

service in ACTION

Trapping depredating coyotes¹

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Quick Facts

Coyotes cause an annual loss of approximately \$2,000,000 to sheep producers in Colorado. Foot-hold traps that range in size from #1.75 coil-spring to #3N long-spring with offset jaws work well for capturing coyotes. Capture success is increased by setting traps near coyote tracks or droppings that indicate areas of frequent use. To avoid capturing non-target animals, increase the weight required to spring traps, carefully select sites where traps are set, and cover baits placed in dirt holes. To minimize injuries, use padded or laminated traps and check them daily.

foot injuries and increase the risk of escape. Conibear traps are not recommended because coyotes may avoid them and non-target animals can be killed. Coyotes usually do not enter cage or box traps.

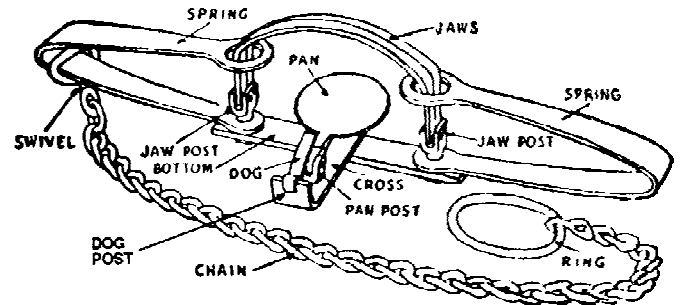


Figure 1. Components of a long-spring foot-hold trap.

A trap contains several major components (see Figure 1). The trap jaws restrain the foot of a captured animal. The springs provide tension on the jaws and hold them shut. A trap pan and dog serve as the trigger mechanism.

Introduction

The coyote (*Canis latrans*) is a 20- to 40-pound omnivore that feeds primarily on mammals, birds, insects and fruits. They kill an estimated 1 percent to 2.5 percent of the domestic ewes and 4 percent to 8 percent of lambs resulting in an annual loss of approximately \$2,000,000 to sheep producers in Colorado.

Equipment

Foot-hold traps ranging in size from #1.75 coil-spring to #3N long-spring with offset jaws work well for capturing coyotes. Traps without offset jaws may cause

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1. Service in Action 6.518, Cooperative Extension, Colorado State University. Revised August 1993. Copyright 1993. For more information, contact your county Cooperative Extension office.
2. Colorado State University Cooperative Extension wildlife specialist and associate professor, fishery and wildlife biology. The term "plates" refers to color photographs that can be displayed on screen from CD-ROM. They are not included in the printable document.

When an animal places its foot on the pan, it releases the dog and the jaws close.

A 3/8-inch to 1/2-inch diameter stake that is 20 inches to 28 inches long holds the coyote at the capture site. Commercial stakes (available from some trap suppliers) with a welded bead or enlargement about 4 inches from the bottom are more difficult for coyotes to pull out of the ground. If the ground is too rocky to use a stake and if trees and shrubs are abundant, attach a drag (Figure 2) to a 5-foot or longer chain to restrain the coyote. Stakes or drags are attached to the trap with a cold-shut chain-repair link, a chain, and swivels that prevent the chain from twisting together while restraining the coyote.

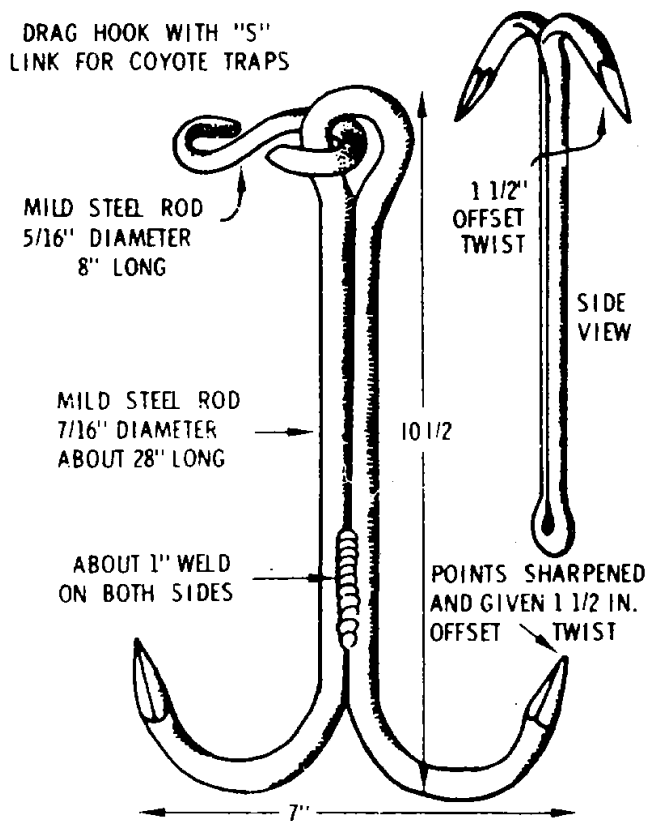


Figure 2. Configuration of a drag used to constrain coyotes.

Preparing Traps

Boil new traps in a lye or a strong detergent solution, or place in a dishwasher to remove oil. Then place the traps in a moist area outdoors until they develop a light film of rust that allows a dye to adhere to the traps. Next, boil the traps for about one hour in a commercial trap dyeing or walnut/hickory hull solution, or dip the traps in a liquid trap dye. Remove thick rust from old traps with a wire brush before dyeing. Then dip traps in a commercial trap wax to prevent rusting.

ZRC, a cold-galvanizing solution, can be sprayed on traps after removing oil to protect them from rusting. The

coating lasts longer than dye and wax and eliminates boiling traps. ZRC is manufactured by ZRC Products Company, Quincy, Massachusetts, and is available from some trap suppliers.

Where To Trap

To increase capture success, set traps near coyote tracks or droppings that indicate areas of frequent use. On the open plains, good locations to set traps are near fence lines, tree rows, edges between two habitat or crop types, livestock trails, pasture gates, pond dams, waterways, draws, and knolls. In mountainous areas, good locations are near livestock trails, pasture gates, fence lines, and saddles between mountains. A good place to set traps is at least 50 yards away from livestock carcasses. Place traps near and on the prevailing upwind side of the trail, or other paths that coyotes follow. An attractant is placed on the prevailing upwind side of the trap so that the wind blows the scent to the coyote as it moves through the area. The coyote frequently moves upwind to investigate the source of the smell and encounters the trap.

Set traps on level ground, in fairly open areas near a clump of grass, cow chip, bone, rodent hole, or other fairly prominent object that coyotes are likely to investigate. Avoid setting traps where people can readily view captured animals. Place the location and number of traps on a map so all animals and traps can be found.

Setting a Trap

Once the trap site is chosen, place a 2-foot by 3-foot plastic or canvas kneeling pad on the ground near the trap site. Wear clean leather or cloth gloves to reduce human odor on the traps and to protect from sand burs and stickers. Set the trap so the pan is about 9 inches from the object on which the scent is placed. Dig a hole to accommodate the trap so there is a slight depression over the trap pan after it is covered with 1/8 inch to 1/4 inch of sifted soil. Dig the hole with a trowel, trapping hammer or a hatchet. Remove the loose soil and place it on the kneeling cloth.

Set the trap by forcing the springs downward, opening the jaws, placing the dog over jaw and securing it under the trap pan. Release the springs. Adjust the pan so it is level with the top of the jaws and travels only a short distance before it releases the dog and jaws. If this is not done, the trap dog post may need to be bent. On a long-spring trap, position the springs toward the dog-side of the trap so that the jaws set flat.

Drive the stake deep enough in the bottom of the hole so that the trap does not rest on it. In loose soil, such as sand, it may be necessary to cross-stake the trap with two stakes driven at 60 to 90 degree angles and with the stakes attached at the top.

Place the chain under the trap or along the trap springs. Put the trap in the hole and apply downward pressure while moving it back and forth so it sits firmly. Lift the "free" jaw of the trap up to place a pan cover over the pan. The pan cover, made from plastic bags, denim, or canvas, prevents soil from filtering under the pan and allows the trap to spring. The cover should be as wide as the diameter of the jaws and about 2 inches to 3 inches longer than the width. Make a 2-inch to 3-inch cut in the center of the long side of the pan cover. Place the cover over the pan from under the free jaw to protect fingers if the trap accidentally fires. Place the cut portion of the cover around the trap dog so that the dog can move without binding on the pan cover (Plate 1). Stretch the cover firmly, secure in place, and cover with sifted soil. Place a 2 1/2-inch square piece of fiberglass insulation below the pan instead of using a pan cover. However, in moist soil and cold weather, the insulation may freeze and prevent the trap from springing.

Put the soil removed from the hole for the trap bed in a commercial or home-made 8 inches by 10 inches by 2-inch deep wooden sifter with 1/4 inch or smaller hail screen attached to the bottom. Sift the soil, preferably dry and fine, over the trap and chain. The sifter prevents stones, sticks, and clods from falling on the trap and possibly keep the jaws from closing. Pack the sifted soil along the outside of the jaws and smooth over the trap with a brush or trowel. Brush out all tracks and discard excess soil at least 10 feet away.

Place small twigs or a few marble-sized stones around the trap just outside the jaws to guide the coyote's foot onto the pan. Crush some fine grass and lightly drop over the trap so the area looks natural.

For a lure, place about 10 drops of coyote urine or a commercial lure on a clump of grass 9 inches behind the trap pan. Place the urine about 10 inches above the ground and the lure a few inches above the ground.

After a coyote is captured, reset the trap in the same location or move next to the disturbed area. Traps usually are set for several days before moving them to new locations.

Dirt Hole Set

Follow the above procedure to make a dirt hole set, except dig a 2-inch to 3-inch diameter and 8-inch deep hole between the covered trap and clump of grass. Dig the hole at a 45-degree angle from upright and slanted toward the trap. Place the soil outside the hole to form a "V" with the point of the V at the hole and extend along the outside of the jaws to guide the coyote's foot onto the pan. The hole usually is dug 6 inches to 9 inches from the trap pan. Place the trap closer to a more upright hole. Put a food-type bait or lure in the hole and cover with grass. Place a few drops of coyote urine or lure on the

grass backing. The hole and lures serve as attractants to coyotes.

Trapping During Freezing Weather

To prevent traps from freezing in the ground, cover them with peat moss, dry manure, dry soil, or three or four parts of dry soil mixed with one part of potassium chloride, calcium chloride, or pickling salt. If a salt is used, wax the traps or treat with ZRC to reduce rusting. Add a thin layer of dry soil to prevent the peat moss from blowing away, and to make the area look natural.

Foreign Odors at Trap Sites

Avoid contaminating the trap and site with unnecessary odors, such as cigarette butts, because they may cause coyotes to avoid the traps. Wear clean clothes and avoid wearing shoes or gloves that smell like gasoline or grease. During warm months, set traps during the morning or evening when the trapper is least likely to perspire. Avoid getting lures and other attractants on gloves and tools used for trapping. If these odors are transferred to the traps or trap beds, coyotes may uncover them. Check traps from a distance to minimize the amount of human odor at the trap site.

Lures and Attractants

Apply commercial lures or coyote urine on a clump of grass, bone, or cow chip near the trap once or twice a week. Generally, Carman's Canine Call, W-U lure (trimethylammonium decanoate plus sulfides), SFE (abbreviated synthetic fermented egg), and O'Gorman's Long Distance Call lure are the most effective attractants.

Legal wildlife that can be used as bait in Colorado are jackrabbits, the carcass or parts of skinned furbearers, carp, shad, and suckers (except the razorback sucker), and the non-edible portions of legally obtained game mammals, birds and sport fish. Fetid or fresh parts of jackrabbits, beaver, and muskrats can be placed in a dirt hole and covered with grass to attract coyotes.

To capture coyotes that avoid or dig up traps, clean traps, use different attractants and wear clean gloves and rubber boots to reduce odors at the trap site. If a coyote is consistently digging up a trap, a second trap set about 1 foot downwind from the first trap and in line with the coyote's usual approach will frequently capture the coyote.

Avoiding Non-target Animals

1. To significantly improve trap selectivity, increase the pan tension, which increases the weight required to spring traps. Traps with increased pan tension eliminate

the capture of 92 percent to 100 percent of smaller animals such as kit foxes, swift foxes, gray foxes, striped skunks, opossums, and black-tailed jack rabbits.

Unmodified traps exclude only 6 percent of the non-target animals.

Pans are held on most traps with screws that tighten to create 4 pounds to 5 pounds of resistance. A leaf spring, manufactured by Woodstream Corporation, can be secured below the pan to increase the pan tension on long-spring traps. A pan tension device can be made from a 1/2-inch-wide metal tape measure that is cut and placed over the springs and below the pan of a long-spring trap. Pan tension devices may be slightly less efficient for capturing coyotes. However, the reduction in small animals captured will leave more traps available for capturing coyotes.

2. Carefully select sites where traps are set, such as outside pastures, to avoid capturing livestock and other non-target animals.

3. Avoid setting traps within 50 yards of animal carcasses to prevent capturing eagles, crows, magpies, vultures and other non-target animals. The use of ground set leghold traps is prohibited within 30 feet of the exposed carcass (meat and internal organs of game wildlife and domestic animals, but does not include bones, hides, or other non-edible parts) of any game wildlife or domestic animals, except for traps equipped with pan-tension devices and used to take animals causing damage to livestock. Scent post or dirt hole sets placed upwind and at least 50 yards from a carcass are successful for capturing coyotes but generally avoid non-target animals.

4. Coyotes often place their front feet about 9 inches from the scent when investigating it. Placing the trap pan 9 inches from the scent improves the chance of capturing coyotes and minimizes the chance of trapping smaller canids such as fox, which usually step closer than 9 inches to the lures.

5. Cover baits placed in dirt holes with grass or leaves instead of exposing to avoid capturing birds that are attracted by sight.

6. Avoid setting traps in urban areas, near residences, or other areas where dogs and cats frequent.

7. Use padded foot-hold traps if there is even a slight possibility of capturing pets.

8. Avoid setting traps in trails where tracks indicate other wildlife are traveling. Attract coyotes away from trails with baits and lures. On public lands, it is illegal to use leghold traps on, or within 50 feet of either side of, officially designated and marked trails that start in or immediately adjacent to any municipality for a distance of 500 yards, unless such traps are placed in the water or off the ground. On all other public lands, the use of leghold traps is prohibited on or within 15 feet of either side of officially designated and marked trails unless such

traps are placed in water or off the ground.

9. Avoid setting traps near fences where dogs might be captured and entangled in the fence.

10. Check traps regularly. Within any city limits or any areas annexed into a city, Colorado Division of Wildlife requires that traps be checked at least once daily unless mechanical means are provided to kill trapped animals. In all other areas, traps must be visually checked at least once every other day unless mechanical means are provided to kill trapped animals. Checking traps every 24 hours (early morning) minimizes the amount of time animals are left in traps, allows non-target animals to be released unharmed and for more coyotes to be captured.

11. Avoid setting traps where hunting dogs might be captured during waterfowl and upland game bird seasons. It is illegal to set traps with a jaw spread of 5 1/8 inches or greater from October 1 through the last day of the upland game bird season on many state of Colorado wildlife areas.

12. Number 3 or larger foot-hold traps are prohibited along portions of the Gunnison, Piedra, San Juan, and Dolores Rivers and some of their tributaries to protect river otters.

13. Remove all traps at the end of the season or when they cannot be checked regularly.

Releasing Non-target Animals from Traps

If furbearers or other wildlife are captured out of season or if trapping is not a legal method of harvesting, the wildlife cannot be killed and must be released immediately. Report injured animals, such as raptors, to the Colorado Division of Wildlife and if needed, take to a rehabilitation center. If non-target wildlife are found dead in a trap, deliver the entire carcass to the Colorado Division of Wildlife within five days.

Trappers should always carry a catch pole or slotted panel to release non-target animals. Place the cable loop of the catch pole over the animal's head and draw the cable snug around the neck. Force the animal's head away from the trap and release the animal's foot by stepping on the springs of the trap. Loosen the loop to release the animal. The trapper may need to stand in the box of a pickup when releasing an aggressive dog to avoid being bitten.

If a catch pole is not available, release non-target animals after covering with a blanket, canvas or coat; pinning the head to the ground with a forked limb; or placing a heavy board or limb over the animal and securing it to the ground.

Reducing Foot Injuries

Padded foot-hold traps (Soft-Catch™), developed by the Woodstream Corporation, significantly reduce foot

injuries to captured animals. In recent studies, the latest version of padded traps were as efficient as standard traps for capturing coyotes if the padded traps were set properly. To properly set: 1) adjust the pan tension to 2 pounds or more, 2) remove lateral movement (creep) in the dog and pan by placing the dog in the pan notch, lift the pan all the way up until pressure is applied, and move the pan downward until a fine trigger is achieved, and 3) dig the trap bed so the bottom of the unrestrained jaw of the trap is about 1/2 inch higher than the other jaw before covering with soil.

Preliminary tests indicate that laminated traps (traps modified to increase jaw thickness) significantly reduce foot injuries to captured coyotes. The jaws are thickened by welding number 9 wire or strap iron to the outside of the jaws, increasing the surface area that contacts the foot. The contact area should be smooth and the edges of the jaws rounded.

Dispatching Captured Coyotes

To minimize the chances of escape and to increase humaneness, quickly shoot captured coyotes between the eyes with a .22 long rifle. Properly transport and dispose of carcasses so they do not offend others.

License Requirements

A small game or furbearer license is required to trap coyotes. However, property owners, members of their families, lessees or their agents do not need a license to trap coyotes when protecting their property. Anyone born after January 1, 1949 must complete a Colorado Division of Wildlife Hunter Education Course before they can purchase a license to trap.