞLU & BARAN (1977, 1980), ATATÜR & YILMAZ (1986), BARAN & ATATÜR (1998) and BAŞOĞLU et al. (1998). However, studies on the east Anatolian herpetofauna are scarce (BAŞOĞLU & HELLMICH 1970; BARAN 1980; BARAN et al. 2004), especially with reference to the province of Iğdır and its vicinity (MULDER 1995; BARAN et al. 2004; GARZONI & GENIEZ 2004; ILGAZ et al. 2005). Despite these articles, the amphibians and reptiles of east Anatolia are still insufficiently known, with various species new to the region only recently discovered (MULDER 1995; GARZONI & GENIEZ 2004; BARAN et al. 2005; ILGAZ et al. 2005). The limited number of studies on the herpetofauna of this area is a reason for confusion and strongly restricts our understanding of the biogeography of the whole region, which holds a mix of Caucasian, Eremial and Iranian species. The aim of this study is to provide a herpetofaunal inventory of the east Anatolian province of Iğdır which is of particular significance considering the unique geography of the region.

The province of Iğdır is located in the Erzurum-Kars section of the east Anatolian region and covers an area of 3539 km². The province is separated by the Aras River valley from Armenia in the north and northeast; Nakhchivan and Iran are located in the east and southeast, the Turkish provinces of Ağrı in the south and Kars in the west and northwest of Iğdır (Figure 1). The present study is based on literature records and 111 specimens collected in the province of Iğdır during the period 2008-2009. All specimens were caught by hand during the day and photographed alive. After euthanization and preservation in 70% ethanol they were transferred to the collection of the Zoology Section at the Department of Biology at Çanakkale Onsekiz Mart University (ÇOMÜ). Table 1 specifies collection number, location, date, and collector's name each.

Tab. 1: Herpetological specimens collected from 2008-2009 in the east Turkish province of Iğdır. Number of specimens collected (*n*) follows museum number. Tab. 1: Herpetologisches Material der Aufsammlungen 2008-2009 aus der östürkischen Provinz Iğdır. Zahl der Exemplare (*n*) in Klammern hinter Museum Nr.

Taxon	ÇOMÜ Museum Nr. (<i>n</i>)	Record Locality / Fundort	Date / Datum	Collector(s) / Sammler
<i>Bufo variabilis</i> (PALLAS, 1769)	171/2009 (9)	Taşburun, Karakoyunlu, Iğdır	08.08.2009	S. Kuş
<i>Pelophylax ridibundus</i> (PALLAS, 1771)	165/2009 (1)	Taşburun, Karakoyunlu, Iğdır	01.08.2009	S. Kuş
<i>Hyla savignyi</i> AUDOUIN, 1827	166/2009 (8)	Taşburun, Karakoyunlu, Iğdır	01.08.2009	S. Kuş
<i>Testudo graeca</i> (LINNAEUS, 1758)	83/2008 (1)	Taşburun, Karakoyunlu, Iğdır	27.06.2008	M. Tosunoğlu, Ç. Gül, I. Uysal, H. Topyıldız
<i>Mauremys caspica</i> (GMELIN, 1774)	167/2009 (1)	Taşburun, Karakoyunlu, Iğdır	25.09.2009	S. Kuş
<i>Eremias trauchti</i> KESSLER, 1878	84/2008 (18)	Melekli köyü, Kumlar mevki, Iğdır	27.06.2008	M. Tosunoğlu, Ç. Gül, I. Uysal, H. Topyıldız
	113/2008 (2)	Gödekli-Aralık, Iğdır	17.06.2008	A. Koc
<i>Eremias pleskei</i> BEDIAGA, 1907	85/2008 (17)	Melekli köyü, Kumlar mevki, Iğdır	27.06.2008	M. Tosunoğlu, Ç. Gül, I. Uysal, H. Topyıldız
	114/2008 (2)	Gödekli-Aralık, Iğdır	17.06.2008	A. Koc
<i>Laudakia caucasia</i> (EICHWALD, 1831)	82/2008 (16)	Doğubayazıt Iğdır arası	26.06.2008	M. Tosunoğlu, Ç. Gül, I. Uysal, H. Topyıldız
<i>Trachylepis aurata</i> (LINNAEUS, 1758)	140/2008 (1)	Melekli köyü, Kumlar mevki, Iğdır	27.06.2008	M. Tosunoğlu, Ç. Gül, I. Uysal, H. Topyıldız
<i>Phrynocephalus persicus</i> DE FILIPPI, 1863	86/2008 (18)	Melekli köyü, Kumlar mevki, Iğdır	27.06.2008	M. Tosunoğlu, Ç. Gül, I. Uysal, H. Topyıldız
	117/2008 (7)	Yeşililik köyü, Iğdır	17.06.2008	A. Koc
<i>Eryx jacultus</i> (LINNAEUS, 1758)	87/2008 (1)	Melekli köyü, Kumlar mevki, Iğdır	27.06.2008	M. Tosunoğlu, Ç. Gül, I. Uysal, H. Topyıldız
<i>Typhlops vermicularis</i> MERREM, 1820	168/2009 (1)	Taşburun, Karakoyunlu, Iğdır	08.08.2009	S. Kuş
<i>Natrix natrix</i> (LINNAEUS, 1758)	169/2009 (1)	Taşburun, Karakoyunlu, Iğdır	08.08.2009	S. Kuş
<i>Natrix tessellata</i> LAURENTI, 1768	170/2009 (3)	Taşburun, Karakoyunlu, Iğdır	08.08.2009	S. Kuş
<i>Malpolon insignitus</i> (GEOFFROY St. HIL., 1827)	88/2008 (4)	Melekli köyü, Kumlar mevki, Iğdır	28.06.2008	M. Tosunoğlu, Ç. Gül, I. Uysal, H. Topyıldız

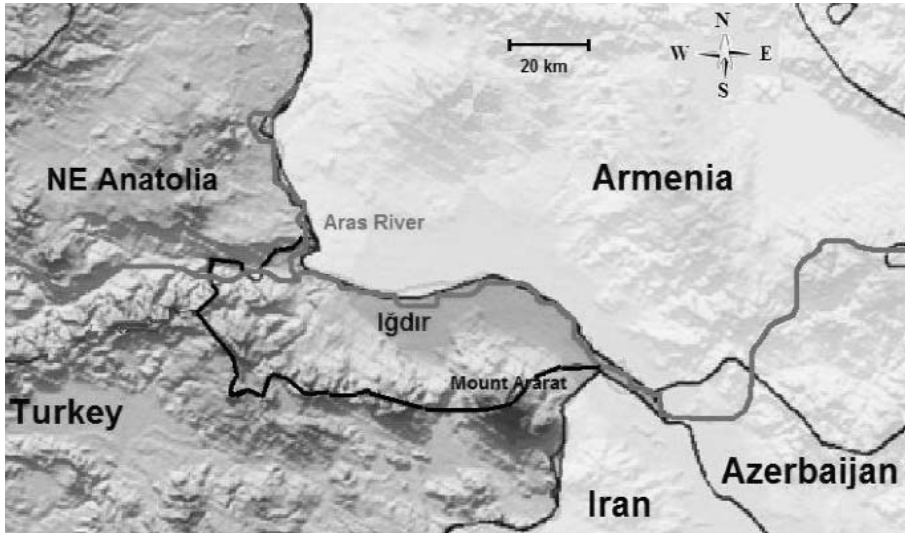


Fig. 1: The east Turkish province of Iğdır (research area) and the adjacent regions of Armenia, Azerbaijan, Iran and north-east Anatolia.

Family / Familie	Species / Art	Reference / Nachweis
Bufonidae	<i>Bufo variabilis</i> (PALLAS, 1769)	(5, *)
Hylidae	<i>Hyla savignyi</i> AUDOUIN, 1827	(5, *)
Ranidae	<i>Pelophylax ridibundus</i> (PALLAS, 1771)	(*)
Geoemydidae	<i>Mauremys caspica</i> (GMELIN, 1744)	(1, *)
Testudinidae	<i>Testudo graeca</i> (LINNAEUS, 1758)	(3, 5, *)
Agamidae	<i>Laudakia caucasia</i> (EICHWALD, 1831)	(2, 4, 5, *)
	<i>Phrynocephalus persicus</i> DE FILIPPI, 1863	(2, 3, 5, *)
Lacertidae	<i>Eremias pleskei</i> BEDRIAGA, 1907	(2, 3, *)
	<i>Eremias strauchi</i> KESSLER, 1878	(2, 3, 5, *)
	<i>Lacerta strigata</i> EICHWALD, 1831	(2, 4)
	<i>Ophisops elegans</i> MÉNÉTRIÉS, 1832	(5)
Scincidae	<i>Trachylepis aurata</i> (LINNAEUS, 1758)	(5, *)
Anguidae	<i>Pseudopus apodus</i> (PALLAS, 1775)	(5)
Typhlopidae	<i>Typhlops vermicularis</i> MERREM, 1820	(5, *)
Boidae	<i>Eryx jaculus</i> (LINNAEUS, 1758)	(*)
Colubridae	<i>Platyceps najadum</i> (EICHWALD, 1831)	(5)
	<i>Hemorrhois ravergieri</i> (MÉNÉTRIÉS, 1832)	(5)
	<i>Dolichophis schmidtii</i> NIKOLSKII, 1908	(5)
	<i>Eirenis collaris</i> (MÉNÉTRIÉS, 1832)	(5)
	<i>Zamenis hohenackeri</i> (STRAUCH, 1873)	(5)
	<i>Zamenis longissimus</i> (LAURENTI, 1768)	(6, 7)
	<i>Elaphe dione</i> PALLAS, 1773	(8)
	<i>Natrix natrix</i> (LINNAEUS, 1758)	(*)
	<i>Natrix tessellata</i> (LAURENTI, 1768)	(5, *)
	<i>Malpolon insignitus</i> (GEOFFROY, 1827)	(5, *)
Viperidae	<i>Montivipera raddei</i> (BOETTGER, 1890)	(5)
	<i>Macrovipera lebetina</i> (LINNAEUS, 1758)	(5)

Table 2: Amphibian and reptile species known from the east Turkish province of Iğdır, based on this study and bibliographic data. 1 - BAŞOĞLU & BARAN (1977), 2 - BARAN (1980), 3 - BARAN et al. (2004), 4 - ILGAZ et al. (2005), 5 - MULDER (1995), 6 - LENK et al. (2001), 7 - SCHWEIGER (1994), 8 - GARZONI & GENIEZ (2004), * - present study.

The publications by BAŞOĞLU & BARAN (1977, 1980), BAŞOĞLU et al. (1998) and BARAN & ATATÜR (1998) were utilized for identification of the amphibian and reptile species collected.

In the present study, a total of 111 specimens were collected belonging to 15 species (3 anurans, 2 turtles, 5 lizards and 5 snakes), 13 genera and 11 families (Table 1). In combination with previous herpetofaunistic studies (BAŞOĞLU & BARAN 1977; BARAN 1980; SCHWEIGER 1995; MULDER 1995; LENK et al. 2001; BARAN et al. 2004; GARZONI & GENIEZ 2004; ILGAZ et al. 2005), 27 species are known from the province of Iğdır.

The region of Iğdır reveals a rich herpetofauna due to sandy, semi-desert conditions and fresh water habitats in the Ararat Plateau, but also in being a doorway to Anatolia for the Eremial reptiles. Although Iğdır represents only a small fraction of east Anatolia, this area amidst Caucasia, Armenia and Iran belongs to the herpetofaunal regions of utmost interest. It provides suitable habitats for various amphibian and reptile species, especially lizards. This survey reveals that, based on the number of specimens captured, *Eremias strauchi* KESSLER, 1878 (*n*: 20), *Eremias pleskei* BEDRIAGA, 1907 (*n*: 19), *Laudakia caucasica* (EICHWALD, 1831) (*n*: 16) and *Phrynocephalus persicus* DE FILIPPI, 1863 (*n*: 25) are the four most abundant herpetological species in the study area.

Three species collected during the 2008-2009 campaign [*Pelophylax ridibundus* PALLAS, 1771, *Eryx jaculus* (LINNAEUS, 1758) and *Natrix natrix* (LINNAEUS, 1758)] were new records to the province of Iğdır.

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