

Description of New Genera and Species of North American Lizards in the Museum of the Smithsonian Institution.

BY SPENCER F. BAIRD.

Family IGUANIDÆ.

EUPHRYNE, Baird.—Body very heavy and clumsy. Tail shorter than the body; very thick and conical. Scales very small, but imbricated and angular throughout. A median dorsal band of about 20 rows, and a large patch on the sides of scales larger than the rest. Infra-orbitals in a series of small, nearly equal plates. Supra-cephalic plates all small, least on the outer part of the supra-orbital region. Upper labials rectangular, not imbricated. Posterior molars with five cusps; palate toothed. Claws very thick and stout, anterior much the longer.

Euphryne obesus, Baird.—Width of head nearly equal to distance from nose to ear. Tail shorter than the body. General color of the young, olive green, with five broad transverse bars above from head to base of tail, and about as many on the tail; these rings yellow, dotted with red. Beneath pea green dotted with black. With increasing age, the bands become obsolete and disappear, the general color becoming reddish olive.

The largest and heaviest of American *Iguanidæ*, sometimes exceeding a foot in length. Abundant in the canons of the Colorado, of California, collected by Maj. Thomas, Mex. Boundary Survey, and Lt. Ives' Expedition. Type No. 4172.

Crotaphytus reticulatus, Baird.—Infra-orbital chain in a series of 6 or 8 nearly equal plates. Scales on the gular fold much smaller than those between the fore legs. Above ashy gray, with a hexagonal reticulation of lighter, the interstices here and there dark brown. Chin and throat reticulated. Neither black collar nor light spots. More closely related to *Crotaphytus collaris*, than to *Crotaphytus (Gambelia) wislizenii*.

Hab.—Laredo and Ringgold Barracks, Tex. Mex. Boundary Survey. J. H. Clark and A. Schott. Type 2692.

Uta symmetrica, Baird.—Larger dorsal scales in four regular series, two on either side of the median smaller ones. Head short, depressed, one and a half times as wide as deep. Tail one and a half times the head and body. General color light brown above, the belly white. Sides with broad transverse bands of blackish. Size of *U. ornata*.

Hab.—Fort Yuma, Cal. Mex. Boundary Survey. A. Schott. Type No. 2760.

Uta schottii, Baird.—Dorsal scales and size as in the last. Head pointed, narrow, nearly or quite as high as wide. General color nearly black, scarcely lighter beneath. Back with small blue spots. Tail banded laterally with the same.

Hab.—Sta. Madelina, Cal. Mex. Boundary Survey. A. Schott. Type No. 2761.

UMA, Baird.—Ears distinct. very long infra-orbital plate. Palate without teeth. Outer face of upper labials plane and broadly vertical; the labials themselves much imbricated, and very oblique. Scales of body above equal, much smaller than ventral ones. Inter-orbital space with two series of plates. Claws very long, slender and straight. Sides with a round black spot. Tail? (broken off.)

Uma notata, Baird.—Head about two-fifths the head and body. Above light pea green, spotted with darker green. Beneath white. Head and body about two inches long.

Hab.—Mohave Desert. Lt. Williamson, Dr. A. L. Heermann. Type No. 4124.

Holbrookia approximans, Baird.—Similar in size and general character to *H. maculata*. Tail shorter than body. Two small vertical indigo black patches on the side of belly, entirely visible from below; with a light blue areola.

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Central point of belly about opposite the middle point between the two patchse. No light stripe on side of neck. Upper parts and sides gray, sprinkled with whitish. Head broad, very convex above. Hind foot about one-third the head and body.

Hab.—Lower Rio Grande. Mex. Boundary Survey, and Lt. Couch.

Sceloporus floridanus, Baird.—Cephalic plates smooth. Three series of supra-orbitals, a broad central one, and an external and internal of very small plates. Scales large, rough. 33 oblique rows of dorsal scales from head to anns. Scales on inside of tibia carinated. Free portion of longest hind toe exceeding the cephalic plates. Color above greenish yellow, with two broad yellow stripes, five scales apart. Back with distinct transverse blackish bars. Larger than *S. undulatus*.

Hab.—Pensacola, Fla. Dr. Jeffries, U. S. N. Type No. 2874.

Sceloporus ornatus, Baird.—Dorsal scales in about 64 oblique series, with but slight carination, mucronation and denticulation. Femoral pores 12. A well marked black cervical collar, complete above, and margined with yellowish. Color dark green above, nearly black towards the median line. Back with small yellowish spots.

Hab.—Patos, Coahuila, Lt. Couch. Type No. 2845.

Sceloporus longipes, Baird.—Similar to *S. occidentalis*, in general characters of shape, coloration and smoothness of the scales on inside of tibia. Limbs and tail much lengthened. Free portion of hind toe longer than the cephalic plates. The hind leg as long as the body and neck. Hind foot contained about two and a half times in the head and body.

Hab.—Fort Tejon, Cal. John Xantus. Type No. 4358.

Sceloporus couchii, Baird.—General appearance of *S. marmoratus*, Hall. Cephalic plates smooth. Scales very small. About 80 oblique dorsal rows from head to tail. Femoral pores 25. Color above dark green, with two lateral light stripes, separated by 18 rows of scales. Back with irregular spots. Sides with a white band from groin. An obsolete dark indigo patch on each side the belly, widely separated below. Sides of jaw banded transversely with blue and whitish. A subcircular indigo patch in front of shoulder, surrounded by light blotches.

Hab.—Santa Caterina, N. Leon. Lt. Couch. Type No. 2739.

Anolis cooperi, Baird.—Cephalic plates smooth. Inter-orbital ridges running to the side of the rostrum, posterior to the nostrils which are rather lateral. Digital pallets inconspicuous. A few central dorsal rows of scales abruptly larger than the rest, but the lateral all much smaller than the ventral. General color grayish above. Less than *A. carolinensis*.

Hab.—California. Dr. J. G. Cooper. Type No. 4165.

Family GECKOTIDÆ.

Sphærodactylus notatus, Baird.—Scales on back and sides large, equal, strongly carinated; those on belly smaller, smooth, hexagonal. Above light brownish yellow, uniformly dotted above with reddish brown, most distinct on the head, least so on the belly.

Hab.—Key West, Fla., Prof. Agassiz and Prof. W. H. B. Thomas. Type No. 3215.

Stenodactylus variegatus, Baird.—Head very broad. Hind foot contained six times in head and body. Above brownish yellow, with irregular small blotches of light reddish brown, sometimes in broad transverse bands. Edges of eyelids and whole under surface opaque white.

Hab.—Rio Grande and Gila Valleys. Mex. Boundary Survey. A. Schott. Type 3217.

Family XANTUSIDÆ.

General form lacertian. No crests nor spines. Head with very large,
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polygonal plates. Scales of back small, granular; those of belly large, square, in transverse series. Tongue broad, linear, not retractile, firmly attached except at tip, which is only slightly notched, the base not emarginate. Surface of tongue with a series of oblique converging ridges on each side. Teeth simple, pleurodont. Digits with one series of transverse smooth lamellæ beneath.

XANTUSIA, Baird.—Body slender; cylindrical. Femoral pores. Three folds on the throat, the anterior connecting the ears inferiorly and encircling the head. Pupil vertical. No eyelids.

Xantusia vigilis, Baird.—Hind leg extended forwards, reaches the first gular fold, and is contained about $2\frac{3}{4}$ times in head and body. Claws small. Color above dark brownish yellow, varied with blackish spots on single tubercles. Young vermiculated with yellowish on a brown ground. A yellowish line on each side of the neck, with two others on the nape, making four parallel ones. Under parts whitish. Head and body about two inches long.

Hab.—Fort Tejon, Cal. John Xantus. Type No. 3063.

Family LACERTIDÆ.

Cnemidophorus inornatus, Baird.—Scales on the gular fold, smaller than those on the breast anteriorly, and scarcely larger than those on the middle of the chin. Scales of back tubercular and elevated. Hind feet about two-fifths the head and body. General color light greenish olive, paler beneath. No lines on the body.

Hab.—New Leon. Lt. Couch. Type No. 3032.

Cnemidophorus octolineatus, Baird.—Gular fold as in the last. Hind foot not two-fifths the head and body. Scales of back depressed. General color light greenish olive, paler beneath. Back with eight equidistant and approximated light lines.

Hab.—New Leon. Lt. Couch. Type No. 3009.

Family ZONURIDÆ.

Gerrhonotus webbi, Baird.—Tail $2\frac{1}{2}$ times the head and body. Scales strongly carinated. Dorsal scales in 48 transverse rows. Body encircled by 26 rows of scales, of which 12 are ventral. Hind feet longer than from snout to ear. Above leaden olivaceous brown, lighter beneath. Back with ten or twelve blackish bars, bordered in front by brownish or reddish yellow.

Hab.—Near San Diego, Cal. Dr. Webb. Type No. 3078.

Gerrhonotus infernalis, Baird.—Dorsal scales carinated in 16 longitudinal rows; ventral in 12. Nasal plate in contact with the 2d labial only. Tail twice as long as head and body. 51 transverse rows of scales from head to tail. Color clear light olive, with 8 cross bars of dusky. Beneath yellowish, marbled faintly with dull olive. Head plain.

Hab.—Devil's River, Tex. Mex. Boundary Survey. Dr. Kennerly. Type No. 3090.

Gerrhonotus olivaceus, Baird.—No single frontal. A series of three pairs of plates between the vertical and rostral, becoming successively smaller. Two post-nasals; one loreal. 39 transverse rows of scales on back from head to tail. 12 longitudinal rows above; the 6 central, strongly carinated. Color dark olive green, with a series of faint dusky bars. Beneath greenish white.

Hab.—Near San Diego. Mex. Boundary Survey. A. Schott. Type No. 3096.

Lepidosternon floridanum, Baird.—Body as thick as a large goose quill. No limbs. A large pentagonal plate on the head above, encircled by nine others, the rostrum ending in a broad horizontal crescent, overhanging the mouth. No ears nor visible eyes. Tail contained 18 times in the body, much depressed, its upper surface with large tubercles. Color white in alcohol.

Hab.—Micanopy, Florida. Dr. J. B. Barratt. Type No. 3202.

Family SCINCIDÆ.

Plestiodon leptogrammus, Baird.—Two post-nasals, the posterior one behind and above the much smaller anterior. Color black, with five narrow, white lines, the two lateral along the middle of single rows. Median light line not bifurcated.

Hab.—Platte River Valley. Lt. Warren, Dr. Hayden. Type No. 3119.

Plestiodon inornatus, Baird.—Two post-nasals of equal size, one above the other. Hind leg applied three times forwards, reaching the ear.

Hab.—Sand Hills of Platte. Lt. Warren, Dr. Hayden. Type No. 3110.

Plestiodon tetragrammus, Baird.—One post-nasal plate; post-frontal and inter-nasals separated by the post-nasal. Five supra-orbitals. Dorsal scales of equal width. Light olive green above; sides with two yellowish lines, separated by six rows of darker olive scales. Upper labials pure yellowish. Body encircled by about 28 rows of scales. No dorsal stripe.

Hab.—Lower Rio Grande. Dr. Berlandier, Lt. Couch. Type No. 3124.

Plestiodon egregius, Baird.—One post-nasal plate; post-frontal and inter-nasals separated by the post-nasal. Four upper labials. Ears very small. Two central dorsal rows largest. Body cylindrical. Color reddish ash, with two or three white lines on each side, margined with dusky, sometimes a third; all these along the centres of single rows of scales. Upper lateral lines separated by two plain rows. Body encircled by about 22 rows of scales.

Hab.—Indian Key, Fla. G. Wurdemann. Type No. 3128.

Plestiodon septentrionalis, Baird.—One post-nasal plate which does not separate the inter-nasals and post-frontals. Color above olive, with four equidistant and equal dark stripes on adjacent half rows of scales. Two narrow white lines on each side, traversing the centres of single rows, and margined above and below by black. Upper lateral light stripes separated by six rows of scales. Beneath light greenish.

Hab.—Minnesota and Nebraska. Rev. S. W. Manney. Type 1356.

Remarks on the lower Cretaceous beds of Kansas and Nebraska, together with descriptions of some new species of Carboniferous fossils from the valley of Kansas river.

BY F. B. MEEK AND F. V. HAYDEN.

The Cretaceous system as developed in Nebraska, is clearly divisible into five distinct formations, which have, for the sake of convenience, been numbered 1, 2, 3, &c., from the base upwards. Although at first entertaining some doubts as to whether No. 1, or the lowest formation, might not be older than Cretaceous, we always placed it provisionally, in our published sections, in the Cretaceous system. More recently, after a careful review of the subject, we became satisfied from the modern affinities of numerous dicotyledonous leaves found in this formation, that we hazarded little in regarding it as a settled question that it could not be older than Cretaceous, and so expressed ourselves in our paper read before the Academy of Natural Sciences, Philadelphia, March, 1858.

The reference of this formation to the Cretaceous, however, was not without some exceptions generally admitted, for Professor Jules Marcou, in his work on the "Geology of North America," page 143, refers it to the New Red Sandstone, and in a subsequent publication,* he places it in the Jurassic; while some investigators in this country also inclined to the opinion that it must be Triassic. In the midst of these conflicting opinions, although satisfied we were right, we wished, in order to remove all doubts from the minds of others, to have the opinion of some good authority in fossil botany, (a department of palæontolo-

*Notes pour servir a une description geologique des Montagnes Rochenses, page 20.