VULPES VIRGINIANUS.—SCHREBER.

GRAY FOX.

PLATE XXI.—MALE.

V. griseo nigroque variegatus, lateribus et partibus colli lateralibus fulvis, genis nigris.

CHARACTERS.

Gray, varied with black, sides of neck and flank, fulvous; black on the sides of the face between the eye and nose.

SYNONYMES.

FOX OF CAROLINA, Lawson, Car., p. 125.

GRAY FOX, Catesby, Car., vol. ii., p. 78, fig. C.

“ “ Pennant, Synop., p. 157, 114.

CANIS VIRGINIANUS, Schreber, Säugethiere, p. 361, 10 to 92 B, 1775.

“ “ Erxleben, Syst., p. 567, 10, 1777.

“ “ Linn., Syst. Nat., ed. Gmel., vol. i., p. 74, 16, 1788.

“ CINEREO-ARGENTEUS, Erxleben, Syst., p. 576, 9.

“ CINEREO-ARGENTATUS, Say, Long's Expedition, vol. ii., p. 340.

“ VIRGINIANUS, Desm., Mamm., p. 204.

“ CINEREO-ARGENTATUS, Godman, Nat. Hist., vol. i., p. 280, fig. 2.

“ (VULPES) VIRGINIANUS, Rich., F. Boreali A., p. 96.

VULPES VIRGINIANUS, Dekay, Nat. Hist. of New-York, p. 45.

DESCRIPTION.

Head, considerably broader and shorter than that of the red fox, (*Vulpes fulvus*;) nose, also shorter, and a little more pointed; teeth, not so stout; ears, a little longer than in the latter animal, of an oval shape, and thickly clothed with hair on both surfaces; whiskers, half the length of the head. Body, rather thicker and more clumsy in appearance than that of either the swift fox, (*V. velox*;) or the red fox; fur, much coarser than that of the other species. Legs, rather long; nails, strong, slightly arched, visible beyond the fur; soles, with five stout tubercles, not clothed with hair; tail, large, bushy, clothed like the body with two kinds of hair; the fur, or inner hair, being soft and woolly, the outer hairs longer and coarser.

Gray Fox.
Male.

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

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COLOUR.

There are slight differences in the colour of different specimens; we will, however, give a description of one which is of the colour most common to this species in every part of the United States. Head, brownish-gray; muzzle, black; a broad patch of dark brown runs from the eye to the nose, on each side of the face; whiskers, black; inner surface of ears, dull white; outer surface of ears, sides of neck, outer surface of fore-legs and thighs, tawny; a yellowish wash under the throat, and along the sides; chin, and around the mouth, dark-brown; cheeks, throat, and under surface of body, dull white, occasionally tinged with a yellowish shade; under surface of hind and fore-feet, yellowish-brown; upper surface of feet and legs, grizzly black and white; nails, dark-brown. The soft inner fur on the back, which is about an inch and a half long, is for half its length from the roots, plumbeous, and pale yellowish-white at the tips. The long hairs which give the general colour to the body above, are white at their roots, then for more than a third of their length black, then white, and are broadly tipped with black, giving the animal a hoary or silver-gray appearance. It is darkest on the shoulder, along the back and posterior parts. The fur on the tail has a little more fulvous tinge than that of the back; the longer hairs are much more broadly tipped with black. When the fur lies smooth, there is a black line along the upper surface of the tail from the root to the extremity; end of brush, black. Some specimens are a little lighter coloured, having a silver-gray appearance. Specimens from the State of New-York are rather more fulvous on the neck, and darker on the back, than those of Carolina. In some specimens there is a dark spot on the sides of the throat about an inch from the ear.

We possessed for many years a beautiful specimen of a variety of the Gray Fox, which was barred on the tail like the racoon, and had a dark cross on the back like that of *Canis crucigera* of GESNER, which latter is regarded by Baron CUVIER as a mere variety of the European fox.

DIMENSIONS.

Length of head and body	-	-	-	-	-	28 inches.
“ of tail (vertebræ)	-	-	-	-	-	12½ do.
“ “ to end of hair	-	-	-	-	-	14 do.
Height of ear	-	-	-	-	-	2½ do.
From heel to end of nail	-	-	-	-	-	5 do.

HABITS.

Throughout the whole of our Atlantic States, from Maine to Florida, and westwardly to Louisiana and Texas, there are but two *species* of fox known, viz., the red fox, (*V. fulvus*,) and the present species, (*V. Virginianus*,) although there are several permanent *varieties*. The former may be regarded as a Northern, the latter as a Southern species. Whilst the Northern farmer looks upon the red fox as a great annoyance, and detests him as a robber who is lying in wait for his lambs, his turkeys, and his geese, the Gray Fox, in the eyes of the Southern planter, is the object of equal aversion. To ourselves, however, who have witnessed the predatory dispositions of each in different portions of our country, it appears that the red fox is far more to be dreaded than the gray; the latter is a pilfering thief, the former a more daring and cunning plunderer. When they have whelps, the females of both species, urged by the powerful pleadings of their young, become more bold and destructive than at any other time; the red fox produces its young very early in the season, sometimes indeed whilst the snow is still remaining here and there in large banks unthawed on the ground, and becomes more daring in consequence of being stinted for food; whilst the present species, having its young later when breeding in the Northern States, and finding a more abundant supply of food when inhabiting the Middle or Southern States, is less urged by necessity to depredate on the poultry of the planter.

We have never, indeed, heard any well authenticated account of this species having entered the poultry-yard of the farmer; it is true, it will seize on a goose, or a turkey hen, that happens to stray into the woods or fields and make its nest at some distance from the house; but we have not heard of its having attempted to kill pigs, or like the red fox, visited the sheep pasture in spring, and laid a contribution, from day to day, on the young lambs of the flock.

The Gray Fox is shy and cowardly, and the snap of a stick or the barking of a dog will set him off on a full run. Although timid and suspicious to this degree, his cunning and voracity place him in a conspicuous rank among the animals that prey upon other species weaker than themselves. The wild turkey hen often makes an excavation in which she deposits her eggs, at a considerable distance from the low grounds, or makes her nest on some elevated ridge, or under a pile of fallen logs covered over with scrub oaks, ferns, tall weeds and grasses; we have often seen traces of a violent struggle at such places; bunches of feathers scattered about, and broken egg-shells, giving sufficient evidence that the Fox has been there, and that there will be one brood

of wild turkeys less that season. Coveys of partridges, which generally at the dusk of the evening fly into some sheltered place and hide in the tall grass, arrange themselves for the night in a circle, with their tails touching each other and their heads turned outward; the Gray Fox possessing a considerable power of scent, winds them like a pointer dog, and often discovers where they are thus snugly nestled, and pounces on them, invariably carrying off at least one of the covey.

On a cold, drizzly, sleety, rainy day, while travelling in Carolina, we observed a Gray Fox in a field of broom-grass, coursing against the wind, and hunting in the manner of the pointer dog. We stopped to witness his manœuvres: suddenly he stood still and squatted low on his haunches; a moment after he proceeded on once more, but with slow and cautious steps; at times his nose was raised high in the air, moving about from side to side. At length he seemed to be sure of his game and went straight forward, although very slowly, at times crawling on the earth; he was occasionally hidden by the grass, so that we could not see him very distinctly; however, at length we observed him make a dead halt. There was no twisting or horizontal movement of the tail, like that made by the common house-cat when ready to make a spring, but his tail seemed resting on the side, whilst his ears were drawn back and his head raised only a few inches from the earth; he remained in this attitude nearly half a minute and then made a sudden pounce upon his prey; at the same instant the whirring of the distracted covey was heard as the affrighted birds took wing; two or three sharp screams succeeded, and the successful prowler immediately passed out of the field with an unfortunate partridge in his mouth, evidently with the intention of seeking a more retired spot to make a dainty meal. We had a gun with us, and he passed within long gun-shot of us. But why wound or destroy him? He has enabled us for the first time to bear witness that he is not only a dog, but a good pointer in the bargain; he has obeyed an impulse of nature, and obtained a meal in the manner in which it was intended by the wise Creator that he should be supplied. He seized only a single bird, whilst man, who would wreak his vengeance on this poacher among the game, is not satisfied till he has killed half the covey with the murderous gun, or caught the whole brood in a trap and wrung off their necks in triumph. Condemn not the Fox too hastily; he has a more strikingly carnivorous tooth than yourself, indicating the kind of food he is required to seek; he takes no wanton pleasure in destroying the bird, he exhibits to his companions no trophies of his skill, and is contented with a meal whilst you are perhaps not satisfied when your capacious bird-bag is filled.

That this Fox occasionally gives chase to the gray rabbit, pursuing him in the manner of the dog, we have strong reason to suspect. We on one occasion observed a half-grown rabbit dashing by us with great rapidity, and running as if under the influence of fear; an instant afterwards a Fox followed, seeming to keep the object of his pursuit fairly in sight; scarcely had they entered the woods when we heard the repeated cry of the rabbit, resembling somewhat that of a young child in pain, and although we were not eye witnesses of his having captured it by sheer speed, we have no doubt of the fact. We do not believe, however, that the Fox is an enemy half as much to be dreaded by the family of hares as either the Bay lynx, or the great horned owl, (*Strix Virginianus*.)

In the Southern States this species is able to supply itself with a great variety and abundance of food, and is consequently generally in good condition and often quite fat. We have followed the track of the Gray Fox in moist ground until it led us to the scattered remains of a marsh hare, which no doubt the Fox had killed; many nests of the fresh water marsh hen (*Rallus elegans*) are torn to pieces and the eggs devoured by this prowler. In Pennsylvania and New-Jersey, the meadow-mouse (*Arvicola Pennsylvanica*) is often eaten by this species; and in the Southern States, the cotton-rat, and Florida rat, constitute no inconsiderable portion of its food. We have seen places where the Gray Fox had been scratching the decayed logs and the bark of trees in order to obtain insects.

This species is not confined exclusively to animal food; a farmer of the State of New-York called our attention to a field of corn, (maize,) which had sustained no inconsiderable injury from some unknown animals that had been feeding on the unripe ears. The tracks in the field convinced us that the depredation had been committed by Foxes, which was found to be the case, and they were afterwards chased several successive mornings, and three of them, apparently a brood of the previous spring, were captured.

Although this Fox is nocturnal in his habits we have frequently observed him in search of food at all hours of the day; in general, however, he lies concealed in some thicket, or in a large tuft of tall broom-grass, till twilight invites him to renew his travels and adventures.

On a cold starlight night in winter, we have frequently heard the hoarse querulous bark of this species; sometimes two of them, some distance apart, were answering each other in the manner of the dog.

Although we have often seen this Fox fairly run down and killed by hounds, without his having attempted to climb a tree, yet it not unfrequently occurs that when his strength begins to fail he ascends one that is small or sloping, and standing on some horizontal branch 20 or 30

feet from the ground, looks down on the fierce and clamorous pack which soon comes up and surrounds the foot of the tree. We were on one occasion, in company with a friend, seeking for partridges in an old field partially overgrown with high grass and bushes, when his large and active pointer dog suddenly started a Gray Fox, which instantly took to its heels, pursued by the dog: after a race of a minute, the latter was so close upon the Fox that it ascended a small tree, and our friend soon came up, and shot it. We were unable to obtain any information in regard to the manner in which the Fox climbs trees, as he does not possess the retractile nails of the cat or the sharp claws of the squirrel, until we saw the animal in the act. At one time when we thus observed the Fox, he first leaped on to a low branch four or five feet from the ground, from whence he made his way upwards by leaping cautiously and rather awkwardly from branch to branch, till he attained a secure position in the largest fork of the tree, where he stopped. On another occasion, he ascended in the manner of a bear, but with far greater celerity, by clasping the stem of a small pine. We have since been informed that the Fox also climbs trees occasionally by the aid of his claws, in the manner of a racoon or a cat. During winter only about one-fifth of the Foxes chased by hounds will take to a tree before they suffer themselves to be run down; but in summer, either from the warmth of the weather causing them to be soon fatigued, or from the greater number being young animals, they seldom continue on foot beyond thirty or forty minutes before they fly for protection to a tree. It may here be observed, that as long as the Fox can wind through the thick underbrush, he will seldom resort to a tree, a retreat to which he is forced by open woods and a hard chase.

In general, it may be said that the Gray Fox digs no burrow, and does not seek concealment in the earth; we have, however, seen one instance to the contrary, in a high, sandy, pine-ridge west of Albany, in the State of New-York. We there observed a burrow from which a female Gray Fox and four young were taken. It differed widely from the burrows of the red fox, having only a single entrance. At about eight feet from the mouth of the burrow there was an excavation containing a nest composed of leaves, in which the young had been deposited. We have on several occasions seen the kennel of the Gray Fox—it is usually in a prostrate hollow log; we once, however, discovered one under the roots of a tree. In the State of New-York we were shown a hollow tree, leaning on another at an angle of about forty-five degrees, from a large hole in which two Gray Foxes had been taken; they were traced to this retreat by their footsteps in the deep snow, and from the appearance of the nest it seemed to have been their resort for a long time.

This species, in many parts of the country where caves, fissures, or holes in the rocks, offer it a safe retreat from danger, makes its home in such places. Some little distance above the city of New-York, in the wild and rocky woods on the Jersey side of the Hudson river, a good many Gray Foxes abide, the number of large fissures and holes in the rocks thereabouts furnishing them secure dwelling places, or safe resorts in case they are pursued. In this neighbourhood they are most easily killed by finding the paths to their hole, and, after starting the animal, making the best of your way to near the entrance of it, while he doubles about a little before the dogs; you can thus generally secure a shot at him as he approaches his home, which if the dogs are near he will do without looking to see if he be watched. The Gray Fox is frequently caught in steel-traps, and seems to possess far less cunning than the red species; we have never, however, seen it taken in box-traps, into which the Bay lynx readily enters; and it is not often caught in dead-falls, which are very successful in capturing the racoon and opossum.

The Gray Fox does not possess the rank smell of the red fox or the European fox; as a pet, however, we have not found him particularly interesting. It is difficult to subdue the snappish disposition of this species, and we have never seen one that was more than half tamed. It does not at any time become as playful as the red fox, and continually attempts to escape.

This species affords good sport when chased, winding and doubling when in favourable ground, so that when the hunter is on foot even, he can occasionally obtain a "view," and can hear the cry of the pack almost all the while. When started in an open part of the country the Gray Fox, however, generally speeds toward some thickly grown and tangled retreat, and prefers the shelter and concealment of a heavy growth of young pines along some elevated sandy ridge; having gained which, he threads along the by-paths and dashes through the thickets, some of which are so dense that the dogs can hardly follow him. He does not, like the red fox, run far ahead of the pack, but generally courses along from seventy to a hundred yards in advance of his pursuers.

We have been told that the Gray Fox has been run down and caught in the winter season, by a remarkably fleet pack of hounds, in forty minutes; but a two hours' chase is generally necessary, with tolerably good dogs, to tire out and capture him. As many as two or three Foxes have been occasionally caught on the same day by one pack of hounds; but in most cases both hunters and dogs are quite willing to give over for the day, after they have captured one.

From Maryland to Florida, and farther west, through Alabama to Mississippi and Louisiana, fox-hunting, next to deer-hunting, is the favourite amusement of sportsmen, and the *chase* of that animal may in fact be regarded exclusively as a Southern sport in the United States, as we believe the fox is never followed on horseback in the Northern portions of our country, where the rocky and precipitous character of the surface in many districts prevents the best riders from attempting it; whilst in others, our sturdy independent farmers would not much like to see a dozen or more horsemen leaping their fences, and with break-neck speed galloping through the wheat-fields or other "fall" crops. Besides, the red fox, which is more generally found in the Northern States than the Gray species, runs so far before the dogs that he is seldom seen, although the huntsmen keep up with the pack, and after a chase of ten miles, during which he may not have been once in view, he perhaps takes refuge in some deep fissure of a rock or in an impenetrable burrow, which of course ends the sport very much to the satisfaction of—the Fox!

In the Southern States on the contrary, the ground is in many cases favourable for this amusement, and the planter sustains but little injury from the passing hunt, as the Gray Fox usually courses through woods, or worn-out old fields, keeping on high dry grounds, and seldom during the chase running across a cultivated plantation.

Fox-hunting, as generally practised in our Southern States, is regarded as a healthful manly exercise, as well as an exhilarating sport, which in many instances would be likely to preserve young men from habits of idleness and dissipation. The *music* of the hounds, whilst you breathe the fresh sweet morning air, seated on a high-mettled steed, your friends and neighbours at hand with light hearts and joyous expectations, awaiting the first break from cover, is, if you delight in nature and the recreation we are speaking of, most enlivening; and although we ourselves have not been fox-hunters, we cannot wholly condemn the young man of leisure who occasionally joins in this sport; at the same time let him not forget that whilst exercise and amusement are essential to health and cheerfulness of mind; the latter especially was not intended to interfere with the duties of an active and useful life, and should never be more than a relaxation, to enable him to return the more energetically to the higher and nobler pursuits which are fitted for an intelligent and immortal mind.

In fox-hunting, the horse sometimes becomes as much excited as his rider, and at the cry of the hounds we have known an old steed which had been turned loose in the woods to pick up a subsistence, prick up his ears, and in an instant start off full gallop until he overtook the pack,

keeping in the van until the chase was ended. Although exercise and amusement are the principal inducements to hunt the Fox, we may mention that it is also a desirable object in many parts of our country, to get rid of this thievish animal, which exists in considerable numbers in some neighbourhoods.

We will now return to our subject, and try to make you familiar with the mode of hunting the Gray Fox generally adopted in Carolina and Louisiana. The hounds are taken to some spot where the animal is likely to be found, and are kept as much as possible out of the "drives" frequented by deer. Thickets on the edges of old plantations, briar patches, and deserted fields covered with broom-grass, are places in which the Fox is most likely to lie down to rest. The trail he has left behind him during his nocturnal rambles is struck, the hounds are encouraged by the voices of their masters, and follow it as fast as the devious course it leads them will permit. Now they scent the Fox along the field, probably when in search of partridges, meadow-larks, rabbits, or field-mice; presently they trace his footsteps to a large log, from whence he has jumped on to a worm-fence, and after walking a little way on it, has leaped a ditch and skulked toward the borders of a marsh. Through all his crooked ways the sagacious hounds follow his path, until he is suddenly aroused, perchance from a sweet, dreamy vision of fat hens, geese, or turkeys, and with a general cry the whole pack, led on by the staunchest and best dogs, open-mouthed and eager, join in the chase. The startled Fox makes two or three rapid doublings, and then suddenly flies to a cover perhaps a quarter of a mile off, and sometimes thus puts the hounds off the scent for a few minutes, as when cool and at first starting, his scent is not so strong as that of the red fox; after the chase has continued for a quarter of an hour or so, however, and the animal is somewhat heated, his track is followed with greater ease and quickness and the scene becomes animating and exciting. Where the woods are free from underbrush, which is often the case in Carolina, the grass and bushes being burnt almost annually, many of the sportsmen keep up with the dogs, and the Fox is very frequently in sight and is dashed after at the horses' greatest speed. He now resorts to some of the manœuvres for which he is famous; he plunges into a thicket, doubles, runs into the water, if any be at hand, leaps on to a log, or perhaps gets upon a worm-fence and runs along the top of it for a hundred yards, leaping from it with a desperate bound and continuing his flight instantly, with the hope of escape from the relentless pack. At length he becomes fatigued, he is once more concealed in a thicket where he doubles hurriedly; uncertain in what direction to retreat, he hears, and perhaps sees, the dogs almost upon

him, and as a last resort climbs a small tree. The hounds and hunters are almost instantly at the foot of it, and whilst the former are barking fiercely at the terrified animal, the latter determine to give him another chance for his life. The dogs are taken off to a little distance, and the Fox is then forced to leap to the ground by reaching with a long pole, or throwing a billet of wood at him. He is allowed a quarter of an hour before the hounds are permitted to pursue him, but he is now less able to escape than before; he has become stiff and chill, is soon overtaken, and falls an easy prey, turning however upon his pursuers with a growl of despair, and snapping at his foes until he bites the dust and the chase is ended.

The following anecdotes of the sagacity of this animal, we hope, may interest our readers. Shortly after the railroad from Charleston to Hamburg, South Carolina, had been constructed, the rails for a portion of the distance having been laid upon timbers at a considerable height from the ground, supported by strong posts, we observed a Fox which was hard pressed by a pack of hounds, mounting the rails, upon which he ran several hundred yards; the dogs were unable to pursue him, and he thus crossed a deep cypress swamp over which the railroad was in this singular manner carried, and made his escape on the opposite side. The late BENJAMIN C. YANCEY, Esq., an eminent lawyer, who in his youth was very fond of fox-hunting, related the following: A Fox had been pursued, near his residence at Edgefield, several times, but the hounds always lost the track at a place where there was a foot-path leading down a steep hill. He, therefore, determined to conceal himself near this declivity the next time the Fox was started, in order to discover his mode of baffling the dogs at this place. The animal was accordingly put up and chased, and at first led the hounds through many bayous and ponds in the woods, and at length came running over the brow of the hill along the path, stopped suddenly and spread himself out flat and motionless on the ground; the hounds came down the hill in pursuit at a dashing pace, and the whole pack passed and did not stop until they were at the bottom of the hill. As soon as the immediate danger was over, the Fox, casting a furtive glance around him, started up, and ran off at his greatest speed on his "back track."

The Gray Fox produces from three to five young at a time. In Carolina this occurs from the middle of March to the middle of April; in the State of New-York they bring forth somewhat later. Gestation continues for about three months.

GEOGRAPHICAL DISTRIBUTION.

The Gray Fox is scarce in New-England, and we have not heard of it to the north of the State of Maine; in Canada we have heard of its occasional, but rare appearance. In the vicinity of Albany, N. Y., it is not an uncommon species; south of this, through Pennsylvania and New Jersey, it is about as abundant as the red fox. In the Southern States, except in the mountains of Virginia, it is the only species and is abundant. It exists plentifully in Florida, Mississippi, and Louisiana; it is found on the prairies of the West, and we have received a specimen from California, scarcely differing in any of its markings from those of Carolina.

GENERAL REMARKS.

This species was noticed by LAWSON, CATESBY, and PENNANT. SCHREBER, in 1775, gave it a specific name; he was followed two years afterwards by ERXLEBEN, and in 1788 by GMELIN. In the meantime ERXLEBEN, SCHREBER, and GMELIN published a variety of the Gray Fox, which was a little more cinereous in colour, as a new species, under the name of *Canis cinereo-argenteus*. RICHARDSON was correct in having applied the specific name of *Virginianus* to the Gray Fox, but he erred in referring the Western kit-fox or swift-fox, (*V. velox*), to *C. cinereo-argentatus*. To us, the short description of these authors, of *C. cinereo-argentatus*, appears to apply more strictly to the Gray Fox than to their accounts of *C. Virginianus*, the latter, we know, is intended for the present species, as it is the only fox in Virginia, with the exception of the red fox, which exists sparingly in the mountains. The views of DESMAREST in regard to our American foxes are very confused, and the translation by HARLAN partakes of all the errors of the original. RICHARDSON did not meet with this species in the Northern regions he visited, and on the whole, very little has been said of its habits by any author.

Audubon, John James and Bachman, John. 1851. "Vulpes Virginianus, Gray Fox [Pl. XXI, male]." *The quadrupeds of North America* 1, 162–172.

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