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ANNOTATED CHECKLIST OF REPTILIAN FAUNA OF BASRAH, SOUTH OF IRAQ

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ABSTRACT

Basrah province is situated at the extreme south of Iraq, it has an interesting reptile fauna (Squamata and Serpentes) and represents a land bridge between three different zoogeographical regions (Oriental, Palaearctic and Ethiopian).

This situation gave Basrah province a topographic specific opportunity for raising its own faunal diversity including reptiles; in this study Basrah province was divided into four main zones: the cities and orchards, marshes and wetlands (sabkha), the true dessert, the seashore and Shat Al-Arab.
Forty nine reptile species were recorded including snakes, sea and fresh water turtles, and Lizards; brief notes and descriptions for the rare and important species were provided and supported by Plates.

Key words: Basrah, Squamata, Serpentes, Turtles, Zoogeography.

INTRODUCTION

There are some previous lists for Iraqi herpetofauna (Boulenger, 1920 a, b) and for snakes Corkill (1932), Khalaf (1959), Mahdi and Georg (1969) and Habeeb and Rastegar-Pouyani (2016); most of them depended on references, there is no specific collection list for Basrah province except that of Afrasiab and Ali (1989a) for west Basrah.

The Basrah province is a very important area from the geographical point of view because it is a triple bridge connecting three different zoogeographical regions, at south east the oriental penetration, at south west the Arabian and Ethiopian penetration and from north the dominant Palaearctic region. Also it is in contact with Arabian Gulf (Leviton, 1986; Disi, 2002; Hawramany, 2007), these situations gave a rich biodiversity and species diversity.

MATERIALS AND METHODS

The present study depended on the collection of the Iraq Natural History Research Center & Museum, University of Baghdad (INHRCM) and the Basrah Natural History Museum, University of Basrah, Basrah province with some recently specimens collected by the authors,

brief descriptions and necessary measurements were presented along with specific descriptions and definitions for some important specimens. Along with present study on survey of Reptiles (Squamata and Serpentes) of this province, we will try to connect each collection with penetrations of these zoogeographical zones in this particular area within reptile diversity.

RESULSTS AND DISCUSSION

Some species are adapted to diurnal type of life while the others are nocturnal. The western reptilian fauna are adapted to desert life, others beneath houses and orchards; but the northern and eastern groups are adapted to marshes and wet lands mainly fresh water. From the other hand the seashore and Shat Al-Arab also have its own biodiversity related to brackish to marine water.

Remark: If any species is recorded as a common in a specific zone this does not mean that it's not found in other zones, but it means that it may be common in one habitat and rare in others.

(1)The cities and orchards zone:

The lizards

(A) Family, Gekkonidae

1-*Hemidactylus flaviviridis* Ruppell, 1840

2-*Cyrtopodion scabrum* (Heyden,1827)

According to Khalaf (1959) and Leviton *et al*. (1992) its synonyms reported as *Gymnodactylus scaber* (Heyden, 1827) *Cyrtopodion scaber* (Heyden,1827), respectively; then Afrasiab and Mohamad (2009) announced that *C. scabrum* (Heyden,1827) as a valid name in Iraq.

This is the only *Cyrtopodion* found in this area, Nader and Jawdat (1976) recorded *C. hetrocercus* in their list from Basrah; However, Leviton *et al*. (1992) stated that this gecko is found in elevation more than 1000 meters.

(B) Family, Lacertidae

1-*Acanthodactylus opheodurus* Arnold,1980

2-*Mesalina brevirostris* Blanford, 1874 (Pl. 1)

Plate (1): Preserved specimens of *M. brevirostris*; collected from the North of Basrah province.

(C) Family, Scincidae

Mabuya aurata (Linnaeus,1758) (=*Trachylepis auratus*)

The snakes

(A) Family, Typhlopidae

Ramphotyphlops braminus (Daudin, 1803) (=*Typhlops braminus*)

This small blind snake was known as a rare and the smallest snake of Iraq; Boulenger (1920a), Corkill(1932) and Khalaf (1959) recorded it from Basrah, they thought it was of Indian origin and introduced by ships. However, Afrasiab and Ali (1996) recorded it from Baghdad about 550 km north to studied area.

Body color dark brown–black and length does not exceed 10cm with 20 scale**s** around mid-body, nasal divided; mostly found in old houses.

Remark: It is a good example for oriental penetration in Basrah province because it is of an Indian origin.

(B) Family, Leptotyphlopidae

Leptotyphlops macrorhynchus (Jan,1861)

(C) Fmily, Boidae

Eryx jaculus jaculus (Linnaeus,1758) (Pl. 2, 8)

Plate (2): *Eryx jaculus jaculus*; from North of Basrah province.

(D) Family, Colubridae

Platyceps ventromaculatus Gray, 1834 (Pl. 3)

This snake is one of the critic species of snakes; its distribution is from India (Khan, 1997). Schatti and Schmitz (2006) mentioned that the Iraq and north Arabian species is not *P. ventromaculatus,* instead it is one of *Platyceps rhodorachis* complex and they explained that it may belongs to *Coluber chesneii* Martin,1838 of Northern Arabia. Afrasiab and Mohamad (2011) announced that this snake is distributed from foothill to Basrah and it is common in Baghdad city.

Plate (3): *Platyceps ventromaculatus*; from North of Basrah province.

(2) Marshes and wetland (Sabkha) zone

This ecosystem has a specific reptilian diversity as follow:

The lizards

(A) Family: Gekkonidae

Stenodactylus affinis (Murray,1884) (Pl. 4)

The marsh gecko was always found in the sabkha land beside marshes, it was previously recorded in Iraq from Kahla area south of Amara city (Southern Iraq) and from Karbala (Central Iraq) (Afrasiab, 1987). This gecko is easily recognized from *Stenodactylus grandiceps* by having two enlarged preanal scale with pores, three rows of granular scales under the toes and differ from *S. slevinii* in lacking the V shaped mark on the head and anal pores.

Plate (4): *Stenodactylus affinis*; from North of Basrah province.

(B) Family: Lacertidae

1-*Acanthodactylus boskianus* (Daudin,1802)

2-*Acanthodactylus grandis* Boulenger,1909

(C) Family: Scincidae

1-*Ablepharus pannonicus* Fitzinger,1823

This lizard has been listed with Rumaila's lizards (Afrasiab and Ali, 1989a), unfortunately the authors could not found it in this collection, but it is common in Baghdad.

2-*Mabuya aurata septemtaeniata* (Reuss,1834) (=*Trachylepis septemtaeniata*) (Pl. 5)

Some authors regarding *M. septemtaeniata* a separate species from *M. aurata* (Leviton *et al*., 1992; Rastegar-Pouyani *et al*., 2008); others mention it as a subspecies of *aurata* (Khalaf, 1959; Mahdi and George, 1969). This *Mabuya* (=*Trachylepis*) is recognized by parietal scales not in contact and having smooth nuchals.

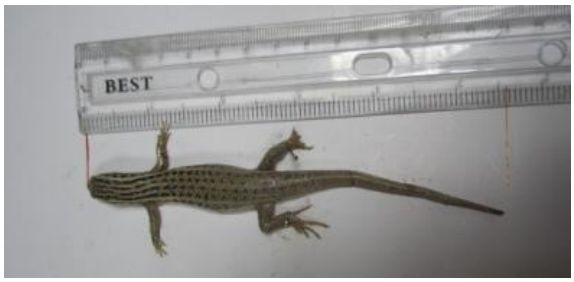

Plate (5): *Mabuya aurata septemtaeniata*; from North of Basrah province.

The Snakes

Family, Colubridae

1-*Natrix tessellata tessellata* (Laurenti,1768) (Pl. 6)

This polymorphic snake is the most common snake of this area hence there is huge color variation even in the same locality; there, it is spotted with red ventral's others have olive dorsal with white and black ventral's; some are dark gray without spots but all have ventral plates with black margin. This snake is recognized by inversed V shape mark on the back of the head ventral black spots and 19 rows of strongly keeled dorsal scale. There is another species of the same genus *Natrix natrix persa* recently recorded from Baghdad province (Afrasiab *et al*., 2012) which differs from *N. tessellata* in dorsal coloration and having two dorsolateral light lines and in having only one preocular, these snakes are of Palaearctic origin (Leviton *et al*., 1992).


Plate (6): *Natrix tessellata tessellate*; Right dark phase, left reddish phase, from North of Basrah province.

2-*Dolichophis jugularis* (Linnaeus,1758)

The authors could not collect this snake from Basrah province in the present study, but it was previously recorded by Boulenger (1920a) from this area. Habeeb and Rastegar-Poyani (2016) put Basrah within its distribution. Afrasiab *et al.* (2016) described *Dolichophis mesopotamicus*, as a new species of the same genus from upper Mesopotamia, so the *Dolichophis* population of Basrah province requires more collection and more taxonomic study.

3-*Spalerosophis diadema cliffordii* (Schlegel,1837)

The snake *S. diadema cliffordii* is one of the three large snakes of Iraq; recently the snake *S. microlepis* was recorded from Iraqi Kurdistan (Afrasiab and Mohamad, 2014). The species of *Spalerosophis* in Basrah have some variation, it looks like the specimen found in collection from Goor, South of Jordan (Lahony *et al*., 2002). The dorsal scales are with light brown spots, and less number of sub-caudal scales, more specimens are needed for further studies.

This snake is recognized by the presence of an elongated spot on the front of the head and the side of the neck, prefrontal and loreal scales are broken down to several small scales; 27 dorsal scales, supralabial scale does not touch the eyes.

4- *Malpolon monspessulana* (Hermann,1804) (Pl.7)

This large opisthoglyphous snake is with back fang mildly poisonous, adult about more than 150cm in length, its uniform color of dark olive or gray, that differs from northern population of *M. monspessulana insignita* (Geoffroy St. Hilaire,1809) which is spotted laterally and green in color (Afrasiab and Mohamad, 2011); that recognize by convex head, with two loreal scales and 17 dorsal scale rows.

Plate (7): *Malpolon monspessulana*; North of Basrah province.

Family, Elapidae

Walterinnesia morgani (Mocquard, 1905)

It was previously known that the Iraqi hoodless cobra belongs to *W. aegyptia* (Corkill, 1932; Khlaf, 1959), but later Nilson and Rastegar-Pouyane (2005) decided that the Iraqi and the eastern population belong to *W. morgani*. Its juvenile is not uniform black (Pl. 8) from Taq Taq south eastern Erbil. Hence, it is most probably that all of the northern population belong to *W. aegyptia*, while the south and southwest population belong to *W. morgani*. Boulenger (1920a) mentioned it as *Naja morgani* Mooquard. Unfortunately no collection of *W. morgani* was available to authors.

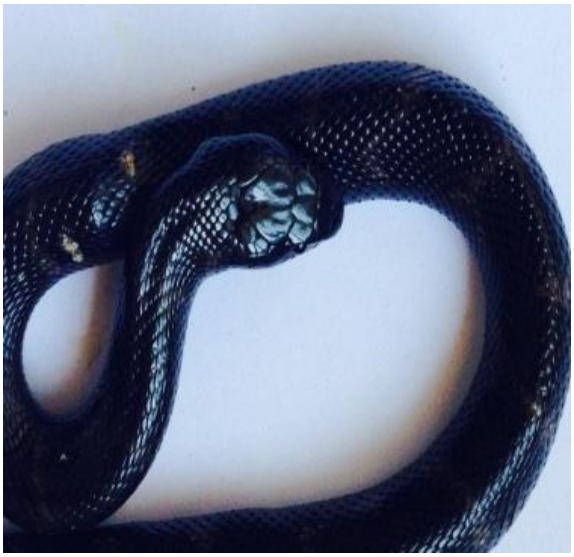

Plate (8): Uniform black juvenile of *Walterinnesia aegyptia*; from Taq Taq south eastern Erbil (Photographed by Dr. Sarbaz Ibrahim Mohamad of Kurdistan Nat. Hist Mus., University of Salahaddin).

Family, Viperidae

Echis carinatus sochureki Stemmler, 1969 (Saw-scaled viper) (Pl. 9)

It is the most dangerous poisonous snake in Iraq because it always found near human settlements; it is common in Thi Qar province but rare in Basrah province (Afrasiab *et al*., 2012).

Plate (9): *Echis carinatus sochureki*; North of Basrah province.

Turtles
Family, Trionychidae
Rafetus euphraticus (Daudin,1802) (Pl.10)

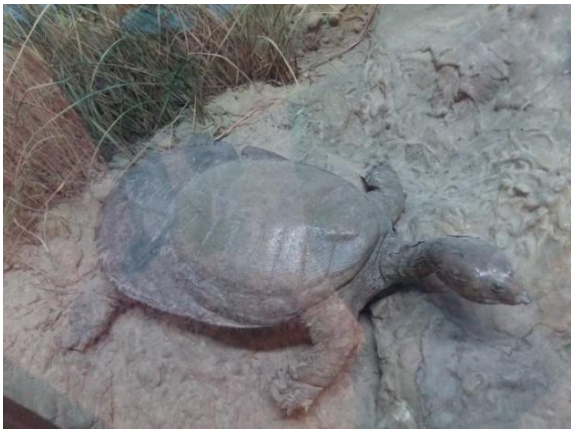

Plate (10): *Rafetus euphraticus*; mounted specimen in the exhibition hall of the INHRCM.

Family, Emydidae
Mauremys caspica caspica (Gmelin, 1774)

It is a common fresh water turtle in Iraq and found even in the deserts wherever water is found (Afrasiab and Ali, 1989 a); true desert of western Zobair and South Rumaila Habitat, this area is very rich in reptile diversity.

Eighteen reptilian species were recorded and some of them proved to be specific for this habitat, most of lizards and snakes are nocturnal and active at the night or early morning or late evening to avoid sun heat; at the rest of the day time they burrow themselves under loose sand.

The true dessert zone
The lizards
Family, Gekkonidae
1-***Stenodactylus slevini*** Haas, 1957 (Pl.11)

Plate (11): *Stenodactylus slevini*; from Rumaila desert western Basrah province (Preserved in INHRCM)

2-*Stenodactylus doriae* (Blanford, 1874)
3- *Bunopus tuberculatus* Blanford, 1874

Family, Agamidae
1- *Trapelus persicus fieldi* (Hass and Y. Werner, 1969) Afrasiab and Ali (1989a) (Pl.12)

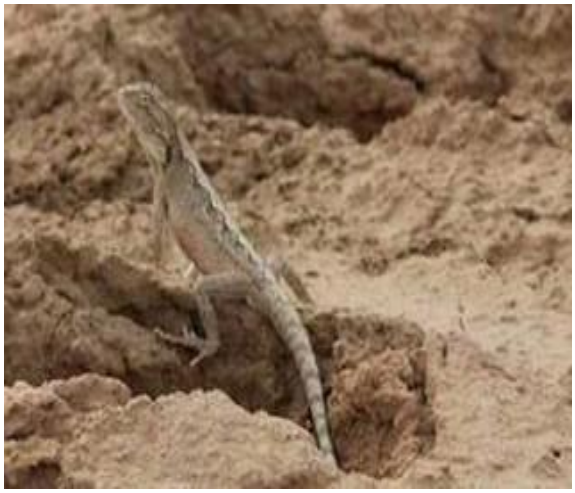

Plate (12): *Trapelus persicus fieldi*; Rumaila desert, West of Basrah province.

2-*Trapelus pallidus haasi* (Y. Werner,1971)
3-*Phrynocephalus arabicus* Anderson, 1894

Two specimens of *P. arabicus* in the collection of INHRCM were collected from Basrah province, without naming the exact locality. Al-Barazengy (2015) recorded *Phrynocephalus maculates* Anderson, 1872 from Samawa district, Muthanna province, the north of the present studied area, these Lizards are recognized by the rudimentary ear not clear and lacking pre anal or femoral pores.

4-*Uromastyx aegyptius microlepis* (Blanford,1874)

Afrasiab and Ali (1989a) founded dead *Urmastyx* animals more than the alive ones in Rumaila area because of pollution caused by petroleum industry activities in the area.

Family, Lacertidae

1-*Acanthodactylus schmidti* Haas,1957 (Pl.13). This is one of the beautiful lizards in this area. It is recognized by 3 large supraoculars, the forth is divided into dorsolateral scale larger than mid-dorsal scales 12-16 ventral plates and 32-54 keeled dorsal scale rows.

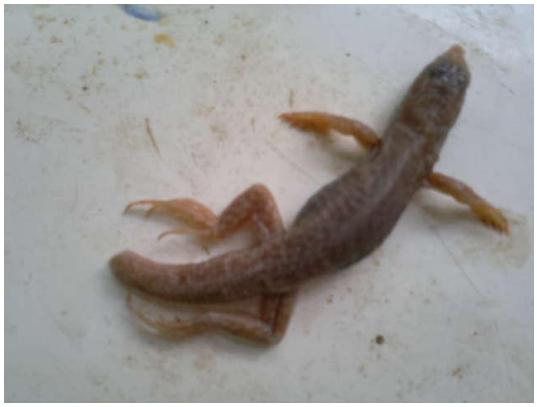

Plate (13): *Acanthodactylus schmidti*; Rumaila desert west of Basrah province (from collection of INHRCM)

2-*Acanthodacylus scutellatus hardyi* Haas,1957

Family, Scincidae

Scincus scincus Blanford,1881

Family, Trogonophidae

Diplometopon zarudnyi Nikolsky, 1907. This burrowing limbless lizard is recorded by Afrasiab and Ali (1989a) from Rumaila desert, west of Basrah province. Niazi (1979) described *Diplometopon shueaibi* a new species from Karbala . Rudayni *et al*. (2017) discoursed the variation within the Saudi Arabian Trogonophidae and they did not refer it to *D. shueaibi* Niazi, we believe that *D. shueaibi* is a valid name for central Arabia and west Karbala of Iraq.

The Snakes

Family, Boidae

Eryx* (*Pseudogongylophis*) *jayakari Boulenger, 1888 (Pl.14)

This snake has been recorded from Rumaila desert by Afrasiab and Ali (1989a).It is recognized by position of the eyes visible from above, presence of mental groove 37-51 dorsal scale rows.

Plate (14): *Eryx jayakari*; Rumaila desert, west of Basrah province. (Preserved in INHRCM)

Family, Colubridae

1-*Malpolon moilensis* (Reuss,1837) (Pl.15)

This snake when feels a danger will raise the anterior part of the body as in cobra; dorsal scales are smooth in 17 rows. Head is convex with two black spots on each side, it is opisthoglyphous.

Plate (15): *Malpolon moilensis*; Rumaila desert (Preserved in INHRCM).

2-*Lytorhynchus diadema gaddi* Nikolsky,1907

This snake was recorded from Rumaila desert, west of Basrah province (Afrasiab and Ali, 1989a), it is one of two snakes in genus *Lytorhynchus* recorded so far from Iraq.

The second species is *Lytorhynchus kennedyi* Schmidt from Al-Qa'im district, Al Anbar province (Afrasiab and Ali,1989b).

3- *Psammophis schokari* (Fosskal,1775)

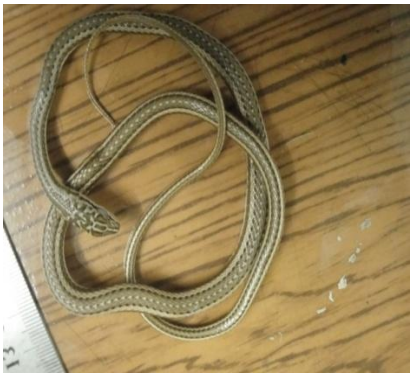

Plate (16): *Psammophis schokari*; Rumaila west of Basrah province.

Family, Viperidae

Cerastes cerastes gasperettii Leviton and Anderson,1967 (Pl.17)

In the same area, this is a poisonous horned viper; some individuals have horns while others without horns; most of the day time it is hidden under the soft sand or bushes.

Plate (17): *Cerastes cerastes gasperettii*; From Rumaila desert west Basrah province (Preserved in INHRCM).

The seashore and Shat Al-Arab zone

There are few records of sea turtles and sea snakes from these areas, but there is a collection of only two sea snakes, *Enhydrina schistosa* and *Hydrophis cyanocinctus*; and one plaster model of the sea turtle *Dermochelys coriacea schlegelii* in INHRCM with measurements taken from real specimens from Basrah province. Furthermore, in this study only sea turtles and sea snakes, recorded by Mahdi and George (1969) and Leviton *et al.* (1992), that listed here:

Turtles
Family, Cheloniidae
1-*Ertmochelys imbricate* (Linnaeus,1766)
2-*Dermochelys coriacea* (Linnaeus,1766) (Pl.18)
The species above were found in seashore.
3-*Rafetus euphraticus* (Daudin, 1802)
This species was found in Shat Al-Arab.

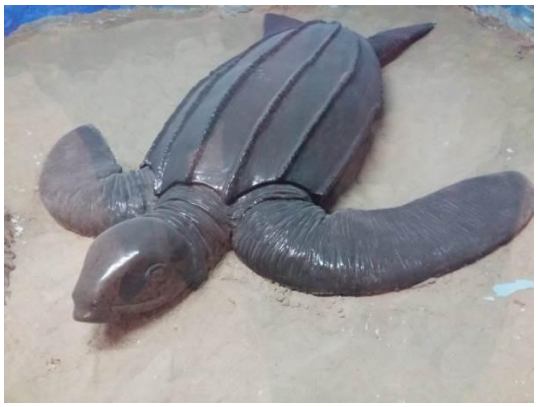

Plate (18): *Dermochelys coriacea*; plaster model in the INHRCM (It is a copy of real one dead in Basrah province).

Sea snakes:
Family, Hydrophiidae
1-*Enhydrina schistosa* (Daudin, 1803)
2-*Hydrophis gracilis* (Shaw, 1802)
3-*Hydrophis spiralis* (Shaw, 1802)
4-*H. cyanocinctus* (Daudin, 1803)
5-*H. ornatus* (Gray, 1842)
6-*H. lapemoides* (Gray,1849)
7-*Pelamis platurus* (Linnaeus,1766)
8-*Lapemis curtus* (Shaw, 1802)

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قائمة مرجعية للزواحف في محافظة البصرة، جنوب العراق

سامان روستم افراسياب، أزهار احمد الموسوي وهند ضياء هادي
مركز بحوث و متحف التاريخ الطبيعي
جامعة بغداد

تاريخ الاستلام: ٢٠١٨/٠١/٠٣ **تاريخ القبول: ٢٠١٨/٠٤/٠٢**

الخلاصة

تقع محافظة البصرة في أقصى جنوب العراق وتمتلك ميزة خاصة في تنوع الزواحف (العضايا والحيات) وهي تشبه جسر بين ثلاثة مناطق حيوانية- جغرافية عالمية (الشرقية، القطبية القديمة و الاثيوبية)، أعطى هذا الموقع لمحافظة ألبصره خصوصية في التنوع الإحيائي ومن بينها الزواحف.

من اجل تسهيل الدراسة قسمت محافظة البصرة إلى أربعة مناطق رئيسة و هي: المدينة والبساتين، الأهوار والمستنقعات، الصحراء الحقيقية و ساحل البحر وشط العرب.

استعرضت الدراسة تسجيل ٤٩ نوعاً من الزواحف تتضمن الحيات وسلاحف المياه العذبة و البحرية والعضايا. أعطي الوصف واهم ألملاحظات التصنيفية لبعض الأنواع النادرة معززا بالصور.