

Predator Management for Small-scale Poultry Enterprises in Kentucky

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Introduction

As urban expansion spreads, there is a loss of natural habitat for wildlife. Wildlife has come into closer contact with livestock operations, and some of these animals are predators of poultry. Complete exclusion of predators is impossible with poultry kept in open access production systems. However, there are some things that can be done to minimize losses. A lot will depend on the nature of the predator, so knowing the types of predators that are in the area is important. You may be able to identify tracks of some mammals. Try adding fine sand or talc powder around the area and look for tracks the following day. Another option to identify wildlife using the area around your operation is the use of a trail camera or game camera. These cameras, if set up at the correct angle, can be triggered to take a picture by animals as small as rats. Different styles of cameras incorporate a black flash or infrared only flash which will help to limit disturbing the flocks. Quality cameras are now as affordable at \$100 each, and will last many years.

Predator Identification

Before you can develop an exclusion strategy it is important to identify the predator(s) involved.



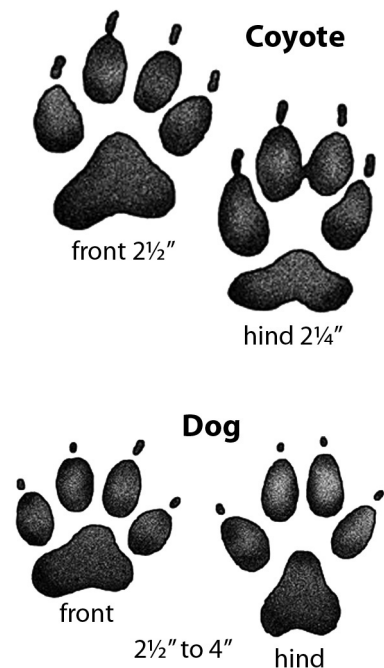
Dogs and Coyotes

Dogs are descended from the wolf and have retained some of the hunting instinct of their predecessor. This instinct depends on the breed and personality of the dog. Some dog breeds have a greater tendency to chase prey than others. This desire can be heightened by the presence of other dogs. If a dog has had success in an attack in the past, it is more likely to repeat the behavior. Domestic dogs allowed to run free in a neighborhood can result in packing behavior and become a real problem for poultry flocks. Attacks can happen day or night. Kentucky code 258.235 pertains to the authority to kill or seize a dog. "Any livestock owner or his agent, without liability, may kill any dog trespassing on that owner's property and observed in the act of pursuing or wounding his livestock." In addition, "Any owner whose dog is found to have caused damage to a person, livestock or other property shall be responsible for that damage."

Coyote tracks are generally longer and narrower than dog tracks. In addition, the toes and claws generally point

forward, where domestic dogs' toes and claws may point slightly off to the sides. Coyotes are usually solitary or with their mate but can travel in large groups, particularly when pups are mobile enough to follow their parents. Coyotes are opportunistic hunters and can be seen hunting during the day, but they primarily hunt at night. Coyotes are very adaptable to their surroundings and will develop more nocturnal habits when human activity is high during the day. Refer to Factsheet FOR-37 'Managing coyote problems in Kentucky.'

Canines (i.e., domestic dogs, coyotes, and foxes) do not kill and consume animals cleanly. Birds may be dead, with pieces of birds scattered around the area due to the dogs shaking them in their mouths to kill them.

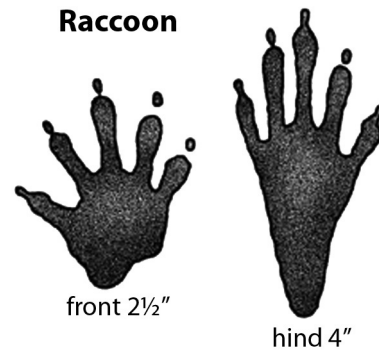
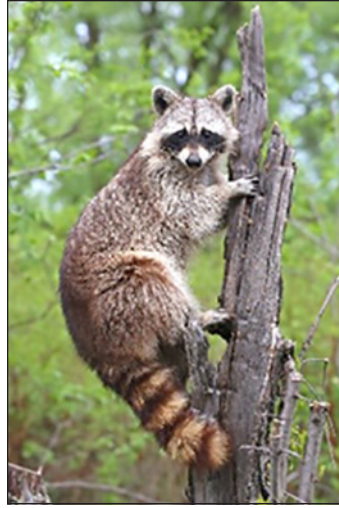
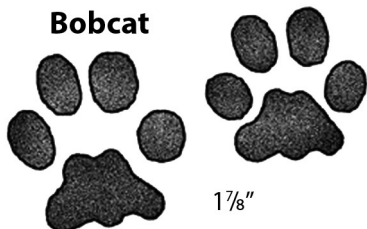




Domestic Cats and Bobcats

The bobcat is the most common wildcat in the United States. It is about twice the size of a typical domestic cat. Like domestic cats, bobcats are visual predators that can see in low light. As a result, they prefer to hunt during the day, but especially during twilight hours of dawn and dusk. Bobcats prefer woodlands and any flock in the vicinity of woodland areas is at risk. A bobcat may eat an entire bird in a single feeding and/or carry a carcass or two away. Bobcats will also cache their meals if not completely consumed. They will do this by moving leaves and grasses over the top of the carcass in an attempt to hide it. This behavior is a good indicator of a bobcat, because coyotes and other predators do not cache carcasses in this manner.

Domestic cats will prey on young birds, even if well fed. Cats can be messy eaters. Typically, cats eat the meat and leave the skin, with the feathers still attached. You will be able to see teeth marks on exposed bone of the prey they have eaten. With smaller chicks, however, cats can consume the whole bird although they typically leave the wings and scattered feathers.



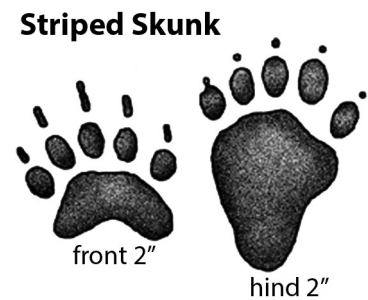
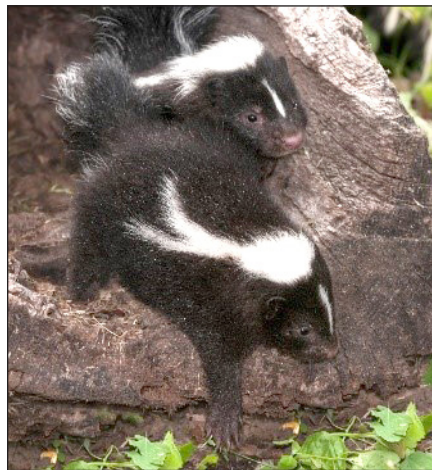
Raccoons

Raccoons are very good at getting into poultry houses. When they identify a food source they will utilize it until they consume all of it, or they feel unsafe. Raccoons can take several birds in one night. They often consume the birds' head, breast, and crop. Sometimes they will eat the entrails as well. They will also be attracted to eggs and can remove them from the nest. They have been known to carry eggs for distances 50 yards or more from nests before eating them. Garbage cans are an attractant to raccoons and once settled in an area they will seek other food sources, including poultry. Securing all potential food sources including feed and garbage will help reduce the risk of attracting raccoons to your operation.

If a raccoon cannot get into the coop they can catch or grab birds or eggs through the wires of the enclosure and will eat what they can through the wire (generally only the heads of birds). The majority of the body is left behind. Also, raccoons may work together, with one scaring the birds to one end of the pen and the other grabbing the birds as they huddle against a fence.

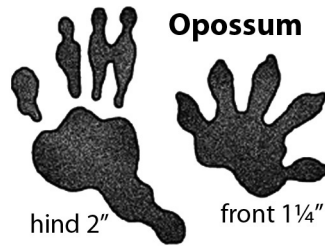
Skunks

Skunks are omnivores that are attracted by eggs. The skunk will open an egg at one end and punch its nose into the hole to lick out the contents. A skunk tends not to remove eggs from a nest but occasionally will move the eggs up to 3 feet away. Skunks do not typically kill many adult birds. In general, when a skunk gets access to a flock, it kills only one or two birds but will maul several others.



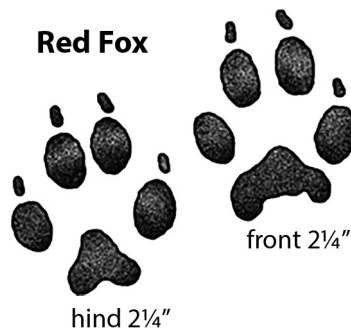
Opossums

Opossums will eat a variety of different foods. They like fish, insects, mushrooms, fruits and vegetables. Unfortunately, they also like birds and eggs. When an opossum gets into a poultry house it typically kills only one bird per visit. The victims will be mauled. Opossum usually begin feeding on adult poultry at the cloacal opening. An opossum will consume young poultry completely. Typically, all that is left behind is a few wet feathers. Generally, they consume eggs only at the nest site and will mash eggs and often chew the shells into small pieces which are then left behind in the nest.



Foxes

When a fox attacks, it usually goes for the throat, but some kill by multiple bites to the neck and back. They are very neat eaters and typically when a fox has been in the hen house the only evidence is a few drops of blood and feathers. The fox will typically carry its victim away, often taking it to the den. Fox also like to eat eggs. They usually open the eggs just enough to lick out the contents. The shells get left behind and are often found next to the nest. Red foxes are very comfortable living in suburban environments often using barns and abandoned buildings. They will often dig in the ground or may use hollow logs for their dens. They are



also common in agricultural landscapes but when large populations of coyotes are present red fox populations are usually low. The red fox is the most common predator of poultry. Grey foxes are very similar to red foxes but are smaller in size, found in more forested landscapes, and generally exist at lower densities.

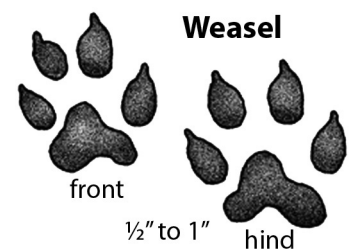


Weasels

The least weasel is long and slender, with a long neck, narrow head and short limbs. It is only 6.5-8 inches long, with much of that being tail. It weighs only 1-2 ounces. Because of its small size, the least weasel is often referred to as the smallest living predator. It can squeeze through holes as small as 1/4-inch in diameter. Weasels must eat food equal to four times its body weight each day. As a result, weasels are voracious eaters. They are active day and night. They do not hibernate, so are active in the winter as well. When a least weasel kills, it typically wraps its body and limbs

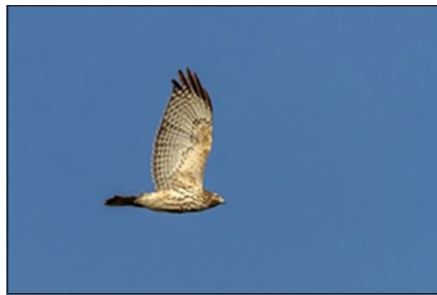
around its prey and kills with a bite to the base of the skull.

Members of the weasel family, including mink, often kill just for sport. Often the chicken's body is bloodied with the internal organs missing.



Snakes

Rat snakes can prey on young chicks (less than a month old). They eat the chicks whole, and they will also eat eggs whole. There may be no sign of the egg predation from a rat snake, while raccoons, opossums, and skunks typically leave shells behind. The size of hole needed for a snake to prey on a poultry flock must be large enough to also let the snake exit after eating. Typically, if a snake can get through gaps that are ¼-inch in diameter or smaller, the gaps are too small to allow predation damage.



Hawks

Three species of hawks typically prey on poultry flocks: the red-tailed hawk, red-shouldered hawk, and Cooper's hawks. Hawks typically hunt during the day, while owls hunt at night. Hawks have good eyesight and will scan for their prey from elevated perches. Once a prey has been selected, the hawk swoops down and lands on the prey with its talons. The prey is often killed on impact. Hawks will typically carry off a young chick or bantam bird and eat it elsewhere. As a result, there may be no indication that they had been there, other than a missing bird or two. For large birds, they will commonly kill and eat it in place. The hawk will eat the breast, cleanly removing the feathers. Spotting feathers with flesh clinging

to them may indicate that a hawk did not kill the bird. Instead, it may have simply scavenged on a bird that died from some other cause.

Red-tailed hawks live in a variety of different habitats, including scrub deserts, grasslands, farm fields, pastures, parks and woodlands. The red tail hawk is one of three species that are sometimes referred to as 'chicken hawks'. Despite this, red-tailed hawks rarely prey on standard-sized chickens. They prefer smaller birds. They prefer to use open areas to hunt that have several scattered perches.

The red-shouldered hawk is sometimes referred to as "hen hawks." They typically eat rodents and other small mammals, but given the opportunity, they will eat poultry as well. Red-shouldered hawks live in forests and swamps.

Cooper's hawks can fly well through heavily wooded areas. They prefer to live in deciduous and mixed forests. All of these species along with owls and other birds of prey are protected under the Migratory Bird Treaty act of 1918 and cannot be killed or injured without a permit from the U.S. Fish and Wildlife Service.

Owls

The most common owl of concern is the great horned owl. Barn owls and screech owls do not normally bother poultry flocks. Owls are most active at night. Great horned owls eat many kinds of animals, including chickens, ducks and other poultry. They live in many different types of habitats, from coastlines to grasslands to mixes of woods and open fields. They do not require open areas to hunt because they are more than capable of hunting successfully within forested areas.



Predator Management

Once you have identified which predators are in the area, or are already attacking your birds, you can take actions to try and keep them away from your flock. The options typically include changing the flock's enclosure, modifying the habitat around the area where you keep your flock, adding a guard animal, or using a trap to remove problem animals if an attack has occurred. When all else fails you should consider seeking assistance from Kentucky Department of Fish and Wildlife Resources or USDA-Wildlife Services (contact information is at the end of this publication).

If you allow your birds to free-range, consider using movable fences to confine your flock. These fences may or may not be electrified. If you decide to go with an electric fence, the amount of electricity used should be enough to stun but not kill an animal. This makes the fence less dangerous to people, but is also more effective in keeping predators away from the flock. Stunning a predator will discourage a predator from bothering the flock. A dead pred-

ator, however, will soon be replaced by another predator.

While fences may help deter ground predators, they will not keep away aerial predators such as hawks and owls. One option may be to remove perches within 100 yards of the flock. Housing the birds at night may be necessary.

Most poultry can be trained to move into a poultry house at night by feeding or watering them indoors at dusk. For more persistent aerial predators, consider covering the run with netting. Orange netting is best because hawks and owls see orange very well. It is important to keep the cover secure. Hawks can get through any loose or weak spots in the covering. It is important to remember that hawks and owls are federally protected species. As such, you may not legally shoot, trap or euthanize these birds. Noise



and bird bombs are limited in their effectiveness. Bird bombs require additional permitting through the Bureau of Alcohol, Tobacco, and Firearms (More information at: <https://www.atf.gov/explosives/explosives-pest-control-device-requirements>) but their use may not be a good idea as it can scare any chickens in the immediate area. Noise devices generally are effective for short periods of time but birds and other animals become habituated to them.

It may be necessary to keep the flock confined in floorless pens that are

Table 1. List of common conditions and likely predators. Keep in mind there are exceptions to these rules due to individual variations in behavior and the environment.

CONDITION	LIKELY PREDATOR
Adult birds missing, but no other signs of disturbance	Dog, coyote, fox, bobcat, hawk, or owl
Chicks missing, but no other signs of disturbance	Snake, rat, raccoon, or domestic cat
Birds are dead but not eaten; bodies of the bird may be bloodied; head and/or crop may be eaten	Weasels and mink
Birds are dead and not eaten, but missing their heads	Raccoon, hawk, or owl
Birds are wounded, but not dead; bites all over	Domestic or feral dog
Young birds are wounded, but not dead; wounds are on breasts or legs	Opossum
Young birds are wounded, but not dead; bites on the hocks; they may also cache young birds.	Rats
Birds have signs their intestines have been removed through their cloaca	Opossums or member of the weasel family
Eggs are missing with no evidence	Snakes
Eggs eaten with shells left behind	Skunks, rats, opossum, raccoons, blue jays, and crows

routinely moved around on pasture. In some cases, however, such enclosures may not be sufficient. Additional peripheral fencing may be needed. See the publication ASC-189: Making a Hoop Pen for Pasture Poultry. This works for flocks of less than 50 birds, but may not be practical for larger flocks.

If you have a permanent foraging area, it may be necessary to provide your flock with a run that is covered with welded wire. It is advisable to use hardware cloth and bury it at least 12 inches into the ground to deter diggers like foxes, coyotes, and rats.

Several precautions should also be included in the flock's best management practices. Have the flock roost inside a secured location at night, making sure to close and lock all the doors. This will discourage animal and human predators. Ensure that the area where the birds live is clean and well-kept. If using feed in the run to encourage pasture usage, make sure there is no feed left in the run at night. Remove sick, dying and dead birds immediately. Dispose of them in a manner that will not attract predators to the vicinity of your flocks. This means to get carcasses as far from your operations as is practical, and if at all possible to bury them.

If the above options are not consistent with your marketing goals, consider getting guardian dogs. If well trained these dogs are extremely effective at



detering predators, both during the day and at night. It is important that the dogs stay with the flock at all times. Great Pyrenees dogs have been shown to be excellent for this job.

It is important to remember that the use of lighting in the area as a predator deterrent is not recommended for laying flocks because the light will disrupt egg production. Some producers have used periodic noises to deter predators. Unfortunately, predators become accustomed to the noises and in many cases such strategies do not remain effective long term.

Removing problem animals by trapping or shooting should be a last resort. When predators are trapped or die of other causes, new predators are likely

to take their place since they are no longer around to defend their territory. A good trapping strategy is to only trap the individuals that are actually causing the problems. Trapping that individual animal causing the problem by placing traps only in the area where the problem is occurring is the best solution. Removing animals of any species that are not causing problems opens you up to having new animals that move into the area, potentially causing problems in the future. For example, if you have secured your birds and their feed inside a building, trapping would be applicable for a raccoon that has figured out a way to get into that area. There may be other raccoons around, but they may not be causing issues, so it is only necessary for you to trap the raccoon getting inside the building. When trapping animals, relocation of a live animal should not occur because it may be a means to spread diseases like rabies through the landscape. If killed, these animals must be euthanized in a humane manner.

Contact Information

Kentucky Department of Fish and Wildlife Resources: 1-800-858-1549

USDA-Wildlife Services: 1-866-4US-DAWS (1-866-487-3297)



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