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REVIEW OF OPISTHOGLYPHOUS SNAKES (REPTILIA, OPHIDIA) OF IRAQ

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ABSTRACT

Seven species of semi venomous Opisthoglypha snakes (Reptilia, Ophidia) of Iraq are listed with important characteristics in morphology due to geographical and individual variation of species, as well, the confusion in the scales count of *Telescopus tessellatus martini* (Schmidt, 1939) of Iraq are discussed.

Keywords: Iraq, Opisthoglypha, Poisonous, Snake, Venomous.

INTRODUCTION

The mild poisonous snakes of Iraq have one or two pairs of posterior maxillary teeth, which are grooved, larger than the others, connected to the venom gland by a duct (Corkill, 1932; Latifi, 1991; Leviton *et al*., 1992; Amr and Disi, 2011), they agreed that there are no records for death by these opisthoglyphous snakes among humans because of the location of the venom teeth and also of the mild composition of the poison. If the mild was bitten by these snakes (which is very rare), he feels pain, swelling and ecchymosis around the bite are nodes. The symptoms of the bite are noticed to be more active on small mammals and birds; four species of colubrids have been incriminated, and others are suspected (Leviton *et al*., 1992).

According to Latifi (1991) only three genera of colubrid snakes belong to opisthoglyphous; the distinction between venomous and nonvenomous snakes is not clear-cut because the saliva of many snakes is toxic for the snake's prey and sometime for humans (Leviton *et al*., 1992). Amr and Disi (2011) believed that even those colubrid snakes which had been registered as not poisonous snakes, have a poison in their saliva and cause the same symptoms and pain.

This study aimed to discuss the morphology and distribution of seven opisthoglypha snakes of Iraq along with individual variation of species supported by figures.

MATERIALS AND METHODS

The study depended on a collection of opisthoglyphous snakes of the Iraq Natural History Research Center and Museum, University of Baghdad (INHRCM); the Kurdistan Natural History Museum, University of Salahaddin, Erbil province, Gafoor (Pers. Comm.) and on personal observations of some specimens of snakes for some undergraduate students in Iraq for the period (February to November, 2018). Twenty six different specimens of opisthoglyphous snakes were used for this study; the photos were taken with a Nikon camera.

RESULTS AND DISCUSSION

There are seven truly opisthoglyphous snakes in Iraq, they all belong to the family Colubridae. In this study, the distribution and color variation of the opithoglyphous snakes of Iraq have been described, with some important notes on taxonomy supported by figures.

(1) *Psammophis schokari* (Forskål, 1775) (Pl. 1)

Six specimens were examined (one from each of Basrah province and Thi Qar province, 3 from INHRCM and 1 from Kurdistan Natural History Museum); this snake is thin, long (99 cm. length) and slender; body is with narrow dark longitudinal strips on the side of the head and eyes continuous through all of the body; a ventral band also is present in most specimens of the collection of this study with an exception in some specimens which have bands only at the side of the head and neck. The rest of the body is with a uniform color; irregular dark and light blotch on the upper side of the head; Mid-body dorsal scales are smooth, arranged in 17 rows; one elongated loreal shield is present; 9 upper labials 5th and 6th touching the eye, the two posterior maxillary teeth are enlarged and grooved.

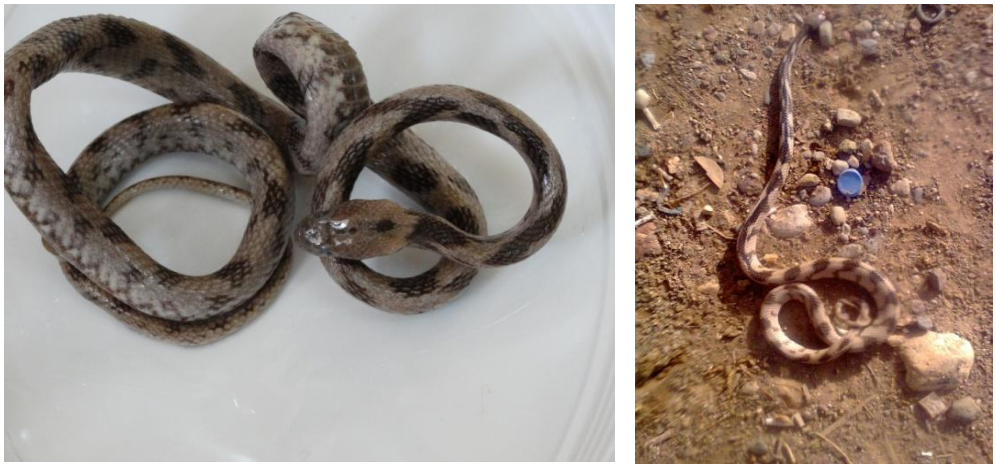
Distribution: Although it is wide-ranging snake, but it is most abundant in dry arid regions (Rhadi *et al*., 2017); it has a wide distribution in all Iraq; and found in Shaiba, Basrah province (Boulenger, 1920); near the river Shatt al Arab District in a Tannumah town, eastern of AL- Basrah province, Wasit province and Al-Diwaniyah province (Rhadi *et al*., 2017). It was also recorded from Rutba city, western Al Anbar province, by (Corkill, 1932), Amara city (Southern Iraq) and Rutba city by Schmidt (1939) and in Bahr Al-Najaf by Mohammad *et al*. (2013).

Plate (1): *P. schokari* (Forskål, 1775) from the South of Erbil province (Photo taken by authors).

(2) *Telescopus tessellatus martini* (Schmidt, 1939) (Pl. 2 A, B)

Six specimens were examined (three from INHRCM , 1 from Kurdistan Natural History Museum and 2 were collected by Gafoor (Pers. Comm.) from Qaradagh, Sulaymaniyah province. The head of this snake is little wider than neck, darker than body; Corkill (1932) and Khalaf (1959) stated that the Iraqi collection have 21 (mean was 23 in the collection of this study) smooth dorsal scale rows; the median four dorsal scales are elongated; loreal enters the eyes; maximum length 78 cm.; tail 12cm.; ventrals, 226-242 (in our collection the mean was 220); subcaudals 67-74. Maxillary teeth were10-12 enlarged anterior longest. Posterior maxillary teeth are enlarged and grooved. Corkill (1932) and Terentjive and Chernove (1965) referred this snake to *Tarbbophis iberus* (Echw.); on the other hand Leviton *et al*. (1992) stated that its distribution is only along Tigris-Euphrates area, but our collection was only from Qaradagh Mountain and Darbandi Khan town, Sulaymaniyah province.

There are some similarities between the studied specimens of *Telescopus tessellatus martini* (Schmidt, 1939) in its 23 dorsal scale and *T. rhinopoma* (Blanford, 1874), but it has a lesser number of ventral and subcaudal scales; also the allopatric distribution of *T. rhinopoma* is in South of Iran and Pakistan (Anderson, 1963). We believe that the Iraqi collection might be a new form, so we are going to achieve a genetic study in the future to demonstrate this clearly.



(A) (B)

Plate (2): *Telescopus tessellatus martini***;** (A) From Darbandikhan, South East of Sulaymaniyah province (Preserved in formalin), (B) Alive specimen. (Photo taken by authors).

(3) *Telescopus fallux nigriceps* (Ahl, 1924)

Body is short, head is black, ventral and flat, larger than neck; eyes are with vertical pupils. Dorsal scales are smoothly arranged in 19 rows. Maximum length is 72 cm (Leviton *et al*., 1992).

Distribution: Baghdad and western desert (Leviton *et al*., 1992); unfortunately we did not have a collection of this snake.

(4) *Malpolon monspessulanus* (Hermann, 1804) (Pl.3).

Eight specimens of this snake were examined in this study (three of collection of INHRCM , 4 from Kurdistan Natural History Museum, and 1specimen was collected by Gafoor (Pers. Comm.) from Qaradagh; this snake has a color variation: dark brown with spots , uniform blackish brown, olive green with spots (Boulenger, 1920; Corkill,1932; Reed and Marx, 1959; Afrasiab and Mohamad, 2011), uniform light grassy green from north Erbil and Hawraman Mountain. Uniform yellow from South Erbil and silver or steely gray from Qaradagh Mountain.

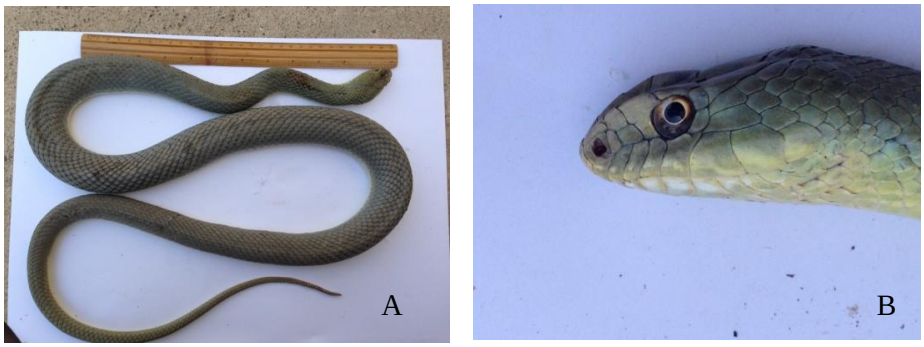


Plate (3): *M. monspessulana insignita* that collected from North of Erbil province; (A) Whole body, (B) Head. (Photos taken by authors)

Terentjive and Chernove (1965) said that the Russian *Malpolon* are brown with black spots and strips more pronounced in young. Amr and Disi (2011) also gave the same coloration for Jordanian collection as well as Venchi and Sindaco (2006) for Middle East; Carranza *et al*. (2006) said that populations of *M. monspessulanus* in some areas cannot be clearly assigned to either *M. m. insignitus* or *M. m. fuscus*, and those from the more arid parts of Iraq have either 17 or 19 scale rows. This species was recorded in the checklist of reptilian fauna of Basrah, South of Iraq by Afrasiab *et al*. (2018).

(5) *Malpolon moilensis* (Reuss, 1834) (=*Rhagerhis moilensis* Reuss, 1834) False cobra

For many years this snake was known to belong to the genus *Malpolon* Fitzinger, 1826 (Corkill, 1932; Khalaf, 1959; Leviton *et al*., 1992), but Amr and Disi (2011) have depended on head shape, the long neck, ribs spreading to the neck and dorsal scale in naming this genus with *Rhagerhis*.

Distribution: False cobra, this desert snake has a wide range of distribution extending from Iran, through Iraq into Arabian peninsula and North Africa (Rhadi *et al*., 2017); it is common in South and western desert of Iraq (Afrasiab and Ali, 1989). It is easily recognized by capability of spreading neck and presence of large black spots between the parietals and the angle of the mouth; 17 smooth dorsal scales, one is loreal, and body length is 137 cm.

Remarks: Main diagnostic character of this genus include the skull characters that formed the typical head shape of *Ragerhis moilensis* and the longer neck ribs (3mm) longer than in equal sized of malpolon of Amr and Disi (2011). That allows the spreading of the neck and the pattern of the dorsal scale which is drastically different in *Rhogerhis moilensis* than both of *Malpolon insignitas* and *M. monspessulana*. *M. moilensis* was listed in the checklist of Afrasiab *et al*. (2018) as one of reptilian fauna of Basrah, South of Iraq.

(6) *Spalerosophis diadema cliffordii* (Schlegel, 1837) (Pl.4)

Four specimens of this snake were described (1from Al-Anbar province, 1 from kirkuk province, 1 from Kurdistan Natural History Museum and 1 from Basrah province). It is a widely distributed snake in Iraq, it is found in wetlands, deserts and mountain regions. We put it with the opisthoglyphous snakes because the large adult specimens have enlarged grooved or hollow maxillary tooth ; 33 dorsal scale ; subcaudals are less than 80 plate; upper lip is separated from eyes by one row of scale ; frontal breaking down to four or more scales (Leviton *et al*., 1992; Afrasiab and Mohamad, 2014).

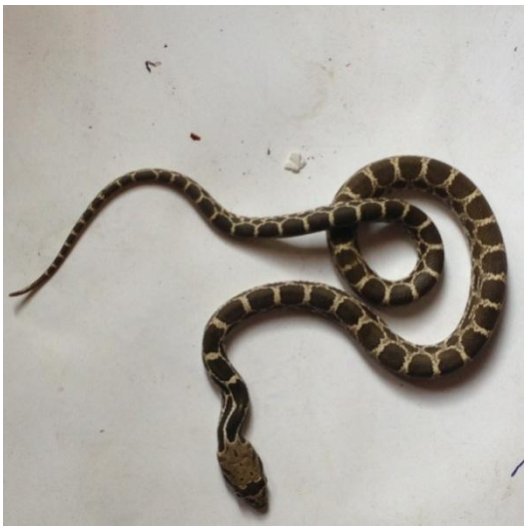


Plate (4): *Spalerosophis diadema* from North of Erbil province. (Photo taken by authors)

(7) *Spalerosophis microlepis* (Jan, 1865) (Pl. 5)

Only two specimens were found in Kurdistan Natural History Museum; they were collected from near Erbil. This snake is recently recorded in Qaladiza and Qaradagh Mountain, in Sulaymaniyah province (Afrasiab and Mohamad, 2014; Afrasiab *et al*., 2018). This snake is characterized by the presence of long lateral neck stripe and more than 90 subcaudals.

Plate (5): *Splerosophis microleps*; North East of Erbil. (Photo taken by authors)

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مراجعة لانواع جنس الثعابين خلفية الأنياب (Reptilia, Ophidia) في العراق

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الخلاصة

استعرضت الدراسة الحالية سبعة انواع من الثعابين خلفيه الانياب خفيفة السم Opisthoglypha (Reptilia, Ophidia) في العراق، و تناولت أهم الصفات التصنيفية المظهرية و تغاير الالوان ضمن النوع بحسب التوزيع الجغرافي لها و انتشارها.

تم التطرق الى اختلاف هذه الدراسة عن الدراسات المحلية الاخرى في عدد حراشف الثعبان *Telescopus tessellatus martini* (Schmidt, 1939) في العراق.