



Rana pipiens.

Sera pipiens?

P. S. Duval Lith. Philad.

R A N A.—*Linnæus. Dumeril et Bibron.*

Genus RANA.—CHARACTERS. Tongue large, fleshy, oblong, slightly contracted before, notched behind, where it is alone movable; maxillary and palatine teeth minute, the latter placed between the posterior nares; tympanum distinct; male with two vocal vesicles either external or internal; fingers and toes sub-round, the former free, the latter palmated.

RANA PIPIENS.—*Latreille.**Plate XVIII.*

CHARACTERS. Head large, green above, yellowish-white below; body large, green in front, dusky olive behind, with irregular black blotches; abdomen yellowish-white, sometimes with dusky marks; extremities dusky, with black bars.

SYNONYMES. Bull-frog, *Catesby*, Carolina, &c., vol. ii. p. 72, pl. lxxii.

Bull-frog, *Kalm*, Travels, &c., Forster's translation, vol. ii. p. 175.

Rana pipiens, *Latreille*, Hist. Nat. Rept., tom. ii. p. 153.

Rana Catesbeiana, *Shaw*, Gen. Zool., vol. iii. p. 106, pl. xxxiii.

Rana mugiens, *Merrem*, Versuch eines Syst. der Amphib., p. 175.

Rana pipiens, *Cuvier*, Reg. An., tom. ii. p. 106.

Rana pipiens, *Harlan*, Med. and Phys. Res., p. 101.

Rana scapularis, *Harlan*, loc. cit., p. 103.

Rana mugiens, *Dumeril et Bibron*, Hist. Nat. des Rept., tom. viii. p. 370.

Bull-frog, *Vulgo*.

DESCRIPTION. The head is very large, broader than it is long, olive above, with the snout green and rounded in front; the upper jaw is green, the lower white, with dusky marks; the throat is clouded yellow. The mouth is very large, and the interval between the palatine teeth is consequently large. The nostrils are lateral and nearer the snout than the orbit. The eyes are very large and prominent, the pupil black, the iris of a beautiful golden, reticulated with black. The vocal vesicles are internal, and the orifice by which the air enters them is under the Eustachian tube. The tympanum is large, finely bronzed, with a small yellow spot in the centre. The body is large and thick, smooth above, green in front, dusky, with only a greenish tinge behind, and marked with irregular blotches of dark brown. The thorax and abdomen are smooth, yellowish-white, and often clouded with dusky.

The anterior extremities are short, thick, dusky above, with a tinge of green, and marked with a dark brown oblong spot at the shoulder, and a similar one at the elbow; their lower surface is yellowish-white; the fingers are four in number, short, very stout, and not palmated. The posterior extremities are exceedingly long and large, dark green above, with numerous dusky brown oblong spots, or transverse bars, as far as the external toe. The under surface of the thigh is yellowish-white, the posterior part granulated; the nates are yellowish-white, mottled with black; the under surface of the leg is silver-white; there are five long, but stout, fully palmated toes; these, as well as the fingers, increase in size a little at their tips.

DIMENSIONS. This is the largest of our frogs, reaching even to the length of 21 inches. Dimensions of the individual from which the accompanying figure was taken:—Length of body, 5 inches; of thigh, 2 inches 3 lines; of leg, 2 inches 4 lines; of tarsus and toes, 3 inches 5 lines: total, 13 inches.

HABITS. Bull-frogs are found about stagnant ponds or sluggish rivers, and in general are solitary in their habits, only collecting together in the breeding season, at which time hundreds may be seen in some small pond, and then the croak

uttered by the males is so loud as to resemble the distant roaring of a bull, and can be heard on still evenings at the distance of half a mile. During the day they are generally quiet, and only begin their noise at the approach of twilight, or in dark cloudy weather.

They cannot be said to abound, but are found commonly enough sitting half immersed in water, or on the banks of ponds, waiting for their prey. If alarmed, they leap suddenly into the water, like the *Rana fontinalis* and *Rana halecina*; but, unlike them, they do not conceal themselves at once, but frequently skim along the surface for several yards before they dive below it.

They are the most aquatic of all our frogs; indeed, I have known them to live in wells for years, where they could not rest a moment on solid ground above the water, consequently they are among the best swimmers of the tribe; and for this their organization is perfect—the thighs and legs are very strong and muscular, and the broad palmated foot makes an excellent paddle.

They are also exceedingly active on land, and leap to a great distance; Kalm gives an amusing story of one that beat a swift running Indian at a "foot race." They feed on various insects, and the smaller animals that live about water, as a species of crawfish, (*Astacus Blandingii*), two of which I have found at a time in the stomach of a large Bull-frog; and Dr. Storer informs me that he has often found their stomachs filled with snails, (*Helix albolabris*.) Like all other frogs, they only seize their prey when it is alive or in motion; they even take the hook readily, springing upon the bait with great avidity, when it is moved gently before them.

GEOGRAPHICAL DISTRIBUTION. This animal is found in almost every part of the United States; Kalm even met with it as far north as Quebec, in latitude 47°. I have seen it in all the Atlantic states, and have received specimens from the more southern states; and there is no doubt of its being in the great valley of the west, as Say observed it in Ohio.

GENERAL REMARKS. In no one of our frogs is there more difficulty in ascertaining its original specific name. Clayton, in the Philosophical Transactions* for 1694, simply mentions it as a large frog, "bigger than any in England, which makes a noise something like the bellowing of a bull."

Catesby, whose description is very correct, calls it the Bull-frog, under which name it is now universally known, and says, "the noise they make has caused their name, for at a few yards distance their bellowing sounds very much like that of a bull a quarter of a mile off."

Kalm, though he calls it by the same name, began the confusion by referring it to the *Rana ocellata* of Linnæus, from which it is perfectly distinct; for this *Rana ocellata* first appears in the tenth edition of the *Systema Naturæ*, and is easily identified, as Linnæus gives but a single reference, Brown's History of Jamaica; and in his description he says, "*plantæ pentadactylæ sub-palmatæ*," which certainly cannot apply to the Bull-frog. Kalm, however, insisting on the identity of the *Rana ocellata* and Bull-frog, perhaps led Linnæus, in the twelfth edition of the *Systema Naturæ*, to give two other references for the animal, the *Rana halecina* of Kalm, and the *Rana maxima*, &c. of Catesby, and never were three frogs more distinct.

Gmelin, in his edition of the *Systema Naturæ*, copies the errors of Linnæus, and adds another reference to Seba, whose animal is not even the real *ocellata*, which is found on the seventy-fifth, and not on the seventy-sixth plate, as he supposes.

The specific name, *pipiens*, was not applied by Linnæus to any Frog, but was first used by Gmelin, so far as I know, and given to a very different animal, the Water-frog of Catesby, the common Shad-frog, which had previously been

* Vol. xviii. p. 125.

called *Rana halecina*; and this leaves the name *pipiens* unapplied, at least so far as Gmelin is concerned.

It is next used by Schneider in his "*Historia Amphibiorum*;" his whole description, however, refers to the *halecina* of Kalm, or the Water-frog of Catesby.

Latreille was the first who used the specific name *pipiens* without synonymes, or reference to any author, stating only that the animal was called, in Carolina, the Bull-frog; his description is correct, and applicable to the Bull-frog in every particular but one: he speaks of a light-coloured vertebral line, which I have never seen in any individual of this species.

Latreille separates it from the *Rana ocellata*, which he describes as a distinct animal, and says, furthermore, that his *Rana pipiens* must not be mistaken for that of Schneider (Gmelin), which we have seen is the *Rana halecina* of Kalm; consequently then to Latreille is due the merit of first definitely applying the specific name *pipiens* to our Bull-frog.

It is singular that Daudin should not have followed his example, but far from it; he, under his *Rana pipiens*, gives three animals entirely distinct from each other, and his plate makes a fourth, for it represents an Indian animal, and not the American Bull-frog.

N. B. Though Gmelin quotes Schneider, he does not quote the name he gives the animal.



Holbrook, John Edwards. 1842. "Rana pipiens – Latreille." *North American herpetology; or, A description of the reptiles inhabiting the United States* 4, 77–81.
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