

*Spindel*  
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*The Distribution of Reptiles and Amphibians in Asiatic Turkey, with Notes on a Collection from the Vilayets of Adana, Gaziantep, and Malatya.* By C. G. BIRD.

[Plates VI. & VII.]

INTRODUCTION.

In February of 1935, in company with Mr. E. K. Balls, botanist and horticulturist, I left England with the purpose of collecting reptiles in Eastern Asia Minor in the country around Lake Van; after numerous hindrances by the Turkish Government we were eventually forced to leave the country at the end of June without having visited this area at all. However, we did as much as we could in the country around the south and east sides of the Cilician Taurus.

Owing to the difficulty of travel under the old regime, and the present restrictions under the new, the distribution and systematics of Asia Minor reptiles are comparatively unknown; as there is little material in European Museums the distribution is only known from the records of travellers who have casually made collections.

I have included in the distribution two areas just outside the borders of Asiatic Turkey—Istanbul in European Turkey and the Amanus Mts. in Syria; the paper on the latter area contains records both inside and outside the Turkish borders.

In those cases where I have given the colours of reptiles the specimens were compared with Winsor and Newton's colour chart of permanent water-colours; this was always done before the specimens had been placed in any preservative.

I am very grateful to my companion for helping to collect several specimens, and also to Mr. Tubini for a small collection from Istanbul. I am again very much indebted to Mr. H. W. Parker of the British Museum (Natural History) for all his help and valuable suggestions.

A bibliography is given at the end which includes all the references except a few of the earlier ones, which may be found in Boettger (1888) and Werner (1902).

Numbers given before the details of my specimens refer to British Museum numbers.

✓

## TESTUDINES.

*Testudo graeca* Linnæus.

*Distribution.*—Izmir (*Loret*); Burnabat near Izmir (*Boettger*, Coll. Th. Loebbecke); Bursa (*Steindachner*, Coll. Mann); Ankara (*Berthold*); S.W. Erdschias Mts. (*Siebenrock*); Meander Valley (*Boulenger*); Antalya, Sandikli, and Milet (*Werner*, Coll. Vosseler); Jenişehir, Afyon, Karahissar, Sultan Dagh near Akşehir (*Werner*, Coll. Bornmüller), Bilecik and Ankara (*Steindachner*, Coll. Escherich); Cilician Taurus (*Werner*, Coll. Holtz); Bursa (*Scholer*); Paznar-Keuy-Isnik-Mekece-Eskişehir Saboundji-Bounar, Izmir, and Ephesus (*Werner*); Gülek, Tarsus, Pozanti, and Bulgar Dagh (*Venzmer*); Ankara (*Boulenger*, Coll. Gadeau de Kerville); Mardin (*Mertens*, Coll. Wolter).

| B.M. reg. no.       |  |          |
|---------------------|--|----------|
| 1935.11.4.174-180.. | Tarsus, in rank vegetation, sea-level.           | 6/4/35.  |
| 1935.11.4.185.....  | Adana, 500 ft., in grass.                        | 11/4/35. |
|                     | Gaziantep, 3000 ft., dry grassy ground.          | 16/4/35. |
| 1935.11.4.170-173.. | " " " "  | 29/4/35. |
|                     | " " " "  | 6/5/35.  |
|                     | " " " "  | 1/5/35.  |
| 1935.11.4.184.....  | Ankara, " " "                                    | 28/5/35. |
| 1935.11.4.181-183.. | Hills above Bosphorus, Turkey in Europe, 300 ft. | 26/4/35. |

The above specimens agree well with those from the Balkan Peninsula. Venzmer (*Zool. Anz.* 1919, p. 291) points out there is a variety of *græca* in Asia Minor with divided supracaudals; this he calls var. *bicaudalis*, from a specimen obtained by him in the Bulgar Dagh in the Cilician Taurus. In the British Museum collection there are five specimens of *græca* from North Syria, two of which have divided supracaudals. In December 1920 Boulenger described a new land-tortoise from North Persia as *Testudo buxtoni*, and points out that it is only to be distinguished from *græca* by the divided supracaudal shield and the extremely narrow pectorals. In the list below I give the measurements of *buxtoni*, those from Syria, my own specimens, and some others. When the height and width ratios are plotted against the length it can be seen that the specimens with the divided supracaudal shield have the same ratios as do the specimens of *græca*. Therefore it appears to me that *buxtoni*, which was described from one specimen, is only

a rather large *græca*. As to the division of the supra-caudal shield, this appears to occur sporadically amongst the larger specimens of *græca*. In any case the name *buxtoni* cannot stand, as *bicaudalis* has priority over it by three months. I have also examined the type-specimen of *T. zarudnyi* from Persia in the British Museum collection; there appears to be no character which warrants it being separated from *græca*. I give the measurements of this specimen also, and the ratios of height and width over length are the same as in *græca*. From the appearance of the shell I should say it was a very old individual.

| Sex. | Length. | Width ratio. | Depth ratio. | Locality.                   |
|------|---------|--------------|--------------|-----------------------------|
| ♂    | 45      | .80          | .55          | Adana.                      |
| ♂    | 52      | .86          | .51          | Ankara.                     |
| ♂    | 62      | .82          | .50          | Tarsus.                     |
| ♂    | 65      | .78          | .53          | "                           |
| ♂    | 76      | .69          | .55          | Gaziantep.                  |
| ♂    | 90      | .72          | .50          | "                           |
| ♂    | 101     | .78          | .49          | S. Kurdistan.               |
| ♂    | 105     | .77          | .49          | Gaziantep.                  |
| ♂    | 114     | .73          | .50          | Tarsus.                     |
| ♂    | 151     | .80          | .54          | "                           |
| ♂    | 160     | .74          | .51          | "                           |
| ♂    | 161     | .71          | .52          | "                           |
| ♂    | 177     | .72          | .52          | "                           |
| ♂    | 181     | .71          | .51          | "                           |
| ♂    | 212     | .74          | .48          | ( <i>zarudnyi</i> ) Persia. |
| ♂    | 213     | .74          | .51          | Syria.                      |
| ♂    | 236     | .72          | .43          | "                           |
| ♂    | 253     | .66          | .46          | "                           |
| ♂    | 263     | .66          | .47          | "                           |
| ♂    | 272     | .68          | .44          | "                           |
| ♂    | 280     | .67          | .45          | ( <i>buxtoni</i> ) Persia.  |

Width ratio=width over length. Depth ratio=depth over length. Note the progressive decrease in width and depth ratios with the increase of length.

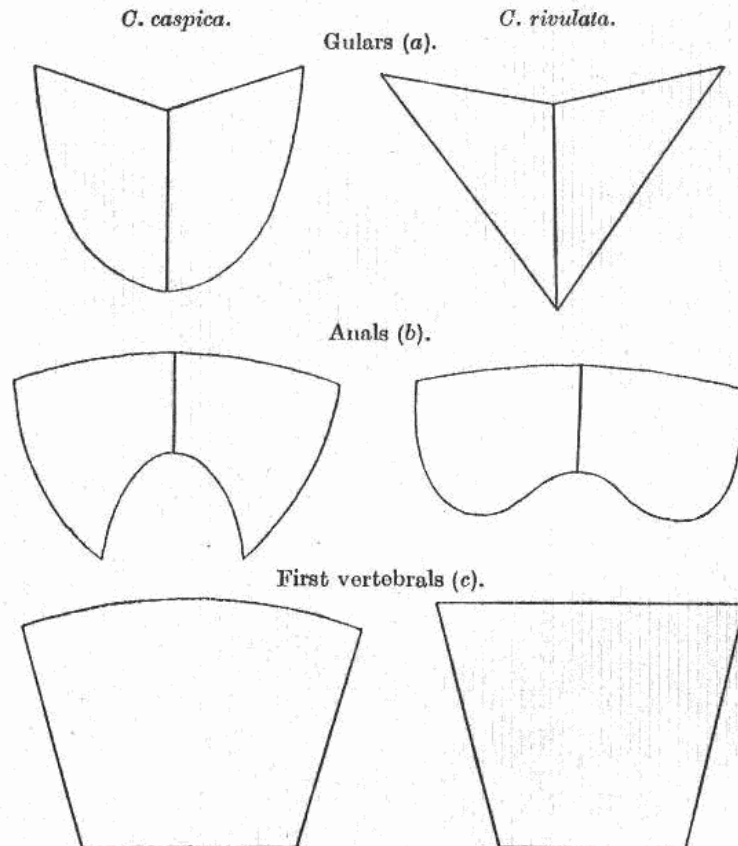
*Clemmys caspica* Gmelin and *Clemmys rivulata* Val.

*Distribution.*—Meander Valley (*Boulenger*); Antalya (*Werner*, Coll. Vosseler); Ankara (*Steindachner*, Coll. Escherich); River Pursak near Eskişehir (*Werner*); Balukli near Bursa (*Werner*); Belgrade Forest, Istanbul, Manisa, and Izmir (*Werner*); Valley of the Meander (*Boulenger*, Coll. Gray); Izmir and Ankara (*Boulenger*, Coll. Gadeau

de Kerville); Cilician Taurus, Pozanti, Gülek, Adana, Tarsus, and Mersin (Venzmer).

B.M. reg. no. 1935.11.4.194..... 20/5/35 River Sufras between Besni and Keysun, 3600 ft.  
1935.11.4.186-193.... 29/5/35 Gaziantep from stream below town, River Sufras.

3000 ft. Besni, Vil. Adana



Outlines of shields of *Clemmys caspica* and *Clem. mys rivulata*.

*C. rivulata* has usually been regarded as a subspecies of *C. caspica*. Boulenger (1924, p. 1) points out that of eleven specimens from Ankara four were of the typical subspecies and four were *rivulata*, this being the first time the two had been seen to occur in the same place. I have examined four of these specimens from de Kerville's collection; two belong to each subspecies. The characters for distinguishing them are: (1) The shape of the gulars;

in *caspica* the angles of the anterior border are smaller, giving the outline of the two gulars together a triangular shape, while in *rivulata* the anterior border is straight but the lateral borders are rounded, giving the two shields together the shape of a semicircle (text-fig., *a*). (2) The notch in the posterior edge of the anals in *rivulata* is in the shape of an inverted U, while in *caspica* it is in the shape of an inverted V (text-fig., *b*). (3) The anterior border of the vertebral shield in *rivulata* is larger in comparison with the other sides than in *caspica* (text-fig., *c*). These characters may only be used in adult specimens, *i. e.*, after four years old.

I have also examined specimens from Dalmatia, Bosnia, and the Cyclades, and using the characters given above they appear to belong to *rivulata*, while specimens from Cyprus and Damascus belong to the typical form. Eight specimens collected by us at Gaziantep, S.E. Asia Minor, are unquestionably *rivulata*. But besides Boulenger's record from Ankara, Venzmer (1922, p. 57) records that Werner has seen specimens even further west, *i. e.*, at Eskişehir and River Pursak; Vosseler also records it from Eskişehir. In Central Asia Minor therefore the two forms are definitely found in the same localities, and as the characters given above are so distinct I think *rivulata* should be regarded as a species distinct from *caspica*. When Venzmer (Zool. Anz. 1920, p. 99) wrote that he thought the typical form only occurred in Central Asia Minor and that *rivulata* occurred on the coasts he had not seen de Kerville's specimens from Ankara.

*rivulata* -  
Eskişehir -  
Pursak -  
? ?

*Emys orbicularis* Linnæus.

*Distribution.*—Ankara (Steindachner, Coll. Escherich); Balukli near Bursa (Werner); Manisa (Werner); Soisaly, S.W. Erdschias Mts. (Siebenrock, Coll. Penther and Zederbauer), Ankara (Boulenger, Coll. Gadeau de Kerville).

*Agama stellio stellio* Linnæus.

*Distribution.*—Amasya (Boettger, Coll. Schneider); Izmir (Boettger); Burnabat near Izmir (Boettger, Coll. Th. Loebbecke); Zebil in Bulgar Dag, Cilician Taurus (Boulenger, Coll. Danford); Mersin (Werner, Coll. Holtz); Amasya (Werner, Coll. Bornmüller); Soisaly, S.W. Erds-

chias Mts. (*Steindachner*, Coll. Penther and Zederbauer); Antalya and Buldur (*Werner*, Coll. Vossler); Meles Valley, Petrota near Izmir, and Alasehir (*Werner*); Amanus Mts. (*Werner*); Cilician Taurus, Bulgar Dag, Gülek, Tarsus, and Adana (*Venzmer*); Izmir (*Boulenger*, Coll. Gadeau de Kerville); Mardin (*Mertens*, Coll. Wolter).

| B.M. reg. no.         |         |  |
|-----------------------|---------|--|
| 1935.11.4.106-107.... | 24/4/35 | 5000 ft., five miles west of Gaziantep, rocky hill-side, grey limestone. |
| 1935.11.4.108-9.....  | 27/4/35 | 3000 ft., from walls, Gaziantep.   |
| 1935.11.4.103-105.... | 21/5/35 | 3000 ft., between Keysun and Gaziantep, shot on black basalt rocks.      |
| 1935.11.4.110-111.... | 27/4/35 | 3000 ft., Gaziantep, limestone walls.                                    |

These specimens are quite typical, except numbers 108 and 109, which are very dark compared with the others, the throat and underside being very dark grey and the spots on the back fewer. These two specimens are intermediate in colour between the typical *stellio* and *A. s. picea*, which is a melanic subspecies, described by Parker (1935, p. 137) from Transjordanian.

*Agama ruderala ruderala* Oliv.

*Distribution*.—Kaiseri (*Werner*, Coll. Siehle); Ankara (*Steindachner*, Coll. Escherich); Karapunar, Erdschias Mts. (*Steindachner*, Coll. Penther and Zederbauer); Nusaybin (*Boettger*); Ankara (*Boulenger*, Coll. Gadeau de Kerville); Mardin (*Mertens*, Coll. Wolter).

| B.M. reg. no.         |         |   |
|-----------------------|---------|---|
| 1935.11.4.112-118.... | 23/4/35 | 3000 ft., Gaziantep.  |
|                       | 1/5/35  | " "   |
|                       | 28/5/35 | " "   |
| 1935.11.4.119.....    | 20/4/35 | 4000 ft., Indjisu, nr. Gaziantep, under stones on dry hill-side.        |
| 1935.11.4.120.....    | 20/5/35 | Near Besni in the vilayet of Malatya, wall of chalky boulders, 4000 ft. |

The adults have the dorsal barring of medium burnt-sienna and the ground-colour pale burnt-sienna. These lizards were not found on walls, but on dry, reddish, stony, waste ground. This colouring does not refer to the specimen from Besni, which was paler.

*Blanus strauchi* Bedriaga.

*Distribution*.—Arsus (*Bedriaga*); Manisa (*Bedriaga*); Izmir (*Boettger*, Coll. A. Müller); Meander Valley (*Boulenger*); Istanbul (*Boulenger*); Izmir (*Bedriaga*);

Ephesus, Izmir, Burnabat, Aydin, Manisa, and Alaşehir (Werner); Atyk Koy, Jarbaschi, Amanus, and Kushdjula (Werner); Izmir (Boulenger, Coll. Gadeau de Kerville); Mardin (Mertens, Coll. Wolter).

B.M. reg. no.  
1935.11.4.125-127.... 20/4/35 Indjisu, near Gaziantep, thirty km.  
on the Maras road, 4000 ft., under  
stones on dry hill-side.

*Blanus aporus* Werner.

*Distribution.*—Mersin (Werner, Coll. Holtz); Bulgar Dagh (Venzmer).

First described by Werner in 1898 from specimens collected by Holtz in Mersin.

*Ophisaurus apodus* Pallas.

*Distribution.*—Ankara (Berthold); Gülek (Werner, Coll. Holtz); Bursa (Steindachner, Coll. Mann); Sinop (Boettger, Coll. Retowski); Adana (Werner); Bulgar Dagh (Venzmer); Izmir (Boulenger, Coll. Gadeau de Kerville).

B.M. reg. no.  
1935.11.4.121-122.... { 26/5/35 300 ft., hills above Bosphorus, Turkey  
in Europe.  
24/5/35 Striped immature specimen, details  
as 121.

This species is said to be very common in the above locality.

*Anguis fragilis* Linnæus.

*Distribution.*—Bursa (Boettger, Coll. Maltzan); Beikos on the Bosphorus (Werner, Coll. Betsch); Rise and Trabzon (Boettger, Coll. Retowski).

B.M. reg. no.  
1935.11.4.123-124.... { 24/5/35 300 ft., hills above Bosphorus,  
Turkey in Europe.  
21/5/35 300 ft., hills above Bosphorus,  
Turkey in Europe.

Another common species in the above neighbourhood.

LACERTILIA.

*Gymnodactylus kotschyi* Steindachner.

*Distribution.*—Nusaybin (Boettger); Konya (Werner, Coll. Escherich); Mersin and Gülek (Werner, Coll. Holtz); Jarbaschi and Amanus Mts. (Werner); Serai Dagh near

Konya (*Steindachner*); Ebenc, S. Taurus, Mersin, and Bulgar Dagh (*Venzmer*).

| B.M. reg. no.      |         |   |
|--------------------|---------|---|
| 1935.11.4.99.....  | 24/5/35 | 300 ft., hills above Bosphorus, Turkey in Europe.                 |
| 1935.11.4.101..... | 20/4/35 | 4000 ft., Indjisu, near Gaziantep, under stones on dry hill-side. |
| 1935.11.4.100..... | 3/5/35  | 3000 ft., Kara Tash, Gaziantep, under dry stones.                 |

*Gymnodactylus heterocercus mardinensis* Mertens.

*Distribution.*—Mardin (*Mertens*, Coll. Wolter).

| B.M. reg. no.      |         |  |
|--------------------|---------|--|
| 1935.11.4.102..... | 12/5/35 | On the wall of the American College, Gaziantep, 3000 ft. |

Details of this specimen are as follows:—Tibial scales keeled; twenty-six scales in a transverse row on the underside of the belly; tubercles on the back in ten rows; nine upper labials, eight lower labials; snout to vent 46 mm. This record extends the range of this subspecies 200 km. to the west, previously it had not been recorded outside the Mardin area.

*Hemidactylus turcicus turcicus* Linnæus.

*Distribution.*—Izmir (*Boulenger*); Mersin (*Werner*, Coll. Holtz); Izmir (*Boettger*); Island of Platia in the Sea of Marmora (*Werner*); Adana (*Werner*); Mersin (*Werner*, Coll. Siehle); Izmir (*Boulenger*, Coll. Gadeau de Kerville).

| B.M. reg. no.     |         |   |
|-------------------|---------|---|
| 1935.11.4.98..... | 24/5/35 | 300 ft., hills above Bosphorus, Turkey in Europe. |

*Ophisops elegans ehrenbergi* Wiegmann.

This exceedingly common and widely distributed species in Asia Minor has been recorded by all observers there.

| B.M. reg. no.         |             |  |
|-----------------------|-------------|--|
| 1935.11.4.144-153.... | 19/4/35     | Gaziantep, 30,000 ft., dry stony ground.   |
|                       | 23/4/35     | Gaziantep, 3000 ft., under stones, dry ground, hill-side.  |
|                       | 26/4/35     | Gaziantep, 3000 ft., dry ground.   |
| 1935.11.4.135-141.... | 1/5/35      | "  |
|                       | 20/4/35     | Indjisu, 30 km. from "Gaziantep on the Maras road, 4000 ft., under stones on dry hill-side, S.E. Asia Minor. |
| 1935.11.4.142-143.... | 7 & 11/4/35 | Adana, dry ground, 200 ft  |



In naming the above specimens it was also necessary to examine specimens from Syria, Persia, and Transcaucasia. There appears to exist some confusion as to the actual localities occupied by *Ophisops e. elegans* and *Ophisops e. ehrenbergi*. Boulenger ('Monograph of the Lacertidæ') gives the two subspecies as occurring on Mt. Hermon in the Lebanon, and he has the two subspecies extremely close together in South Asia Minor. *Ophisops e. elegans*, which was originally described from Baku, may be said to be the Transcaucasian subspecies, which extends to the Anatolian plateau; *Ophisops e. ehrenbergi* is the coastal subspecies, occurring from Istanbul to Syria through the Lycian and Cilician Taurus, Gaziantep, Mardin to Syria. In S.E. Asia Minor the distribution of *ehrenbergi* is divided by the Giaour Dag; this line of hills is a direct continuation of the coastal hills of Syria and Palestine, *i. e.*, the Lebanon and the Amanus Mts. Here *O. e. elegans* occurs, and so typical *elegans* is found between localities occupied by *ehrenbergi*. I do not suggest that the distribution of *ehrenbergi* is not continuous round the north of the Giaour Dag, as there is no evidence on this point.

*Lacerta sicula hieroglyphica* Berthold.

*Distribution*.—I. of Antigoni, Platia, and Oxia, Sea of Marmora (*Werner*); Beikos on the Bosphorus (*Werner*).

B.M. reg. no.  
1935.11.4.129-134 ... 24/5/35 Hills above Bosphorus, Istanbul,  
Turkey in Europe, 300 ft.

| Coll. no. | 1. | 2. | 3. | 4. | 5. | 6*. |
|-----------|----|----|----|----|----|-----|
| 129 ..... | 60 | 64 | 28 | 10 | 26 | 24  |
| 130 ..... | 59 | 65 | 29 | 10 | 29 | 32  |
| 131 ..... | 42 | 70 | 26 | 11 | 29 | 26  |
| 132 ..... | 69 | 76 | 26 | 11 | 29 | 22  |
| 133 ..... | 57 | 69 | 29 | 11 | 26 | 31  |
| 134 ..... | 62 | 74 | 29 | 11 | 31 | 31  |

As there are no specimens of this subspecies in the British Museum I have compared the above with *albiventris* from Italy, which Boulenger regards as almost similar.

\* 1. Length from snout to vent. 2. Scales across the middle of the body. 3. Transverse series of ventral plates. 4. Collar plates. 5. Gular scales in a longitudinal series. 6. Lamellar scales under the fourth toe.

Measurements of six specimens of *albiventris* from the Adriatic coast of Italy :—

|                |    |    |    |    |    |    |
|----------------|----|----|----|----|----|----|
| <i>a</i> ..... | 67 | 63 | 21 | 7  | 26 | 29 |
| <i>b</i> ..... | 63 | 62 | 24 | 9  | 24 | 28 |
| <i>c</i> ..... | 60 | 67 | 24 | 8  | 27 | 29 |
| <i>d</i> ..... | 52 | 65 | 23 | 8  | 26 | 28 |
| <i>e</i> ..... | 64 | 67 | 24 | 10 | 26 | 30 |
| <i>f</i> ..... | 64 | 65 | 25 | 9  | 27 | 28 |

Boulenger (Mon. of the Lacertidæ, vol. i. p. 208) gives measurements of two specimens from Marmora Islands :

|              |    |    |    |    |    |    |
|--------------|----|----|----|----|----|----|
| Oxia .....   | 65 | 68 | 29 | 11 | 28 | 32 |
| Platia ..... | 62 | 71 | 28 | 9  | 28 | 30 |

and one specimen from Istanbul (Constantinople) :

|    |    |    |    |    |    |
|----|----|----|----|----|----|
| 48 | 68 | 25 | 11 | 34 | 35 |
|----|----|----|----|----|----|

Although my specimens from Istanbul are smaller on an average in measurements, *i. e.*, 182–185, I think they should be referred to the above subspecies.

*Apathya cappadocica cappadocica* Werner.

(Pl. VI. fig. 1.).

*Distribution.*—Erdschias Mts. (Werner, Coll. Siehle); Buldur in Pisidia (Werner, Coll. Vosseler); Soisaly and Ewerek in S.W. Erdschias Mts. and Lifos (Steindachner, Coll. Penther & Zederbauer); Dumblek Daghl (Werner, Coll. Siehle); Kaiseri (Boulenger, Coll. Danford); Adana (Werner).

*Apathya cappadocica wolteri*, subsp. n.

(Pl. VII. figs. 2 & 3.).

*Distribution.*—Mardin (Mertens, Coll. Wolter).

B.M. reg. no.

1935.11.4.128 (holotype). 23/4/35 3000 ft., ten miles west of Gaziantep; on limestone rocks in thick scrub country.

*Paratypes.*—Five specimens in the Magdeburg Museum from Mardin, collected by Herr Wolter.

*Details.*—♀ (collar shields damaged) : femoral pores 22, gular scales 31, rows of ventral plates 29, scales around the body excluding ventrals 60, supraciliaries 7, scales

beneath the fourth toe 25; length, snout to vent 74 mm., tail 111 mm. (extreme tip broken, perhaps 10 mm.).

Details of the five specimens from Mardin may be found in the paper by Mertens (1924). I have examined, through the kindness of Dr. Wolterstorff, specimens nos. 1, 3, 4, 5 described in that paper, and have compared them with the specimen I obtained near Gaziantep, and I consider they should be separated subspecifically from typical *cappadocica*. I have examined specimens of the typical form from Hassan Dagħ (2), Erdschias Mts. (1), Adana (1), Dumbelek Dagħ (imm.) (1), Kaiseri (imm.) (1), Mōks in Kurdistan (imm.) (1).

The name proposed for the new subspecies is *wolteri*, after Herr Wolter, who was post director in Mardin during the war, and collected the Mardin specimens. The pholidosis of the two subspecies is similar. They are to be distinguished by the difference in the colour-pattern of the back, head, and flanks.

*Wolteri* is distinguished from typical *cappadocica* by the presence of two very clearly marked longitudinal lines (3 mm. wide approx.) running from the base of the tail along the back and outer edge of the parietals to the posterior border of the eye. Between these lines the colour is not mottled black and blue-green as in *cappadocica* (Pl. VI. fig. 1), but is black divided either by narrow bands of blue-green (Pl. VII. fig. 2), or, in the specimen from Gaziantep, by a row of ocelli (Pl. VII. fig. 3). In *wolteri*, outside the two dorsal lines, the black is broken up by spots and short lines; this colouring reaches the ventral plates. In *cappadocica* the colour-pattern outside the dorsal lines is as in *wolteri*, but is separated from the ventral plates by a further mid-lateral line of blue-green; this line runs from the angle of the jaw to the hind limbs. In *cappadocica* the head is often flecked with black, but never so in *wolteri*.

*Eremias velox velox* Pallas.

*Distribution*.—Alaşehir (Werner); Mts. west of Buldur (Werner, Coll. Vosseler).

*Lacerta taurica taurica* Pallas.

*Distribution*.—Beikos on the Bosphorus (Werner, Coll. Vosseler).

— die dors. Lin. zu seigh  
abund. in ihm  
Holotypus "

*Lacerta laevis* Gray.

*Distribution*.—Cilician Taurus (Werner, Coll. Siehle); Bulgar Dag (Venzmer). Boulenger ('Monograph of the Lacertidæ,' vol. i. p. 306) believes Werner's record to be based on an aberrant form of *danfordi*, and confines the distribution of *laevis* to Syria.

*Lacerta danfordi* Gunther.

*Distribution*.—Bulgar Dag, Cilician Taurus (Boulenger, Coll. Danford); Kaiseri and Dumblek Mt. (Werner, Coll. Siehle); Antalya to Buldur (Werner, Coll. Vosseler); Kushjula, Cilician Taurus (Werner); Bulgar Dag (Venzmer).

*Lacerta anatolica* Werner.

*Distribution*.—Koksche Kissik near Eskişehir (Werner, Coll. Backhaus & Vosseler).

*Lacerta muralis muralis* Laurenti.

*Distribution*.—Beikos on the Bosphorus (Werner, Coll. Betsch).

*Lacerta depressa* Camerano.

*Distribution*.—Trabzon (Camerano); Sinop (Boettger, Coll. Retowski); all Mts. from Transcaucasia to Sinop in Paphlagonia (Werner); east side of Erdschias Mts., Ewerek, south side and Lifos, and north side (Steindachner, Coll. Penther & Zederbauer); north side of Cilician Taurus (Werner, Coll. Bornmüller).

*Lacerta saxicola saxicola* Eversmann.

*Distribution*.—Olympus near Bursa (Werner); near Lake Van (Werner).

*Lacerta parva* Boulenger.

*Distribution*.—Kaiseri (Boulenger, Coll. Danford); Sari Keuy and Berchetti Mandam (Werner); Inewi near Konya (Steindachner, Coll. Escherich); Eskişehir, Saboundji, Bounar, and Alayund (Werner); Afyon Karahissar (Werner, Coll. Vosseler); Nigde, east side of Erdschias Mts. (Steindachner, Coll. Penther & Zederbauer); Ankara (Boulenger, Coll. Gadeau de Kerville).

*Lacerta strigata* Boulenger.

*Distribution*.—Bursa and Ankara (*Steindachner*, Coll. Mann & Escherich); Izmir and Cilician Taurus (*Werner*, Coll. Danford); Koksche Kissik, Eskişehir, Saboundji, Bounar, Burnabat near Izmir, Afyon Karahissar, Sari Keuy (*Werner*); Konya (*Steindachner*); Koksche Kissik (*Werner*; Coll. Vosseler); Cilician Taurus (*Werner*, Coll. Siehle); Bulgar Dagh (*Venzmer*); Ankara (*Boulenger*, Coll. Gadeau de Kerville); Mardin (*Mertens*, Coll. Wolter).

Specimens from these localities which previous authors referred to *strigata strigata*, *strigata major*, and other names have been put together under *strigata*. That both these subspecies, and possibly others, occur in Asia Minor is most probable, but the status and distribution of both is very little known.

*Lacerta viridis* (*viridis* ?) Laurenti.

*Distribution*.—Island of Platia in the Sea of Marmora (*Werner*); Beikos on the Bosphorus, Bursa, Olympus, Eskişehir, Schechle, Daz Dagh, and Jarpuz (*Werner*).

*Werner* records the specimens from the above localities as *viridis*. It is, however, probable that the specimens from Schechle, Daz Dagh, and Jarpuz, which are in the Amanus Mts., are really *viridis wolterstorffi* *Mertens*.

*Chamaeleo chamaeleon* Linnæus.

*Distribution*.—Izmir (*Boettger*, *Berthold*, *Boulenger*); Ankara (*Berthold*); Mersin (*Werner*, Coll. Holtz); Milet, Akeuy, and Sokia (*Werner*, Coll. Vosseler); Adana (*Werner*); Jarbaschi (*Werner*); Bulgar Dagh (*Venzmer*).

*Mabuia vittata* Oliv.

*Distribution*.—Mersin (*Werner*, Coll. Holtz); Alayund-Saboundji-Bounar (*Werner*); Konya (*Steindachner*); Adana (*Werner*); Bulgar Dagh (*Venzmer*); Atyk Koy, Kushjula, and Alexandretta (*Werner*).

*Mabuia septemtseniata fellowsi* Gray.

*Distribution*.—Izmir (*Boulenger*); Alaşehir (*Werner*); Bulgar Dagh (*Venzmer*); Izmir (*Boettger*).

*Mabuia aurata aurata* Linnæus.

*Distribution*.—Mardin (*Mertens*, Coll. Wolter).

*Eumeces schneideri schneideri* Daudin.

*Distribution*.—Jarbaschi and Bagdje (*Werner*); Bulgar Dagh (*Venzmer*); Adana (*Werner*).

B.M. reg. no.

|                          |   |  |
|--------------------------|---|--|
| 1935.11.4.154-159, . . . | { | 28/5/35 Gaziantep, 3000 ft., dry hill-side, waste ground. The ground-colour of the back is terre verte, the dorsal spots and mid-lateral line are deep cadmium orange. |
|                          |   | 30 & 31/5/35 Gaziantep, 3000 ft.   |
|                          |   | 19 & 21/6/35 " " "   |

These specimens agree well with those from Cyprus and Syria, in that the spots and lateral line are well marked in all the specimens. It appears that those from Mardin, 180 miles east of Gaziantep, are intermediate between the typical form and *E. s. princeps* from Transcaucasia; the latter subspecies lacks the lateral line almost entirely except just posterior to the head, and the dorsal spots are very pale in colour, being pale lemon.

*Eumeces schneideri princeps* Eichwald.

It appears to me, as pointed out above, that the *Eumeces* from Mardin are intermediate, as the lateral line and dorsal spots are not entirely lacking. Mertens (1924, p. 384), who has examined three specimens from this area, however, regards them as the above subspecies.

*Ablepharus kitaibelii* Bibron & Bory.

*Distribution*.—Izmir (*Boettger*); Petrota, Ephesus, Adana (*Werner*); Beikos on the Bosphorus (*Werner*, Coll. Betsch); Cilician Taurus (*Werner*, Coll. Siehle); Cilician Taurus (*Venzmer*); Istanbul (*Werner*, Coll. Bornmüller); Jarpuz and Kushjula (*Werner*).

*Chalcides ocellatus ocellatus* Forskål.

*Distribution*.—Adana (*Werner*).

## OPHIDIA.

*Typhlops vermicularis* Merrem.

*Distribution*.—Bursa (*Strauch & Steindachner*, Coll. Mann); Izmir and Amasya (*Boettger*, Coll. A. Müller & Schneider); Ankara (*Steindachner*, Coll. Escherich &

Berthold); Mersin and Gulek (*Werner*, Coll. Holtz); Eskişehir (*Werner*); Izmir, Ephesus, Burnabat, Aydin, Manisa, Alaşehir, and Sari Keuy (*Werner*, Coll. Scherer); Jarbaschi, Atyk Koy, and Kushjula (*Werner*); Bulgar Dag (*Venzmer*); Erdschias west of Kaiseri (*Steindachner*, Coll. Penther & Zederbauer); Izmir and Ankara (*Boulenger*, Coll. Gadeau de Kerville); Mardin (*Mertens*, Coll. Wolter).

*Eryx jaculus* Linnæus.

*Distribution*.—Izmir and Burnabat (*Boettger*, Coll. A. Müller & Th. Loebbecke); Milet (*Werner*, Coll. Vosseler), Jarpuz and Daz Dag (*Werner*); Adana (*Werner*); Izmir (*Boulenger*, Coll. Gadeau de Kerville).

*Natrix tessellatus tessellatus* Laurenti.

*Distribution*.—Izmir (*Boettger*, Coll. A. Müller); Amasya (*Boettger*, Coll. Schneider); Trabzon (*Bedriaga*); Mersin (*Werner*, Coll. Holtz); Ankara (*Steindachner*, Coll. Escherich); Bulgar Dag, Gülek, and Tarsus (*Venzmer*); Koksche Kissik (*Werner*, Coll. Vosseler); Izmir (*Boulenger*, Coll. Gadeau de Kerville); Adana (*Werner*); Mardin (*Mertens*, Coll. Wolter).

*Natrix tessellatus vosseleri* Werner.

*Distribution*.—From Antalya to Buldur (*Werner*, Coll. Vosseler); Amanus Mts. (*Werner*); Bulgar Dag (*Venzmer*).

*Natrix natrix persa* Pallas.

*Distribution*.—Izmir (*Boettger*, Coll. A. Müller); Ankara (*Steindachner*, Coll. Escherich & Berthold); Meander Valley (*Boulenger*, Coll. MacAndrew); Buldur-Sandikli (*Werner*, Coll. Vosseler); Ephesus, Meles Valley near Izmir, Afyon Karahissar, Sari Keuy (*Werner*); Adana (*Werner*); Beikos on the Bosphorus (*Werner*, Coll. Betsch); Ilgin, Erschias Mts. (*Steindachner*, Coll. Penther & Zederbauer); Alexandretta (*Werner*); Ankara (*Boulenger*, Coll. Gadeau de Kerville).

B.M. reg. no.

1935.11.4.160-161.... { 15/4/35 1800 ft., between Fevzi Pasha and Gaziantep, from under stones, on damp ground near the Lake Arslan.

It is not at present possible to agree with Hecht's nomenclature of this subspecies (Syst. Ausbreitungs-

geschichte und Oekologie den Europäischen Arten der Gattung *Tropidonotus* (Kuhl), H. Boie, Mitt. Zool. Mus. Berlin, 16, Bd. ii. 1930, p. 244). In this treatise the subspecies *persa* is divided into several "varieties"; this cannot be accepted, owing to the great individual variation to be found throughout the whole species *Natrix natrix*, and I am satisfied that until considerably more material can be brought together Hecht's "varieties" must come under the subspecies *persa*. Ten specimens were examined by me from Asia Minor; eight were of the two-lined form, i. e., *persa*, the two which were not being immature specimens.

*Coluber ater* Venzmer.

*Distribution*.—Bulgar Dagh (Venzmer).

*Coluber rhodorhachis* Jan.

*Distribution*.—One specimen in the Museum Royale d'Hist. nat. Belg. Brussels, labelled Asia Minor (Werner).

*Coluber ravergeri ravergeri* Ménétries.

*Distribution*.—Trabzon (Martin); Karpak (Werner); Gülek (Werner, Coll. Holtz); Adana (Werner); Derinde near Eregli (Werner, Coll. Siehle); Bulgar Dagh (Venzmer); Mardin (Mertens, Coll. Wolter).

As pointed out below, the Taurus is an intermediate area between typical *C. r. ravergeri* and typical *C. r. nummifer*, therefore those specimens from Derinde, Bulgar Dagh, Adana, and Gülek may be regarded as either subspecies. No specimens have been examined from these localities.

*Coluber ravergeri nummifer* Reuss.

*Distribution*.—Near Istanbul (Werner); Bulgar Dagh (Venzmer); Xanthus (Boulenger, Coll. Fellows & Haslar Collection); Budrum (Varniale).

B.M. reg. no.  
1935.114.162 ..... 12/5/35 In the college compound, Gaziantep,  
3000 ft., dry ground.

Details of the above specimen:—Scales around the back 25, ventrals 206, subcaudals 93, præoculars 2, subocular 1, postocular 2.



In this specimen the upper præocular plate is not in contact with the frontal. Mertens (1924, p. 387), who has examined the type of *Coluber nummifer*, agrees with Anderson ('Reptiles of Egypt,' vol. i. 1898, pp. 260 & 261) that *nummifer* is not a distinct species but a subspecies of *Coluber ravergeri*. Mertens gives details of the specimens obtained by Wolter in Mardin, and it appears that they are intermediate between the two, the number of scales around the body in three cases being 23; this is to be expected, as Mardin is an intermediate locality. In the British Museum there are two specimens from Budrum in Eastern Asia Minor identified as *ravergeri* by Boulenger, the number of scales around the back in each case being 23; in neither case is the præfrontal separated from the frontal. There are also two specimens from Xanthus and one from Rhodes with the same scale-count which Boulenger identified as *nummifer*; 23 is an uncommon scale-count in *nummifer*, but it is still less common in *ravergeri*; the Budrum specimens should be referred to *nummifer*, as should, of course, my specimen; specimens from the Taurus and East Asia Minor are intermediate. It is probable that the distribution given by Anderson ('Reptiles of Egypt,' pp. 260 & 261) is correct, *i. e.*, that *C. r. ravergeri* occurs in Turkestan, Afghanistan, Persia, and Transcaucasia, and *C. r. nummifer* in Lower Egypt, Palestine, Syria, Asia Minor, Cyprus, and Rhodes. But within the areas occupied by each subspecies only about 70 per cent. of the specimens are typical.

*Coluber najadum* Eichwald.

*Distribution.*—Budrum (*Boulenger*); Mersin (*Werner*, Coll. Holtz); Ankara (*Steindachner*, Coll. Escherich); Haymana near Ankara (*Berthold*); Trabzon (*Bedriaga*); Meles Valley near Izmir (*Werner*); Adana (*Werner*); Amanus Mts., Kaipak (*Werner*); Gülek, Tarsus, and Bulgar Dagh (*Venzmer*).

I saw specimens of what I feel sure was this snake at both Gaziantep and Malatya.

*Coluber jugularis caspius* Gmelin.

*Distribution.*—Sinop (*Boettger*, Coll. Retowski); Ankara (*Steindachner*, Coll. Escherich); Alaşehir (*Werner*); Sari

Keuy (*Werner*, Coll. Scherer); Ankara (*Boulenger*, Coll. Gadeau de Kerville).

|                    |        |  |
|--------------------|--------|--|
| B.M. reg. no.      | 1/6/35 | 3000 ft., Gaziantep, dry ground in cornfield.  |
| 1935.11.4.163..... |        |  |
|                    |        | <i>Colour</i> :—Ventral scales scarlet-lake (new). Dorsal scales light red. Between the scales black, dorsal and ventral margins of scales cream-colour. |

Number of ventrals 195. Subcaudals 47, probably 20 subcaudals missing. Although there are no specimens in the British Museum which approach this specimen in colour the pholidosis is the same as this subspecies. *Boulenger* ('Snakes of Europe,' p. 173) gives the colour of this subspecies as follows: "the upper parts are pale olive or reddish brown, with or without brown or black spots, and each scale bears a pale brown or yellowish streak; there is often a dark longitudinal streak on the nape; the belly is uniform red or orange." I saw two other specimens of this snake near Gaziantep; they were both the same colour as the above specimen, but I was able to collect neither of them.

*Coluber jugularis asianus* Boettger.

*Distribution*.—Budrum (*Boulenger*); Adana (*Werner*); Mersin (*Werner*, Coll. Holtz); Ebene, Gülek, and Tarsus (*Venzmer*); Charumji Maras, Airan (*Werner*).

*Elaphe quatuorlineata sauromates* Pallas.

*Distribution*.—Izmir (*Boettger*, Coll. A. Müller); Ankara (*Berthold*); Sultan Dagħ near Akşehir and Afyon Karahissar (*Werner*, Coll. Bornmüller); Erdschias Mts. (*Werner*, Coll. Siehle); Sari Keuy (*Werner*, Coll. Scherer).

*Elaphe taurica* Werner.

*Distribution*.—Amasya (*Boettger*, Coll. Schneider); Gülek (*Werner*, Coll. Holtz); Amasya (*Boulenger*); Akşehir and Bulgar Dagħ (*Werner*).

*Elaphe situla* Linnæus.

*Distribution*.—Izmir (*Jan*); Trabzon (*Jan*); Istanbul (*Werner*). Both the lined and the spotted forms occur in Asia Minor.

*Elaphe longissima longissima* Laurenti.

Distribution.—

B.M. reg. no.  
1935.11.4.164..... { 21/5/35 300 ft., Belgrade Forest near Istanbul,  
Turkey in Europe. No. of ventral  
scales 229.

*Coronella austriaca austriaca* Laurenti.

Distribution.—Beikos on the Bosphorus (Werner, Coll. Betsch); Izmir (Venzmer).

B.M. reg. no.  
1935.11.4.165-166.... { 21/5/35 Belgrade Forest near Istanbul, Tur-  
key in Europe.  
3/6/35 Belgrade Forest near Istanbul, Tur-  
key in Europe.

*Contia coronella* Schlegel.

*Linnaeus culicis Schmidt*

Distribution.—Adana (Werner); Mardin (Mertens, Coll. Wolter).

*Contia modesta* Martin.

Distribution.—Izmir (Boettger, Coll. A. Müller); Amasya (Boettger, Coll. Schneider); Manisa and Coast of Karien (v. Maltzan); Bursa (Gunther); Scutari (Boettger); Mersin and Gülek (Werner, Coll. Holtz); Meander Valley (Werner, Coll. MacAndrew); Bursa (Steindachner, Coll. Mann); Izmir (Jan); Ankara (Steindachner, Coll. Escherich); Milet (Werner, Coll. Vosseler); Isnik, Meles Valley near Izmir, Burnabat, and Aydin (Werner); Airan and Atyk Koy (Werner); Bulgar Dagh (Venzmer). Var. *aurilineata*: Taurus (Venzmer); Izmir and Ankara (Boulenger, Coll. Gadeau de Kerville); Adana (Werner); Mardin (Mertens, Coll. Wolter).

Observed by us at Indjisu, ten miles west of Gaziantep, on the Maras road.

*Contia decemlineata* Dum. & Bibr.

Distribution.—Adana (Werner); Mersin (Werner, Coll. Holtz); Bulgar Dagh (Venzmer).

B.M. reg. no.  
1935.11.4.167-169.... 1 & 3/5/35 Gaziantep, 3000 ft., taken from  
under low stone-walls.

Other specimens were seen in this locality; it is probably quite common.

*Oligodon melanocephalus septentrionalis* Werner.*Distribution.*—Adana (Werner).*Tarbophis savignyi* Boulenger.*Distribution.*—Bulgar Dagh (Venzmer).*Tarbophis fallax fallax* Fleischmann.*Distribution.*—Izmir (Boettger, Coll. A. Müller); Burnabat near Izmir (Boettger, Coll. Th. Loebbecke); Bursa (Steindachner, Coll. Mann); Gülek (Werner, Coll. Holtz); Milet, Akeuy (Werner, Coll. Vossler); Amanus Mts. (Werner); Bulgar Dagh, Mersin, Gülek, and Adana (Venzmer).*Malpolon monspessulanus insignitus* Geoffroy.*Distribution.*—Hieronda in Karien (Boettger, Coll. v. Oertzen); Izmir (Boettger, Coll. A. Müller); Burnabat near Izmir (Boettger, Coll. Th. Loebbecke); Adana (Werner); Bulgar Dagh (Venzmer); Mardin (Mertens, Coll. Wolter).*Vipera lebetina xanthina* Gray.*Distribution.*—Budrum (Boulenger); Izmir (Boulenger & Boettger); Adana (Werner); Kar Boghaz, Cilician Taurus (Werner, Coll. Holtz); Ankara (Steindachner, Coll. Escherich); Ephesus (Werner); Spartakule near Istanbul (Werner, Coll. Betsch); Boz Dagh (Werner, Coll. Bodemeyer).

Mr. E. Schwarz tells me that in his forthcoming work on the vipers of Europe he has made *bornmülleri* synonymous with *xanthina*. Some of the specimens referred to from the above localities have previously been regarded as belonging to this subspecies. Also some of the above specimens have been referred to *mauritanica* Guich, but this well-defined subspecies from North Africa is now found not to occur in Asia Minor.

*Vipera ammodytes meridionalis* Boulenger.*Distribution.*—Beikos on the Bosphorus (Werner, Coll. Betsch).*Vipera berus berus* Linnæus.*Distribution.*—Sabandja (Werner, Coll. Bodemeyer).

AMPHIBIA.

*Rana ridibunda ridibunda* Pallas.

*Distribution.*—Bursa (*Steindachner*, Coll. Mann); Ankara (*Steindachner*, Coll. Escherich); Izmir (*Boettger*, Coll. A. Müller & v. Maltzan); Amasya (*Boettger*, Coll. Schneider); Akşehir (*Werner*, Coll. Bornmüller); Bursa, Abullonia, Balukli, Inkaya, Gok-Dere, Olympus, Isnik, Eskişehir, Koksche Kissik, Saboundji, Bounar, Ephesus, Alayund, Aydin, Manisa, and Alaşehir (*Werner*); Sandikli, Konya, and Eskişehir (*Werner*, Coll. Vosseler); Ilgin and Soisaly (*Steindachner*, Coll. Penther & Zederbauer); Taurus (*Venzmer*); Bulgar Dag, Gülek, Tarsus, Adana, and Mersin (*Venzmer*); Izmir and Ankara (*Boulenger*, Coll. Gadeau de Kerville); Mardin (*Mertens*, Coll. Wolter); Amanus Mts., Charunji, and Alexandretta (*Werner*).

| B.M. reg. no.        |           |   |
|----------------------|-----------|---|
| 1935.11.4.1-17.....  | { 14/4/35 | Between Fevzi Pasha and Gaziantep, from still water, 1800 ft.                 |
|                      | { 15/4/35 | Between Fevzi Pasha and Gaziantep, from still water, 1800 ft.                 |
| 1935.11.4.24-27..... | 24/3/35   | Taken in pools, 200 ft., Justinian Aqueduct, near Istanbul, Turkey in Europe. |
| 1935.11.4.18-20..... | 20/5/35   | River Sufras, near Besni, in the vilayet of Malatya, 3000 ft.                 |
| 1935.11.4.28.....    | 21/5/35   | Belgrade Forest, near Istanbul, Turkey in Europe.                             |
| 1935.11.4.22-23..... | 24/3/35   | Taken in pools, 200 ft., near Justinian Aqueduct, Istanbul.                   |
| 1935.11.4.21.....    | 7/4/35    | Adana, still pool north of the town, sea-level.                               |

*Rana macronemis* Boulenger.

*Distribution.*—Olympus near Bursa (*Werner*); Bursa (*Boulenger*); Akşehir (*Werner*, Coll. Bornmüller); Koksche Kissik (*Werner*, Coll. Vosseler).

*Rana camerani* Boulenger.

*Distribution.*—Alayund (*Werner*); Maidan Göl, Taurus (*Werner*, Coll. Holtz); Kaiseri (*Werner*, Coll. Siehle); Albistan (*Boulenger*, Coll. Danford); Akşehir (*Werner*, Coll. Korb); east and north side of Erdschias Mts. (*Steindachner*, Coll. Penther & Zederbauer).

*Rana holtzi* Werner.

*Distribution*.—Maidan Göl, Cilician Taurus (Werner, Coll. Holtz); Bulgar Maaden, Cilician Taurus (Werner, Coll. Bodemeyer).

*Rana agilis* Thomas.

*Distribution*.—Balukli near Bursa (Werner).

*Bufo bufo bufo* Linnæus.

*Distribution*.—Izmir (Boettger, Coll. A. Müller); Rise near Trabzon (Boettger, Coll. Retowski); Manisa (Werner).

B.M. reg. no. 1935.11.4.29-30..... { 24/3/35 200 ft., marshy ground near Justinian Aqueduct, Istanbul, Turkey in Europe.

*Bufo viridis viridis* Laurenti.

*Distribution*.—Bursa (Steindachner, Coll. Mann); Trabzon (Boettger, Coll. Retowski); Bursa (Werner, Coll. Bornmüller); Izmir (Boettger, Coll. A. Müller); Albistan (Boulenger, Coll. Danford); Amasya, Izmir, Trabzon (Boettger, Coll. Schneider); Ankara (Steindachner, Coll. Escherich); Antalya and Afyon Karahissar (Werner, Coll. Vosseler); Alayund, Aydin, Alaşehir, and Manisa (Werner); Jarbaschi, Schechle, Daran, Atyk Koy, and Charumji (Werner); Erdschias Mts. (Steindachner, Coll. Penther & Zederbauer); Bulgar Dagh (Venzmer); Ankara (Boulenger, Coll. Gadeau de Kerville); Mardin (Mertens, Coll. Wolter).

B.M. reg. no. 1935.11.4.36-40..... { 8/4/35 200 ft., Adana, S.E. Asia Minor, edge of still pool.  
6/4/35 200 ft., Adana, S.E. Asia Minor, edge of still pool.  
1935.11.4.47..... 9/4/35 Three miles north of Adana, 700 ft. The ground-colour of this specimen is vermilion-orange, the spots are oxide of chromium.  
1935.11.4.41-45..... 11/4/35 Adana, 500 ft., waste ground with scrub.  
1935.11.4.49-55..... 20/4/35 Indjisu near Gaziantep, 4000 ft., under stones on dry hill-side.  
1935.11.4.48..... 23/4/35 3000 ft., Gaziantep, dry ground on summit of hill.  
1935.11.4.31-35.... 15 & 16/5/35 3900 ft., Malatya, collected in pools.  
1935.11.4.46..... 6/4/35 Adana, still pool (several tadpoles), sea-level.

*Hyla arborea arborea* Linnæus.

*Distribution.*—Izmir (Boettger, Coll. A. Müller); Bursa (Steindachner, Coll. Mann); Olympus (Werner, Coll. Bornmüller); Ankara (Steindachner, Coll. Escherich); Bursa (Werner); Ankara (Boulenger, Coll. Gadeau de Kerville).

B.M. reg. no.  
1935.11.4.56-60... 13 & 19 & 24/3/35 150 ft. Dug up, on dry hill-side,  
at Göksu, Bosphorus, Asia Minor.

*Hyla arborea savignyi* Audouin.

*Distribution.*—Giaour Dagh (Boulenger, Coll. Danford); Adana (Werner); Soisaly, Erdschias Mts. (Steindachner, Coll. Penther & Zederbauer); Bulgar Dagh, Gülek, Tarsus, and Mersin (Venzmer); Mardin (Mertens, Coll. Wolter); Alexandretta (Werner).

B.M. reg. no.  
1935.11.4.61-63... 14 & 15/4/35 Between Fevzi Pasha and Gaziantep,  
S.E. Asia Minor, 1800 ft.

*Pelobates syriacus* Boettger.

*Distribution.*—Izmir (Boulenger); Eskişehir (Werner); Cordelio near Izmir and Ephesus (Werner).

B.M. reg. no.  
1935.11.4.64..... 14/4/35 Between Fevzi Pasha and Gaziantep,  
1800 ft., S.E. Asia Minor, in still  
water.

*Salamandra luschani* Steindachner.

*Distribution.*—Tortukar Agassyin, Lycia (*Luschan*).

*Salamandra caucasica* Waga.

*Distribution.*—Trabzon (Werner).

*Salamandra salamandra salamandra* Linnæus.

*Distribution.*—Olympus near Bursa (Martens); Zebil, Bulgar Dagh (Boulenger, Coll. Danford); Adana (Werner); Izmir (Boettger); Bulgar Dagh (Venzmer); Adana (Werner); Bagdsche, Kushjula (Werner).

*Triturus crocatus* Cope.

*Distribution.*—Mus and Van (Steindachner); Buldur in Lycia (Werner, Coll. Vosseler).

*Triturus vulgaris vulgaris* Linnæus.

*Distribution.*—S. coasts of Black Sea (*Boettger*); Istanbul (*Berthold*); Izmir (*Boettger*, Coll. A. Müller); Cordelio near Izmir (*Werner*); Izmir (*Boulenger*, Coll. Gadeau de Kerville).

*Triturus cristatus karelini* Strauch.

*Distribution.*—Olympus near Bursa (*Müller, F.*, *Werner*, Coll. Bornmüller); Cordelio near Izmir (*Werner*); Ephesus (*Werner*).

*Triturus vittatus ciliciensis* Wolterstorff.

*Distribution.*—Lycia (*Lataste*); Trabzon (*Boulenger*); Bursa (*Steindachner*, *Boettger*); Olympus near Bursa (*Werner*, Coll. Bornmüller).

B.M. reg. no.  
1935.11.4.65-97..... 14/4/35 Ventral surface cadmium-orange.  
From under stones in a moist  
place near the Lake Arslan. Be-  
tween Fevzi Pasha and Gaziantep.

These specimens are all juveniles, probably one year old, and agree well with this subspecies, but are very dark on the dorsal side, almost black.

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EXPLANATION OF THE PLATES.

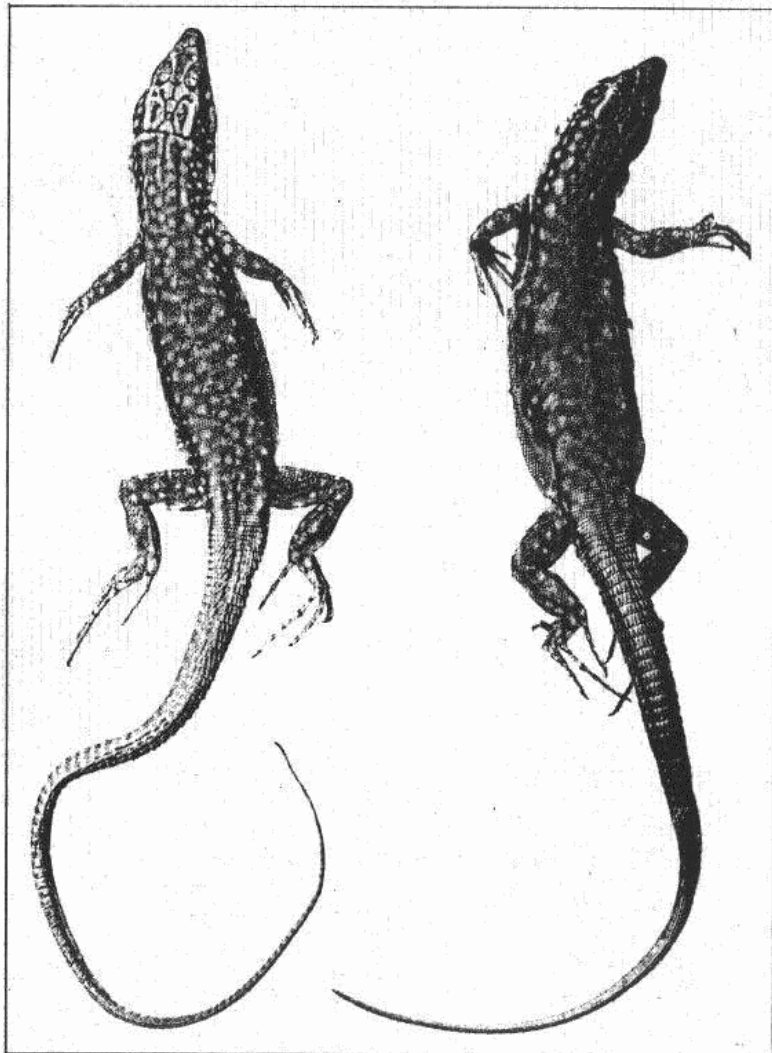
PLATE VI.

Fig. 1. ♂ and ♀ of *Apathya cappadocica cappadocica* from Hassan Dagh  
in Central Asia Minor, in the British Museum.

PLATE VII.

Fig. 2. ♀ paratype of *A. c. wolteri* from Mardin, in the Magdeburg Museum  
(faded slightly).  
Fig. 3. ♀ type of *A. c. wolteri* from Gaziantep, in the British Museum.

FIG. 1.



*Apathya cappadocica cappadocica.*  
♂ ♀ from Hassan Dagh, Central Asia Minor.

FIG. 2.



FIG. 3.



*Apathya cappadocica wolteri*, subsp. n.

(2) Paratype ♀ from Mardin.

(3) Holotype ♀ from Gaziantep.