

# The herpetofauna of Lebanon: new data on distribution

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**Abstract.** This paper reports more than 400 original data on the Lebanese herpetofauna (covering 5 amphibians and 44 reptiles), deriving from museum collections and recent field observations. The most interesting data concern: (a) *Cyrtopodion amictopholis*, a species known only from Mt. Hermon, reported for the first time from Mt. Lebanon Range; (b) *Lacerta fraasi*, previously considered endemic to the Mount Lebanon Range, also recorded from Antilebanon; (c) the occurrence of *Macrovipera lebetina* is confirmed with certainty from two localities in the north. New records are given for many species known in Lebanon only on the basis of very few and often old reports.

**Kurzfassung.** In dieser Arbeit werden über 400 unveröffentlichte Daten zu 5 Amphibien- und 44 Reptilien-Arten des Libanon mitgeteilt, die auf Museumssammlungen und eigenen Feldbeobachtungen basieren. Die Daten umfassen, unter anderem, folgende interessante Feststellungen: (a) *Cyrtopodion amictopholis*, eine Art, die bisher nur vom Mt. Hermon bekannt ist, wurde erstmals im Gebiet des Mt. Lebanon gefunden; (b) *Lacerta fraasi*, die bisher als endemisch für das Gebiet des Mt. Lebanon angesehen wurde, wurde nun auch im Antilibanon festgestellt; (c) das sichere Vorkommen von *Macrovipera lebetina* wird an zwei Stellen im Norden des Landes bestätigt. Für viele Arten, die aus dem Libanon nur aufgrund sehr weniger und häufig alter Zitate bekannt sind, werden neue Nachweise gemeldet.

**Key words.** Levant, Middle East, zoogeography, faunistics, Amphibia, Reptilia

## Introduction

The herpetofauna of Lebanon is rich in terms of number of species, but their distribution is relatively poorly known. In fact, most of the taxa are known only from a limited number of localities. This paper is a first step towards a revised checklist of the Lebanese herpetofauna (see IN DEN BOSCH 1998), and it summarises the results of the recent fieldwork by the authors, who have also brought together most of the distributional data available in the literature. In this preliminary paper, we present more than 400 unpublished museum and field data. As the aim of this paper is to enhance our knowledge of the distribution of Amphibians and Reptiles, notes are limited to the distribution aspects.

## Material and methods

In listing species, we use trinomial nomenclature for species considered as polytypic and binomial for monotypic species. Comments on nomenclatorial problems will be discussed in a further paper in preparation. Nearly all the material in Lebanese collections and the observations of HB and RS were collected in the last ten years: those of MCC and other observations (SSV, SSSV)

were collected in May-June 2000. Considering that the spelling of geographic names is very inconsistent in different sources and maps, we follow that of the “*National Imagery and Mapping Agency’s (NIMA) database of foreign geographic feature names*”, approved by the U.S. Board on Geographic Names, developed and maintained by the National Imagery and Mapping Agency (U.S.A.), without diacritics, with many corrections. All localities quoted in the text are listed, with geographic coordinates, in the Gazetteer in the appendix.

**Abbreviations.** AUB = American University of Beirut; LU = Lebanese University; MCC = Museo Civico di Storia Naturale di Carmagnola; – HB = HRAOUI-BLOQUET; RS = Riyad SADEK; SSV = Alberto SELVAGGI, Roberto SINDACO and Alberto VENCHI; SSSV = Alberto SELVAGGI, Riyad SADEK, Roberto SINDACO and Alberto VENCHI.

## Species list

### *Triturus vittatus vittatus* (Gray, 1835)

WERNER (1939) quotes the only two bibliographic records available at the time; the only recent confirmation is by HRAOUI-BLOQUET et al. (1997). In recent years, two of the authors have observed this species at the following localities: Btighrin; Beit Chebab; Bikfaiya; Biskinta; Ehmej; Nabatiye; Yahshoush; specimens from El Maad are preserved in the collection of the Lebanese University.

### *Salamandra inframaculata inframaculata* Martens, 1885

Very few published localities exist, although this species proves to be quite widespread in the Mt. Lebanon Range. One relevant record, En Nabi Chit, is located in the foothills of Anti-Lebanon. We have recorded or observed salamanders at the following localities: Biskinta (LU); Shhim (AUB); Ehden (AUB); El Maad (LU); El Machnaqa env. (SSV obs.); Zaarour near Biskinta (LU); Hammana (AUB); En Nabi Chit (HB obs.), Taanayel (HB obs.), Hasbayya (HB and RS and others obs.).

### *Bufo viridis* Laurenti, 1768

Very widespread species. We have records from: Uyun as Siman (AUB); Uyun Urghush (SSV obs.); Joub Jannine (AUB); Khalde (AUB); Baalbek (AUB); Barouk (AUB); Shhim (AUB); Nahr Ibrahim Valley (AUB); Sour (LU); Biskinta, Sannin (LU); Fanar (LU); Jounieh (AUB, LU); Nahlah (AUB).

### *Hyla savignyi* Audouin, 1812

Widespread species. New data from Es Soutlane Yaakoub, 1000 m (AUB); betw. Barouk and Ain Zhalta (MCC); Nahr El ‘Assi (Orontes) near Hermel (MCC); Nahr Ej Jaouz between Boqsmaya and Majdel (SSSV obs.); El Mogheiri env. (SSV obs.); betw. Afqa and El ‘Aqura (SSV obs.); Laqluq env. (SSV obs.); Bcharré city (SSV obs.); Sour, southern beach dunes S (SSSV obs.); ‘Ammiq (LU); Sour (LU); Maad (LU); Sannin (LU); Tannurin (LU); Nahr El Kalb (LU).

### *Rana bedriagae* Camerano, 1882

A common and widespread species. Records from: Sour (AUB and LU); Nahr Ej Joouz betw. Boqsmaya and Majdal (SSSV obs.); El Mogheiri env. (SSV obs.); betw. Afqa and El ‘Aqura (SSV obs.); Nahr El ‘Assi (Orontes) near Hermel (SSV obs.); Nahr El Bared (AUB); ‘Arida (AUB); ‘Ammiq (AUB and LU); Rass El Ain (AUB and LU); Hermel (AUB); Nahr El Hammam (AUB); Sannin (LU); Anjar (LU).

***Trionyx triunguis*** (Forsskål, 1775)

Apart the old data summarised by KASPAREK & KINZELBACH (1991), there is an unpublished record of a specimen from Jisr El Basha near Beirut in 1965, but nothing since then (RS).

***Mauremys caspica rivulata*** (Valenciennes, 1833)

Records from: Nahr El 'Assi (Orontes) near Hermel (SSSV obs.); Sour (AUB); 'Ammiq marshes (AUB); 'Arida (AUB).

***Testudo graeca terrestris*** Forsskål, 1775

Records from: Nahr Ibrahim valley, near El Machnaqa (SSV obs.); Nahr El 'Assi (= Orontes) sources env. (SSSV obs.); Shhim; Berqayel; Minyeh; Qomet Shehwan; Nabh As Safa (near Barouk Town) (all RS and HB pers. observations).

***Laudakia stellio stellio*** (Linnaeus, 1758)

Records from: Uyun As Siman env.; Baalbek; between Bcharré and the Cedars; Cedars of Bcharré; Beirut, in front of the "grottes des pigeons" ; El Mogheiri env.; Faqra, archaeological site; Hmaireh env. (between Hermel and Qbayiat); Laqluq env.; Hermel env., Nahr El 'Assi; Hermel pyramid env.; Nahlah env.; Nahlah, Ard El Kichek; Nahr Ej Joauz, betw. Majdal and Boqsmaya; El Machnaqa (Nahr Ibrahim valley); dunes S of Sour; (all MCC or SSV obs.); 'Ammiq (LU); Es Saadiyat (south of Damour) (AUB); Boutmeh (AUB); Shhim (AUB); Sour (AUB); Al Qam-mouaa (AUB); 'Alman (AUB); Kifrayya (AUB).

***Trapelus lessonae*** (De Filippi, 1865) [Formerly *T. ruderatus*]

Species living only in northern Beqa', where it was recorded for the first time by BOULENGER (1885). Our records come from Hermel, pyramid env. (MCC); Nahlah env. (MCC); Suwayd, S of Hermel (AUB).

***Chamaeleo chamaeleon recticrista*** Böttger, 1880

We have personal records from: Nahr Ej Joauz betw. Boqsmaya and Majdal (SSSV obs.); Beirut, in front of the "grottes des pigeons" (SSV obs.); El Machnaqa env. (Nahr Ibrahim valley) (SSSV obs.); El Naame (AUB).

***Cyrtopodion amictopholis*** (Hoofien, 1967)

This species was previously considered to be an endemic of Mount Hermon, mainly on the S slopes in areas occupied by Israel (but it was also recorded from "near the top" by HOOFIEN 1967). A specimen was collected in summer 2000 from the Mount Lebanon Range, where it was found in the environs of Boutmeh village, in the western foothills of Barouk Mountains, at 995 m above sea level. The specimen is preserved in the American University herpetological collection (AUB AR-0750).

***Cyrtopodion kotschyi orientalis*** (Štěpánek, 1937)

Records from: Bcharré (SSV obs.); El Machnaqa (Nahr Ibrahim valley) (MCC); Shhim (AUB); Nahlah (AUB).

***Hemidactylus turcicus turcicus*** (Linnaeus, 1758)

We have specimens from: Hermel (AUB); Palm Island near Trablous (AUB, LU); Shhim (AUB); Sour (AUB); Beirut (AUB); Nahr El 'Assi near Hermel (SSSV obs.); Qurnat Shahwan (LU).

***Ptyodactylus puiseuxi*** Boutan, 1893

Since the description of *Ptyodactylus lobatus sancti-montis* Barbour, 1914 from the Lebanese foothills of Mount Hermon (Rashayya), this gecko has only been recorded a few times from

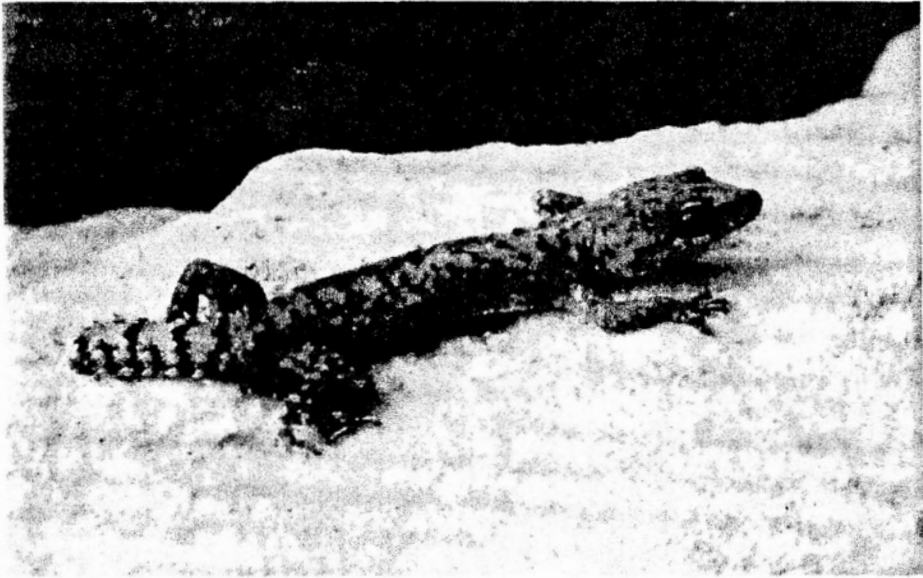


Fig. 1. *Cyrtopodion amictopholis* (Hoofien, 1967) (photograph: Riyad A. SADEK).

Lebanon. SIVAN & WERNER (1992) record it from El Qara'oun lake (Beqa') and Beqa', and the same authors, in another article, map two localities in Lebanon (WERNER & SIVAN 1994). *P. hasselquistii guttata* from Mount Hermon, reported by WERNER (1939) on the basis of the old record of GÜNTHER and the citations of *P. hasselquistii* by HRAOUI-BLOQUET (1981) for En Nabi Chit and Sar'ine (Saraine, Beqa'), should be referred to this species. The locality of Beirut (HRAOUI-BLOQUET 1981) must be considered as very doubtful. Actually, *Ptyodactylus puseuxi* is distributed mainly in the southern Beqa' below 1200 m, but not on the western slopes of Mount Lebanon. Records from: Kifrayya (AUB); 'Ammiq (AUB).

***Acanthodactylus schreiberi syriacus* Böttger, 1879**

Known from Beirut (where it is very probably extinct) and from the coastal areas north and south of Tyr (= Sour). We found it only in this latter area: Sour env. (MCC) and Ras al Ain (AUB).

***Lacerta fraasii* (Lehrs, 1910)**

This endemic Lebanese lizard, previously known only from the Mount Lebanon Range (Mt. Lebanon and Jabal Sannin), is here reported from the high Anti-Lebanon (at about 2000 m) for the first time (Jurd Nahlah, 15.V.1999, MCC-R918 and AUB AR-0740). The locality is very close to the Syrian border and it is expected that its range extends into Syrian territory.

***Lacerta kulzeri kulzeri* (Müller & Wettstein, 1932)**

The record from Baalbek (HRAOUI-BLOQUET, 1981, DISI 1991) refers to high altitude localities of the Antilebanon in the Caza (= province) of Baalbek; the record from Beirut of *L. cf. kulzeri* by HOOFIEN et al. (1990) is erroneous. We have found this species at Ma'asser Ech Chouf (Jabal Barouk) (AUB); Uyun As Siman (AUB; LU, MCC); Nahlah, Ard El Kichek (AUB, MCC).

***Lacerta laevis laevis* (Gray, 1838)**

A very widespread lizard. Our specimens come from: Baalbek (MCC); Hermel env., Nahr El 'Assi (MCC); Hmaireh env. (between Hermel and Qbayiat) (MCC); Nahr Ej Joauz, betw. Majdal and Boqsmaya (MCC); Palm Island near Trablous (AUB, LU); Ain Al Hqailat (AUB); Bcharré (MCC); Beirut, grottes des pigeons (SSV obs.); Faqra, archaeological site (SSV obs.); Mayruba (SSV obs.); Horj Ehdén (LU); Jounieh (AUB); Sannin (AUB, LU); Shhim (AUB); Bab Mare' (AUB); Saghbin (AUB); Nahlah village (AUB); Nahr Ibrahim Valley (AUB); Nahr El Hammam (AUB); Sour (AUB); Al 'Arida (AUB); Farayya town (AUB).

***Lacerta media wolterstorffi* Mertens, 1922**

Records from: Nahr El 'Assi near Hermel (AUB; MCC); Hermel (AUB); El Machnaqa (Nahr Ibrahim valley) (MCC); Qammoua (AUB); betw. Afqa and El 'Aqura (SSV obs.); betw. Bcharré and Cedars (SSV obs.); Cedars of Bcharré (SSV obs.); Laqlouq env. (SSV obs.); Sannin (LU). According to IN DEN BOSCH et al. (1998), the subspecies *israelica* Peters, 1962 is also present.

***Mesalina brevirostris* cf. *microlepis* Angel, 1936**

Although not included in the checklist by IN DEN BOSCH (1998), this species is known in Lebanon on the basis of specimens collected in "*Coelasyria*" (= Beqa') by E. FESTA at the end of the 19th century (PERACCA 1896). Recently this species was reported by IN DEN BOSCH (2001) from areas N and NE of Hermel, while we collected it at a locality several km S of the pyramid of Hermel (AUB, MCC).

***Ophisops elegans* Ménétries, 1832**

A very common and widespread lizard. We have data from: Al 'Arida (AUB); Ain Zhalta near Cedars (AUB, MCC); Uyun As Siman (AUB); Cedars of Tannurin (LU); S of the Pyramid of Hermel (MCC); Laqlouq env. (MCC); Nahlah env. (MCC); El Machnaqa, Nahr Ibrahim valley (MCC); El Mogheiri env. (SSSV obs.), Shhim (AUB), Sannin (LU); Eastern slopes of Jabal Sannin West of Hadath Baalbek (AUB).

***Ablepharus budaki budaki* Göçmen, Kumlutaş & Tosunoğlu, 1996**

Probably a rather abundant species. Our specimens come from Beirut (AUB); Shhim (AUB); Tannurin Cedars (LU); Horj Ehdén (LU), Nahr Ej Joauz betw. Boqsmaya and Majdal (MCC); Ehdén (AUB). Lebanese *Ablepharus* quoted in the literature before SCHMIDTLER's article (1997) cannot be referred with certainty to either *A. budaki* or *A. rueppelli*.

***Chalcides ocellatus ocellatus* (Forsskål, 1775)**

A species known so far from Lebanon exclusively from the coastal area of Beirut (ZINNER 1967, HRAOUI-BLOQUET 1981). On the basis of our personal data, it seems to be distributed all along the Mediterranean coast. In Beirut it may have suffered the same fate as *Acanthodactylus schreiberi*. Records: Sour env. (AUB); Mina zone in Tripoli (Trablous) harbor (HB obs.); Ras el Ayn (RS obs., AUB).

***Chalcides guentheri* Boulenger, 1887**

ZINNER (1967) reported the only Lebanese locality known so far, Mazraet Barguthieh above Saïda, 400 m (a locality not found on our maps or gazetteers). It is not clear if the records from Mt. Hermon (e.g. GÜNTHER, 1864 sub *Seps monodactylus*) refer to Lebanese territory. One of the authors (R. SADEK) has recently collected further specimens: one from Mazbud, NE of Saïda, at 450 m (AUB AR-0773), and another from Tairi, near Bint Jbail in the south.

***Eumeces schneideri pavimentatus*** (Geoffroy St.-Hilaire, 1827)

The species is known from some localities in the Northern Beqa' around Baalbek and Hermel, with one recent record in the Central Lebanon. Records from Beirut (ANGEL 1936, HRAOUI-BLOQUET 1981) need confirmation. Records: Pyramid of Hermel env. (MCC); Charbine env. (N of Hermel) (MCC); Nahlah env. (AUB); Bedghane at around 1200 m (AUB).

***Mabuya vittata*** (Olivier, 1804)

The most abundant lizard of the Lebanon. Records: Antilebanon, Jord Nahlah (= Ard El Kichek) (AUB; MCC); Shhim (AUB); Sour (AUB; MCC, LU); Horj Ehden (AUB, LU); 'Ammiq (AUB, LU); Uyun As Siman (MCC, LU, AUB); Uyun Urgush (MCC); betw. Baruk and Ain-Zhalta (MCC, LU); Nahr El 'Assi near Hermel (MCC); El Machnaqa (MCC); betw. Bcharré and Cedars (SSV obs.); Laqluq env (SSV obs.).

***Pseudopus apodus* cf. *thracius*** Obst, 1978

Mainly known from the W Mount Lebanon Range. We have records from Baabdate (AUB); Zakrite (AUB); Brummana (AUB); Al Chiyyah (AUB).

***Blanus strauchi aporus*** Werner, 1898

Since the old generic citation by TRISTRAM (1888), only one precise locality was previously known recording the occurrence of this species in Lebanon (IN DEN BOSCH et al. 1998). We have two new records from Jounieh (A.U.B.) and Halat (north of Jounieh).

***Typhlops vermicularis*** Merrem, 1820

Probably a rather widespread species. Records: Beirut (AUB); Nahr El Kalb (AUB); Shhim (AUB).

***Eirenis decemlineatus*** (Duméril, Bibron and Duméril, 1854)

Generically reported from Lebanon by BÖTTGER (1880) and from Beskinta by HRAOUI-BLOQUET (1981). Its occurrence in the Biskinta area is confirmed by the new specimen from Sannin (AUB AR-465).

***Eirenis levantinus*** Schmidtler, 1993

The records of *E. modestus* from Lebanon [i.e. "Libanon" NMW 15627) and Brumana/Lebanon (SMF 19279)] should be referred to this taxon (SCHMIDTLER 1993). Records: Maaser Al-Shouf (Barouk) (AUB); Hrajel (AUB); Barja (AUB); Baalbek (AUB); Jezzine (AUB); Maad (AUB); Sannin (AUB); Hadath (AUB); Jounieh (AUB); between Barouk and Ain Zhalta (MCC); Laqluq env. (MCC).

***Eirenis lineomaculatus*** Schmidt, 1939

The only undoubted published Lebanese record known to us is that of SIVAN & WERNER (1992) from Kafr-Kuk (S-Lebanon). DISI (1985) reported two specimens (BM 1957.1.3.66-67) from "Amioun - Syria" (= Amioun, Lebanon). We found the species at Shhim (AUB); Barouk (AUB); Mazboud (AUB); Maaser Al-Shouf (Barouk) (AUB); Dahr es Souane (AUB).

***Eirenis rothi*** Jan, 1863

Recorded by GÜNTHER (1864), BÖTTGER (1880) and BOULENGER (1894) (summarised by HAAS 1951 and WERNER 1939). The record of *Contia collaris*, reported by BOULENGER (1923) from Lake Yamouné, could belong to this species. One specimen is preserved in the AUB collection without data. The occurrence of this species in Lebanon, although very probable, needs confirmation.

***Elaphe hohenackeri*** (Strauch, 1873)

This species was known in Lebanon only from “*Amnioum*” (= Amioun; NILSON & ANDRÉN 1984) and from Bcharré area (IN DEN BOSCH et al. 1998). It has also been reported from Mt. Hermon (Syrian slopes). On the basis of our specimens this species seems to be much more common than expected: Mazbud (NE of Saida) (AUB); Shhim (AUB); Horj Ehden (AUB); Ain Zhalta (AUB); Dahr es Souane (LU); Sannin (LU).

***Elaphe sauromates*** (Lacépède, 1789)

Well known from S slopes of Mt. Hermon, IN DEN BOSCH et al. (1998) has only recently recorded this snake from the Mt. Lebanon Range. Our single specimen comes from the cedar forests of Barouk (Maaser Al Shouf, LU), but we have another observation from Niha cedar grove (further south). Old records of *Callopeltis quaprilineatus* (sic!) and *Coluber quadrilineatus* from Beirut (BÖTTGER 1877, 1880) are very probably erroneous.

***Hemorrhhois nummifer*** Reuss, 1834 [formerly *Coluber*; see SCHÄTTI & UTIGER (2001)]

Previous records of *C. ravergeri* in Lebanon, except for that of PERACCA (1896), mainly refer to this species (see also SCHÄTTI & AGASIAN 1985). Personal records: Sarba (AUB); Shhim (AUB); Mazbud (AUB); Beirut (AUB); Qartaba (AUB); Chouf (AUB); Jadra-Shouf (AUB); Mahruqah (AUB); Antelias (LU); Dahr es Souane (HB); Jounieh (LU); Sabtiyah (LU); El Maamelteine (LU); Fanar (LU).

***Hemorrhhois ravergeri*** Ménétries, 1832 [formerly *Coluber*; see SCHÄTTI & UTIGER (2001)]

Known for many years only from the specimen of PERACCA (1896) collected near the top of Mt. Hermon, the species was recently discovered also in the Mount Lebanon Range by IN DEN BOSCH et al. (1998). All the older records of this species refer to *C. nummifer* (see above). The only record we have is from Uyun Urgush (AUB), 2050 m.

***Hierophis jugularis*** (Linnaeus, 1758)

A common snake. Our specimens come from: Hadath El Jubbah (AUB); Al Chiyyah (AUB); Tall ‘Ayn ash Sharif (W of Baalbek) (AUB); Haouch Snaid (AUB); Beirut (AUB); Jounieh (AUB); Ma’asser Ech Chouf (AUB); Palm Island off Trablous (AUB); Shhim (AUB); ‘Ammiq (LU).

***Malpolon monspessulanus insignitus*** (Geoffroy, 1827)

Abundant and widespread: Manjel. Akkar (LU); ‘Ammiq (HB; RS); Kifrayya’s side of Barouk (AUB); Saida (AUB); Hazmiye (AUB); Beirut (AUB); “Beqa’” (AUB); Bwarej (AUB); Bkhesh-tay near Aley (AUB); Qartaba (AUB); Fissane env. (Beqa’) (SSV obs.); Hermel env., Al Assi river (SSSV obs.); El Mghairiye (AUB).

***Natrix tessellata*** (Laurenti, 1768)

Rather widespread: Sultan Yaaqoub (AUB); ‘Ammiq marshes (AUB, LU); Shhim (AUB); Jisr El-Basha (AUB); Nahr El Kalb (AUB); Beirut, AUB campus (AUB); Haouch Sneid, AUB farm (AUB); Bcharré Cedars (SSV obs.); Sannin (LU).

***Platyceps collaris*** (Müller, 1878) [formerly *C. rubriceps* (Venzmer, 1919); see SCHÄTTI et al. (2001)]

This species was confused for a long time with *C. najadum* (e.g. the specimen quoted by ANGEL 1936; R. SINDACO det.). Most previous records of *C. najadum* (or *dahli*) refer to this species. Personal data from Saida (AUB); Shhim (AUB); Haouch-Sneid, AUB farm (AUB); Ksaibeh (AUB); Nabeh Es Safa (AUB); Sannin (AUB); Sour (LU).

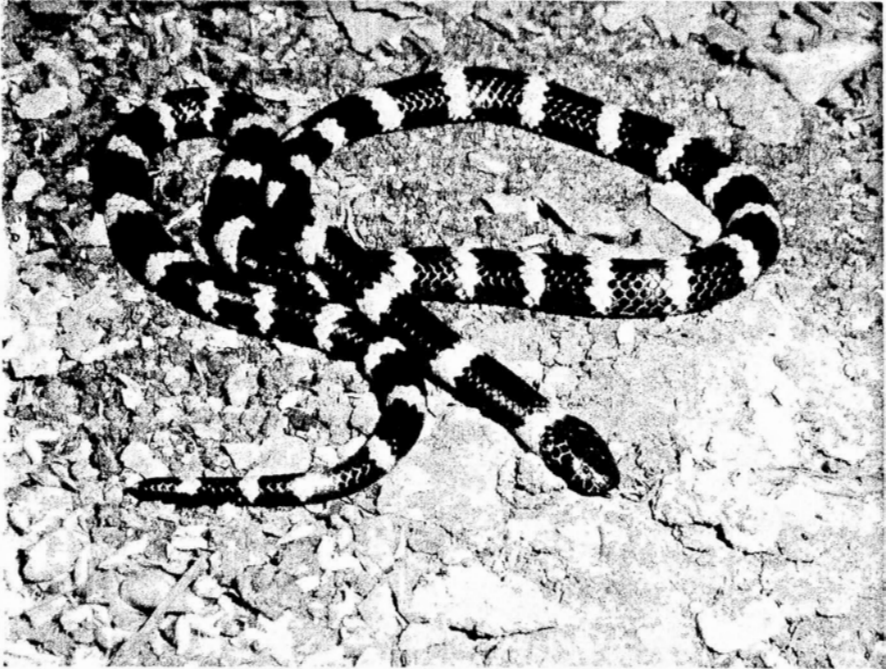


Fig. 2. *Micrelaps muelleri* Böttger, 1880 (photograph: Riyad A. SADEK).

***Platyceps najadum dahlui*** (Schinz, 1833) [formerly *Coluber*; see SCHÄTTI & UTIGER (2001)]

The records of this species in older papers must be carefully evaluated because of confusion with *C. rubriceps* (e.g. ANGEL 1935-36; R. SINDACO det. in the Muséum National d'Histoire Naturelle collection in Paris). Its presence in Lebanon has been reported only recently by IN DEN BOSCH et al. (1998), from the Mt. Lebanon, and this is confirmed by our record from Ain El Hqailat Cedar Forest, N of Ehden, near Miziarah (AUB AR-704). The Lebanese distribution is extended in the Anti-Lebanon Range by a remarkable record from Nahleh (AUB AR-714).

***Rhynchocalamus melanocephalus melanocephalus*** Günther, 1865

A relatively common species reported from many localities by HRAOUI-BLOQUET (1981), but not subsequently recorded by FRANZEN & BISCHOFF (1995). Our specimens come from Shhim (AUB), Beirut (AUB) and Dahr El Sawwan (LU).

***Telescopus fallax syriacus*** (Böttger, 1880)

Recorded from a few localities by FLOWER (1933), MÜLLER & WETTSTEIN (1933) and HRAOUI-BLOQUET (1981). We have few specimens, from: Saida (AUB); Debbiyeh (SE of Damour, around 400 m) (AUB); Shhim (AUB).

***Micrelaps muelleri*** Böttger, 1880

A very little known species in Lebanon; the only precise locality given in the literature is "Tripolis" (BATTERSBY 1953). One specimen labelled "South Lebanon", without further data, is preserved in the AUB collections.





Fig. 3. *Macrovipera lebetina* (Linnaeus, 1758) (photograph: Riyad A. SADEK).

***Vipera bornmuelleri* Werner, 1898**

This endemic species is probably restricted to high altitude (above 1800 m) in Mount Lebanon Range and Mount Hermon, but it may also be present in Antilebanon. We found it at Uyun As Siman (AUB; MCC); Bcharré Cedars (MCC).

***Macrovipera lebetina* (Linnaeus, 1758)**

The old records in BÖTTGER (1877) and FLOWER (1933), reported by HAAS (1951), may refer to *V. palaestinae*, a species not described until much later by F. WERNER (1938) and widely distributed in Mediterranean coastal areas where these old *lebetina* records come from. In a recent paper by AL-ORAN et al. (1998), there is a map showing four localities in Lebanon: Tripoli area (probably after FLOWER 1933), Beirut area (after BÖTTGER 1877), Saida area (unknown source) and an area near the border between extreme N Israel and Lebanon (area of Lake Hula, source unknown). All these localities fall within the Mediterranean subregion. We have two specimens of *Macrovipera lebetina*, documenting with certainty its presence in Lebanon: Jiwar Al-Hashish, in the eastern foothills of Mount Lebanon between Hermel and Qobayyate (AUB AR-727), and Qab'it, about 650 m (AUB).

***Vipera palaestinae* Werner, 1938**

Contrary to what is stated by JOGER (1984), *V. palaestinae* is recorded from three Lebanese localities by HRAOUI-BLOQUET (1981) but is not reported by JOGER (1984). The record of *Vipera (Echidna) lebetina* from Beirut (BÖTTGER 1877), also mentioned by HAAS (1951), is very probably this species. Our data come from. Aley (AUB); Anout, NE of Saida (AUB); Beirut (AUB); Shhim (AUB); Nahr Ibrahim Valley (AUB).

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## Annex: Gazetteer

List of all the localities mentioned in the text, together with their Caza (district) and geographic latitude and longitude.

- Afqa – El 'Aqurah (Jbail): 34.05/35.53  
 Ain El Hqailat (Zgharta): 34.21/36.00  
 Aley (Aaley): 33.48/35.36  
 Alman (Shouf): 33.36/35.24  
 Ammiq (Beqa' Al Gharbi): 33.42/35.45  
 Anjar (Baalbek): 33.43/35.55  
 Antelias (Metn): 33.54/35.35  
 Arida. Al (Aakkar): 34.38/35.59  
 Ayn Zhalta (Shouf): 33.44/35.42  
 Baabdate (Metn): 33.53/35.40  
 Baalbek (Baalbek): 34.00/36.12  
 Barja (Shouf): 33.39/35.26  
 Barouk (Shouf): 33.42/35.04  
 Bcharre (Bcharré): 34.15/36.01  
 Bcharre Cedars (Bcharré): 34.15/36.01  
 Bedghane (Aley): 33.46/35.40  
 Beirut (Beirut): 33.52/35.30  
 Beit Chebab (Metn): 33.56/35.40  
 Bab Mare' (Beqa' Al Gharbi): 33.35/35.41  
 Berqayel (Aakkar): 34.29/36.02  
 Bikfaiya (Metn): 33.55/35.40  
 Biskinta (Metn): 33.56/35.47  
 Bkhechtai (Aaley): 33.48/35.37  
 Boutmeh (Shouf): 33.40/35.37  
 Btigrin (Metn): 33.55/35.44  
 Bwarej (Zahlé): 33.49/35.49  
 Charbine (Hermel): 34.27/36.22  
 Chiyyah. Al (Baabda): 33.51/35.31  
 Dahr es Souane (Metn): 33.49/35.51  
 Ehden (Zgharta): 34.17/35.58  
 Ehmej (Jbeil): 34.07/35.47  
 Es Saadiyat (Shouf): 33.42/35.25  
 Fanar (Metn): 33.53/35.35  
 Faqra (Kesrouane): 34.00/35.49  
 Farayya (Kesrouane): 34.01/35.49  
 Fissane (Hermel): 34.29/36.21  
 Hadath Baalbek (Baalbek): 34.00/36.01  
 Hadath El Jubbah (Bcharré): 34.15/35.56  
 Halat (Kesrouane): 34.05/35.39  
 Hammana (Kesrouane): 33.50/35.44  
 Haouch Snaid (AUB farm) (Baalbek): 33.56/36.04  
 Hasbayya (Rashayya): 33.24/35.41  
 Hazmiye (Baabda): 33.52/35.32  
 Hermel (Hermel): 34.23/36.23  
 Hermel. 'Assi river (Hermel): 34.24/36.26  
 Hermel. 'Assi source (Hermel): 34.21/36.22  
 Hermel. Pyramid env. (Hermel): 34.21/36.23  
 Hermel. S of the Pyramid (Hermel): 34.22/36.25  
 Hmaireh (Aakkar): 34.29/36.20  
 Horj Ehden (Zgharta): 34.19/35.59  
 Jadra (Shouf): 33.38/35.24  
 Jezzine (Jezzine): 33.32/35.35  
 Jisr El Basha (Metn): 33.53/35.34  
 Jiwar Al Hashish (Hermel): 34.30/36.21  
 Joub Jannine (Beqa' Al Gharbi): 33.37/35.47  
 Jounieh (Kesrouane): 33.59/35.37  
 Kifrayya (Beqa' Al Gharbi): 33.41/35.43  
 Laqluq. Al (Kesrouane): 34.09/35.51  
 Ma'asser Ech Chouf (Shouf): 33.41/35.42  
 Maad. El (Jbeil): 34.07/35.48  
 Maamelteine. El (Kesrouane): 34.00/35.39  
 Machnaqa. El (Jbail): 34.05/35.46  
 Mahruqah. Al (Metn): 33.57/35.49  
 Manjel near Halba (Aakkar): 34.32/36.06  
 Mayruba (Kesrouane): 34.01/35.45  
 Mazbud (Shouf): 33.36/35.29  
 Mghairiye. El (Shouf): 33.36/35.27  
 Minyeh (Danniyeh): 34.29/35.56  
 Mogheiri. El (Jbail): 34.06/35.52  
 Naame. El (Shouf): 33.45/35.28  
 Nabatiye (Nabatiyyeh): 33.22/35.29  
 Nabi Chit. En (Baalbek): 33.52/36.07  
 Nahlah (Baalbek): 34.03/36.16  
 Nahlah. Ard El Kichek (Baalbek): 34.03/36.21  
 Nahlah. Jurd Nahlah (Baalbek): 34.03/36.21  
 Nahr Al Kalb (Kesrouane): 33.57/35.36  
 Nahr ej Jaouz. betw. Majdal and Boqsmaya (Koura): 34.15/35.47  
 Nahr El 'Assi (= Hermel. 'Assi river) (Hermel): 34.24/36.26  
 Nahr El Bared (Danniyeh): 34.31/35.57  
 Nahr El Hammam (Shouf): 33.39/35.31  
 Nahr Ibrahim Valley. above El Machnaqa (Jbail): 34.05/35.46  
 Niha Cedars (Shouf): 33.36/35.39  
 Qab'it (Akkar): 34.27/36.06  
 Qammouaa'. Al (Akkar): 34.27/36.08  
 Qartaba (Jbail): 34.06/35.51  
 Qurnat Shahwan (Kesrouane): 33.55/35.38  
 Rass El Ain (Sour): 33.13/35.13  
 Sabtiyah (Metn): 33.53/35.34  
 Saghbin (Beqa' Al Gharbi): 33.36/35.41  
 Saida (Saida): 33.33/35.22  
 Sannin. Jurd (Metn): 33.57/35.52  
 Sarba (Kesrouane): 33.00/35.00  
 Shhim (Shouf): 33.37/35.29  
 Sultane Yaaqoub. Es (Beqa' Al Gharbi): 33.38/35.51  
 Sour (Sour): 33.16/35.12  
 Suwwayd (S of Hermel) (Hermel): 34.10/36.17  
 Taanayel (Zahlé): 33.47/35.52  
 Tairi (Bint Jbail): 33.07/35.24  
 Tall 'Ayn ash Sharif (Baalbek): 33.53/36.02  
 Tannourine (Batroun): 34.13/35.56  
 Tripoli (= Trablous) (Trablous): 34.26/35.51  
 Trablous. Palm Island (Trablous): 34.28/35.48  
 Uyun As Siman (Kesrouane): 34.00/35.53  
 Uyun Urghush (Kesrouane): 34.16/36.08  
 Yahshush (Kesrouane): 34.04/35.44  
 Zaarour. Ez (Metn): 33.56/35.48