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SEVEN NEW REPTILES FROM FUKIEN PROVINCE, CHINA¹

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In this paper I describe six new snakes and a new lizard collected by myself in Fukien Province for the Third Asiatic Expedition of The American Museum of Natural History during 1925 and 1926. The American Museum's earlier reptile collections from China were reported by Karl P. Schmidt in 1927. A report on all the more recently collected Chinese reptiles, now in manuscript form, will appear shortly, bringing the matter up to date.

Kuatun, from where many species have been described, is a village in the mountains of Ch'ungan Hsien, the type locality for all but one of the new species described herein.

SAURIA

Lacertidae

Apeltonotus sylvaticus, new species

TYPE.—A. M. N. H. No. 34975; Q; Ch'ungan Hsien, northwest Fukien Province, China; April-September, 1926; Clifford H. Pope.

DIAGNOSIS.—This species differs from *dorsalis* in having a less distinct collar, much shorter limbs, more scales across the middle of the back, a greater number of transverse series of ventral plates, and a distinctive color pattern.

Description of Type.—Head twice as long as broad, its length contained 4½ times in total length to vent; snout acutely pointed, a little longer than postocular part of head, with a sharp canthus, and a vertical, slightly concave loreal region. Neck slightly narrower than head. Hind limb stretched forward fails to reach elbow; fore limb stretched backward fails to touch knee; foot slightly longer than head; tail long, slender.

Nasals not in contact behind rostral; rostral and frontonasal forming a short suture; frontonasal longer than broad; frontal as long as its distance from end of snout, narrower behind than in front; parietals about $1\frac{1}{2}$ times as long as broad, outer border convex; interparietal small, slightly longer than frontonasal; occipital very small; 2 large and 2 small supraoculars; supraciliaries 5, separated from supraoculars by a series of granules. Rostral just separated from nostril; a single postnasal; anterior loreal barely half as large as posterior, only third and fourth upper labial in contact with posterior loreal. Four pairs of chin-shields, first pair completely in contact, second barely separated posteriorly.

¹Publications of the Asiatic Expeditions of The American Museum of Natural History. Contribution No. 81.

Scales on back largest, strongly keeled, those on sides granular, the two types gradually merging, slightly intermixed, 44 scales across middle of body. Ventral plates in 6 longitudinal, 24 transverse rows, plates of outer longitudinal row distinctly keeled and pointed, remainder barely so. Preanal plate large, smooth, bordered by a semicircle of 6 plates as large as those of last transverse row of ventrals; 4 of 6 are anterior, 2 lateral. Three femoral pores on each side; 26 lamellæ under fourth toe. Caudal scales strongly keeled, twice as long as largest dorsals.

Color, dark green above, lighter below, lightest on the throat. A continuous white stripe from subocular to base of hind leg. This line passes just below tympanum, above base of fore limb, and along fourth to sixth lateral rows of scales; vivid on head and neck, distinctly less so on body.

Four paratypes, all from type locality, Nos. 34972-974 and 34976.

SERPENTES

Colubridæ

Pseudoxenodon fukienensis, new species

Type.—A. M. N. H. No. 34650; &; Ch'ungan Hsien, northwest Fukien Province, China; April-September, 1926; Clifford H. Pope.

DIAGNOSIS.—A small *Pseudoxenodon* without a caudal stripe but with a vivid head and body pattern persistent throughout life. The ventral count is low, the caudal high, and, as might be expected, the tail proportionately long. Lower labials only 8–8.

Description of Type.—Rostral broader than deep, just visible from above; internasals shorter than prefrontals; frontal much longer than broad, as long as its distance from end of snout, slightly shorter than parietals, which are as long as their distance from internasals. Loreal deeper than long; preoculars 1–1; postoculars 3–3; both anterior and posterior temporals 2–2; upper labials 8–8, fourth and fifth entering eye. Four pairs of lower labials in contact with anterior chin-shields. Scale formula 19–17–15, the reduction from 19 to 15 taking place so abruptly at midbody that the section covered by 17 rows is equal only to width of some 20 ventral plates; at midbody all scale rows keeled. Ventrals 138; anal divided; subcaudals 62; total length 616 mm., 0.22 occupied by tail.

Fundamentally, the dorsal color pattern is strikingly like that of the other Pseudoxenodons, but actually it is distinct because of the different values of the component parts. The rather faint, middorsal light spots, 36 in number, are black-bordered before and behind, and from side to side cover 3 or 4 scale widths, while longitudinally they cover the length of a scale. The lateral black spots fall opposite the central light ones and are about twice as large. There is a purplish tinge to the ground color along the sides that is lacking down the middle of the back. On the tail only the light spots, 15 in number, predominate, for there the rest of the pattern is obscure.

The ventrum has the usual dark speckling which is almost lacking on the first score of ventral plates just as in the other Pseudoxenodons described herein. The speckling is proportionately less concentrated laterally, but the individual spots tend to run together along the base of each plate, and, posteriorly, across the center. The greatest profusion of speckles is reached before the anus, for behind it they are only moderately profuse and almost lacking along the juncture of the divided subcaudal plates.

The top of the head is black except for a gray interocular band and a gray temporal stripe irregular in outline extending from the eye to a little above the angle of the mouth. The side of the head between the eye and nasal opening it also gray, as is the rostral plate. At the sutures between each of the first 5 upper labials is a wedge-shaped, black spot directed downward. A postocular stripe, just below the temporal one described above, borders the sixth and crosses the last 2 upper labials, sending a point downward at the suture between the sixth and seventh. There is a very conspicuous V-shaped, black band across the neck whose apex reaches almost to the parietals.

All of the 14 paratypes are from the type locality. Their numbers are 33749, 34642-649 and 34651-655.

Pseudoxenodon karlschmidti, new species

Type.—A. M. N. H. No. 34658; Q; Ch'ungan Hsien, northwest Fukien Province, China; April-September, 1926; Clifford H. Pope.

DIAGNOSIS.—A *Pseudoxenodon* allied to *sinensis* from which it differs through a lack of yellow in the dorsal pattern, in having a narrower head, higher labial count, more ventrals in the males, fewer in the females, and fewer subcaudals in both sexes. Moreover, *karlschmidti* undergoes a more marked color change during ontogeny.

Description of Type.—Rostral broader than deep, just visible from above; internasals much shorter than prefrontals; frontal much longer than broad, barely as long as its distance from end of snout, just as long as parietals, which are much less than twice as broad in front as behind. Loreal deeper than long; preoculars 1–1; post-oculars 3–3; anterior temporals 2–2; posterior, 2–3. Upper labials 8–8, fourth and fifth entering orbit; lower labials 9–10; four in contact with anterior chin-shields on one side, 5 on other. Scales reduced from maximum of 19 to minimum of 15 at mid-body, consequently, count of 17 extends along a distance equal to width of only some 6 ventrals. Ventrals 154; anal divided; subcaudals 56; total length 796 mm., 0.18 taken up by tail.

The ground color of the dorsum is blackish gray. Down the middle of the back are 24 light gray spots. From side to side each spot covers the width of 4 to 6 scales, but longitudinally only the length of one. Some of these spots lie obliquely and all are surrounded by scales part black and part gray. Anteriorly on either side is a very indistinct row of darkish spots made up of black-bordered scales. These darkish spots for the most part alternate with the middorsal spots. The majority of the dorsal scales have minute traces of black. The light, middorsal row of spots extends on to the tail where there are 5 distinct and 2 indistinct ones. There the black borders are very indistinct. Beginning about 20 plates from the chin-shields, the ventrals are speckled with black more and more profusely toward the tail under which the speckling is so profuse that the subcaudals appear black. Laterally the speckles are concentrated along the tips of the ventrals to form a line, while in general they are gathered along the bases of the scales. The tips of even the first 20 plates are black.

¹Named for Mr. Karl P. Schmidt who has already reported the former Asiatic collections of the American Museum.

The ventral surface of the head is immaculate. The temporal region is darker than the dorsal surface of the head but there is no distinct postocular band. All but the last 2 upper labials on either side are narrowly bordered with black behind.

There are 6 paratypes (A. M. N. H. Nos. 34638-641 and 34659-660).

Pseudoxenodon striaticaudatus, new species

Type.—A. M. N. H. No. 33759; 9; Ch'ungan Hsien, northwest Fukien Province, China; June-July, 1925; Clifford H. Pope.

DIAGNOSIS.—A *Pseudoxenodon* differing from its ally, *dorsalis*, in having a higher ventral and subcaudal count, and in lacking all traces of yellow or red in its coloration.

Description of Type.—Rostral much broader than deep, just visible from above; internasals slightly shorter than prefrontals; frontal longer than broad, as long as its distance from the rostral, shorter than the parietals which are twice as broad in front as behind. Loreal deeper than long; preoculars 1–1; postoculars 3–3; both anterior and posterior temporals 2–2. Upper labials 8–8, fourth and fifth entering eye; lower labials 9–10, four in contact with anterior chin-shields on one side, 5 on the other. Nineteen rows of scales on neck, 17 from neck to midbody, 15 from middle of body to anus; at midbody all but 3 rows on either side feebly keeled. Ventrals 148; anal divided; subcaudals 55. Total length 776 mm., tail 0.18 of total.

The dorsum is an obscure, intricate mixture of black and gray, blending on the neck to give a uniformly dark appearance but arranged along the midregion to form indistingt, black-bordered, diamond-shaped spots reaching to the second scale row on either side. Most of the scales not entering this pattern are gray, many others are gray but bordered with black, while a few are entirely black. From a point a tail's length anterior to the anus a black-bordered, middorsal, light gray stripe extends to tip of tail. This is the most conspicuous marking on the dorsum. The light ventrum is profusely spotted with black. The spots run together laterally to form a black band and centrally are most numerous along the anterior edge of each plate. The spots are varied in size and shape and hazy in outline. They are present only on the tips of the first few ventrals.

There is a dark line from behind the eye to the angle of the mouth while all but the last 2 upper labials are black-bordered posteriorly. The ventral surface of the head is milky white.

There are 20 paratypes, all from the type locality (Nos. 33760–762, 34596 and 34662–677).

Dinodon futsingensis, new species

Type.—A. M. N. H. No. 34106; juvenile 9; Futsing Hsien, Fukien Province, China; August-October, 1925; Clifford H. Pope.

DIAGNOSIS.—A black and white banded *Dinodon* allied to *ruhstrati*. The scales are smooth, in 17 rows on the neck and at midbody, 15 just before the anus. Ventrals 197; subcaudals 79. Also allied to *yunnanensis* and *septentrionalis*.

Description of Type.—On the anterior extremity of the maxillary there are 4 small, subequal teeth. These are followed immediately by 4 much larger ones, the third of which is the longest. The remaining teeth, about 3 in number, are arranged along the maxillary some distance behind the first 8.

Rostral broader than deep, plainly visible from above; internasals distinctly narrower than the prefrontals and only half as long. Frontal slightly longer than broad, shorter than parietals, as long as its distance from end of snout. Loreal twice as long as deep, not entering eye; preoculars 1-1; postoculars 2-2; anterior temporals 2-2; posterior, 3-3. Upper labials 8-8, the third, fourth and fifth entering the orbit on one side, the fourth, fifth and sixth, on the other; lower labials 10-10, the first 5 in contact with the anterior chin-shields which are a little shorter than the posterior. Anal entire. Total length 227 mm., 0.21 occupied by tail.

The body is black, crossed by 22 white bands which are 2 scale lengths in width on the middle of the back but wider on the sides where they join the faintly clouded, white belly. Nearly all of these bands split just before they reach the ventrals. The 12 white bands on the tail scarcely widen laterally. Except on the neck, where they are much more widely separated, these white bands are 5 to 6 scale-lengths apart. The subcaudals are dark. There is a conspicuous white area extending anteriorly as far as the eyes and posteriorly 3 scale-lengths behind the parietals. Laterally it extends to the next to the last upper labial and finally joins the white of the throat. There are slight traces of black on this area, the most conspicuous being a narrow line from the posterior tip of the parietals to the beginning of the black ground color of the neck.

The single paratype, No. 34105, is also from Futsing Hsien and agrees remarkably well with the type.

Opisthotropis kuatunensis, new species

TYPE.—A. M. N. H. No. 34437; Q; Ch'ungan Hsien, northwest. Fukien Province, China; April-September, 1926; Clifford H. Pope.

DIAGNOSIS.—An Opisthotropis allied through strongly keeled scales and a high upper labial count to rugosa and typica of Sumatra and Borneo. The nasals are undivided and the prefrontal single.

Description of Type.—Maxillary teeth 25, small, subequal. Head broad, depressed; nostrils near upper edge of the nasals which are not in contact. Internasals long, curved outward; prefrontal single. Frontal large, a little longer than broad, much shorter than parietals. Supraocular divided on one side, entire on other; loreal longer than deep. Preoculars 2–2; postoculars 2–3. A total of 6 scales enter orbit on 1 side, 9 on other. Anterior temporals 1–1. Only first 6 upper labials on one side, first 8 on other, extend from head shields to labial border; those following are divided horizontally, first into double, then triple, then again double, rows. Their number, when only those entering margin are counted, may be given as 15–16; lower labials even more irregular. The very finely rugose anterior chin-shields are several times the size of the narrow posterior ones. Scales in 19 rows, striated and strongly keeled throughout. Ventrals 160; anal divided; subcaudals 63. The tail occupies 0.23 of total length which is 666 mm.

The uniform olive-brown of the back extends down on either side to the third row of scales and is marked only by 3 very obscure, black, longitudinal lines, each as wide as a scale. The belly and first 3 rows of scales on either side are uniformly light. The ventral surface of the tail is clouded except just behind the anus.

The 15 paratypes (Nos. 33708-710, 34428-436, and 34438-40) come from the type locality.

Hemibungarus kelloggi, new species

Type.—A. M. N. H. No. 33744; Q; Ch'ungan Hsien, northwest Fukien Province, China; June-July, 1925; Clifford H. Pope.

DIAGNOSIS.—A *Hemibungarus* with 15 rows of scales, no longitudinal lines on the body, and head rather distinct from the neck.

Description of Type.—Maxillary with a pair of large, grooved poison-fangs and 2 small, solid teeth separated by a space from the fangs. Rostral broader than deep; frontal a little longer than deep, as long as its distance from tip of snout, and much shorter than parietals, Diameter of eye equal to its distance from edge of lip; pupil round. Upper labials 7-7, third and fourth entering eye, sixth largest. Lower labials 6-6, four pairs in contact with anterior chin-shields. Preoculars 1-1; post-oculars 2-2; anterior temporals 1-2; posterior temporals 2-2. Scales in 15 rows throughout. Ventrals 203; subcaudals 28, divided. Anal divided. Total length 774 mm., 0.09 of which is occupied by tail.

The dorsum is purplish brown with 3 sets of markings. The most conspicuous of these is made up of 22 light-edged, black cross-bands, each a scale length in width, distributed down the back and descending to the edge of the ventrals. They may even join the ventral spots. This set is continued on the tail where there are 3 additional bands. The second set of markings is composed of a series of paired, light-edged black spots, each about the size of a scale, located on either side of the central scale row midway between the cross-bands. On the tail these spots are a little irregular. The third set of markings is a broken series of small, black spots each occupying the center of a middorsal scale. These spots are absent on the neck, tail, and the scales adjacent to the cross-bands.

The ventrum is milky white with 49 black blotches of varying size and outline disposed along its center. Five of the blotches fall behind the anus.

The head is black, crossed by 2 white bands; a narrow one beginning on the second and third upper labials and crossing over the snout at the juncture of the prefrontals with the internasals; a much broader one with the form of a shallow V having its anterior edges on the posterior upper labials and its apex at the posterior tip of the frontal.

There are 3 paratypes, all from Ch'ungan Hsien, A. M. N. H. Nos. 33490, 34104, and 34588.

 $^{^1}$ Named after Mr. Claude R. Kellogg, of the Fukien Christian University, who is devoting his life to the teaching of zoology in China.