



Heterodon platirhinos.

HETERODON PLATIRHINOS.—*Latreille.*

Plate XVII.

CHARACTERS. Head short, flattened, triangular, turned up and pointed at the snout, a strong ridge on the rostral plate above; body greyish or yellowish-grey above, with large blotches or transverse bars or oblong spots of black; abdomen dirty-white. Pl. 144. Sc. 42.

SYNONYMES. *Heterodon platirhinos* 1802, *Coluber heterodon*, *Latreille*, Hist. Nat. Rept., tom. iv. p. 32, figs. 1, 2, 3.

Coluber heterodon, *Daudin*, ¹⁸⁰³ Hist. Nat. des Rept., tom. vii. p. 153, fig. of head, pl. lx. fig. 28.

Coluber heterodon, *Say*, Amer. Jour. Arts and Scien., vol. i. p. 261.

Coluber heterodon, *Harlan*, Med. and Phys. Res., p. 120.

Hog-nose Snake, *Vulgo.*

DESCRIPTION. The head is large, flat, triangular, broad behind, with the snout pointed and elongated at the tip; it is covered with scales on the posterior part, and with plates on the anterior and on the vertex. The vertical plate is regularly pentagonal, with its broadest part directed forwards; the superior orbital are quadrilateral, elongated, and broadest posteriorly, with their outer margins projecting over the eye, which gives a sinister look to the animal. The occipital plates are rhomboidal. The frontal are quadrilateral, with their anterior inferior angles very much prolonged; the anterior frontal are triangular, with their bases directed inwards, and their apices rounded and turned to the nostrils. Between the anterior frontal, to prevent them coming in contact with each other, is a narrow, elongated, azygous plate, reaching from the posterior frontal to the

rostral plate, with a ridge on its upper surface continuous with that of the rostral plate.

The rostral plate is triangular, with its basis below and the apex very pointed above, and recurved, with a strong carina or ridge on the upper surface. The nasal plates are two on each side; the anterior is irregularly quadrilateral, lunated on the posterior margin, with its anterior and inferior angle greatly prolonged; the posterior is narrow, and concave in front to complete the nostril. There are twelve orbital plates, the superior of which have been already described; besides these, there are three anterior orbital plates, which are quadrilateral, the largest being above; the inferior orbital are five and the posterior orbital three in number, all of which are quadrilateral. The upper jaw has eight labial plates, quadrilateral, and increasing in size to the sixth, which is largest.

The nostrils are very large, near the snout, and lateral. The eyes are large, the pupil dark, the iris light grey. The neck is the size of the head when the animal is quiet, but when roused or irritated it flattens it more than twice its ordinary breadth. The body is elongated, thick, rounded above, but flattened at the abdomen, covered with scales strongly carinated above, the three inferior lateral rows being ecarinate, and with plates below. The tail is long, narrow, and terminating in a point, with scales or bifid plates on its under surface.

COLOUR. The head above is dusky, with a light band between the orbits; behind the occiput is a dusky spot; a dark band begins at the back of each nostril, which increases in size as it descends, and forms a large blotch on the side of the neck. The body is iron-grey, or sometimes brownish-yellow, and marked with a triple series of black or dark grey spots—those of the vertebral series being sub-quadrangle and elongated transversely; the spots of the lateral rows are rounded, and many of them correspond with those of the vertebral line, while others alternate with them. Sometimes the spots of the lateral and vertebral lines are confluent, so as to give the appearance of bands.

DIMENSIONS. Length of head, 18 lines; breadth of head, when not disturbed, 1 inch; length of body, 27 inches; length of tail, 5 inches; circumference of body, $4\frac{1}{2}$ inches. In the individual here described, there were one hundred and forty-four abdominal plates entire, and two bifid plates near the vent, and forty-two pair of sub-caudal bifid plates.

HABITS. The *Heterodon platirhinos* is a harmless snake, choosing moist places and feeding on toads, small reptiles, and insects. Though a harmless, yet it is a bold animal when disturbed; it coils itself after the manner of the Rattlesnake, though not so closely, assumes a threatening attitude, by flattening the head and three or four inches of the neck, which it lifts and waves with an undulating motion, hissing loudly at the same time, and projects the head with a sudden motion, as if to bite any object presented.

It is remarkable, however, that I have never seen it bite or lay hold of any object offered it, in the many times that I have tried the experiment. It may be worried with the end of a walking-stick or cane, or pushed roughly from place to place, yet cannot be provoked to open its mouth, though it often advances its head with a threatening air towards the object of its annoyance.

At times it exhibits the instinct of some insects, and remains perfectly quiet and motionless, as if dead, to elude its tormentor; in this state it will remain several minutes. The first time this phenomenon came under my observation, I thought the animal had been unintentionally killed by rough handling; and it was only after witnessing the same thing in many instances that I came to the conclusion that it was done at will.

GEOGRAPHICAL DISTRIBUTION. The *Heterodon platirhinos* is found in all the Atlantic states from New Hampshire to Florida. I have also received specimens from Alabama and Louisiana, and it no doubt inhabits the western states generally, as Dr. Pickering informs me that it has been observed as far west as Engineer Cantonment on the Missouri. It is probable that the *Heterodon*

annulatus of Troost* is only a variety of this, for it is not uncommon to see individuals more or less annulated.

GENERAL REMARKS. There can be no doubt that this is the *Heterodon platirhinos* of Latreille, from his description, as well as from the geographical distribution he gives it. This species of *Heterodon* is found in New Jersey, where Palisot de Beauvais first observed it, and from which state the animal here described was also received.

It seems to me very clear that we have three species of *Heterodon* in the Atlantic states—*Heterodon platirhinos*, *Heterodon niger*, and *Heterodon simus*—which latter differs in several respects from the two former; as in size, in having the neck smaller, in colour and markings, in the form of the rostral plate, and in having the azygous plate between the anterior frontal plates surrounded with small scales; as well as in being confined to the southern and western states.

The animals of this genus have the power of flattening the head and body still more than in that of *Tropidonotus*; in which respect they approach the *Cobra de Capello* of India.†

* Ann. Lyc. N. Y., vol. iii. p. 188.

† See anatomical part of this work for an account of this structure.

ORDER IV. BATRACHIA. *Brogniart.*

The many and great differences that exist between this and the three preceding orders of reptiles, have led several excellent herpetologists of our day to arrange the animals it includes as a distinct class, named Amphibia; as they are in fact, at one time, animals that live in water, and respire by means of gills, like fishes, and at another they breathe atmospheric air with lungs, like mammalia.

CHARACTERS.

1. The body is depressed, round, or elongated, and with or without a tail; the skin is soft, naked, or without a shell, and most commonly without apparent scales, (cœcilia.)
2. The extremities vary in number and proportion, or are entirely wanting. The fingers and toes are destitute of nails, and are rarely provided with a horny sheath, (Datylethra.)
3. There is no neck distinct from the body, and the head is joined to the vertebra by two condyles.
4. There are in general three movable eyelids, and no visible external meatus of the ear, though the tympanum is often very distinct.
5. The sternum is distinct in most species, but is never joined to the ribs, which are either very short or entirely wanting.

6. The heart has a single ventricle, and apparently a single auricle, which is, however, subdivided into two chambers.

REMARKS. Although the order Reptilia embraced but few animals in the time of Linnæus, yet the numerous discoveries of recent herpetologists of new species, made it necessary to subdivide this order into three very natural families, from the great difference in their external forms, which is always attended with a corresponding internal organization.

These sub-orders were well named by Oppel—Apoda, Ecaudata, and Caudata.

Of the first, or Apoda, there are none in the United States.

SUB-ORDER II. ECAUDATA. *Oppel. Dumeril et Bibron.*

CHARACTERS.

1. There is no vestige of a tail.
 2. The head is large and flattened; the opening of the mouth extensive, often reaching behind the cranium.
 3. The upper jaw and palate bones are sometimes armed with teeth, which are always small, little developed, and are all nearly of the same size.
 4. The lower jaw is destitute of teeth.
 5. The tongue is fleshy, adherent in front, more or less movable at its posterior extremity, and sometimes exsertile.
 6. The body is short, thick, and covered either with a smooth or warty skin, which does not adhere to the muscles beneath, but envelopes them loosely, like a sack.
 7. The extremities are four in number and of unequal length; the anterior are smaller and rounded; the posterior are much larger, flattened, and often palmated.
 8. They are oviparous, and the eggs are commonly united in a glairy mass, or in
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mucilaginous chords, and when hatched they produce Tadpoles or animals unlike the parents.

9. Tadpoles have very large heads, confounded with a short, thick body, and have long compressed tails, and breathe with gills. They undergo a complete metamorphosis; the tail disappears and is succeeded by anterior and posterior extremities; the gills disappear, and their place is supplied by lungs, &c.; and these changes are always accompanied by alterations equally important in the internal organization of the animal. At first the Tadpole is aquatic and breathes with gills, like a fish; but after its metamorphosis it respires atmospheric air only, by means of lungs. As a Tadpole, it lives on vegetable matter, and its organization is in accordance; as a perfect animal it is carnivorous, its food being different; the alimentary canal is now shortened and otherwise altered in its arrangement, and it is wonderful to observe the ease with which nature changes an herbivorous to a carnivorous animal.

The Ecaudate batrachian animals have been arranged in two sections. 1. Those without a tongue (*Aglossæ*), of which none exist in our country; and 2. Those furnished with a tongue (*Phaneroylossæ*), which are very numerous, and may well be grouped in three families—*Ranoidea*, *Hyloidea*, and *Bufoidea*.

FAMILY I. RANOIDEA.

CHARACTERS.

I. There are always teeth in the upper jaw and palate, between the posterior nares; the latter are minute, and variously grouped.

II. The extremities of the fingers and toes are free, and never dilated into a disk.

III. The tympanum is always visible.

IV. The males are provided with vocal vesicles at the throat, communicating internally with the mouth, and in some they pass out of openings at the sides of the jaws when distended, but not in others.

REMARKS. This family embraces a great many genera, three only of which have as yet been observed as inhabitants of the United States—*Rana*, *Cystingnathus*, and *Scaphiopus*.



Holbrook, John Edwards. 1842. "Heterodon platirhinos – Latreille." *North American herpetology; or, A description of the reptiles inhabiting the United States* 4, 67–75. <https://doi.org/10.5962/p.326837>.

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