Drawn on Stone by R Trembly.

Black Rat.

Old & Young.

Drawn from Nature by J.J. Audubon, F.R.S., F.L.S.

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GENUS MUS.—LINN.

$$\text{Incisive } \frac{2}{2}; \text{ Canine } \frac{0-0}{0-0}; \text{ Molar } \frac{3-3}{3-3} = 16.$$

Cheek-teeth, furnished with tubercles; ears, oblong or round, nearly naked; without cheek-pouches; fore-feet, with four toes, and a wart covered with an obtuse nail in place of a thumb; hind-feet, pendac tylous; tail, long, usually naked and scaly; fur, with a few long, scattered hairs, extending beyond the rest.

The generic name *Mus* is derived from the Latin *mus*, a mouse, from the Greek *μῦς*, (*mus*), a mouse.

There are upwards of two hundred species of this genus described as existing in various quarters of the globe, of which about nine well-determined species are found in North America, three of which have been introduced.

MUS RATTUS.—LINN.

BLACK RAT.

PLATE XXIII.—OLD AND YOUNG, OF VARIOUS COLOURS.

M. cauda corpore longiore; pedibus anterioribus ungue pro pollice instructis; corpore atro, subtus cinereo.

CHARACTERS.

Tail, longer than the body; fore-feet, with a claw in place of a thumb, bluish-black above, dark ash-coloured beneath.

SYNONYMES.

MUS RATTUS, Linn., 12th ed., p. 83.

“ “ Schreber, *Säugethiere*, p. 647.

“ “ Desmar., in *Nouv. Dict.*, 29, p. 48.

RAT, Buffon, *Hist. Nat.*, vol. vii., p. 278, t. 36.

RAT ORDINAIRE, Cuv., *Règne Anim.*, p. 197.

BLACK RAT, Penn., *Arc. Zool.*, vol. i., p. 129.

ROLLER PONTOPP., *Dan. i.*, p. 611.

MUS RATTUS, Griffith's Animal Kingdom, vol. v., 578, 5.

" " Harlan, p. 148.

" " Godman, vol. ii., p. 83.

" " Richardson, p. 140.

" " Emmons, Report on Quadrupeds of Massachusetts, p. 63.

" " Dekay, Natural History of New-York, vol. i., p. 80.

DESCRIPTION.

Head, long; nose, sharp pointed; lower jaw, short; ears, large, oval, broad and naked. Whiskers, reaching beyond the ear.

Body, smaller and more delicately formed than that of the brown rat; thickly clothed with rigid, smooth, adpressed hairs.

Fore-feet, with four toes, and a claw in place of a thumb. Feet, plantigrade, covered on the outer surface with short hairs. Tail, scaly, slightly and very imperfectly clothed with short coarse hairs. The tail becomes square when dried, but in its natural state is nearly round. Mammæ, 12.

COLOUR.

Whiskers, head, and all the upper surface, deep bluish-black; a few white hairs interspersed along the back, giving it in some lights a shade of cinereous; on the under surface it is a shade lighter, usually cinereous. Tail, dusky; a few light-coloured hairs reaching beyond the toes, and covering the nails.

DIMENSIONS.

Length of head and body	-	-	-	-	-	-	-	8 inches.
" tail	-	-	-	-	-	-	-	8 $\frac{1}{4}$ do.

HABITS.

The character of this species is so notoriously bad, that were we to write a volume in its defence we would fail to remove those prejudices which are every where entertained against this thieving cosmopolite. Possessing scarcely one redeeming quality, it has by its mischievous propensities caused the world to unite in a wish for its extermination.

The Black Rat is omnivorous, nothing seeming to come amiss to its voracious jaws—flesh, fowl or fish, and grain, fruit, nuts, vegetables, &c., whether raw or cooked, being indiscriminately devoured by it. It is very fond of plants that contain much saccharine or oleaginous matter.

The favourite abodes of this species are barns or granaries, holes under out-houses or cellars, and such like places; but it does not confine itself to any particular locality. We have seen its burrows under cellars used

for keeping the winter's supply of sweet potatoes in Carolina, in dykes surrounding rice-fields sometimes more than a mile from any dwelling, and it makes a home in clefts of the rocks on parts of the Alleghany mountains, where it is very abundant.

In the neighbourhood of the small streams which are the sources of the Edisto river, we found a light-coloured variety, in far greater numbers than the Black, and we have given three figures of them in our Plate. They were sent to us alive, having been caught in the woods, not far from a mill-pond. We have also observed the same variety in Charleston, and received specimens from Major LECONTE, who obtained them in Georgia.

During the summer season, and in the autumn, many of these rats, as well as the common or Norway rat, (*Mus decumanus*), and the common mouse, (*Mus musculus*), leave their hiding places near or in the farmer's barns or hen-houses, and retire to the woods and fields, to feed on various wild grasses, seeds, and plants. We have observed Norway rats burrowing in banks and on the borders of fields, far from any inhabited building; but when the winter season approaches they again resort to their former haunts, and possibly invite an additional party to join them. The Black Rat, however, lives in certain parts of the country permanently in localities where there are no human habitations, keeping in crevices and fissures in the rocks, under stones, or in hollow logs.

This species is by no means so great a pest, or so destructive, as the brown or Norway rat, which has in many parts of the country either driven off or exterminated it. The Black Rat, in consequence, has become quite rare, not only in America but in Europe.

Like the Norway rat this species is fond of eggs, young chickens, ducks, &c., although its exploits in the poultry house are surpassed by the audacity and voraciousness of the other.

We have occasionally observed barns and hen-houses that were infested by the Black Rat, in which the eggs or young chickens remained unmolested for months together; when, however, the Rats once had a taste of these delicacies, they became as destructive as usual, and nothing could save the eggs or young fowls but making the buildings rat-proof, or killing the plunderers.

The following information respecting this species has been politely communicated to us by S. W. ROBERTS, Esq., civil engineer:—

"In April, 1831, when leading the exploring party which located the portage railroad over the Alleghany mountains, in Pennsylvania, I found a multitude of these animals living in the crevices of the silicious limestone rocks on the Upper Conemaugh river, in Cambria county, where the large viaduct over that stream now stands. The county was then a wilder-

ness, and as soon as buildings were put up the rats deserted the rocks, and established themselves in the shanties, to our great annoyance; so that one of my assistants amused himself shooting at them as he lay in bed early in the morning. They ate all our shoes, whip-lashes, &c., &c., and we never got rid of them until we left the place."

We presume that in this locality there is some favourite food, the seeds of wild plants and grasses, as well as insects, lizards, (*Salamandra*,) &c., on which these Rats generally feed. We are induced to believe that their range on the Alleghanies is somewhat limited, as we have on various botanical excursions explored these mountains at different points to an extent of seven hundred miles, and although we saw them in the houses of the settlers, we never observed any locality where they existed permanently in the woods, as they did according to the above account.

The habits of this species do not differ very widely from those of the brown or Norway rat. When it obtains possession of premises that remain unoccupied for a few years, it becomes a nuisance by its rapid multiplication and its voracious habits. We many years ago spent a few days with a Carolina planter, who had not resided at his country seat for nearly a year. On our arrival, we found the house infested by several hundreds of this species; they kept up a constant squeaking during the whole night, and the smell from their urine was exceedingly offensive.

The Black Rat, although capable of swimming, seems less fond of frequenting the water than the brown rat. It is a more lively, and we think a more active, species than the other; it runs with rapidity, and makes longer leaps; when attacked, it shrieks and defends itself with its teeth, but we consider it more helpless and less courageous than the brown or Norway rat.

It is generally believed that the Black Rat has to a considerable extent been supplanted both in Europe and America by the Norway rat, which it is asserted kills or devours it. We possess no positive facts to prove that this is the case, but it is very probably true.

We have occasionally found both species existing on the same premises, and have caught them on successive nights in the same traps; but we have invariably found that where the Norway rat exists in any considerable numbers the present species does not long remain. The Norway rat is not only a gross feeder, but is bold and successful in its attacks on other animals and birds. We have known it to destroy the domesticated rabbit by dozens; we have seen it dragging a living frog from the banks of a pond; we were once witnesses to its devouring the young of its own species, and we see no reason why it should not pursue the Black

Rat to the extremity of its burrow, and there seize and devour it. Be this as it may, the latter is diminishing in number in proportion to the multiplication of the other species, and as they are equally prolific and equally cunning, we cannot account for its decrease on any other supposition than that it becomes the prey of the more powerful and more voracious Norway rat.

The Black Rat brings forth young four or five times in a year; we have seen from six to nine young in a nest, which was large and composed of leaves, hay, decayed grasses, loose cotton, and rags of various kinds, picked up in the vicinity.

GEOGRAPHICAL DISTRIBUTION.

This species is constantly carried about in ships, and is found, although very sparingly, in all our maritime cities. We have met with it occasionally in nearly all the States of the Union. On some plantations in Carolina, particularly in the upper country, it is the only species, and is very abundant. We have, however, observed that in some places where it was very common a few years ago, it has altogether disappeared, and has been succeeded by the Norway rat. The Black Rat has been transported to every part of the world where men carry on commerce by means of ships, as just mentioned.

GENERAL REMARKS.

PENNANT, KALM, LINNÆUS, PALLAS, DESMAREST, and other European writers, seem disposed to consider America the Fatherland of this pest of the civilized world. HARLAN adopted the same opinion, but BARTRAM, (if he was not misunderstood by KALM,) did more than any other to perpetuate the error.

In the course of a mutual interchange of commodities, the inhabitants of the Eastern and Western Continents have presented each other with several unpleasant additions to their respective productions, especially among the insect tribe.

We are willing to admit that the Hessian fly was not brought to America in straw from Hanover, as we sought in vain for the insect in Germany; but we contend that the Black Rat and the Norway rat, which are in the aggregate greater nuisances, perhaps, than any other animals now found in our country, were brought to America from the old world. There are strong evidences of the existence of the Black Rat in Persia, long before the discovery of America, and we have no proof that it was known in this country till many years after its colonization. It is true,

there were rats in our country which by the common people might have been regarded as similar to those of Europe, but these have now been proved to be of very different species. Besides, if the species existed in the East from time immemorial, is it not more probable that it should have been carried to Europe, and from thence to America, than that it should have been originally indigenous to both continents? As an evidence of the facility with which rats are transported from one country to another, we will relate the following occurrence: A vessel had arrived in Charleston from some English port, we believe Liverpool. She was freighted with a choice cargo of the finest breeds of horses, horned cattle, sheep, &c., imported by several planters of Carolina. A few pheasants (*Phasianus colchicus*) were also left on board, and we were informed that several of the latter had been killed by a singular looking set of rats that had become numerous on board of the ship. One of them was caught and presented to us, and proved to be the Black Rat. Months after the ship had left, we saw several of this species at the wharf where the vessel had discharged her cargo, proving that after a long sea voyage they had given the preference to terra firma, and like many other sailors, at the clearing out of the ship had preferred remaining on shore.

We have seen several descriptions of rats that we think will eventually be referred to some of the varieties of this species. The *Mus Americanus* of GMELIN, *Mus nigricans* of RAFINESQUE, and several others, do not even appear to be varieties; and we have little doubt that our light-coloured variety, if it has not already a name, will soon be described by some naturalist who will consider it *new*. To prevent any one from taking this unnecessary trouble, we subjoin a short description of this variety, as observed in Carolina and Georgia.

Whole upper surface, grayish-brown, tinged with yellow; light ash beneath; bearing so strong a resemblance to the Norway rat, that without a close examination it might be mistaken for it.

In shape, size, and character of the pelage, it does not differ from the ordinary black specimens.

Audubon, John James and Bachman, John. 1851. "Mus Rattus, Black Rat [Pl. XXIII, old and young of various colours]." *The quadrupeds of North America* 1, 189–194. <https://doi.org/10.5962/p.322496>.

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