



Game & Wildlife
CONSERVATION TRUST
Cymru • Wales

Humane Cable Restraints in Conservation: Your Essential Brief

Summary

Effective fox control is a central pillar of wildlife management for conserving some threatened species of ground nesting birds. Humane cable restraints (HCRs) play a critical role in fox control for conservation in spring and early summer, when these birds are breeding. The design of the HCR is the culmination of years of collected development work and when used according to the Code of Practice¹, surpasses international standards for restraining traps.

Background

Fox control is a widespread and, many would argue, necessary part of managing wildlife in rural Britain. Foxes prey on vulnerable wild ground-nesting birds like lapwing, curlew and stone curlew, as well as other species such as water vole and brown hare. Several of these are species of conservation concern and predation, predominantly by foxes, can be the main factor limiting their success. In order to protect vulnerable species while they are breeding, foxes are controlled mainly from late winter to early summer.

Is fox control important?

Q: Why is fox control important for the conservation of our wildlife?

A: Wild ground-nesting birds like lapwing, curlew, black grouse, and partridge are particularly vulnerable to predation by foxes, as are brown hares. Several of these are species of conservation concern. In order to protect vulnerable species while they are breeding, wildlife managers such as gamekeepers, farmers and wardens aim to control fox numbers, particularly from late winter to early summer. Fox numbers are thought to be approximately two-to-three times higher than they were in the early 1960s².

Q: How many foxes are there in Wales/the UK?

A: A report by the Joint Nature Conservation Committee (JNCC) from 1995 estimated the fox population in Wales to be around 22,000³. As the population was stable in the intervening years, a subsequent JNCC report from 2005 also reported this number for Wales⁴, but a further report to Natural England by the Mammal Society in 2018 updated this number to 27,700⁵.

The same 1995 report estimated the fox population in Britain as a whole was 240,000 adults in the spring, to which a production of 425,000 cubs was added annually^{3,4}. For the population to remain stable at this level, 425,000 foxes would have to die each year⁶. More recent estimates suggest that pre-breeding numbers are higher, with the 2018 update estimating a population of 357,000⁵.

Some die naturally (including disease), and in the past there would have been less food, as well as their own predators – wolves, lynx, golden eagles and eagle owls – reducing numbers. Today an estimated 100,000 per year are killed by cars. Wildlife managers probably kill 39,000, of which some 25% are estimated to have been held in restraining devices – approximately 9,500⁷. Although this estimate is based on the best evidence available, it is considered a ballpark figure.

Q: Why has the fox population risen?

A: There are thought to be two parallel factors which have led to higher fox numbers. One is the lack of higher predators such as wolves, lynx etc in the modern countryside which humans historically eliminated. In the 19th century, gamekeepers effectively replaced the role of these missing top predators in limiting smaller predator populations. However, gamekeeper numbers had fallen dramatically by the mid-20th century.

The other is increased food resources, also associated with human activity. Agriculture, livestock and poultry farming, introduction of non-native species like the rat and rabbit, game management, road kills and the waste associated with all human settlements have created substantial food resources with foxes and other generalist species have been able to exploit. Whatever the driving reasons, as far as we can tell the number of generalist predators has risen, levelling off in recent decades at higher numbers than were seen historically. In the modern world many generalist predators thrive to the extent that they can seriously impact on the status of a range of vulnerable prey species, especially ground-nesting birds².

Q: Are there more foxes now due to increased number of pheasants being released?

It has been suggested that where large numbers of gamebirds are released for shooting, the increased supply of prey could provide easy food for generalist predators, such as foxes. This is an important question to consider, but at present few pieces of the jigsaw to answer it are available. A recent review of the effect of gamebird management examined seven studies, which found both positive and negative effects but the majority were not significant. It concluded that “overall, the evidence for a negative impact of gamebirds releases on non-game species is not compelling, though appropriate large-scale experiments are absent”⁸. It is important to improve our understanding in this area and this is an ongoing focus of research for the GWCT.

Q: Are foxes solely to blame for the decline of wild bird populations?

A: No. However, where ground-nesting bird populations are already low, for example perhaps because of a change in land use, generalist predators can prevent their recovery – even when the habitat has been improved. This is why some conservation projects involve reducing the local fox population.

The need for Humane Cable Restraints in conservation

Q: Can't foxes be shot directly with thermal imaging scopes instead of using a restraint?

A: Not always. Although fox control by shooting at night can be effective in winter, in the spring and summer the vegetation is too high, and foxes are concealed by it. It is not possible to shoot an animal that you cannot see, so animals need to be captured and restrained before they can be shot. Therefore, high seats or night vision technology are of little use at this time of year, but this is also the time when birds are nesting and are therefore at their most vulnerable. Fox control in the breeding season is very important to protect threatened ground nesting birds. This is why some important conservation projects use HCRs to help control foxes.

Q: Is the humane cable restraint really humane?

A: For some people, any trapping of wild animals is unacceptable. However, if it is accepted that wild animals may be trapped, many believe that a standard level of welfare should be defined⁹. There will be differences of opinion as to what is acceptable.

The Agreement on International Humane Trapping Standards (AIHTS) assesses a trap by looking for both specific physical injuries as well as particular behaviours which are “recognised as indicators of poor welfare in trapped animals”. A device only surpasses the standard if at least 80% of 20 animals caught show none of these¹⁰. In large trials, the HCR surpasses the AIHTS trapping standards^{10,11}.

HCRs have been used by ecologists studying fox behaviour and biology for many years. In these studies, foxes are carefully monitored before being tagged and released showing no signs of harm. Sometimes a fox is recaptured in future, and scientist observe that they remain healthy, demonstrating no unusual behaviours and carrying no injuries as a result of the capture.

Alternatives

Q: What other methods could be used to replace the HCR?

A: In the spring and summer, none are feasible. Whilst there are other methods of fox control which can be effective at other times of year, these are often not appropriate when the vegetation is tall – when birds are nesting.

Q: What about rifle shooting or other live traps?

A: These are the only lawful alternatives for lethal control (although non-lethal methods like electric fencing also have their place). Whilst technology is allowing these techniques to change, they are still no match for all scenarios. For effective fox control in a variety of situations it is desirable to have a range of methods available, giving options according to cost, time, safety, landscape and seasonal constraints.

Q: Can foxes be trapped in other ways?

A: Cage traps are suited to use in urban environments but are generally not very successful in rural settings. They have been formally assessed for rural foxes in Spain but had a low success rate and were not very selective, taking lots of non-target animals including raptors. There is also a Collarum trap which, when triggered, throws a heavy loop over the fox's head to restrain it; these do pass humaneness standards, but also have low efficiency.

Q: Why don't these other traps work as well as humane cable restraints?

A: Foxes are intuitively wary about approaching anything 'new', and this makes it necessary to tempt them towards such a trap with bait, which also raises the risk of non-target captures. By contrast, a well-set HCR is not detectable by the fox, thus catching it unaware. They therefore do not require the use of bait, and can have a higher catch rate when skilfully used.

Q: Can you flush foxes out into the open or use scent lures to make shooting possible?

A: Because the foxes are aware that something unusual is happening, flushing and attracting tend to select younger, more naïve foxes. To control predation pressure in the spring and summer it is also necessary to catch older foxes that have reached breeding age.

Q: Why do conservationists need to control foxes in the spring and summer?

A: The fox breeding season coincides, naturally enough, with that of their prey. The food demands of growing cubs are far greater than the maintenance requirements of adults. So, to protect prey species that are especially vulnerable to fox predation, like ground-nesting birds, fox control in spring and summer is critical.

Q: Can we expect other developing techniques to replace humane cable restraint?

A: It took 200 man-years of development from scientists and many gamekeepers over 17 years to design, test and refine the humane cable restraint and at present no other method matches its utility in spring and summer conditions. There is a lot of technology being brought into fox control, including advances in night vision, thermal imaging equipment, and acoustic attractants. These make it easier to shoot foxes safely and selectively from high-seats, but again only at times when the vegetation permit it.

Q: If foxes caught by HCR are going to be shot, why bother using it in the first place?

A: Shooting foxes with a rifle can be impractical during the spring and summer, when natural vegetation and arable crops are tall enough to hide a fox. Also, a gun must have someone present to work it, whereas an HCR works 24 hours a day to catch and hold the fox. In order to be legally compliant, any HCR must be inspected at least daily so that if a fox has been caught it can be humanely shot, and the code of good practice recommends twice daily checks.

Q: Are humane cable restraint a risk to pets?

A: An operator following the code of practice will not set an HCR close to houses, on footpaths, or on public land where pets might get caught. In a GWCT study published in 2012 comparing the HCR with old-style restraining devices, only 1 out of 1,296 captures was a domestic pet – a dog that was released unharmed¹¹.

Q: Are HCRs a risk to other wildlife?

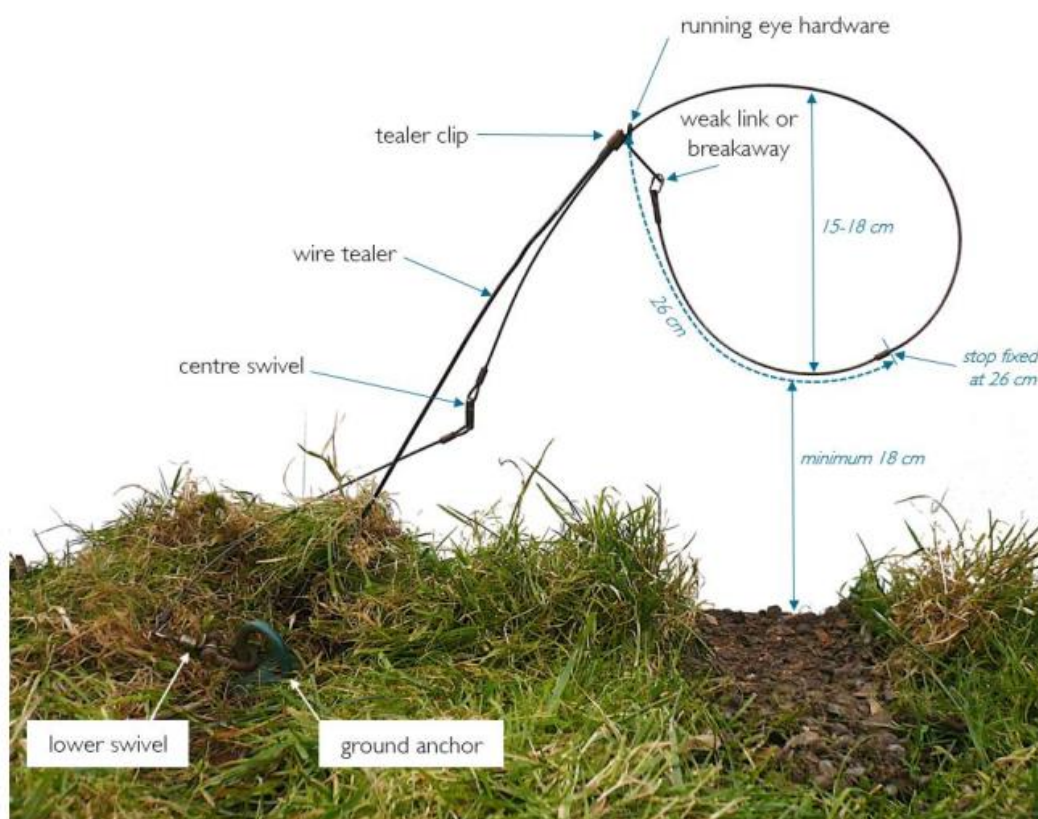
A: It is not possible to eliminate the risk of catching non-target wildlife completely, but a good deal can be done to minimise it and to avoid injury while the animal is held captive. Various features in HCR design reduce the likelihood of non-target captures, allow such wildlife to escape if it is caught, and increase the likelihood that those who do not self-release can be released unharmed by the operative¹¹.

HCR design

In 2006, GWCT scientists undertook to design a restraining device which was safe and specific to the target animal. 200 man-years of research and development went into designing, testing and refining the humane cable restraint by scientists and gamekeepers. This device has been thoroughly tested and surpasses international humaneness standards for a restraint.

Q: How does an HCR work?

A: A loop of wire is set on a support ('tealer') at the appropriate height in a suitable place – for example in a 'tramline' made by tractors in an arable crop which foxes may travel along. The head of the fox goes through the loop, which draws up to a fixed minimum size, thus restraining but not strangling the fox. The humane cable restraint is anchored to the ground, so the fox is held alive and unharmed.



Q: What are the particular features on the humane cable restraint?

A: the humane cable restraint has a robust ground anchor, two swivel points, a support to hold it at the correct height (the tealer), a well-designed self-releasing tealer clip, a good quality running eye, a weak link (breakaway) to allow self-release and a stop that is fixed to allow the loop to close only to a 26cm circumference.

Q: What is the break-away device?

A: This is a device on the cable that opens the loop if an animal stronger than a fox (such as a badger or a sheep) pulls at it. It is the weakest point in the HCR and is manufactured to break at the correct force so that a badger or sheep, but not a fox, can pull hard enough to break it and release themselves whilst leaving the HCR fixed to the ground.

Q: What is the fixed stop?

A: This only allows the loop to close to a certain size. In the HCR, it is set so that the loop can close small enough to trap (but not kill) a fox. As hare's heads are smaller, they can self-release by pulling their heads out, and it prevents the capture of an animal by the leg.

Q: How does the running eye work?

A: It is designed specifically so that it cannot lock and therefore allows the HCR loop to expand with the movements of the captured animal (e.g. to move with breathing), and to loosen when not pulled upon to leave the animal comfortable at rest.

Q: What is the wire tealer?

A: This is a temporary support that holds the loop at fox head height. Once an animal has been trapped, the tealer clip releases the HCR from the support.

Q: Why are there two swivels?

A: These are to prevent separation of the cable by twisting, which can lead to subsequent breakage. Breakage can allow the animal to escape with the noose around its body, which can cause very poor welfare. The best position for the swivel (to relieve stresses in the cable) is considered to be near the ground anchor, but a second swivel is positioned further up in case the first one is buried under excavated soil or entangled with an obstacle.

Q: How does the ground anchor work?

A: This varies depending on the HCR location. Different soil types, depths, moisture levels all affect the anchor choice, and practitioner experience will determine what sort of anchor is used. However, it is critical that the anchor holds firm, and the animal cannot pull the HCR from the ground. As long as the anchor can withstand more force than the break-away, the device will not be pulled free.

Humane Cable Restraints: Hardware vs practice

Q: Why do operators need to be skilled?

A: Few – if any – methods of catching wild animals are independent of operator skills. Fieldcraft is needed to decide when it is appropriate and safe to set an HCR. In particular, setting an HCR where the captured animal could entangle the cable with nearby obstacles hugely increases the risk of it being injured – for foxes, the risk of injury or death is ordinarily <1%, but rises to 16-40% where entanglement occurs. The necessary skills, and awareness of the mistakes to avoid, can be taught. The GWCT recommends that operators must be trained and certified in the use of HCRs, and that each one set should be tagged with a unique code that is identifiable to the operator.

Q: How can we ensure high standards of operation?

A: In the last 25 years the GWCT has worked constructively to understand existing fox control methods, to improve hardware, and to identify good and bad operating practices. Through publications, codes of practice, and training courses we promote a responsible and careful attitude to the use of all forms of predation control. Good operating practices are critical to welfare outcomes, so following the code of practice is essential.

Recommendations on the use of humane cable restraint

GWCT position

The Game & Wildlife Conservation Trust regards the HCR as a uniquely effective tool that has no functional replacement for the effective control of fox predation. HCRs do have potential risks of poor welfare and non-target capture, which are minimised with training and suitable use. HCRs are designed to capture but not kill the animal, and non-target animals such as badgers and hares are sometimes caught.

Therefore, the GWCT considers it essential that HCR operators are well trained and use the equipment responsibly, preferring other methods of fox control when possible. The GWCT has undertaken substantial research into the design of HCR operating practices and design. Our peer-reviewed research has shown that the performance of the HCR used according to the Code of Practice surpasses international standards for restraining traps.

GWCT recommendations

To ensure that the general use of HCRs comes up to this standard, we recommend:

1. All HCR users should make sure they are familiar with the latest Code of Practice (CoP) and training.
2. Official training and certification of competence in HCR use should be mandatory.
3. Manufacturers should only produce HCRs that conform to the design specified in the CoP (including a built-in breakaway link at the eye and stop set to allow a minimum noose of circumference 26cm).
4. The GWCT will continue to provide and promote training in the use of HCRs. Our training is based on evidence and long experience and will advocate the highest standards of responsible and effective practice, not merely minimum compliance. Our experience-based recommendations have changed little since the first publication of our advice leaflet in 1997, though the evidence to support them has accumulated.
5. The evidence of this report supports the concept of accreditation following training, and of HCR-tagging as a means of identifying the responsible user. We recognise the difficulties involved in implementing this level of regulation but look forward to discussions about it with Welsh Government and other interest groups. We do not see any logical reasons why the statutory or CoP requirements in Scotland or Northern Ireland should be different from those in England and Wales.

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