



Drawn on Stone by Wm. E. Hitchcock

*Arctic Fox.*

Drawn from Nature by J.W. Audubon

Lith. Printed & Col. by J.T. Bowen Phil





## VULPES LAGOPUS.—LINN.

ARCTIC FOX.

PLATE CXXI.—WINTER AND SUMMER PELAGE.

V. Auriculis rotundatis brevibusque, margine inflexa; collari post genas; colore in æstate fusco, in hyeme albo.

## CHARACTERS.

*Ears, rounded, short, and folded at the edges; cheeks with a ruff; colour, in summer brown, in winter white.*

## SYNONYMES.

PIED FOXES. James's Voyage, Ann. 1633.

CANIS LAGOPUS. Linn., Syst., vol. i. p. 59.

" " Forster, Philos. Trans., lxii. p. 370.

ARCTIC FOX. Pennant's Arctic Zoology, vol. i. p. 42.

" " Hearne's Journey, p. 363.

GREENLAND DOG. Pennant's Hist. Quadr., vol. i. p. 257 (?) a young individual.

CANIS LAGOPUS. Captain Sabine, Parry's First Voyage, Supplement, 187.

" " Mr. Sabine, Franklin's Journal, p. 658.

" " Richardson, Parry's Second Voyage, Appendix, p. 299.

" " Harlan, Fauna Americana, p. 92.

ISATIS, or ARCTIC FOX. Godman's Nat. Hist., vol. i. p. 268.

CANIS (VULPES) LAGOPUS—ARCTIC FOX. Rich., Fauna Boreali Americana, p. 83.

STONE FOX. Auctorum.

TERREEANEE-ARIOO. Esquimaux of Melville Peninsula.

TERIENNAK. Greenlanders.

WAPPEESKEESHEW-MAKKEESHEW. Cree Indians.

PESZI. Russians.

## DESCRIPTION.

Male in winter pelage.

Head, not as much pointed as in other species of Fox; ears, rounded, and presenting somewhat the appearance of having been cropped; hairs on the ears, shorter than on the neighbouring parts.

The cheeks are ornamented by a projecting ruff which extends from behind the ears quite around the lower part of the face, to which it gives

a pleasing appearance; legs, rather long than otherwise, and muscular; feet, armed with pretty strong, long, compressed, and slightly arched claws; soles of the feet, covered with dense woolly hair; body covered with two kinds of hair, the longer thinly distributed and fine, the shorter a remarkably fine straight wool or dense fur; on the tail and lower parts of the body the long hairs are similar to those on the body, and the wool or fur like that of the finest wool of the merino sheep. The tail is thick, round, and bushy, and shorter than that of the red Fox.

The shoulders and thighs are protected by long fur, but the anterior parts of the legs are covered with short hair, the hind legs having the shortest and smoothest coat.

#### COLOUR.

In winter every part of this animal is white, except the tip of the nose the nails and eyes. Eyes, hazle; tip of nose, black; nails, brownish. The hairs of the animal are all white from the roots to the tips.

We have, however, seen specimens in which the colour was not pure white, but rather a bluish or brownish-gray tint at the roots on the back shoulders and outside of the thighs, but particularly on the neck and tail. The proportion of the fur so coloured varies with the season of the year as well as with different individuals of the species. Sometimes it is confined to a small space at the roots of the hair, whilst in other cases the dingy colour is so widely spread as to tarnish the customary whiteness of the whole skin.

At almost all times the short hair clothing the posterior surface and margin of the ears, is dark brownish-gray for half its length from the roots, so as to give a bluish or brownish tinge to view when the hairs are blown apart.

#### Summer pelage.

In the month of May, when the snow begins to disappear, the long white hairs and fur fall off, and are replaced by shorter hair, which is more or less coloured. A specimen killed at York factory on Hudson's Bay, in August, is described by Mr. SABINE as follows: "The head and chin are brown, having some fine white hairs scattered through the fur; the ears externally are coloured like the head; within they are white; a similar brown colour extends along the back to the tail, and from the back is continued down the outside of all the legs; the whole of the under parts, and the insides of the legs, are dingy white. The tail is brownish above, becoming whiter at the end, and is entirely white beneath."



## DIMENSIONS.

Specimen obtained on the northeastern portion of the American continent by Captain PETTIGRU, and presented by him to the museum of the Charleston College.

	Feet.	Inches.
From point of nose to root of tail, - - - - -	2	4
Length of tail (vertebræ), - - - - -	1	
“ “ (including fur), - - - - -	1	2
“ head, - - - - -		6
From point of nose to eye, - - - - -		2½
Height of ear anteriorly, - - - - -		2
From heel to point of middle claw, - - - - -		2½
Longest nail on the fore foot, - - - - -		1 1/2
“ “ hind foot, - - - - -		¾

Average weight about eight pounds, varying, according to Captain LYON, from seven to nine and a half pounds when in good case.

## HABITS.

From our description of the Arctic Fox, it will have been observed that this animal is well adapted to endure the severest cold. In winter its feet are thickly clothed with hair, even on the soles, which its movements on the ice and snow do not wear away, as would be the case if it trod upon the naked earth. These softly and thickly haired soles serve the double purpose of preserving its feet from the effects of frost and enabling it to run briskly and without slipping over the smooth icy tracts it must traverse.

The Arctic Fox is a singular animal, presenting rather the appearance of a little stumpy, round-eared cur, than that of the sharp and cunning-looking Foxes of other species which are found in more temperate climes. The character (for all animals have a character) and habits of this species are in accordance with its appearance; it is comparatively unsuspicious and gentle, and is less snappish and spiteful, even when first captured, than any other Fox with which we are acquainted.

At times there is seen a variety of this Fox, which has been called the Sooty Fox, but which is in all probability only the young, or at any rate is not a permanent variety, and which does not turn white in winter, although the species generally becomes white at that season. It is said likewise that the white Arctic Foxes do not all assume a brown tint in the summer. RICHARDSON says that only a majority of these animals



acquire the pure white dress even in winter ; many have a little duskiness on the nose, and others, probably young individuals, remain more or less coloured on the body all the year. On the other hand, a pure white Arctic Fox is occasionally met with in the middle of summer, and forms the variety named *Kakkortak* by the Greenlanders.

Mr. WILLIAM MORTON, ship's steward of the *Advance*, one of Mr. HENRY GRINNELL's vessels sent in search of Sir JOHN FRANKLIN and his party, although not a naturalist, has furnished us with some account of this species. He informs us that whilst the vessels (the *Advance* and *Rescue*) were in the ice, the men caught a good many Arctic Foxes in traps made of old empty barrels set with bait on the ice : they caught the same individuals in the same trap several times, their hunger or their want of caution leading them again into the barrel when only a short time released from captivity.

They were kept on board the vessels for some days, and afterwards let loose ; they did not always appear very anxious to make their escape from the ships, and those that had not been caught sometimes approached the vessels on the ice, where first one would appear, and after a while another, showing that several were in the neighbourhood. They were occasionally observed on the rocks and snow on the land, but were not seen in packs like wolves ; they do not take to the water or attempt to swim.

These Foxes when they see a man do not appear to be frightened : they run a little way, and then sit down on their haunches like a dog, and face the enemy before running off entirely. They are said to be good eating, the crews of the vessels having feasted on them, and are fat all the winter. They were occasionally seen following the polar bear to feed on his leavings, seals, flesh of any kind, or fish.

Those they captured were easily tamed, seldom attempting to bite even when first caught, and by wrapping a cloth around the hand some of them could be taken out of the barrel and held, not offering more resistance than a snap at the cloth.

Several beautiful skins of this animal were brought home by Dr. E. K. KANE, the accomplished surgeon of the expedition, and have since been presented by him to the Academy of Natural Sciences at Philadelphia.

Captain LYON, during two winters passed on Melville peninsula, studied with attention the manners of several of these animals. He says : "The Arctic Fox is an extremely cleanly animal, being very careful not to dirt those places in which he eats or sleeps. No unpleasant smell is to be perceived even in a male, which is a remarkable circumstance. To come unawares on one of these creatures is, in my opinion, impossible, for even when in an apparently sound sleep they open their eyes at the slightest



noise which is made near them, although they pay no attention to sounds when at a short distance. The general time of rest is during the daylight, in which they appear listless and inactive ; but the night no sooner sets in than all their faculties are awakened ; they commence their gambols, and continue in unceasing and rapid motion until the morning. While hunting for food, they are mute, but when in captivity or irritated, they utter a short growl like that of a young puppy. It is a singular fact, that their bark is so undulated as to give an idea that the animal is at a distance, although at the very moment he lies at your feet.

“Although the rage of a newly caught Fox is quite ungovernable, yet it very rarely happened that on two being put together they quarrelled. A confinement of a few hours often sufficed to quiet these creatures ; and some instances occurred of their being perfectly tame, although timid, from the first moment of their captivity. On the other hand, there were some which, after months of coaxing, never became more tractable. These we suppose were old ones.

“Their first impulse on receiving food is to hide it as soon as possible, even though suffering from hunger and having no fellow-prisoners of whose honesty they are doubtful. In this case snow is of great assistance, as being easily piled over their stores, and then forcibly pressed down by the nose. I frequently observed my Dog-Fox, when no snow was attainable, gather his chain into his mouth, and in that manner carefully coil it so as to hide the meat. On moving away, satisfied with his operations, he of course had drawn it after him again, and sometimes with great patience repeated his labours five or six times, until in a passion he has been constrained to eat his food without its having been rendered luscious by previous concealment. Snow is the substitute for water to these creatures, and on a large lump being given to them they break it in pieces with their feet and roll on it with great delight. When the snow was slightly scattered on the decks, they did not lick it up as dogs are accustomed to do, but by repeatedly pressing with their nose collected small lumps at its extremity, and then drew it into the mouth with the assistance of the tongue.”

In another passage, Captain LYON, alluding to the above-mentioned Dog-Fox, says : “He was small and not perfectly white ; but his tameness was so remarkable that I could not bear to kill him, but confined him on deck in a small hutch, with a scope of chain. The little animal astonished us very much by his extraordinary sagacity, for during the first day, finding himself much tormented by being drawn out repeatedly by his chain, he at length, whenever he retreated to his hut, took this carefully up in his mouth, and drew it so completely after him that no one who



valued his fingers would endeavour to take hold of the end attached to the staple."

RICHARDSON says that notwithstanding the degree of intelligence which the anecdotes related by Captain LYON show them to possess, they are unlike the red Fox in being extremely unsuspicious; and instances are related of their standing by while the hunter is preparing the trap, and running headlong into it the moment he retires a few paces. Captain LYON received fifteen from a single trap in four hours. The voice of the Arctic Fox is a kind of yelp, and when a man approaches their breeding places they put their heads out of their burrows and bark at him, allowing him to come so near that they may easily be shot.

They appear to have the power of decoying other animals within their reach, by imitating their voices. "While tenting, we observed a Fox prowling on a hill side, and heard him for several hours afterwards in different places, imitating the cry of a brentgoose." They feed on eggs, young birds, blubber, and carrion of any kind; but their principal food seems to be lemmings of different species.

RICHARDSON thinks the "brown variety," as he calls it, the more common one in the neighbourhood of Behring's Straits. He states that they breed on the sea coast, and chiefly within the Arctic circle, forming burrows in sandy spots, not solitary like the red Fox, but in little villages, twenty or thirty burrows being constructed adjoining to each other. He saw one of these villages on Point Turnagain, in latitude  $68\frac{1}{2}^{\circ}$ . Towards the middle of winter, continues our author, they retire to the southward, evidently in search of food, keeping as much as possible on the coast, and going much farther to the southward in districts where the coast line is in the direction of their march. Captain PARRY relates that the Arctic Foxes, which were previously numerous, began to retire from Melville peninsula in November, and that by January few remained. "Towards the centre of the continent, in latitude  $65^{\circ}$ , they are seen only in the winter, and then not in numbers; they are very scarce in latitude  $61^{\circ}$ , and at Carlton House, in latitude  $53^{\circ}$ , only two were seen in forty years. On the coast of Hudson's Bay, however, according to HEARNE, they arrive at Churchill, in latitude  $59^{\circ}$ , about the middle of October, and afterwards receive reinforcements from the northward, until their numbers almost exceed credibility. Many are captured there by the hunters, and the greater part of the survivors cross the Churchill river as soon as it is frozen over, and continue their journey along the coast to Nelson and Severn rivers. In like manner they extend their migrations along the whole Labrador coast to the gulf of St. Lawrence. Most of those which travel far to the southward are destroyed by rapacious animals; and the few which survive to the spring breed in their new quar



ters, instead of returning to the north. The colonies they found are however soon extirpated by their numerous enemies. A few breed at Churchill, and some young ones are occasionally seen in the vicinity of York factory. There are from three to five young ones in a litter."

The trap in which the Arctic Fox is taken by the Esquimaux, is described by authors as simple: it consists of a little hut built of stones, with a square opening on the top, over which some blades of whalebone are extended nearly across so as to form an apparently secure footing, although only fastened at one end, so that when the animal comes on to them to get the bait they bend downward and the Fox is precipitated into the hut below, which is deep enough to prevent his jumping out, the more especially because the whalebone immediately rises again to its position, and the bait being fastened thereto, several Foxes may be taken successively. Other traps are arranged so that a flat stone falls on the Fox when he by pulling at the bait disengages the trigger. These Foxes are also caught in traps made of ice (in which wolves are taken at times by the Esquimaux). These traps are thus described by Dr. RICHARDSON, and are certainly composed of the last material we, dwellers in more favoured lands, would think of for the purpose: "The Esquimaux wolf-trap is made of strong slabs of ice, long and narrow, so that a Fox can with difficulty turn himself in it, but a wolf must actually remain in the position in which he is taken. The door is a heavy portcullis of ice, sliding in two well-secured grooves of the same substance, and is kept up by a line, which, passing over the top of the trap, is carried through a hole at the farthest extremity; to the end of the line is fastened a small hoop of whalebone, and to this any kind of flesh-bait is attached. From the slab which terminates the trap, a projection of ice or a peg of wood or bone points inwards near the bottom, and under this the hoop is slightly hooked; the slightest pull at the bait liberates it, the door falls in an instant, and the wolf (or Fox) is speared where he lies."

In speaking of the *Sooty Fox*, which is only a variety of the present species, Dr. RICHARDSON says: "On one occasion during our late coasting voyage round the northern extremity of America, after cooking our supper on a sandy beach, we had retired to repose in the boats, anchored near the shore, when two Sooty Foxes came to the spot where the fire had been made, and carrying off all the scraps of meat that were left there, buried them in the sand above high water mark. We observed that they hid every piece in a separate place, and that they carried the largest pieces farthest off."



## GEOGRAPHICAL DISTRIBUTION.

Arctic Foxes have been seen as far north on the American continent as man has ever proceeded. They are numerous on the shores of Hudson's Bay, north of Churchill, and exist also in Bhering's straits; towards the centre of the continent in latitude  $65^{\circ}$ , they are seen only in the winter, and then not in numbers. They are very scarce in latitude  $61^{\circ}$ , and at Carlton house in latitude  $53^{\circ}$ , only two were seen in forty years. On the coast of Hudson's Bay, however, according to HEARNE, they arrive at Churchill, in latitude  $59^{\circ}$ , about the middle of October, and afterwards receive reinforcements from the northward. On the eastern coast of America they are found at Labrador, where they have been seen occasionally in considerable numbers; a few have been also observed in the northern parts of Newfoundland, about latitude  $52^{\circ}$ .

On the eastern continent they are found in Siberia, and in all the Arctic regions.

## GENERAL REMARKS.

We have had opportunities in the museums of London, Berlin, and more particularly at Dresden, of comparing specimens of this animal from both continents: we could not find the slightest difference, and have no hesitation in pronouncing them one and the same species.





Audubon, John James and Bachman, John. 1854. "Vulpes lagopus, Arctic Fox [Pl. CXXI, winter and summer pelage]." *The quadrupeds of North America* 3, 89–96. <https://doi.org/10.5962/p.322598>.

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