Drawn on Stone by R. Tremblay

American Grass Field

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

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difficult to take him in a trap of any kind. He eludes the snares laid for him, and generally discovers and avoids the steel-trap, however carefully covered with brush-wood or grasses.

In the Northern States, such as Pennsylvania and New-York, and in New England, the rutting season of the Fox commences in the month of February. During this period he issues a succession of rapid yells, like the quick and sharp barking of a small dog. Gestation continues from 60 to 65 days. The cubs are from 5 to 9 in number, and like young puppies, are born with hair and are blind at birth. They leave their burrows generally when three or four months old, and in all predatory expeditions each individual goes singly, and plunders on his own account, and for his own especial benefit.

The Generic name is derived from the Latin word *vulpes*, a Fox.

There are about twelve well-known species belonging to this genus—four of which exist in North America.

VULPES FULVUS.—DESM: *var. Decussatus*.—PENNANT.

AMERICAN CROSS FOX.

PLATE VI.—MALE.

V. cruce nigra supra humeros, subtus linea longitudinali nigra, auribus pedibusque nigris.

CHARACTERS.

A cross on the neck and shoulders, and a longitudinal stripe on the under surface, black; ears and feet black.

SYNONYMES.

RENARD BARRÉ, Tsinantontongue, Sagard Theodat., Canada, p. 745.

EUROPEAN CROSS FOX, var. B., Cross Fox, Pennant, Arct., Zool., vol. i., p. 46.

CANIS DECUSSATUS, Geoff., Coll. du Mus.

CANIS FULVUS, Sabine, Franklin's Journal, p. 656.

“ “ var. B., (decussatus) Rich., Fauna Boreali Americana, p. 93.

DESCRIPTION.

Form, agrees in every particular with that of the common red fox, (*V. fulvus*.) Fur, rather thick and long, but not thicker or more elongated than in many specimens of the red fox that we have examined. Soles of

the feet densely clothed with short woolly hair, so that the callous spots at the roots of the nails are scarcely visible. A black longitudinal stripe, more or less distinct, on the under surface.

COLOUR.

Front of the head, and back, dark gray; the hairs being black at the roots, yellowish white near the ends, and but slightly tipped with black; so that the light colour of the under part of each hair showing through, gives the surface a gray tint; with these hairs a few others are mixed that are black throughout their whole length.

The soft fur beneath these long hairs is of a brownish black. Inner surface of ears, and sides of the neck from the chin to the shoulders, pale reddish yellow; sides, behind the shoulders towards the top of the back, slightly ferruginous; under surface, to the thighs, haunches, and under part of the root of tail, pale ferruginous. Fur underneath the long hair, yellowish. Tail dark brown; fur beneath, reddish yellow; the long hairs, yellowish at base, broadly tipped with black; at the extremity of the tail a small tuft of white hair. Nose, outer surface of ear, chin, throat, and chest, black. A line along the under surface for half its length, and broadest at its termination, black; a few white hairs intermixed, but not a sufficient number to alter the general colour. The yellowish tint on each side of the neck and behind the shoulders, is divided by a longitudinal dark brown band on the back, crossed at right angles by another running over the shoulders and extending over the fore-legs, forming a cross. There is another cross, yet more distinctly marked, upon the chest; a black stripe, extending downward from the throat towards the belly, being intersected by another black line, which reaches over the chest from the inside of one fore-leg to the other. Hence, the name of this animal does not originate in its ill-nature, or by reason of its having any peculiarly savage propensity, as might be presumed, but from the singular markings we have just described.

DIMENSIONS.

Adult Male.

From nose to root of tail	-	-	-	-	24 $\frac{1}{2}$ inches.
Tail, (vertebræ)	-	-	-	-	12 $\frac{1}{2}$ do.
Tail, to end of hair	-	-	-	-	16 do.
From nose to end of ear	-	-	-	-	8 do.
“ “ to eyes	-	-	-	-	2 $\frac{1}{2}$ do.

Weight, 14 pounds.

HABITS.

In our youth we had opportunities whilst residing in the northern part of the State of New York, of acquiring some knowledge of the habits of the fox and many other animals, which then were abundant around us.

Within a few miles dwelt several neighbours who vied with each other in destroying foxes and other predacious animals, and who kept a strict account of the number they captured or killed each season. As trappers, most of our neighbours were rather unsuccessful—the wary foxes, especially, seemed very soon, as our western hunters would say, to be “up to trap.” Shooting them by star-light from behind a hay-stack in the fields, when they had for some time been baited and the snow covered the ground so that food was eagerly sought after by them, answered pretty well at first, but after a few had been shot at, the whole tribe of foxes—red, gray, cross, and black—appeared to be aware that safety was no longer to be expected in the vicinity of hay-stacks, and they all gave the latter a wide berth.

With the assistance of dogs, pick-axes, and spades, our friends were far more successful, and we think might have been considered adepts. We were invited to join them, which we did on a few occasions, but finding that our ideas of sport did not accord precisely with theirs, we gradually withdrew from this club of primitive fox-hunters. Each of these sportsmen was guided by his own “rules and regulations” in the “chase;” the horse was not brought into the field, nor do we remember any scarlet coats. Each hunter proceeded in the direction that to him seemed best—what he killed he kept—and he always took the shortest possible method he could devise, to obtain the fox’s skin. He seldom carried a gun, but in lieu of it, on his shoulder was a pick-axe and a spade and in his pocket a tinder box and steel.

A half-hound, being a stronger and swifter dog than the thorough bred, accompanied him, the true foxhound being too slow and too noisy for his purpose; we remember one of these half-bred dogs which was of great size and extraordinary fleetness; it was said to have a cross of the greyhound.

In the fresh-fallen and deep snows of mid-winter, the hunters were most successful. During these severe snow storms, the ruffed grouse, (*Tetrao umbellus*,) called in our Eastern States the partridge, is often snowed up and covered over; or sometimes plunges from on wing into the soft snow, where it remains concealed for a day or two. The fox occasionally surprises these birds, and as he is usually stimulated at this inclement season by the gnawings of hunger, he is compelled to seek for food by day as

well as by night; his fresh tracks may be seen in the fields, along the fences, and on the skirts of the farm-yard, as well as in the deep forest.

Nothing is easier than to track the Fox under these favourable circumstances, and the trail having been discovered, it is followed up, until Reynard is started. Now the chase begins: the half-hound yells out, in tones far removed from the mellow notes of the thorough-bred dog, but equally inspiring perhaps, through the clear frosty air, as the solitary hunter eagerly follows as fast as his limited powers of locomotion will admit. At intervals of three or four minutes, the sharp cry of the dog resounds, the Fox has no time to double and shuffle, the dog is at his heels almost, and speed, speed, is his only hope for life. Now the shrill baying of the hound becomes irregular; we may fancy he is at the throat of his victim; the hunter is far in the rear, toiling along the track which marks the course so well contested, but occasionally the voice of his dog, softened by the distance, is borne on the wind to his ear. For a mile or two the Fox keeps ahead of his pursuer, but the latter has the longest legs, and the snow impedes him less than it does poor Reynard; every bound and plunge into the snow diminishes the distance between the fox and his relentless foe. Onward they rush through field, fence, brushwood, and open forest, the snow flying from bush and briar as they dart through the copse or speed across the newly-cleared field. But this desperate race cannot last longer. The fox must gain his burrow, or some cavernous rock, or he dies. Alas! he has been lured too far away from his customary haunts and from his secure retreat, in search of prey; he is unable to reach his home; the dog is even now within a foot of his brush. One more desperate leap, and with a sudden snappish growl he turns upon his pursuer and endeavours to defend himself with his sharp teeth. For a moment he resists the dog, but is almost instantly overcome. He is not killed, however, in the first onset; both dog and fox are so fatigued that they now sit on their haunches facing each other, resting, panting, their tongues hanging out, and the foam from their lips dropping on the snow. After fiercely eyeing each other for a while, both become impatient—the former to seize his prey, and the latter to escape. At the first leap of the fox, the dog is upon him; with renewed vigour he seizes him by the throat, and does not loose his hold until the snow is stained with his blood, and he lies rumped, draggled, with blood-shot eye and frothy open mouth, a mangled carcass on the ground.

The hunter soon comes up: he has made several *short cuts*, guided by the baying of his hound; and striking the deep trail in the snow again, at a point much nearer to the scene of the death-struggle, he hurries toward the place where the last cry was heard, and pushes forward in a half run

until he meets his dog, which on hearing his master approach generally advances towards him and leads the way to the place where he has achieved his victory.

We will now have another hunt, and pursue a Fox that is within reach of his burrow when we let loose our dog upon him. We will suppose him "started;" with loud shouts we encourage our half-hound; he dashes away on the Fox's track, whilst the latter, with every muscle strained to the utmost is shortening the distance between himself and his stronghold; increasing his speed with his renewed hopes of safety, he gains the entrance to his retreat, and throws himself headlong into it rejoicing at his escape. Whilst yet panting for breath, he hears his foe barking at the entrance of his burrow, and flatters himself he is now beyond a peradventure safe. But perhaps we do injustice to his sagacity; he may have taken refuge in his hole well aware of the possibility of his being attacked there—yet what better could he do? However this may be, he has escaped one enemy by means of a swift pair of heels, and has only to dread the skill, perseverance and invention of the hunter, who in time comes up, rigged out pretty much as we have already described him, with spade, pick-axe, flint and steel.

On arriving at the spot where the Fox has been (in select phrase) "holed," the sportsman surveys the place, and if it is on level ground where he can use the spade, throws off his coat, and prepares for his work with a determination to have "that" fox, and no mistake! He now cuts a long slender stick, which he inserts in the hole to ascertain in what direction he shall dig the first pit. The edge or mouth of the burrow is generally elevated a little above the adjacent surface of the ground by the earth which the Fox has brought from within; and this slight embankment serves to keep out the rain water, that might otherwise flow in from the vicinity in stormy weather.

The burrow at first inclines downward for four or five feet at an angle of about twenty-five degrees; it then inclines upward a little, which is an additional security against inundations, and is continued at a depth of about three or four feet from the surface, until it reaches a point where it is divided into two or three galleries.

This dividing point the hunter discovers after sinking three or four pits—it is generally twenty or thirty feet from the entrance of the burrow. The excavation is now made larger and the earth and rubbish thrown out, the dog is placed in the hole thus laid open, and his aid is sought to ascertain into which branch of the gallery the Fox has retreated. There are seldom any tortuous windings beyond the spot whence the galleries diverge—the Fox is not far off. The stick is again inserted, and

either reaches him, and the hunter is made aware of his whereabouts by his snapping at it and growling, which calls forth a yelp of fierce anxiety from the dog ; or, as frequently happens, the Fox is heard digging for life, and making no contemptible progress through the earth. Should no rocks or large roots interfere, he is easily unearthed, and caught by the dog.

It however very frequently occurs, that the den of the Fox is situated on the mountain side ; and that its winding galleries run beneath the enormous roots of some stately pine or oak ; or it may be amongst huge masses of broken rock, in some fissure of too great depth to be sounded, and too contracted to be entered by man or dog. What is then to be done ? Should a "dead-fall" be set at the mouth of the hole, the Fox will (unless the ground be frozen too hard) dig another opening, and not go out by the old place of egress ; place a steel-trap before it, and he will spring it without being caught. He will remain for days in his retreat, without once exposing himself to the danger of having a dog snapping at his nose, or a load of duck-shot whistling round his ears. Our hunter, however, is not much worried with such reflections as we have just made ; he has already gathered an armful or two of dry wood, and perhaps some resinous knots, or bits of the bark of the pine-tree ; he cuts up a portion into small pieces, pulls out his tinder-box, flint, and steel, and in a few moments a smart fire is lighted within the burrow ; more wood is thrown on, the mass pushed further down the hole, and as soon as it begins to roar and blaze freely, the mouth is stopped with brush-wood covered with a few spadefuls of earth, and the den is speedily exhausted of pure air, and filled with smoke and noxious gases.

There is no escape for the Fox—an enemy worse than the dog or the gun is destroying him ; he dies a protracted, painful death by suffocation ! In about an hour the entrance is uncovered, large volumes of smoke issue into the pure air, and when the hunter's eye can pierce through the dense smoky darkness of the interior, he may perhaps discern the poor Fox extended lifeless in the burrow, and may reach him with a stick. If not quite dead, the Fox is at least exhausted and insensible ; this is sometimes the case, and the animal is then knocked on the head.

The number of Foxes taken by our neighbours, in the primitive mode of hunting them we have attempted to describe, was, as nearly as we can now recollect, about sixty every winter, or an average of nearly twenty killed by each hunter. After one or two seasons, the number of Foxes in that part of the country was sensibly diminished, although the settlements had not increased materially and the neighbourhood was at that time very wild.

At this time Pennant's Marten (*Mustela Canadensis*) was not very

scarce in Rensselaer county, and we had three different specimens brought to us to examine.

These, the people called Black Foxes. They were obtained by cutting down hollow trees in which they were concealed, and to which their tracks on the snow directed the hunters.

We cannot now find any note in regard to the number of Cross Foxes taken, as compared to the Red, Gray, and Black Foxes; about one-fourth of the whole number captured, however, were Gray Foxes, and we recollect but a single one that was perfectly black with the exception of a white tip at the end of its tail, like the specimen figured in our work.

On examining several packages of Fox skins at Montreal, we saw about four specimens only of the Cross Fox, and three of the Black Fox, in some three hundred skins. We were informed during our recent visit to the upper Missouri country, that from fifty to one hundred skins of the Cross Fox were annually procured by the American Fur Company from the hunters and Indians.

The specimen from which our drawing was made, was caught in a steel-trap by one of its fore-feet, not far from the falls of Niagara, and was purchased by J. W. AUDUBON of the proprietor of the "Museum" kept there to gratify the curiosity of the travellers who visit the great Cataract.

Dr. RICHARDSON (Fauna Boreali Americana, p. 93) adheres to the opinion of the Indians, who regard the Cross Fox of the fur traders as a mere variety of the Red Fox. He says, "I found on inquiry that the gradations of colour between characteristic specimens of the Cross and Red Fox are so small, that the hunters are often in doubt with respect to the proper denomination of a skin; and I was frequently told, "This is not a Cross Fox yet, but it is becoming so." It is worthy of remark, moreover, that the European Fox (*Vulpes vulgaris*) is subject to similar varieties, and that the "*Canis crucigera* of GESNER differs from the latter animal in the same way that the American Cross Fox does from the red one."

We have had several opportunities of examining *C. crucigera* in the museums of Europe, and regard it as a variety of the common European Fox, but it differs in many particulars from any variety of the American Red Fox that we have seen.

The Cross Fox is generally regarded as being more wary and swift of foot than the Red Fox; with regard to its greater swiftness, we doubt the fact. We witnessed a trial of speed between the mongrel greyhound already referred to in this article, and a Red Fox, in the morning, and another between the same dog and a Cross Fox, about noon on the same day. The former was taken after an hour's hard run in the snow, and the

latter in half that time, which we accounted for from the fact that the Cross Fox was considerably the fattest, and from this circumstance became tired out very soon. We purchased from a country lad a specimen of the Cross Fox in the flesh, which he told us he had caught with a common cur dog, in the snow, which was then a foot in depth.

In regard to the cunning of this variety there may be some truth in the general opinion, but this can be accounted for on natural principles; the skin is considered very valuable, and the animal is always regarded as a curiosity; hence the hunters make every endeavour to obtain one when seen, and it would not be surprising if a constant succession of attempts to capture it together with the instinctive desire for self-preservation possessed by all animals, should sharpen its wits and render it more cautious and wild than those species that are less frequently molested. We remember an instance of this kind which we will here relate.

A Cross Fox, nearly black, was frequently seen in a particular cover. We offered what was in those days considered a high premium for the animal in the flesh. The fox was accordingly chased and shot at by the farmers' boys in the neighbourhood. The autumn and winter passed away, nay, a whole year, and still the fox was going at large. It was at last regarded by some of the more credulous as possessing a charmed life, and it was thought that nothing but a silver ball could kill it. In the spring, we induced one of our servants to dig for the young Foxes that had been seen at the burrow which was known to be frequented by the Cross Fox. With an immense deal of labour and fatigue the young were dug out from the side of a hill; there were seven. Unfortunately we were obliged to leave home and did not return until after they had been given away and were distributed about the neighbourhood.

Three were said to have been black, the rest were red. The blackest of the young whelps was retained for us, and we frequently saw at the house of a neighbour, another of the litter that was red, and differed in no respect from the Common Red Fox. The older our little pet became, the less it grew like the Black, and the more like the Cross Fox. It was, very much to our regret, killed by a dog when about six months old, and as far as we can now recollect, was nearly of the colour of the specimen figured in our work.

The following autumn, we determined to try our hand at procuring the enchanted fox which was the parent of these young varieties, as it could always be started in the same vicinity. We obtained a pair of fine fox-hounds and gave chase. The dogs were young, and proved no match for the fox, which generally took a straight direction through several cleared fields for five or six miles, after which it began winding

and twisting among the hills, where the hounds on two occasions lost the scent and returned home.

On a third hunt, we took our stand near the corner of an old field, at a spot we had twice observed it to pass. It came at last, swinging its brush from side to side, and running with great rapidity, three-quarters of a mile ahead of the dogs, which were yet out of hearing.—A good aim removed the mysterious charm: we killed it with squirrel-shot, without the aid of a silver bullet. It was nearly jet-black, with the tip of the tail white. This fox was the female which had produced the young of the previous spring that we have just spoken of; and as some of them, as we have already said, were Cross Foxes and others Red Foxes, this has settled the question in our minds, that both the Cross Fox and the Black Fox are mere varieties of the Red.

J. W. AUDUBON brought the specimen he obtained at Niagara, alive to New-York, where it was kept for six or seven weeks. It fed on meat of various kinds: it was easily exasperated, having been much teased on its way from the Falls. It usually laid down in the box in which it was confined, with its head toward the front and its bright eyes constantly looking upward and forward at all intruders. Sometimes during the night it would bark like a dog, and frequently during the day its movements corresponded with those of the latter animal. It could not bear the sun-light shining into its prison, and continued shy and snappish to the last.

The fur of the Cross Fox was formerly in great demand; a single skin sometimes selling for twenty-five dollars; at present, however, it is said not to be worth more than about three times the price of that of the Red Fox.

GEOGRAPHICAL DISTRIBUTION.

This variety seems to originate only in cold climates; hence we have not heard of it in the southern parts of the States of New-York and Pennsylvania, nor farther to the South. In the northern portions of the State of New-York, in New Hampshire, Maine, and in Canada, it is occasionally met with, in locations where the Red Fox is common. It also exists in Nova Scotia and Labrador. There is a Cross Fox on the Rocky Mountains, but we are not satisfied that it will eventually prove to be this variety.

GENERAL REMARKS.

The animal referred to by SAGARD THEODAT in his History of Canada, under the name of Renard Barré, Tsinantontongue, was evidently this va-

riety. PENNANT probably also referred to it, (vol. i., p. 46,) although he blended it with the European *V. Crucigera* of GESNER, and the *Korsraef* of the Swedes. GEOFF (Collect. du Mus.) described and named it as a true species. DESMAREST (Mamm., p. 203, 308) and CUVIER (Dict. des Sc. Nat., vol. viii., p. 566) adopted his views. It is given under this name by SABINE (Franklin's Journ., p. 656.) HARLAN (Fauna, p. 88) published it as a distinct species, on the authority and in the words of DESMAREST. GODMAN, who gave the Black or Silver Fox (*A. argentatus*) as a true species, seemed doubtful whether the Cross Fox might not prove a "mule between the Black and Red Fox." RICHARDSON, under the name of the American Cross Fox, finally described it as a mere variety of the Red Fox.

We possess a hunter's skin, which we obtained whilst on the Upper Missouri, that differs greatly from the one we have described, in its size, markings, and the texture of its fur. The body, from point of nose to root of tail, is 33 inches long; tail to end of fur $18\frac{1}{2}$; the skin is probably stretched beyond the natural size of the animal; but the tail, which is very large in circumference, is, we think, of its proper dimensions. The hair is long, being on the neck, sides, and tail, five inches in length; the under fur, which is peculiarly soft, is three inches long. There is scarcely a vestige of the yellowish-brown of our other specimen on the whole body; but the corresponding parts are gray. The tail is irregularly clouded and banded, the tip for three inches white. The colour of the remaining portions of the body does not differ very widely from the specimen we have described. The ears, nose, and paws of this specimen (as in most hunters' skins) are wanting. It is not impossible that this may be a variety of a *larger species* of Red Fox, referred to by LEWIS and CLARK, as existing on both sides of the Rocky Mountains.

Audubon, John James and Bachman, John. 1851. "Vulpes fulvus — Desm: var. decussatus — Pennant, American Cross Fox [Pl. VI, male]." *The quadrupeds of North America* 1, 45–54. <https://doi.org/10.5962/p.322595>.

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