

FAUNA AND FLORA OF HAWRAMAN MOUNTAIN  
(Part one)  
HAWRAMAN LOWEST ZONE, KURDISTAN PROVINCE NORTH  
EAST OF IRAQ

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ABSTRACT

In this study we try to make a first step for making a new list for fauna and flora of Kurdistan in particular and Iraq in general. This is very important study of biodiversity of Iraq. We recognize 52 migratory and resident birds including *Alectoris chukar asoica* which is recently described. Also, 20 amphibians and reptiles including two snakes recently recorded *Zamenis hohenackeri* and *Platycephalus ladacesis*, a new form of *Asaccus* sp. and sub-species of *Varanans griseus caspeius* for the first time in Iraq, with many rare specimens. Thirteen different species of mammals were recognized, with comments on 5 species of freshwater fishes, 12 species of ticks and 7 species of butterflies. For the flora, 8 wild large trees and 70 flowering plants identified including some rare and important species for the first time in this area. Figures are also given for the rare species.

INTRODUCTION

Kurdistan of Iraq is a mountainous area situated at the northern and north eastern parts of Iraq, varying from some 500-800 m in altitude in the lowest valleys to from 2000-3600 m at the summits of the highest ranges, and it is with a cold winter and relatively high rainfall upwards to 800 mm and the mountains above approximately the 1800 m level are snow-bound for several months and snow often falls in the valleys, while the summer though hot and dry, is comparatively of shorter duration than on the other parts of Iraq (Guest and Al-Rawi, 1966). These factors contribute to richer biodiversity situation especially the floral components.

This area seems unique since it represents the Irano-Tranian and Alpine ecozone extension reaching the Iraqi territories with rather rich fauna and flora. Bisan valley and Daray Mar, Halabja, Sulaimaniya province, as a part of mountainous region is of special interest. It rests just beyond high mountains of Hawraman which provide a plenty of water, both from rains and ice and springs. The wild forests of *Quercus*, *Pistacia*, *Crataegus*, *Prannus* and *Amygdalus* sp. are intersected by strips of deforested cultivated land. Many important caves are found in Daray Mar vale in one of the caves named Hamashwana we found Stone age painting, Fig. (1) its approximately of 30, 000 years ago. As a valley, the area is with a relatively higher temperature and more water supplies, compared with surrounding heights, the two factors that play important role in providing suitable habitats for the diversification of life forms.

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On the other hand, Iraq officially joined the CBD (convention on biological diversity) agreement in 2009 that ask the parties to prepare lists of their own national biodiversity. Combination of these two mentioned subjects seems vital to put a step in fulfilling the requirements of that international agreement.

The aim of this manuscript is to study natural heritage provide systematic lists of fauna and flora of Bisan-Tawera and Daray Mar valley as an introductory effort to prepare more comprehensive lists for Kurdistan of Iraq, a project that Iraq Natural History Museum currently undertakes

## RESULTS AND DISCUSSION

**Why this two valley:** This two valley is a sample of all Irano-Turanian ecozone of Iraqi Kurdistan mountain, also it's one of the most beautiful natural heritage place, rich in biodiversity with a plenty of water. Edmonds 1945 visit this area as the guest of Afrasiab beg asenior member of the Lahon family, and he said about orchard and walnut groves, he didn't seen such arrangements not in Iraq and not in Persia. Abdulla Goran famous Kurdish poet was with hem and he described the nature of those Valleys by his famous poetry (A trip to Hawraman) Edmonds (1957).

**Ecological Succession:** There is two type of secondary ecological succession occurs in valley Besan-Tawera through past three years.

1. secondary ecological succession occurs by the effect of global warming and dryness specially in winter season even if there is aplenty of spring rainfall, many plant dose not grow at all and others week and does not give healthy fruit for example in 2007 there was many flouring plant such us , *Arum sp. Fig. ( )*, *Allium calocephalum*, *Allium subhirutum*, and *Iris*. But disappear in 2008 and 2009 or very week and short. The large trees as walnut, pyrus, pomegranate and grape in the 2010 do not give strong and healthy fruit because of the same reason.
2. The most clear secondary succession occurs in Besan-Tawera when the valley catch fire the last summer many bushes and grasses which was good for pasture disappear or clear reduction in its population. such as *Frulogo*, *Hordeum and poa bulbosa* instead some other plant become dominant such as *Echinops*, *Silybum*, *Cirsium*, *Carlina*, *Adonis* `Campanula, *Papaver*. Also some Arthropods as Ticks was in high population density after the fire it disappear in this valley.

**Humans population:** There was 16 village distributed in this area, at the time of Sadam forced the people of this village to migrate to the town and camps, and destroying all the villages even after removing of Sadams pour most of the families dos not return to villages because they adapted to city's life. Mr. Lahony said with a deep sorrow, nothing will return back as it was, he Said it was march 1973, at sun set, I was sitting on that hill, the clouded sky little cold with drizzle the ground was painted with green, yellow, purple and red wild spring flowers and grasses. The shepherd comes back from the mountain with sheep's and goats to the village. Each pretty young girls of the village with beautiful Kurdish dress caring cooking pot and there young limb to milking there sheep's, each one calling her sheep's by a name ( Galawez, Kazal ...etc) the shepherd potting his tea pot on the fire for making tea later play on his clarinet with beautiful tune, from the other side of the front mountain a man was working in grape fields and singing a famous sia-chamana song, near the top of the mountain chukar partridge covey calling (kagak kowa), the limb calling for their mother, the cock of the village crowing, the mosque of the village calling allah akber. All these was mixing together

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forming a wonderful heaven symphony I was feeling at that time the sprite of God and angels was very close to me. So do you think this will return back again ?.

**The caves:** There is many important caves in this area and they have names.

1-Hama shwana cave also called sanctuary of Bawanawos its very important cave because we found inside the Stone Age paint belonging to Archic-Homosapiens more than 30, 000 year B. P.

2-Ashkawte Gawaran, this is a mysterious cave and there is an old stairway about 50 M. high from the 1<sup>st</sup> step to the opening of the cave. Its history still critic and doubtful thy said probably place of prayer and contemplate of Zardashte religious.

3-Ashkawte chlgaze. It is about 40 meter deep.

4- Ashkawte Khan Ahmad Khan It is large and wide cave.

5-. Ashkawte Afrasiab Bag, 5- Ashkawte momea

Each of these caves have its own history.

**Biodiversity:** Below is a decline of the scientific name of some fauna and flora of this partecular zone.

#### **Birds**

We depend mainly on Allouse (1960-1962), Vauri (1959) and Salim, *et al.* (2006) for Identification. Resident, Common.

*Alectoris chukar asoica*, Lahony and Rawi, 2010., Asoi chukar.

*Ammoperdix griseogularis* (brandt, 1830) Seesee Partridge.

*Coracias garrulus* L. 1758., European Roller.

*Dendrocopos syriacus* (Emprich and Ehrenberg, 1833) Syrian Woodpeckers

*Pica pica* (L. 1850) Magpie.

*Garrulus glandarius* (L. 1758) Jay.

*Corvus corone* L. 1758., Hooded Crow.

*Corvus corax* L. 1758., Raven.

*Galerida cristata* L. 1758., Crested lark.

*Passer domesticus* (L. 1758) House sparrow.

*Parus caeruleus* L. 1758. Blue Tit.

*Sitta tefronota* Sharpe, 1872. Rock Nuthatch.

*Carduelis carduelis* L. 1758, Goldfinch.

*Columba livia* Gmelin, 1789. Rock dove.

*Cuculus canorus* L. Cuckoo. Two pares were seen in 25 April

*Clamator glandarius*, L. 1758, Great spotted Cuckoo. It is resident.

*Otus scops*, L. 1758, Scops Owl.

*Athene noctua*, Scopoli, 1769, Little Owl.

Common migratory: Autumn and winter.

*Aquila chrysaetos*, L. 1758, Golden Eagle.

*Milvus migrans*, Boddaert, 1758, Black kite.

*Neophron percnopterus*, L. 1758, Egyptian Vaulture.

*Falco tinnunculus* L. 1758, Kesttral.

*Falco columbarius*, L. 1758. Merlin.

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*Bubo bubo*, L. 1758. Eagle Owl.  
*Scolopax rusticola*, L. 1758. Woodcock.  
*Columba palumbus*, L. 1789. Wood Pigeon.  
*Streptopelia turtur*, L. 1758. Turtle Dove.  
*Merops apiaster*, L. 1758, European Bee-eater.  
*Upupa epops*, L. 1758, Hoopoe.  
*Troglodytes troglodytes*, L. 1758, Wren.  
*Lanius nubicus*, Lichtenstein, 1823, Masked Shrike.  
*Turdus viscivorus* L. 1758. Mistle Thrush.  
*Turdus merula*, L. 1758. Blackbird.  
*Parus major*, L. 1758. Great Tit.  
*Parus lugubri*, Temminck, 1820. Sombre Tit.  
*Phoenicurus phoenicurus*, L. 1758. Redstart.  
*Erithacus rubecula*, L. 1758. Robin  
*Emberiza melanocephala*, Scopoli, 1769. Blackheaded Bunting.  
*Petronia petronia*, L. 1766. Rock Sparrow.  
*Sturnus roseus*, L. 1758. Rosecoloured Starling.  
*Oriolus oriolus*, L. 1758. Golden Oriol.  
*Aluda arvensis*, L. 1758. Skylark.  
*Muscicapa hypoleuca*, Pallas, 1764. Pied Flycatcher.  
*Motacila flava*, L. 1758. Yellow Wagtail.  
*Silvia hortensis*, Gmelin, 1789. Orphean Warbler.  
*Silvia conspicillata*, Temminck, 1820. Spectacled Warbler  
*Silvia communis*, Latham, 1758. Whitethroat.  
*Phylloscopus collybita*, Vieillot, 1817. Chiffchaff.

#### Mammalia

We depend on Harrison (1964-1972), Amr (2000), Brink (1967) and Hatt (1959) for identification.

*Canis aureus* Linnaeus, 1758. Asiatic Jackel .  
*Vulpes vulpes* L. 1758. Common Red Fox.  
*Martes foina*, Erxleben, 1777. Ston marten.  
*Vormela peregusna*, Guldensaedt, 1770. Marbled Polecat  
*Meles meles*, L. 1758. Badger  
*Mustela nivalis*, L. 1766. Weasel  
*Sus scrofa* L. 1758. Wild Boar  
*Lepus capensis*, L. 1758. Brown Hair.  
*Sciurus anomalus*, Guldenstedt, 1785. Squirrel  
*Hystrix indica*, Ker, 1792. Indian crested porcupine  
*Mus musculus*, L. 1758. House mouse  
*Microtus socialis*, Pallas, 1773. Social Vole: was infected by Nematodes, *Entrobium vermicularis*.  
*Spalax leucodon*, Nordmann, 1840. Mole Rat.

#### Amphibians and Reptilians

We depend on Leviton, *et al.* (1992), Anderon (1999), Latifi (1991) and Afrasiab and Mohamad (2009, 2011) in Identification.

*Bufo viridis* Toad  
*Rana ridibanda* Frog  
*Hyla savignyi* Audouin, 1812: It has some color variation as all the *hyla* of eastern Iraq has a series of dark spots on dorsal side of the body.

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*Testudo graeca iberica* Land tortoise

*Laudakia nupta* De Filippi, 1843

*Ophisaurus apodus*, (Pallas, 1775) Fig. (1).

*Asaccus griseonotus*, Dixon and S. Anderson, 1973 The Hawramans *Asaccus* has some variation with *griseonotus* it required more study.

*Cyrtopodion scaber* (Heyden, 1827)

*Lacerta sp.* Single specimens collected was dead and half of the body was eaten by wasps, this specimens is differ from other Iraqi *Lacerta*, in having longer tail about three time of body length, with strongly keeled imbricate dorsal scale, and 5<sup>th</sup> chin shield large and well develop. It need more collection and more study.

*Ophisop elegans*, Menetries, 1832, This lizard was seen active in a cold weather, in early March. It's the only lizard seen at this time.

*Eumeces schneiderii*, (Eichwald, 1839)

*Varanus griseus caspius*, (Eichwald) Fig. No. (2). This is a new record for this sub-species of *Varanus* in Iraq posterior tail compressed and narrow in cross section, keeled above, Back with 6 sepia bars. Tail with 27 bars. Large, Total length 156 cm. it's very close to description giving by Anderson (1974).

*Coluber jugularis*, Linnaeus, 1758. When we catch this snake, it was swallowing Two juvenile snake one of *Vipera lebetina* and other was *Rhynchocalamus sp.*

*Coluber rodorachis ladacensis*, (Anderson, 1871). Fig: (5) We believed *C. ladacensis* is a separate species as it described in (Afrasiab and Mohamad 2011 ). We found it inside the Daray Mar cave searching for geckos from the roof of the cave its good climber.

*Zamenis hohenackeri* (strauch, 1873) This snake recently recorded by Afrasiab and Mohamad 2011.

*Malpolon sp.* Fig No. (3). There is a color variation between our specimen and *M. insignita* (Geoffroy, 1827) Afrasiab and Mohamad 2011. It has yellow green dorsal, and ventral entirely white. Habitat in cultivated forest (orchards) and in between vegetation near streams.

*Natrix tessellate*, ( Laurenti, 1765)

*Eryx jaculus*, (Linnaeus, 1758)

*Vipera lebetina obtusa*, Dwinubsky, 1832. Fig. No. (4) Is a most common poisonous snake of this vale.

#### Pisces

The common fishes recognized from the streams and fountain of this zone are:

- 1- *Barbatula panthera* (Heckel, 1843).
- 2- *Chondrostoma regium* (Heckel 1843).
- 3- *Varicorhinus ( Capoeta) barroisi* Barrois 1804.
- 4- *Barbus luteus* (Heckel 1843).
- 5- *Acanthobrama marmid* Heckel 1843.

Some Insects of this region:

-*Vanesa cardui*.

-*Euplagia quadripustaria* .

-*brintesia circe*.

-*Gonepteryx farinose* .

-*Chazara prieuri* .

-*Cicada, Pltypleura sp.*

- Moths and Wasps.

-Ticks: *Hyalomma aegyptium*, *H. anatolicum*, *H. excavatum*, *H. detritum*, *Haemaphysalis parva*, *Ixodes tatei*, *Rhipicephalus leporis*, *R. sanguineus*, *R. turanicus*, *R. (Boophilus) annulatus*, *R. (Boophilus) microplus*, and *R. (Boophilus) kohlsi*.

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### Flora

For identification we depend on Flora of Iraq Guest *et al.* (1966-1968). All volumes, Flora Iranica, Rechinger all the volumes, 1963-1982. Flora of Saudi Arabia by Migahid, 1978. Flora of Turkey, by Davis 1972., For Mediterranean, by Pollunin and Huxley, 1965. of the British Isles by Roles, 1957 and for Kurdistan by Shahbaz, 2010. For some species we gave only genus because we were not sure of the species and variety.

Trees and Bushes also there is some change in plant genus which is varied from author to others, for example in flora Iranica giving the name of the genus *Amygdalus* but Shahbaz place it in the same genus of *Prunus* :

*Quercus aegilops*, L. This large *Quercus* is mostly found near graves.

*Quercus infectoriae* Oliv,

*Pistacia atlantica kurdica*

*Pistacia khinjuk* Stock

*Crataegus azarolus* L.

*Prunus microcarpas*, C. A. Meyer (1833) this prunus Fig. (1). More than three meter high.

Have some variation especially in its fruit it has elongated fruit instead of round.

*Prunus orientalis* ( mill)

*Amygdalus brachiuca*

*Prunus webbi*= *Amygdalus webbi* (Spach) Vierh.

### Flowers

Araceae

*Arum elongatum* (Steve., 1857). Fig. (5). One meter and 90cm. high, we found it in early April, that year was cold and rainy at spring time. But unfortunately next year was dry and hot with very poor rain, it was not growing in such climate. It seem to be its growing connect with amount of rainfall. Rechinger, 1963 reported it in Iran and Kurdistan with ought giving exact location in Kurdistan.

Ranunculaceae:

*Anemone coronaria*

*Ranunculus neocuneatus* C. C. Townsend 25 April.

*Ranuncula sericeus*, Banks.

*Ranunculus cornutus*, DC.

Papaveraceae:

*Papaver rhoeas*, L.

*Papaver fugax*, Poir.

*Papaver glaucum*, Boiss. Petals dark red, blotched at the base.

*Adonis aestivalis parviflora* (Fisch. exDC)

*Adonis aestivalis*, L.

Scrophylariaceae:

*Digitalia nervosa*

*Delphinium micranthum*, in july

Iridaceae :

*Iris sp.* Locally thy term it mountain star, its star shaped it comes out in February. Fig.(2), its close related to *Iris cabulica*, in general shape it has short stem, storage root much swollen, the distribution of *I. cabulica* is in Afgghanistan very far from our collection Rechinger, 1975. Also it has some relation with *I. pseudocaucasica*. But it differ in coloration and in having two types of flowers, one large three to four lobes, and three to four small flower, with flap-like lip in between the lobes of the large lobes.

*Gladiolus atroviolaceus* Boiss.

*Gladiolus segetum* Ker-Gawl, 1804

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*Fritillaria sp.*

*Ixiolirion tataricum.*

*Gagea arvensis.*

Campanulaceae:

*Campanula reuterana*, Boiss and Bal.

*Campanula trachelium*, L., the plant is stiff-haired with toothed leaves are heart –shaped. It found in woods near streams banks on clay soil, in shade places. the flower dark purplish blue in July-August.

*Campanula acutiloba* Vatke, Linnaea. (1875) in between the rocks of mountain slops of daray mar valli alt. 700m. August and September.

*Campanula luristanica* Freyn – Morgan

*Campanula strigosa* bank, found end of April

Gentiniacea

*Gentiana sp. Probably (Olivier)*

*Anthemis tinctoria* yellow and White.

*Anthemis chia*

*Anthemis cotula*

Leguminosae:

*Viciae villosa*, Roth.

*Viciae variabilis*, Fregn and Sint.

*Trifolium purpurcum*, Lois. .

*Trifolium fragiferum*

*Hymenocrater sp.* It's a small plant with good odder

Compositae:

*Scorzonera sp.* Yellow and violet fig( )

*Scorzonera pseudolanata* Grossh.

*Tragopogon longirostris* Bisch

Dipsacaceae:

□*Achillea eriophora.*

Liliaceae :

*Ornithogalum monttanum*, Cyr.

*Ornithogalum nutans*, L.

Rosaceae:

*Umbilicus sp.*

Cruciferae :

*Savignya parviflora*, additional records of this plant from Karbala desert, near Razaza lake, and also it found in Arabian peninsula.

Labiata

*Salvia indica*, L.

*Salvia brachyantha* (Bordz) Pobed. -Siami

*Ziziphora clinopodiodes kurdica.*

*Phlomis olivieri*, Benth.

*Eremostachy macrophylla*, Moutbr and Aucher.

*Hymenocrater sessilifolius* Benth.

Gramineae:

Caryophyllaceae :

*Vaccaria pyramidata*, Med.

*Kohlruschia sp.*

Geraniaceae:

*Geranium tuberosum*, L.

*Geranium sp.*

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Dipsacaceae Scabious Family  
*Scabiosa sp.*

Umbelliferaceae :

*Ferulago stllata* Boiss.

*Ferulago sp.* . (?) This collection is very important, its regard a new record for this plant in Iraq. Previously its recorded from western turkey but no one announced to be present in Iraq or Kurdistan. It has hairy stem and flower with glandular hair. We send samples two British Museum for confirm.

*Ferula orientalis*, L. 1753.

*Smyrniium cordifolium* Boiss., Diagn.

Alliaceae :

*Allium subhirsutum*

*Alum calocephalumv*, Windelbo

Malvaceae:

*Alcea kurdica* (Schlecht)

And grasses, *Hordeum sp.*, *Vulpia sp.*, *Bromus sp.*

Economical trees :

*Juglans regia* L. Walnut.

*Pyrus malus* L. Apple.

*Morus alba* L. White mulberry تو

*Morus nigra* Blak mulberry

*Rubus caesius* L. تو ترك Dewberry

*Punica granatum* L. هه نار Pomegranate.

## ACKNOWLEDGMENT

We want to thank particularly prof. Dr. Ali Mosawe from Baghdad University for his helping in some plant identification and Mr. Saman A. Ahmad from Herbarium of Agriculture college of Sulaymanyah University for identification of plants with (□) marks and to Sabah Haj Rafat and Serwan lahony from Anab village for helping in filed collection.

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PLATE 1



*Euplagia quadripuntaria*



*E. quadripuntaria*



Moth



*Vanessa cardui* collecting around source of foods



The Waspes



The Cicada, *Ptypleura* sp. On walnut tree end of august

PLATE 2



Dorsal view of *Brintesia circe*



Ventral view of *Brintesia circe*



*Gonepteryx farinose*



*Vanessa cardui*



*Papilio sp.*



*Chazara prexeri* always in shade places

Fauna and Flora of Hawraman Mountain (Part one)

PLATE 3



*Eryx jaculus*



*Platyceps rhodorhachis ladacensis*



*Ophisaurus apodus*



*Varanus griseus caspius*



*Asaccus sp.*



*Testudo graeca iberica*

PLATE 4



*Macrovipera lebetina* the most common poisoning snake in studded area.



*Zamenis hohenackeri*



*Malpalam monspessulanus insignitus*



*Hyla sp.*



*Rana ridibunda*



*Ophisops elegans*

Fauna and Flora of Hawraman Mountain (Part one)

PLATE 5



*Alectoris chukar asoica*



*Sitta tephronota*( Rock Nuthatch)



Nest of *Asoi Chukar* With eggs



*Falco columbarius* ( merlin)



*Lanius nubicus* (masked shrike)



*Lanius isabellinus*( isabellian shrike)

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PLATE 6



*Lanius collurio* (Red backed shrike)



*Erithacus rubecula* (Robin)



*Phylloscopus collybita* (Chiff chaff)



*Quercus infectaria*



*Crataegus azarolus*



*Achillea eriophara*

Fauna and Flora of Hawraman Mountain (Part one)

PLATE 7



*Barbotula panthera*



*Chondrostoma regium*



*Chondrostoma regium*



*Acanthobrama marmid*



*Varicorhinus barroisi = Capoeta barroisi*



*Barbus luteus*

PLATE 8



*Allium caicephalum*



*Ferulago stflata*



*Anthemis sp.*



*Smyrnum cordifolium*



*Scorzonera pseudolanata*



*Adanes aestivalis*

Fauna and Flora of Hawraman Mountain (Part one)

PLATE 9



*Hymenocrater sessilifolius*



*Arum sp.*



*Vaccaria pyramidata*



*Savignya parviflora*



*Pranrus microcarpas*



*Pistacia khinjuk*

PLATE 10



*Campanula perpusilla*



*Campanula sp.*



*Campanula trachelium*



*Campanula sp.*



*Campanula patula*



*Campanula sp.*

Fauna and Flora of Hawraman Mountain (Part one)

PLATE 11



*Trifolium purpureum*



*Scabiosa sp.*



*Blarum tenuifolium*



Hazbela هه زبى له *Scutellaria sp.*



*Vicea villosa*



*Papaver fugux*

PLATE 12



*Adonis aestivalis parviflora*



*Papaver rhoeas*



*Papaver glaucum*



*Gladiolus segetum*



*Gladiolus atroviolaceus*

Fauna and Flora of Hawraman Mountain (Part one)

PLATE 13



*Anemone coronaria*



*Ranunculus sp.*



*Salvia indica*



*Scutzonera pseudolantia*



*Phlomis*



*Fritillaria*

PLATE 14



*Ornithogalum* sp.



*Alcea kurdica*



*Geranium tuberosum*



*Ferulago* sp.



*Iris pseudocaucasica*



*Crocus biflorus*

Fauna and Flora of Hawraman Mountain (Part one)

PLATE 15



*Gagea arvensis*



*Trapogon longirostris*



*Carduns sp.*



*Hiracium sp.*



PLATE 16



*Morus nigra*



*Pyrus malus*



The rest of collectors group from Besan-Tawera valley



The rest of collector's group from Daray Marr valley



Zalms vally



The villager house destroyed by Sadams war

**PLATE 17**



Hamashwana caves and fountain

Lahony. *et al.*

PLATE 18



Gawaran cave



Stone Age paint on Hamashwana cave



The stone on it the Stone Age paint



The mysterious Hamashwana cave (The skull of the mountain )



Chel Gaze cave



Always from the top

الحياة الحيوانية والنباتية في جبل هورامان  
(الجزء الاول)  
المنطقة المنخفضة في جبل هورامان، شمال شرق اقليم كردستان – العراق

سامان رستم افراسياب لهوني و محمد كاظم محمد و حسن حسين علي  
و ازهار احمد الموسوي و محمد صالح عبد الرسول

متحف التاريخ الطبيعي – جامعة بغداد – بغداد - العراق

الخلاصة

حاولنا في هذا الدراسة كخطوه الأولى لعمل قائمة جديدة للنباتات و الحيوانات في كردستان خاصة والعراق عامة. هذه الدراسة مهمة جدا في دراسة التنوع الاحيائي في العراق. تمكنا في هذه الدراسة على تشخيص ٥٢ نوع من الطيور المهاجرة والمستوطنة بضمنها نويج القبيج الاسويي الذي تم وصفه حديثاً. و تم تشخيص ٢٠ نوع من البرمائيات والزواحف بضمنها تسجيل نويج جديد من الأراول ونوع من ابو بريص الكهوف فيه بعض الاختلافات عن انواع الاخرى المعرفة، مع بعض أنواع النادرة. ولوحظ وجود ١٣ نوع من اللبائن كما اعطيت بعض الملاحظات عن خمسة انواع من اسماك المياه العذبة و ١٢ نوعاً من القراد وسبعة انواع من الفراشات. و في النباتات تم تشخيص ٨ اشجار برية و ٧٠ نوع من النباتات الزهرية تحتوي بعض انواع النادرة والجديدة. وعرضت صوراً لأنواع النادرة.