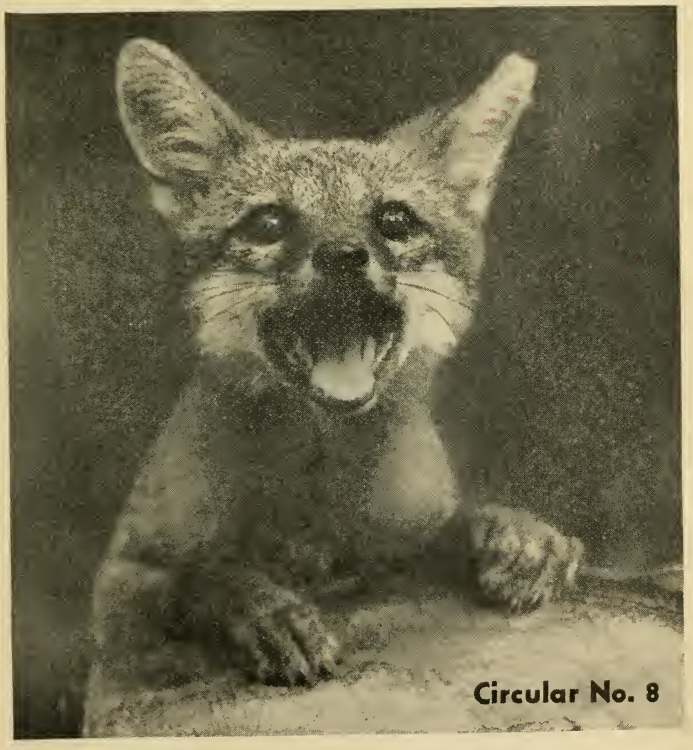
Capturing Foxes



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FISH AND WILDLIFE SERVICE
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CAPTURING FOXES

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INTRODUCTION

The increase in the population of foxes during recent years has stimulated interest in methods of catching them and reducing their numbers in areas where they have become too abundant. When they are not held in check by sportsmen with guns and dogs and by fur hunters, they often become very destructive to poultry, game, and some other animals of economic importance. Heavy infestations of foxes menace human beings and domestic stock through spreading, in infected areas, the dread disease known as rabies, which may originate in an area from domestic dogs.

This circular summarizes general information on foxes and gives instructions for trapping and other methods of taking them. The suggestions on trapping may also aid the fur hunter. Den hunting should be carried on only when a more or less extensive control program is necessary. Foxes in moderate numbers are not excessively destructive, and, in fact, do some good through consumption of mice and other creatures that damage crops. Individual foxes, however, that prey on poultry or other domestic animals should be removed by trapping.

FOXES AND THEIR CHARACTERISTICS

In the territory to which this circular applies, mainly the United States, there are found two genera of foxes: the red fox (*Vulpes*) and the gray fox (*Urocyon*). Another genus, the Arctic fox (*Alopex*), inhabits the northern wastes of North America from Greenland and Labrador to Alaska.

The red foxes are divided into 2 groups: The true red foxes (*Vulpes fulva*) and the kit and desert foxes (*Vulpes velox*). In the former group there are in the United States and Canada 12 species and

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subspecies, and in the latter, 7. The general color of all these forms is reddish yellow. In the true red foxes there are 3 distinct color phases. The common one is red, another is black or silver, which is a black with silver-tipped hairs, and the third is the cross, which is intermediate between the red and the black, having a dark band down the back and another across the shoulders forming a cross, which gives the variety its name. These 3 color phases may occur in the same litter. All the true red foxes have a large bushy tail, the tip of which is usually white, and most of them have white throats. The males are larger than the females, the range of weights of adult animals being 8 to 14 pounds, the average 10 pounds.

The red foxes avoid both heavily forested areas and brushless plains, preferring fairly open country with moderate cover. Such conditions prevail on farm lands, where these foxes are commonly found. Foxes are most active at night, but may often be seen during the day. Generally, they do not have a home range with a greater radius than 5 miles, but some individuals may wander more extensively.

The kit and desert foxes are small animals (weighing 4 to 5½ pounds) and are not of much economic importance in the plains and desert areas in which they live.

Of the gray fox (*Urocyon*), 14 species and subspecies are recognized in the United States and Canada. These foxes are slightly smaller than those of the *fulva* group of red foxes and have shorter muzzles and longer legs. In general, their color is grizzled gray above and white to ashy gray below.

The gray foxes are neither so cunning nor so bold as are the true reds, but they have more of these qualities than do the kit foxes. When chased by dogs, they scurry into burrows or other hiding places, or sometimes climb into accessible trees, being much better climbers than are the other kinds of foxes.

The characteristics and habitats of the three groups of foxes occurring in the United States are outlined in table 1.

The distribution of the three groups of foxes is shown in figure 1. It will be seen that the ranges of the groups overlap considerably, but, in general, the gray foxes are found more abundantly in warmer, and the true red foxes in colder, regions. The kit and desert foxes inhabit the dry or desert areas of the Plains and Southwestern States.

TABLE 1.—*Characteristics and habitats of the 3 groups of foxes occurring in the United States*

Group	Coloration			Weight of adults		Habitat
	Upper parts	Under parts	Tip of tail	Range	Average	
				Pounds	*Pounds*	
Red	Reddish	White	White	8–14	10	Open timbered and farm lands.
Kit and desert	Yellowish gray	White (throat)	Black	4–5½	4½	Brushy, prairie, and desert lands.
Gray	Grizzled gray	White to ashy gray.	Dark gray	7–11	8	Lightly timbered, brushy, and swampy areas in the warmer regions.

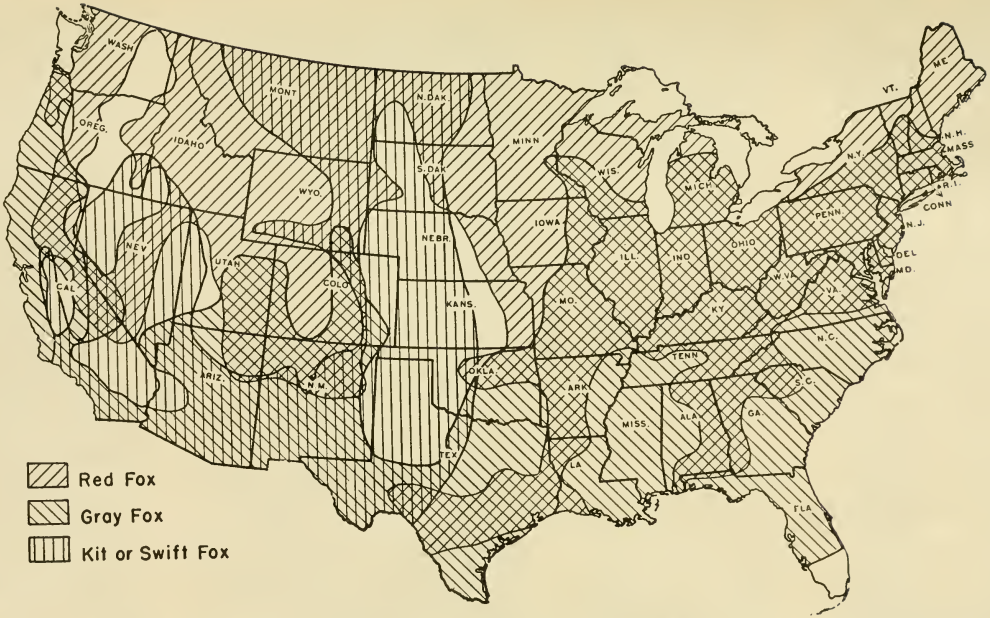

Figure 1.—Composite map showing the distribution of foxes in the United States. The red foxes in the extreme southern areas are from introductions. The gray fox has recently extended its range northward. The kit fox has been extirpated from much of its former range, particularly toward the east.

BREEDING HABITS

The breeding and rearing season of foxes extends from February through May. The gestation period is about 51 days. There are 4 to 10 young (average 5) in a litter, and normally there is only 1 litter a year.

The den is usually in a burrow dug in the ground, but may be in a hollow log or under rocks. No nesting material is provided. The pups are ready to come to the entrance of the den when 5 weeks old, and generally abandon the home den when 8 to 10 weeks of age.

FOOD HABITS

All species of foxes feed mainly on rabbits, hares, ground squirrels, mice, poultry, birds, and insects. Their next choice is such fruits as grapes, figs, dates, and wild berries. In addition, the gray fox takes fishes and the desert fox reptiles, forms the red fox does not often eat. Foxes may at times become very destructive to turkeys, chickens, and lambs. In July 1944, in Yamhill County, Oreg., they killed 205 turkeys and 104 chickens on 4 ranches. During the year 1944, in Louisiana, 1,379 head of livestock were reported as lost through fox depredations. Other States at the present time are having similar losses.

RABIES AMONG FOXES

Since 1940 several outbreaks of rabies have occurred among foxes in Georgia, Alabama, Mississippi, Louisiana, Arkansas, and Maryland. In Burke County, Ga., in 1940, many people were bitten by rabid foxes, and livestock suffered heavy losses before the outbreak was suppressed. In Clarke County, Ala., in 1944, there was an outbreak of rabies among foxes, in the suppression of which during 3½ months 1,188 foxes were taken in an area of 1,216 square miles. This degree of fox population is too great for the good of the foxes or the community. During that period 15 people in the county took the Pasteur treatment, and the losses of cattle, horses, mules, hogs, and goats were heavy for that area. Suppressive measures have been necessary in other States where rabid foxes have been found. During 1944 in 12 counties and parishes of Louisiana, Mississippi, and Arkansas, in which rabies was present among foxes, 405 domestic animals, valued at $28,295, were bitten and died. Ninety-eight people were bitten and took the Pasteur treatment.

FUR QUALITIES

The fur of the red fox is of much better quality than that of the kit and the gray foxes. The silver and cross foxes of the red group, which are found mostly on fur farms, are especially valued for their novel colors. In areas where it is necessary to reduce the number of foxes because of economic losses or the presence of rabies among them, the foxes should be trapped heavily, if possible, during the period when the fur is prime, which is generally from November through January in the Northern States and from December through January in the South. These periods usually fall within the open seasons for taking foxes in those States that have regulations for the protection of these animals.

The fur of the gray fox has only about a fifth of the value of that of the red fox, and the pelt of the kit fox about half the value of that of the gray, being coarser, shaggy, and with the underfur less thick and soft.

METHODS OF CAPTURE

Foxes may be taken by trapping, by sportsmen coursing with dogs, by locating the dens and destroying the pups, and by shooting. Sportsmen derive much sport from coursing the red fox with dogs. The gray fox generally does not abide the chase long, but will climb a convenient tree or crawl into a hollow log or burrow. The kit fox offers little sport through chasing by dogs.

TRAPPING

TRAPS AND THEIR CARE

The No. 2 coil-spring steel trap (fig. 2) and the No. 2 double-spring steel trap, shown in figure 5, are of convenient size and type for use

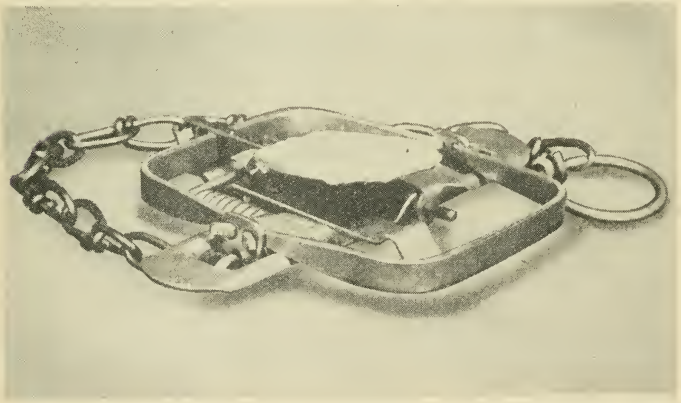

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Figure 2.—A No. 2 coil-spring steel trap open ready to set. The springs are in the base of the trap. One coil can be seen in one corner of the trap. The trap has a chain of convenient length which can be attached to a swivel link fastened to a stake.

in trapping foxes. The size 3 double-spring steel trap can be employed though it is larger than necessary. These traps are provided with a short chain which can be fastened to a stake about 18 inches long driven into the ground, or to a suitable drag. It is usually better to use a stake to save time looking for the trapped animal.

As foxes, particularly red foxes, are keen-scented and cautious, both new and old traps that may have odors repellent to the animals, such as oils and gasoline fumes, should be boiled for half an hour or more with twigs of spruce, fir, hemlock, birch, sagebrush, sassafras, or other scented growths.

LOCATING TRAVEL WAYS

Selecting the location for trap sets is very important and for best results requires knowledge of the habits of the animals and careful observations to detect their lines of travel. Persons who are planning to trap should keep a sharp lookout throughout the year for fox dens, hunting grounds, trails, and other signs of foxes. In logged-over or partially cleared tracts, sandy wastelands, or ravines bordered by forests or woodlots, there may be seen telltale "signs" of the presence of foxes. Fox signs may also be found on trails, roads, ditches, and terraces in cultivated fields and pasture lands. These signs include tracks in dust, sand, mud, and snow; hair around burrows and on fences and other objects brushed against; droppings; and "scent posts."

When looking for fox signs and places to set traps, the trapper should avoid as much as possible making tracks along the travel ways of foxes, for their inherent fear of man may cause them to desert that trail for a time.

SELECTING TRAP SITES

There are several suitable types of trap sites. At the juncture of travel ways is a good location for a trap. At a place in a trail where a stick or small log causes the fox to break its step is another. Where the trap should be set can usually be determined from the location of the tracks. A natural widening in a trail makes a good site, the trap being placed 6 or 8 inches from a small shrub or clump of grass at the border of the trail (fig. 3). A scent should be used to attract the fox to the set.

A decaying carcass along fox travel ways acts as a lure, and trails to it may be found on which traps can be placed. A good place for a trap is on a nearby mound slightly higher than the general level of the surface of the ground upon which the fox can stand and look at the carrion. If the carcass is in a depression, like a gravel pit, the trap should be placed on the rim, for foxes circle a carcass, observing it from vantage points. An excellent location along travel ways is near a natural scent post where the foxes come to urinate. Such places are at small clumps of grass or bushes or at fence corners and fence posts.

SETTING TRAPS

The trapper should be equipped with a trowel; a sharpened piece of angle iron or a prospector's pick; a "setting cloth" of canvas, sheepskin, or calf hide about 3 feet square; a "trap pad" or "pan cover"; a bottle of scent; a small hand ax; and the trap. If the setting cloth and the trap pad are made of new canvas or have human scent on them, they should be spread out and buried in the ground or in a manure pile for several days. If gloves are worn while making the set, they should be used for this purpose and for no other.

In making a set, select a spot so that the pan of the trap will be about 8 inches from the bush or grass tuft along the trail. When the double-spring trap is used, the springs should be bent back and extended toward the bush. Place the setting cloth at a distance convenient for kneeling upon it while working. Dig a hole large enough

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Figure 3.—A trapper walking by the side of a trail being used by foxes recognizes a good location for a trap near a tuft of grass at the edge of the trail.

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Figure 4.—A No. 2 double-spring steel trap partially set in position in the hole made in the ground for it. The base of the trap is about 8 inches from the base of the clump of grass; the springs are bent back and extended toward the clump; and the trap pad is in place over the pan. The chain is buried in a small hole next to a stake driven into the ground out of sight at the end of one of the springs.

to contain the trap (fig. 4), putting the soil removed on the setting cloth. The cavity may be made deep enough so that the chain can be folded beneath the trap and the stake driven into the ground out of sight nearby. Set the trap level and solidly so that it will not tip if the fox should step on the jaws. Firmly embed the base and fill in with earth under the jaws, being careful to keep the space beneath the pan clear. Cover the pan with the trap pad, placing the ends of the pad beneath the jaws, as shown in figure 4. Cover the entire trap with earth free of sticks and stones, placing the surface soil first removed and put on the setting cloth on the top so that the ground above the trap will appear as natural as possible and blend with the surroundings (fig. 5). The soil or dust over the trap should be about half an inch deep and its surface slightly below that of the surrounding ground. The fox is less likely to scratch and expose the trap without springing it if there is no mound over it.

A few drops of scent should then be placed on the small bush or plant near which the trap is set. The scent may be put on a small wad of wool or cotton placed at the base of the bush about 8 inches from the trap in such a manner that it will not blow away or be carried off by mice or birds. A stick or a piece of bark may be used to cover it. The trapper should then pick up the setting cloth with whatever dirt remains on it, and scatter the dirt at some distance from the trap. With a stick or a bunch of weeds or grass he should brush over the spot where the cloth was resting so that the area around the trap will appear natural.

The bush should be rescented every third day in wet weather and every fourth or fifth day during dry periods. For carrying liquid scent, a bottle of suitable size equipped with a medicine dropper will be found convenient. Semisolid scent material may be carried in a wide-mouthed bottle. Places where foxes have been caught are often good for resets because of the scent left by the animal trapped.

A scent may be made by grinding trout, eel, carp, or other oily fish and placing the material in a strong container provided with a small vent to permit gases to escape but no flies to enter. There it should remain for 1 to 4 weeks, or until the flesh has decayed. To each pint of this material add 1⅓ ounces of glycerine, mixing thoroughly. This mixture can be used as it is, but is improved by the addition of one-third of a teaspoonful of pulverized beaver castor to each pint.

Another scent useful in alternating with the putrid scent is made by collecting from fox carcasses or captive animals a pint of urine and mixing with it 5 grains of zinc valerate and 1 grain of beaver castor. This solution should stand for 12 hours or longer before it is used.

Scent stations may be used to draw foxes off a travel way if for some reason it is not advisable to set the trap in a trail. In such cases, a larger quantity of scent should be applied.

Instead of using scent, a trap may be baited by burying a small piece of meat beneath the trap. The tainted body of a woodchuck, rabbit, ground squirrel, prairie dog, or chicken may be used and the

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Figure 5.—The set trap at the edge of the fox trail has been covered with earth and the area above it made to blend with the surroundings. The trapper is placing a few drops of scent on the bush near the buried trap.

trap set as has been described. This is also a good method of baiting for a snow set.

When a fox trail leads to a narrow, shallow, sluggish stream, or shallow spring, a set may be made in the water. Several weeks before the trapper plans to begin trapping, he should set a stone or chunk of turf in the water about 2 feet from the bank so that it extends slightly above the surface and is in line with the place where the foxes have been coming up to the water. Then midway between the stone or piece of turf and the bank, he should build up a pile of mud from the bottom of the stream or pool until it is nearly level with the surface and cover the top with moss so that it extends just above the water. When ready to trap, he should lift off the moss, embed the trap in the mud as has been described, and place the moss back over the trap.

When traveling the trap lines, the trapper should not approach the trap sets any nearer than is necessary to see if they are still undisturbed. He should leave as few traces of his visit as possible. Trap lines should be visited daily.

The pelt of a fox should always be cased. An experienced trapper can quickly show how this should be done. It is important to learn how to do this well and how to dry and prepare the skin for sale, for the condition of the skin greatly affects the price. A good description of pelting is given in The Fox in New York, by Clayton B. Seagears.

DEN HUNTING

When it is necessary to reduce the fox population rapidly, den hunting with destruction of the pups is advised as a supplement to other methods. The proper time to hunt dens is from the latter part of April through June, depending on the section of the country, generally later the farther north the area is situated. This work should be systematic and thorough. It requires keen observation, persistence, and a knowledge of the habits of foxes.

Foxes may make their dens on high knolls, in a bank or hillside, in stone piles or old strawstacks, or even in level land. Elevated places, however, are generally favored. Foxes, as a rule, prefer to enlarge abandoned badger, skunk, or rabbit burrows rather than to dig new holes for dens.

Certain signs indicate to the hunter that a den is nearby. Fox tracks may lead from a main trail, or scattered tracks may run together into a well defined path, toward a den. If the trapper sees the parent foxes and they appear nervous and excited, he may be reasonably sure that a den is nearby. On observing him, the foxes may circle about the den, singly or in pairs, appearing and disappearing in the distance. They may bark at him and try to attract him away from the den. A good hunter will soon recognize these and other tricks and indications of the existence of a den. Areas in which foxes have denned previously should be systematically hunted for holes that have the appearance of fox dens.

DESTRUCTION OF PUPS

When an occupied den is found, all the entrances should be closed except one from which it is intended to take the pups. This entrance should also be closed if the hunter cannot remove the pups at once,

for otherwise the parent foxes may move them to another den while he is away. The holes should be plugged with rocks, heavy brush, or other materials that the foxes cannot remove.

Sometimes when the den is shallow the pups can be dug out and destroyed easily. The work, however, may be difficult if the den has a long deep tunnel leading to the lair. If the hunter does not wish to take the time to dig out the pups, he may set traps in the tunnels below the entrance plugs and catch the pups as well as the adults if they are in the den. Traps should also be set on the mounds of the den to catch the parent foxes if they are not at home.

If it is not desired to know the number or size of the pups, they may be gassed in the burrow through a 6-foot piece of hose, one end of which is attached to the exhaust pipe of an automobile and the other put down into the den. All burrow entrances should be closed and the motor allowed to run for 15 minutes with the carburetor set for a rich mixture. Another gas that may be employed is carbon bisulphide. A wad of cotton or other absorbent material the size of a baseball is saturated with the carbon bisulphide and rolled down into the burrow, and all entrances closed. As this material is inflammable, the hunter should not smoke while using it. Calcium cyanide in the dust, granular, or flake form may also be used. A heaping tablespoonful should be placed well down into the burrow and all entrances closed. After gassing the den, traps should be set on the mounds at the burrow entrances to catch parent foxes that may be outside.

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