

*On a New Genus and three New Species of Reptiles inhabiting North America.*

By EDWARD HALLOWELL, M. D.

## LAMPROSAURUS, Hallowell.

*Gen. Char.* Head conical, pointed, rostral vertical, the supra-nasals on each side contiguous; internasal large; nostrils between two nasal plates; two fronto-parietals; tympanum depressed; a few small scales in front of the ear; no gular fold; body and extremities slender; toes 5-5; scales smooth and shining, similar upon back and abdomen, rounded posteriorly; preanal scales large; no femoral pores; no palatine or sphenoidal teeth; body and extremities slender.

## LAMPROSAURUS GUTTULATUS.

*Sp. Char.* Body and upper surface of extremities black; a row of seven or eight white spots along the margin of the upper jaw; a row of white spots along the inferior margin of the supra-orbital plates, continuous with which is a white spot upon the fronto-nasal, and another upon the parietal plates; the rest of the upper surface, sides and front part of the head, are jet black, with the exception of a small white spot along the upper margin of the third supra-orbital, and one which is indistinct upon the freno-nasal plate; chin black; throat, abdomen and under surface of extremities iron grey, with a shining lustre. Total length 2 inches 6 lines.

*Description.* The head is elongated, conical and pointed, rounded above and in front; the rostral plate is vertical, pentangular, not grooved inferiorly, a little larger, apparently, in the vertical direction than transversely; there are two nasal plates, with the nostril between them; there are two supero-nasals, one on each side, contiguous, rhomboidal; the internasal is large, in contact laterally with the supero-nasal and the freno-nasal plate; in front with the supero-nasal, posteriorly with the fronto-nasal; the fronto-nasal are pentagonal, larger than the supero-nasal, their internal angle prolonged; they are in contact anteriorly with the inter-nasal and the freno-nasal; laterally with the freno-orbital and the anterior supra-orbital; posteriorly with the frontal; the frontal plate is long and hexagonal, broader in front, excavated laterally; the fronto-parietal are large and quadrilateral, larger than the fronto-nasal; the inner-parietal is broad and rather short, rounded posteriorly, the anterior angle passing in between the fronto-parietals; the parietals are large; there are five supra-orbital plates, the third the largest; there are seven superior labials on one side and eight on the other, the last the largest; body and extremities slender; tail, according to Dr. Hammond, nearly as long as the body (mutilated in the specimen;) fourth toe much longer than the third, and stouter; third and fourth fingers of nearly equal length; body covered above with smooth imbricated scales, broad and rounded posteriorly; the scales upon the abdomen are similar to those upon the back; no femoral or anal pores; chin, throat and extremities covered with smooth imbricated scales.

*Color.* Body and upper surface of extremities black; a row of seven or eight white spots along the margin of the upper jaw; a row of white spots along the superior margin of the supra-orbital plates, continuous with which is a white spot upon the fronto-nasal, and another upon the parietal; the rest of the upper surface, sides and front part of the head is jet black, with the exception of a small white spot along the upper margin of the third supra-orbital, and one, which is indistinct, upon the freno-nasal; chin black; throat, abdomen and under surface of extremities iron grey, with a shining lustre.

*Dimensions.* Length of head 4 lines; greatest breadth  $2\frac{1}{4}$  lines; length of neck and body 1 inch; of anterior extremity 7 lines; of posterior the same; of tail about 1 inch 2 lines.

*Habitat.* New Mexico, Fort Fillmore, below the Jornada del Muerte; found, also, at El Paso; rare, Dr. Hammond having seen but two specimens.



The specimen above described was found by Dr. G. F. Hammond, and presented by him to the Academy.

### CROTAPHYTUS, Holbrook.

#### CROTAPHYTUS FASCIATUS.

*Sp. Char.* Head of moderate size, triangular, slightly swollen at the temples; body slender; anterior extremities idem; tail nearly three times as long as the body (including neck and extending to vent;) body covered with small granulations, ash colored, with seven or eight narrow transverse bands upon the back of the color of vermilion; bands of a similar color upon the tail; legs banded; abdomen covered with quadrangular scales: flesh-colored; femoral pores in the male very distinct.

*Description.* The head is subtriangular, rounded in front, slightly swollen at the temples, covered above with polygonal tubercles, larger anteriorly; a row considerably larger than the rest runs along the middle line of the front part of the head, midway between the nostrils; these tubercles are much smaller and of more uniform size upon the temples; they are also small over the orbits; the occipital plate is of moderate size, and rather indistinct; the supraciliary ridges are well developed; the external margin of the eyelid is bordered with a row of quadrangular scales, external to which is another row upon the lower lid, with pointed extremities, presenting a well-marked denticulation; the lids are covered with minute granulations; the nostrils are large, oval, lateral, looking outward and slightly backward, situated in a single scale; the rostral plate is narrow, quadrangular, much more extended transversely than in the vertical direction; the upper jaw is bordered with a row of seventeen plates; the external opening of the ear is very apparent, oval, its anterior border presenting a few small denticulations; neck folded; body slender, covered above with small granulations, rather larger upon the back than upon the sides; anterior extremities slender; posterior well developed; both covered above with granulations, rather larger in front than posteriorly; several rows of small plates along the margin of the lower jaw; chin and throat covered with small granulations; abdomen covered with smooth hexagonal and quadrangular scales; anterior surface of arms and forearms covered with small granulations; of thighs and legs with scales similar to those upon the abdomen; femoral pores very distinct; no anal ones; tail very long and slender posteriorly, covered with smooth quadrangular scales near its root, hexagonal posteriorly; these scales are distinctly verticillate throughout the greater part of the length of the tail, less so anteriorly, and carinated both anteriorly and posteriorly, except within about two inches of its root; femoral pores very distinct.

*Color.* Head of the specimen examined of a light yellow color, with numerous small brown spots disseminated upon its surface; a dark colored bar upon the temples, between the orbit and ear; chin and throat marked with dark colored lines and blotches; body ash color above, presenting numerous small points upon its surface, and marked with transverse bars of a vermilion color during life; upper surface of its extremities resembling in color that of the abdomen, the thighs and more especially the legs marked with transverse bands of vermilion; abdomen flesh color; tail ash, beautifully banded with transverse bars of vermilion.

*Dimensions.* Length of head  $10\frac{1}{2}$  lines; greatest breadth 7 lines; length of neck and body  $2\frac{1}{2}$  inches; length of tail  $6\frac{1}{2}$  inches; of arm 5 lines; of anterior extremity 1 inch 7 lines; length of foot to extremity of longest toe 13 lines.

*Habitat.* Sand hills, at the lower end of the Jornada del Muerte, New Mexico.

*Remarks.* This animal, of which there are two specimens, a male and a female, forming part of Dr. Woodhouse's collection, differs from the *Crotaphytus Wislizenii* of Baird and Girard, in the size and shape of the head: that of *Wislizenii* being about a quarter of an inch longer; the latter is also broader and



the snout less pointed; the neck also in *fasciatus* is much more contracted, and the body and both anterior and posterior extremities are much less robust. In addition to these distinguishing characteristics, sufficient of themselves to separate the two animals, there exist in *fasciatus* seven or eight narrow transverse bands of a bright vermilion color upon the back, which are not observed in the other species.

### TROPIDONOTUS, Kuhl.

#### TROPIDONOTUS WOODHOUSII.

*Sp. Char.* Head long, depressed, rounded in front; eyes projecting; neck much contracted; body thicker in the middle; tail of moderate length; scales strongly carinated; a series of transverse rhomboidal dark colored blotches upon the back, less distinct near the tail, obsolete upon the anterior half of the body; which is of an olive green color; interstices between the blotches white; 23 rows of scales. Abdominal scuta 150; sub-caudal

*Description.* The head is quite large and much depressed, covered above with nine plates; of these the anterior frontal are pentangular, their posterior and external angle being somewhat prolonged; the posterior frontal are much larger and irregularly quadrilateral; the vertical is pentagonal, much broader in front than posteriorly, its lateral margins being slightly hollowed; the supra-orbital are oblong, pentagonal, broader behind than in front; the occipital are very large, pentagonal: the rostral is broad and quadrilateral, rounded above, excavated below; the nostrils look upward and outward, and are situated between two nasal plates; there is one loreal on each side which is quadrilateral; there are one anterior ocular and three posterior ocular plates; the former is quite large, and excavated anteriorly, so as to receive the posterior margin of the loreal; there are two large temporal plates on each side of the occipital; there are eight labials upon the margin of the upper jaw on each side; of these the sixth and seventh are the largest; the eyes are large and projecting, the supraorbitals extending but slightly over the eye; the mental plate is small and triangular; the anterior and posterior genials are quite long, the posterior somewhat more slender and larger than the anterior; the body is long, much thicker in the middle than at the extremities, covered with twenty-three rows of strongly carinated scales; the rows upon the sides are much less strongly carinated than those upon the back; the row nearest the abdomen is the broadest.

*Color.* Dusky olive upon the upper part of the head and back, becoming darker upon the middle of the body, and toward the tail, presenting numerous transverse dark colored bands, most distinct upon the posterior half of the body; these bands do not, as in *Tropidonotus sipedon*, extend as far as the abdomen; they are bordered anteriorly and posteriorly with a strip of white; chin, thorax and neck straw color; the abdominal scales are bordered anteriorly with black; tail, straw color, with indistinct bands of black along the borders of the scales.

*Dimensions.* Length of head 1 inch 6 lines; greatest breadth 9 lines; length of body 2 ft. 2 inches; of tail  $5\frac{1}{2}$  inches. Abdominal scuta 150; sub-caudal 44, (tail broken off at extremity.)

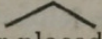
*Habitat.* Prairies near the Arkansas river.

*Remarks.* The reptile above described resembles the *Tropidonotus erythrogaster*, in having the same number of rows of scales, there being 23 in each; and nearly the same number of abdominal plates, there being 148 in the *erythrogaster* and 149 in *Woodhousii*. The tail in the specimen of the latter species having been mutilated, their number could not be accurately determined. The coloration of the two animals, however, is very different, the white transverse bands upon the back being very apparent in *Woodhousii*, but do not exist in *erythrogaster*. They differ also greatly in size, *Woodhousii* being a much smaller animal. *Tropidonotus fasciatus* has 140 abdominal plates and 42 pairs of sub-caudal scales. The "body has singular oblong or triangular purplish red spots on the flanks, which are insensibly lost about midway between the abdomen and vertebral line." "In old animals the whole superior and lateral surface becomes of a brownish color." Its circumference is five inches.



## AMBYSTOMA NEBULOSUM.

*Sp. Char.* Head as broad as long, rounded in front; palatine teeth in the form of a triangle, the apex directed forward; body brown with numerous yellow spots; tail longer than neck and body; total length 5 inches 9 lines.

*Description.* The head is large, depressed above, about as broad as it is long; snout rounded; nostrils small, about three lines apart; eyes large and prominent; mouth very large; tongue broad and flattened, free at its edges, attached at its anterior border; palatine teeth  shaped, the angle presenting forward, the extremities of the row being placed a short distance behind the internal nares; neck contracted; posterior extremities stouter than the anterior; body sub-cylindrical, flattened inferiorly; tail longer than the head and body, much more compressed, the posterior half especially, quite thin and rounded at its extremity.

*Color.* Head brownish above, with numerous indistinct yellowish spots posteriorly; body blackish, presenting many yellowish spots upon the surface, the largest about a line in diameter; extremities blackish, mingled with yellow; tail of some dark hue, with numerous yellow spots and markings; chin, throat and abdomen yellowish.

*Habitat.* New Mexico.

*Dimensions.* Length of head 8 lines; greatest breadth 8 lines; length of neck and body 2 inches 2 lines; of tail 2 inches 9 lines; of anterior extremities 1 inch 6 lines; of posterior the same; total length 5 inches 9 lines.

Another specimen from the same locality is more uniformly blackish upon the upper surface, the yellowish spots being absent; the chin, throat and abdomen are also more distinctly marked with black and yellow.

*Remarks.* The above species differs from the *Proserpine* of Baird and Girard in the shape of the head and in the coloring; and from *Mavortia* of Baird in the same particulars. The *Mavortia*, according to Prof. Baird, has "about nine broad transverse bands of yellowish on the sides of the body, confluent to a certain extent with that of the belly." He describes similar markings upon the tail, forming nearly complete ellipses, about twelve in number. The *Mavortia* is eight inches in length.

The Committee on the following paper by Dr. Genth, reported in favor of publication in the Proceedings:

*On a probably new element with Iridosmine and Platinum, from California.*

By Dr. F. A. GENTH.

I received from Dr. Charles M. Wetherill a small quantity of white grains, which were collected in 1849-50 from California gold by the late Jos. R. Reynolds, Esq. An examination of these grains furnished me results which are, perhaps, worth noticing.

I. When treated with boiling hydrochloric acid, two grains began to dissolve with disengagement of hydrogen. As soon as I observed this reaction I picked them out and washed them off with water. With a good magnifying glass I found that they were mechanically mixed with gold. Their color was between a tin-white and steel color; they were malleable, but harder than tin; they dissolved in nitric acid, yielding a crystalline salt, the native gold which was mixed with them remaining undissolved. They precipitated copper from solutions, but slowly. Hydro-sulphuric acid precipitated the solution in nitric acid brown. A pure piece of metal before the blowpipe on charcoal fused readily. It was soon covered with a black oxide and gave no incrustations. Borax in the O. F. dissolved it and gave a colorless bead, which on cooling became opalescent; the same reaction took place more readily in R. F.

The quantity of this metal was too small for further experiment, but these re-



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