

## RESEARCH NOTES ON RECORDING SOME RARE VERTEBRATES FROM KURDISTAN, IRAQ

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### ABSTRACT

A mounted specimen of a mustelid animal deposited in the Kurdistan Museum of Natural History, Salahaddin University, Erbil proved to be *Mustela erminea* (Linnaeus, 1758) and represents a new record for the mammalian fauna of Iraq. Its measurements and some biological noted are provided. Also, two passerine birds; the Red-headed bunting, *Emberiza bruniceps* Brandt, 1841(Family, Emberizidae) and the Variable wheatear, *Oenanthe picata* (Blyth, 1847) (Family, Muscicapidae) were recorded for the first time in Iraq. Furthermore, the tree frog *Hyla savignyi* Audouin, 1829 was found in two locations north east of Iraq with spotted dorsum and having interesting behavior in having the capability of body inflation and hiding the head downward.

Key words: *Emberiza bruniceps*, Iraq, Kurdistan, *Mustela erminea*, *Oenanthe picata*.

### INTRODUCTION

The fauna of Iraq still require further attention to collect more data from the ecosystems, for discovering more fauna and flora of this part of the world. The present study gives an insight for previewing some of the hidden knowledge about some of the rare and important vertebrate species.

According to Afrasiab (2007) the Iraqi Kurdistan zoogeography may be subdivided into five ecozone categories: Alpine ecozone: more than 1500 m. a.s.l. covered by dwarf shrubs and rich in vegetation with prominent and specific animal diversity; Irano-Turanian ecozone: between 300-1500m. It's the most important zone. It is rich in biodiversity, human population and man-made orchards with rather a plenty of water resources; foothills up to 300m. The area is arid except in the valleys where rivers and streams pass through which mostly used for agriculture; Steeps between the mountains and foothill: most of these steeps used for agricultures and human settlement; River sides: the main rivers covered by this project Zalem River from Halabjah, Serwan (Diyala) River and Tigris River.

Each of the above subdivisions has special faunal diversity which differs from the other parts of Iraq; for example, wild goat *Capra aegagrus*, Chukar partridge *Alectoris chukar kurdistanica*, Transcaucasian Rat Snake *Zamenis hohenackeri*, Caucasus Frog *Rana camerani* from Alpine ecozone. For Irano-Turanian ecozone, the prominent mammal: Squirrel *Sciurus*

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*anomalus*, Birds: *A. chukar asoica* and *Garrulus glandarius*, Reptile: *Timon princeps kurdistanica*, amphibian *Neurergus microspilotus*-Kurdistan newt. For foot hill steppe region and river side the important mammals are Otter *Lutra lutra* and Persian gazelle *Gazella subgutturosa*, birds: Chukar *A. chukar werae*, Black partridge *Francolinus francolinus kurdistanicus* and Great bustard *Otis tarda*. amphibians, frogs *Pelophylax ridibundus* and *Hayla* sp. and reptile snake *Dolicophis jugularis* (Allouse, 1962; Guest and Al-Rawi, 1966; Harrison, 1968; Leviton *et al.*, 1992; Afrasiab and Al-Rawi, 2010; Afrasiab and Mohamad, 2011).

The present expedition is focusing on rare uncommon vertebrate species of Iraqi Kurdistan and comparing them with those in other regions of Iraq.

#### MATERIALS AND METHODS

This paper is one of the results of a project undertaken to define the rare vertebrates of Kurdistan, Iraq. The work was achieved during 2014-2015, it was supported and financially covered by Ministry of Higher Education and Scientific Research, Republic of Iraq.

Data of this work depend on a specimen of Stoat kindly provided by Dr. Sarbaz I. Mohamad director of Kurdistan Museum of Natural History of Salahaddin University who has collected it from Halgurd Mountain north of Erbil. The other source is the field observation of birds conducted by authors at some parts of Iraqi Kurdistan region. On the other hand, eight specimens of two collections of *Hyla savignyi* Audouin, 1829 from two different locations (Bakrajo south of Sulaymaniyah , 21 March 2014; and from south Diyala ,January 2014 northeastern Baghdad) were transported alive and represented the material of laboratory work observations on the tree frog, while the field observations were taken immediately at collection sites.

#### RESULTS AND DISCUSSION

First record of stoat, short-tailed weasel *Mustela erminea* (Linnaeus, 1758) (Mamalia-Mustelidae) from Iraqi Kurdistan (Pl. 1).

Raza (2013) photographed a Mustelid from Barzan Wildlife Reserve north of Erbil, of winter white color pattern and assigned it to be *Mustela nivalis*. The present observations reveal that weasel *M. nivalis* distributed in Irano-Turanian ecozone and also in foothills between 300m to less than 1500m a.s.l. while the stoat *M. erminea* in Alpine ecozone more than 1500 m a.s.l. covered by snow in winter, the color is changed to white probably for mimicry in harmony with the surrounding snow for protection from larger predators and also to help in catching the prey.

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**Plate (1):** *Mustela erminea* collected from Halgurd peak, Hasarost Mountain north east of Erbil kept in Kurdistan Museum of Natural History, Salahaddin University (Date of collection was not recorded).

For many times we observed this stoat at Alpine ecozone of Kurdistan mountains of altitude more than 2000m at winter of 2014-2015 especially of winter color turned to white and tail with clear black tip. Unfortunately we could not catch any of them.

Measurements: body length 253mm, tail length 90mm, hind foot broken about 40mm. Color: upper side yellowish brown, ventral yellowish white, tail tip black.

Subfamily Mustelinae in Iraq represents three genera and species: *Martes foina*, *Mustela nivalis* and *Vormela peregusna*; and all of these are common in Irano-Turanian ecozone of Iraqi Kurdistan (Al-Sheikhly *et al.*, 2015). They were found previously in Anab village north of Halabjah, altitude 700m a.s.l. (Lahony *et al.*, 2013). Workers on Iraqi mammals did not record stoat *Mustela erminea* in Iraq (Hatt, 1959; Harrison, 1968; Mahdi and Georg, 1969; Amr, 2009; Al-Sheikhly *et al.*, 2015). Of genus *Mustela*, only Weasel *Mustela nivalis* had been recorded so far from Iraq (Raza, 2013; Lahony *et al.*, 2013; Al-Sheikhly *et al.*, 2015). Al-Sheikhly *et al.* (2015) stated that it is confined to the mountains of northern Iraq recording it in Shirin Mountain in Barzan area, Erbil Province and Hawraman Mountain, Sulaymaniyah province. The Stoat *M. erminea* was recorded in this study from Halgurd peak, Hasarost mountain, northeast of Erbil.

Csurhes and Markula (2010) mentioned that the stoats are habitat generalists found wherever suitable prey is available and their habitats include forest-edge, scrub, alpine meadows, and riparian woodlands. Only deserts and dense forests are avoided (Reid and Helgen, 2008). It has a circumboreal range of distribution throughout northern temperate, subarctic, and arctic regions of Europe, Asia and North America, from Greenland and the Canadian and Siberian arctic islands south to about 35° N (King, 1983; Fagerstone, 1987; Reid and Helgen, 2008); it was only recently reported from Turkey (Reid *et al.*, 2016). Place of collection of present specimen is Halgurd peak at Hasarost Mountain (Pl. 2) near the Iranian border at 36° 43' 47"N in the ecoregion Zagros Mountains Forest Steppe (PA0446) and falls within the distribution range of the stoat given by (King 1983; Fagerstone, 1987; Reid and Helgen, 2008), this mountain retains some snow throughout the summer (Nature Iraq, 2013).

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**Plate(2):** Halgurd peak, Hasarost mountain with snow at end of July.

The two species of genus *Mustela* recorded in Iraq could be differentiated depending on their size and tail; according to MISE (2013) the weasel *Mustela nivalis* is the smallest of the small mustelids and the smallest of all the carnivores, it has short legs and a slender body (17-24cm). The tail is very short (3-6cm) and often hard to see with uniform chestnut brown color and no black tip. The stoat *M. erminea* is slightly larger (20-30cm) than the weasel and has a longer tail (7-12cm) with a distinctive black tip covering the rearmost third. If live animals are seen, the black tail tip is a key identifying feature. So, although there is quite a difference in size between weasels and stoats, the black tip to the stoat's tail (which is always present, even in white winter coat) is usually the only visible difference when an animal is seen at a distance.

### **Records of two passerine birds (Aves, Passeriforms) from Kurdistan region of Iraq**

Family Emberizidae, Red-headed bunting, *Emberiza bruniceps* Brandt, 1841: It breeds in central Asia and wintering in India and Western Europe and northern Iran (Byers *et al.*, 2013). At the time of migration, it may reach to some parts of Middle East, for example it was recorded from Kuwait and Iran (BirdLife International, 2016a) and we observed it in Kurdistan of Iraq from two locations north of Halabja city. First one was in Anab village in April (altitude 400m a.s.l.) and the second in Zarelahall in May (altitude 700m a.s.l.), both of them were at the time of maturing White Mulberry, which seems to feed on its fruits, also it was the time of breeding season of the bird itself. This may suggest it is breeding in the area. This is regarded the first confirmed record for this bunting in Iraq. It was not recorded by Allouse (1962) but he mentioned that it may be found in Iraq. Salim *et al.* (2006) did not mention it in their list of Iraqi birds also.

Family Muscipidae, variable wheatear, *Oenanthe picata* (Blyth, 1847): a single male specimen was seen among small stones in uncultivated agricultural field to the west Halabja city on April 2014. The following remarks were observed: the underwing is almost gray in color, the breast looks very dark in flight and the black color nearly covers belly. Unfortunately, we could not take a picture for it at that moment. According to Birdlife International (2016b) this species has extremely wide range. Recording this bird in Iraq is not surprising since it was reported from Israel (Shirihai, 2012) who could not get a photo and this would far extend its distribution from the East regions of Iran toward the eastern banks of

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the Mediterranean Sea. However, nothing could be said about its status in Iraq now until more information will be available.

Notes on color variation and behavior of spotted tree frog *Hyla savignyi* (Amphibia-Hylidae) from northeastern of Iraq

*Hyla savignyi* Audouin (Amphibia, Hylidae), Reed and Marx (1959) and Balleto (1985) reported that the distribution of tree frog *Hyla savignyi* is restricted by area altitude. Disi (2002) restricted the distribution for Jordanian populations to temperature and water body, but for Iraq we have a collection of tree frogs from all zoogeographic zones (high mountains, foothill, semi deserts, and extreme southern marshes of Amara and Basrah). In eastern population it shares habitat with *Bufotes surdus* and *Pelophylax ridibundus* while the population of south and north it shares habitat with *B. viridis* and *P. ridibundus* (Afrasiab and Ali, 1988) wherever water body is found. Also, they showed that the breeding season would start from December, but we ascribe it to temperature for example for Sulaymaniya north east of Iraq and other Kurdistan provinces breeding starts in normal case from the last third of March immediately after hibernation, while in extreme south probably there is no hibernation from early December, instead, sometimes in hot summer day when some part of the marsh dried they enter aestivation. In one stream from south of Diyala north of Baghdad we collected *Hyla*, *Bufo*, and *Pelophylax* in early December.

Color variation: In two collections of *Hyla savignyi* from two different locations (Bakrajo south of Sulaymaniyah and from south of Diyala, northeastern of Baghdad) it was seen that they have dorsal color pattern with three series of dorsal spots unlike the other populations which have uniform green dorsal color. The lateral strips wider and covers the invisible tympanum (Pl. 3,4,5). On transporting to laboratory aquarium they rapidly change the dorsal green color to yellow brown with spots.

There is an interesting behavior in these frogs; they have the capability of inflation of the body, the body inflates to appear larger in size if it is disturbed and hiding the head downward. The authors could not be able to notice such a behavior previously in any of the Iraqi frogs.

Measurements of largest male, head body length = 4.6cm, head width = 1.9cm, femur = 2cm, tarsus+digits = 3cm.



**Plate(3):** Spotted *Hyla savignyi* from Bakrajo south Sulaymaniyah north eastern of Iraq(21March 2014).



**Plate (4):**Spoted *Hyla savignyi* in aquarium



**Plate (5):** Spoted *Hyla savignyi* , from southern Diyala inflate its body (January2014).

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ملاحظات بحثية حول تسجيل بعض الفقرات النادرة من كردستان، العراق

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### الخلاصة

سجل النوع *Mustela erminea* (Linnaeus, 1758) من فصيلة السراييب لأول مرة للباثن المجموعة الحيوانية العراقية، من النماذج المحفوظة في متحف كردستان للتاريخ الطبيعي- جامعة صلاح الدين- أربيل، اعطيت القياسات وبعض الملاحظات الحياتية لهذا النوع.

كما تم تسجيل نوعين من الطيور العصفورية لأول مرة في العراق وهما الدرسة حمراء الرأس *Emberiza bruniceps* Brandt, 1841 من عائلة الدرسة *Emberizidae* والأبلق المتغير *Oenanthe picata* (Blyth, 1847) من عائلة خاطفات الذباب *Muscicapidae*.

علاوة على ذلك، وجد ضفدع الأشجار *Hyla savignyi* Audouin, 1829 في منطقتين في شمال شرق العراق، الذي يتميز بظهر مبقع وسلوك مميز بامتلاك القدرة على تضخيم الجسم وإخفاء الرأس نحو الأسفل.