MISSOURI CABLE RESTRAINT

Training Manual

Revised March 2007

Missouri Trappers Association

Missouri Department of Conservation

Acknowledgements

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We also thank the many representative members of the advisory committee of Living Together with Hides, Hounds and Traps for their time and effort debating this and other issues dealing with traps and hunting dogs. Despite having differing view points and backgrounds, they set aside their individual preferences while we learned together, and engaged in healthy discussions and debates for several months. Finally, we reached common ground and consensus, leading to final adoption of the cable restraint regulations in Missouri.

Much of the information contained in this document can be attributed to other expert snare men and several good publications on cable restraints and snaring, and we'd like to thank the Wisconsin DNR, the Ohio DNR, Hal Sullivan, Tom Krause, Scott Huber, Rally Hess and Dan DeZarn. Much thanks to Joan McKee and Marci Porter of the Missouri Department of Conservation for pulling all the pieces together.

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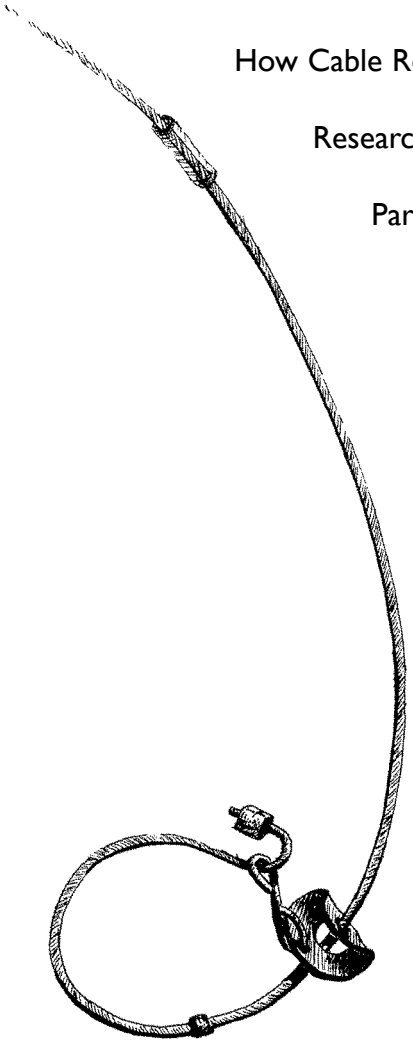

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Cable Restraints in Missouri

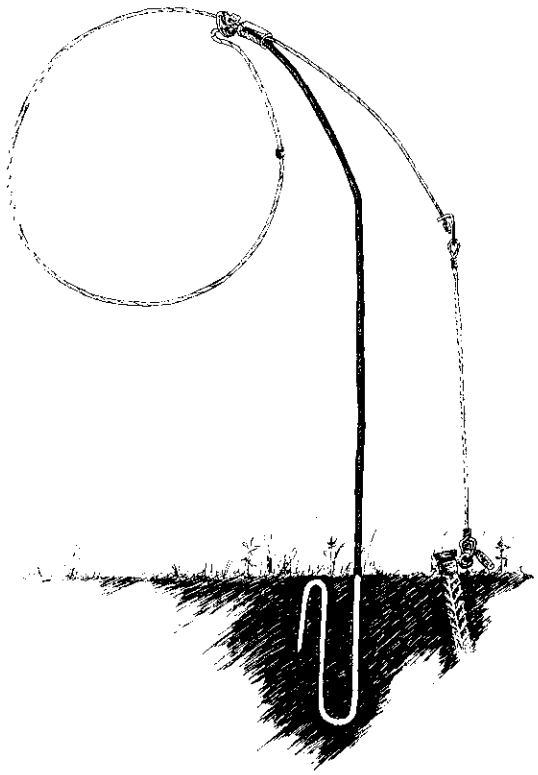
Snares and snaring methods used in the 21st century are significantly different from the past. The cable used today is strong enough to keep an animal from escaping, yet flexible enough to form easily into a loop. With these features, it is no longer necessary to use a powering device to keep the loop closed. When a locking device is added to keep the loop from re-opening once it starts to close, yet stops tightening when pressure is released, the snare is turned into a non-lethal trapping method—called a cable restraint.

When used properly, cable restraints have a great track record of holding captured animals without mortalities and with few significant injuries. Because of this distinction, cable restraints can be safely used in many places where other traps pose problems for pets and other animals.

In the past, snares were designed to quickly kill animals before they had time to gnaw through or break the material used in the snare's loop. To keep animals from escaping, snares were attached to a source of power, such as a bent-over pole. When the animal stuck its head through the loop, the pole sprung free and the animal was jerked off its feet and hung.

Since cable restraints hold animals alive and without significant injuries, they are much different from traditional land snares. Therefore, we are using the term "cable restraint" to avoid the negative connotations often associated with snares.

After studying reports about the safe and efficient use of cable restraints to capture coyotes and foxes, the Missouri Trappers Association and the Missouri Department of Conservation entered into a cooperative agreement in 2004 to provide resident trappers in Missouri with training to learn the best methods for using cable restraints on land for appropriate furbearers.



This student manual is intended for use in the cable restraint training course, which addresses how to use cable restraints in a responsible manner to catch live foxes, coyotes and nuisance animals. It provides basic guidance of ethics, management principals and regulations in Missouri. In addition to classroom sessions, the course includes equipment demonstrations and practical field experience under the supervision of qualified instructors.

Satisfactory completion of this course and passing the exam is necessary to purchase a Cable Restraint Permit and to use cable restraints in Missouri.

A cable restraint looks and works almost exactly like a common snare, with one very important distinction—it is always used to capture the animal alive.

As with other trapping techniques, expertise in using cable restraints comes only with years of experience and long hours of thoughtful observation and study. You are encouraged to check with your instructor for sources of additional information, and seek guidance from instructors or other experienced trappers. Take time to analyze the reasons for your success and failures, and always attempt to improve your methods. Trappers also must be willing to accept the responsibilities that come with using cable restraints.

Trapping as a Wildlife Management Tool

Using cable restraints is a highly regulated activity, as are all trapping methods. Anyone who traps must follow strict rules established and enforced by the Missouri Department of Conservation. Restrictions on species that may be harvested, harvest seasons, trap types, and areas open to trapping are some examples of the guidelines and regulations that are regularly reviewed and enforced.

Trapping plays an important role in many wildlife management programs. It helps control furbearer populations to minimize human-wildlife conflicts. Similarly, trapping contributes to the protection of endangered species by controlling their predators. Trapping also is used to relocate animals and restore populations in areas where conditions are suitable for the species to thrive.

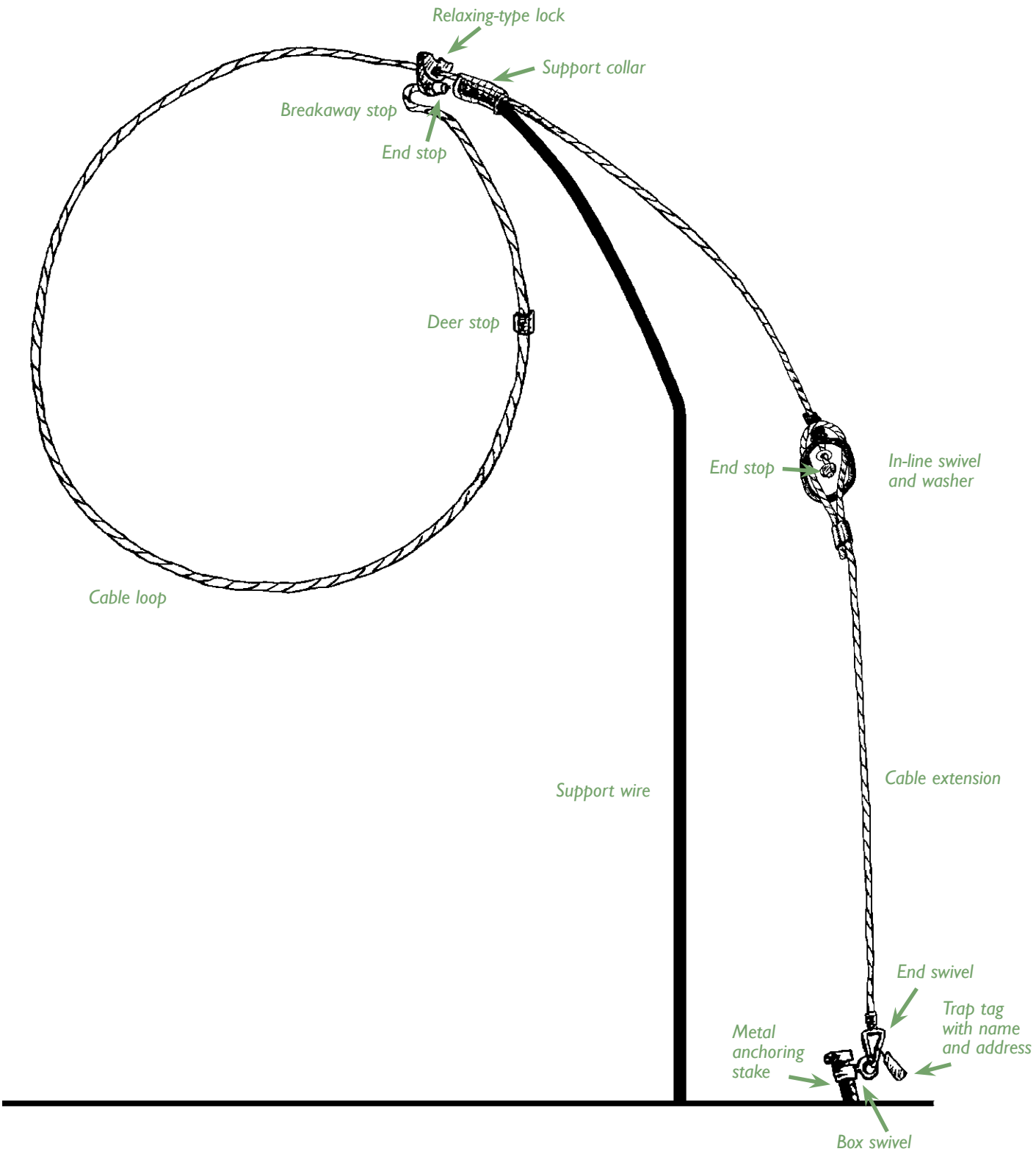
Scientists collect important ecological information about wildlife through the use of trapping. Preferred habitats, migration patterns and population indices for some species of wildlife are determined through capture and release programs and by monitoring regulated harvest. In addition, trapping can help reduce the exposure of rabies and other diseases to humans and pets. Trapping is widely recognized by the wildlife conservation community as a legitimate and beneficial outdoor activity, providing food, fur for garments, oils for soaps and lubricants, cosmetic items, artists' supplies and other products.

Cable Restraint Course Objectives

Trappers who successfully complete this cable restraint training course should know:

- the basic design of cable restraints.
- Best Management Practices for Trapping, the scientific basis for recommending cable restraints as a humane and effective tool.
- how to responsibly and effectively use cable restraints to avoid incidental captures and reduce the chances of injury to animals captured in them.
- how to properly prepare, maintain and use cable restraints.
- the cable restraint regulations in the *Wildlife Code of Missouri*.
- how to use cable restraints ethically in the outdoors.

Cable Restraint Components & Terminology



How Cable Restraints Work

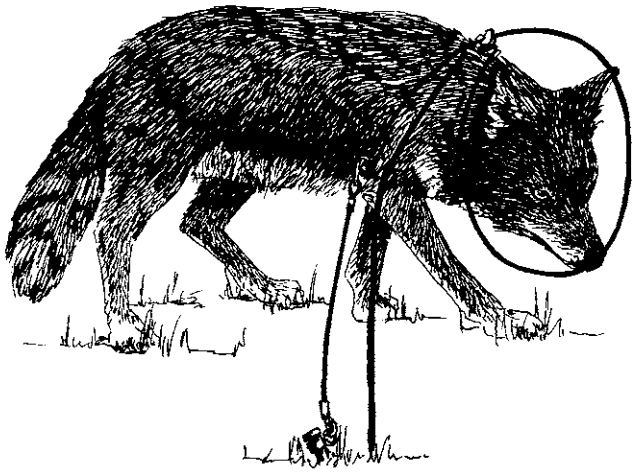
With no springs or other powering devices to close the cable loop, cable restraints rely on the force of the animal itself pulling on the loop to provide the energy to close the loop.

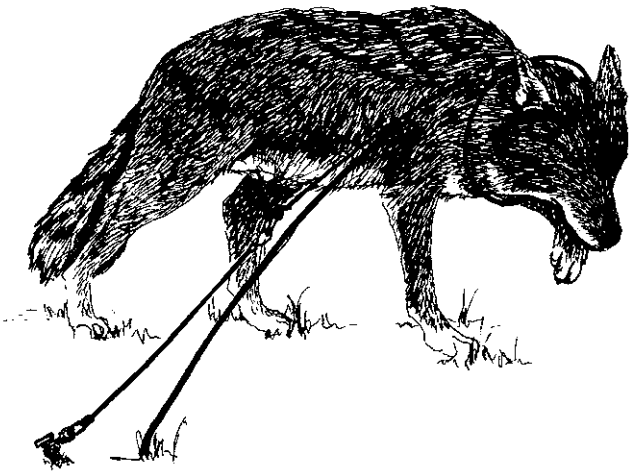
When the cable is set correctly with the loop suspended above a trail or path, the animal unknowingly enters the cable loop and continues on, pulling the loop until the animal is secure.

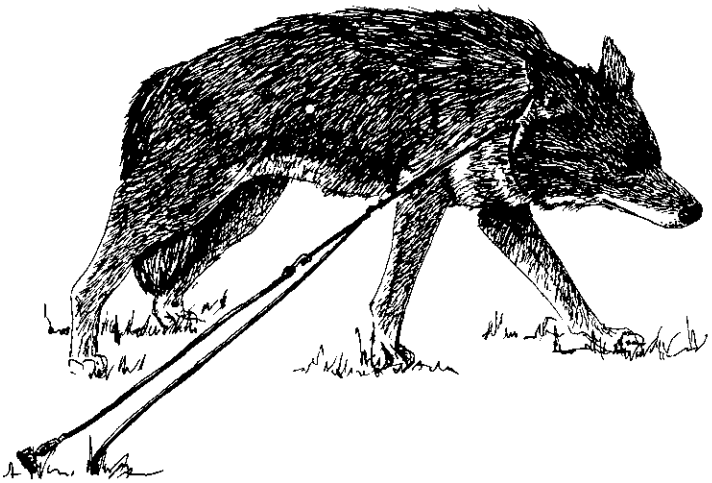
The restraint works along trails because animals walk through obstacles every day during normal movements. They regularly encounter weeds, branches, vines and brush in their path, and do not make detours every time they touch an obstacle. The restraint, therefore, is not recognized as danger, and the animal simply tries to push its way through.

After discovering it cannot get through, the animal will try to back out to go around. At this point, however, the cable loop is cinched down on the animal, and the lock keeps the cable loop from opening.

When the animal feels the noose tightening it will stop pulling back and the lock will stop tightening, as it is designed to do. The cable restraint then humanely holds the animal in place.







Research Leads to Legalization of Restraints

While Missouri has a long history and strong tradition of trapping, some other states have banned trapping, which often results in more nuisance complaints and property damage. Opposition to trapping centers on the concern for animal welfare. Once those concerns are addressed in a responsible manner, Missourians have responded in statewide polls that trapping should remain legal as long as it is regulated.

The use of cable restraints in Missouri is based on data collected during one of the most ambitious research projects in the history of the conservation movement—the development of Best Management Practices for Trapping in the United States.

The Missouri Department of Conservation and other fish and wildlife agencies all across the country worked with the Association of Fish and Wildlife Agencies to develop Best Management Practices for Trapping in the United States. Called BMPs, these guidelines are designed to provide trappers and wildlife managers with trap performance information so they can make the best decisions about which groups of traps and capture devices should be used for each furbearer species.

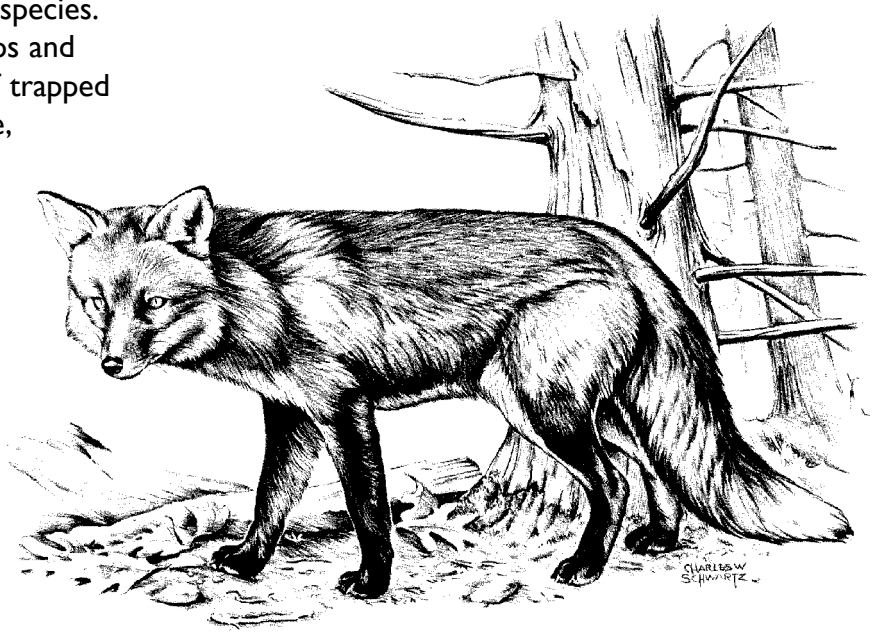
These guidelines identify techniques, traps and cable restraints that address the welfare of trapped animals and allow for the efficient, selective, safe and practical capture of furbearers.

Why BMPs are Important

Best Management Practices for Trapping were designed to:

- sustain regulated trapping as a wildlife management tool and to maintain the integrity of wildlife management programs throughout the United States.
- ensure responsible wildlife management.
- maintain and improve the welfare of captured wildlife through research on traps and trapping methods.
- reduce or eliminate real and perceived problems associated with trapping.

The techniques and principles taught in this class are based on these Best Management Practices.



Today's trapper must be willing and able to accept new ideas and to adopt new trapping systems, when necessary.

Test results show restraints are effective for humane, live capture

Trappers and the wildlife agencies in Missouri and Wisconsin were interested in testing cable restraints to see if they could be used effectively to capture coyotes and foxes, holding them alive and unharmed. Simultaneously, they wanted to use them safely in areas that have relatively large numbers of dogs and other domestic animals. In both states, the use of snares on land has long been prohibited, primarily due to concerns for the safety of hunting dogs and free-roaming pets.

In 2001 and 2002, cable restraints were field tested by experienced local trappers during legal trapping seasons using daily trap checks, as required by Wisconsin and Missouri. This field testing also provided for a consistent time interval for the most accurate analysis.

The studies were designed following the science-based field testing protocols used and perfected by the Furbearer Resources Technical Work Group of the Association of Fish and Wildlife Agencies, consistent with the Best Management Practices program. This scientific design was used because it provides the most accurate analysis.

Specimens taken in Wisconsin by cable restraints were sent to wildlife veterinary pathologists from the University of Wyoming, who used international trap testing guidelines to examine the animals for trap-related injuries through full-body necropsies.

INTERNATIONAL TRAP TESTING GUIDELINES

Two injury scoring systems show restraints are a humane live-capture technique

As part of the Wisconsin trapping studies on cable restraints in 2002, necropsy results from 42 coyotes and foxes were evaluated by two different standards: the Association of Fish and Wildlife Agencies and the International Standards Organization Injury Scoring System. Both rating systems showed that cable restraints, when used properly by trained trappers, result in few injuries.

Injury Scores from 2002 Cable Restraint Study

	Trauma Class[1]			
Species	Mild	Moderate	Moderately Severe	Average[2] Score
Coyote	21	9	0	3.5
Red fox	9	1	1	15.3
Gray fox	0	1	0	11.0
% of total	71	26	2	6.8

[1] The Association of Fish and Wildlife Agencies Standards: The total of mild and moderate scores must be greater than 70 percent to be considered acceptable. Results of this study: mild (71 percent) + moderate (26 percent) = 97 percent.

[2] International Standards Organization Injury Scoring System Standards: Average score must be 55 or less to be considered acceptable. Results of this study: 6.8. This independent evaluation supports and parallels results of the IAFWA injury score system.

The performance of all three cable restraints was outstanding: 89 percent of all coyotes and foxes captured were held until trappers returned the following day, and 94 percent overall of all furbearers were held. Trappers also released seven dogs that were safely restrained in the cable restraints. Five coyotes, three deer and one gray wolf were released via the breakaway device. The animal welfare scores also ranked the best of all trap types tested so far for coyotes or any other furbearer species. See table on page 7.

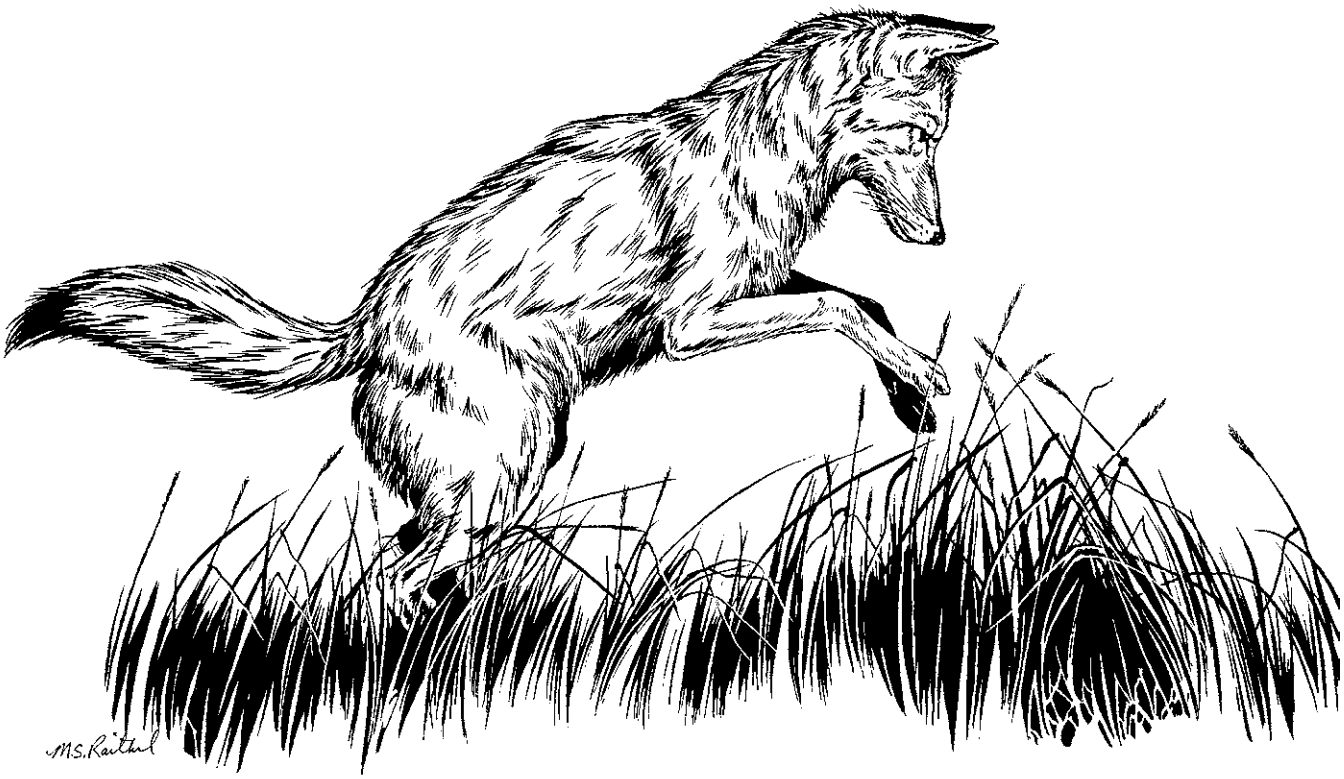
Pelts also were inspected for damage from the restraints after proper skinning, fleshing, stretching and drying. Dried pelts were graded by experts from the North American Fur Auctions, and they found little to no damage to any furbearer.

Because testing proved that the cable restraints could be used safely, effectively and humanely when in the hands of experienced and trained trappers, the Missouri Department of Conservation and the Missouri Trappers Association set up this course to ensure that everyone who purchases a Cable Restraint Permit knows the proper way to use restraints.

Scientific testing improves animal welfare

The process of documenting improvements to traps and trapping methods must be done scientifically to assure improvements in animal welfare and wildlife management. Professional wildlife biologists, wildlife veterinarians and expert trappers are involved in all phases of this project. With their guidance, Best Management Practices are:

- developed regionally to address differences found in species, habitat and climate across the United States.
- designed to be efficient, selective, user safe, practical and to promote animal welfare.
- based on the best traps available and the best methods for setting traps.
- updated and revised as new technology becomes available.

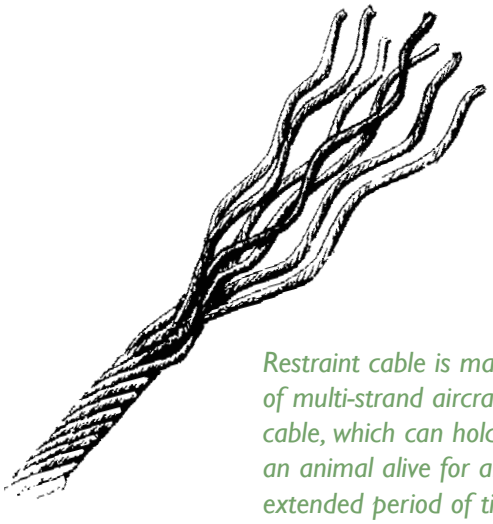


Parts of a Cable Restraint

Cable restraints are made up of a cable loop and a relaxing-type sliding lock placed where a furbearer will attempt to walk through the loop. The beauty of the restraint is its simplicity and that it almost always remains unnoticed or of little concern to the animal.

Cable restraints are made from the following parts: cable, locks, ferrules, swivels, swivel washers, support collars, cable stops and breakaway device systems. Cable and components are available from trapping supply dealers.

While other trapping devices, like foothold and body-gripping traps can be reused, cable restraints can be used only once. After an animal has been held in a restraint, the cable will bend and twist and can no longer function properly. It is often possible to reuse some of the hardware such as the lock and swivel and make another restraint using a new piece of cable, ferrules, breakaway devices and stop.



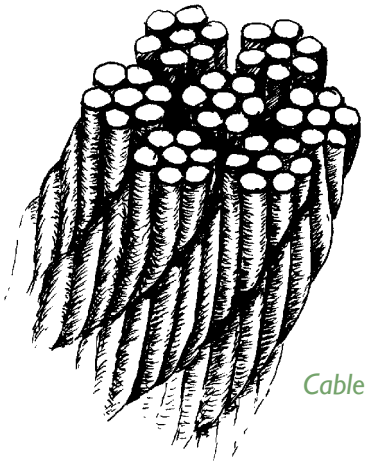
Restraint cable is made of multi-strand aircraft cable, which can hold an animal alive for an extended period of time.

Cable

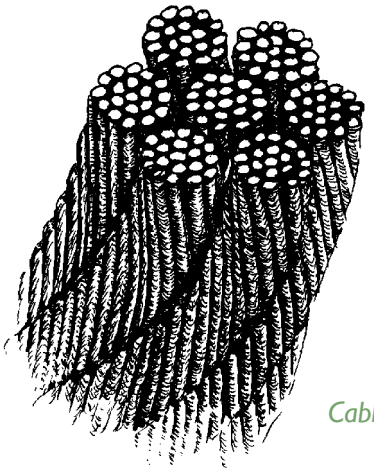
To be legal in Missouri, a cable restraint must be made of stranded steel not greater than 5 feet long, not including extensions. The three most common braids of galvanized aircraft cable used to make cable restraints are 7 × 7, 7 × 19 and 1 × 19.

The number depicting the braid of cable explains the number of wires in a strand and the number of strands in a cable. The 7 × 7 cable consists of 7 strands of small diameter wire wound into a larger strand. Seven of these larger strands are then wound together to make the finished cable. The 7 × 19 consists of 19 very small wires wound into a strand with 7 of these strands making up the cable. The 1 × 19 is made of 19 wires wound together in one strand to make the cable.

Cables used for live capture of certain furbearers on dry land must have a minimum diameter of 5⁄64 inch. The three diameters of cable commonly used for restraints are 1⁄8, 3⁄32 and 5⁄64 inches. All three diameters are legal to use in Missouri, but each may behave differently in specific situations. Trappers will want to experiment to see which size they prefer.



Cable strands 7 × 7



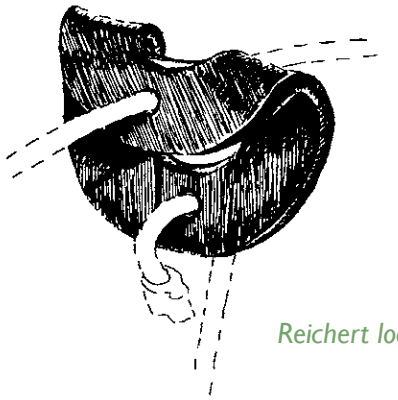
Cable strands 7 × 19

Relaxing–type lock

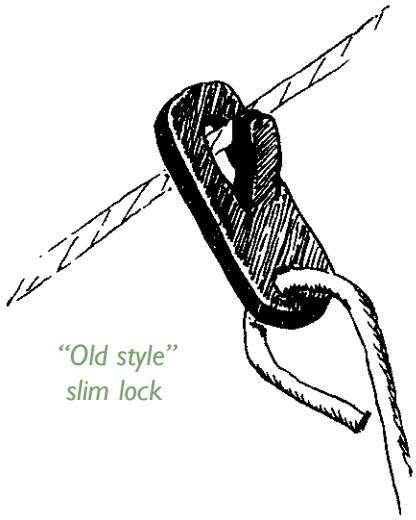
An important part of the cable restraint is the sliding lock, which slides easily in one direction. As the cable loop is pulled closed, the lock slides down the cable, enclosing around the animal's neck or body. The lock, however, will not slide the opposite direction, which prevents the animal from backing out of the cable.

Locks come in a wide variety of shapes and forms, depending on the targeted species and specific needs. Locks used on cable restraints for live capture do not use compression springs often found on killing-type snares.

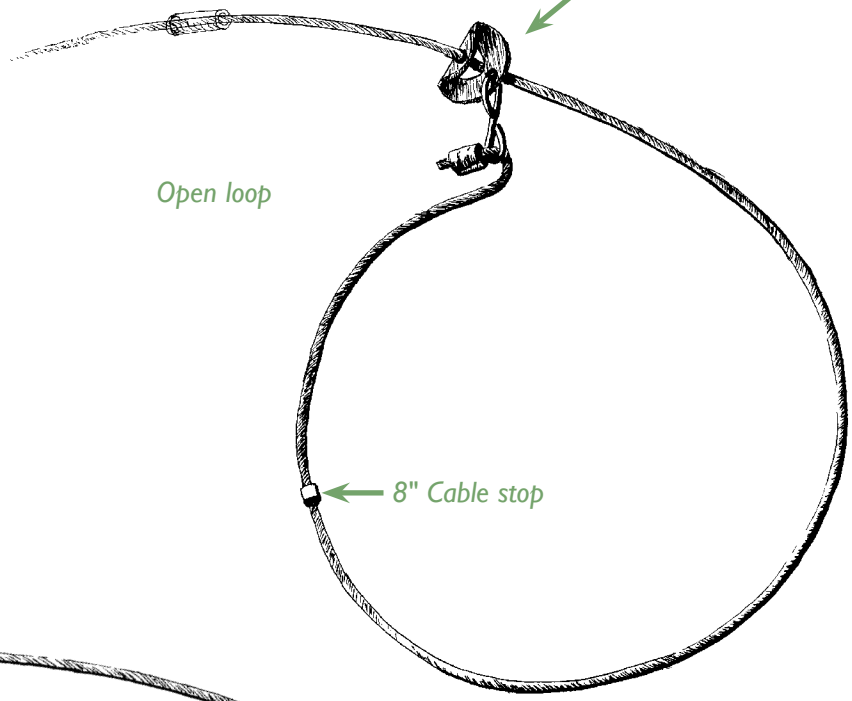
Missouri regulations state that cable restraints must be equipped with a relaxing-type sliding lock, which stops exerting pressure when an animal quits pulling on it. For best results, choose a lock design that loosens a small amount when pressure is reduced. Locks that use springs or other powering devices to hold them closed are not legal in Missouri.

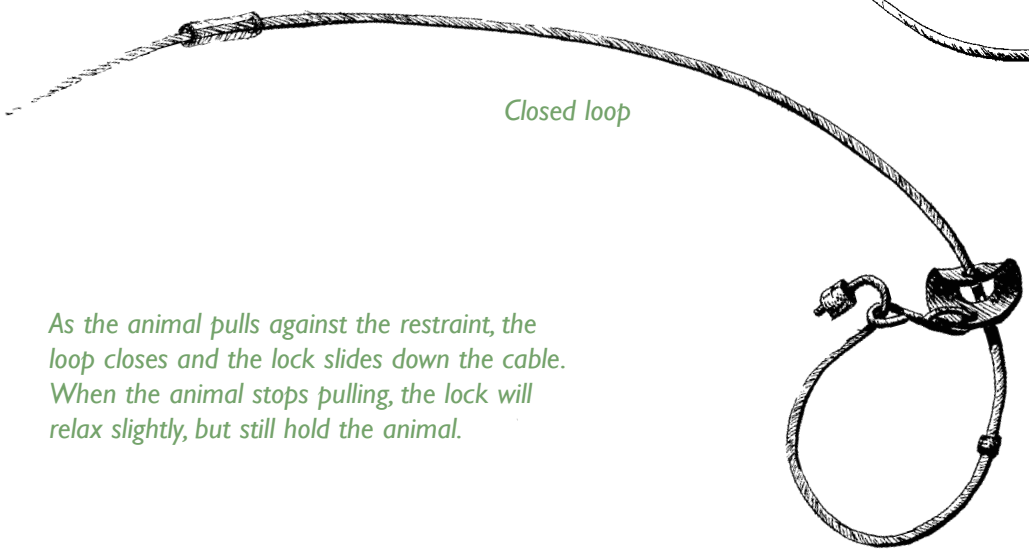


Reichert lock



"Old style" slim lock

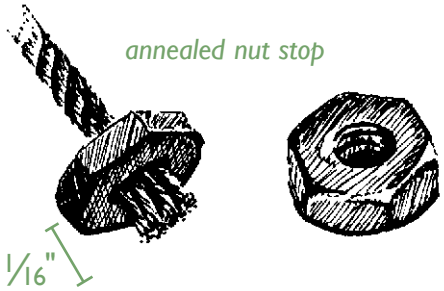




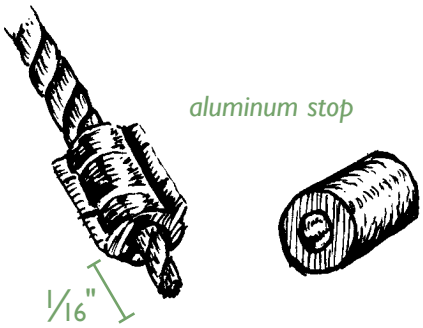
As the animal pulls against the restraint, the loop closes and the lock slides down the cable. When the animal stops pulling, the lock will relax slightly, but still hold the animal.

Cable stops

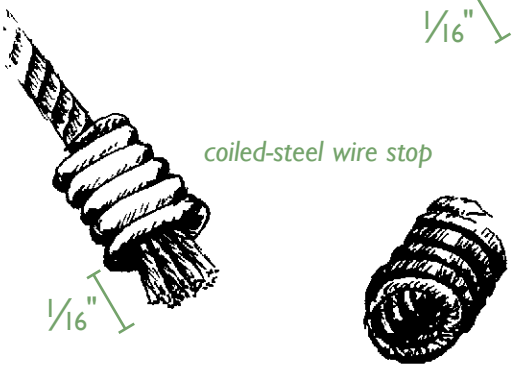
Cable stops used on each end of the cable hold the lock and swivel on the restraint. The three basic types of stops are made of aluminum, coiled-steel wire and annealed nuts. Cable stops are hammered or crimped onto the snare cable to prevent any movement or slippage.



annealed nut stop



aluminum stop



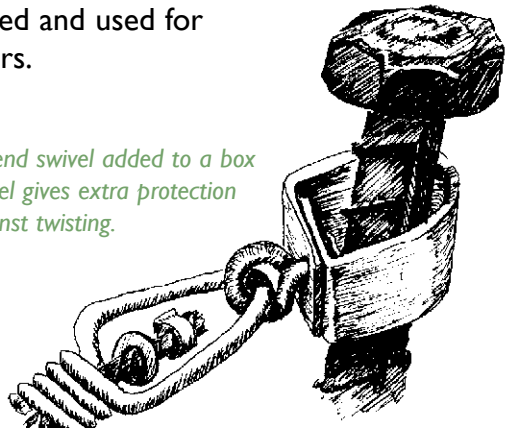
coiled-steel wire stop

wire stop

Swivels

Swivels, an important component of the cable restraint, allow the animal some freedom of movement after being caught. Swivels help prevent the cable from kinking and twisting, which could lead to cable breakage or injury to the animal. Locating a swivel as close to the animal's body as possible will help ensure that the swivel will function properly. According to Missouri regulations, cable restraints must be equipped with an anchor swivel. Because swivels keep the cable from twisting, many trappers use multiple swivels whenever possible.

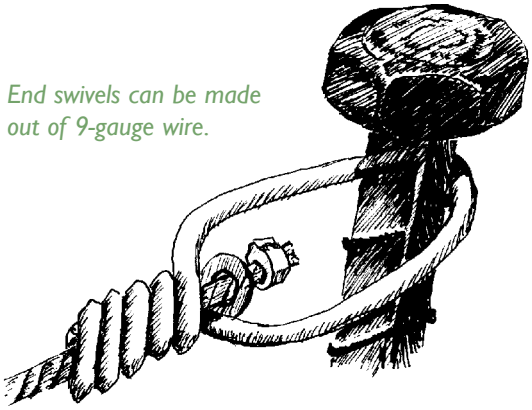
A variety of universal and snare-type swivels are used on cable restraints. Tools to manufacture swivels are commercially available for trappers who wish to make their own from 9-gauge wire. Good quality snare-type swivels can be recycled and used for many years.



An end swivel added to a box swivel gives extra protection against twisting.

Swivel Washer

A washer placed between the swivel and the ferrule provides a flat surface for the cable ferrule to turn against. This allows the cable to turn freely when a captured animal applies pressure, thus increasing the chance that the animal will not get tangled and injured. Note placement of washers in illustrations below.

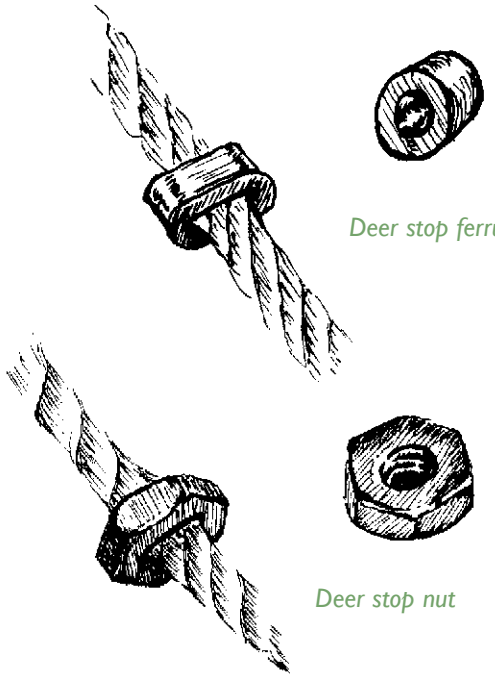


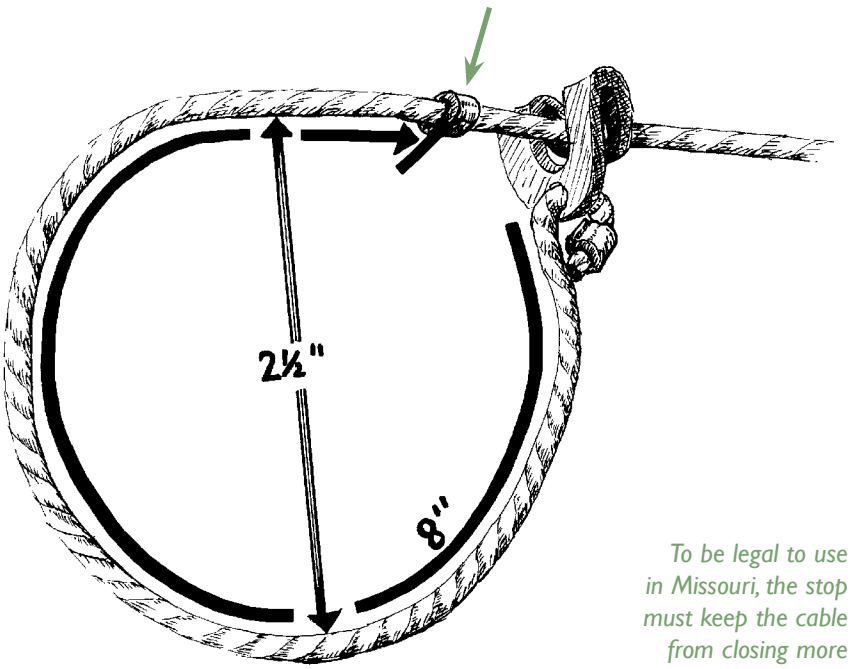
End swivels can be made out of 9-gauge wire.

In-line swivels are good to use in thick grass.

Deer stop

A deer stop, crimped onto the cable to prevent the snare loop from closing past a certain point or diameter, allows deer to step out of the cable loop without getting caught in the cable. To be legal in Missouri, cable restraints must have a stop that prevents it from closing to less than 2½ inches in diameter.

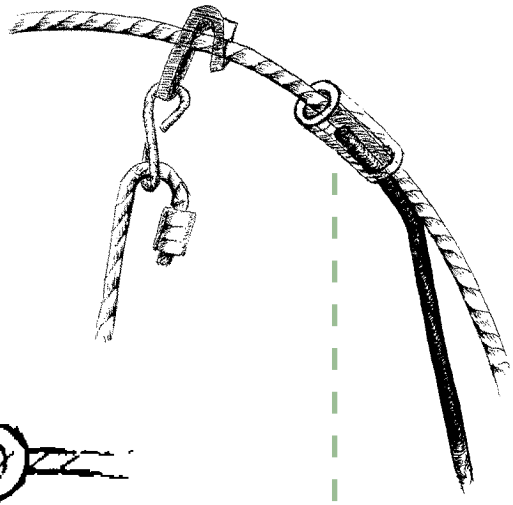




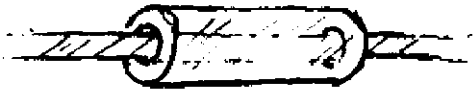
To be legal to use in Missouri, the stop must keep the cable from closing more than 2½ inches.

Support collars

The support collar or whammy is a quick connect device used to connect the cable restraint to the support wire. These collars keep the cable in place and allow for proper positioning and height placement to target a specific animal. Support collars are often made from surgical tubing, plastic water line and wire.



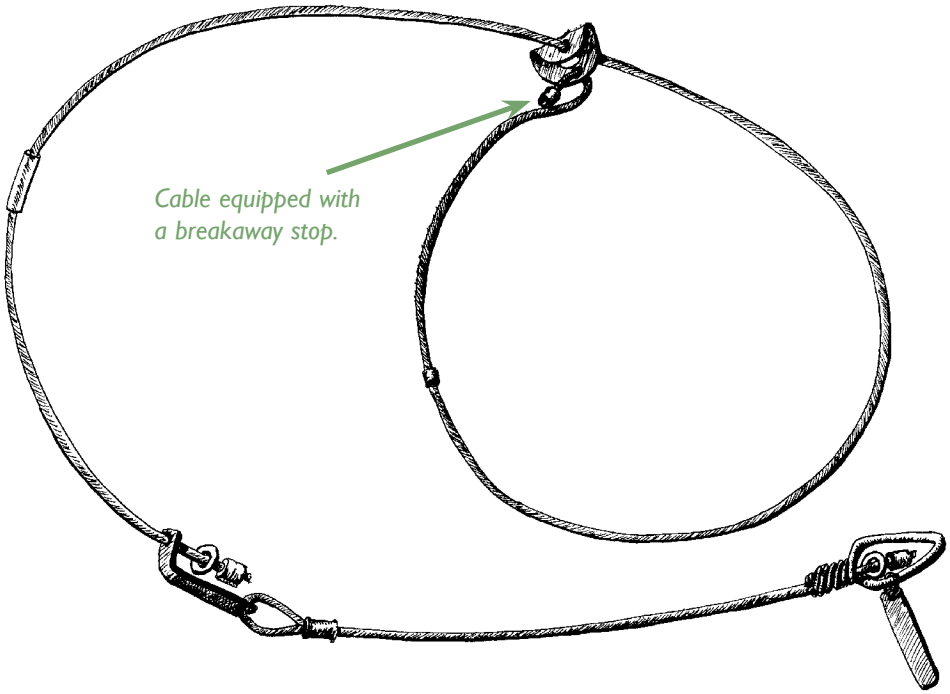
metal support collar

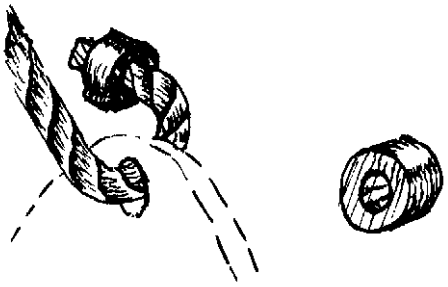


plastic support collar

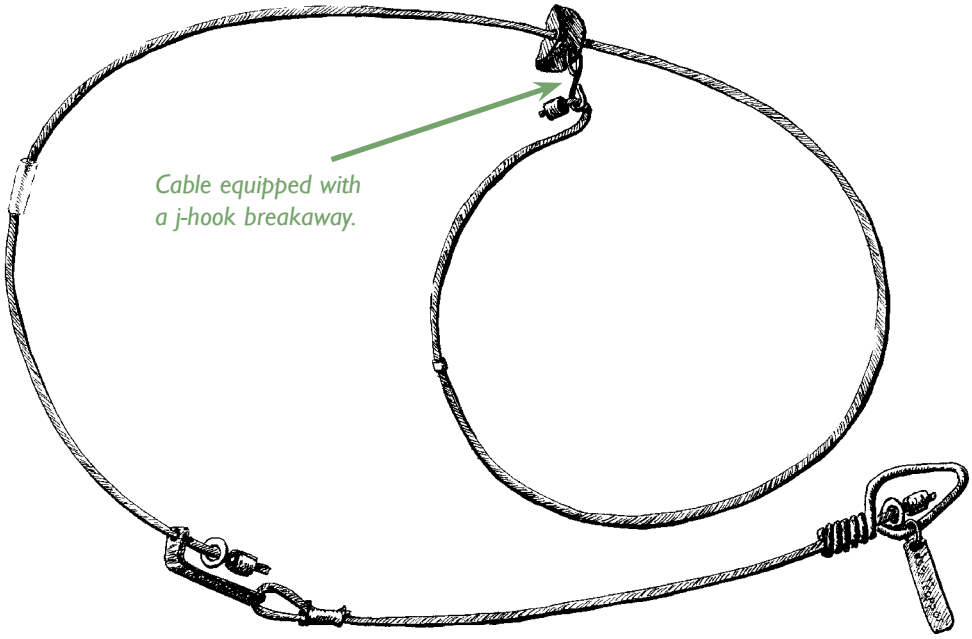
Breakaway device system (BADS)

A breakaway device releases or breaks away at varying degrees or pounds of pressure, allowing the cable loop to open and release any animal that can exert the necessary amount of force. All cable restraints used in Missouri must be equipped with a breakaway device rated at 350 pounds or less. Types of breakaway devices include j-hook, s-hook and breakaway or pop-off stop. These devices must be attached at the end of the cable where the lock is located. Warning: Never use a pop-off stop on the swivel end of the cable restraint.





Breakaway stops require a precision swaging tool for crimping to the required tension. To ensure that these breakaways are legal, it is best to purchase them already attached to the cable.



J-hook breakaway rated at 350 pounds or less can easily be installed by trappers who want to make their own restraints. If not opened, these can be reused after the initial capture.

How to Make a Cable Restraint

Cable restraints are inexpensive to purchase, but many trappers prefer to make their own. Although the cable itself can only be used once, many of the other parts can be reused, making the restraint even less expensive. Making your own cable restraint also allows you to customize it to fit your particular set location. However, when making your own restraint, be sure that each part and the final product meets the legal requirements set in the *Wildlife Code of Missouri.*

Below is a step–by–step guide to making a basic cable restraint.

Step 1: Cut a 40- to 50-inch piece of stranded steel cable.

Step 2: Slide a stop onto the end of the cable, and crimp it with a swaging tool or a mallet.

Step 3: Bend the end of the cable near the stop into a figure-seven bend.

Step 4: Slide a J-hook breakaway on the cable next to the stop.

Step 5: Hook the other end of the J-hook into a relaxing lock. Do not put the lock on the cable.

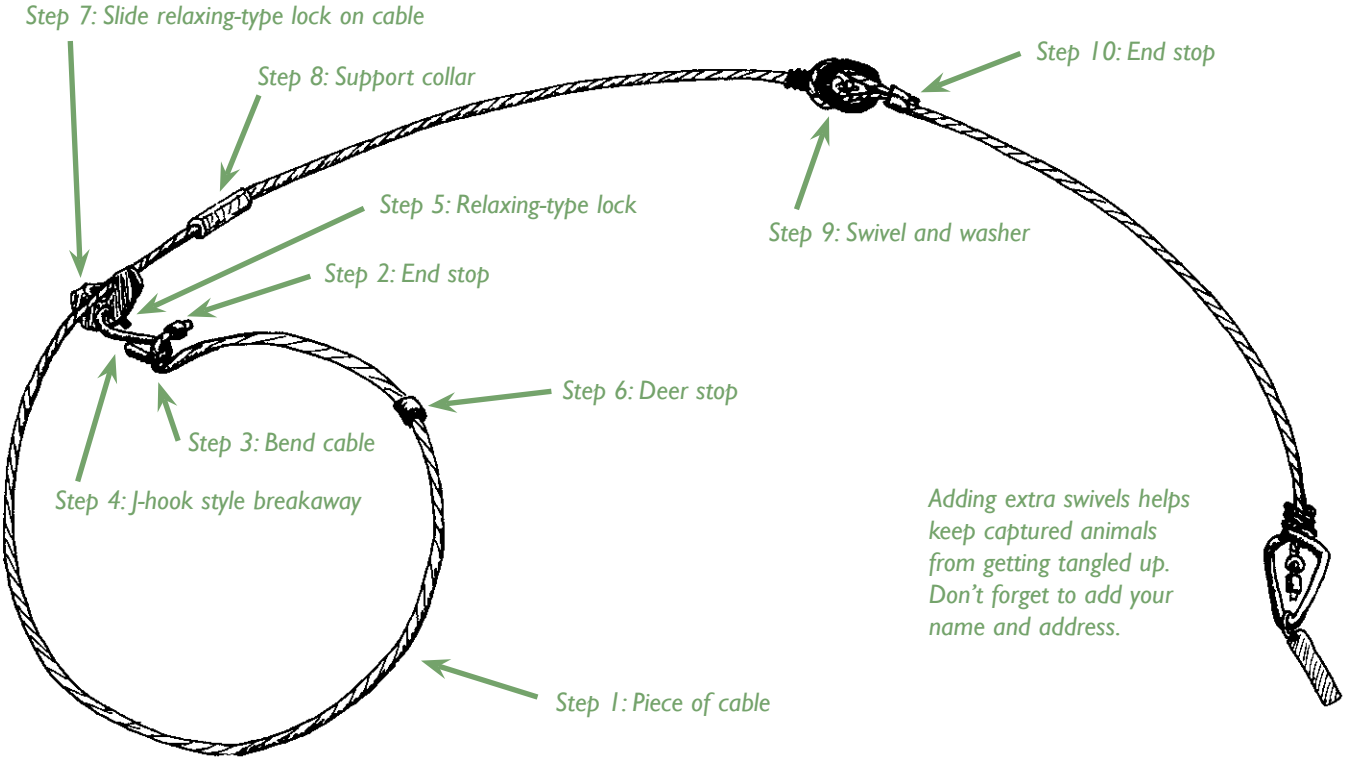
Step 6: Slip a deer stop on the cable and crimp it about 8 inches from where the lock makes contact with the cable, so the cable forms a loop that is at least 2½ inches in diameter.

Step 7: Pass the unfinished end of the cable through the other side of the lock.

Step 8: Slide a support collar onto the cable.

Step 9: Thread the swivel, followed by the swivel washer onto the cable.

Step 10: Install the end stop on the end of the cable to complete the restraint.



Treating Cable Restraints

New cable and other parts of the restraint may be coated with oil and grease from the manufacturer, which the animal may smell. The color of the cable also may stand out when placed in a set. To camouflage and deodorize the cable restraint, follow the steps below:

- Boil the cable restraint in water with baking soda added for about 15 minutes. This will etch the zinc coating in the metal so paint will stick to it.
- Pour off the grease that rises to the top of the water.
- Rinse the cable restraints in clean tap water, and let dry.
- Dip the dry restraint in a water-based dip such as Formula One Instant TrapKote, which is available at trapper supply stores, or spray with a low-gloss paint. Choose a paint color that will blend into the surroundings around the set.

Missouri Cable Restraint Regulations

All Missouri trapping regulations and methods that apply to trapping also apply to the use of cable restraints. According to these general rules, all traps and cable restraints:

- must be plainly labeled on durable material with the user's full name and address.
- must be checked daily, and all wildlife must be removed or released.
- may not be set within 150 feet of any dwelling or a driveway leading to a dwelling.

In addition to the general trapping regulations, there are some specific regulations that apply to using cable restraints only. Most important, trappers who use cable restraints to take furbearers during specified seasons must have completed the cable restraint training course and be a holder of a Cable Restraint Permit.

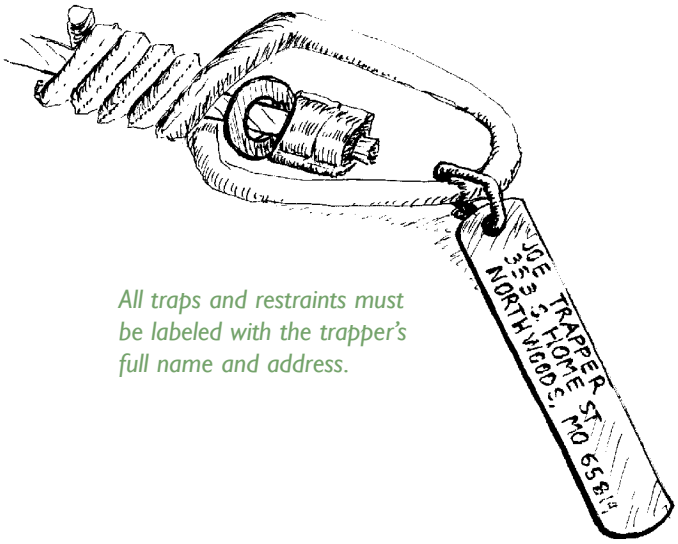
The cable restraint must:

- be made of stranded steel cable, not greater than 5 feet long (not including extensions), with a diameter of not less than 5⁄64 inches.
- be equipped with a commercially manufactured breakaway rated at 350 pounds or less.
- be equipped with a relaxing-type lock.
- be equipped with a cable stop that prevents it from closing to less than 2½ inches in diameter.
- be equipped with an anchor swivel.
- NOT be equipped with a compression-type choke spring, or be otherwise mechanically powered.

When set, cable restraints must:

- have a loop size of 12 inches diameter or smaller and the bottom of the loop must be set at least 6 inches or more above the ground.
- be solidly anchored or stabilized in a location where a captured animal cannot get entangled by rooted, woody vegetation greater than ½ inch in diameter or any other objects.
- be at least 12 inches from a fence when fully extended.
- NOT be set using a drag, or used with a kill pole.

Remember: Permission must be obtained from the landowner before trapping. A cable restraint permit doesn't allow for trespass.



All traps and restraints must be labeled with the trapper's full name and address.

Differences between Cable Restraints and Snares

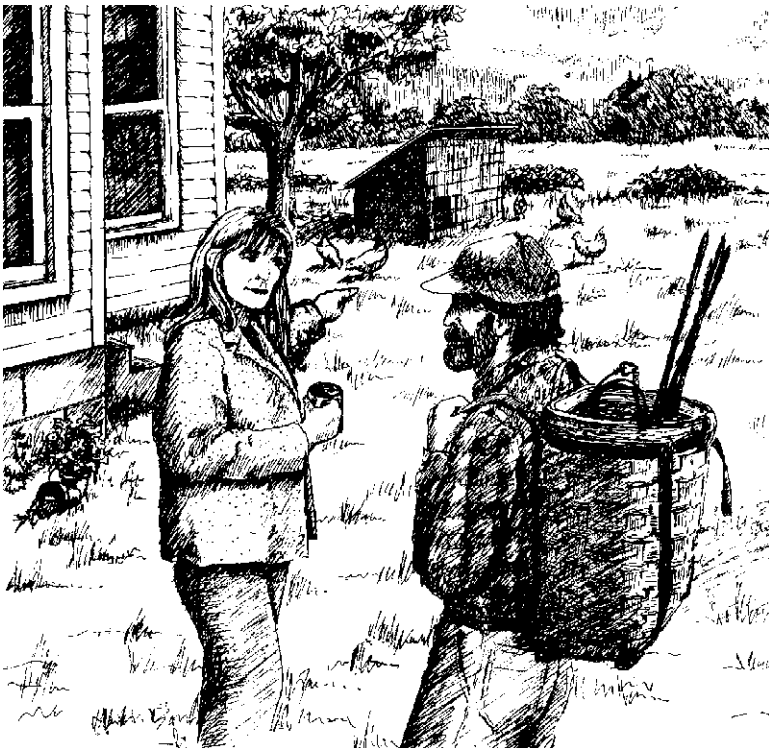
Trap type	Purpose	Set location	Maximum loop size
Cable restraints	live trap	on land	12 inches
Snares	killing trap	underwater	15 inches

For more regulations on using snares, see the *Wildlife Code of Missouri*.

Pre-season Preparation

Always keep in mind the landowner on whose property you are trapping and consider it a privilege. Let landowners know when you plan to be on their property. Explain to them why cable restraints have been legalized, how they work, their effectiveness, and the need for their role in managing furbearer populations.

If you cannot get to a particular farm or property until later in the season, be sure to inform the landowner that you still intend to trap and when you will be there. If your plans change and you don't plan to trap on that property, let the landowner know so other trappers can be found.



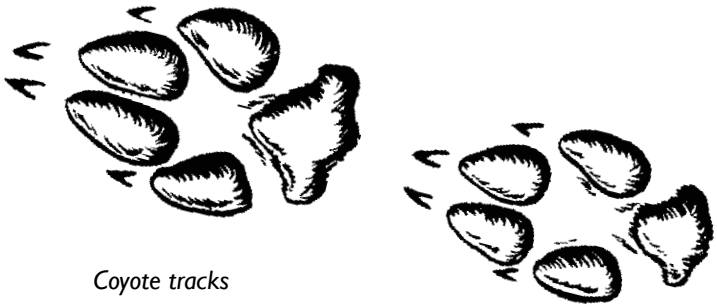
Always ask permission before entering private property. A Cable Restraint Permit is not a license to trespass.

Scouting

Pre-season scouting should always be a top priority because it can save time, trouble and increase your overall success when using cable restraints or any trapping method. When preparing a trapping line, determine what animals are using the area and try to estimate wildlife populations.

When scouting, take notes to identify potential trapping locations and equipment that will be necessary at each location. An efficient line is only possible when you know in advance the approximate number of sets you plan to make and whether you will need specialized items such as stakes and extension cables. After you return home, review your notes and make a list of equipment and materials to bring for each site.

Some trappers also use this time to install support wire and anchors prior to the opening of trapping season. In most cases, this isn't necessary as the entire process of setting the cable restraint should only take a few minutes. This time, however, could be used to fence down an area where a set is planned to save time during the setting process. This is especially true if you find an area with a lot of sign, but few good set locations. In these situations, trails can be constructed by clearing or mowing, and areas can be narrowed by adding cut brush and grass to force animals through your set.



Coyote tracks

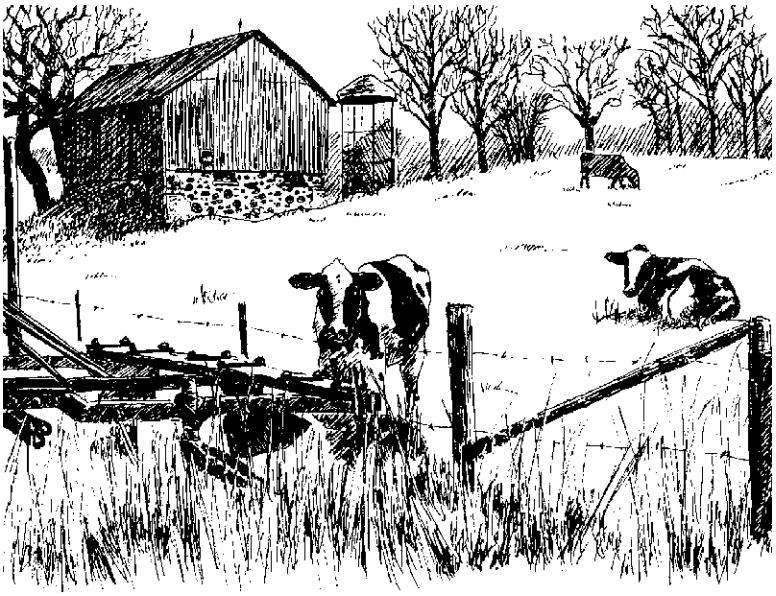
Set Locations

Recognizing set locations is a crucial part of any type of trapping. If you cannot recognize a good set location, you cannot make an effective set. The best way to find a place to set cable restraints is to first substantiate good furbearer populations in the area by locating fresh sign such as tracks, scat, hair and actual sightings of animals. Good places to look for sign and set locations are along trails. Almost any animal will use the same trail continuously unless forced to do otherwise, and a good trail may be used by many different animals.

Field corners also are excellent locations to look for potential set locations. An inside or outside corner to a crop field or wooded area will have trails in or near the corners. An outside corner can be any point where the field has a sharp point or projection. The corner will be more desirable as a set location if it contains enough cover to conceal the animal.

Fenced areas will almost certainly have trails leading out of the enclosures at the corners. Animals are similar to humans in many aspects. Just as we tend to take the path of least resistance, if given the opportunity, animals will use any location that gives them easy access through the fence. Look for holes in and under the fence, especially in ditches or low areas. Most animals will walk several hundred yards down a fence so they can crawl through or under rather than jump the fence. Animals also will walk parallel to a weedy line or fence row until they see an opening or clearing to use as a cross over.

Furbearers also use livestock trails, but regulations prohibit the use of cable restraints in these areas. However, these trails do create opportunities where these trails intersect field borders and wood lots. Trails made by equipment along field borders, where livestock is absent, also can be productive sites.



Always avoid areas where landowners and farm animals are active, especially around buildings, machinery, gates and fences to pastures.

Animals use open areas, but not as much as areas with cover. A clump of shrubs, a patch of trees in an open field or other outstanding features suitable for hunting often will be visited by most animals in the area.

Low areas with small drainages and washes also are good locations. This is especially true if the low area is flanked by weeds or brush. Other good locations are found in a low saddle on a high ridge where animals cross naturally, as well as old railroad beds that have grown up in cover.

If numerous trails are in an area, it is important to recognize which ones will be the most productive. To find the best spots, look for sign. Hair can be used to determine set locations in the absence of tracks and scat. Look for hair on fences, trees and even rocks. Weeds and

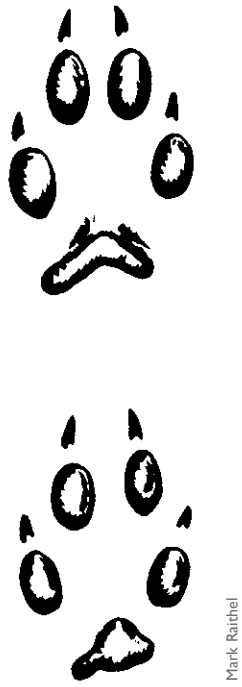
As with other types of trapping, set location is the key to successful cable restraint use.

briars also will hold hair that is pulled from the animal as it passes through an area. Dirt and mud also pulls loose hair from animals, especially at crawl-under locations and den sites. Grassy areas between crop fields or low lying ditches can also be productive sites, catching animals using these passageways from one area of cover to another.

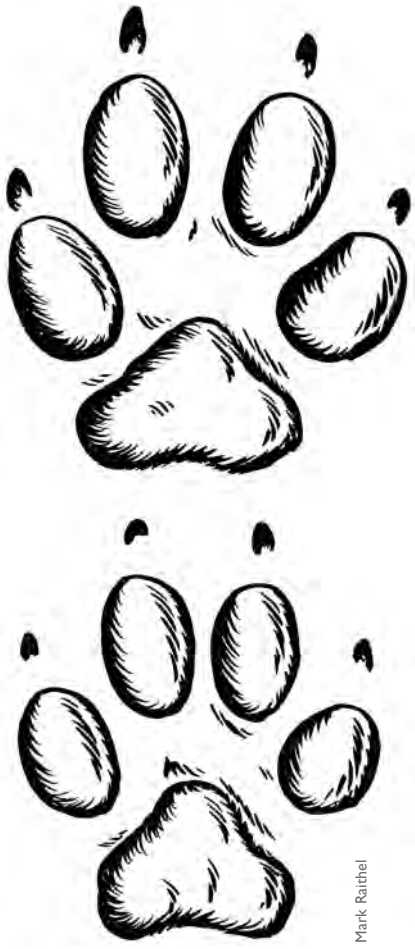
These are just a few areas to build a good basic trap line. Once you become familiar with the area you plan to trap, you will be able to pinpoint sets by letting the terrain tell you where the best locations will be. Observant and creative trappers will always find new and better ways of increasing their success.

A reminder:

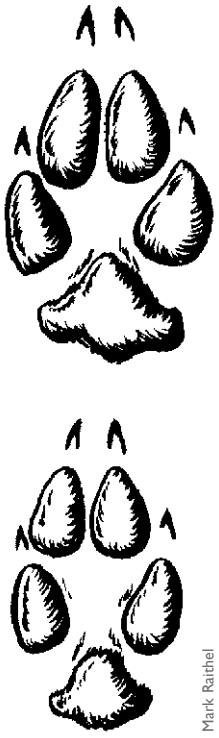
As with all hunting and trapping activities, please be advised that any person using a cable restraint should take appropriate precautions so as to minimize risks to dogs and other domesticated animals. Successful completion of training classes and possession of a legal permit to use cable restraints do not automatically shield a person from responsibility for injuries or property damage related to the use of this equipment.



Fox tracks



Dog tracks



Coyote tracks

Bobcat tracks

TRACKS NOT SHOWN AT ACTUAL SIZE

Types of Sets

The principles for constructing a set with a cable restraint are different than with other traps. A cable restraint is used in a trail or blind set and depends on an animal's continued forward progress to tighten down the cable loop. Unlike traps that depend on something to draw the animal to them, cable restraints should not be used in close proximity to bait or lure or anything else that would make an animal stop or hesitate as it approaches and enters the restraint.

In general, use of cable restraints should be avoided in parks, high-use recreational or hunting areas, and residential developments. Even though correctly set restraints should not harm dogs, trappers should do everything they can to avoid capturing pets. In areas where pets freely roam, box, cage and other types of dog-proof traps should be used.

All brush ½ inch thick or more should be removed to prevent entanglements. However, the cut vegetation can be stuck back in the ground and more cut vegetation can be added to help hide the restraint.

Before

After

Crawl under

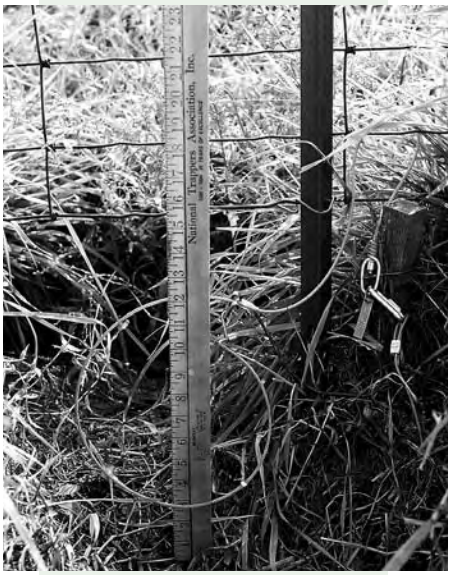
The crawl under is an opening in a fence, under a building, tree, rock, or wherever animals are crawling through to get to another area. The idea is to catch the animal before it crawls through and reaches any entanglements. When making this type of set, the restraint when fully extended must be placed at least 12 inches from the fence and free of any entanglements.

Fence crawl unders are great locations to catch coyotes and foxes. To make the set effective and to stay the prescribed distance from the fence, use natural materials to create artificial fencing to extend the crawl under to where the cable restraint is legally located. The use of a slide wire and drowning lock system can be used to keep the caught animal from tearing up the site where the catch is initially made. This is beneficial for making multiple catches at the same location.

Legal set:
When activated and extended, the restraint is at least 12 inches from the fence.

Illegal set:
Restraints must never be mounted directly on a fence or anything else that the animal could become entangled in.

Legal set:
The restraint must be placed away from a fence so animals can't get tangled in the fence or climb up the fence.



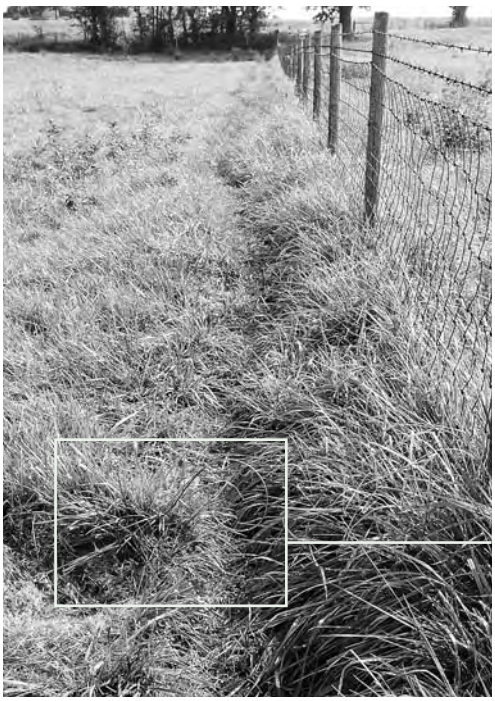
Illegal set:
This restraint is set too low and too close to the fence.

When setting cable restraints at crawl unders near fences, be sure the extended cable is at least 12 inches from the fence to avoid entanglement.

The trail set

The trail set can be found in almost any area being used by animals. After you find trails used by the furbearer you intend to trap, follow them until the best locations for a set is found. You may add additional cover to funnel the animal into the restraint.

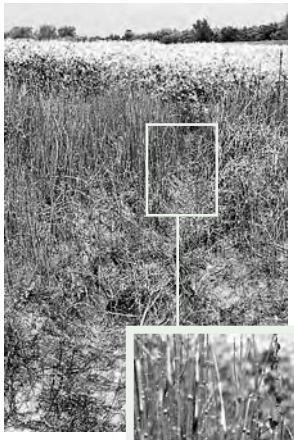
This restraint is set where coyote tracks were found. Additional cover should be added to camoflauge the restraint.



Trails along fences provide good set locations. However, be sure restraints when fully extended are 12 inches from the fence.

Field borders and corners

Field borders and corners act as natural funnels for wildlife. Animals use these natural barriers as travel lanes to move from one area to another. These locations lend themselves to a variety of sets.



Cable restraints along field borders are often nearly invisible.

The walkthrough

The walkthrough is used when an animal has to pass through an enclosure on both sides and sometimes overhead. These sets, similar to trail sets, can be made at various locations, such as at the junction of two fences or where a field meets with a woody area. If a sapling is used to support a cable, it must be cut off and stuck back into the ground.

Culvert sets

Culvert sets or drainages are excellent locations for catching animals as they approach or exit an area. Animals use the structures because they get from one place to another without crossing roads or exposing themselves to open areas. These areas usually contain a lot of tracks, which will help in locating the best sites for your sets. When choosing the site, make sure there is not a dropoff. If the animal exits the tube, it could cause an injury.

Sets to Avoid

Each time you set a cable restraint, check the area carefully for anything that could injure a captured animal. The two sets shown here are examples of sets where animals could be harmed. In the log set, an animal could fall off the log. In the set near the concrete wall, the animal could fall off the wall or get entangled around the pole.

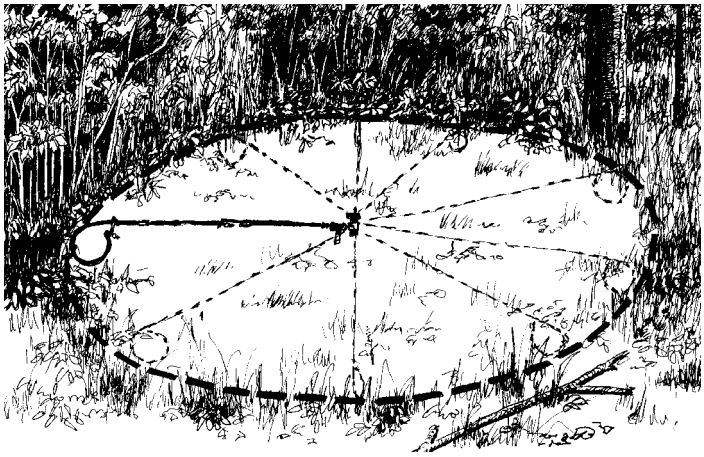
Setting Cable Restraints

Because the purpose of a cable restraint is to catch an animal alive, all regulations pertaining to these traps must be carefully followed so that the animal cannot harm itself while in the restraint. The following steps will help you set your restraints correctly.

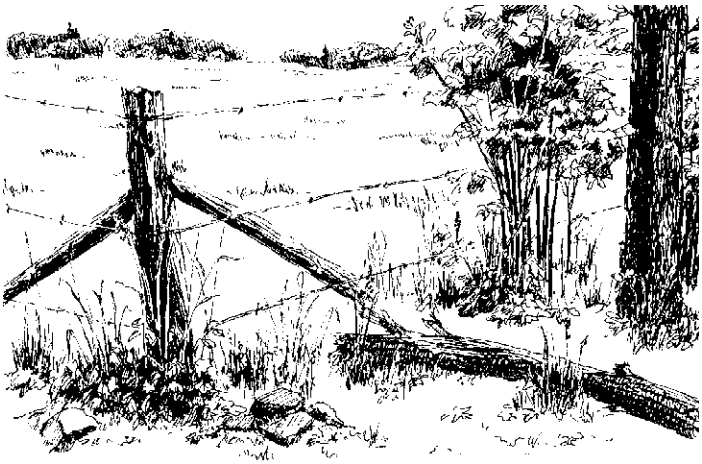
Equipment

Cable restraints require a minimum amount of equipment. Along with the restraint, take the following with you in the field:

- ❑ wire
- ❑ pliers
- ❑ stakes
- ❑ earth anchors
- ❑ hammer or maul
- ❑ cable cutters
- ❑ paper and pencil to record set locations
- ❑ catch pole (see page 32)
- ❑ brush clippers
- ❑ hand saw or hand ax



Each time you set a cable restraint, check to be sure the extended cable won't reach any entanglements.



Fences aren't the only entanglements to avoid while setting cable restraints. Also check for downed logs, large rocks and woody brush with a diameter of ½ inch.

Preparing the site

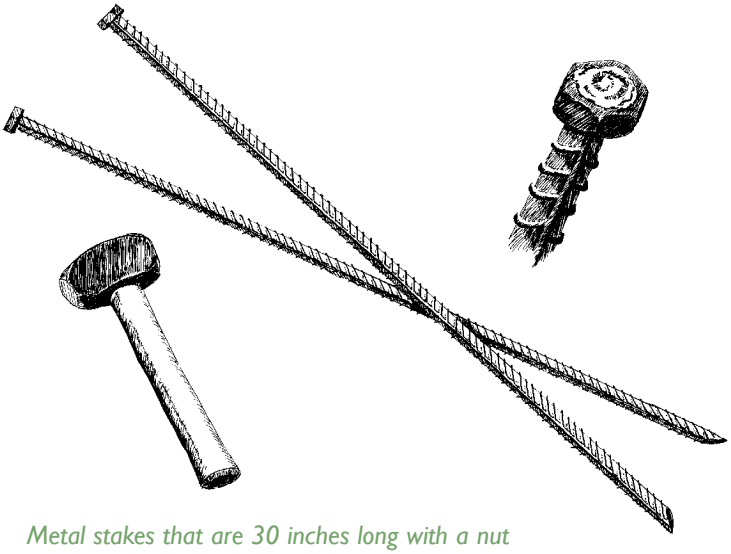
After you have found a good set location, check the area carefully for any possible entanglements. The key to successful live capture with cable restraints is avoiding injury to the captive animal. Place the cable so it can't reach or get hung on fences, woody vegetation, downed logs, rocks and other entanglements. Remember: Your goal is a safe, live capture of wildlife, as well as any domestic dogs that might incidentally be caught. The future use of cable restraints as a trapping tool depends on trappers avoiding accidental injury and death to animals caught in a cable restraint.

Each time you set a cable restraint, measure how far the cable will be extended once an animal is caught. An extended cable must be at least 12 inches from a fence and other entanglements so the animal won't be able reach them. Also, cut all brush with a diameter larger than ½ inch off at the ground to avoid entanglement. To make the area look more natural, you can save some of this cut brush to stick back loosely in the ground around the restraint.

The key to successful live capture with cable restraints is avoiding entanglement, including fences and woody vegetation.

Anchoring

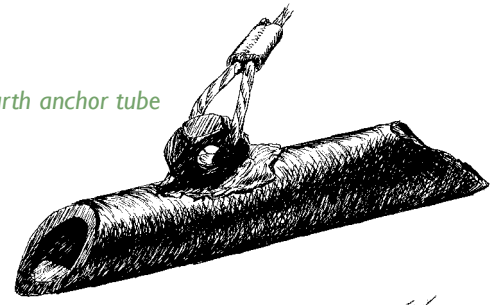
When improperly anchored, cable restraints can result in severe injuries to trapped animals if they pull the restraint loose and escape with it around their neck or body. Also, using swivels allows the cable restraint to move freely with the animal's neck, reducing injury. Earth anchors, metal stakes and wooden stakes are all suitable anchors. When using metal stakes in wet weather conditions or loose, sandy soil, it is often best to cross stake using two stakes to make sure the restraint is secure. Wire should be avoided when anchoring cable restraints.

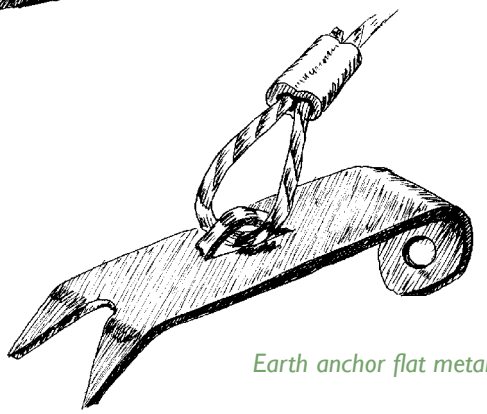


Metal stakes that are 30 inches long with a nut welded on one end and tapered on the other are good ways to anchor cable restraints. A good maul should be carried to drive in the stakes.

In wet conditions or loose, sandy soil, cross stake using two metal stakes to be sure the restraint is secure.

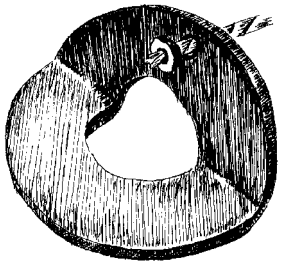
Earth anchor tube



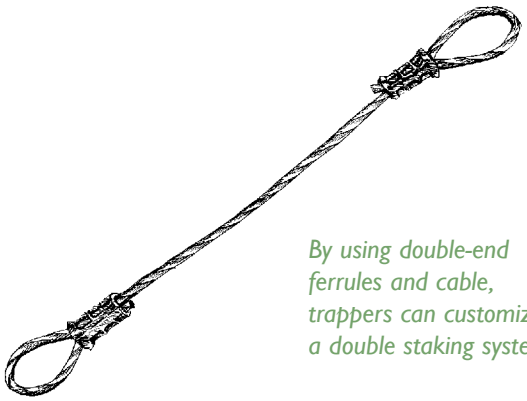


Earth anchor flat metal

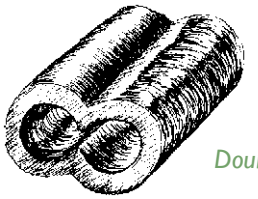
Earth anchors, which are smaller and lighter weight than metal stakes, are easier to carry to remote locations.



Earth anchor bent washer



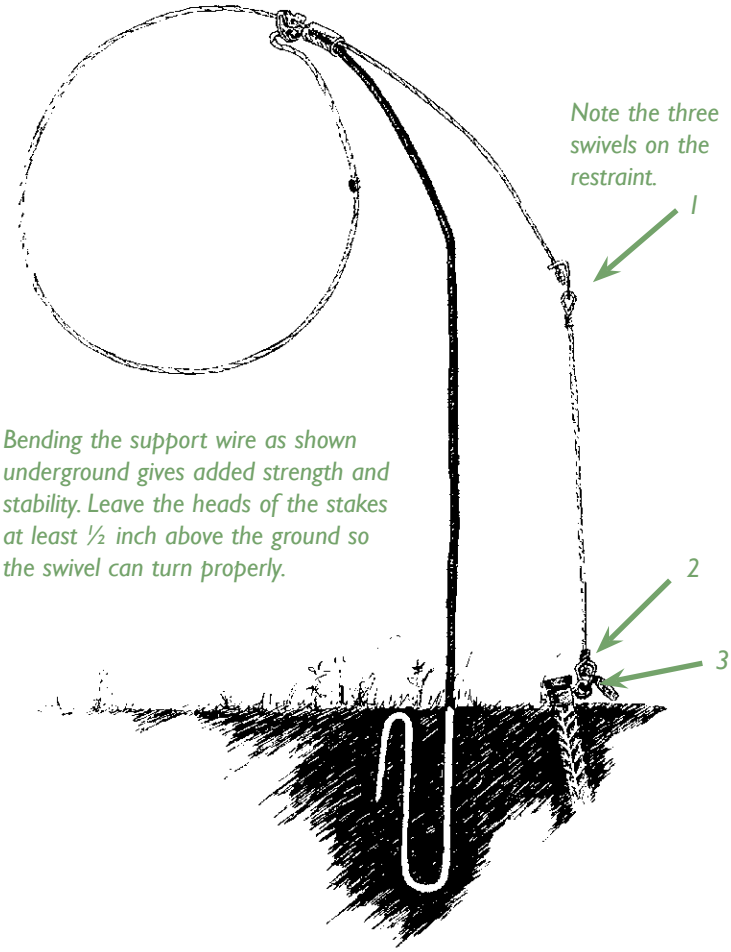
By using double-end ferrules and cable, trappers can customize a double staking system.



Double-end ferrule

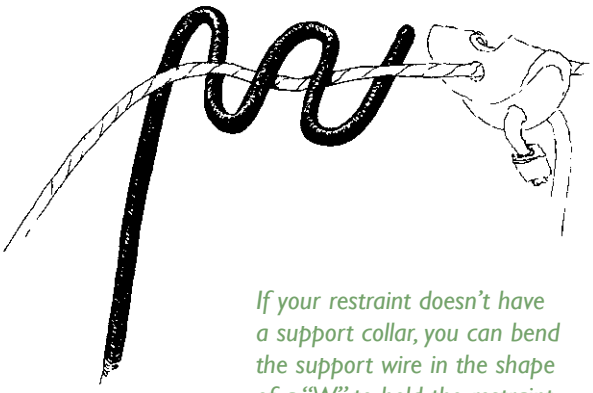
Supporting the cable loop

Several methods can be used to support the cable loop. The more rigid the support wire is at the point where it supports the cable, the easier it is for the cable restraint to fire. Most support systems use 9-gauge wire as the support wire because it is stiffer and the sturdiest of the commercially manufactured wire available to trappers. The support wire is often attached to a wooden or steel stake that is driven in the ground so that the support wire is as rigid as possible.

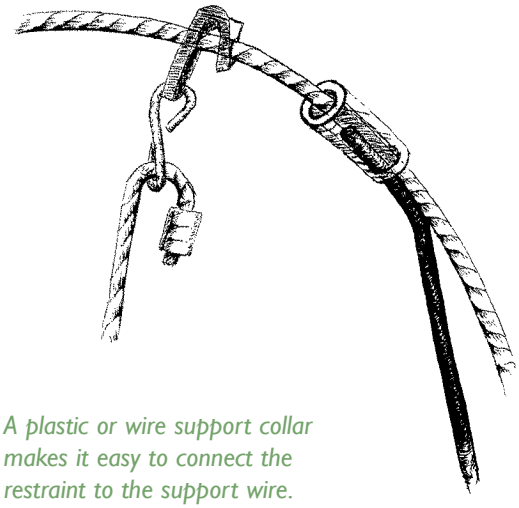


Note the three swivels on the restraint.

Bending the support wire as shown underground gives added strength and stability. Leave the heads of the stakes at least ½ inch above the ground so the swivel can turn properly.

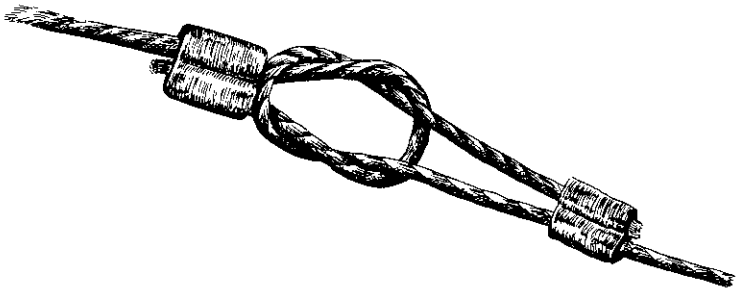


If your restraint doesn't have a support collar, you can bend the support wire in the shape of a "W" to hold the restraint in the correct position.



A plastic or wire support collar makes it easy to connect the restraint to the support wire.

This is a common method for attaching an earth anchor to a cable loop.

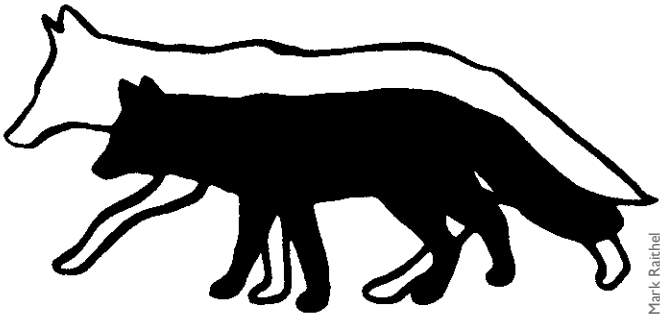


Positioning

When positioning the cable restraint to capture a specific species, the rule of thumb is to set the loop as high as its diameter. For example, when setting for coyotes, use a 10-inch loop set 10 to 12 inches above the ground. When setting for fox, use a 6 to 8 inch loop at 6 to 8 inches above the ground.

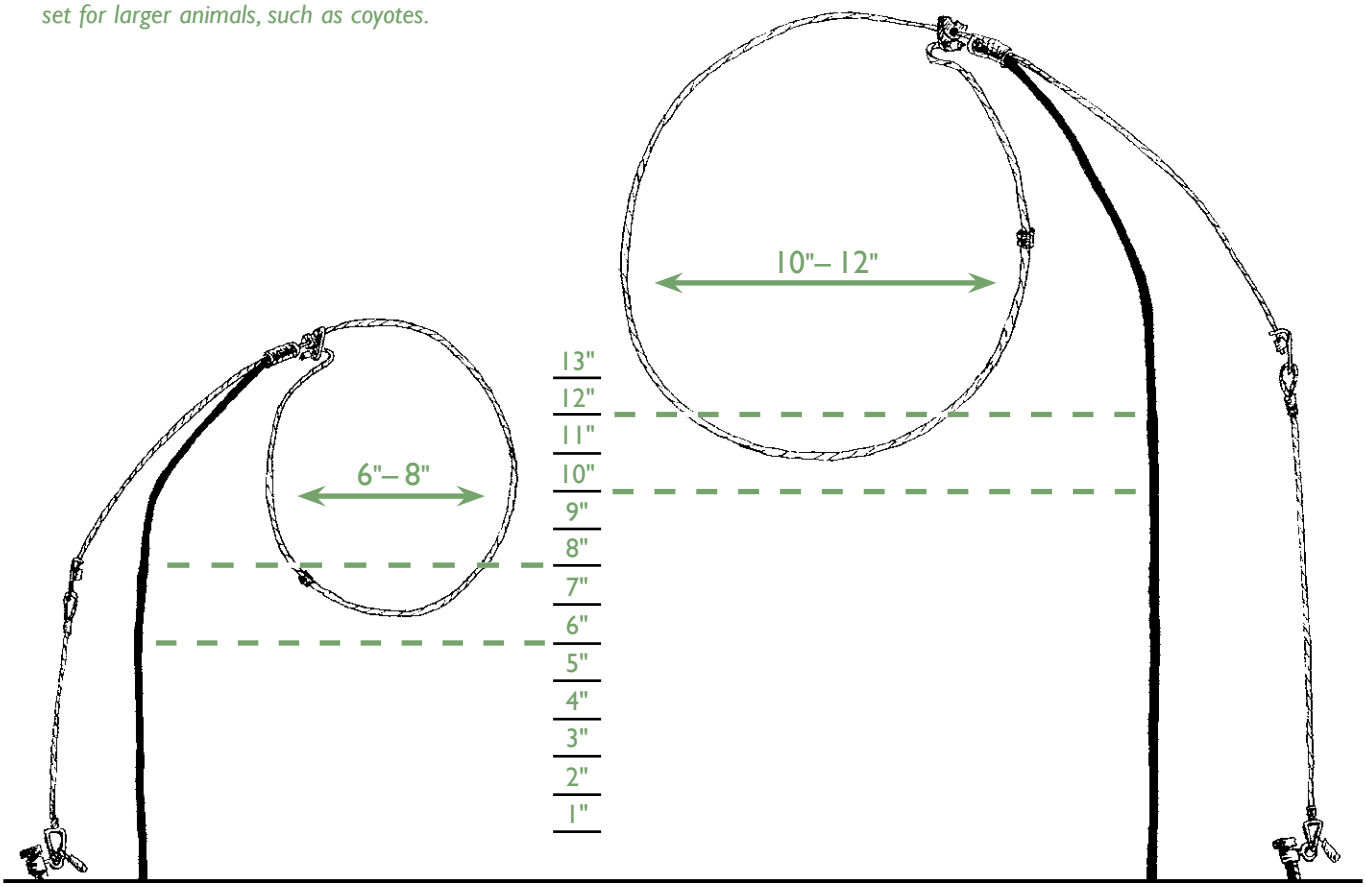
When setting the cable restraint, the lock should be set at the 1 or 11 o'clock position. This allows gravity to pull down on the lock and keep the loop open, even if a larger animal bumps into the restraint.

In high wind, the lock position may need to be increased to the 2 or 10 o'clock. An alternative solution to using the 2 or 10 o'clock position in windy conditions is to put a 10-degree upward bend in the cable at the support collar.



Set the height of the cable loop to catch a specific species. Note the relative size of the coyote and the fox.

Loop height helps reduce incidental catches. The restraint on the left is set for a fox and the one on the right is set for larger animals, such as coyotes.



Recording set locations

It is important that trappers record all set locations and the number of cable restraints set at each spot so all restraints can be checked daily and will be removed from the field at the end of the season. Don't rely on your memory. Write down each set location immediately after setting restraints. This is one of the most critical concerns, because cable restraints are relatively cheap and light weight, and many can be set, and accidentally left in the field after the season closes. They must all be retrieved at the close of the season.

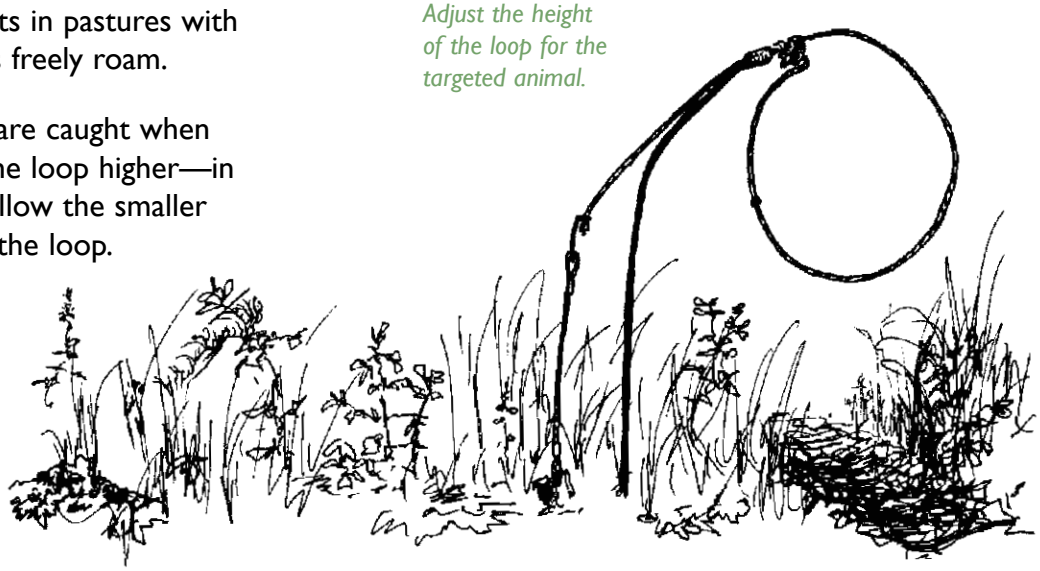
Aerial photos or topographic maps can help you keep track of set locations.

Avoiding incidental catches

Here are some tips to avoid incidental catches:

- Never use cable restraints in pastures with livestock and where pets freely roam.
- If opossums and skunks are caught when targeting for fox, place the loop higher—in excess of 6 inches—to allow the smaller animals to pass beneath the loop.

Adjust the height of the loop for the targeted animal.



Use Cable Restraints Wisely

The future of cable restraints in Missouri belongs to all trappers. Some of the most common errors made by beginning trappers are listed below. It's your responsibility to use cable restraints legally and wisely.

Failure to properly secure. When improperly anchored, cable restraints can result in severe injuries to trapped animals if they pull the restraint loose and escape with it around their neck or body. Also, using swivels allows the cable restraint to move freely with the animal, reducing chance of injury.

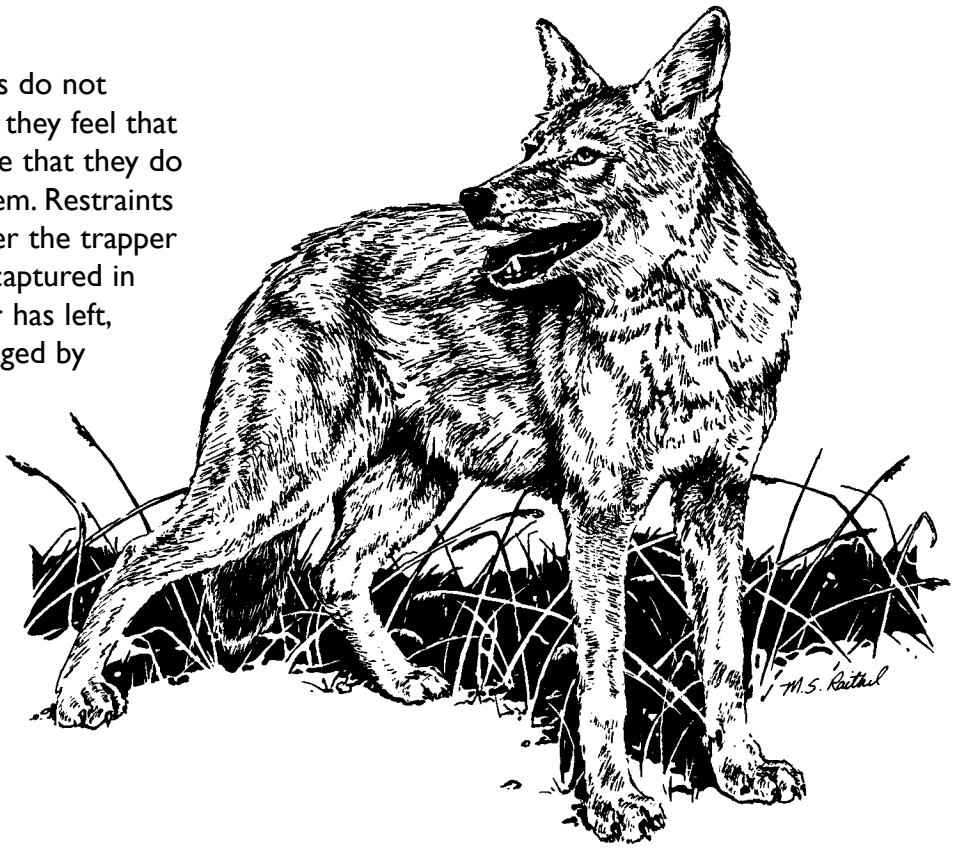
Failure to check every day. In general, injuries increase with the amount of time the animal spends in the cable restraint, particularly if circulation is restricted. No cable restraint should be set if it cannot be tended every day, as required by the *Wildlife Code of Missouri.* If a set goes untouched for a number of days and you want to abandon that location, completely remove the cable restraint from that area.

Failure to remove. Some trappers do not accurately record all set locations, or they feel that the cable restraints are so inexpensive that they do not need to retrieve every one of them. Restraints may remain active for a long time after the trapper quits checking them. Animals can be captured in them days or weeks after the trapper has left, and all trappers reputations are damaged by these actions.

Failure to avoid entanglement. Inexperienced trappers too often fail to recognize potentially dangerous set locations and do not work to ensure a safe set location. Problems arise when cable restraints are set too close to fences, or without clearing the set area of woody stems and vines. This entanglement will cause mortality or severe injury, which is not a legal use of a cable restraint.

Failure to choose an appropriate location. In general, use of cable restraints should be avoided in parks, high-use recreational or hunting areas, and residential developments. Even though correctly set restraints should not harm dogs, trappers should do everything they can to avoid capturing pets. In areas where pets freely roam, box, cage and other types of dog-proof traps should be used.

Failure to respect property rights. Never trespass on other peoples' property or tamper with other trappers' sets. Both are illegal.



Troubleshooting Problems

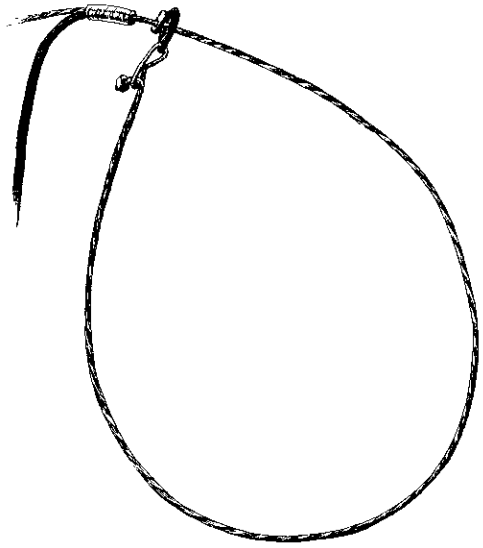
Catching animals in cable restraints is not as simple as hanging a cable and waiting for an animal to wander through. Often a great deal of effort is required to force an animal into a certain setup. Each species and situation brings different challenges. Being creative and adaptable will serve the cable restraint user well. Some common problems and their solutions are listed below.

Cable is knocked down. When a cable restraint is knocked down, it usually means it was not supported properly or was set too low. Support the cable so the wind won't blow it down (see page 28) and raise it up high enough so small animals going underneath it won't cause it to fall.

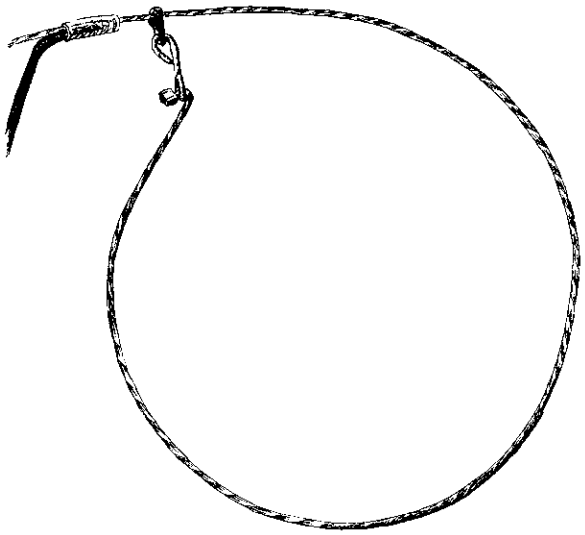
Animals approach but refuse to go through the cable. This problem can be caused by several different things. For example, if the loop is too large, animals partially enter the restraint, then back out. Also, fencing with unnatural materials can cause refusal. Approach trails should be fenced in with natural looking materials to lead the animal through the restraint. Also, it could be that the cable hasn't been properly "loaded" or that the support wire may not be rigid enough to allow the cable device to fire when the animal hits it with its chest. The key is to make the restraint blend in as much as possible. See section on treating cable restraints on page 15.

Animals are caught around the body, instead of the neck. If the loop is too large, animals may get too far into the restraint before they are caught. This can cause injury to the animals and damage to the fur.

Incidental catches are made. Loop size, shape and height are key factors in avoiding incidental catches and successfully harvesting the target animal. If raccoons, opossums, skunks and other incidental catches are a problem, the cable restraint is probably being set too low or the set is in the wrong location. Look for sign of the targeted animal and move the set.



An improperly loaded cable loop appears as a tear drop shape. Resistance in the cable loop makes it difficult to fire properly.



A properly loaded cable loop is shaped more like an oval or kidney.

Loading will be demonstrated in the hands–on section of the class.

Releasing Animals

To release live animals from cable restraints, use a catch pole to secure the animal before cutting the cable free from the animal. Catch poles are available commercially or can be made from materials purchased at a local hardware store. See figure below.

When releasing coyotes and other large animals, it is best to have an extra person to distract the animal while the other person slips the loop of the catch pole over the animal's neck. As an extra precaution with vicious animals, use a shield to keep the animal away from you. An inexpensive shield can be from a 4 × 4 foot piece of plywood, with handles secured to the back.

To release an animal from a restraint, first secure the loop of the catch pole around the animal's neck. Then pin the animal to the ground, taking care to avoid the animal's teeth and claws. After the animal is secured with the catch pole, free the animal from the restraint by cutting the cable with cable cutters or dikes.

Once the cable restraint is cut away from the animal's neck or body, the animal can be placed in a transport box prior to moving the animal to a pen, meeting the specifications outlined in the *Wildlife Code of Missouri*; or in the case of incidental catches, the catch pole can be relaxed to let the animal escape.

How to make a catch pole

Material:

5 feet of ½- to 1-inch conduit, PVC or steel pipe

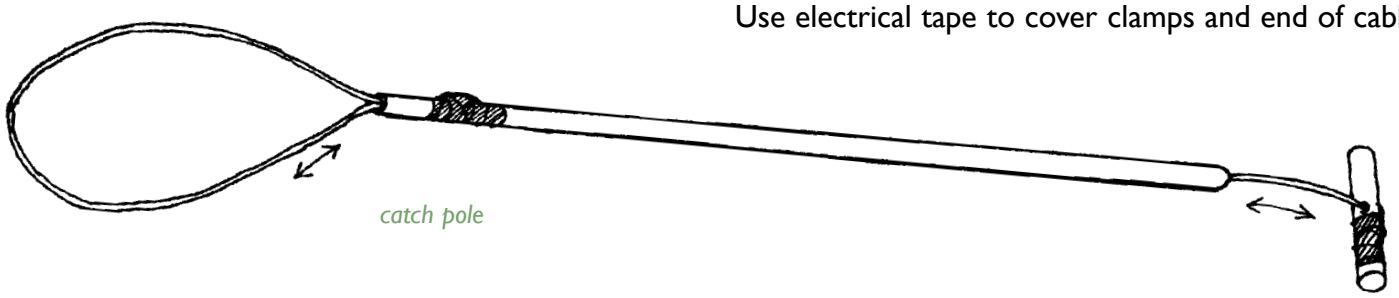
9 feet of cable, ¼ inch in diameter

2 hose clamps

electrical tape

dowel rod for handle

Drill hole in dowel rod and insert cable. Cinch with hose clap. Run cable through conduit and make loop. Clamp cable after making desired size of loop. Use electrical tape to cover clamps and end of cable.



catch pole

Transporting and Holding Live Furbearers

Only red fox, gray fox and coyotes may be taken alive during established seasons and held in captivity. They may not be exported and may only be sold or given to holders of a valid Hound Running Area Operator's Permit. The captured fox and coyotes must not be possessed after February 15. They may not be held for longer than 72 hours after capture, except when confined in facilities and cared for as specified in 3 CSR 10–9.220 of the *Wildlife Code of Missouri*, and after approval by an agent of the Conservation Department. Complete and current records of all transactions must be maintained showing the county of origin, the species, date captured, date of transfer, and name and permit number of the hound running area operator/dealer receiving each individual animal. These records must be kept on forms provided by the Conservation Department, given to a Department agent by April 15, and available for inspection by an authorized agent of the Department at any reasonable time.

Notes

Code of Responsible Trapping

The following points are keys to trapping in a responsible and ethical manner:

1. Respect private property. Do not violate trespass laws or tamper with the property of others. Ask permission from the landowner.
2. Know selective and humane trapping systems, and use them appropriately.
3. Check traps regularly and faithfully, preferably in the morning.
4. Be aware of others using the outdoors, and do not interfere with their activities.
5. Assist property owners with wildlife damage problems.
6. Avoid areas or sets likely to result in the capture of domestic animals.
7. Be a conservationist. Make an effort to harvest only the surplus.
8. Promptly report wildlife problems such as disease, pollution or fish kills.
9. Identify and record all set locations accurately. Pick up all equipment when you have finished trapping.
10. Use furbearer carcasses for human, domestic animal or wildlife food whenever possible.
11. Dispose of unused carcasses properly.
12. Provide educational assistance to new trappers.
13. Support strict enforcement of laws relating to wildlife.
14. Respect the rights and feelings of others.
15. Cooperate with wildlife management agencies.
16. Do not tamper with cable restraints or traps or snares of others.

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