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REPTILES AND AMPHIBIANS FROM  
SOUTHWESTERN ASIA

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Field Museum's interest in the herpetological fauna of south-western Asia dates from the arrival of a small collection of lizards and snakes obtained by Dr. Henry Field in Iraq and Trans-Jordan in the course of the Marshall Field North Arabian Desert Expedition of 1928. The fact that this collection of twelve specimens, obtained incidentally in the course of an archaeological survey, included a new species of poisonous snake, conspicuous by reason of its size and by the fact that it has horn-like knobs over the eyes, is impressive evidence that this part of the world, so long known in history, is still relatively unexplored zoologically. As a natural result, Dr. Field, enthusiastically seconded by Mr. Richard A. Martin, engaged in much more extensive zoological collecting in the course of the Field Museum Anthropological Expedition to the Near East in 1934. Their efforts resulted in the collecting of some 1,900 specimens of amphibians and reptiles. No opportunity has been neglected to add to our collections from this region. Yusuf Lazar, an Assyrian, who had been employed as a zoological and botanical collector in Iraq on the Near East Expedition, has continued collecting in subsequent years; 208 specimens of reptiles collected through his efforts have been presented to Field Museum by Dr. Field. Dr. Field and Mr. Martin have been constantly helpful in geographic and other questions in the course of the preparation of the present work. I am indebted also to Mr. H. W. Parker, of the British Museum (Natural History), for advice on various taxonomic problems. The map showing the localities mentioned is the work of Mr. Paul Wong.

Friends of Dr. Field and of the Museum have contributed to the growing collection from the region as a whole. Among these especial mention may be made of Dr. Walter P. Kennedy, of the Royal College of Medicine, Baghdad; the late Wing-Commander

A. R. M. Rickards; Mr. E. S. Fraser of the Nairn Overland Transport Company, at Rutba, Iraq; Dr. Calvin W. McEwan, of the Oriental Institute of the University of Chicago, who collected in Hatay; and Dr. Ernst Herzfeld, former director of the Oriental Institute Expedition at Persepolis, Iran, who obtained a considerable number of specimens of amphibians and reptiles. During the past twelve years the Iraq Petroleum Company has rendered valuable assistance to members of Museum expeditions, and two members of its staff, Dr. P. Y. Shuwayhat and Dr. P. S. Manasseh, have sent specimens of reptiles to the Museum. Dr. Georg Haas, of Hebrew University, Jerusalem, has been in active correspondence with Field Museum since 1936, and numerous additions to the herpetological collections have been received from him by gift and exchange. In the systematic list of the collection which follows, the collectors are Dr. Henry Field and Mr. Richard A. Martin, except as otherwise stated.

We are indebted to the Museum of Vertebrate Zoology of the University of California for the loan of a small collection from the border of the Persian Gulf, which has been included in the present report, adding three species to the list. The total collection here reported includes 114 species, and amounts to 2,302 specimens, of which six are salamanders, 989 frogs and toads, 961 lizards, 319 snakes, and 27 turtles. The localities from which specimens have been received are shown on the accompanying map. Recently accepted spellings of place-names have been used to conform, wherever possible, to those adopted by the Permanent Committee on Geographical Names of the Royal Geographical Society, London. The following names must be noted: Hatay, formerly *Sanjak* of Alexandretta, and now part of the Republic of Turkey; Iran = Persia; Iraq = Mesopotamia; Kish = Tell el Uhaimir; and Shah Abdul Azim = Rayy. Geographical names in brackets have been inserted to elucidate the text.

Aside from the fact that the basic zoological exploration of southwestern Asia is still far from complete, the herpetological fauna of this region is of great biological interest and importance. There are complicated problems in zoogeography, involving faunal relations with Europe, central Asia, the Oriental region, and Africa, and exhibiting the interaction of animal communities adjusted to desert, savanna, forest, and mountain habitats. No less interesting are the more strictly ecological relations with the environmental factors (see *Agama stellio picea*, for example), and the evolutionary



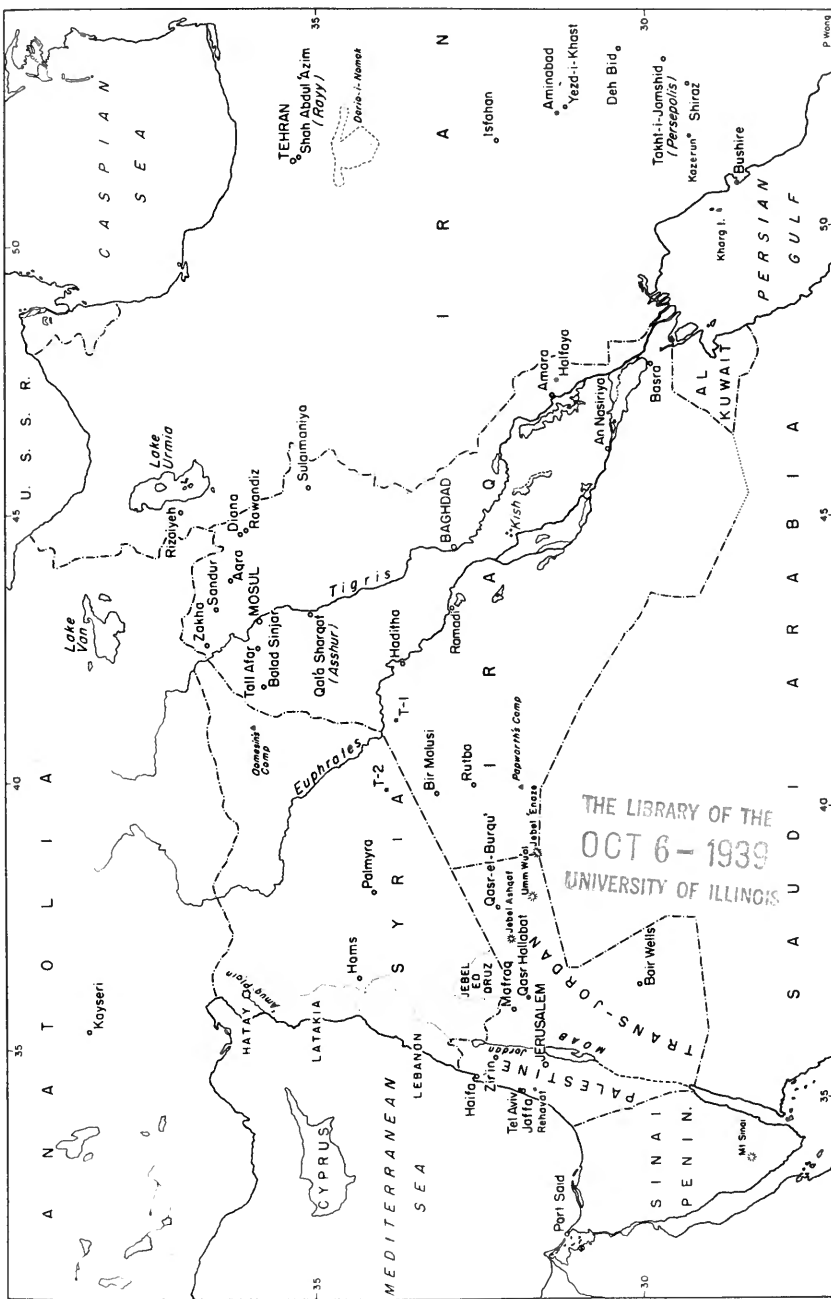


FIG. 6. Map of southwestern Asia showing localities mentioned in the text.

implications of the structural adaptations, which, especially in the desert forms, exhibit notable parallelisms with snakes and lizards from desert regions in other parts of the world. With glimpses of so much of biological interest, it is disappointing to find that even the identification of species in the present list is of necessity provisional in many genera. Much fundamental taxonomic study, depending on the assembly of adequate collections, remains for the future; this will involve, in particular, the partition of wide-ranging forms into subspecies correlated with geographic factors.

### CAUDATA

#### ***Neurergus crocatus crocatus* Cope.**

*Neurergus crocatus* Cope, Proc. Acad. Nat. Sci. Phila., 1862, p. 343, 1862—Urmia, Persia (now Rizaiyeh, Iran).

IRAQ: Aqra, 6 (19627–32).

The type locality, presumably in the Lake Urmia (Rizaiyeh) drainage, is not more than 140 km. distant from Aqra, and while our specimens are from the Tigris drainage, their correspondence with the original description in details of coloration is so close that they clearly represent typical *crocatus*.

All our specimens are females. The largest measures 167 in total length, tail 90, arm 29, leg 30, width of head 14.6, length of head to gular fold 18. The toes of the appressed hind limb reach nearly to the elbow of the forelimb. A half-grown specimen, with three gill rami (longest 5 mm.) on one side and only one on the other, measures 81, tail 42, arm 12, leg 13.

While the agreement in structural characters with *Neurergus strauchii* Steindachner is close, the radical difference in color pattern and the much more elongate body in *strauchii* (in which the appressed limbs barely meet) indicates that the two forms are distinguishable, though the type locality of *strauchii*, Lake Van in eastern Anatolia, is not far from the range of true *crocatus*. Werner records *crocatus* from Buldur (?Burdur), in western Anatolia, but I infer that his specimens are more like *strauchii* than like our *crocatus*, and may well represent a distinct form. Nesterov's *Neurergus crocatus derjugini* and *N. c. microspilotus*, from the mountains south of our area, are more directly allied to *crocatus crocatus* in body form than to *strauchii*, but both are quite different in color pattern from our specimens, and apparently represent distinct geographic forms.

Wolterstorff (1926, p. 1) still considers the type locality of *crocatus* to be unknown. This was omitted by Cope merely as an

oversight; Dunn records the type from "Ooromia" (= Urmia), Persia (1917, p. 27); this is now known as Lake Riziaiyeh, Iran.

## SALIENTIA

### **Bufo viridis viridis** Laurenti.

*Bufo viridis* Laurenti, Synopsis Rept., p. 27, pl. 1, fig. 1, 1768—Vienna.

*Bufo viridis viridis* Mertens, Senckenbergiana, 8, p. 258, 1926.

HATAY: Amuq Plain, 1 (25351, C. W. McEwan).

IRAN: Isfahan, 15 (21018); Shah Abdul Azim, 12 (21019).

IRAQ: Amara, 76 (19838–63); Baghdad, 12 (21138, 26396–8, Yusuf Lazar); Balad Sinjar, 1 (19870); Halfaya, 5 (19864); Tall Afar, 270 (juv.) (19865–9); Tell Asmar, 5 (19837).

The specimens here listed are readily distinguishable from the few European specimens at hand, but it is obvious that a comprehensive revision of this species into geographic races will require a detailed study of large series from the great area over which it ranges. The problem may be compared to the similarly unsolved partition of *Rana pipiens* in North America. There are no conspicuous differences between specimens from Iran and Iraq.

### **Hyla arborea savignyi** Audouin.

*Hyla savignyi* Audouin, Descr. Egypte, Rept., Suppl., pl. 2, fig. 13, 1812—Syria (presumed).

*Hyla arborea savignyi* Mertens, Abh. Ber. Mus. Magdeburg, 3, p. 356, 1924.

HATAY: Amuq Plain, 1 (25350, C. W. McEwan).

IRAN: Persepolis, 1 (21025).

IRAQ: Amara, 5 (19871–5); Baghdad, 28 (20872, Field and Martin; 22683, 25137, Yusuf Lazar).

The single Persian specimen exhibits no appreciable difference from those from Baghdad.

### **Rana ridibunda ridibunda** Pallas.

*Rana ridibunda* Pallas, Reise Russ. Reich, 1, p. 458, 1771—Gurev, north coast of the Caspian Sea.

ANATOLIA: Kayseri (Kaisarieh), 1 (25907, L. Forcart).

HATAY: Amuq Plain, 3 (25352–4, C. W. McEwan).

IRAN: Isfahan, 6 (21024); Persepolis, 29 (21026); Shah Abdul Azim, 40 (21017–18, 21021); Yezd-i-Khast, 74 (21022–23).

IRAQ: Amara, 270 (19748–71); Baghdad (vicinity of), 9 (26394–5, 26399, Yusuf Lazar); Balad Sinjar, 11 (19778); Diana, 8 (19784); Haditha, 16 (19773); Halfaya, 11 (19772); Mosul, 5 (19774); Sandur, 5 (19780); Tall Afar, 41 (19775–7, 19779); Zakho, 31 (19781–3).

It is disappointing to be unable to reach a satisfactory conclusion as to the distinctness of *Rana ridibunda susana* from the study of this large series. The leg-length character proposed by Boulenger (1905, p. 552) in describing *susana* is subject to great variation; the difference between individuals from a single locality may be fully as great as that between Boulenger's specimens from Susa (Shush), Iran, and the specimens referred by him to *Rana ridibunda ridibunda*. In our series from Amara, which is geographically not far distant from Susa, and in the lower Tigris-Euphrates lowland, the length of the tibia relative to that of the body (t/b) varies from 0.46 to 0.51 in both sexes; and as this is slightly lower than the same proportion in specimens from northeastern Iraq (0.48–0.56, male; 0.46–0.53, female), there is some correspondence to Boulenger's distinction of the two forms; but the overlap of variation in the two series is much too great to warrant the distinction of a named form.

That the relative length of the tibia changes with age is clearly shown in the series from Persepolis, assorted according to size:

Sex	Number of specimens	Range in size	Extremes t/b
Male	4	80–90	0.49–0.50
Male	6	72–76	0.51–0.55
Female	4	108–121	0.45–0.48
Female	6	84–95	0.49–0.55

The large size of the specimens from Persepolis is not matched elsewhere. The largest male and female specimens from northeastern Iraq measure respectively 77 and 81 in body length; in the large series from Amara, the maxima are 78 and 93.

## SAURIA

### *Stenodactylus sthenodactylus* Lichtenstein.

*Ascalabotes sthenodactylus* Lichtenstein, Verz. Doubl. Mus. Berlin, p. 102, 1823.

*Stenodactylus sthenodactylus* Flower, Proc. Zool. Soc. Lond., 1933, p. 760, 1933.

IRAQ: Rutba, 4 (19676–9).

These differ considerably from Egyptian specimens, but as for so many other species, the definitive partition into geographic forms must await the study of extensive collections.

### *Alsophylax tuberculatus* Blanford.

*Bunopus tuberculatus* Blanford, Ann. Mag. Nat. Hist., (4), 13, p. 454, 1874—  
Bahu Kalat, Mand, and near Bampur, Baluchistan.

SYRIA: Damesin's Camp, 1 (19739).

This specimen is referred to *tuberculatus* only on the precedent of Procter's record from Mesopotamia and Angel's from Syria. The range from Baluchistan to Syria, without differentiation, is somewhat improbable.

### ***Alsophylax blanfordii* Strauch.**

*Bunopus blanfordii* Strauch, Mém. Acad. Sci. St. Pétersbourg, (7), 35, p. 61, pl. 1, figs. 13, 14, 1887—Egypt (in errore).

ARABIA: Al Jubail, 70 km. north of Bahrein Island, 2 (MVZ 25620-1, R. P. Miller).

These specimens greatly extend the known range of *blanfordii*, which was known only from Bent's specimens from the Hadhramaut. It is evident that the type locality "Egypt" is erroneous, and that the cotypes, obtained from a dealer in terrarium specimens, really came from Arabia.

The larger specimen, a female, measures 115, body 48.4, tail 66.6, length of head 12.8, width of head 9.5, arm 19, leg 26. The smaller specimen is a male with broken tail. It measures 40.5 from snout to vent, and has 12 preanal pores.

### ***Gymnodactylus scaber* Heyden.**

*Stenodactylus scaber* Heyden, in Rüppel, Atlas Reise nörd. Afrika, Rept., p. 15, pl. 4, fig. 2, 1827—vicinity of Tor, Sinai.

*Gymnodactylus scaber* Duméril and Bibron, Erp. gen., 3, p. 421, 1836.

IRAQ: Aqra, 1 (19684); Baghdad, 71 (19681-2, 19694, 20866-71, 22685, 22688, Field and Martin; 25139-47, 25150-1, Yusuf Lazar); Diyala, 4 (25148-9, 25152-3, Yusuf Lazar); Halfaya, 1 (19683); An Nasiriya, 7 (22690).

### ***Gymnodactylus kotschy* Steindachner.**

*Gymnodactylus kotschy* Steindachner, Sitzber. Akad. Wiss. Wien, 63, Abt. I, p. 329, pl. 1, fig. 1, 1870—Syros Island, Cyclades (restr. by Mertens and Müller, 1928).

HATAY: Amuq Plain, 1 (25338, C. W. McEwan).

### ***Gymnodactylus kirmanensis* Nikolsky.**

*Gymnodactylus kirmanensis* Nikolsky, Ann. Mus. Zool. Acad. Sci. Petrograd, 4, p. 381, 1899—Mons Ku-i-tuftan (Kuh-i-Taftan), in Sargado, and eastern Kirman.

IRAN: Persepolis, 1 (21007, Ernst Herzfeld).

**Pristurus rupestris** Blanford.

*Pristurus rupestris* Blanford, Ann. Mag. Nat. Hist., (4), 13, p. 454, 1874—Muscat, and Island of Karrak (?Kharg) near Bushire, Persian Gulf.

ARABIA: Aden, 8 (18220, A. R. M. Rickards).

These specimens may well be from the Hadhramaut instead of from the Aden region, as only part of Rickard's collection was specifically labeled.

**Phyllodactylus elisae** Werner.

*Phyllodactylus elisae* Werner, Verh. Zool. Bot. Ges. Wien, 45, p. 14, pl. 3, fig. 1, 1895—ruins of Nineveh, near Mosul, Iraq.

IRAQ: Baghdad, 2 (19695-6); Mosul, 2 (19702-3).

**Ptyodactylus hasselquistii hasselquistii** Donndorff.

*Lacerta hasselquistii* Donndorff, Zool. Beytr., 3, p. 133, 1789.

*Ptyodactylus hasselquistii* Boettger, Ber. Senck. Ges., 1879-80, p. 194, 1880.

ARABIA: Aden, 4 (18221, A. R. M. Rickards).

IRAQ: Haditha, 2 (19699-700).

PALESTINE: Jerusalem, 1 (26881, Georg Haas).

SYRIA: Between Iraq Petroleum Company's Stations T-1 and T-2, two (19697-8).

Our series of this species is inadequate for any effective contribution to its partition into geographic races. Flower (1933, p. 764) comments on its extraordinarily sedentary habits, which contribute to its geographic variations.

**Hemidactylus flaviviridis** Rüppell.

*Hemidactylus flaviviridis* Rüppell, Neue Wirbelthiere Abyssinien, Amphibien, p. 18, pl. 6, fig. 2, 1835—Massaua Island, Eritrea.

IRAQ: Baghdad, 7 (22687, 22691, 25154-7, Yusuf Lazar; 28307, W. P. Kennedy); Tell Asmar, 1 (19692).

**Hemidactylus turcicus** Linnaeus.

*Lacerta turcica* Linnaeus, Syst. Nat., p. 202, 1758—Turkey.

*Hemidactylus turcicus* Boettger, Ber. Offenb. Ver. Naturk., 1876, p. 57, 1876.

HATAY: Amuq Plain, 1 (25339, C. W. McEwan).

IRAQ: Baghdad, 10 (22686, 25158-61, 28312, Yusuf Lazar).

**Agama adramitana** Anderson.

*Agama adramitana* Anderson, Contr. Herpetol. Arabia, p. 31, 1896—Hadhramaut.

ARABIA: Aden (or inland from Aden), 5 (18203-7, A. R. M. Rickards; 1850, British Museum).

**Agama agilis** Olivier.

*Agama agilis* Olivier, Voy. Emp. Ottoman, 4, p. 394, pl. 29, fig. 2, 1804—Baghdad, Iraq.

IRAN: Daria-i-Namak, 7 (20985-6, 20988); Isfahan, 1 (20989); Yezd-i-Khast, 62 (20987, 20990).

Males usually lack the dorsal pattern, and have a varying amount of blue on the belly and throat. A few of the males have peculiarly coarse dorsal scales. Females lack the blue color and have the conspicuous dorsal pattern.

**Agama caucasica** Eichwald.

*Stellio caucasicus* Eichwald, Zool. Spec., Rossiae Polon., 3, p. 187, 1829—Baku.

*Agama caucasica* Boulenger, Cat. Liz. Brit. Mus., 1, p. 367, 1885.

IRAQ: Asshur (Sharqat), 1 (19644); Diana, 3 (19641-3).

**Agama microlepis** Blanford.

*Stellio microlepis* Blanford, Ann. Mag. Nat. Hist., (4), 13, p. 453, 1874—Kush-Kizard, north of Shiraz, Iran.

*Agama microlepis* Boulenger, Cat. Liz. Brit. Mus., 1, p. 366, 1885.

IRAN: Shah Abdul Azim, 13 (20972-84).

**Agama nupta** De Filippi.

*Agama nupta* De Filippi, Giorn. Inst. Lomb., 6, p. 407, 1832—Persepolis.

IRAN: Persepolis, 4 (20997-21000).

**Agama pallida** Reuss.

*Agama pallida* Reuss, Mus. Senck., 1, p. 38, pl. 3, fig. 3, 1834—Upper Egypt.

IRAQ: Baghdad, 1 (19639); Euphrates, west bank, 1 (21915, P. A. Jarvis); Rutba, 14 (11359-60, 19662-73).

SYRIA: Homs, 2 (19674-5).

TRANS-JORDAN: Jebel Ashqaf (el Ashaqif), 1 (19661); Umm Wu'al, 1 (11068, Henry Field).

**Agama persica** Blanford.

*Agama persica* Blanford, Proc. Zool. Soc. Lond., 1881, p. 674, pl. 49, 1881—Deh Bid and Kazerun, Iran.

IRAQ: Amara, 1 (19654); Baghdad, 3 (20864, 25762-3, Yusuf Lazar).

TRANS-JORDAN: Qasr-el-Burqu', 1 (11069, Henry Field).

**Agama ruderata** Olivier.

*Agama ruderata* Olivier, Voy. Emp. Ottoman, 4, p. 395, pl. 29, fig. 3, 1804—Persia and northern Arabia.

IRAQ: Balad Sinjar, 2 (19652-3); Tall Afar, 4 (19648-51).

HATAY: Amuq Plain, 2 (25343-4, C. W. McEwan).

**Agama sinaita** Heyden.

*Agama sinaita* Heyden, in Rüppell, Atlas Reise nörd. Afrika, Rept., p. 10, pl. 3, 1827—Sinai.

ARABIA: Aden, 7 (18208–14, A. R. M. Rickards); Hadhramaut, 2 (18450–51, A. R. M. Rickards).

SINAI PENINSULA: 1 (3907, British Museum).

**Agama stellio stellio** Linnaeus.

*Lacerta stellio* Linnaeus, Syst. Nat., p. 202, 1758—Delos, Cyclades, and Egypt (restr. to Delos, Mertens & Müller, 1928, p. 26).

*Agama stellio* Boulenger, Cat. Liz. Brit. Mus., 1, p. 368, 1885.

HATAY: Amuq Plain, 8 (25345–9, 25361, C. W. McEwan).

IRAQ: Aqra, 1 (19640).

PALESTINE: Rehovot (Rethoboth), 1 (26883, Georg Haas).

SINAI PENINSULA: Mount Sinai, 2 (3908–9, British Museum).

TRANS-JORDAN: Hammam-es-Sarakh near Qasr Hallabat, 1 (11070, Henry Field); Moab, 1 (1588).

Flower has pointed out some of the geographic variations of this species, which become of increased importance in view of the distinctness of *Agama stellio picea*. It is evident that the partition of the wide range remaining to *A. s. stellio* affords an attractive taxonomic problem.

Three eggs from Amuq Plain contain mature embryos. The eggs range in size from 24 x 15 to 27 x 15 mm. An embryo measures 76, body 32.

**Agama stellio picea** Parker.

*Agama stellio picea* Parker, Proc. Zool. Soc. Lond., 1935, p. 137, pl. 1, 1935—Black Lava Desert of Trans-Jordan (32° 10' N. Lat., 36° 40' E. Long.).

TRANS-JORDAN: Qasr-el-Burqu', 5 (19655–9).

Our specimens agree in detail with Parker's description. His speculations on the functional relations of the remarkable coloration of this form with its environment are discussed by Klauber (1939, p. 65). The fundamental ecological importance of the heat economy of desert reptiles has only lately been appreciated.

**Phrynocephalus arabicus** Anderson.

*Phrynocephalus arabicus* Anderson, Ann. Mag. Nat. Hist., (6), 14, p. 377, 1894—plateau of the Hadhramaut.

ARABIA: Hadhramaut, 1 (184552, A. R. M. Rickards).

The single specimen is typical of this well-defined species.



**Phrynocephalus scutellatus** Olivier.

*Agame scutellata* Olivier, Voy. Emp. Ottoman, 5, p. 196, pl. 42, fig. 1, 1807—Mt. Sophia, near Isfahan, Iran.

*Phrynocephalus scutellatus* Mocquard, Bull. Mus. Hist. Nat. Paris, 16, p. 15, 1910.

IRAN: Yezd-i-Khast, 187 (20991-6).

I have followed Mocquard in adopting the name *scutellatus* in place of *olivieri* auct. Other authors have regarded Olivier's *Agame scutellata* as not properly binomial; but comparison with other descriptions in the same work seems to warrant Mocquard's conclusion.

**Aporoscelis benti** Anderson.

*Aporoscelis benti* Anderson, Ann. Mag. Nat. Hist., (6), 14, p. 376, 1894—near Makulla, Hadhramaut.

ARABIA: Wadi Du'an, near Hajarain, Hadhramaut, 2 (18202, 18449, A. R. M. Rickards).

**Uromastix microlepis** Blanford.

*Uromastix microlepis* Blanford, Proc. Zool. Soc. Lond., 1874, p. 656, pl. 53, 1874—Basra, Iraq.

ARABIA: Al Jubail, 70 km. north of Bahrein Island, 1 (MVZ 25622, R. P. Miller).

IRAN: Tehran, 2 (20885-6).

The specimens from Tehran are flat trade skins, purchased in the market.

The distinction of this species from *aegyptius* by the absence of enlarged lateroventral tubercles in *microlepis*, becomes difficult when these tubercles are reduced or few. The relations between the two forms require further study.

**Uromastix aegyptius** Forskål.

*Lacerta aegyptia* Forskål, Descr. Anim., p. 13, 1775—Egypt.

*Uromastix aegyptius* Anderson, Zool. Egypt, Amph. Rept., p. 129, pl. 14, 1898.

IRAQ: Baghdad, 4 (19485-8); Rutba, 1 (11357, E. S. Fraser).

**Uromastix loricatus** Blanford.

*Centrotrachelus loricatus* Blanford, Proc. Zool. Soc. Lond., 1874, p. 660, 1874—Bushire, Iran.

*Uromastix loricatus* Boulenger, Cat. Liz. Brit. Mus., 1, p. 409, pl. 32, 1885.

IRAQ: 1 (19645, W. P. Kennedy).

This specimen is probably from the same source, some fifty miles west of Baghdad, as the one recorded by Dr. Kennedy (1937, p. 748).

**Varanus griseus** Daudin.

*Tupinambis griseus* Daudin, Hist. Nat. Rept., 8, p. 352, 1803.

*Varanus griseus* Boulenger, Cat. Liz. Brit. Mus., 2, p. 306, 1885.

IRAQ: Baiji, 1 (28306, W. P. Kennedy).

TRANS-JORDAN: Qasr el Hallabat near Zerka, 1 (11071, Henry Field).

The vivid juvenile pattern is present in the specimen from Qasr el Hallabat. The sandy coloration of the adult, in a typical desert pattern, is well shown in the plate in the "Zoology of Egypt."

**Diplometopon zarudnyi** Nikolsky.

*Diplometopon zarudnyi* Nikolsky, Ann. Mus. Zool. Acad. Sci. Petrograd, 10, p. 277, figs. 1-3, 1907—Nasrie, Arabistan, Iran.

ARABIA: Al Jubail, 70 km. north of Bahrein Island, coast of Persian Gulf, 1 (MVZ No. 25623, R. P. Miller).

This specimen has scattered brown spots on the dorsum. The annuli number 178+17, with 54 segments in an annulus at mid-body. The dorsal and ventral longitudinal grooves are well defined. *Pachy-calamus*, to which Boulenger refers *zarudnyi*, lacks the dorsal line, and it seems preferable to retain *Diplometopon* pending a more comprehensive revision of the family. The head shields and preanal plates of the Al Jubail specimen are closely similar to those of the type.

**Apathya cappadocica urmiana** Lantz and Suchow.

*Apathya cappadocica urmiana* Lantz and Suchow, Zool. Anz., 106, p. 294, 1934—west of Lake Urmia (Rizaiyeh).

IRAQ: Aqra, 1 (19745).

This specimen has 60 dorsal scales across the middle of the back, and thus agrees closely with specimens described by Mertens from Mardin (Mertens, 1924, p. 362). Iraq specimens, with dorsal scales 60-68, are thus intermediate between the types of *urmiana*, in which they number 52-57, and the typical form, in which they are 65-75. The presence of eight rows of ventrals apparently ties our specimen directly to the eastern subspecies, though Mertens reports six rows in his specimens from Iraq. The Aqra specimen measures 182.5, tail 122.

**Acanthodactylus tristrami iracensis** subsp. nov.

*Type* from Haditha, Iraq. No. 21679 Field Museum of Natural History. Adult male. Collected May 24, 1934, by Henry Field and Richard A. Martin.

*Diagnosis.*—Distinguished from *tristrami tristrami* and *tristrami orientalis* by larger and fewer dorsal scales, 45–46 across the back instead of 58–65 and 48–56, apparently by a less vivid color pattern, and by the more sharply pectinate toes.

*Description of type.*—Habitus lacertiform, head and body depressed, shorter than the tail; the length of the head to the posterior border of the parietals contained 4.5 times in the length from snout to anus; a feeble concavity in the anterior border of the frontal; snout pointed, with fairly distinct canthus; nasals feebly swollen; the tip of the fourth toe reaches the ear opening.

Suture between the nasals short; frontonasal a little broader than long; frontal long, narrowed behind; frontoparietals much larger than the interparietal; no occipital; parietals with a raised ridge along their posterior and lateral borders; bordered laterally by a large anterior and a small posterior temporal; two large supraoculars, preceded by a group of three shields on each side representing the first supraocular; six superciliaries, separated from the oculars by a partly double row of granules; two nasals extensively in contact with the upper border of the first labial; anterior loreal much smaller than second; subocular broadly bordering the lip; temporals small, rounded; a small but distinct tympanic shield; auricular denticulation very feeble.

Nuchal scales granular, passing gradually into the larger, smooth, flat, and imbricate dorsals, which number 46 across the body; scales smooth on base of tail; 10 longitudinal and 27 transverse rows of ventrals; the outer rows much narrowed; a median series of five anals; nine scales in the collar; 27 scales from collar to chin shields; five pairs of chin shields, the anterior three in contact; femoral pores 22–22; lamellae beneath the fourth toe 23.

Brown above with obscure light dorsolateral spots, paler beneath; sides of head and neck with vertical dark bars.

*Measurements.*—Length 135, body 53, head to posterior border of ear 13.5, arm 19, leg 34.

*Notes on paratypes.*—Nos. 21677, 21678, and 21680, all from the type locality, exhibit no important variation. No. 21677 is a gravid female, measuring 53 mm. from snout to vent, with black vermiculation on the dorsal ground color; the two smaller male specimens have obscure light spots in a dorsolateral row on each side.

*Remarks.*—The specimens from Papworth's Area, due south of Rutba, recorded below as *Acanthodactylus tristrami orientalis*,

resemble the present form in coloration and in their more elongate snout, and are thus intermediate between *orientalis* and *iracensis*. Presumably the shorter-snouted form from Damesin's Camp, Syria, is typical of *orientalis*.

***Acanthodactylus tristrami orientalis* Angel.**

*Acanthodactylus tristrami orientalis* Angel, Bull. Inst. Egypte, 18, p. 109, 1936—Palmyra, Tell Abiad, Ain Zahra, and Deir ez Zor.

IRAQ: Papworth's Area (south of Rutba), 2 (19723-4).

SYRIA: Damesin's Camp (northeastern Syria), 4 (19741-4).

These specimens agree with Angel's diagnosis of *orientalis* in having 48 to 51 dorsal scales across the body; they thus reinforce the distinctness of this form from *tristrami*, which has dorsal scales 58-65. There are differences of coloration between our Syrian and Mesopotamian specimens, and in the four specimens from Damesin's Camp the snout is shortened, the labial border of the first upper labial being shorter than that of the second. Obviously much remains to be learned about the distribution of the numerous forms of *Acanthodactylus* in southwestern Asia.

***Acanthodactylus boskianus asper* Audouin.**

*Lacerta aspera* Audouin, Descr. Egypte, Rept., Suppl., p. 173, pl. 1, fig. 9, 1829—Egypt.

*Acanthodactylus boskianus* var. *asper* Lataste, Ann. Mus. Genova, (2), 2, p. 496, 1885.

ARABIA: Aden, 4 (18222, A. R. M. Rickards, 1932); Shabwa (Hadhramaut), 1 (18453, A. R. M. Rickards, 1932).

IRAQ: Haditha, 6 (19730); Rutba, 1 (28117).

SYRIA: Between Iraq Petroleum Company's Stations T-1 and T-2, 1 (19704).

The specimen from the Hadhramaut has larger dorsal and especially lateral scales, the laterals and dorsals across the body numbering only 22, with nine between the hind limbs. The Syrian specimen has 36 dorsals, the Rutba specimen 40, and the dorsals vary from 35 to 40 in the Aden series. This variation, however, is matched in Boulenger's much larger series, in which the minimum dorsal scale count of 23 is connected, in south Arabian specimens, with the higher counts.

Two specimens from Haditha have the subocular narrowly bordering the lip on one side only.

***Acanthodactylus boskianus euphraticus* Boulenger.**

*Acanthodactylus boskianus* var. *euphraticus* Boulenger, Ann. Mag. Nat. Hist., (9), 3, p. 550, 1919—Ramadi, Iraq.

*Acanthodactylus boskianus euphraticus* Angel, Bull. Inst. Egypte, 18, p. 110, 1936.

IRAQ: Tall Afar, 2 (19735-6).

These specimens fall within the limits of variation for this form established by Boulenger and Angel.

***Acanthodactylus schreiberi syriacus* Boettger.**

*Acanthodactylus boskianus* var. *syriacus* Boettger, Ber. Senck. Ges., 1879-80, p. 69, 1880—Haifa, Palestine.

*Acanthodactylus schreiberi syriacus* Wettstein, Sitzber. Akad. Wiss. Wien, (math. natur.), 137, Abt. I, p. 781.

PALESTINE: Rehovot (Rethoboth), 1 (26882, Georg Haas).

***Acanthodactylus robustus* Werner.**

*Acanthodactylus robustus* Werner, Zool. Anz., 81, p. 240, fig. 2, 1929—Bir Molusi (Meloza), Iraq; Schmidt, Field Mus. Nat. Hist., Zool. Ser., 17, p. 225, 1930.

IRAQ: Jebel Enaze, 1 (11072, Henry Field, 1928).

This specimen has been described in detail in the paper cited above.

***Acanthodactylus cantoris arabicus* Boulenger.**

*Acanthodactylus cantoris* var. *arabicus* Boulenger, Bull. Soc. Zool. France, 43, p. 154, 1918—southern Arabia.

*Acanthodactylus cantoris arabicus* Parker, Ann. Mag. Nat. Hist., (10), 8, p. 521, 1931.

ARABIA: Adena Sailan, Wadi Beihan, 2 (18456, 18458, A. R. M. Rickards, 1932); Hadhramaut, 1 (18454, A. R. M. Rickards, 1932); Wadi Irma, near Shabwa, western Hadhramaut, 1 (18455, A. R. M. Rickards, 1932); Wadi Sa'ad, between Beihan and Nisab, 1 (18457, A. R. M. Rickards, 1932).

These specimens tend toward *arabicus* in their low number of dorsal scales, but reach a considerably larger size than any reported by Boulenger or Parker. The dorsal scales across the body range from 35 to 40; the length from snout to anus in the single female specimen is 66 mm., two males measuring 68 and two 74.

***Ophisops elegans elegans* Ménétries.**

*Ophisops elegans* Ménétries, Cat. Rais. Obj. Zool. Voy. Caucase, p. 63, 1832—near Baku, Transcaucasus, U.S.S.R.

*Ophisops elegans elegans* Lantz, Bull. Mus. Géorgie, Tiflis (Tbilisi), 6, p. 34, 1931.

IRAN: Darya-i-Namak, 3 (21015); Tehran, 1 (21014).

IRAQ: Balad Sinjar, 2 (19737-8); Diana, 25 (19746); Sulaimaniya, 7 (19747); Tall Afar, 4 (19731-4).

SYRIA: Damesin's Camp, 9 (19740).

TRANS-JORDAN: Moab, 2 (1587, Basel Museum).

The specimens from Diana appear to have somewhat smaller temporal scales than the series from other localities.

***Ophisops elegans ehrenbergii* Wiegmann.**

*Amystes ehrenbergii* Wiegmann, Arch. Naturg., 1, pt. 2, p. 6, 1835—Syria.

*Ophisops elegans ehrenbergii* Müller and Wettstein, Sitzber. Akad. Wiss. Wien, 142, Abt. I, p. 142, 1933.

ANATOLIA: Erjias Dag, 2 (2056, O. H. Tellalina, 1903).

HATAY: Amuq Plain, 1 (25340, C. W. McEwan, 1936).

I venture to retain this subspecies provisionally, though it has been synonymized with the typical form by Lantz (1931, p. 34).

***Ophisops elegans schlueteri* Boettger.**

*Ophisops schlueteri* Boettger, Ber. Senck. Ges., 1879-80, p. 176, pl. 3, fig. 3, 1880—Cyprus.

CYPRUS: 4 (1855, British Museum).

Boulenger's reference of specimens from Mount Hermon to this subspecies suggests a problem for further study. His use of the concept "variety" and the system of subdivision of species into geographic subspecies in modern practice are often incompatible.

***Ophisops blanfordi* sp. nov.**

*Ophisops elegans* var. *mizolepis* Boulenger, Monog. Lacert., 2, p. 216, 1921.

*Type* from Halfaya, 20 miles east of Amara, Iraq. No. 19721 Field Museum of Natural History. Adult male. Collected April 28, 1934, by Henry Field and Richard A. Martin.

*Diagnosis*.—Distinguished from *Ophisops elegans* by its single postnasal, and small temporal scales.

*Description of type*.—Habitus lacertiform, snout obtusely pointed, tail twice the length of head and body. Upper head shields smooth; nostril between two large slightly protuberant nasals, with a single postnasal; frontonasal wider than long; prefrontal suture two-thirds the length of the frontonasal; frontal in contact with three supraoculars; three superciliaries on each side, separated from the two large supraoculars by a row of granules; interparietal elongate, as long as the frontoparietals; parietals bordered by two enlarged temporals on each side, the anterior twice as long as the posterior;

four supralabials anterior to the subocular; three shields between the subocular and the auricular, which is large; first vertical and lowermost horizontal temporal rows of scales four-five; dorsals across back at mid-body 22; ventrals in eight longitudinal (the outer rows much narrowed) and 25 transverse rows; collar attached at middle; 16 gulars from collar to chin shields; a moderately enlarged preanal; femoral pores 10-11. The general color is brownish gray, with obscure light dorsolateral lines, paler beneath.

*Measurements*.—Total length 144, tail 98, width of head 8, length of shielded part of head 11, arm 17, leg 31.

*Notes on paratypes*.—The paratypes, all from the lower Tigris-Euphrates Valley (91 specimens, 19716-21, 19876, and 22692), are invariable in having a single postnasal, and 90 of the 91 have the third postsubocular in contact with the auricular. In the specimens referred to *elegans elegans*, eight exhibit this contact on both sides, one has it on one side and not on the other, and in 40 specimens these scales are separated by a lower auricular scale from the enlarged auricular. The dorsal scales, exclusive of the narrow outer row of ventrals, vary from 22 to 28, averaging 25. The temporals are smaller than in *elegans elegans*; the scales in the row between the first postsubocular and the enlarged temporal, number 3 in two, 4 in thirteen, and 5 in five specimens.

*Remarks*.—Malcolm Smith has shown (1935, p. 380) that Stoliczka's name *meizolepis*, based on an Indian specimen, is not applicable to the form in the Tigris-Euphrates Valley, which was referred to *mizolepis* by Boulenger (1921, p. 216). This slightly but constantly distinct form is thus left without a name, which I have supplied above. It is named for W. T. Blanford in allusion to his early recognition of the form (he also confused it with *meizolepis*), and in recognition of his fundamental herpetological work in southwestern Asia. Pending demonstration of intergradation with *Ophisops elegans elegans*, I place it as a distinct species.

### ***Eremias guttulata guttulata* Lichtenstein.**

*Lacerta guttulata* Lichtenstein, Verz. Doubl. Mus. Berlin, p. 101, 1823—Egypt.

*Eremias guttulata guttulata* Wettstein, Sitzber. Akad. Wiss. Wien (math.-natur.), 137, Abt. I, p. 782, 1928.

IRAQ: Haditha, 1 (21676).

TRANS-JORDAN: Qasr-el-Burqu', 3 (19727-9, Henry Field, 1928).

This form may readily be distinguished from the Irani (Persian) specimens recorded below as *watsonana* by its more elongate snout.

**Eremias guttulata watsonana** Stoliczka.

*Eremias (Mesalina) watsonana* Stoliczka, Proc. Asiatic Soc. Bengal, p. 86, 1872—between Karachi and Sukkur, Sind.

*Eremias guttulata watsonana* Smith, Fauna Brit. India, Rept. Amph., 2, p. 389, 1935.

IRAN: Isfahan, 7 (21013, 21681); Shah Abdul Azim, 2 (21011–12); Yezd-i-Khast, 33 (21010).

**Eremias brevirostris** Blanford.

*Mesalina brevirostris* Blanford, Ann. Mag. Nat. Hist., (4), 14, p. 32, 1874—Kalabagh, Punjab, and Tumb Island, Persian Gulf.

*Eremias brevirostris* Boulenger, Cat. Liz. Brit. Mus., 3, p. 89, 1887.

IRAQ: Papworth's Area, 2 (19725–6); Rutba, 27 (19722, Field and Martin; 11358, E. S. Fraser).

I take this opportunity to restrict the type locality of this species to Kalabagh, Punjab. Specimen No. 11358 has only two pairs of chin shields in contact. Our specimens do not appear to be *Eremias brevirostris* var. *microlepis* of Angel.

**Eremias velox persica** Blanford.

*Eremias persica* Blanford, Ann. Mag. Nat. Hist., (4), 14, p. 370, 1874—near Isfahan, and Rayin, southeast of Kerman.

*Eremias velox persica* Smith, Fauna Brit. India, Rept. Amph., 2, p. 383, 1935.

IRAN: Yezd-i-Khast, 15 (21009).

**Mabuya aurata aurata** Linnaeus.

*Lacerta aurata* Linnaeus, Syst. Nat., p. 209, 1758—Jersea anglorum, Cypro.

*Mabuya aurata aurata* Mertens, Abh. Ber. Mus. Magdeburg, 3, p. 376, 1924.

IRAQ: Tall Afar, 2 (19690–91).

**Mabuya aurata septemtaeniata** Reuss.

*Euprepis septemtaeniatus* Reuss, Mus. Senck., 1, p. 47, pl. 3, fig. 1, 1834—Massowa (Massaua).

*Mabuya aurata septemtaeniata* Mertens, Abh. Ber. Mus. Magdeburg, 3, p. 377, 1924.

IRAN: Isfahan, 1 (21016).

IRAQ: Amara, 9 (19685–6); Baghdad, 75 (19687, Field and Martin; 25081–25136, Yusuf Lazar); Diyala *Liwa*, 1 (22689, Yusuf Lazar); Halfaya, 2 (19688–89).

The single specimen from Isfahan has 34 scales around the body, and differs in coloration from the Baghdad series in having the belly lineate and the posterior part of the back without pattern.



**Mabuya brevicollis** Wiegmann.

*Euprepis brevicollis* Wiegmann, Arch. Naturg., 3, p. 133, 1837—Abyssinia.

*Mabuia brevicollis* Boulenger, Cat. Liz. Brit. Mus., 3, p. 169, 1887.

ARABIA: Abian Hills, near Lahej, 2 (1859, British Museum); Kureba Wadi Du'an, Hadhramaut, 2 (18461-2, A. R. M. Rickards, 1932).

**Mabuya tessellata** Anderson.

*Mabuia tessellata* Anderson, Proc. Zool. Soc. Lond., 1895, p. 636, pl. 36, fig. 2, 1895—(?) near Aden.

ARABIA: Aden, 2 (18223-4, A. R. M. Rickards, 1932).

**Mabuya vittata** Olivier.

*Scincus vittatus* Olivier, Voy. Emp. Ottoman, 3, p. 103, 1804—sands west of Rosetta.

*Mabuya vittata* Wettstein, Sitzber. Akad. Wiss. Wien (math.-natur.), 137, Abt. I, p. 783.

HATAY: Amuq Plain, 2 (25341-2, C. W. McEwan, 1936).

Both specimens have 31 scales around mid-body.

**Ablepharus brandtii festae** Peracca.

*Ablepharus festae* Peracca, Boll. Mus. Torino, 9, No. 167, p. 8, 1894—Es-Salt and Dscherasch (Terash), Trans-Jordan.

IRAQ: Baghdad, 1 (28309, W. P. Kennedy, 1937).

Reference to Blanford's account of his *Ablepharus pusillus* from Basra (1876, p. 391, pl. 27, fig. 1) and to Peracca's description of *A. festae* from Trans-Jordan (1894, p. 8), clearly supports the sub-specific differentiation of the Mesopotamian form; as in so many other instances, this must be stated as a problem for further investigation. Our specimen agrees with *festae* in having only 18 scales around mid-body, and differs from Blanford's figure of *pusillus* in having a much more elongate body. Boulenger and Proctor have referred specimens from the Euphrates to *brandtii*, with no reference to Peracca's species.

**Eumeces schneideri princeps** Eichwald.

*Euprepis princeps* Eichwald, Bull. Soc. Nat. Moscou, 2, p. 303, 1839—Talysch region, Transcaucasus, U.S.S.R.

*Eumeces schneideri princeps* Mertens, Abh. Ber. Mus. Magdeburg, 3, p. 384, pl. 12, fig. 4, 1924.

HATAY: Amuq Plain, 1 (25355, C. W. McEwan, 1936).

IRAQ: Balad Sinjar, 38 (19636); Rutba, 1 (19633); Tall Afar, 39 (19634-5, 19637-8, 19680).

In spite of the studies on this form by Mertens (1920, 1924, 1924a) and Taylor (1936), the status of *schneideri* and the related forms is far from settled. I am inclined to agree with Taylor in placing the type locality of *schneideri* as "Egypt"; but Mertens' reference of specimens from northern Iraq to the eastern subspecies (whatever its name) is obviously correct.

Whether or not the single specimens from Rutba and from the Amuq Plain belong here is less certain. The series from the Mosul region tends to be completely uniform in dorsal coloration; the Rutba specimen has the bright golden spots familiar in Egyptian specimens. The Hatay specimen differs in having decidedly larger scales on the forearm, four across the arm as viewed from in front instead of five, as in the remaining series. Without specimens of *pavimentatus*, the slender, longitudinally lined form of Syria and Palestine, or Egyptian material, I can offer no further opinion on this question.

In our series twenty-two specimens have the 26 scales around the body and nineteen have 28. The nuchal formula varies from 1-2 to 4-6, as often different on the two sides as alike, the counts 3-4, 4-4, and 4-5 occurring in eight specimens each. Counting the two sides separately, a single nuchal occurs twice, 2 nuchals eight times, 3 twenty times, 4 thirty-six times, 5 eighteen times and 6 twice. Taylor states that the normal scale count in the specimens examined by him is 24; this does not correspond with Anderson's statement that the scales in this species are 26-28 in Egyptian specimens.

***Eumeces schneideri variegatus* subsp. nov.**

*Type* from Persepolis, Iran. No. 21008 Field Museum of Natural History. Collected August 30, 1934, by Henry Field and Richard A. Martin.

*Diagnosis*.—Allied to *Eumeces schneideri*, from which it is distinguished by its vermiculate or mottled pattern, and its more numerous nuchals. Distinguished from *Eumeces zarudnyi* in having only four auricular lobules and no lateral line.

*Description of type*.—Habitus lacertiform; head little broader than neck; limbs moderate, overlapping by the length of the fingers when adpressed; tail slender, longer than head and body. Rostral followed on the upper surface of the head by a pair of supranasals, in contact; a median frontonasal, in contact with the anterior loreal on each side; a pair of large prefrontals, in contact; frontal six-sided, elongate, in contact with three supraoculars on each side; supra-

oculars five; frontoparietals a little smaller than the interparietal, which broadly separates the parietals; nuchals six-six; two loreals behind the rather large nasal; six superciliaries; eight upper and eight lower labials with an additional smaller postlabial above and below; three enlarged temporals, followed by a vertically elongate post-temporal; auricular lobules four on each side; two postmentals, followed by transverse rows composed successively of two, three, five, and eight scales. Twenty-six scales around the body; 66 dorsals to a point opposite the posterior face of the thigh; the two median rows enlarged; median scale row beneath tail enlarged for most of its length; 11 lamellae beneath third finger, 14 beneath fourth toe.

Back brown, with vermiculate darker markings, some of which are arranged in vertical rows, while the mid-dorsal spots tend to form longitudinal lines; under surfaces paler brown.

*Measurements*.—Total length 205, body 82, tail 123, arm 22, leg 32.5.

*Remarks*.—While more definitive discrimination of this form depends on the collection and study of additional material, it appears to be well distinguished from its nearest geographic allies, *Eumeces schneideri princeps* and *E. zarudnyi*.

### ***Scincus arabicus* sp. nov.**

*Type* from near Shabwa, Hadhramaut, Arabia. No. 18460 Field Museum of Natural History. Collected in 1933 by A. R. M. Rickards.

*Diagnosis*.—A *Scincus* with thirty scales around the body, rostral broadly in contact with frontonasal, six supraoculars, and poorly developed digital fringes; apparently allied to *Scincus scincus*, from which it is separated by the high number of scales around the body.

*Description of type*.—A stout-bodied *Scincus*, with lateroventral angulation extremely developed; limbs broadly overlapping when adpressed. Rostral strongly produced, with sharp horizontal edge, broadly in contact with the frontonasal; supranasals small, but larger than the very small nasals; a pair of prefrontals, their suture shorter than the frontonasal; frontal expanded anteriorly, narrowed between the supraoculars; six supraoculars; four superciliaries, the anterior longest; frontoparietals separated by the interparietal, which meets the frontal in a point; parietals broken into small transverse scales, three on the left, two on the right; postnasal small, followed by two elongate loreals; four subocular and one postocular; temporals indistinguishable from body scales; eight upper and seven

lower labials; two postmentals, followed by transverse rows of two, three, five, and nine scales; 30 scales around body, 58 dorsals from interparietal to a point opposite posterior face of thigh; two much enlarged preanals; 10 lamellae beneath third finger and 10 beneath fourth toe.

Pale brown above, each scale with a small dark brown spot at its posterior border; uniform yellowish beneath.

*Measurements*.—Total length 82, body 48, tail 34, arm 14, leg 15.5.

*Notes on paratype*.—A second specimen, No. 18459, from Wadi Beihan, also collected by the late Wing-Commander Rickards, agrees very closely with the type.

*Remarks*.—It is unfortunate that no adult specimens are available to make possible a more complete description of *arabicus*.

### **Scincus conirostris** Blanford.

*Scincus conirostris* Blanford, Proc. Zool. Soc. Lond., 1881, p. 677, fig. 1, 1881—Tangyak, 7 miles south of Bushire.

IRAQ: Baghdad, 2 (20863, 20865).

The two specimens lack field numbers, and it is impossible to state where, in the environs of Baghdad, they may have been collected. It is not unlikely that geographical races of this wide-ranging form may prove distinguishable.

### **Chalcides ocellatus ocellatus** Forskål.

*Lacerta ocellata* Forskål, Descr. Anim., p. 13, 1775—Egypt.

*Chalcides ocellatus ocellatus* Wettstein, Sitzber. Akad. Wiss. Wien (math.-natur.), 137, Abt. I, p. 784, 1928.

ARABIA: Aden, 2 (18225–26, A. R. M. Rickards).

PALESTINE: Jerusalem, 1 (26884, Georg Haas).

### **Chalcides sepsoides** Audouin.

*Scincus sepsoides* Audouin, Descr. Egypte, Rept., Suppl., p. 180, pl. 2, figs. 9, 10, 1827—Egypt.

*Chalcides sepsoides* Flower, Proc. Zool. Soc. Lond., 1933, p. 790, 1933.

PALESTINE: Jaffa, 1 (26885, Georg Haas).

### **Chamaeleo chamaeleon** Linnaeus.

*Lacerta chamaeleon* Linnaeus, Syst. Nat., p. 204, 1758—Africa and Asia.

PALESTINE: Jerusalem, 2 (22385–86, Georg Haas).

### **Chamaeleo calcarifer** Peters.

*Chamaeleo calcarifer* Peters, Monatsber. Akad. Wiss. Berlin, 1870, p. 110, 1870—Bembatuka, Madagascar (in errore).

ARABIA: Aden, 1 (18201, A. R. M. Rickards).

**Chamaeleo calyptratus** Duméril.

*Chamaeleo calyptratus* Duméril, Cat. Méth. Rept., p. 31, 1851.

ARABIA: El Khubar, 1 (1847, British Museum).

## SERPENTES

**Typhlops vermicularis** Merrem.

*Typhlops vermicularis* Merrem, Tent. Syst. Amphib., p. 158, 1820—Greek Islands (restr. by Mertens and Müller).

HATAY: Amuq Plain, 2 (25336–7, C. W. McEwan).

IRAN: Shah Abdul Azim, 1 (20943).

IRAQ: An Nasiriya, 1 (622730, Yusuf Lazar).

PALESTINE: Benyamina, 1 (28572, Georg Haas).

**Leptotyphlops macrorhynchus** Jan.

*Stenostoma macrorhynchus* Jan, Arch. Zool. Anat. Phys., 1, p. 190, 1862—Senaar.

*Leptotyphlops macrorhynchus* Corkill, Snakes and Snake Bite in Iraq, p. 8, 1932.

IRAN: Persepolis, 1 (21033, Ernst Herzfeld, 1934).

IRAQ: Baghdad, 2 (26355–6, Yusuf Lazar).

**Eryx jaculus jaculus** Linnaeus.

*Anguis jaculus* Linnaeus, Syst. Nat., p. 228, 1758—Egypt.

*Eryx jaculus jaculus* Zarewsky, Ann. Mus. Zool. Acad. Sci. Petrograd, 20, p. 375, 1915.

IRAQ: Baghdad, 1 (19498); An Nasiriya, 7 (22723–29, Yusuf Lazar).

PALESTINE: Jordan Valley, 2 (21911–2, P. Y. Shuwayhat).

**Eryx jaculus familiaris** Eichwald.

*Eryx familiaris* Eichwald, Zool. spec., Rossiae Polon., 3, p. 176, 1831.

*Eryx jaculus familiaris* Zarewsky, Ann. Mus. Zool. Acad. Sci. Petrograd, 20, p. 376, figs. 8, 9, 1915.

IRAQ: Sulaimaniya, 1 (19624).

The single specimen available from northern Iraq is insufficient material to form an opinion as to the validity of Zarewsky's partition of the species *jaculus*. Rostombekov (1928) carries this partition farther, describing a subspecies *urmianus*, which, if valid, may prove to include the form in northern Iraq.

**Natrix tessellata** Laurenti.

*Coronella tessellata* Laurenti, Syn. Rept., p. 87, 1768—Karst region (Ostmark).

*Natrix tessellata* Bonaparte, Iconogr. Fauna Ital., 2, fasc. 11, pl., 1834.

IRAN: Isfahan, 4 (20914-15, 20931, 20941); Persepolis, 12 (20899-901, 20916-21, 20925, 20937-38); Shah Abdul Azim, 29 (20902-13, 20942-45, 20951-58); Tehran, 5 (20946-50).

IRAQ: Balad Sinjar, 8 (19594, 19598-99, 19604-7, 19609); Diana, 1 (19622); Halfaya, 58 (19513-70); An Nasiriya, 3 (22720-22, Yusuf Lazar).

PALESTINE: Jordan Valley, 2 (19581, 21908, P. Y. Shuwayhat).

In the Halfaya series the extremes and averages for the number of ventrals and caudals in 25 specimens of each sex are as follows:

	Extremes	Average
Ventrals		
Male.....	163-178	170.2
Female.....	162-174	167.4
Caudals		
Male.....	64-75	69.6
Female.....	53-70	60.9

The scale counts of 15 males and 12 females from Shah Abdul Azim and Tehran, Iran, are as follows:

	Extremes	Average
Ventrals		
Male.....	170-181	176.1
Female.....	168-174	170.7
Caudals		
Male.....	70-80	74.7
Female.....	65-71	67.5

These exhibit an increased average number of both caudals and ventrals. The specimens from Persepolis and Isfahan differ from both of the above series. Our specimens are too few to afford conclusive data as to the probable extent of the difference. In nine males and seven females the scale counts are as follows:

	Extremes	Average
Ventrals		
Male.....	176-183	179.1
Female.....	173-184	177.4
Caudals		
Male.....	63-71	67.7
Female.....	61-67	63.5

These specimens have a higher number of ventrals, in both sexes, than the series from Shah Abdul Azim; but the caudals are fewer and are in better agreement with the Halfaya specimens. The reversal of the relative numbers of ventrals in the sexes is noteworthy.

### ***Coluber jugularis asianus* Boettger.**

*Zamenis viridiflavus* var. *asiana* Boettger, Ber. Senck. Ges., 1879-80, p. 151, 1880.

*Coluber jugularis asianus* Müller and Wettstein, Sitzber. Akad. Wiss. Wien (math.-natur.), 143, Abt. I, p. 142, 1933.

IRAN: Shah Abdul Azim (20948).

IRAQ: Amara, 1 (19504); Diana, 2 (19619, 19623); Halfaya, 4 (19511, 19515, 19545, 19567); Zakho, 3 (19612-14).

PALESTINE: Benyamina, 1 (28580, Georg Haas).

Ventrals in the present series range from 194 to 203 in males, and from 199 to 203 in females; caudals from 102 to 114 in males, and from 92 to 107 in females. The total length of the largest specimen (No. 19619, male) is 1,700, tail 465.

I do not find any noteworthy differences between specimens from northeastern Iraq and from the Amara region. The single specimen from Iran has only 92 caudals and has 11 lower labials on each side.

### ***Coluber najadum* Eichwald.**

*Tyria najadum* Eichwald, Zool. Spec., Rossiae Polon., 3, p. 174, 1831—Baku, Transcaucasus.

*Coluber najadum* Mertens and Müller, Abh. Senck. Ges., 41, p. 46, 1928.

IRAQ: Baghdad, 1 (22693); Balad Sinjar, 1 (19603).

PALESTINE: Mount Scopus (near Jerusalem), 1 (28583, Georg Haas); Miqve Yisrael, 1 (28584, Georg Haas).

The four specimens listed above are females; ventrals range from 213 to 225, caudals from 122 to 134; upper labials eight; lower labials 10, except in the Baghdad specimen, which has nine; oculars two-two in all; anterior temporals invariably two; posterior temporals one to three. The Baghdad specimen has more numerous half-bars on the sides of the neck than the remaining specimens.

### ***Coluber rhodorachis* Jan.**

*Zamenis rhodorachis* Jan, in De Filippi, Viagg. Pers., p. 356, 1865—Iran.

*Coluber rhodorachis* Parker, Ann. Mag. Nat. Hist., (10), 8, p. 516, 1931.

ARABIA: Aden, 1 (18218, A. R. M. Rickards).

IRAQ: Diana, 1 (19618).

The single specimen from Aden, a male, has 19 scale rows; 228 ventrals; 132 caudals; nine upper and 10 lower labials; oculars two-two, and temporals two-two and two-three. The female specimen from Iraq has 243 ventrals and 115 caudals; upper labials nine, lower labials 10; oculars one-two; and temporals two-two and two-three.

### ***Coluber rogersi* Anderson.**

*Zamenis rogersi* Anderson, Ann. Mag. Nat. Hist., (6), 12, p. 439, 1893—Lower Egypt.

*Coluber rogersi* Flower, Proc. Zool. Soc. Lond., 1933, p. 810, 1933.

IRAQ: Rutba, 3 (11361, E. S. Fraser; 19508, Field and Martin; 21914, P. S. Manasseh).

SYRIA: Between Homs and Palmyra, 2 (19588, 19592).

These specimens extend the range of *Coluber rogersi* to the north. The ventrals, in the five males, range from 200 to 207, caudals from 88 to 104; the upper labials are uniformly nine; a single preocular in two specimens, 2 in three; postoculars two; temporals 2-2 in three, 2-3 in two; the largest specimen measures 745, tail 200.

### ***Coluber ventromaculatus* Gray.**

*Coluber ventromaculatus* Gray, Illus. Indian Zool., 2, pl. 80, fig. 1, 1834—Bengal.

ARABIA: Al Jubail (70 miles north of Bahrein Island), 1 (MVZ 25624).

IRAN: Yezd-i-Khast, 1 (20939).

IRAQ: Baghdad, 12 (19494-95, 19501, 19505-7, Field and Martin; 22695, 26357-58, 28316-18, Yusuf Lazar); Kish, 2 (11064-65, Henry Field); An Nasiriya, 23 (22696-717, Yusuf Lazar).

No differences are discernible in the Arabian and Persian specimens. The series is uniform in coloration and in scale characters. Ventrals vary in eleven males from 196 to 217, caudals in eight males from 97 to 112; in six females the ventrals range from 210 to 222, and caudals from 93 to 104.

### ***Lytorhynchus diadema* Duméril and Bibron.**

*Heterodon diadema* Duméril and Bibron, Erp. Gén., 7, p. 779, 1834—Algeria.

*Lytorhynchus diadema* Peters, Monatsber. Akad. Wiss. Berlin, 1862, p. 272, pl., fig. 1, 1862.

IRAQ: Baghdad, 1 (20859).

The single specimen available is a female with dorsal scales 21-19-15, ventrals 192, anal divided, caudals 44, upper labials eight, lower labials 11, oculars two-two, temporals two-three and two-four; the total length (with tip of tail wanting) is 450, tail 60. The darker dorsal blotches, 34 on the body and eight on the tail, are about as long as the lighter interspaces.

Were it not that this form, like so many others in southwestern Asia, is in need of comprehensive taxonomic study, I should be inclined to refer the Baghdad specimen to *Lytorhynchus gaddi* Nikolsky, from Iran.



***Lytorhynchus kennedyi* sp. nov.**

*Type* from between Homs and Palmyra, Syria. No. 19586 Field Museum of Natural History. Adult male. Collected May 21, 1934, by Henry Field and Richard A. Martin.

*Diagnosis*.—Allied to *L. diadema*, but with widely spaced black dorsal crossbars; preoculars three on each side; 10 lower labials.

*Description of type*.—Relatively short and stout-bodied for *Lytorhynchus*, head short and eye large; rostral enlarged with vertical projecting lateral edges, projecting backwards so that the inter-nasal suture is very short, one-third that of the prefrontals; frontal five-sided, as long as its distance from the end of the snout; parietals large, extending downward at the anterior border to a point opposite the middle of the eye; nasal large, divided, nostril nearer its upper border; a small quadrangular loreal, as long as high, upper labials seven-eight; lower labials 10-10; preoculars three-three; post-oculars two-three; temporals two-two on each side; dorsal scales smooth, 21-19-13; ventrals 166; anal divided; caudals 35.

Pale yellowish gray above, with 22 black crossbars on the body and eight on the tail. The crossbars, extending to the first or second scale row, cover one and one-half to two dorsal scales, the interspaces six or seven; small black spots are present on the first and second scale row on each side midway between the transverse bars; ventrals entirely without markings; head marked with a transverse black mark from eye to eye, connecting with a longitudinal mark on the frontal and on the parietal suture, continuing and broadening on the neck for the length of eight scales, and eight scales wide posteriorly.

*Measurements*.—Total length 380, tail 55.

*Remarks*.—The distinctive coloration described above is shown in the plate of *L. diadema* in *Snakes and Snake Bite in Iraq* (Corkill, 1932, pl. 10). It may be pointed out that the difference between *kennedyi* and *diadema* corresponds closely to that between *Phyllorhynchus browni* and *P. decurtatus* of the Arizonan deserts on the opposite side of the world. *Phyllorhynchus* closely parallels *Lytorhynchus* in its modified rostral shield. The new form bears the name of Dr. Walter P. Kennedy, of the Royal College of Medicine, Baghdad, who has contributed important material to our collections.

***Elaphe nummifera* Reuss.**

*Coluber nummifer* Reuss, Mus. Senck., 1, p. 135, 1834—Egypt.

PALESTINE: Jordan Valley, 1 (21913, P. Y. Shuwayhat); Kefar Jehoshua (east of Haifa), 1 (28581, Georg Haas).

Both specimens are females; the dorsal scales are 23-23-17, ventrals 211 and 215, anal divided, caudals 85 and 79, upper labials nine, lower labials 10-10 and 10-11, oculars two-two and two-three, temporals one-three and two-three in one, two-three on each side in the other.

***Elaphe ravergeri* Ménétries.**

*Coluber ravergeri* Ménétries, Cat. Rais. Obj. Zool. Voy. Caucase, p. 69, 1832—Georgia.

IRAQ: Diana, 1 (19621); Zakho, 2 (19616-17).

The Diana specimen is incomplete, but has the dorsal scales in 23 rows in agreement with the two from Zakho. Of these, the male has ventrals 207, caudals 101, upper labials nine, lower labials 11, oculars two-two, and temporals two-three; the female has 220 ventrals, tail imperfect, upper labials nine, lower labials 10, oculars three-two, and temporals two-two. The Diana specimen measures 1,255, tail 310.

***Elaphe caudaelineata* Günther.**

*Zamenis caudaelineatus* Günther, Cat. Colubrine Snakes Brit. Mus., p. 104, 1858—Shiraz, Iran.

IRAN: Persepolis, 4 (20922, 20924, 20926, 20936, Ernst Herzfeld).

The four specimens from Persepolis are entirely distinct from the specimens of *ravergeri* discussed above. The dorsal scale formula is 21-21-15 instead of 23 or 25-23-17. Ventrals and caudals in the single male, 193 and 101; in three females 201-213 and 87-93. The lineate pattern of the tail is distinctive. The largest specimen, a female, measures 855, tail 195.

***Spalerosophis microlepis* Jan.**

*Spalerosophis microlepis* Jan, in De Filippi, Viagg. Pers., p. 356, 1865—Laristan and Shiraz (here restricted to Laristan).

IRAN: Persepolis, 2 (20923, 20929, Ernst Herzfeld).

The two specimens, both male, are in close agreement. Both have the dorsal scale formula 37-43-23; the ventrals are 240 and 241; anal undivided; caudals 101 in No. 20929, with a complete tail; upper labials 14-15 in both; lower labials 16-14 in one, 15-15 in the other; scales about eye 13 in one, 12 in the other; temporals seven-seven and six-eight. No. 20929 measures 1,005 in total length, tail 270.

**Spalerosophis schirazianus** Jan.

*Periops parallelus* var. *schiraziana* Jan, in De Filippi, Viagg. Pers., p. 365, 1865—Shiraz.

IRAN: Shah Abdul Azim, 9 (20908, 20912–13, 20951, 20960–62); Tehran, 3 (20894, 20908, 20959).

In the present series of six specimens of each sex, the dorsals at mid-body are 25 in two, 27 in eight, and 29 in two; ventrals in males 224–237; in females 236–245; caudals in five males 80–89; in five females 80–87. The upper labial count 12 occurs twelve times, 13 eleven times, and 14 once; lower labials 13 or 14; ocular ring composed of six to 10 scales; anterior temporals three–five, those of second row four to six. The largest specimen, a female, measures 1,222, tail 215.

The species is well distinguished from the so-called *diadema* of Iraq, but may be more closely allied to the true *diadema* (of north-western India). Trinomial designation is reserved for further study.

**Spalerosophis cliffordii** Schlegel.

*Coluber cliffordii* Schlegel, Physion. Serp., 2, p. 163, 1837—Tripoli.

IRAQ: Baghdad, 4 (19580, 20857, Field and Martin; 28314–15, Yusuf Lazar); Balad Sinjar, 1 (19596); Halfaya, 1 (19625); Kish (Tell el Uhaimir), 2 (11066–67, Henry Field); An Nasiriya, 2 (22718–19, Yusuf Lazar).

The reference of specimens from Iraq to *cliffordii* instead of to *diadema* auct. is made necessary by the recognition of *schirazianus* from Iran, inserted between the type locality of *diadema* (Bombay), and the Iraqi (Mesopotamian) area. It is by no means a completely satisfactory allocation. The alternative is to give a new name to the form in the Euphrates Valley, and it is preferable to reserve the proposal of additional names for a more comprehensive revision, pending which trinomials are avoided. It seems clear that *Spalerosophis* is more nearly allied to *Elaphe* than to *Coluber*.

**Rhynchocalamus arabicus** Schmidt.

*Rhynchocalamus arabicus* Schmidt, Field Mus. Nat. Hist., Zool. Ser., 20, pp. 9–10, 1933—Aden.

ARABIA: Aden, 1 (18219, A. R. M. Rickards).

Additional material of this species is much to be desired.

**Rhynchocalamus melanocephalus** Jan.

*Homalosoma melanocephalum* Jan, Arch. Zool. Anat. Phys., 2, p. 34, 1862—Beirut.

*Rhynchocalamus melanocephalus* Günther, Zool. Rec., 2, p. 152, 1865.

PALESTINE: Jaffa, 1 (26890, Georg Haas); Jerusalem, 1 (28575, Georg Haas).

The two specimens at hand differ notably in the development of the rostral, which separates the internasals in the specimen from Jaffa, and fails to do so in the one from Jerusalem. The probability that the development of the rostral is associated with burrowing habits suggests that this difference may have a geographic or ecological correlation. Ventrals in the Jaffa specimen, a female, number 222, caudals 60; the specimen from Jerusalem, a male, has ventrals 195, caudals 60; a loreal is present in both.

***Eirenis collaris* Ménétries.**

*Coluber collaris* Ménétries, Cat. Rais. Obj. Zool. Voy. Caucase, p. 67, 1832—Bechemerbak, near Caspian Sea.

*Eirenis collaris* Jan, Arch. Zool. Anat. Phys., 2, p. 257, 1863.

IRAQ: Baghdad, 1 (20858); Tall Afar, 1 (19626).

PALESTINE: Jordan Valley, 1 (21910, P. Y. Shuwayhat).

The two from Iraq, both male, have ventrals 184 and 196, and caudals 60. The ventrals and caudals are 187 and 60 in the single female from Palestine. The latter has a very small loreal, absent in the two former.

***Eirenis coronella coronella* Schlegel.**

*Calamaria coronella* Schlegel, Physion. Serp., 2, p. 48, 1837—Moorea and Syria (here restricted to Syria).

*Eirenis coronella* Barbour, Proc. New Engl. Zool. Club, 5, p. 89 (cited for combination only).

SYRIA: Homs, 1 (19593); between Homs and Palmyra, 3 (19585, 19590-91).

TRANS-JORDAN: Jebel el Ashaqif, 1 (19582); Mafrqa, 1 (19577).

The series above listed exhibits little variation, and appears to represent a well-defined form. The dorsal scales are 17 on the neck (only as far as the sixth ventral), 15 at mid-body, and reduce to 13 anterior to the anus. Ventrals in three males 126, 130, 131, in four females 143, 146, 149, 151; caudals in males 39, 39, and 48, in females 37, 42, 42, and 45; upper labials uniformly 7-7, lower labials 8-8 in five, 8-7 in one, 7-7 in one; oculars 1-2 in five, preocular single on one side in one, postocular single on one side in another; temporals 1-1; length of largest male 255, tail 55; of largest female 295, tail 55. All are plainly banded.

I regard Jan's *Eirenis fasciatus* from Lake Tiberias as probably identical with this form. Boulenger's *coronella* does not seem to

correspond to *coronella* of Schlegel at all (cf. *Eirenis lineomaculata*, below). Barbour's series of *Eirenis* from Petra and Mount Sinai (Barbour, 1914, p. 89) have 15 dorsal scale rows, but the ventrals range from 140 to 158 (not sexed). The difficulties in allocating specimens correctly to this species emphasize the necessity for a revision of the genus.

***Eirenis coronella fraseri* subsp. nov.**

*Type* from Rutba, Iraq. No. 11364 Field Museum of Natural History. Adult male. Collected, 1930, by E. S. Fraser.

*Diagnosis*.—An *Eirenis* with a short body and broad head, with 15 scale rows, distinguished from *Eirenis coronella* by distinctly higher number of ventrals in both sexes and by the obscurity of the transverse bands and nuchal collar.

*Description of type*.—A stout-bodied small snake with head distinctly widened in temporal region. Portion of rostral seen from above about as long as the internasal suture, which is a little shorter than the prefrontal suture; frontal as long as its distance from the tip of the snout, shorter than the parietals; nasal single, a small loreal; preocular single; seven upper and eight lower labials; two postoculars; temporals one-one; anterior chin shields much larger than the posterior, which are scarcely distinguishable from the adjacent scales; dorsals smooth, 15-15-13; ventrals 141; anal divided; caudals 36 (tail incomplete).

Pale yellowish brown above, lighter beneath, with extremely obscure darker transverse bands above.

*Measurements*.—Body length 231, tail (incomplete) 49.

*Notes on paratypes*.—Four additional specimens from Rutba, also collected by E. S. Fraser, one from Papworth's Area, 25 miles south of Rutba, collected by Henry Field and Richard A. Martin, and two (from the same collectors) from between Homs and Palmyra, Syria, are available as paratypes. The difference between this series and what I have interpreted as true *coronella* is evident when the scale counts are assorted to sex:

	<i>c. coronella</i>	<i>c. fraseri</i>
Ventrals		
Male.....	126-131	139-146
Female.....	143-151	152-158

The number of specimens available is too small for more definitive characterization of the forms in question. I should be inclined to identify *fraseri* with *modesta* (Martin, 1838, p. 82), but for the description of the head coloration, which corresponds to that of

*collaris*, and the complication of Boulenger's assignment of this name to a form with 17 scale rows (1920, p. 348). The new form is named for E. S. Fraser, of the Nairn Overland Transport Company, at Rutba.

***Eirenis decemlineata* Duméril and Bibron.**

*Ablabes decemlineatus* Duméril and Bibron, *Erp. Gén.*, 7, p. 327, 1854—no locality.

*Eirenis decemlineatus* Müller, *Verh. Naturf. Ges. Basel*, 6, p. 595, 1878.

PALESTINE: Between Jaffa and Haifa, 2 (26886–87, Georg Haas).

The male specimen, No. 26887, is without dark lines, while the female, No. 26886, is lineate. The dorsals are 17–17–15 in both, and both have upper labials seven, lower labials eight, oculars one–two, and temporals one–two. The ventrals and caudals in the male are 168 and 82; in the female 169 and 70.

***Eirenis rothi* Jan.**

*Eirenis rothi* Jan, *Arch. Zool. Anat. Phys.*, 2, p. 259, 1863—Jerusalem.

PALESTINE: Kafr Juri, 7 miles north of Jerusalem, 1 (26888, Georg Haas).

The single male has dorsal scales 15–15–15, ventrals 166, anal divided, caudals 50, upper and lower labials seven, oculars one–two, temporals one–one, and a small loreal on each side. Total length 295, tail 57.

***Eirenis lineomaculata* sp. nov.**

*Type* from Jordan Valley, Palestine. No. 21909 Field Museum of Natural History. Adult male. Collected, 1934, by P. Y. Shuwayhat.

*Diagnosis*.—Distinguished from *Eirenis coronella* by having seventeen scale rows, a lower number of ventrals, no loreal, and dorsal spots arranged as alternate longitudinal dashes.

*Description of type*.—A stout-bodied snake with neck as wide as head, head pointed, and rostral moderately developed. Portion of rostral seen from above longer than the internasal suture, which is about half as long as that between the prefrontals; frontal longer than its distance from the tip of the snout, nearly as long as the parietals; nasal undivided, elongate, in contact with the single preocular; no loreal; upper labials seven–seven; lower labials eight–eight; two postoculars on each side; temporals one–two on each side; dorsal scales smooth, 17–17–15; ventrals 119; anal divided; caudals 38.

Pale brown above, lighter uniform yellowish brown below; back with four rows of dark brown spots, those of the median rows strongest, with a tendency to be juxtaposed anteriorly, becoming

alternate posteriorly; each of the scales involved in these spots, viewed under a magnifier, is seen to have a light median shaft bordered by dark pigment stronger than in the remainder of the spot, producing a sharply lineate appearance; a well-marked nuchal collar extends obliquely forward to the first ventral, narrowing below and not closed on the throat; a dark subocular spot on the second to fourth labials is matched by a smaller one on the third and fourth lower labials; obscure dark markings on the head shields; sixth upper labial, first temporal, upper second temporal, and adjacent border of parietal dark-bordered.

*Measurements*.—Total length 217, tail 45.

*Notes on paratype*.—A single specimen, No. 25335, collected by C. W. McEwan in the Amuq Plain, Hatay, agrees with the type in coloration and other essential characters. A female, with 118 ventrals and 22 caudals.

*Remarks*.—Our material is inadequate for the solution of the taxonomic problems in *Eirenis*; the present form agrees closely with the Palestinian series described by Boulenger (1894, p. 264) under the name *coronella*.

***Eirenis iranica* sp. nov.**

*Type* from Tirak Mart Mountains, near Shah Abdul Azim, Iran. No. 20950 Field Museum of Natural History. Adult male. Collected September 6, 1934, by Henry Field and Richard A. Martin.

*Diagnosis*.—Distinguished from *Eirenis condoni* by fewer ventrals and the absence of a loreal, and from *E. brevicauda* by the longer tail and scales in 17 rows.

*Description of type*.—A stout-bodied snake with head slightly wider than neck; snout pointed; rostral scarcely visible from above; internasals about as long as prefrontals; frontal with a straight anterior border, as long as the parietal suture; nasal undivided, elongate, extending to the preocular, in contact with the first two labials; the single preocular widely separated from the frontal; two postoculars; temporals one-two on each side; parietal extending downward on the sides, making a contact with the lower postocular; anterior chin shields longer than posterior; dorsal scales smooth, 17-17-15; ventrals 159; anal divided; caudals 76.

Grayish brown above, paler beneath, without markings, except for irregular small dark spots on the sides of the neck and dark margins on the upper and lower labials.

*Measurements*.—Total length 398, tail 104.

*Remarks.*—The species appears to be well distinguished from *Eirenis condoni* from Shiraz, which has ventrals 169–173, and from *E. brevicauda*, which has the dorsal scales in 15 rows and caudals only 38–41. Nikolsky's species *Eirenis bicolor*, from eastern Iran, has 15 scale rows and 202 ventrals; and his *E. transcaspica* is excluded from *iranica* by the same characters. Boulenger has revived the name *modesta* of Martin (type locality, Euphrates Valley) for the specimens with 17 scale rows which he had formerly referred to *collaris*; but since Martin's description specifically mentions the characteristic head coloration of *collaris*, I am inclined to interpret *modesta* as a strict synonym of *collaris*. The present form appears to be excluded from *modesta* in any case, by the absence of a loreal.

It may be repeated, as is obvious from the list of species above, that the genus *Eirenis* requires comprehensive revision in the light of modern geographic taxonomy.

***Tarbophis fallax mcewani* subsp. nov.**

*Type* from Amuq Plain, Hatay (formerly *Sanjak* of Alexandretta). No. 25330 Field Museum of Natural History. Adult male. Collected in 1936 by C. W. McEwan.

*Diagnosis.*—A subspecies of *Tarbophis fallax*, distinguished from *fallax fallax* by its longer tail and fewer dorsal spots; from *syriacus* by the longer tail, greater number of ventrals, and larger number of dorsal spots; and from *fallax iberus* by its divided anal and lower number of ventrals.

*Description of type.*—Head distinct from neck, snout bluntly pointed, body moderately slender. Rostral little visible from above; internasals smaller than prefrontals; frontal subtriangular, as long as its distance from the end of the snout; nasal rectangular, semi-divided; loreal elongate, narrowly entering the eye below the preocular; the single preocular broadly in contact with the frontal; two postoculars; parietals rather small; temporals two–three–four on each side; upper labials seven–eight; lower labials ten–ten; dorsal scales 19–19–15, smooth; ventrals 195; anal divided; caudals 67.

Pale brown above, with about 34 dark mid-dorsal blotches which tend to be connected on the sides with vertical or oblique narrower lines extending to the dark venter; chin light; top of head uniform glossy brown; dark nuchal band six scales behind parietals, seven scales long; dark dorsal spots two or three scales long.

*Measurements of type.*—Total length 610, tail 105.

*Notes on paratypes.*—In two additional males (25331–32) and two females (25328–29) from the type locality, all collected by Dr.



McEwan, the ventrals are respectively 200, 197, 200, and 197, and the caudals 72, 63, 65, and 59. The scaling of the head is uniform. The dorsal spots range from 30 to 36.

*Remarks.*—Boulenger's list of specimens of *fallax* (1896, Cat. Snakes Brit. Mus., 3, p. 49) includes one from Xanthus which may belong with the present form, judging from its high number of caudals. If this guess should prove correct, *Tarbophis fallax mcewani* is to be expected from intermediate localities, and must be thought of as intervening between *T. f. fallax* of the Balkan Peninsula and *T. f. iberus* of the Caucasus. Boulenger's figures for caudals in eight Dalmatian specimens range from 48 to 55. The new form is named for Dr. Calvin W. McEwan, of the Oriental Institute, University of Chicago, whose efforts added the important collection from the Amuq Plain to our material.

### ***Tarbophis fallax syriacus* Boettger.**

*Tarbophis vivax f. syriaca* Boettger, Ber. Senck. Ges., 1879–80, p. 166, 1880—Jaffa.

*Tarbophis fallax syriacus* Mertens, Senckenbergiana, 6, p. 184, 1924.

PALESTINE: Kiriath Anawim, 1 (28585, Georg Haas); Rehovot (Rethoboth), 1 (28586, Georg Haas).

SYRIA: Chouit Araya (12 km. from Beirut), 1 (28304, Yusuf Lazar).

The two Palestinian specimens, both females, agree in having 185 ventrals, eight upper and 10 lower labials, temporals two–four, and 19 dorsal scale rows. No. 28585, with a complete tail, has 65 caudals. The number of dorsal spots is 24 and 26 on the body. These specimens obviously agree with Boulenger's *Tarbophis savignyi*, which Mertens has correctly referred to *Tarbophis fallax syriacus*. Barbour and Amaral, regarding Boettger's *syriacus* as composite, restrict the type locality to "Southern Syria and adjacent Lower Egypt"; but Mertens (1922, p. 181) cites only a single type, with the unequivocal type locality Jaffa.

### ***Tarbophis fallax iberus* Eichwald.**

*Trigonophis iberus* Eichwald, Zool. Spec., Rossiae Polon., 3, p. 175, 1831—Tiflis.

*Tarbophis fallax iberus* Mertens and Müller, Abh. Senck. Ges., 41, p. 50, 1928.

IRAN: Shamar Mountains, near Shah Abdul Azim, 1 (20956); Tehran, 2 (20968, 20970).

In No. 20968, a female from Tehran, the dorsals are in 19 rows, ventrals 218, anal entire, caudals 69, upper labials eight–eight, lower labials 11–11, oculars one–two, temporals three–three and three–four, total length 220, tail 39.

The specimen from the Shamar Mountains is a male with dorsals 19, ventrals 216, anal entire, caudals 65, upper labials eight-eight, lower labials 11-10, oculars one-two, and temporals two-five. It measures 601, tail 103.

The specimens obviously agree most closely with *iberus*.

### **Tarbophis nigriceps** Ahl.

*Tarbophis nigriceps* Ahl, Arch. Naturg., 90, Abt. A, Heft 5, p. 246, 1924—central Mesopotamia.

IRAQ: Rutba, 1 (11367, E. S. Fraser).

The single female is noteworthy for its coal black belly and black head. The dorsal scale formula is 19-19-15; ventrals 187; anal divided; caudals 55; upper labials nine-nine; lower labials 10-10; oculars one-two; temporals two-two; and total length 380, tail 65. The number of dorsal dark bands is 18 on the body, five on the tail.

The agreement in coloration with Ahl's description is striking, and I have little hesitation in regarding the species as fully distinct. It agrees most closely in scale characters with *Tarbophis fallax syriacus* of Palestine.

### **Tarbophis martini** sp. nov.

*Type* from Baghdad, Iraq. No. 28319 Field Museum of Natural History. Adult female. Collected in 1937 by Yusuf Lazar.

*Diagnosis*.—A *Tarbophis* similar to the *fallax* formenkreis in coloration, distinguished by having the dorsal scales uniformly in 21 rows and by a greater number of ventrals; the loreal enters the eye, and the anal may be entire or divided.

*Description of type*.—Head very large in the temporal region, body stout, tail slender; rostral scarcely visible from above, internasals smaller than prefrontals; frontal subtriangular, the anterior angles truncate at their contacts with the preoculars, shorter than its distance from the tip of the snout; parietals relatively small; nasal rectangular, semidivided; loreal elongate, entering the eye; a single preocular; two postoculars; temporals two-four-four and three-five-five; upper labials eight-seven; lower labials 10-11; dorsal scales 21-21-15, smooth; ventrals 235; anal divided; caudals 67.

Pale brown above, with about 39 darker brown mid-dorsal blotches, irregularly connected with vertical or oblique narrow bars on the sides; belly dark, chin white.

*Measurements of type*.—Total length 876, tail 136.

*Notes on paratypes.*—A considerable series, all from Baghdad (several collected by Yusuf Lazar near Dr. Kennedy's house), attests the uniformity in scale characters of *Tarbophis martini*. Nos. 19493, 19497, and 19499–500 were collected by Henry Field and Richard A. Martin, Nos. 22694, 26348–49, and 28303 by Yusuf Lazar. All have 21 scale rows at mid-body. In two males the ventrals are 226 and 232 and the anal is single; caudals 74 and 67. In six females the ventrals range from 226 to 242; the anal is single in one, divided in five; caudals 65–72.

*Remarks.*—This is the Iraqi form referred to *iberus* by various authors; it is well distinguished from that form by its higher number of dorsal scales, and more frequently divided anal. It is readily distinguishable from *Tarbophis cyprianus*, which also has 21 dorsals, by its much higher number of ventrals. There is at present no evidence of intergradation between these 21-rowed forms and the 19-rowed *fallax* series. The new form is named in honor of Richard A. Martin, Curator of Near Eastern Archaeology in Field Museum.

***Tarbophis guentheri* Anderson.**

*Tarbophis guentheri* Anderson, Proc. Zool. Soc. Lond., 1895, p. 656, pl. 36, fig. 3, 1895—Aden and the Hadhramaut.

ARABIA: Aden, 1 (18216, A. R. M. Rickards).

The single female has dorsal scales 21–21–13; ventrals 226; anal entire; caudals 70; upper labials nine; lower labials 12; oculars one–two; temporals two–three; total length 807, tail 146.

***Tarbophis rhinopoma* Blanford.**

*Dipsas rhinopoma* Blanford, Ann. Mag. Nat. Hist., (4), 14, p. 34, 1874—Kamán, Iran.

*Tarbophis rhinopoma* Boettger, in Radde, Fauna Flora Caspi-Gebietes, p. 72, 1886.

IRAN: Persepolis, 1 (20928, Ernst Herzfeld).

The juvenile specimen is a female; dorsal scales 21–23–17; ventrals 251; anal entire; tail incomplete; upper labials 10–9; lower labials 12; oculars two–three; temporals four–four and five–four.

***Malpolon monspessulana insignitus* Geoffroy.**

*Coluber insignitus* Geoffroy, Descr. Egypte, Hist. Nat., 1, p. 151, 1827—Lower Egypt.

*Malpolon monspessulana insignitus* Mertens and Müller, Abh. Senck. Ges., 41, p. 51, 1928.

IRAN: Shah Abdul Azim, 1 (20963).

IRAQ: Diana, 1 (19620); Zakho, 3 (19610–11, 19615).

PALESTINE: Tel Aviv, 1 (28576, Georg Haas).

TRANS-JORDAN: Mafrq, 1 (19578).

The six specimens examined are remarkably uniform in scale characters. One has 19 scale rows at mid-body, reducing to 15; four have the scale formula 17-15; and one reduces to 17-15-13. Ventrals in two males are 168 and 174; in four females 174, 175, 175, and 179; caudals in males 77 and 86, and in females 74, 79, 87, and 89. There is little, if any, difference between the sexes in these characters.

### **Malpolon moilensis** Reuss.

*Coluber moilensis* Reuss, Mus. Senck., 1, p. 142, pl. 7, fig. 1, 1834—Moilah, Arabia.

*Malpolon moilensis* Parker, Ann. Mag. Nat. Hist., (10), 8, p. 522, 1931.

IRAQ: Baghdad, 3 (20860-62).

The three females available are remarkably uniform in scale characters. All have dorsal scales 17-17-13; ventrals 167; and upper labials eight-eight. The caudals are 55, 55, and 57; lower labials 11-11 in two, 11-10 in one; oculars one-two in two, one-three on one side and two-two on the other side in the third; temporals two-three in two, two-four in the third.

### **Taphrometopon lineolatum** Brandt.

*Coluber (Taphrometopon) lineolatum* Brandt, Bull. Acad. Sci. St. Pétersbourg, 3, p. 243, 1838—Caspian coast.

*Taphrometopon lineolatum* Peters, Proc. Zool. Soc. Lond., 1861, p. 48, fig., 1861.

IRAN: Tehran, 1 (20971); Yezd-i-Khast, 1 (20940).

The specimen from Yezd-i-Khast is a male, measuring 540, tail 120, with dorsals 17-17-13, ventrals 174, anal divided, caudals 75, upper labials nine-nine, lower labials 11-11, oculars one-two, and temporals two-three. The female from Tehran measures 535, tail 129, and differs only in having ventrals 175 and caudals 83.

### **Psammophis schokari** Forskål.

*Coluber schokari* Forskål, Descr. Anim., p. 14, 1775—Yemen.

*Psammophis schokari* Boulenger, Cat. Snakes Brit. Mus., 3, p. 157, 1896.

ARABIA: Aden, 1 (18217, A. R. M. Rickards).

IRAN: Persepolis, 1 (20934, Ernst Herzfeld).

IRAQ: Amara, 1 (19574); Rutba, 1 (19509).

PALESTINE: Tel Aviv, 1 (28582, Georg Haas).

*Psammophis schokari*, with its vast geographic range, from Senegal to Sind, exhibits a great amount of variation in scale characters and coloration, and will repay a detailed study, even though its great

powers of active locomotion and association with habitat conditions relatively recently established afford less expectation of partition into subspecies than in less vagile forms. The specimens here listed fall within the limits of ventrals and caudals in Boulenger's list.

### **Hydrophis cyanocinctus** Daudin.

*Hydrophis cyanocinctus* Daudin, Hist. Nat. Rept., 7, p. 383, 1803—Coromandel.

ARABIA: Bahrein Island, 2 (28310–11, W. P. Kennedy).

The two specimens differ conspicuously in coloration, the bands in one encircling the body, while in the second they are confluent dorsally and ventrally and irregular on the sides. The ventrals number about 330, the dorsals 30–40–40.

### **Vipera lebetina euphratica** Martin.

*Vipera euphratica* Martin, Proc. Zool. Soc. Lond., 1838, p. 82, 1838—Euphrates Valley.

IRAQ: Balad Sinjar, 5 (19595, 19597, 19600–2).

The fine series of specimens collected by Dr. Field and Mr. Martin is uniform in scale characters. The ventrals in the two males are 174 and 177; in three females 169, 172, 174; caudals in males 44 and 47; in females 40, 44, and 44; upper labials 10 or 11; lower labials 13 or 14; the largest specimen measures 1,270, tail 150.

With no other available material of *Vipera lebetina* in the broad sense, no opinion is offered on the further partition of this form. The trinomial is used in view of the restriction of *Vipera lebetina lebetina* to Cyprus and Milos by Mertens and Müller (1928, p. 52).

### **Vipera palaestinae** Werner.

*Vipera palaestinae* Werner, Zool. Anz., 122, p. 313, figs. 3, 4, 1938—Haifa, Palestine.

PALESTINE: Ain Harod, 1 (28579, Georg Haas).

The single male specimen available agrees best with Werner's description of *Vipera palaestinae*; I can offer no further comment on Werner's partition of the *lebetina* group, which fails to define *euphratica*. Our specimen has 161 ventrals, anal entire, 38 caudals, upper labials 10–10, lower labials 11–12, scales between oculars five, scales around eye (exclusive of supraocular) 11–12.

### **Pseudocerastes fieldi** Schmidt.

*Pseudocerastes fieldi* Schmidt, Field Mus. Nat. Hist., Zool. Ser., 17, p. 227, pl. 2, text fig. 2, 1930—Bair Wells, Trans-Jordan; Flower, Ann. Mag. Nat. Hist., (10), 6, p. 224, 1930.

IRAQ: Rutba, 2 (19834).

TRANS-JORDAN: Bair Wells, 2 (11061–62, Henry Field); Um Wu'al 1 (11063, Henry Field).

In addition to the type (11061) and two paratypes collected by Dr. Field on his expedition of 1928, we have received one complete and one fragmentary specimen of this species from Rutba. The complete specimen, a female, has dorsal scales 21–23–17; ventrals 136; caudals 36; upper labials 12–12; lower labials 16–15; total length 720, tail 85.

It seems evident that *Pseudocerastes fieldi* is quite as likely to be the Biblical adder (Hebrew *shephiphon*) of Genesis xlix:17 as *Aspis cerastes* (*Cerastes cornutus* auct.), as supposed by Tristram (Nat. Hist. Bible, ed. 3, p. 273, 1872). I find no recent record (of specimens collected) of *cerastes* for Palestine, though Flower lists it from both Palestine and Trans-Jordan (1933, p. 830). Bodenheimer's reference to this species (1935, p. 190) distinguishes it from *Aspis cerastes* with the supposition that *fieldi* has "only one horn between the eyes," which is quite erroneous. It may well prove that *P. fieldi* has been much confused with the horned *Aspis*.

### ***Pseudocerastes persicus* Duméril and Bibron.**

*Cerastes persicus* Duméril and Bibron, Erp. Gén., 7, p. 1443, pl. 78b, fig. 5, 1854—Persia.

*Pseudocerastes persicus* Boulenger, Cat. Snakes Brit. Mus., 3, p. 501, 1896.

IRAN: Aminabad, 1 (20933).

The single specimen is much damaged. The dorsal scale rows are 23; caudals 48; upper labials 13; lower labials 15; scales about eye, 17.

### ***Aspis cerastes* Linnaeus.**

*Coluber cerastes* Linnaeus, Syst. Nat., p. 217, 1758—"Oriente"; here restricted to southern Judaea.

ARABIA: Al Jubail, 70 km. north of Bahrein Island, 1 (MVZ, R. P. Miller).

A single badly mangled specimen, without horns.

### ***Echis carinatus* Schneider.**

*Pseudoboa carinata* Schneider, Hist. Amphib., 2, p. 285, 1801—India.

*Echis carinata* Wagler, Syst. Amphib., p. 177, 1830.

IRAN: Persepolis, 1 (20927, Ernst Herzfeld).

The specimen is a juvenile female, measuring only 200 mm., tail 23; the dorsal scales are 27–35–21; belly injured; caudals 32; upper labials 11–11; lower labials 15–14; scales in ring about eye, 16.

## TESTUDINATA

***Clemmys caspica caspica* Gmelin.**

*Testudo caspica* Gmelin, Reise durch Russland, 3, p. 59, pls. 10, 11, 1774—Hircania.

*Clemmys caspica* Wagler, Icon. Amphib., pl. 24, 1830.

IRAN: Persepolis, 8 (21035-42, Ernst Herzfeld).

IRAQ: Ba'adri (northeast of Mosul), 5 (19708-10, 19712-14); Halfaya, 4 (19705-7, 19785).

No significant difference is discernible between specimens from Persepolis and those from Iraq.

***Testudo graeca* Linnaeus.**

*Testudo graeca* Linnaeus, Syst. Nat., p. 198, 1758—Santa Cruz, western Barbary.

HATAY: Amuq Plain, 5 (25356-60, C. W. McEwan).

SYRIA: Homs (between Homs and T-4), 1 (19715).

*Testudo graeca* is said by Flower (1933, p. 745) to fall into at least four well-marked subspecies. These do not seem to have been defined, and as it is to be hoped that Major Flower may publish something on this topic, our specimens may stand for the present simply as *graeca*.

***Testudo zarudnyi* Nikolsky.**

*Testudo zarudnyi* Nikolsky, Ann. Mus. Zool. Acad. Sci. Petrograd, 2, p. 307, pl. 17, 1897.

IRAN: Yezd-i-Khast, 3 (21027-9).

These specimens extend the range of *Testudo zarudnyi* westward. They exhibit the flaring corners of the carapace which appear to distinguish this species from *graeca*, in spite of Boulenger's remarks about *zarudnyi* on the occasion of describing *Testudo buxtoni* (1920, p. 251).

***Trionyx euphraticus* Daudin.**

*Testudo euphratica* Daudin, Hist. Nat. Rept., 2, p. 305, 1802.

*Trionyx euphraticus* Geoffroy, Ann. Mus. Hist. Nat. Paris, 14, p. 17, 1809.

IRAQ: Baghdad, 1 (19492).

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