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The herpetofauna of Palestine: A preliminary checklist

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Abstract

A preliminary checklist of the herpetofauna of Palestine (West Bank and Gaza Strip) Governorates is presented based on records of amphibian and reptile species whose presence has been confirmed in Palestine's governorates as a result of extensive field expeditions, examination of fixed herpetological collections, literature review, and personal communications from researchers. The paper reports 95 original data on the Palestinian herpetofauna (4 Amphibians and 54 reptiles), deriving from field observations.

The herpetofauna of Palestine consists of 58 species belonging to forty six genera and twenty families. Species found in this study either globally or regionally distributed. Majority of species (44 species) fall in the least concern category of the IUCN Red List Category. One species found to be categorized as critically endangered, and another species found to be categorized as endangered. Two Species found to be categorized as threatened, and three Species as vulnerable accordingly.

Keywords: Reptiles; Amphibians; Palestine

1. Introduction

The biological diversity including the diversity of reptiles and amphibians in the Middle East were and still is of great interest for local and European faunal specialists. Being located as a terrestrial bridge between Europe, Asia, and Africa, this region has had a great interest and attention. The large varieties of habitats in Palestine in general, and the transitions between climatic regions within the country contribute to the diversity of reptile and amphibian species in the country, which is high relative to its area. Tristram (1863-1897), the Author of the book (Survey of Western Palestine: the Fauna and Flora of Palestine), who visited the region during. His work was considered for many years as the most important pioneer comprehensive work in the area ^[1].

Karl P. Schmidt (1930-1939) published the results of his expeditions to Trans-Jordan, Syria, Arabia and Iraq in 1930 and 1938 along with other materials collected from Palestine ^[2].

Generally speaking, studies on vertebrate biodiversity in the Palestine (West Bank and Gaza Strip), is limited compared to that in the nearby areas of Egypt, Jordan and Israel; Palestinian research in general still lags behind ^[3].

The herpetofauna of the West Bank governorates is rich in term of a number of species, but their distribution pattern is relatively poorly known. In fact, most of the taxa are known only in a limited number of localities. This paper is a pioneering step towards preparing a preliminary checklist of the herpetofauna of the West Bank governorates. It also presents results of the recent fieldwork by the author, as well as the data available in the literature.

The literature survey showed that majority of the previous studies focused on systematic, and distribution in general but not the species ecology by ^[4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15]. The distribution of some species, such as *Bufo viridis*, *Mauremys caspica rivulata*, *Natrix tessellata*, *Coluber ventromaculatus*, *C. jugularis asianus*, *Walterinnesia aegyptia*, and *Vipera Palestine*, has been greatly influenced by climatic as well as anthropogenic changes.

Over the past few years, the West Bank Governorates have witnessed environmental changes, including habitat modification due to political regime of Israel, agricultural development in the form of water abstraction, population increase, and herd grazing, which eventually affected the herpetofauna of these areas. Due to the previously listed facts, all the animals inhabiting Palestine have been negatively affected by these problems. Significant declines in vertebrate biodiversity in Bethlehem governorate area noticed by ^[16].

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2. Material & Methods

2.1 Study site

For an overall view of the distribution and habitat of the species, localities and/or coordinates of each record were allocated to one of the four major ecological regions as follow. a) The semi-coastal zone, which is a narrow strip extending at 100-300 m above sea level, in the North-Northwest corner, comprises of Jenin, Qalqilia and Tulkarem districts; the soil is mostly alluvial and loam; the annual

rainfall is 600 mm. b) The central highlands, which is mountainous rock and hilly area rising up 1,027 m above sea level, includes the area from Jenin Southwards until Hebron district and receives annual rainfall around 400 mm. c) The eastern slope zone, comprises of steep mountains with little rainfall (150-300 mm) and represents the semi-desert climate, as a transitional area between Mediterranean and desert. d) The Jordan valley and lies 390 m below sea level [17].



Fig 1: The map of the West Bank and Gaza Strip Governorates.

2.2 The Herpetofauna survey

The Herpetofauna of the West Bank were surveyed during a period of five years (2010 – 2015). A total number of 58 species were recorded by direct encounter or road kills. The recorded species were photographed for later identification and recognition using a set of literature including [4, 5, 7, 8, 9, 10, 11, 15, 19, 20]. The species described were all resident and were mostly found throughout the study areas and the study time.

3. Results & Discussion.

The study area (the West Bank and Gaza Strip Governorates) is mostly located in the Central highlands of Palestine, just above the Jordan valley, whereas natural forest, agricultural fields, and irrigated crops fields are found. The reptiles and amphibians of the West Bank Governorates were surveyed during a period of two years (2010– 2015). In the present paper, only species whose presence has been confirmed in Palestinian territory via extensive field expeditions, examination of collections, literature review, as well as through personal communications with regional herpetologists are listed

We obtained a final list of 58 species in 21 families and 48 genera, corresponding to 4 species of amphibians (2 frogs, 1 newt and 1 toad), and 54 Species of reptiles (27 snakes, 8 lizards, 7 skinks, 3 turtles, 1 tortoise, 5 geckos, 2 agama, and 1 chameleon) (annex 1).

As for the Reptilian fauna of Palestine, it belongs to seventeen families, dominated by the *Colubridae* family, with highest number of genera and Species (18 Species (31%) in 12 genera (21%) followed by *Scincidae* and *Lacertidae* families (7 & 6

Species (12% & 10%) accordingly in 5 genera (9%), followed by *Gekonidae* with (5 Species (9%) in 4 genera (7%)), then followed by (*Agamidae*, *Atractaspididae*, *Chelonidae*, *Testudinidae*, *Typhlopidae*, and *Viperidae*) families (2 Species (3%) in 2 genera (3%)), then followed by (*Aguidae*, *Boidae*, *Chamaeleonidae*, *Elapidae*, *Leptotyphlopidae*, and *Varanidae*) families (1 Species (2%)/genera in 2 genera (2%)), each of the total reptilian genera. Figure. (1). As for the dominant family/families, with highest number species, our finding showed that *Colubridae* family has the highest number of species as well as genera. As far as the Species distribution, concern, all species found during this study are globally distributed, and no species found to be endemic to Palestine. The listed species of this study were categorized based on the IUCN red list category version (2015-4). The majority of the found species (43 Species) fall in the least concern category of the IUCN Red List Category [18]. Only one species found to be categorized as critically endangered, and another species found to be categorized as endangered, as shown in (annex 1). The species recorded were all resident and were mostly found throughout the year. The diversity of terrestrial and aquatic ecosystems in the study area encouraged the occurrence of the species. However, the increasing human impact on the existing environment in general and micro-habitats generally has threatened the main components of life. It is noticed that the populations of snake's species are declining to an alarming level. The results of this preliminary survey recommend strongly the necessity of long-term survey of the whole biodiversity in Palestinian governorates.

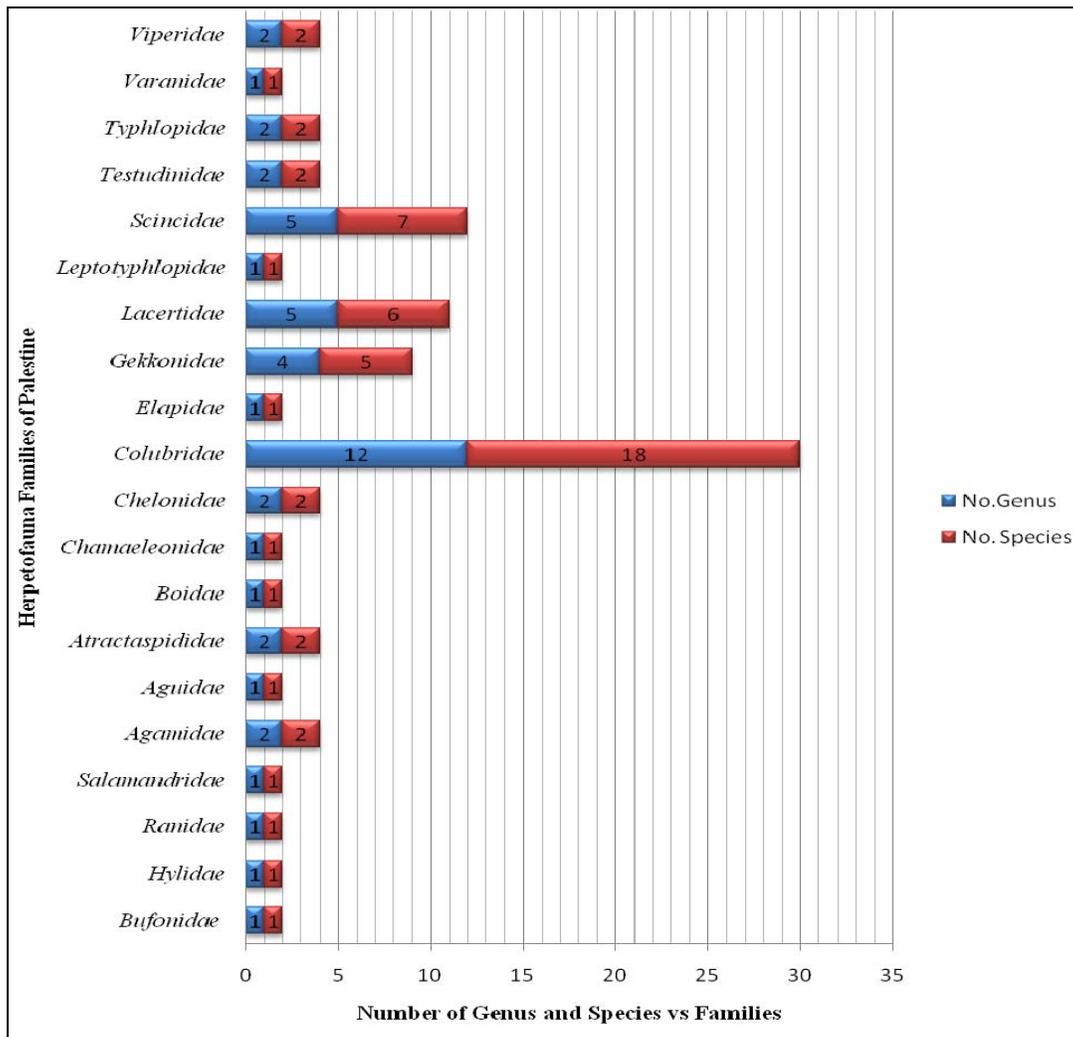


Fig 2: Distribution of Palestine herpetofauna Species in Genera and Families.

The distribution limits between different species are not well studied. The area of contact of all species lies within the area of contact of West Bank governorates, and Gaza Strip. The herpetofauna distribution analysis showed that three Amphibian species are distributed in all West Bank and Gaza strip governorates. The fourth Amphibian species is distributed only in the central highlands of the West Bank governorates, which is a series of mountains started in the north of Jenin governorate and extended southwards up to Hebron governorate.

The overall analysis of Palestine Herpetofauna showed that thirty-four species (58.62%) are distributed in all West Bank and Gaza Strip governorates with some exclusion for Jericho governorate in twenty-one species and Gaza strip in two species. Six species found to be distributed only in Gaza strip governorate. Five species found to be distributed only in Jericho governorate. Four species found to be distributed only in Gaza strip & Jericho governorates. The distribution patterns in term of species numbers are shown as in Figure 2. The remaining species were distributed as in Annex (1).

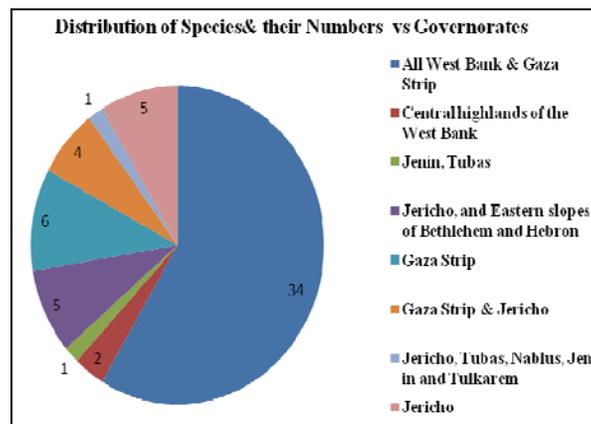


Fig 3: Distribution of Species and their number In the West Bank and Gaza Strip Goernorates

The two endangered and critically endangered species accordingly, *Chelonian mydas* and *Acanthodactylus schreiberi syriacus*, each has a limited distribution in the Gaza strip governorate. One of the major threats that these species face is the destruction, reduction and modification of their habitat and, at least the sea water pollution as a result of raw sewage water dumping is predicted to have a major impact on chelonian turtle persistence.

Finally, this checklist is the first comprehensive compilation of published information on the herpetofauna in Palestine. Doubtless, material already collected and deposited in some

museums, universities and other institutions locally or regionally could provide more information and add other taxa to the list, and it is certainly necessary to carry on with studies of Palestine's herpetofauna that will help to elucidate the limits of the distribution and the taxonomy of many of the species listed. Palestine's territory is vast and diverse, and has many areas, whose herpetofauna has not been inventoried. Having this basic knowledge is crucial in order to recommend and adopt proper actions for the conservation and/or management of Palestine's natural resources.

Annex 1: A checklist of the Herpetofauna of Palestine (West Bank and Gaza Strip) Governorates

Amphibians (4 Families; 4 Genera; and 4 Species).						
No	English name	Family	Latin name	Local distribution	Global distributions	IUCN Red List Category ^[18]
1	Levant green toad	<i>Ranidae</i>	<i>Pelophylax bedriagea</i>	All West Bank & Gaza Strip Governorates	Cyprus, Egypt, Jordan, Lebanon, Syria, Turkey, and Israel	Least Concern
2	Savigny's tree frog	<i>Hylidae</i>	<i>Hyla savignyi</i>	All West Bank & Gaza Strip Governorates	Cyprus, Georgia, Iraq, Iran, Jordan, Lebanon, Syria, Turkey, and Israel	Least Concern
3	European green toad	<i>Bufo</i>	<i>Pseudepidalea variabilis</i>	All West Bank & Gaza Strip Governorates	Cyprus, Georgia, Iraq, Iran, Jordan, Lebanon, Syria, Turkey, Russia, and Israel	Data Deficient
4	Spotted newt	<i>Salamandridae</i>	<i>Ommatotriton vittatus</i>	Central highlands of the West Bank Governorates	Jordan, Lebanon, Syria, Turkey, and Israel	Least Concern
Reptiles						
Snakes (8 Families, 21 Genera, and 27 Species).						
No	English name	Family	Latin name	Local distribution	Global distributions	IUCN Red List Category
5	Palestine saw-scaled viper	<i>Viperidae</i>	<i>Echis coloratus</i>	Jericho, Tubas, Eastern slopes of Bethlehem and Hebron Governorates	Egypt, Jordan, Saudi Arabia, and Israel	Least Concern
6	Palestine viper	<i>Viperidae</i>	<i>Vipera palestinae</i>	All West Bank & Gaza Strip Governorates	Jordan, Lebanon, Syria, and Israel	Least Concern
7	Desert Black Cobra	<i>Elapidae</i>	<i>Walterinnesia aegyptia</i>	Jericho and Eastern slopes of Bethlehem and Hebron governorates	Egypt, Jordan, Saudi Arabia, and Israel	Threatened
8	Palestine Mole Viper	<i>Atractaspidae</i>	<i>Atractaspis engaddensis</i>	Jericho and Eastern slopes of Bethlehem and Hebron governorates	Egypt, Jordan, Saudi Arabia, and Israel	Least Concern
9	Muller's Snake	<i>Atractaspidae</i>	<i>Micrelaps muelleri</i>	Jenin, Tubas governorates	Jordan, Lebanon, Syria, and Israel	Threatened
10	Monpellier Snake	<i>Colubridae</i>	<i>Malpolon monspessulanus insignitus</i>	All West Bank & Gaza Strip Governorates	Cyprus, Georgia, Iraq, Iran, Jordan, Lebanon, Syria, Turkey, Russia, Greece, Spain, Italy, Algeria, Tunisia, and Israel	Least Concern
11	Schokari sand Racer	<i>Colubridae</i>	<i>Psammophis schokari</i>	All West Bank & Gaza Strip Governorates	India, Oman, UAE, Iraq, Iran, Jordan, Lebanon, Syria, Pakistan Nigeria, and Israel	Least Concern
12	Palestine Kukri Snake	<i>Colubridae</i>	<i>Rhynchocalamus melanocephalus</i>	All West Bank Governorates, excluding Jericho	Armenia, Azerbaijan, Egypt, Iran, Israel, Jordan, Lebanon, Syrian and Turkey	Least Concern
13	Lined Dwarf Racer	<i>Colubridae</i>	<i>Eirenis decemlineata</i>	All West Bank Governorates, excluding Jericho	Iraq, Israel, Jordan, Lebanon, Syrian and Turkey	Least Concern
14	Roth's Dwarf Racer	<i>Colubridae</i>	<i>Eirenis rothi</i>	All West Bank Governorates, excluding Jericho	Turkey, Jordan, Lebanon, Syria, and Israel	Least Concern
15	Sinai Dwarf Racer	<i>Colubridae</i>	<i>Eirenis coronelloides</i>	Jericho, and Eastern slopes of Bethlehem and Hebron governorates	Iraq, Jordan, Syrian and Israel	Least Concern
16	Crowned Dwarf Racer	<i>Colubridae</i>	<i>Eirenis lineomaculatus</i>	All West Bank Governorates	Turkey, Jordan, Lebanon, Syria, and Israel	Least Concern
17	Dice Snake	<i>Colubridae</i>	<i>Natrix tessellata</i>	All West Bank & Gaza Strip Governorates	Slovenia, the Czech Slovakia, Hungary, Romania, Bulgaria, Ukraine, Russia, Croatia, Bosnia, Serbia, Turkey, Syria, Lebanon, Israel, Jordan, Armenia, Azerbaijan Iran, Iraq, Yemen, Afghanistan, Pakistan, China	Least Concern
18	False Smooth Snake	<i>Colubridae</i>	<i>Macroprotodon cucullatus</i>	Gaza Strip Governorates	Algeria, Tunisia, Libya, Egypt, and Israel	Least Concern
19	Arabian Cat Snake	<i>Colubridae</i>	<i>Telescopus dhara dhara</i>	Jericho, and Eastern slopes of Bethlehem and Hebron governorates	Oman, Jordan, Israel, UAE, Saudi Arabia, Algeria, Chad and Lybia	Least Concern
20	European Cat Snake	<i>Colubridae</i>	<i>Telescopus fallax syriacus</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Albania, Armenia Azerbaijan, Bosnia, Bulgaria, Croatia, Cyprus; Georgia, Greece, Iran, Iraq, Israel, Italy, Lebanon, Malta, Montenegro, Russian Federation, Slovenia, Syrian and Turkey	Least Concern
21	Common Leaf-nosed	<i>Colubridae</i>	<i>Lytorhynchus diadema</i>	Gaza Strip Governorates	Algeria, Chad, Egypt, Iran, Iraq; Israel, Jordan, Oman, Saudi Arabia; Syrian,	Least Concern

	Snake				Tunisia; UAE, Yemen	
22	Diadema Snake	<i>Colubridae</i>	<i>Spalerosophis diadema</i>	Gaza Strip & Jericho Governorates	Morocco, Turkey, Jordan, Syria, and Israel	Data Deficient
23	Wadi Racer	<i>Colubridae</i>	<i>Platyceps rhodorachis</i>	Jericho, Tubas, Nablus, Jenin and Tulkarem	Algeria, Libya, Egypt, Israel, Jordan, Syria, Eritrea, Ethiopia, Somalia, Chad Saudi Arabia	Data Deficient
24	Rogers' Racer	<i>Colubridae</i>	<i>Platyceps rogersi</i>	Jericho Governorate	Egypt, Iraq, Israel, Jordan, Libya, and Syrian	Least Concern
25	Collared Dwarf Racer	<i>Colubridae</i>	<i>Platyceps collaris</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Bulgaria, Israel, Jordan, Lebanon, and Syrian	Least Concern
26	Large Whip Snake	<i>Colubridae</i>	<i>Dolichophis jugularis</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Cyprus, Egypt, Greece, Iran, Iraq, Israel, Jordan, Syrian, and Turkey	Least Concern
27	Coin-Marked Snake	<i>Colubridae</i>	<i>Hemorrhhis nummifer</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Cyprus, Turkey, Soviet Union (Caucasus), Israel, Syria, Lebanon, Jordan, Iran, Egypt	Least Concern
28	Beaked Blin Snake	<i>Leptotyphlopidae</i>	<i>Myriopholis macrorhyncha</i>	Jericho Governorate	Turkey, Morocco, Jordan, Israel, Egypt, Chad, Syria, Iraq, Iran, and UAE	Data Deficient
29	Simon Worm Snake	<i>Typhlopidae</i>	<i>Rhinotyphlops simoni</i>	All West Bank and Gaza Strip Governorates	Jordan, Syria and Israel	Least Concern
30	European blind snake	<i>Typhlopidae</i>	<i>Typhlops vermicularis</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Cyprus, Turkey, Ex-Soviet Union (Caucasus), Israel, Syria, Lebanon, Jordan	Least Concern
31	Sand Boa	<i>Boidae</i>	<i>Eryx jaculus jaculus</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Cyprus, Turkey, Ex-Soviet Union (Caucasus), Israel, Syria, Lebanon, Jordan, Egypt, Tunisia, Algeria	Least Concern
Other Reptiles (Lizards, Skinks Agamas, Geckos, Chameleons and Turtles) (9 Families, 23 Genera, 27 Species)						
32	Desert Monitor Lizard	<i>Varanidae</i>	<i>Varanus griseus griseus</i>	Gaza Strip Governorates, and Jericho	Cyprus, Turkey, Ex-Soviet Union (Caucasus), Israel, Syria, Lebanon, Jordan, Egypt, Tunisia, Algeria	Data Deficient
33	European Glass Lizard	<i>Aguidae</i>	<i>Pseudopus apodus apodus</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Cyprus, Turkey, Ex-Soviet Union (Caucasus), Israel, Syria, Lebanon, Jordan, Egypt, Tunisia, Algeria	Least Concern
34	Günther's Cylindrical Skink	<i>Scincidae</i>	<i>Chaleastides guentheri</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Israel, Syria, Lebanon, Jordan	Vulnerable
35	Wedge-snouted Skink	<i>Scincidae</i>	<i>Chaleastides sepsoides</i>	Gaza Strip Governorates	Egypt, Israel, Jordan Libya	Least Concern
36	Ocellated skink	<i>Scincidae</i>	<i>Chaleastides ocellatus</i>	All West Bank and Gaza Strip Governorates	Italy, Malta, Turkey, Iraq, Israel, Syria, Lebanon, Jordan, Egypt, Tunisia, Algeria, UAE, Pakistan, Kenya	Near Threatened
37	Latast's Snake Skink	<i>Scincidae</i>	<i>Ophiomorus latastii</i>	All West Bank excluding Jericho and Gaza Strip Governorates,	Israel, Syria, Jordan	Data Deficient
38	Bridled Mabuya, Bridled Skink	<i>Scincidae</i>	<i>Trachylepis vittata</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Turkey, Iraq, Israel, Syria, Lebanon, Jordan, Egypt, Tunisia, Algeria, Iran	Least Concern
39	Snake Eyed Skink	<i>Scincidae</i>	<i>ablepharus rueppellii</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Egypt, Jordan, Syria, Israel	Least Concern
40	Schneider's skink	<i>Scincidae</i>	<i>Eumeces schneideri schneideri</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Turkey, Iraq, Israel, Syria, Lebanon, Jordan, Egypt, Tunisia, Algeria, UAE, Saudi Arabia	Least Concern
41	Snake-eyed lizard	<i>Lacertidae</i>	<i>Ophisops elegans</i>	All West Bank Governorates, excluding Jericho, and Gaza Strip	Turkey, Iraq, Israel, Syria, Lebanon, Jordan, Egypt, Tunisia, Algeria	Least Concern
42	Olivier's Sand Lizard	<i>Lacertidae</i>	<i>Mesalina olivieri</i>	Jericho Governorate	Morocco, Algeria, Western Sahara, Tunisia, Libya, Egypt, Sinai, Israel, Jordan, S Iraq, N Saudi Arabia	Least Concern
43	Bosk's Fringe-Fingered Lizard	<i>Lacertidae</i>	<i>Acanthodactylus boskianus asper</i>	Jericho Governorate	Turkey, Iraq, Israel, Syria, Lebanon, Jordan, Egypt, Tunisia, Algeria	Least Concern
44	Schreiber's Fringe-Fingered Lizard	<i>Lacertidae</i>	<i>Acanthodactylus schreiberi syriacus</i>	Gaza Governorates	Israel, Lebanon, Cyprus, Turkey	Critically Endangered
45	Lebanon Lizard	<i>Lacertidae</i>	<i>Phoenicolacerta laevis</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Israel, Lebanon, Cyprus, Turkey, Jordan	Least Concern
46	Medium Lizard, Three-lined Lizard	<i>Lacertidae</i>	<i>Lacerta media</i>	Central highlands of the West Bank Governorates	Armenia, Azerbaijan, Georgia, Iran, Israel, Jordan, Lebanon; Russian Federation, Syrian, Turkey	Least Concern
47	Mediterranean	<i>Chamaeleonidae</i>	<i>Chamaeleo</i>	All West Bank and Gaza	Algeria, Cyprus, Egypt, Greece, Iraq, Israel,	Least

	Chameleon		<i>chamaeleon</i>	Strip Governorates, excluding Jericho	Jordan; Lebanon, Libya; Malta, Morocco; Saudi Arabia, Syrian, Tunisia; Turkey, Yemen	Concern
48	Rough Tail Rock Agama	<i>Agamidae</i>	<i>Laudakia stellio picea</i>	All West Bank and Gaza Strip Governorates	Egypt, Greece, Iraq, Israel, Jordan; Lebanon, Libya, Turkey, Syria, Cyprus	Least Concern
49	Sinai Agama	<i>Agamidae</i>	<i>Pseudotrapelus sinaitus</i>	Jericho Governorate	Greece, Turkey, Iraq, Syria, Israel, Jordan, Cyprus, Lebanon	Least Concern
50	Elegant Gecko	<i>Gekkonidae</i>	<i>Stenodactylus sthenodactylus</i>	Jericho and Gaza Strip Governorates	Algeria, Egypt, Israel, Jordan; Lebanon, Libya, Morocco, Saudi Arabia, Syria, Tunisia	Least Concern
51	Anderson's Short-fingered Gecko	<i>Gekkonidae</i>	<i>Stenodactylus petrii</i>	Jericho and Gaza Strip Governorates	Algeria, Egypt, Israel, Jordan; Lebanon, Libya, Morocco, Saudi Arabia, Syria, Tunisia	Least Concern
52	Kotschy's Gecko	<i>Gekkonidae</i>	<i>Mediodactylus kotschyi</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Albania, Bulgaria, Cyprus, Greece, Israel, Jordan, Lebanon, Macedonia, Serbia, Syrian, Turkey, Ukraine	Least Concern
53	Turkish Gecko	<i>Gekkonidae</i>	<i>Hemidactylus turcicus</i>	All West Bank and Gaza Strip Governorates	Algeria, Cyprus, Egypt, Greece, Israel, Italy, Lebanon, Morocco, Spain, Tunisia, Turkey	Least Concern
54	Fan-fingered gecko	<i>Gekkonidae</i>	<i>Ptyodactylus guttatus</i>	All West Bank and Gaza Strip Governorates	Egypt, Israel, Syria, Jordan, Saudi Arabia, Oman	Data Deficient
55	Western Caspian Turtle	<i>Testudinidae</i>	<i>Mauremys rivulata</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	Albania, Bulgaria, Croatia, Cyprus, Greece, Israel, Jordan, Lebanon, Syria, Turkey	Least Concern
56	Common Tortoise	<i>Testudinidae</i>	<i>Testudo graeca</i>	All West Bank and Gaza Strip Governorates, excluding Jericho	France, Greece, Israel, Jordan, Lebanon, Syria, Turkey, Moldova	Vulnerable
57	Green Turtle	<i>Chelonidae</i>	<i>Chelonian mydas</i>	Gaza Strip Governorates	France, Greece, Israel, Lebanon, Syria, Turkey, and many others	Endangered
58	Loggerhead Turtle	<i>Chelonidae</i>	<i>Caretta caretta</i>	Gaza Strip Governorates	France, Greece, Israel, Lebanon, Syria, Turkey, and many others	Vulnerable

4. Conclusion

The study findings have led to conclude that any of the studied locations can be utilized by amphibian and reptile Species, as normal habitat, if the important threatening factors can be overcome by increasing and diversifying the population of plantations, which is in agreement with many regional and international studies.

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