

Pennsylvania

Cable Restraint Certification Course Student Manual



Revised July 2019

Acknowledgments

The Pennsylvania Cable Restraint Certification Course was developed to provide initial familiarization to the use of cable restraints for trapping fox and coyote during limited seasons. The curriculum was developed through the combined efforts of the Pennsylvania Game Commission and representatives from the Pennsylvania Trappers Association.

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Courtesy of *U. S. Fish and Wildlife Service/Bob Savannah*

Introduction

Snare. Cable restraint. Aren't they the same thing? This is a question individuals unfamiliar with trapping occasionally ask when discussing these devices. The image of trapping and the devices used in this activity have been incorrectly portrayed to the public for years. This misunderstanding guides the non-furtaking public into making the incorrect assumption that these devices are the same device.

Cable restraints are state-of-the-art tools used by trappers to safely, efficiently, and humanely capture furbearers, alive. Restraints have been tested extensively and have proven to be an effective device for restraining furbearers, causing little or no injury to the animal or damage to the fur. When the cable restraint is constructed properly and used by trained furtakers, it is a device that simply and safely holds the animal until the furtaker returns.

Cable restraints are similar to a dog-training collar. This type of collar will tighten around the dog's neck when force is applied, but will stop constricting and slightly "relax" when the animal or trainer stops pulling on the leash. Because animals caught in a cable restraint are held relatively in the same manner, non-target species and domestic animals occasionally caught in cable restraints can be released without suffering lasting injury or being subject to adverse physical stress.

Snares, although made from similar materials and set using comparable trapping techniques, differ from cable restraints in respect to animal welfare. Snares can be set to dispatch captured animals prior to the return of the trapper. Many snares are constructed with non-relaxing locks causing the snare loop to remain at the smallest diameter reached as a result of the animal's movement. In Pennsylvania, snares can only be used to trap beaver.

Pennsylvania's non-furtaking public will form negative opinions about the use of cable restraints so long as they remain incorrectly informed about these devices. Trappers, through ethical conduct afield and education will provide the public with information necessary to form positive opinions about cable restraints and trapping. This support from the general will help to ensure cable restraints and trapping are thought of as necessary, effective and humane wildlife management tools.



Cable Restraints in Pennsylvania

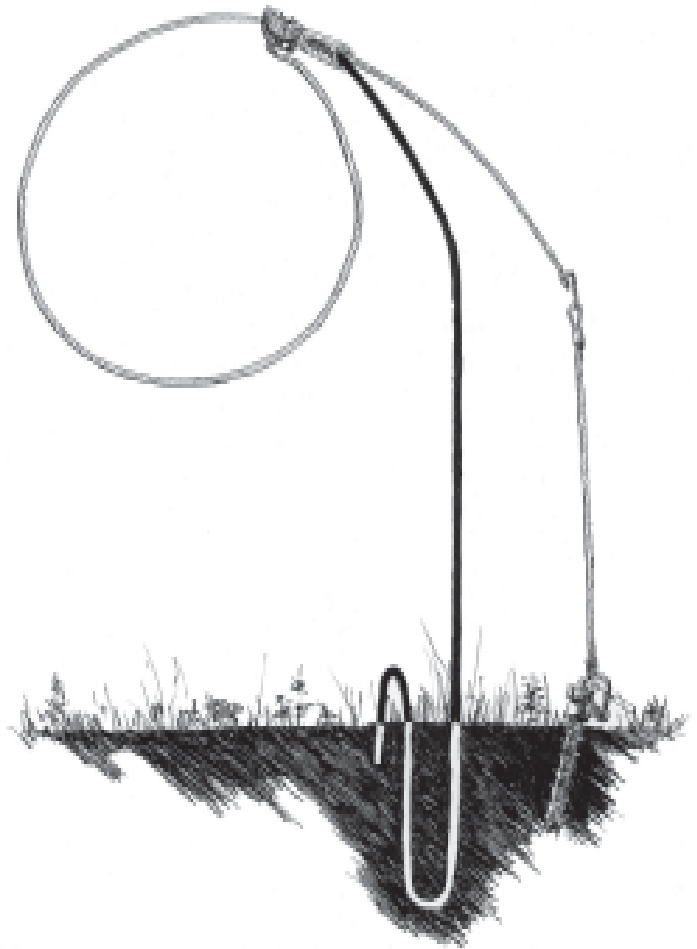
Snares and snaring methods used in the 21st century are significantly different from the past. The cable used today is strong enough to keep an animal from escaping, yet flexible enough to form easily into a loop. With these features, it is no longer necessary to use a powering device to keep the loop closed. When a locking device is added to keep the loop from reopening 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 with little or no injury, 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.

This student manual is intended for use in the cable restraint certification course, which addresses how to use cable restraints in a responsible manner to catch live foxes and coyotes. It provides basic guidance of ethics, management principals and regulations in Pennsylvania. In addition to classroom sessions, the course includes equipment demonstrations and hands-on activities under the supervision of trained instructors.



Satisfactory completion of this certification course is necessary to use cable restraints during the special fox and coyote season in Pennsylvania.

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.

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.

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 Pennsylvania Game Commission. 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

At the conclusion of this course, students will be able to:

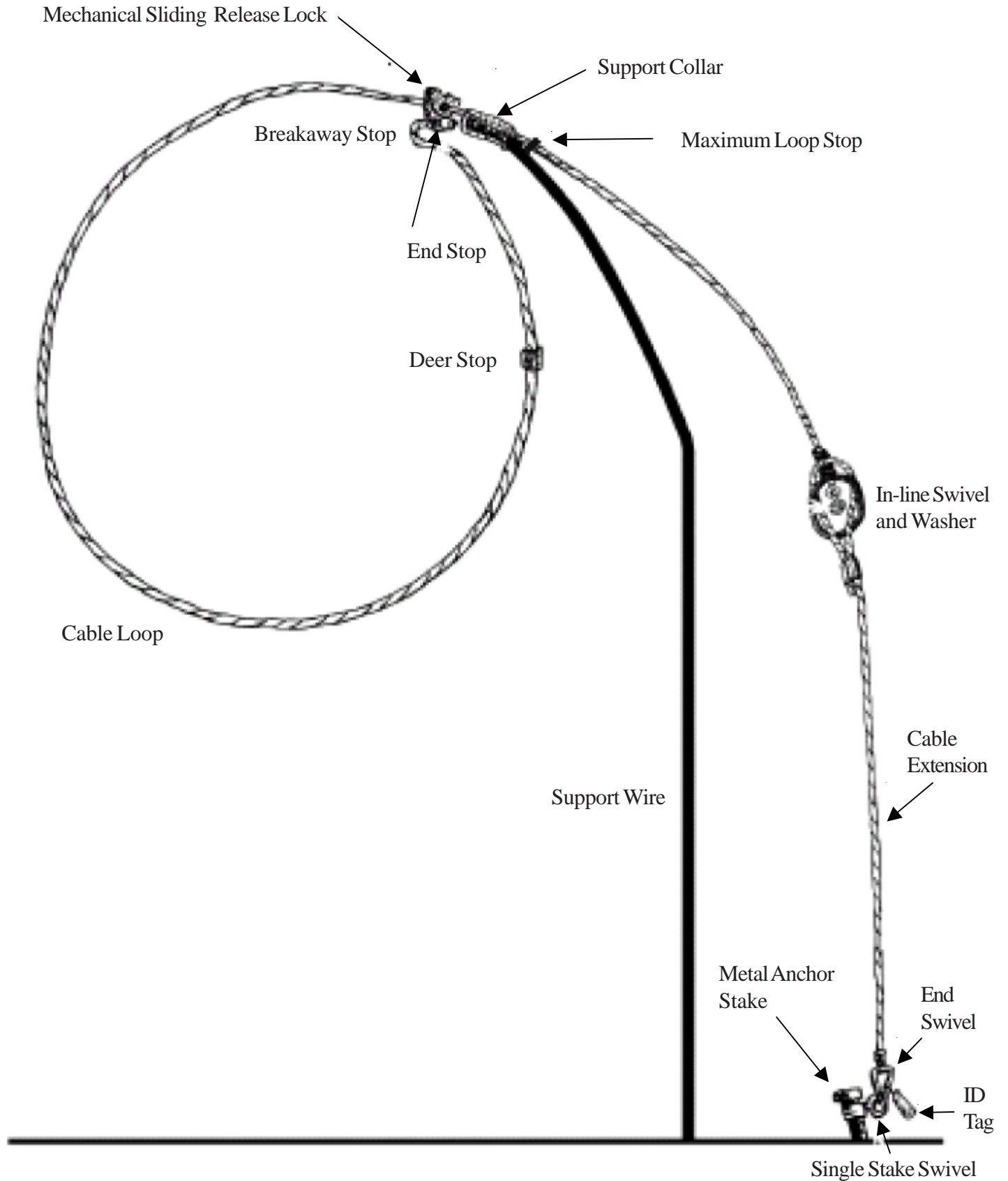
- Recognize there are many more non-furtakers than there are furtakers in Pennsylvania.
- Recognize how non-furtakers influence public policy about furtaking.
- Define the words responsible, respect, and ethics.
- List how trappers can demonstrate responsible behavior.
- Recognize the difference between responsible and irresponsible decisions when confronted by dilemmas.

- Demonstrate knowledge of Pennsylvania's furtaker laws and regulations.
- Explain how furtaker laws and regulations are created.
- Explain what is meant by "Best Management Practices".
- State three reasons for the existence of furtaker laws.
- Locate information about furtaker laws using the *Pennsylvania Digest of Hunting and Trapping Regulations*.
- Identify materials needed to make a cable restraint that meets Pennsylvania's current cable restraint regulations.
- Explain how to treat cable restraints.
- Explain how a cable restraint works.
- Understand the importance of avoiding trails and areas frequented by people, domestic animals and other non-target animals.
- Explain how to prepare a cable restraint site.
- Identify the tools, materials and supplies needed to make a cable restraint set.
- Demonstrate how to make a proper cable restraint for selected furbearers.
- Identify three correct cable restraint sets and two incorrect cable restraint sets.
- Explain how to troubleshoot cable restraint problems.
- Explain strategies to avoid incidental catches.
- Explain how to release non-target animals from cable restraints.
- Describe how to safely, humanely and quickly dispatch furbearers.



Courtesy of U. S. Fish and Wildlife Service/Bob Savannah

Cable Restraint Components & Terminology



How Cable Restraints Work

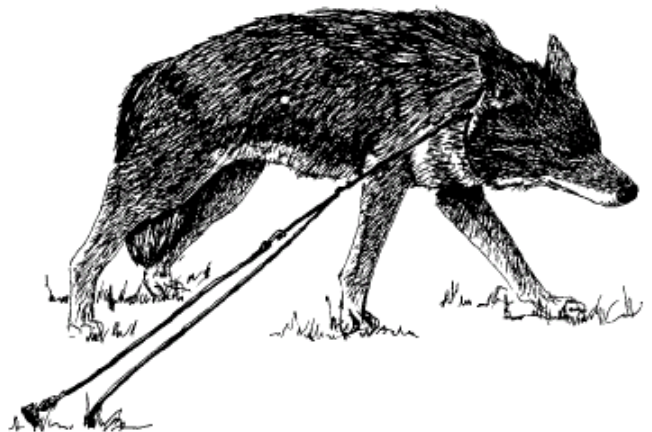
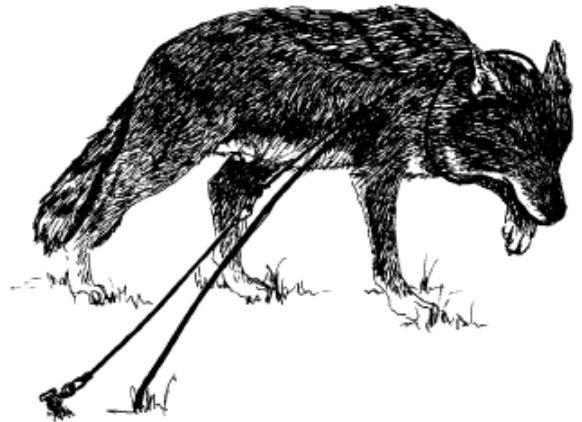
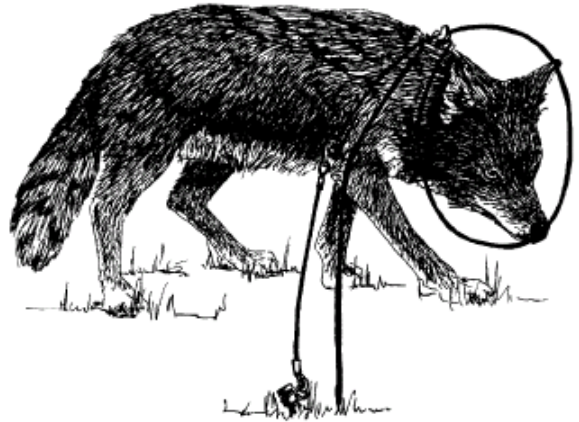
With no springs or other powering devices to close the cable loop, cable restraints rely on the force of the animal itself pulling on the loop to provide the energy to close the loop.

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, the loop will stop closing and the lock will relax slightly, as it is designed to do. The cable restraint then humanely holds the animal in place.



Research Leads to Legalization of Restraints

While Pennsylvania 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.

The use of cable restraints in Pennsylvania 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 Pennsylvania Game Commission 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.



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

Why BMP's are Important?

Best Management Practices for trapping are 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.
- ❑ Improve real and perceived problems associated with regulated trapping.

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

For more information, visit:
www.fishwildlife.org/furbearer

IAFWA

The International Association of Fish and Wildlife Agencies was founded in 1902. It is an organization of public agencies charged with the protection and management of North America's fish and wildlife resources. The 50 state fish and wildlife agencies, as well as provincial and territorial governments of Canada are members. Federal agencies in Canada and the United States area also members.

The Association has been a key organization in promoting sound resource management and strengthening state, provincial, federal, and private cooperation in protecting and managing fish and wildlife and their habitats in the public interest. The association is now know as the Association of Fish and Wildlife Agencies.

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 regulated 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 by 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 using 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 using the International Standards Organization Injury Scoring System. The rating system showed that cable restraints, when used properly by trained trappers, result in few injuries.

Injury Scores from 2002 Cable Restraint Study

Species	Mild	Moderate	Trauma Class (1)	
			Moderately Severe	Average Score (2)
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 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) Average score must be 55 or less to be considered acceptable. Results of this study: 6.8.

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 among the best of all trap types tested so far for coyotes or any other furbearer species. See table on page 7.

The pelts were graded by experts from the North American Fur Auctions, and they found little to no damage to any pelt.

Because testing proved that the cable restraints could be used safely, effectively and humanely when in the hands of experienced and trained trappers, the Pennsylvania Game Commission designed this curriculum to ensure that everyone who successfully completes this course knows the proper way to use cable 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.

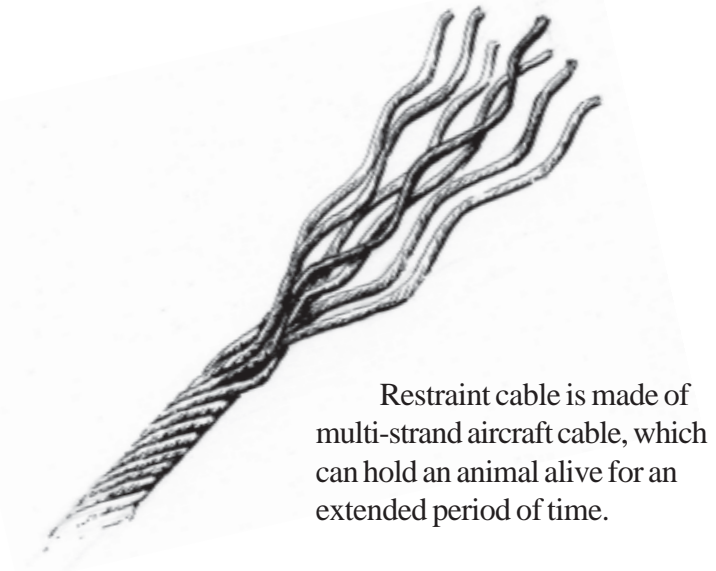
While other trapping devices, like foothold and body-gripping traps can be reused, cable restraints can be used only once. After an animal has been held in a restraint, the cable will bend and twist and can no longer function properly. It is often possible to reuse some of the hardware such as the lock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

Cable

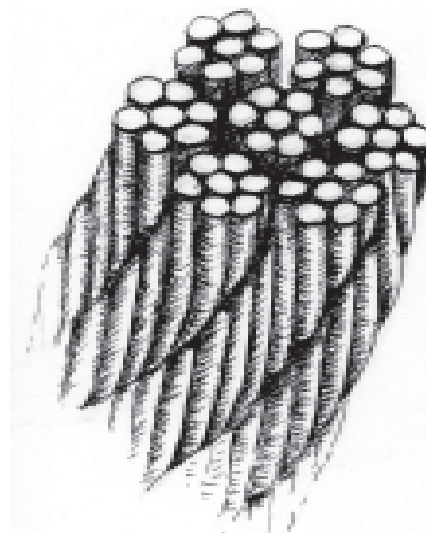
To be legal in Pennsylvania, a cable restraint must be made of non-stainless, multi-strand cable. Currently, only the 1 x 19, 7 x 7 and 7 x 19 cables are authorized in Pennsylvania.

The number depicting the braid of cable explains the number of wires in a strand and the number of strands in a cable. A 1 x 19 cable is a single strand of 19 small wires. The 7 x 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.

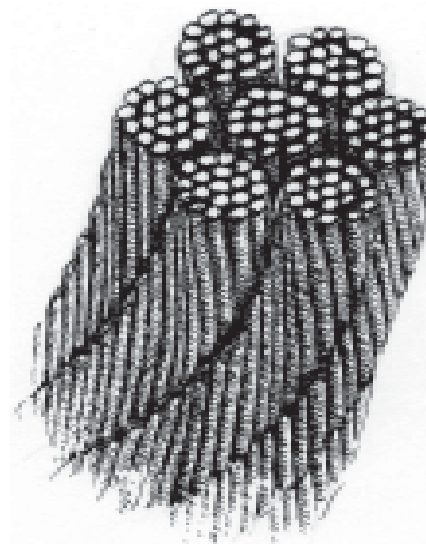
The 7 x 19 consists of 19 very small wires wound into a strand with 7 of these strands making up the cable. Cables used for live capture of certain furbearers in Pennsylvania must have a minimum diameter of 3/32 inch.



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



Cable strands 7 x 7



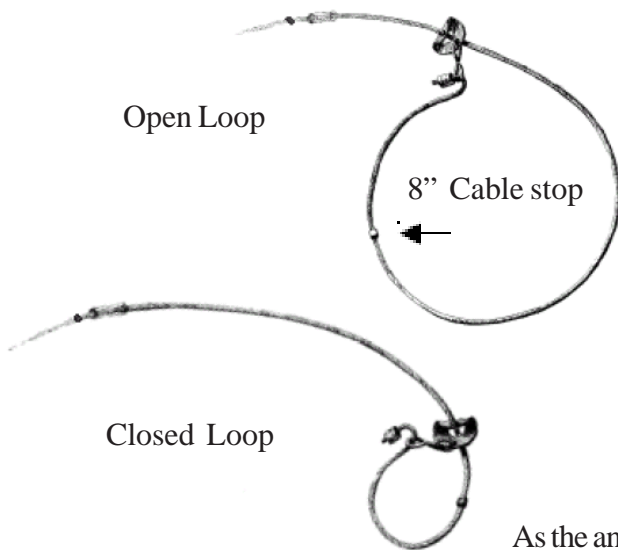
Cable strands 7 x 19

Relaxing-type lock

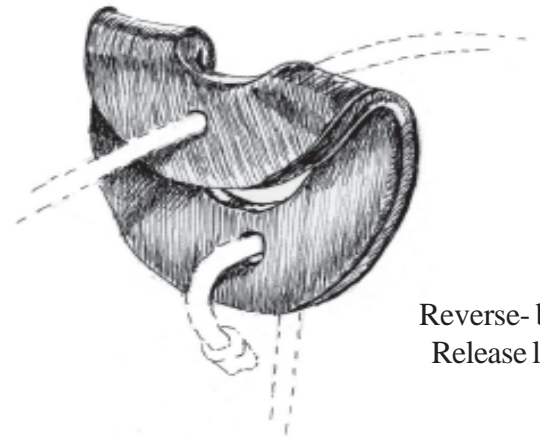
An important part of the cable restraint is the sliding lock, which slides easily in one direction. As the cable loop is pulled closed, the lock slides down the cable, enclosing around the animal's neck or body. The lock, however, will not easily slide the opposite direction, which prevents the animal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

Pennsylvania 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, are constructed with moving parts or other powering devices to hold them closed are not legal in Pennsylvania.



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.



Reverse-bend Release lock

The following locks are approved:

1. Reichart 180° Reverse Bend Washer



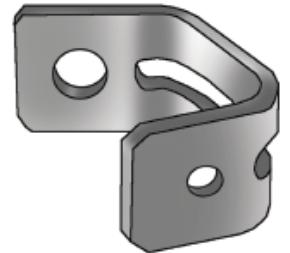
4. MicroLock



2. Kaatz "Relax-a-Lock"



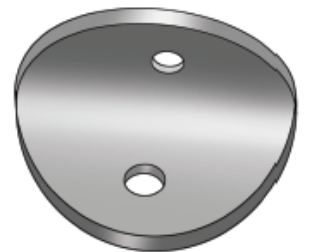
5. BMI Slide Free Lock



3. Penny Lock



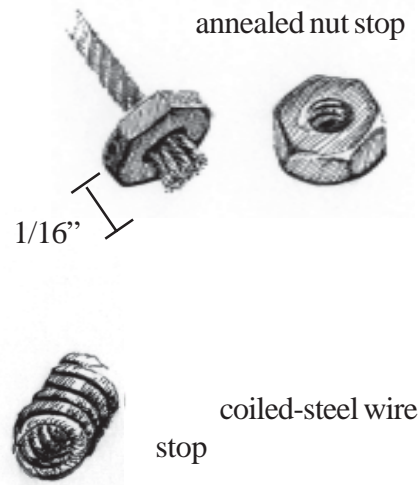
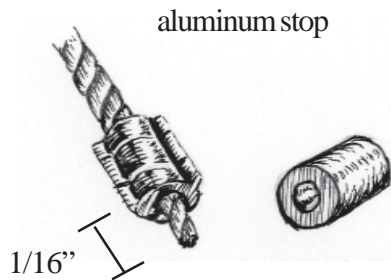
6. Berkshire 90° Bend Washer



It is unlawful to: Use, set, tend, or operate a cable restraint having any lock that has not been approved under this section.

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.



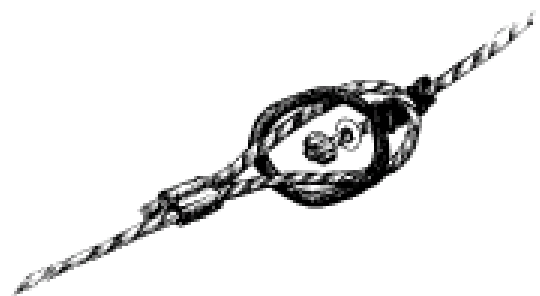
Swivels

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 Pennsylvania regulations, cable restraints must be equipped with at least one swivel device. 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.

Swivel Washer

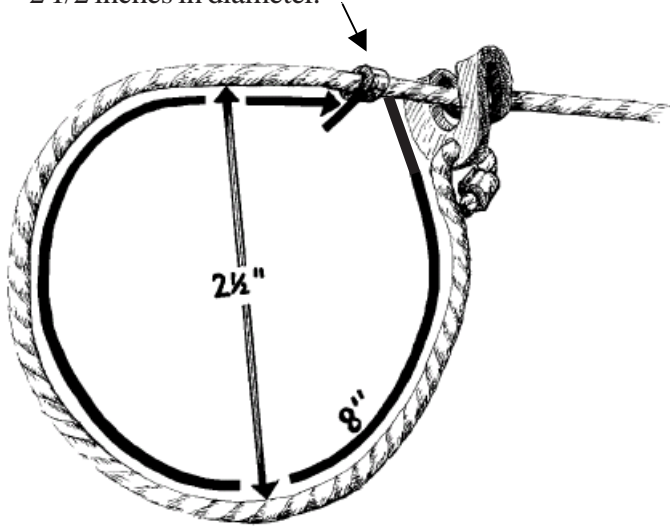
A washer placed between the swivel and the ferrule provides a flat surface for the cable ferrule to turn against. This allows the cable to turn freely when a captured animal applies pressure, thus increasing the chance that the animal will not get tangled and injured. Note placement of washers in illustrations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



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 Pennsylvania, cable restraints must have a stop that prevents it from closing to less than 2 1/2 inches in diameter.

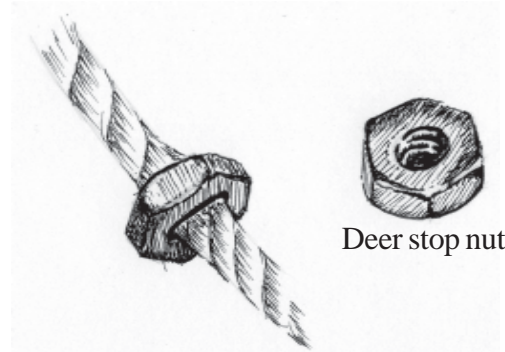
The deer stop keeps the loop from closing to less than 2 1/2 inches in diameter.



To be legal to use in Pennsylvania, the stop must keep the cable loop from closing beyond 2 1/2 inches in diameter.



Deer stop ferrule



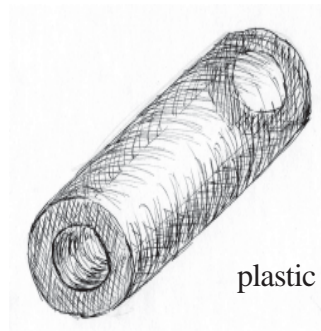
Deer stop nut



Support collars

The support collar 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

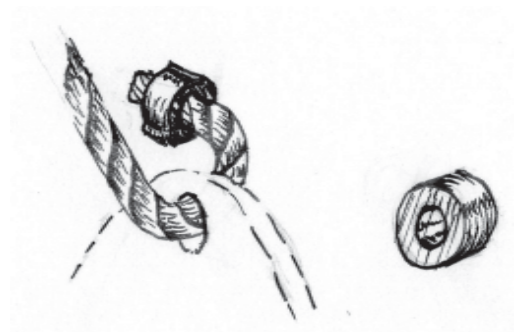


plastic support collar



Breakaway Device System (BADs)

A breakaway device releases or breaks away at varying 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 Pennsylvania must be equipped with a breakaway device rated at 375 pounds or less. Types of breakaway devices include J-hook, S-hook and breakaway or pop-off stop. These devices must be attached between the relaxing-type lock and cable or 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 swagging 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.



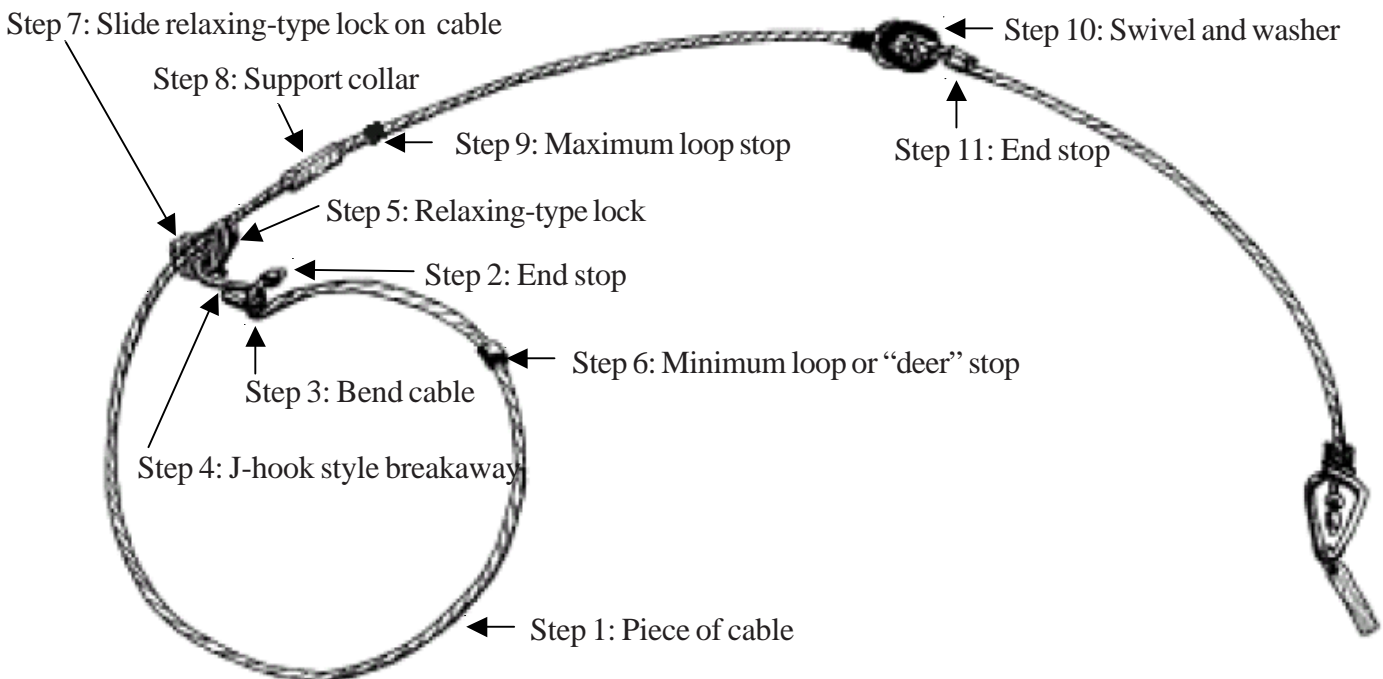
J-hook breakaway rated at 375 pounds or less can easily be installed by trappers who want to make their own restraints. If not opened, these can be reused after the initial capture.

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 Pennsylvania*

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

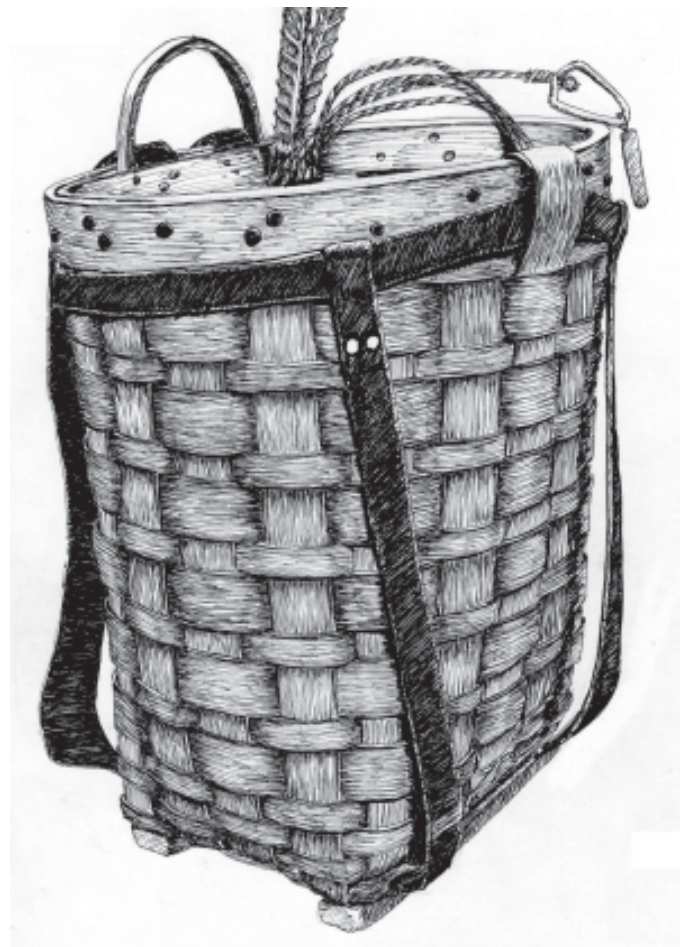
- Step 1: Cut a 40- to 50-inch piece of non-stainless, multi-strand cable.
- Step 2: Slide a stop onto the end of the cable, and crimp it with a swagging tool or a mallet.
- Step 3: Bend the end of the cable near the stop into a figure-seven bend.
- Step 4: Slide a breakaway device on the cable next 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 stop on the cable and crimp it to form a loop a minimum of 8 inches in circumference.
- 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: Slide a stop onto the cable and crimp at location where maximum loop circumference will be 38 inches.
- Step 10: Thread the swivel, followed by the swivel washer onto the cable.
- Step 11: 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 on 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 hang in a secure area to weather.
- ❑ Trappers may dip the dry restraint in a water-based dip 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.



Pennsylvania Cable Restraint Regulations

All Pennsylvania 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 or id number issued by the Pennsylvania Game Commission.
- ❑ must be checked once every 36 hours and all wildlife must be removed or released. (Suggested that all traps be checked early each morning.)
- ❑ be removed by sunset of the closing day of the season.

In addition to the general trapping regulations, there are regulations that specifically apply to using cable restraints. Most importantly, trappers who use cable restraints to take furbearers during specified seasons must have completed the cable restraint certification course and have the certification card in his or her possession while trapping.

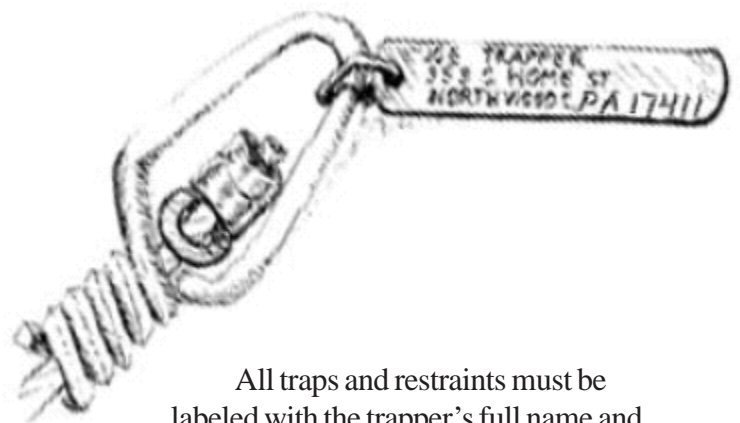
The cable restraint must:

- ❑ be made of non-stainless, multi-strand cable with a diameter of not less than 3/32 inch, and not greater than 7 feet in length from the anchor point to the relaxing lock contacting the minimum loop stop.
- ❑ be made with galvanized stranded cable of either 1 bundle of 19 wires, 7 bundles comprised of 7 wires (7 x 7 wire) or 7 bundles of 19 wires (7 x 19 wire).
- ❑ be equipped with a commercially manufactured breakaway rated at 375 pounds or less.
- ❑ be equipped with a relaxing-type lock.
- ❑ be equipped with cable stops that prevent the loop from closing to less than 2 1/2 inches in diameter or opening beyond 38 inches in diameter.
- ❑ be equipped with at least one swivel device.
- ❑ **NOT** be equipped with a compression-type choke spring, or be otherwise mechanically powered.

When set, cable restraints must:

- ❑ have the loop set at no less than 6 inches or greater than 12 inches above the first solid surface beneath the bottom of the cable restraint.
- ❑ **NOT** use a bent washer as a relaxing lock that has an outside diameter of less than 1 1/4 inches.
- ❑ be set to allow the captured animal to move freely in a 360 degree arc for the entire length of the restraint without risk of the cable restraint becoming entangled in any object.
- ❑ **NOT** be set using a drag, or used with a kill pole.

Remember: Permission must be obtained from the landowner before trapping.



All traps and restraints must be labeled with the trapper's full name and address or number issued by the Pennsylvania Game Commission.

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.

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.

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 or earth anchors. 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. Trappers cannot preposition nor attach cable restraints at these locations prior to the beginning of the season. In most cases, this isn't necessary as the entire process of setting the cable restraint should only take a few minutes.



Always ask permission before entering private property. Fostering positive relationships with landowners will help to ensure the future of furtaking in Pennsylvania.

This time, however, could be used to prepare 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.



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 actually sighting 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 trappers should avoid these areas if frequently used by livestock. Trappers need to make every effort to prevent incidental catches. Trails made by equipment along field borders, where livestock is absent, also can be productive sites.

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 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. In all cases, trappers should remember that restraint entanglement must be avoided.

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



Courtesy of U. S. Fish and Wildlife Service/Bob Savannah

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 the cable restraint certification course does not automatically shield a person from responsibility for injuries or property damage related to the use of this equipment.



Fox Tracks



Dog Tracks



Coyote Track



Bobcat Tracks



Mark Rathel



Mark Rathel



Mark Rathel



Mark Rathel

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 close 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.

All brush 1/2 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.

NOTE: Removal or destruction of vegetation on State owned land is illegal. On private land, obtain permission from the land owner before cutting any vegetation.

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 should be placed at least 12 inches from the fence and free of any entanglements.

Fence crawl under are great locations to catch coyotes and foxes. To make the set effective and to stay the recommended distance from the fence, use natural materials to create artificial fencing to extend the trail from the crawl under to where the cable restraint is legally located.



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

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



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



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

When setting cable restraints near fences, it is recommended that 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 location for a set is found. You may add additional cover to funnel the animal into the restraint.



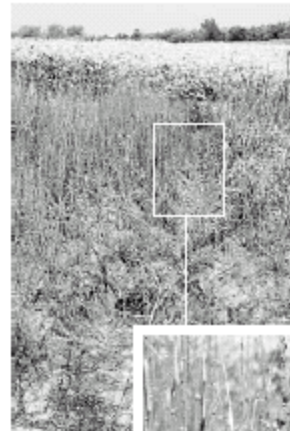
Trails along fences provide good set locations. However, be sure restraints when fully extended are 12 inches from the fence.

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



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. **Remember**, it is illegal to cut vegetation on State owned lands!



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 drop-off. If the animal exits the tube, it could cause an injury. Additionally, restraints should be placed so that captured animals will not be able to jump over the culvert. This reduces the risk of the culvert causing an entanglement.



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.

Possible entanglement around pole.



Animal may fall and be suspended from log.

Animal may become entangled around log and vegetation.



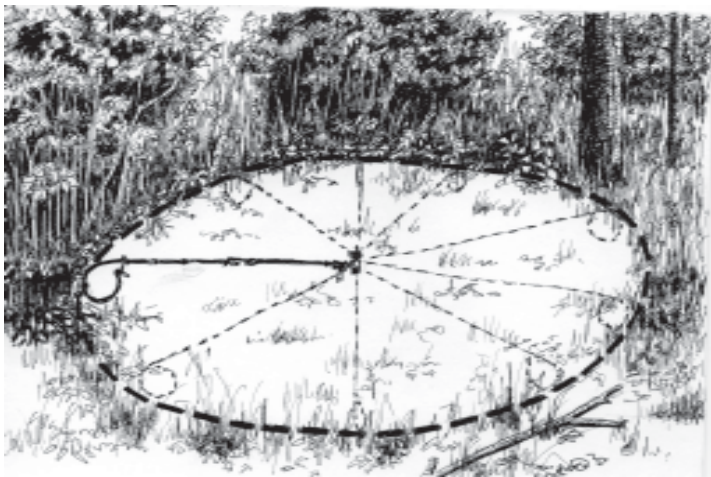
Setting Cable Restraints

Because the purpose of a cable restraint is to catch an animal alive, all regulations pertaining to these devices 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
- √ 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 or small trees.

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.

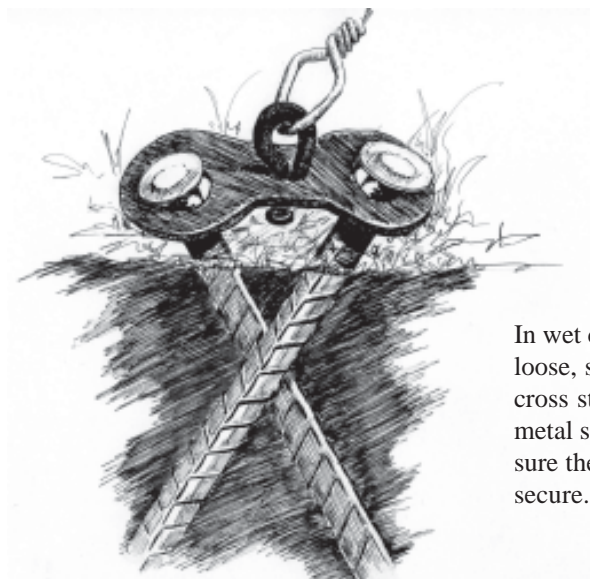
Each time you set a cable restraint, measure how far the cable will be extended once an animal is caught. As a general rule of thumb, an extended cable should be at least 12 inches from a fence and other entanglements so the animal won't be able reach them. Also, if permitted to do so, cut all brush with a diameter of 1/2 inch or larger 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.

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. 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. Also, using swivels allows the cable restraint to move freely with the animal's neck, reducing injury.

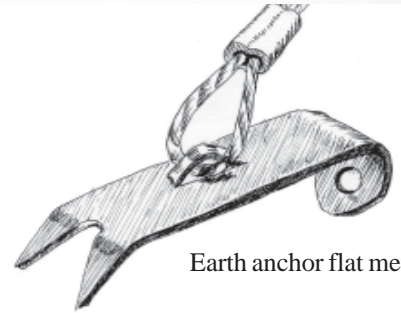
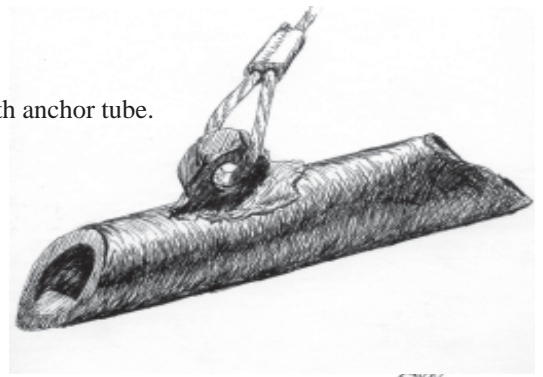


Metal stakes that are at least 18 inches long with a nut welded on one end and tapered on the other are good ways to anchor cable restraints. **Note:** stake length may vary with ground condition and time of year. A good maul or hammer should be carried to drive in the stakes.



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

Earth anchor tube.

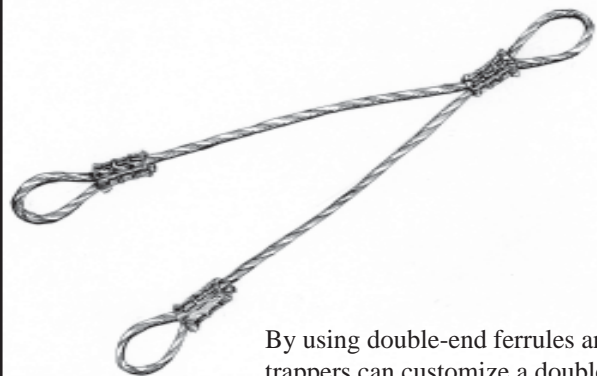


Earth anchor flat metal.

Earth anchors, which are smaller and lighter weight than metal stakes, are easy to carry to remote locations. Not recommended for use in frozen ground.



Earth anchor bent washer.



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

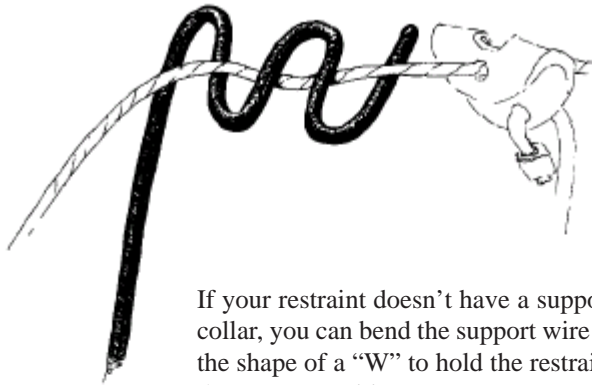


Double-end ferrule

Supporting the cable loop

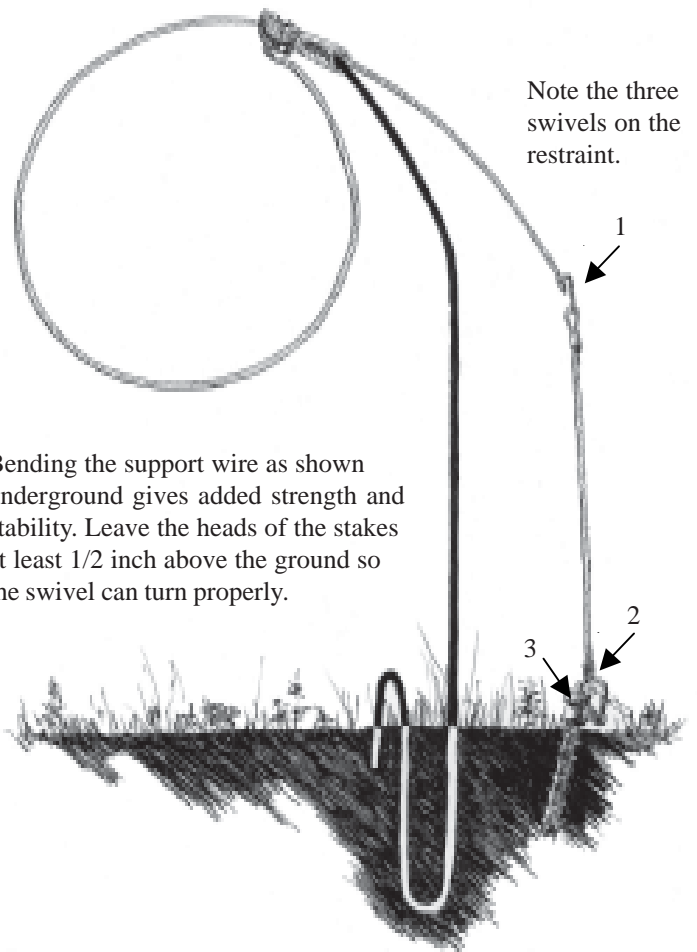
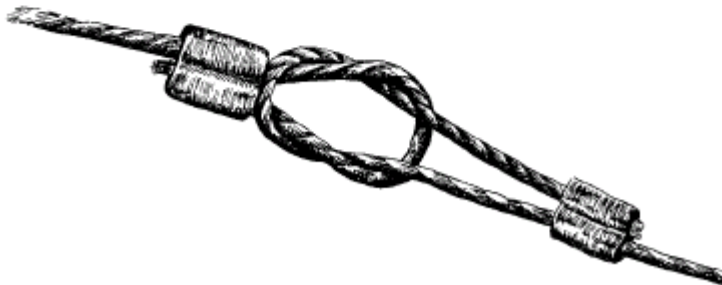
Several methods can be used to support the cable loop. The more rigid the support wire is at the point where it supports the cable, the easier it is for the cable restraint to engage. Most support systems use 9-gauge wire as the support wire because it is stiffer and the sturdiest of the commercially 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. But not so that the wire will not fall away once an animal has been caught



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.

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



Bending the support wire as shown underground gives added strength and stability. Leave the heads of the stakes at least 1/2 inch above the ground so the swivel can turn properly.



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

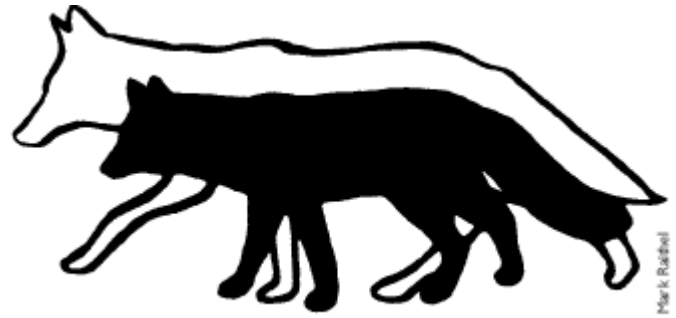
Positioning

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.

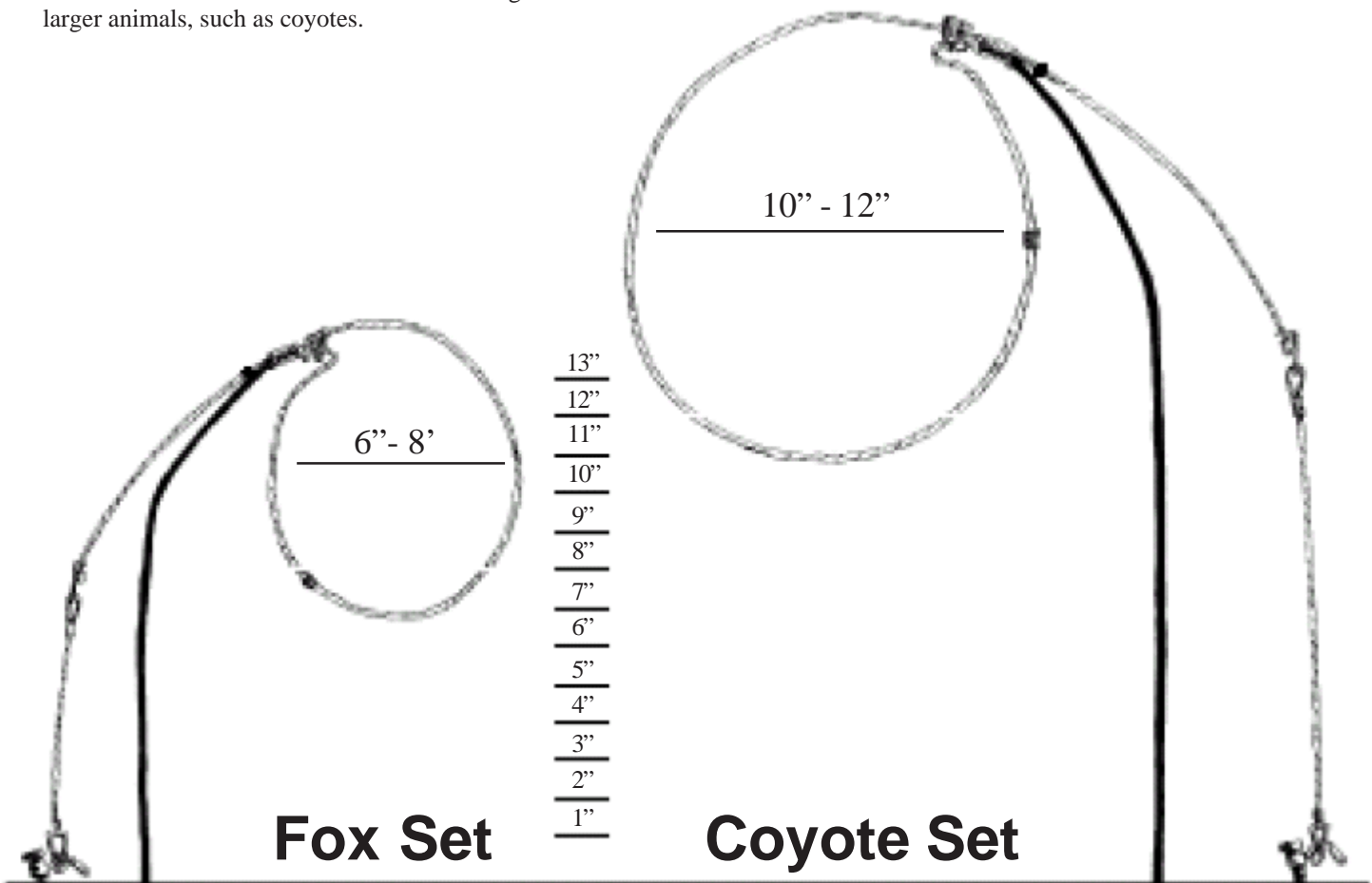
When setting the cable restraint, the lock should be set at the 1 or 11 o'clock position. This allows gravity to pull down on the lock and keep the loop open, even if a larger animal bumps into the restraint.

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.

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.



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



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 every 36 hours. Don't rely on memory. Write down each set location immediately after making your set. Because cable restraints are relatively cheap and lightweight, and many can be set, it is critical to know their locations so no restraints are accidentally left in the field after the season closes. They must all be retrieved at the close of the season.



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.



Use Cable Restraints Wisely

The future of cable restraints in Pennsylvania 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.

Secure the restraint

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.

Check every 36 hours

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 36 hours, as required by *Pennsylvania Hunting and Furtaking Regulations*. All traps should be checked daily, preferably every morning of the season that trapper's have active sets. 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.

Remove traps at end of season

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.

Avoid entanglement

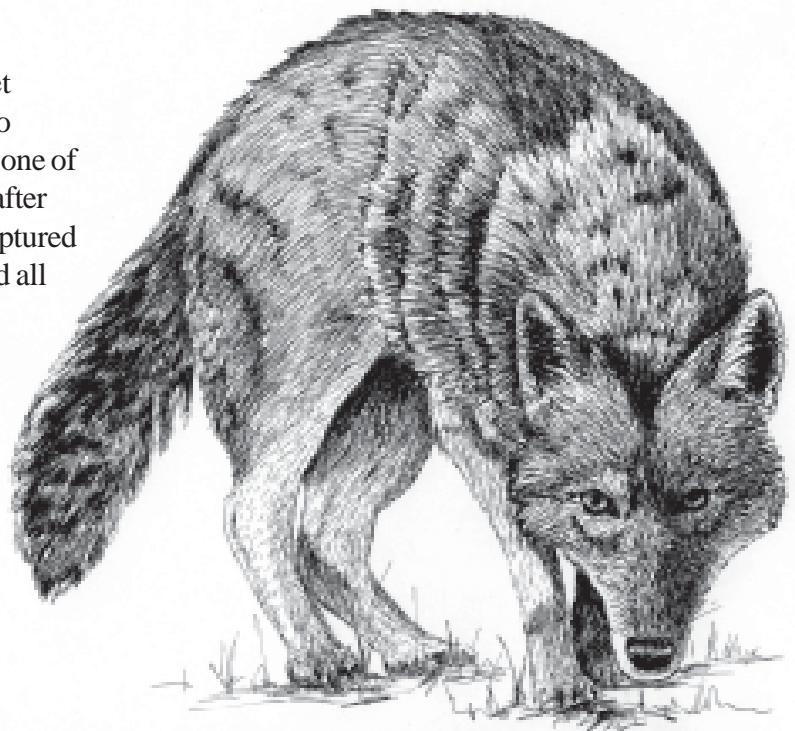
Inexperienced trappers too often fail to recognize potentially dangerous set locations and do not work to ensure a safe set location. Problems arise when cable restraints are set too close to fences, or without clearing the set area of woody stems and vines. This entanglement will cause mortality or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

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.

Respect property rights

Never trespass on other peoples' property or tamper with other trappers' sets. Both actions 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 direct 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 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 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. The key is to make the restraint blend in as much as possible. 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.

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.

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. It is recommended that trappers purchase the best quality catch pole that they can afford.

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 x 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. Once the cable restraint is cut away from the animal's neck or body, the catch pole can be relaxed to let the animal escape.

Releasing Animals using a catch pole

1. Place the catch pole loop around the animal's neck and tighten until firm but not choking the animal.
2. Pin the animal's head to the ground quickly and safely; avoid the animal's teeth and claws.
 - a. If the non-target species is a bobcat extra caution is necessary.
 - b. Neck vertebrae of cats are more delicate than canines.
 - c. Place loop over neck and one front leg if possible.
3. Using the cable cutters cut the loop near the locking device.
4. Pull the cable restraint away from the animal.
5. Relax the loop on the catchpole and release.
6. Try to contact the owner if a domestic dog was restrained.
7. If the animal is moving violently or is a larger furbearer:
 - a. Place a shield, if available, between yourself and the animal.
 - b. Or, get help from another person.



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.
- 2) Know selective and humane trapping systems and use them appropriately.
- 3) Check traps regularly, 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, traps or snares of others.

