

MISCELLANEA

REPTILES.

LIZARDS OF THE SIMLA HILL STATES.—As originally written this paper consisted of some notes on the various lizards collected during the months of July, August and September 1914; but later on, in accordance with a suggestion received from Dr. N. Annandale, a list of all the lizards known from the region, with references to the literature, is also given. In all, lizards belonging to the families *Geckonidae*, *Agamidae*, *Anguidae* and *Scincidae* have been taken from this region. Of these the collection contains representatives of only the *Agamidae* and *Anguidae*. The family *Anguidae*, a single representative of which, *Ophiosaurus gracilis* (Gray), was taken at Simla at an altitude of about 8000 ft., has not been found previously in the Western Himalayas, and has not apparently been recorded from any place the altitude of which exceeded 6000 ft. The occurrence of *Calotes versicolor* (Daud.) is also interesting, as in Dr. Annandale's recent note (*Rec. Ind. Mus.*, vol. x, p. 320) the species is only said to occur in the foothills of the Himalayas.

My sincere and hearty thanks are due to Major J Stephenson, I.M.S., Professor of Biology, and Principal, Government College, Lahore, for the facilities given me in working out this collection, and for the great help in obtaining the literature. I have also to thank Dr. Annandale for his valuable suggestions and kind help given at all times.

List of species known to occur in the Simla Hill States :—

1. *Alsophylax himalayensis*, Annandale.
2. *Gymnodactylus fasciolatus* (Blyth).
3. *Acanthosaura major* (Jerdon).
4. *Calotes versicolor* (Daud.)
5. *Agama tuberculata*, Gray
6. *Ophiosaurus gracilis* (Gray).
7. *Lygosoma himalayanum* (Günther).
8. *Lygosoma punctatum*¹ (Linn.).

Fam. GECKONIDAE.

1. *Alsophylax himalayensis*, Annandale.

Annandale, *Rec. Ind. Mus.*; vol. ix, p. 305, pl. xv, fig. 1 (a-c); vol. x, p. 319.

¹ There is a specimen from Subathu in the Indian Museum.

2. *Gymnodactylus fasciolatus* (Blyth).

Theobald, *Cat.*, p. 92; Boulenger, *Fauna*, p. 1; Annandale, *Rec. Ind. Mus.*, vol. ix, p. 325, pl. xvi, fig. 3.

Fam. AGAMIDAE.

3. *Acanthosaura major* (Jerdon).

Theobald, *Cat.*, p. 113; Boulenger, *Fauna*, p. 128; Annandale, *Rec. Ind. Mus.*, vol. I, p. 152, and x, p. 321.

4. *Calotes versicolor* (forma typica) (Daud.).

Theobald, *Cat.*, p. 109; Boulenger *Fauna*, p. 135, fig. 42; Annandale, *Rec. Ind. Mus.*, vol. i, p. 153; vol. vii, p. 46; vol. viii, p. 41; vol. x, p. 320.

Dr. Annandale adds as a footnote to his recent note on "Three rare Himalayan Lizards" (*Rec. Ind. Mus.*, vol. x, p. 320), that the typical form of the species occupies the foothills of the Himalayas, the Gangetic plain, Assam, Burma, Siam, the northern part of the Malay Peninsula, etc., according to his investigations then the form does not occur in the higher mountains, but specimens of this form were caught by me in the following places:—

1. Three at Saujauli (about two miles from Simla).
2. Two at Kufri (about eight miles from Simla on the Kulu Road).

The altitudes of the two places is approximately 8000 feet. The specimens are not very large and do not show any well marked sexual characters.

5. *Agama tuberculata*, Gray.

Stellio tuberculatus, Theobald, *Cat.*, p. 116; Boulenger *Fauna*, p. 148; Dodsworth, *Journ. Bombay Nat. His. Soc.*, vol. xxii, pp. 404, 405. Annandale, *Rec. Ind. Mus.*, vol. i, p. 154.

This rock lizard is very common at Simla as has been recorded by Mr. Dodsworth (*op. cit.*). Dr. Annandale also obtained two specimens of this form at Simla, while I have always seen them basking on stones on sunny days; specimens were also seen at Kasauli though none were secured.

A female specimen caught on the 22nd of August had five eggs in it, the eggs were quite ready for laying. According to Mr. Dodsworth the breeding season is May, June, July, and probably the first half of August, but my specimen which showed these ripe eggs was taken in the third week of August, hence the breeding season seems to extend up to the end of August. In all, eight specimens of this form were obtained on the Mashobra-Tibet Road, from underneath large stones about four miles from Simla

Fam. ANGUIDAE.

6. *Ophiosaurus gracilis* (Gray).

Pseudopus gracilis, Theobald, *Cat.*, p. 47; (*Ophiosaurus*) Boulenger. *Fauna*, p. 71, fig. 47; Annandale, *Rec. Ind. Mus.*, pp. 42 and 857.

The distribution of the Genus *Ophiosaurus*, Daud., according to Dr. Boulenger, is "South-Eastern Europe, North Africa, South Western Asia, Himalayas and Burma, Central America"; while the habitat of the species is "Eastern Himalayas, Khasi hills, Eastern Bengal, Rangoon, Western Yunnan". The species has been recorded by Dr. Annandale also in the "Zoological results of the Abor expedition" and parts i and iv (*op. cit.*). According to him the range is as follows: "A common species in the Eastern Himalayas at altitudes of between 4000 and 5000 ft.; it also occurs in the Khasi hills in Upper Burma and Yunnan, and probably in the hills of Pegu." Some of his specimens were taken at an altitude of 2000-2150 ft., and others at an altitude of 4000 ft. The single specimen about which the following notes are appended was taken on the 22nd of August on the Mashobra-Tibet Road about three miles from Simla. Now Simla is situated in the South-Western slopes of the Himalayas at an altitude of 7156 ft. This slow-worm then is not confined to the Eastern Himalayas as has been supposed up till now, but occurs in the Western Himalayas as well.

Measurements of the specimen.

Length 22.5 cm. Tail 8.1 cm.

The colour is yellowish brown above while ventrally it is uniform yellow, so also is the posterior one-third of the tail dorsally. The lateral blue-black stripes mentioned by Dr. Annandale are absent; dorsally a large number of black spots, during life rather bluish, which in some parts are like half hoops, are very distinctly seen.

Fam. SCINCIDAE.

7. *Lygosoma himalayanum* (Günther).

Mococa himalayana and *M. blythii*, Theobald, *Cat.*, pp. 57 and 59; (*Lygosoma*) Boulenger, *Fauna*, p. 200; Annandale, *Rec. Ind. Mus.*, vol. i, pp. 154, 155.

According to Dr. Annandale this skink is very abundant in the gardens in the town of Simla in the neighbourhood of which it is common at least as high as 9000 ft. Skinks were seen by me twice at Simla which probably might have belonged to this species but could not be secured.

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