

maculated; the fins are unicolor except the dorsal which has a black spot at its posterior margin.

D 9. A 8. C 6. I. 7. 6. I. 5. V 6. P 14.

Leon's Springs, Rio Grande del Norte.

13. *CYPRINODON GIBBOSUS*, B. and G.—The back forms a very prominent arch in the individuals of both sexes. The nape is often depressed and subconcave. The head is proportionally small, and the eyes large. The back, upper part of sides, head, and dorsal fins, are uniformly bluish black in the male; beneath golden yellow, and the caudal margined with black; the anal, ventrals and pectorals, yellow. The female exhibits vertical bars of black on the sides from the head to the caudal fin which is unicolor like the anal, ventrals and pectorals. The dorsal is provided posteriorly with a black spot.

D 10. A 11. C 4. I. 8. 7. I. 3. V 5. P 15.

Brackish waters of Indianola.

14. *HETERANDRIA AFFINIS*, B. and G.—Body elongated, subfusiform and compressed. Head forming about one-fifth of the entire length. Body yellowish brown above, orange beneath. Fins unicolor, except the caudal which has two narrow bands of black.

D 6. A 8. C 3. I. 7. 6. I. 2. V 5. P 12.

Rio Medina and Rio Salado.

15. *HETERANDRIA NOBILIS*, B. and G.—General form much stouter than in the preceding species; back arched. Head forming the fourth of the entire length. Ground color reddish; margin of scales black.

D 8. A 7. C 4. I. 7. 7. I. 3. V 6. P 10.

From Leona and Camanche springs, valley of the Rio Grande del Norte.

16. *HETERANDRIA PATRUELIS*, B. and G.—Body rather elongated, compressed. Head stouter than in *H. affinis*, though forming the fifth of the entire length. Reddish brown above, yellowish beneath.

D 5. A 8. C 3. I. 7. 6. I. 2. V 6. P 11.

Inhabits the Hydrographic basin of the Rio Nueces; specimens were collected in the Rio Sabinal, Rio Leona and Rio Nueces, and Elm creek.

17. *HETERANDRIA OCCIDENTALIS*, B. and G.—Body slender; back slightly arched; head small and conical, forming the fifth of the entire length. Reddish brown above; reddish yellow beneath. Fins unicolor, of a light yellowish white. The ventral line is marked by a black stripe. A black and heavier line may be observed under the tail, between the posterior margin of the anal fin and the base of the caudal.

D 6. A 7. C 4. I. 7. 6. I. 3. V 6. P 10.

Collected in the Rio Santa Cruz of the Rio Gila.

Description of New Species of Fishes, collected by Captains R. B. Marcy, and Geo. B. M'Clellan, in Arkansas.

By SPENCER F. BAIRD, and CHARLES GIRARD.

1. *POMOTIS BREVICEPS*, B. and G.—Body subelliptical, rather short; head very short, fore part convex and elevated; peduncle of tail of medium size. The greatest depth is more than half of the length, the caudal fin excluded. The origin of the dorsal fin is in advance of the opercular flap, and is composed of eleven spiny rays and ten soft ones. The origin of the anal is under the first soft ray of the dorsal, and contains nine soft and three spiny rays. The posterior extremities of these two fins extend a little beyond the middle of the peduncle of the tail. The caudal is slightly emarginated posteriorly, and its angles rounded; it is composed of seventeen fully developed rays and a few rudimentary ones. The ventrals inserted behind the base of pectorals, extend by their tips to the anus. The pectorals, composed of thirteen rays, do not reach quite so far.

D XI. 10. A III. 9. C 2. I. 8. 7. I. 2. V I 5. P 13.

The scales are large, higher than long, and disposed in twenty rows on the line of the greatest depth, and about eight rows on the peduncle of the tail. The lateral line is very conspicuous, from head to tail, and very much arched on the body.

The opercular flap is very large, broad and posteriorly rounded, and margined with whitish. Irregular light lines are observed on the cheeks and opercular apparatus. The color of the body appears to have been uniform reddish brown.

Otter Creek, Arkansas.

2. *POMOTIS LONGULUS*, B. and G.—Body rather elongated, subfusiform; the head conical and continuous with the body, save a little depression on the snout. The elongated appearance of this species is owing to the head and peduncle of the tail being longer than usual in this genus. The posterior tip of both dorsal and anal fins do not reach the base of the caudal. The origin of the dorsal is immediately above the membranous flap of the operculum; it is composed of ten spiny, or nine or ten soft rays. The anal is situated very far back, its anterior margin begins opposite to the fourth soft rays of the dorsal; it has eight soft rays and three spiny ones. The caudal is slightly emarginate posteriorly, and its angles rounded. It is composed of seventeen fully developed rays and a few rudimentary ones. The ventrals are placed under the pectorals; their tips when bent backwards do not reach the anus. The pectorals are subelliptical, and extend as far back posteriorly as the ventrals.

D X. 9 or 10. A III. 8. C 2. I. 8. 7 I. 1. V I 5. P 13.

The scales are of medium size, longer than high. Twenty seven rows may be counted across the line of greatest depth of the body, and about thirteen rows on the tail. The lateral line is regularly arched on the body, and almost straight on the tail.

Color uniformly dark brown, probably considerably altered by the alcohol. The membranous opercular flap is comparatively small and entirely black. Irregular lighter lines are observed on the cheeks and opercular apparatus.

Otter Creek, Arkansas.

3. *LEUCISCUS LUTRENSIS*, B. and G.—Body elongated, fusiform, compressed, largest specimen examined, two inches and three-eighths; head forming a little less than the fourth of the entire length. Eyes proportionally large. Anterior margin of the dorsal fin at an equal distance from the snout and base of caudal. Caudal forked. Anal fin entirely behind the dorsal. Insertion of ventrals in advance of the dorsal; their tip not reaching the anterior margin of the anal. Tip of pectorals almost contiguous to the base of the ventrals. Scales large. Lateral line forming a very open curve convex towards the abdomen, and nearer to it than to the back.

D I 8. A I 9. C 2. I. 9. 8. I 1. V 8. P 11.

Ground color bluish brown; back blue; dorsal fin yellowish brown; caudal, pectorals and ventrals, reddish.

Specimens of this species were caught in the Otter Creek, Arkansas.

4. *LEUCISCUS BUBALINUS*, B. and G.—Body very much compressed, back considerably arched, and peduncle of tail quite narrow. Head two-ninths of the total length, which is two inches and one-eighth. The dorsal and anal fins are very much developed, while the pectorals and ventrals are comparatively small. The caudal is forked. The base of ventrals is under or a little behind the anterior margin of the dorsal, and their tips reach the anterior margin of the anal. The tips of pectorals are contiguous to the base of ventrals.

D 8. A I 9. C 4. I. 9. 9. I. 3. V 8. P 11.

The scales are large and the lateral line forms a very open curve convex towards the abdomen and nearer to it than to the back. Differ from the preceding by the structure and position of the fins and scales.

Caught with the preceding in Otter Creek, Arkansas.

5. *CERATICHTHYS VIGILAX*, B. and G.—Body fusiform, compressed; specimens before us two inches long, probably immature. The head forms the fifth of the

length. The eyes are rather small. The dorsal fin is longer than high; its anterior margin situated almost at the same distance from the snout and the base of the caudal fin. Caudal fin forked. Anal back of the dorsal. Base of ventrals behind the anterior margin of the dorsal; tip not reaching the anal fin. Pectorals not reaching the base of ventrals. The pectorals, ventrals and anal are proportionally small compared to the dorsal.

D 9. A 8. C 3. I 8. 8. I 3. V 8. P 14.

Scales large; lateral line running through the middle of the sides, slightly bent downwards on the abdomen.

Back brownish yellow; a greenish grey stripe down each side covering the lateral line.

Caught in Otter creek, Arkansas.

On leave granted, Dr. Leidy made the following communication :

Dr. John Evans, who is now engaged under the United States government to survey part of Oregon, recently sent to the Academy for examination, ten boxes, containing a large quantity of mammalian and chelonian fossils, from the Mauvaises Terres of Nebraska. In this large collection, it is worthy of remark, there is not to be found a single fragment of a bird or a fish bone. Most of the animals indicated by the remains, have already been described in Dr. D. D. Owen's Geological Report, and in the "Ancient Fauna of Nebraska" of the author. The collection contains several new genera and species of mammalia, besides fragments of important parts not before obtained of those species described.

A very large proportion of the collection consists of remains of *Oreodon*, of which there are fragments of about two hundred individuals. The species *O. Culbertsonii* predominates, and then follows *O. gracilis*; while of *O. major* there are very few fragments. This enormous quantity of remains of *Oreodon*, would indicate that the animal was gregarious, and existed in immense herds like the recent Peccary or Bison.

Only a few small fragments of *Poebrotherium Wilsonii* and *Agriochoerus antiquus* are contained in the collection.

Of the two species of *Rhinoceros*, *R. occidentalis* and *R. Nebrascensis*, there are remains of numerous individuals.

Of *Entelodon Mortonii* the collection contains portions of several crania.

Of *Anchitherium Bairdii* there are four crania and numerous small fragments of others.

Of the huge *Titanotherium Proutii* there are numerous small fragments of bones and teeth; and also several entire superior molars, which have served to remove some of the obscurity in regard to the characters of the animal. From the last mentioned specimens it appears that those, which have been described as probably indicating a new species of *Palæotherium*, under the name *P. giganteum*, (Ancient Fauna of Nebraska, pl. XVII, figs. 11-13,) belong to *Titanotherium Proutii*, while several superior molars (lb. figs. 1-7), attributed to the latter, belong to a new genus associating characters of *Rhinoceros* and *Palæotherium*. For this genus and species, represented by figures 1-7, plate XVII, in the Ancient Fauna of Nebraska, I propose the name of *FOETHERIUM AMERICANUM*.

Of *Machairodus primaevus* there are preserved several crania and some other bones.

Of the new mammalia above referred to, there are four carnivora and one ruminant. The carnivora consist of three species of *Hyænodon* and a new genus. The ruminant is a new genus closely allied to the recent *Moschus*. These interesting animals I propose to name as follows :

1. *HYÆNODON HORRIDUS*, Leidy.—This is the largest of the three species above referred to. It is founded upon a much fractured skull and lower jaw; but on both sides of the specimen the teeth are preserved nearly perfect. The formula of the dentition is as follows :

$$\text{in. } \frac{3}{3} \text{ c. } \frac{1}{1} \text{ mol. } \frac{7}{7}$$