



*Helicops erythrogrammus.*

*Sera puzos*

*P.S. Duval, Lith. P. 182.*

## HELICOPS.—Wagler.

GENUS HELICOPS.—CHARACTERS. Head smaller than the neck, depressed; eyes superior; loral plate wanting; superior orbital plates not projecting; posterior orbital two; anterior single; mouth inferior, ascending at the angle; three or four posterior maxillary teeth largest; body robust, and covered above with smooth scales.

### HELICOPS ERYTHROGRAMMUS.—Daudin.

#### *Plate XXV.*

CHARACTERS. Head short, depressed, small, and not distinct from the neck; nostrils superior, and placed near the snout; eyes small, directed upwards; body stout; superior surface bluish-black, with three longitudinal red lines, and a row of bluish-black spots on each side of the abdomen; tail short, one-eighth of total length. Pl. 178. Sc. 39.

SYNONYMES. *Coluber erythrogrammus*, Daudin, Rept., vol. vii. p. 93, tab. 83, f. 2.

*Natrix erythrogrammus*, Merrem, Versuch eines Syst. der Amphib., p. 117.

*Helicops erythrogrammus*, Wagler, Natürlich. Syst. der Amphib., p. 170.

DESCRIPTION. The head is short and depressed, smaller than the neck; and the mouth is also small. The vertical plate is short and pentagonal, presenting an acute angle backwards; the superior orbital is narrow and almost a parallelogram in shape; the occipital plates are large, polygonal, and broadest before; the frontal plates are quadrilateral, large, with the inferior and posterior angle forming a small part of the orbit of the eye; there are two posterior orbital

plates, the upper one large, the lower very small; the anterior orbital plate is quadrilateral, narrow, and elongated; the nasal plates are two in number, small and trapezoidal; the nostril plates are also somewhat trapezoidal; the rostral plate is very broad and irregularly hexagonal, broadest below, and slightly concave. There are seven superior labial plates, increasing in size from before to the sixth; the fourth and fifth complete the inferior wall of the orbit.

The nostrils are small, superior, and placed near the snout, open outwards, backwards, and upwards. The eyes are very small, superior, and are placed near the snout; the pupil is black, and the iris greyish-red. The body is somewhat depressed, elongated and fusiform, tapering at the head and tail. The scales are all smooth and shining, broad, obtuse, and somewhat hexagonal on the back, and nearly uniform in size throughout, the inferior row being a little larger.

**COLOUR.** The head is dark blue; the marginal plates of both the upper and lower lip are of a bright lemon-colour, each with a dark blue spot in the centre; the throat is bright lemon-colour for about an inch and a half, when it becomes of a pale straw-colour. A vertebral line of red begins at the occiput and runs to the tail; on each side of this is another longer line of the same colour, reaching to the extremity of the tail; each of these lines is of the breadth of a single scale, and between them are broad bands of bluish-black, the breadth of three scales; beneath the inferior longitudinal red line is another band of bluish-black, including two scales and a half; and next is a third red band consisting also of two scales and a half; the margins of the scales being straw-colour, give a lighter appearance to the latter band. The plates of the abdomen are flesh-colour, with their posterior margin pale straw-colour, and on each are two large rounded spots of indigo-blue, forming a line of blue spots on each side of the abdomen; a third spot is sometimes present in the middle of the plates.

**DIMENSIONS.** Length of the head,  $\frac{9}{16}$  of an inch; breadth across the temples,  $\frac{3}{4}$  of an inch; circumference,  $3\frac{1}{2}$  inches; length of head and body, 38 inches; tail,  $5\frac{1}{2}$

inches: total length, 3 feet  $7\frac{1}{2}$  inches. I have seen one much larger. The specimen figured had 178 abdominal plates, and 39 sub-caudal bifid plates.

**GEOGRAPHICAL DISTRIBUTION.** This serpent is by no means uncommon in Carolina. I have often seen it near the banks of the Santee river. Dr. Ravenel has procured me specimens from the lower country, and Dr. Wurdeman, from Greenville, South Carolina.

**HABITS.** This animal is found in swampy grounds and damp places, in holes in the earth, or under the stumps of old trees, and passes much of its time under ground, whence it is frequently turned out in ploughing, but never takes to the water. It frequents the banks of rice fields, where it lies in wait for its prey, the large rat that infests them, injuring at once the rice and the banks by burrowing in the soil. Spite of this essential service, the universal prejudice against the serpent tribe causes its destruction from all hands.

**GENERAL REMARKS.** This beautiful serpent was first noticed by Palisot de Beauvois, who found it in the southern states, and communicated a specimen to Daudin, which he described as the *Coluber erythrogrammus*.

Schlegel supposes the *Coluber erythrogrammus* of Daudin is not identical with the animal now under consideration, but that it is the *Coluber bipunctatus*\* (*Tropidonotus sirtalis*) of Latreille, which to me is inconceivable. Daudin's account agrees with our serpent, even to the markings on the belly, in every particular, except in having three vertebral rows of carinated scales. This arrangement is not mentioned in his specific characters of the animal; and it is possible that he might have been deceived in the matter, as his description was drawn up from a dried skin, or it might have been the result of hasty observation, as no such structure exists in any one of our *Helicopes*. Besides, Daudin says that his *Coluber erythrogrammus* attains the length of five feet, and I have seen

\* *Phys. des Serp.*, tom. ii. p. 320.

one nearly six, while the *Tropidonotus bipunctatus* (*sirtalis*) never reaches four feet in length. The two animals also differ entirely in colour, and this is even uncommonly well marked in Daudin's plate. The one has the body dusky, with pale yellow longitudinal lines; the other is bluish-black, with longitudinal lines of red, so remarkable as to afford a specific character;\* an arrangement which never occurs in any serpent of this country, and as far as my observations have extended, never in any other.

Schlegel further believes that the *Helicops erythrogrammus* is a variety of the *Homalopsis* (*Helicops*) *plicatilis*, the result of climate, to which I can by no means consent, as they differ greatly in several particulars. The *Helicops plicatilis* is reddish-brown above, more or less shaded; the *Helicops erythrogrammus* is deep bluish-black, with three bright red longitudinal lines; the former has a single anterior frontal plate, the latter has two; the one inhabits South America, and the other is found only in the United States.

\* Serpent á raies rouges.



Holbrook, John Edwards. 1842. "Helicops erythrogrammus – Wagler." *North American herpetology; or, A description of the reptiles inhabiting the United States* 3, 107–110. <https://doi.org/10.5962/p.326816>.

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