



*Engystoma Carolinense.*

*Stone by L. H. H. H. H.*

*J. S. Duval, Lith. Phila.*

ENGYSTOMA.—*Fitzinger.*

GENUS ENGYSTOMA.—CHARACTERS. Head small, pointed; mouth minute; tongue elongated, elliptical, movable only at its posterior extremity; tympanum concealed; jaws and palate without teeth; males with a sub-gular vocal vesicle; body oval, covered with a smooth skin; no parotid glands; anterior extremities with four fingers, free; posterior short, with five toes, not palmated.

ENGYSTOMA CAROLINENSE.—*Holbrook.**Plate VI.*

CHARACTERS. Head small, short, pointed; body short, thick, nearly oval, covered with a delicate skin; chestnut above, and thickly mottled with blackish specks beneath.

SYNONYME. Engystoma Carolinense, *Dumeril et Bibron*, Hist. Nat. des Rept., tom. viii. p. 743.

DESCRIPTION. The general form of this animal approaches the oval; the skin is smooth; the head remarkably small and short, though large for the genus; its extent is marked by a delicate fold of the integuments behind the orbits; its shape is triangular, the snout being very pointed; the upper jaw is dark brown, the lower dark grey; the mouth is inferior and minute.

The nostrils are very small, lateral, and placed near the snout. The eyes are



exceedingly minute, and but slightly prominent; the pupil is black, the iris very dark grey.

The body is round, somewhat flattened in the living animal, and smooth; dark brown along the vertebral line, and chestnut on either side of it; the sides of the head and neck below the orbits, and the flanks, are greyish; the throat and abdomen lighter, all thickly sprinkled with blackish specks.

The anterior extremities are chestnut-brown above and yellowish-brown beneath; the fingers are five in number, short, and distinct. The posterior extremities are short and thick, chestnut-brown above, with a few dark spots; the toes are five in number, short, and not palmated.

**DIMENSIONS.** Length of body, 1 inch; of thighs,  $\frac{3}{8}$  of an inch; of leg,  $\frac{3}{8}$  of an inch; of tarsus and toes,  $\frac{5}{8}$  of an inch.

**GEOGRAPHICAL DISTRIBUTION.** Hitherto this animal has never been found north of Charleston; its range extending westward to the Lower Mississippi, where it has been observed by Lesueur.

**HABITS.** The *Engystoma Carolinense* passes most of its days in concealment, near old fences, or under the bark of fallen and decaying trees, emerging only towards evening and after heavy rains. They are frequently seen with myriads of the young of the *Bufo lentiginosus*, apparently washed from their places of concealment by summer showers, which has led many to suppose that they descended with the rain. It makes a feeble chirp at night, and at times when captured; and being but a clumsy swimmer, if thrown into water it repeats this chirp frequently in its endeavours to escape.

**GENERAL REMARKS.** This is the only species hitherto observed in the United States, and must not be confounded with those of South America. The *Engystoma ovale* is nearly twice the size of our animal, is uniformly dusky on the back, and



has a white line along the posterior surface of the thigh, and a white spot at the axilla. Besides this our species differs in the comparatively greater size of the head and mouth, as well as in the markings.

It is possible that Bosc\* referred to this animal when he says he observed in Carolina a "crapaud bossu, ou une grenouille" living under the bark of dead trees, though he describes its skin as so excessively delicate as to prevent his preserving it alive even for a short time, in order to make a drawing of it. Now, though the skin of our animal is smooth and delicate, I have kept them alive for several months, and even sent them from Charleston to Philadelphia, where they not only arrived in safety, but lived a considerable time after.

Dumeril and Bibron describe an *Engystoma rugosa*† as inhabiting the United States, and suppose that I have confounded it with the *Engystoma Carolinense*. Now I never saw their *Engystoma rugosa*, and if I had, should never have mistaken it for the *Engystoma Carolinense*, which has a smooth skin. The only ecaudate batrachian animal, with which I am acquainted, resembling an *Engystoma* in form and size, is the *Bufo quercicus*; but this is a true toad, with parotid glands, warty skin, &c.; whereas all the genus *Engystoma*, as I receive it, have smooth skins and no parotid glands.

Their *Engystoma rugosa* is probably a Mexican animal, as they say it came from "des parties meridionales de l'Amerique du Nord."

\* Nouv. Dict. d'Hist. Nat., tom. vi. p. 489.

† Hist. Nat. des Rept., tom. viii. p. 744.





## FAMILY II. CAUDATA.

## CHARACTERS.

1. The presence of a tail, at all periods of their existence, readily distinguishes the animals of this family from those of the last, though it varies in length and in form.
2. The body is elongated, round, and covered with a skin adherent to the muscles beneath.
3. The extremities vary in number; there may be four, (Salamandra,) or two, (Siren.)
4. The tongue varies in shape, size, and mode of attachment.
5. The tympanum is not visible.

REMARKS. Fitzinger makes a very natural subdivision of this family into two tribes.

*Mutabilia*, or such as undergo a metamorphosis, as Salamanders; and

*Immutabilia*, or such as are hatched with the forms they are permanently to retain, like the Siren.

**TRIBE I. MUTABILIA.****CHARACTERS.**

The animals of this tribe undergo a complete metamorphosis; the young breathe only in water, and with gills, like fish; but in their adult state, respiration is performed with lungs.

The tribe Mutabilia includes two genera, Salamandra and Triton, distinguished by their mode of existence, whether terrestrial or aquatic, and each with its peculiar and appropriate organization.



Holbrook, John Edwards. 1842. "Engystoma carolinense – Holbrook." *North American herpetology; or, A description of the reptiles inhabiting the United States* 5, 23–28. <https://doi.org/10.5962/p.326863>.

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