

TRANSACTIONS

OF THE

Nova-Scotian Institute of Natural Science.

ART. I. ON THE MAMMALIA OF NOVA SCOTIA. BY J.
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No. III.

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IN the two former papers I had the honour to read on the mammalia of this Province, I enumerated and described the several families of bats and shrews,—the two very marked representatives of the cat family—our lynxes; and the wolf and fox, with their varieties, representing the dog family. With the exception of the southern family of bats, feebly represented, we found our shrews, our lynxes, and our foxes, numerous and vigorous, beautiful in colour and strong to resist our Arctic winters.

The paper this evening will be upon the representatives of the weasel family in our Province, a true boreal fauna, and numerous, beautiful and vigorous. We find them contained in two genera and seven species. Formerly the genus *Mustela* contained the whole. But whilst all have common habits, long vermicular bodies, and lustrous fur, two species have thirty-eight teeth, four more than the rest, have bushy tails, and longer fur, attain to a larger size, and are arboreal in habits. Whilst the others have thirty-four teeth, slender tails, shorter fur, and attain a less size.

MUSTELA,—or *Tree-Martins*.

MUSTELA PENNANTI,—*Fisher*.

MUSTELA AMERICANA,—*Martin*.

PUTORIUS,—*Weasels.*

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| PUTORIUS VISON, | } <i>Mink.</i> |
| PUTORIUS NIGRESCENS, | |
| PUTORIUS CICOGNANII, | } <i>Ermine Weasels.</i> |
| PUTORIUS RICHARDSONII, | |
| PUTORIUS NOVEBORACENSIS, | |

MUSTELA.

MUSTELA PENNANTI.—(*Erxleben*) *Fisher.*

Of two skins examined by me at Halifax, 1863, the following is the description:—They were both in the finest condition of winter pelage. End of nose black, face brown, but grizzled with short white hair, ears with short rim of cream coloured hair. General colour of back, shoulders, flanks, light brown, with an indistinct brindling of black about the neck, which runs into a dorsal line and ends at tip of tail. These black shining dorsal hairs are longer than the brown ones, and terminate in a beautiful pencil of hair at the point of the tail. Colour beneath very much lighter than above,—a broad medial line, and all the legs black, toes well covered, nails conspicuous and white, a large white spot in one, a few white hairs in the other on the lower belly and vent.

These skins presented the unusual appearance of an animal very much darker below than above, and were terminated by a bushy, well pointed and handsome tail. Length of the larger skin 48 inches, length of tail 17 inches. A mounted specimen belonging to the late Joseph Robinson, Esq., Halifax, measured from tip of nose to tip of tail 42½ inches, and tail 19 inches; the head and forehead rounded, nose sharp, ear round and close, with a light border, legs robust and well furred, claws white, the thighs muscular, and with the tail covered by much longer hairs than the upper portions of the body. I have examined many hundred skins but never have seen the animal alive.

This, the largest weasel in the world, requires a thick cover for its protection. It lives continually in trees, where it pursues its prey, sometimes squirrels; at other times it is seen hunting the martin. It feeds upon small birds and their eggs. Descending to the ground it hunts mice and weasels, surprises the ruffed grouse or alpine hare, and will not disdain frogs or dead fish cast upon the lake shores. It is accused of stealing the hunter's bait; and it is the only animal that attacks with impunity and devours the porcupine. Writers say it throws it over and bites it upon the belly. Mr. Andrew Downs informs me, that in skinning them, he often finds porcupine quills in their stomachs. Though timid and always evading pursuit, when brought to bay it fights desperately, and is a match for several dogs. That very accurate observer, Hearne, says they are

easily tamed, and show marks of great affection; whilst Audubon says of those kept by him, they were surly and morose, feeding greedily and skulking away in their cages. It brings forth three or four young at a birth, for which it constructs a nest in the hollow of a tree. Never very plenty, they are rapidly becoming extinct in our Province; from a hundred and fifty to two hundred are the very utmost now taken yearly; these chiefly come from the high wild region of the Cobequid hills in Cumberland. Dr. Richardson gives to this weasel the specific name of "*Canadensis*," quoting Schreber, whilst Dr. Baird (Smithsonian Institute) gives "*Pennanti*," from Erxleben, Schreber, dating 1778, Erxleben, 1777, and the doubt is further increased by Schreber's great work having been many years in publishing—the title page being published previously to much of the text. One is pleased that the doubt is thrown in favour of the great Welch naturalist, whose name is thus justly retained for this large and magnificent arboreal weasel.

MUSTELA AMERICANA.—(*Turton*,) *American Martin*.

Of seven hunters' skins obtained from Mr. Thomas, fur merchant, Halifax, the following is a description:—No. 1 and 2 are dark mahogany brown, almost black, from the nose to the tail, the brown showing a little more on the sides, the tails are black at the root, a brown ring about the middle, then black at the tip. The faces of both are black, the ears dusky inside and out, but with a conspicuous white rim of very fine hair; beneath, the chins of each are blackish brown, a broad orange spot mixed in with black hairs, upon the throat, runs down between the fore legs; all the legs brownish black, and the belly and flanks, similar to, but rather brighter than back. The hair is coarse and shining, and very long at tip of tail.

No. 3 may be classed with No 1 and 2, but with less black on the back, but face pale greyish, orange spot on throat, much less vivid.

No. 4, 5, 6, 7. The same as regards size of ears, tail and legs, but the black on the back has faded into a dusky streak, the faces light ash with a brown wash, and a rich orange wash pervading the whole skin. The orange spot beneath the throat, very bright, almost fulvous, and running into the belly and lower side of the tail.

In another, the tail was bright brownish yellow, with black tip.

Thus we find two dark brown with dark faces, and five with more or less grey faces. The tail, legs, and rim of ears, coinciding in all. The orange throat accompanying the pale faces. I have never seen the animal in life, but from a mounted specimen belonging to Mr. C. Kaizer, Halifax, we have a high rounded back, triangular head, and very robust and well-covered limbs and tail. Entire length to tip of tail $24\frac{3}{8}$ ins. length of tail 8 inches.

When we begin to study this species, we soon find a very great variety in colour, not only between summer and winter specimens, but between winter skins themselves, that are all in the highest condition. Whilst they all coincide in what may be called typical marks, such as colour of legs, tail, and especially ears, all of which have a very pale but conspicuous rim or border, they vary much in colour of face, some having black, others faces so pale as to be nearly white, and the pale faces have a lighter brown colour, and the orange throat much more vivid. These marks are important, as they point to a very intimate connection, if not identity, with the true Russian sable, which has a pale face. Till within a few years, it has been confounded with the pine martin of Europe, (*M. Martes*.) DeKay, Audubon, and even Sir John Richardson, describe it as such. Turton is the first, in his edition of Linnæus, to show its specific differences, and to give it the specific *Americanus*. Subsequently Dr. Brant, a Russian naturalist, in a monograph of the genus *Mustela*, calls it *Americanus*, shews its specific differences, but considers it identical in its white faced variety, with *M. Zibellina*, the Russian sable. In figure this animal resembles its congener, the fisher, though smaller—it has the same round ear, with a light border, round head, nose not so pointed, an arched back, and comparatively long and very muscular thighs and legs. The figure is set off by a handsome bushy tail, and glittering eyes. In its habits it is a true tree weasel, keeping in the densest pine forests, its food is small birds and their eggs, the smaller mammals, shrews, and wood-mice, squirrels and hares. It also preys upon frogs, lizards, and beetles, takes bait from the hunter's trap, and according to some writers, feeds also upon berries. It shows great cunning and boldness in defending itself, or attacking its prey, and has been seen winding a hare with tail erect, and nose to ground, like a small hound. It never approaches the open, but keeps to the thick pine cover, where it makes its nest within a hollow tree, beneath a rock, or even in an underground cave. It has six or eight at a litter. About one thousand skins from Nova Scotia are annually exported. Those from Newfoundland and Labrador

are much finer, darker in colour, and more lustrous in pelage than our own. They have pale faces.

We come now to the *Putorii* or true weasels. These, as before stated, have thirty-four teeth, have longer bodies, shorter legs and fur, thinner tails, and never take to trees. They are represented with us by two species of mink, and three species of ermine weasels.

PUTORIUS.

PUTORIUS VISON,—(*Richardson*,) *Mink*.

PUTORIUS NIGRESCENS,—(*Audubon*,) *Little Black Mink*.

Following Audubon and Baird, I have made two species of mink, founded rather in a very marked difference in size, than in any thing else, as they both coincide in general and typical marks and habits. I have never had a specimen in the flesh to examine, but the following description of skins taken from the Halifax market, will show their relative size:—

The largest mink skins measure from the tip of the fore-finger (the arm being extended) to the ear of a man; the smaller to the bend of the arm. The hunters readily allow two kinds.

The largest measured was total length to tip of tail $32\frac{1}{2}$ inches, tail $9\frac{1}{2}$ inches; the smallest measured 23 inches total, tail $6\frac{1}{2}$ inches. These skins may be somewhat stretched, the tails contracted. The colour varies from nearly fawn to brown, brownish black, black, and finally, when in the highest condition of winter pelage, to an indescribable shining bluish black, with a glorious lustre. The lower parts are lighter than the back. The tip of chin is often white, the throat and between the fore-legs always white, with frequently a white line down the belly. I have seen two or three specimens with white tips to the tail, the smaller species is usually the darker. The feet are half webbed, very large, and have the soles naked. The head is round and truncated, the eyes very near the nose, ear round and short, back high, and hairy tail. The hair much finer and shorter than the martins.

These two species are common in the Province, and by no means decrease in numbers. Unlike the martins, their habits are familiar, and they approach out-houses and farm-yards, where they make great havoc among the poultry. They are good swimmers, and have been seen diving after trout. Their food is birds and their eggs, mice or shrews; but he is preeminently the fisherman of his family, and frequents the rocky brooks and the sea side. Along the borders of the forest lake, his tracks, and the pile of clam shells attest his industry. Many an unlucky

frog is picked off in his hurried journeys from lake to lake, by this bright eyed fisherman.

This fur once valueless has steadily increased in price, till last winter not seldom five dollars was paid for a single skin. Our Indians trap but very little now. The idle boys about the villages take many. The farmer indignant at his slaughtered fowl yard, adds a few more skins. In every land and every village, there is a social gypsey who loves sport and hates work; who fishes, and fowls, and traps, eats his own trout, or poached salmon or moose meat, taken out of season, and exchanges his little pile of fur for tea and tobacco at the country store. Many come from this source. Thus a gathering pile collects and dangles at the country store. The owner packs and sends them to the Halifax market, where of late years it has become the habit for the fur dealers to tender in writing for them. About six thousand are annually exported from Nova Scotia proper.

PUTORIUS CICOGNANII, (*Bonaparte*,) *Small Brown Weasel*.

Under this head I put the common weasel or ermine weasel of the Province. From my notes its size and colour will be studied.

Wm. Dargie, at Annapolis Royal, gave me 10th Nov. 1860, a weasel, total length to end of tail, 11 5-10 inch, length of tail 4 9-10 inch. It was in summer pelage, with short fur—in colour it was brown, with upper lip, cheeks, inside of legs, side of belly two-thirds to back, front of hind legs and belly beneath white, genitals white, the pœnis with a bone, a deep sulphur, stain along the belly.

25 Nov., 1860, Mr. Melville, Hammond's Plains, near Halifax, gave me one, total length to end of tail 11 1-10 inch, length of tail 3 6-10 inch, this was in full winter pelage—fur thick, ears nearly hidden, feet well furred and colour white, with black tip to the tail, a pale sulphur tinge on flanks and belly. Thus I had two specimens within 10 days, one winter, one summer pelage.

28 Jan., 1861, Sgt. Kavanagh, Desertion Post, St. Margaret's Bay, gave me the smallest specimen I have seen—total length to end of tail, 10 1-2 inches, length of tail 3 1-10 inch. It was in winter pelage

21 Feb., 1861, he sent me the largest specimen I have seen, from the same out post—total length to tip of tail 14 4-10 inches, total length of tail 4 8-10 inches. It was in full winter pelage—fur very thick, and limbs very robust. Both white with a yellow tinge on flanks, tip of tail black.

Thus it appears that the ordinary weasel of the Province may be referred to *P. Cicognanii*, (*Bonaparte*,) *P. Fusca*, (*Audubon*, *DeKay*.) That he attains a larger size here than the southern species, but preserves the relative proportion of tail

always. The largest tail obtained, 4 8-10 inch, being less than *P. Richardsonii*, and the shortest obtained, 3 1-10 too long for *P. Pusillus*. This species so abounds, that perhaps in 1000 skins, 20 or 30 might be referred to *Richardsonii*, and I have only obtained one skin that I could refer to "*Noveboracensis*," whilst I have never obtained, though so common in New England, a single specimen of *Pusillus*, or common weasel. The almost insular position of the Province may account for this very limited range of species. My remarks refer to this species alone, as the others are so very rare that I have only got their skins. He is very numerous, though unseen, and is in some degree a nocturnal hunter—he clears the trap not only of bait, but also of the hare or grouse that lies entrapped. The forest or the sterile hills are his usual home, yet he often comes into the open, and frequents stone walls or the cellars of out-houses. Sitting motionless for a while in the forest, the hunter not unfrequently perceives the rustle of a leaf, and then a pair of glittering eyes peering out from it, and presently the daring little robber advancing and boldly tugging at his boot. At certain seasons, numbers congregate by the side of brooks, and will boldly attack intruders upon them. This happened to a gentleman at Aylesford, Nova Scotia, where he came upon a party at a brook side, which there crossed the post road. Their attitude was so hostile, that he was feign to retreat. It is recorded that a man was only rescued from death in Scotland, from an attack of this kind. It is all but impossible for a single man to long resist simultaneous attacks in front and back, leg, and arm, and throat, from a number of these bold sharp-teethed and nimble little creatures. It is interesting to record that the American species retain the habit of their European congeners. Mr. Melville, of Hammond's Plains, informed me that a weasel became gradually familiarized about his house, at first about the farm-yard, then picking up bits of meat thrown to it, and at last it made its nest beneath the porch, lining it with the fur of wood mice. It retained these quarters for two or three years, bringing up several litters, which it allowed him to observe, and finally was drowned in a harness cask. His

children lamented this wild pet, whose annual changes from white to brown and from brown to white they had so often seen. Of this change, which, according to Audubon, takes place suddenly (in large patches during one night,) and is completed in twenty days, I have had no opportunities of observing; I have had white specimens as early as middle of November, and perfect brown ones as early as April. Perhaps both these dates are early for the great body of them to change. Personally I have noticed in this little animal a bold and courageous figure, glittering eyes set low in a very triangular head, and glancing every where, a bounding gait when pursued, but when hunting quick mincing steps, and head carried high on an arched neck, turning from side to side incessantly. An arched back, and tail well-up, complete the figure of as high spirited, bold little fellow as haunts the forest.

PUTORIUS RICHARDSONII (*Bonaparte*).

In examining many hunters' skins I found several in winter and summer pelage whose tails were about five inches in length; the summer specimens all retained the white upper lip, which by some naturalists has been made a typical mark. Dr. Baird referred these skins to this species. They are very rare in the Province.

PUTORIUS NOVEBORACENSIS (*DeKay*.)

Mr. James Thomas, Halifax, gave me a skin obtained at Antigonish, Nova Scotia, which I refer to this species. It was in winter pelage—white, but with a brown patch on the forehead, and a light brown indistinct dorsal line, the belly and tail had a bright sulphur mark through the white, the latter tipped with black. Total length to tip of tail 21 inches, length of tail 7 2-10 inches, length of black tip 1 6-8 inch.

Our Province thus is represented almost solely by *P. Cicognanii*, which appears to have spread itself thoroughly in its limits.

The entire absence of *Pusillus* so common in New England, and the very great scarcity of *Richardsonii* and *Noveboracensis* may appear singular to those unacquainted with the very limited range many species have, and the small fauna, islands, and extremities of continents have, compared with central countries. The raccoon has but lately appeared amongst us, and in the Annapolis Valley has yet only penetrated the north mountain—being unknown on the south side of the valley. Our list of

reptilia is scarcely half that of New England, and batrachians are unknown at Newfoundland. It remains to make a few remarks on the adaptation of this beautiful boreal family to the country in which it lives—on the harmony of its strong life, fed on flesh, and wrapt in fur, with the stern winter in which it rejoices. Our hills glaciated to their summits by ancient ice, and our valleys cut out by the same invisible forces, have long since risen from their submergence, and been clothed by dense evergreen forests, our dark pines and firs. A winter, the counterpart of Norway, covers the whole in its mantle of snow. The bear and the marmot, each in his fat sleep, have left the scene; the mice have disappeared to their winter hoards; the ground squirrel is asleep, and the red squirrel is lying by in his nest for days. Beaver and muskrat are fast in their rushy mounds. Yet now this boreal group come forth, the colder the clime the more lustrous their fur, the more vigorous their movements. The great tree martins, with soft muffled silent tread, and furred foot, are hunting the feather-legged grouse, in common with the snow owl, the winter falcon, and the lynx, all feathered or furred to their toes. The mink is pursuing his prey along the half frozen water-courses; whilst on the snow clad hills, with breast as snowy, the fur-footed ermine is steadily winding the varying hare, whose foot is equally furred, coat as white and thick, but whose feeble heart will soon surrender to his cruel pursuer. Everywhere, the slant wintry sun throws his scant rays athwart dark pine and glistening snow. Everywhere, through the short silent wintry day, the furred and noiseless pursuer tracks the furred and noiseless pursued.