

Recent observations on the herpetofauna of Syria with notes on trade in reptiles

Neue Beobachtungen zur Herpetofauna Syriens
mit Angaben zum Reptilienhandel

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KURZFASSUNG

Es wird über weitere Fundorte von zwei Arten von Amphibien [*Hyla savigny*, *Triturus (O.) vittatus*] und vierzehn von Reptilien [*Blanus strauchi*, *Testudo graeca*, *Chelonia mydas*, *Mauremys caspica*, *Asaccus elisae*, *Cyrtopodion scaber*, *Laudakia stellio*, *Trapelus ruderatus*, *T. persicus*, *T. pallidus*, *Eumeces schneideri*, *Ophisops elegans*, *Varanus griseus*, *Coluber (H.) nummifer*] berichtet, die in Syrien gefangen oder beobachtet wurden. Zusätzlich werden Angaben über den Lebensraum am Fundort gemacht.

Bei der Befassung mit dem Reptilienhandel in Syrien, stellten sich zumindest fünf Arten als durch uneingeschränkten Handel gefährdet heraus, nämlich die Syrische Landschildkröte *Testudo graeca terrestris*, die Kaspische Bachschildkröte *Mauremys rivulata*, das Europäische Chamäleon, *Chamaeleo chamaeleon*, die Ägyptische Domschwanzagame *Uromastix aegyptia* und zwei Schlangenarten, eine Wassernatter (*Natrix* sp.) und die Pfeilnatter *Coluber jugularis*.

ABSTRACT

Further localities for two species of amphibians [*Hyla savigny*, *Triturus (O.) vittatus*] and fourteen of reptiles [*Blanus strauchi*, *Testudo graeca*, *Chelonia mydas*, *Mauremys caspica*, *Asaccus elisae*, *Cyrtopodion scaber*, *Laudakia stellio*, *Trapelus ruderatus*, *T. persicus*, *T. pallidus*, *Eumeces schneideri*, *Ophisops elegans*, *Varanus griseus*, *Coluber (H.) nummifer*] collected or observed in Syria are given with some notes.

Emphasis on trade in reptiles in Syria revealed that at least five species are threatened due to excessive trade, including the Middle Eastern Spur-thighed Tortoise, *Testudo graeca terrestris*, the Striped-necked Turtle, *Mauremys rivulata*, the Mediterranean Chameleon, *Chamaeleo chamaeleon*, the Dabb, *Uromastix aegyptia*, and two snakes; *Natrix* sp. and *Coluber jugularis*.

KEY WORDS

Amphibia; Reptilia; Syria, herpetofauna, distribution, trade, conservation

INTRODUCTION

During field visits to Syria in the years 2004 to 2006, the authors encountered several species of reptiles and amphibians.

As indicated by MARTENS (1997), the herpetofauna of Syria is still poorly known and requires further investigation. Previous studies added additional records to the herpetofauna of Syria (MARTENS & KOCK 1992; MORAVEC & MODRY 1994a, 1994b;

DISI & BÖHME 1996; MORAVEC 1998). More recently, LYMBERAKIS & KALIONZOPOULOU (2003) and SINDACO et al. (2006) added new localities and records.

In this report, field observations and additional locality records for 16 species of reptiles and amphibians are presented. Since reptile trade was observed closely in Damascus this issue is also addressed here.

MATERIALS AND METHODS

Sixteen species of amphibians and reptiles were either collected or observed during the study period. Collected speci-

mens were deposited at the Jordan University of Science & Technology Museum (JUSTM) in Irbid.

TAXONOMIC ACCOUNT

Hyla savignyi AUDOUIN, 1827

Material examined: Nahr al-Sajoor, 6. 7.2005 (JUSTM 0198).

We observed this species among *Typha* vegetation that extends along the river banks. This Tree Frog is common in most of the freshwater bodies in Syria. It is noteworthy to indicate that this frog was never before encountered along the Euphrates around Ar-Raqqah and Dair ez Zour.

Triturus (Ommatotriton) vittatus vittatus (GRAY in JENYS, 1835)

Material examined: Basofan, 2.2.2005 (JUSTM 0199).

This specimen was found in a small pool between old ruins near Basofan village. It seems that the Banded Newt is distributed across Syria from north to south. Specimens were reported from Latakia, Homs and Dar'a (ARNTZEN & OLGUN 2000). Two alloatric populations were reported; one from the Caucasus region (northeastern Turkey to Georgia and adjacent northern Iraq) and one from coastal southeastern Turkey, through Syria, to northern Lebanon and Palestine (OLGUN et al. 1997).

Blanus strauchi aporus
F. WERNER, 1884

Material examined: 3 km E Hamama (35°55'N, 36°23'E), 3.7.2005 (JUSTM 0200).

A dead specimen was found in cultivated land about 100 m from the Orontis River. This species was reported from Latakia (ALEXANDER 1966) and from Qalat el Hosn (BISCHOFF & SCHMIDTLER 1994). Specimens were also collected from three localities from the eastern region of the Amanos Mountains, Turkey, close to our site (UGURTAŞ et al. 2000).

Testudo graeca terrestris
FORSKÅL, 1775

Material examined: 1♀, Tahonan Al-Halawa, 3.7.2005 (JUSTM 0201). 1♂, Slinfah, 3.7.2005 (JUSTM 0202).

FRITZ et al. (1996) recognized different local morphs of this species in Syria. They indicated that the population of the

Aanasriye Mountains showed a contrasting yellow-black colouration, while those from arid regions are distinctly paler. They considered such variations as adaptations to local conditions prevailing in Syria.

Chelonia mydas mydas (LINNAEUS, 1758)

One specimen was observed near the beach at Oum et Touyour on 20.7.2003. The Green Turtle was previously reported along the Mediterranean shoreline of Syria, however, nesting was not ruled out (KASPAREK 1995; KASPAREK et al. 2001).

Mauremys caspica caspica
(GMELIN, 1774)

Material examined: Nahr al-Sajoor, 6. 7.2005 (JUSTM 0203).

In Syria, both *M. caspica* and *M. rivulata* (VALENCIENNES, 1833), are known to occur (DISI & BÖHME 1996). *Mauremys caspica* is found in freshwater bodies of the northeast, along the tributaries of the Euphrates and the Tigris rivers, while *M. rivulata* is known from water bodies in the south and close to the coastal mountains.

Asaccus elisae (F. WERNER, 1895)

Material examined: 1♂, Qal'at Nijm, 9.6.2006 (JUSTM 0204).

This is a common species along the Euphrates River basin. Specimens were collected in old ruins and rocky areas. We observed specimens in Qal'at Jaaber and in Ar-Raqqah, Qal'at Nijm.

Cyrtopodion scaber (HEYDEN, 1827)

Material examined: 5♂, 3E, Ar-Raqqah, 6.7.2005 (JUSTM 0205-9).

All specimens of this gecko were collected from mud-built houses in Ar-Raqqah. Several specimens were observed in Fukhaiha and Dair ez Zour. This species is common in houses along the Euphrates.

Laudakia stellio stellio
(LINNAEUS, 1758)

Material examined: 1♂, Slinfah, 3.7.2005 (JUSTM 0210).

The Starred Agama is quite common in rocky areas. This is a problematic species that still requires further investigation. Colour and size of the observed specimens vary greatly from north to south; where northern specimens are smaller and darker than southern.

For reasons of consistency with the most pertinent recent herpetofaunal literature on agamas of the Genus *Trapelus* in adjacent Jordan, the below names were used.

Trapelus ruderatus ruderatus
(OLIVIER, 1804)

Material examined: 1♂, Himo, Al-Qamishli, 6.7.2005 (JUSTM 0211).

This species has been previously collected from the Irano-Turanian zone of Syria, extending from the south of Damascus, over Palmyra to Jaboul to the north (LYMBERAKIS & KALIONZOPOULU 2003). This record extends the known range further north-west towards near the Turkish border.

Trapelus persicus fieldii
(HAAS & Y. WERNER, 1969)
(Fig. 1)

Material examined: 2♂ and 1♀, 50 km from Deir ez-Zour to Palmyra, 8.7.2005 (JUSTM 0212-14).

A large population of this lizard was observed about 50 km from Deir ez-Zour to Tadmor highway. Lizards were seen and collected at about 10:00 a.m. in a flat area with few rocks. The vegetation cover is mostly *Anabasis* sp. Males were more common than females and located on the highest stone within the area. The gular fold was brilliant blue. One newly hatched individual was collected suggesting that eggs may have hatched recently. *Trapelus pallidus agnetae* was found along with this species and was active at the same time.

MORAVEC & MODRY (1994a) recorded this species for the first time from Syria from Abu Kamal near the Syrian-Iraqi borders. They indicated the low density of this species in the sampling area. Our records extend the distribution range further to the north-west. In Jordan, DISI et al. (1999) found populations of this species to inhabit hard wet land with *Nitraria retusa* shrubs.

Trapelus pallidus agnetae
(F. WERNER, 1929) (Fig. 2)

Material examined: 1♂, 60 km from Reqa to Homs, July 2004 (JUSTM 0215). 2♂ and 1♀, 50 km from Dair Al-Zour to Palmyra, 8.7.2005 (JUSTM 0216-18).

In the past, all specimens of this nominate subspecies were referred to as *Trapelus pallidus haasi* (Y. WERNER, 1971). This lizard is a rather common within flat deserts and semi deserts.

Eumeces schneideri ssp.
(DAUDIN, 1802)

One specimen was observed in a cemetery in Tal Abyad, near the Turkish border. We observed the predation strategy of Schneider's Skink. While inspecting the site for reptiles, a camel spider (solpugid) was moving in the flat area of the cemetery, very swiftly it was attacked by a medium-sized *E. schneideri* that was hiding between the stones.

Ophisops elegans elegans
MÉNÉTRIÉS, 1832

This very common lizard was encountered in several localities including Tal Abyad, Hemo and Dair Dejlah.

Varanus griseus griseus
(DAUDIN, 1803)

A road-killed specimen was collected on the highway between Dair Al-Zour and Palmyra. The specimen was too badly damaged to perform any measurements. Stomach contents yielded three geckos of the genus *Stenodactylus* and a solpugid as well as a mass of intestinal cestods. The surrounding area consists of shallow sand dunes formed by wind action. The sand was mostly formed around bushes. Tracks of the desert monitor were also found further into the sand.

Coluber (Hemorrhoidis) nummifer
(REUSS, 1834)

Material examined: 3 km E Hamama (35°55'N, 36°23'E), 3.7.2005 (JUSTM 0219).

One specimen was found close to a cave near Hamama village overlooking the Orontis River.



Fig. 1: *Trapelus persicus fieldii*
(HAAS & Y. WERNER, 1969), male specimen,
50 km from Dair ez-Zour to Palmyra.

Abb. 1: *Trapelus persicus fieldii*
(HAAS & Y. WERNER, 1969), Männchen. Fundort: 50 km von Dair ez-Zour in Richtung Palmyra.



Fig. 2: *Trapelus pallidus agnetae*
(F. WERNER, 1929), gravid female,
50 km from Dair ez-Zour to Palmyra.

Abb. 2: *Trapelus pallidus agnetae* (F. WERNER, 1929), trächtiges Weibchen. Fundort: 50 km von Dair ez-Zour in Richtung Palmyra.



Fig. 3 (left): *Testudo graeca terrestris* FORSKÅL, 1775
in cages in the animal market, downtown Damascus.

Abb. 3 (links): *Testudo graeca terrestris* FORSKÅL,
1775 in Käfigen auf dem Tiermarkt in der Altstadt
von Damaskus.

REPTILE TRADE IN SYRIA

Over the past years, we had the opportunity to visit the animal market downtown Damascus several times. More than 10 shops are specialized in selling live local animals (birds, mammals and reptiles). Several species of living reptiles were displayed for sale, including the Middle Eastern Spur-thighed Tortoise, *Testudo graeca terrestris*, of various sizes, the Strip-necked Turtle, *Mauremys rivulata*, the Mediterranean Chameleon, *Chamaeleo chamaeleon* (LINNAEUS, 1758), The Dabb, *Uromastyx aegyptia* (FORSKÅL, 1775), snakes of the genus *Natrix* and the Large Whip Snake *Hierophis jugularis* (LINNAEUS, 1758).

Hundreds of *T. graeca terrestris*, are kept under improper conditions (Fig. 3). They are placed in cages of about 70 cm x 70 cm, where each cage contains more than hundred specimens without suited food. Several *Ch. chamaeleon*, of various sizes are kept in cages. Locals buy chameleons to practice traditional medicine, and believe strongly that chameleon meat and skin can heal from several diseases. Snakes are placed in glass containers filled with water. Each container includes more than 30 specimens, some of which are dead.

About 500 specimens of *T. graeca terrestris* originating from Syria have been confiscated at Dubai Airport in 2003. Also, the Royal Society for the Conservation of Nature (RSCN) in Jordan confiscated over 600 specimens at the land border between Jordan and Syria from a single transport in 2004. Large specimens of this turtle are sold at a price of 3 US\$. The trade with this species is continuous despite the fact that Syria is a signatory of the CITES treaty in 2003. Specimens are sold mostly to Eastern Europe and then smuggled into Western Europe. For instance, a Norwegian citizen was fined for violating CITES in Denmark, where he had brought 125 live juvenile Spur-thighed Tortoises from Syria in 2002. He claimed they were for medicinal purposes and that the specimens were to be roasted and ground to a powder for ingestion to heal an aching back (ANONYMOUS 2003).

Other reptiles and amphibians are used in folk medicine in the Levant such as *Scincus scincus* (LINNAEUS, 1758) to in-

crease fertility in men and women, *Echis coloratus* GÜNTHER, 1878 skeleton against intimacy problems, *Pelophylax ridibundus* (PALLAS, 1771) against inguinal hernia and thinning eyelashes, *Varanus griseus* dried skin and secretion are used against spider bite, reducing fear, skin diseases and treatment of eye inflammation and *Testudo graeca* to improve personal relations and inguinal hernia problems (LEV 2003).

In 2004, the RSCN seized a "bag of snakes" which contained over 100 *Natrix* specimens. Two species of *Natrix* occur in Syria, *N. tessellata* (LAURENTI, 1768) and *N. natrix* (LINNAEUS, 1758). Again these snakes are sold in Syria as "aquaria"-animals and sent to Turkey and parts of Europe by buses and land transport. In the animal market, tens of *Natrix* specimens are placed crowded in water containers, with several dead specimens. These snakes are sold for about 2 US\$ a piece.

Such illegal trade will certainly affect these species and will lead to a drastic decline in their populations. Concerning Morocco, LAMBERT (1979) suggested that the net effect of collecting *T. graeca graeca* LINNAEUS, 1758 may have reduced pre-trade population levels by as much as 86 %.

Overcollecting of certain species addresses the need to evaluate the level of trade and make sure that it is not causing declines in wild populations. In Syria, no records to track the imports and exports of reptiles are available. The lack of information implies that population declines due to overcollecting could be going undetected (SCHAEFFER et. al. 2005). Further investigation should focus on the actual number of traded animals in Syria.

The concept of conservation in its broad spectrum is not yet fully visualized in Syria, despite the presence of a conservation authority. This is mainly due to lack of experience and knowledge in this multidisciplinary task. Syria has no area-based environmental laws or protected area system dedicated explicitly towards conserving biodiversity. However, the Ministry of Environmental Affairs is currently drafting a nature conservation law, and there is a system of protected forests and rangelands.

Hunting and collecting animals occurs throughout Syria and is said to be increasing; the hunting laws are considered to be strict, but despite the efforts of the authori-

ties many collectors collect and trade in animals illegally. Enforcement and awareness should be the first priority for the Syrian authorities to regulate this trade.

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