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FIG. 1. VIEW AT BAIR WELLS, TRANSJORDANIA, TYPE LOCALITY OF PSEUDOCERASTES FIELDI, SP. NOV.



FIG. 2. JUVENILE SPECIMEN OF PSEUDOCERASTES FIELDI, SP. NOV., FROM UM MUWAL, IRAQ

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REPTILES
OF MARSHALL FIELD NORTH ARABIAN
DESERT EXPEDITIONS, 1927-1928

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REPTILES OF MARSHALL FIELD NORTH ARABIAN DESERT EXPEDITIONS, 1927-1928

BY KARL P. SCHMIDT

The Marshall Field North Arabian Desert Expeditions of 1927-1928, of Field Museum of Natural History, secured twelve specimens of lizards and snakes in Transjordan and Iraq. This material, which proves to be an accession of unusual interest, was collected in 1928 by Mr. Henry Field, Assistant Curator of Physical Anthropology in Field Museum of Natural History. A preliminary account of the route and archaeological work of this part of the expedition has been published by Mr. Field.¹

Special thanks are due to the members of the British Royal Air Force and particularly to Group Captain Rees, V.C., officer commanding in Transjordan, who made the expedition possible.

Mr. Field has kindly supervised the preparation of the map (Fig. 1) which shows the approximate position of the localities from which specimens were obtained. The addition of a new and remarkable poisonous snake to the fauna of southwestern Asia as a by-product of archaeological investigations attests to Mr. Field's active and effective collecting in the interests of Field Museum, and I take pleasure in naming the new form in his honor.

The desert region of southwestern Asia is a meeting ground for several distinct faunal elements. Central Asia is represented by the westernmost extension of the agamid genus *Phrynocephalus*. From north Africa, in addition to very widespread forms, numerous species just enter the region, such as the horned viper *Cerastes cornutus*. A series of forms ranges from northwestern India to Egypt and Abyssinia, without being properly either Saharan or central Asian. The new viper, *Pseudocerastes fieldi*, represents these and illustrates the fact that this group of species is perhaps the oldest of the several faunal elements, being split up into distinct species and supplying the more conspicuous of the endemic forms.

All this complexity of distribution is characteristic of Asiatic zoogeography. The situation in Indo-China and Malaysia is one of

¹Natural History, Vol. XXIX, pp. 33-44, 1929.

extreme complexity, just as it is in southwestern Asia at the opposite end of the continent. The faunal complexity is all the more striking because of the relative simplicity and uniformity of ranges discoverable in African animals, on the adjacent continent.

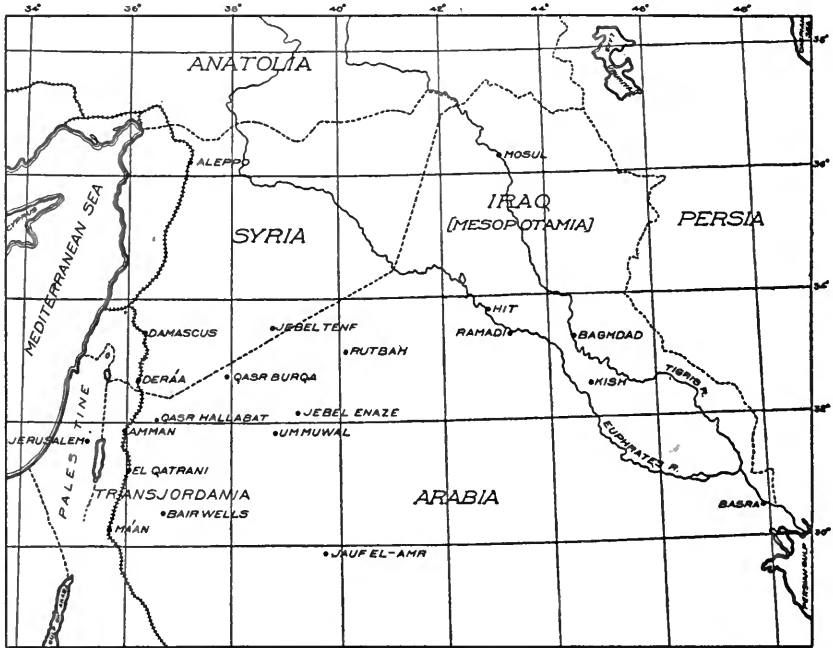


Fig. 1. Map showing location of places mentioned in the text.

LIST OF SPECIES

LIZARDS

1. *Agama ruderata* Olivier. Olivier's Agama.

Um Muwal, Transjordanian, Nov. 25, 1927, one specimen.
Arabic name *kadi el jibal*.

2. *Agama persica* Blanford. Persian Agama.

Qasr Burqa, Transjordanian, April 19, 1928, one specimen.
Probably not distinguished from the preceding species by the Arabs.

3. *Agama stellio* (Linné). Stellio.

Hammam-es-Sarakh near Qasr Hallabat, Transjordanian. April 29, 1928, one specimen.

Arabic name *hardun*. The enlarged spinose scales of the caudal whorls are distinctly larger (and hence fewer in number) than the corresponding scales in specimens from Mt. Sinai and from Moab, Syria, available for comparison in Field Museum's collections.

4. **Varanus griseus** (Daudin). Desert Monitor.

Qasr Hallabat, Transjordan, April 30, 1928, one specimen.

Arabic name *waral el jibal* or *waral el ard*. The bold pattern of the young, of black crossbars and lines on a grayish ground color, is well shown in this specimen. The adult assumes the paler coloration with indefinite pattern characteristic of desert animals.

A large lizard, doubtless of this species, was seen on the top of one of the volcanic peaks at Um Muwal by a member of the Expedition.

5. **Acanthodactylus robustus** Werner. Stout-bodied Desert Lizard.

Jebel Enaze, Transjordan, April 11, 1928, one specimen.

This species, described since the present specimen was collected, was based on a single specimen from Bir Molusi, about halfway between Damascus and Baghdad, presumably, therefore some distance to the north of Jebel Enaze.

Our specimen agrees in general habitus and in coloration with Werner's figure. It differs from his description in having the tail longer than the body instead of shorter. The lateral scales are very small, so that the dorsal scales across the body midway between the limbs number 88, the highest count in the genus.

Scale characters of F.M.N.H. No. 11072 (for comparison with Boulenger's tables): number of scales across middle of body 88; transverse series of ventral plates 30; plates in collar 8; gular scales from collar to chin-shields 28; femoral pores 23-27; tricarinate scales beneath fourth toe 24.

Measurements: from end of snout to vent 77.2 mm.; from end of snout to fore limb 28.8 mm.; length of head to posterior border of ear-opening 17.7 mm.; greatest width of head 14.2 mm.; greatest vertical depth of head 10.3 mm.; fore limb 25.7 mm.; hind limb 43.8 mm.; tail 84.0 mm.

This species may be compared with *Acanthodactylus tristrami* of the Lebanon as well as with *A. grandis* of the western border of the

Syrian desert. The feebly developed digital fringes suggest that it may be a relict from a former period of more humid conditions in this area, now confined to oases. The considerable number of species which have become known from the Syrian and Mesopotamian deserts only in the present century, and the small amount of information available as to their distribution, illustrates again the rather accidental nature of herpetological collecting, and the slow growth of our faunal knowledge of even the oldest known regions.

SNAKES

6. *Coluber ventromaculatus* Gray. Desert Racer.

Kish, Iraq, 1928, two female specimens. Arabic name (probably) *jeier*.

Dorsal scales 19–13, ventrals 217, subcaudals 99; total length 334 mm., tail 76 mm. (F.M.N.H. No. 11064). The second specimen is represented by head and tail; it has 93 subcaudals. Both exhibit the typical coloration.

7. *Spalerosophis diadema* (Schlegel).

Kish, Iraq, 1928, two male specimens, the larger of which was found during excavations at a depth of about two feet below the surface of a mound.

The dorsal scale count in both specimens (Nos. 11066 and 11067) is 29–31–19. The ventrals are respectively 228 and 218, the subcaudals 70 and 72. The first has nine ocular scales in the ring about the orbit on both sides, the second has nine on one side and six on the other.

The three species *diadema*, *arenarius* and *microlepis*, referred to the genus *Zamenis* by Boulenger and other authors, agree in having the prefrontals broken up, several loreal plates, temporals small and scale-like, and the anal plate single. They evidently constitute a natural group of species, and they are at least as distinct from other Old World species of *Coluber* (= *Zamenis* of Boulenger) as are several other groups currently recognized. I have accordingly referred the present species to *Spalerosophis* Jan, type *S. microlepis* Jan, as no genus appears to have been founded on the long-known *diadema*.

S. diadema, ranging from Morocco to Turkestan and the Indian Peninsula, will probably be found to include several recognizable subspecies. *S. diadema dolichospila* (Werner) has been described

from western Algeria, but the binomial form is retained in the present paper until a comprehensive study of the species can be made.

8. *Pseudocerastes fieldi* sp. nov.

Type from Bair Wells, Transjordan, F.M.N.H. No. 11061, adult male. Collected May 9, 1928, by Henry Field.

Range.—Known only from the type locality and from Um Muwal, 175 miles to the northeast, in eastern Transjordan.

Diagnosis.—A typical *Pseudocerastes* in having the rostral separated from the anterior nasal shield by small scales; scale covered horn-like projections over the eyes; lateral scales large and smooth; and ventrals not angulate. Distinguished from *P. persicus* Duméril and Bibron and from *P. bicornis* Wall by having only 21 rows of dorsal scales, two series of scales between the nasal and the rostral, and a lower number of ventrals and subcaudals.

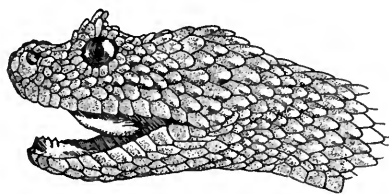


Fig. 2. Lateral view of the head of *Pseudocerastes fieldi* sp. nov., F.M.N.H. No. 11061, natural size

Description of type.—Body stout, with broad head, tail .11 of the total length.

Rostral broader than high, bordered by five scales above, separated from the large crescentic anterior nasal by two rows of scales; nasal separated from the labials by a single row of scales; eye surrounded by a ring of 15 subequal scales; a horn-like, scale-covered tubercle, directed outward and backward above the eye; two rows of scales between the labials and suboculars; four scales between the nasals, ten between the supraocular tubercles; most of the head scales tuberculate or swollen at the tip; upper labial border sharply serrate, the lower lip fitting into a groove in the inner face of the upper labials; upper labials 13-13; lower labials 14-14, three on each side in contact with the single pair of enlarged chin shields.

Dorsal scales with two apical pits, strongly keeled, the keels shorter than the scales and swollen posteriorly; several lateral rows nearly smooth, the outer entirely without keels; scale rows 25 (just behind the head), 22 or 21 (irregularly) at mid-body, and 17 just in front of the vent.

Ventrals 134, smooth, with no trace of sharp angulation or keel; subcaudals 35, the terminal six scale-like.

Coloration (in alcohol): general color pale yellowish brown, with about 30 transverse darker bars across the back; many of the dorsal scales, especially bordering the dark bars, are punctate with dark spots, as are the ends of the ventrals and the subcaudals; ventral surface otherwise uniform pale straw-color; sides of head darker brown, due to two very obscure oblique dark bars below the eye, which extend to the lower labials; tip of tail black, sharply distinct from the rest of the animal.

Measurements.—Total length 726 mm.; tail 81 mm.; greatest body diameter 38 mm.; diameter of neck 13 mm.; greatest width of head 28 mm.

Notes on paratypes.—The female specimen, No. 11062, has 138 ventrals, 38 subcaudals, 14 upper labials, 16 lower labials, and 17–18 scales in the ocular ring. The total length is 622 mm., tail length 74.

The coloration is much paler than that of the male, with the dorsal bars obsolete; the tip of the tail is black.

The juvenile specimen, No. 11063, is imperfect. Its color pattern is much clearer than in the two adult specimens; there are two lateral series of dark spots, the upper alternating with the dorsal bars; the scales of the dark spots tend to have light keels; one or two scales at the anterior border of each dark bar is light with a black tip, producing an ocellate effect. Tip of tail light.

Remarks.—The genus *Pseudocerastes* has previously been known from *P. persicus* Duméril and Bibron, from Persia and Baluchistan, and from *P. bicornis* Wall from Waziristan. The present species differs from the two previously known in having two rows of scales between rostral and nasal instead of one, a different scale count, and a much paler color-pattern. The species from Waziristan is as yet very imperfectly known. The new species extends the range of the genus far to the west.

Mr. Henry Field has kindly supplied the following note regarding the type locality of this species:

“Bair Wells are situated on the northern bank of the Wadi Bair. The gravelly bed of the stream contains water only during the rainy season. A long, low range of flint and gravel-covered hills lie on either side of the wadi, and the male and female adult specimens were collected from beneath a pile of stones, forming a Beduin grave, upon the summit of a hill about five hundred paces northeast of the wells.”

An extraordinary character exhibited by these specimens is a facial pit, whose location, just above the nasal shield, is shown in black in the figure (Fig. 2). This pit or, perhaps better, pocket, extends under the skin of the upper side of the snout, its location plainly indicated externally by a swollen area on each side. The depth of the pocket is 4 mm. The other species of *Pseudocerastes* should be examined for indications of a corresponding pocket. The existence of so well-defined a structure, especially curious in view of possible comparability with the pit of the pit-vipers, would certainly warrant generic separation of a species to which it was confined. My suspicion that a similar pocket, or at least an indication of one, is to be found in the other species of the genus is based on the fact that the new form agrees so excellently with the forms previously known in the characters regarded as generic in *Pseudocerastes*.

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