Is trapping the right response?

Traps shouldn't be used to remove wildlife in response to nuisance concerns. Cage traps are often described as humane, but they can cause unnecessary suffering and even death when not used properly. Trapped animals can severely injure themselves, have an extremely low survival rate when *translocated*, and often leave behind dependent young who can't survive on their own. Additionally, the trapping and translocation of "nuisance" wildlife doesn't address the root causes of conflicts and often leaves a vacancy for another wild animal to occupy shortly after the previous resident is removed. Instead, humane and effective solutions (*wildneighbors.org*) should be used to solve conflicts with wildlife in the long term.

Direct handling and trapping should always be the last consideration for wildlife. If assessing population density or health, fecal analysis or camera traps with size indicators can be noninvasive alternatives. While traps aren't the answer to nuisance wildlife concerns, trapping may be necessary for nonlethal research, *relocation*, or to capture injured, sick or orphaned wildlife. Despite being designed for live capture, cage traps can cause injury or death when not used and monitored properly.

Translocation moves a captured animal to a new location outside of their home range, while **relocation** moves them within their home range.

By using these simple techniques, you can help minimize stress and prevent injuries to the animal while improving the chances of a safe, successful capture.

Setting up for success

Be prepared. Ensure that more than one person knows the trap's location and is prepared to frequently check the trap and rapidly release or transport any captured animals (in case the animals are injured and in need of medical care). Consult with professionals who have worked with the target species for tips on safe, effective operation, learn about the components of your device (see "Choosing the right trap design"), and set traps according to manufacturer instructions.

Keep close tabs on traps. Multiple trap sites over a complex landscape becomes confusing, and they require checks at the end of every day/shift. Developing a trap log will help staff maintain a record of trapping information and ensure traps are checked at prescribed intervals; this helps ensure that the traps don't cause harm to animals and aren't left unchecked indefinitely. A trap log should include the trap's permanent number, target species, time set, location (street address, GPS coordinates), check times, time retrieved/closed, target/nontarget animal capture time, name of personnel who set the trap and their contact information, dispatch number and additional notes.

Choosing a trap site

Know your area. Don't set traps where they might be exposed to human-related activity, including neighborhood dogs, curious children and social gatherings. This will help prevent traps from being accidentally triggered and companion animals from being accidentally trapped. This will also help reduce the stress captured animals experience from the sounds and smells of activity around them.

Consider trap visibility. The public may not understand why a trap is present and want to release animals, or they may remove or destroy capture devices. Always label traps with "Rescue Trap" or something to describe your program as nonlethal and a phone number to call. Depending on what state you're in and the circumstances surrounding your trapping effort, you may be required to provide additional information on a trap label. In a rural or park setting, off-road vehicles may pose a risk to traps and captured animals. You may need to add fluorescent/neon color safety flags or post signage at trail heads to increase awareness about traps to avoid traps being hit.

Place traps thoughtfully. Placement of the trap can influence the likelihood of capturing the target species or individual. This can include securing the trap at certain heights for target animals who can climb, which reduces the likelihood of catching nontarget animals who can't climb. For example, to avoid catching a striped skunk in someone's yard, place and secure the trap on an outdoor table. Avoid placing traps in direct sunlight, heat sinks (e.g., asphalt roads or tar, shingle and metal roofs), or in areas of potential flooding. If the site is near a water source, anchor or stake the trap so that the movements of a captured animal doesn't result in tipping the trap into the water, inadvertently causing exposure or drowning.

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Stay alert to weather. Avoid setting traps in temperatures above 80 degrees or below 35 degrees Fahrenheit, or when extreme weather (e.g., heavy rain, hail) is happening or is forecasted. Weather can change quickly, so assess for the full duration of trapping efforts.

Setting traps

Prevent animal injury. Always ensure the trap is properly secured. Avoid placing any sharp objects, such as metal cans or food containers, inside. Instead, opt for safer alternatives, such as plastic containers, Kong-type pet toys, or solid baits such as carrots and apples. Solid baits not only serve as effective bait but act as "worry toys" that help keep the animal occupied while confined. Also, consider covering the trap with nearby materials such as metal, plastic or even nearby foliage. This can offer shade, reduce stress and make the trap feel more secure for the animal. You can also line the trap floor with a layer of sand, dirt, cardboard or a nonwoven towel if it doesn't interfere with the trigger mechanism or the door's closing. This creates a more inviting environment for the animal, and helps provide comfort during the capture process.

Be selective on bait. Think about what will be attractive to the target animal but not to other animals. For example, to catch cats but not raccoons, try catnip or catnip oil. To catch raccoons but not cats, try marshmallows or fruit. In dry areas or places with elevated ambient temperatures, consider water as bait.

Consider species natural history and seasonal conditions.
Mother-young: Is it baby season for the target species? If there are young present, how old are they likely to be? If dependent young are captured, would mom come back for them, and how would you reunite them? If the target animal is injured and you discover that she's lactating, effort must be made to locate and capture dependent young if the injury will require off-site care.

Predator-prey: Traps set for small species should be staked or tethered so they're not carried off by large predators (e.g., raptors).

Sexual: Scent marking from a female in heat can draw more animals, while the smell of a dominant male may only draw other males.

Territorial-family units: Does the species live in a family group or in a colony (e.g., prairie dogs and beavers) and require the family to be moved together? If translocating colonial animals for colony survival or human safety, capture and hold them in an acclimation area until the entire family unit is captured. After the family unit is together in an acclimation enclosure at the release site, they can be released together into the new environment.

Minimizing captivity stress

Check traps frequently. Check every two hours during the day, but always early in the morning and last thing in the evening. Use binoculars to monitor traps remotely and avoid dispersing animals with your presence.

Don't let animals sit in traps. Always be ready to immediately transport or release the animal. Rapid response will minimize the time in the trap and potential harm to the animal.

Reduce stress with time management. Animal stress and the potential for death caused by capture-related stress (capture myopathy) increases with the amount time spent in captivity. Plan for the shortest amount of time in captivity, knowing that animals experience stress from when they're first pursued and captured until they're released.

Use compression for medical intervention. When vaccines, emergency fluids or pre-anesthesia drugs are needed, attempting to inject an alert wild animal as they move back and forth in a trap causes them unnecessary stress. Use a trap divider to humanely confine the animal at one end of the trap. This allows the injection to be administered through the trap wire with minimal movement and stress. Intramuscular or subcutaneous injections should be performed by specially trained personnel. At a minimum, you should have a team of two people, one to perform animal compression and the other to perform the needle injection.

Choosing the right trap design

Cage traps are available in different materials and designs, with benefits and considerations for each:

Metal traps come in a variety of materials (e.g., aluminum, tin, steel); we recommend *tempered galvanized steel* to withstand the elements and sanitation process.

- *Mesh metal walls* are lightweight and have species-specific mesh sizes, but are open to the elements, don't block visual stressors, and may allow for bait to be eaten from outside the trap.
- *Solid metal walls* block out visual stressors and reduce scent stressors because they're easily sanitized. However, avoid using in extreme temperatures. The solid walls increase the captured animals' risk of temperature dysregulation (hyper- and hypothermia).

Plastic traps are made from durable polyethylene. The opaque walls decrease visual stressors and provide protection from wind and rain. However, they're difficult to sterilize, become brittle over time, and don't allow for the drainage of water or urine.

Gravity (vertical) doors are less expensive, operate quietly, cause less face-rub injuries, and are easy to open when releasing captured animals. However, they can be triggered accidentally and can open (allowing escape of the captured animal) if rolled.

Spring-loaded (slant/angle) doors close quickly and on uneven ground when engaged. However, their springs can wear out over time and the door closing may injure tails or legs.