

# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

A Program of the Massachusetts Society for the Prevention of Cruelty to Animals



Illustration by Chris Hill

### **Bats:** How to Kindly Remove Unwelcome Guests

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*Bats are intriguing mammals that seldom cause problems for humans. On the rare occasions when bats do create conflicts, we should take care in removing these animals humanely.*

#### **Misunderstood Creatures**

There is nothing to fear from the presence of these graceful creatures.

Bats are very beneficial to have around because they consume large numbers of insects each night during flight. Bats are nocturnal and use echolocation to find their way as they fly in the dark. They also have excellent sight to find prey. They migrate annually and usually have one baby each year.

Humans are bats' biggest threat, along with habitat degradation and pesticide use.

If conflicts with bats do occur, they can be safely, humanely, and effectively resolved.

#### **Possible Conflicts and Solutions**

Conflicts with bats usually concern a bat either accidentally entering living areas or roosting in buildings or homes. Bats typically roost in

higher places—thus the term “bats in the belfry”—so the attic is the most common place to find them. If you should accidentally encounter a bat, remain calm and remove children and pets from the area. Bats are not normally aggressive and will try to avoid contact with humans.

If a bat is in your home while you are sleeping or while children or mentally ill persons are present, call your physician as well as your local board of health, animal-control officer, or state department of public health for assistance. Do not let the

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bat get away. But if a bat has entered your home and you're certain that it has not had contact with anyone, allow it a way out by opening all windows and closing interior doors.

Bats often fly in a U-shape when they are confined indoors, so it is advisable to keep as near to the walls as possible when moving around a room. Bats will most likely land somewhere they can hang, such as in curtains or on a houseplant. Be sure to examine the room carefully to determine how the bat

entered the area, and seal the entrances you find.

Bats often enter rooms through an open window or door, but they can also enter through places such as chimneys, openings in interior walls that lead to attics or basements, or openings in outer walls of the house. If you find one bat inside your home, check and make sure there is not a bat colony living somewhere else in the house. Bats do not make or enlarge holes but, rather, use preexisting openings to enter buildings. They can enter a hole as small as a half inch wide! Look outside at higher points on the structure. A hole that is used by bats is often discolored from body oil residue.

You can also find out where bats are roosting by watching for them at sunset when they emerge to feed.

If you have located a bat colony in your home and you decide to exclude the animals, first find all the points where they are gaining entry. Seal all these entryways with hardware cloth or sheet metal, except the largest or most often used. Once all but one of the entryways are sealed, attach bird netting or flexible plastic strips with staples or duct tape over the last opening (leave the bottom open) to create a one-way exit. The bats will leave to feed and not be able to regain entry. Leave the one-way exit in place for several nights to be sure that all bats are gone, as not all bats leave the roost every night. After all bats

have left, permanently seal the remaining hole.

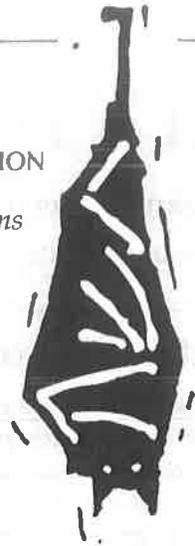
The months of May through August are not a good time to try to solve bat colony problems because it is likely that young bats will be present and they can't leave the roost. The ideal time is winter, after the bats have left to hibernate. Before this, you can try to harass the bats into leaving by lighting the area continuously and using fans to cool the attic, which can make the temperature inhospitable to them.

#### **Public-Health Concerns**

Although bats have been commonly associated with the transmission of rabies, the incidence of rabies in bat populations in the Northeast has been estimated to be less than one-half of 1 percent. Bats with rabies generally are not aggressive and do not bite unless provoked. Read the MSPCA's *Issues and Answers* on rabies for more information.

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Areas that contain large accumulations of bat or bird droppings may harbor histoplasmosis fungi spores, which can cause infection in humans. To prevent exposure, avoid soil contaminated with bat droppings. If it is necessary to be in such areas, wear gloves, work boots, and a face mask or self-contained breathing apparatus, and

keep exposed clothing in a bag until washing.

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### The Beaver: Wetlands Engineer

In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.

In this edition of Issues & Answers, we will take a look at the beaver and its importance as a vital member of the Massachusetts ecosystem.

#### General Information

The beaver (*Castor canadensis*), a keystone species in our environment, is the largest rodent found in North America. An individual can weigh up to 60 pounds, but the average adult generally weighs between 35 and 40 pounds.

Trapped to near extinction for its dense waterproof fur soon after the European settlement of North America, the beaver is making a comeback. Its recovery is a godsend for the environment.

Beavers are the world's greatest builders of small, rich wetlands. The habitats they fashion support a myriad of species, including other mammals, wading birds, waterfowl, fish, turtles, mussels, deer, bears, and moose. Beaver habitat also houses sensitive plant species, improves water quality by acting as a settling basin, and controls flooding by slowing water movement.

Beavers live in and around water and constantly modify streams by build-

ing dams and impounding flows to create ponds. They are herbivores, feeding on the inner bark layer of woody plants and on leaves, shoots, and aquatic herbs such as duckweed, water lilies, and pondweed. A

remember that beavers do not create problems in natural or wilderness areas. The two most common human-beaver conflicts are flooding, resulting from dam building, and damage to trees that are used for food or building materials.

Contrary to popular belief, trapping is not an effective means of controlling beaver populations or of solving conflicts. In fact, unless it's extensive and heavy, trapping has been shown to stimulate the production of more young than if the animals are not trapped.

Fortunately, there are effective solutions to dealing with human-beaver conflicts. Where potential flooding is an issue, there are devices—called bafflers, deceivers, levelers, or other terms—designed to control water levels without removing or destroying the beavers. Tree protection, fencing, and repellents are also possible solutions.

The key to living with beavers is tolerating them and realizing that they play an important role in establishing and maintaining wetlands.

#### Public-Health Concerns

While beavers have been implicated in the spread of *Giardia*, to date there is no documentation of a human contracting *Giardia* from a beaver. A variety of other animals, including humans, shed *Giardia* in their feces, and the presence of *Giardia* in a wetland or watershed may be due to the presence of many different environmental factors.



beaver's preferred food trees include aspen, birch, willow, cottonwood, poplar, maple, apple, and even oak.

Beavers are monogamous and produce one litter a year, usually between March and June. Because they are territorial and tolerate only the presence of family members under the age of two, families typically disperse, usually traveling less than six miles in search of homes.

#### Possible Conflicts and Solutions

While problems sometimes arise when beavers come into contact with humans or human property,

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### Chipmunks

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*Chipmunks rarely cause extensive damage to yards and homes, and the enjoyment they provide to homeowners often outweighs any damage they can cause.*

### General Information

Chipmunks are smaller members of the same family of animals as tree squirrels. However, chipmunks are distinguishable by the broad stripes along their backs.

Eastern chipmunks have reddish-brown fur on their upper parts with five dark brown stripes and contrasting light brown stripes along their backs. They have a tawny stripe that goes from their whiskers to below their ears and light stripes over their eyes. They have a light underside and a dark tail.

Eastern chipmunks mate in early spring and again in early summer, producing litters of four or five young twice each year. The young emerge from the burrow after about six weeks and strike out on their own within the next two weeks.

Chipmunks primarily consume plant matter, and their diet varies with the seasons. They typically eat and store acorns and other nuts underground, which provide them caches of food for the winter. Spring flowers and growing buds are also eaten as the weather warms, and in the summer chipmunks often eat fruits and berries.

Chipmunks fulfill several important functions in our ecosystem. Their activities of harvesting and hoarding tree seeds play a crucial role in seedling establishment, and they consume many different kinds of fungi.

Although they are good climbers, chipmunks prefer to live in burrows they often dig below tree stumps, fallen logs, woodpiles, retaining walls, and rock piles. Chipmunk burrows are 2 inches in diameter, plunge steeply downward, and have loose dirt around the entrance. Chipmunks will also construct extensive tunnel systems underground, often with several entrances, where they store their food.

### Possible Conflicts and Solutions

Chipmunks are known to dig in lawns, eat ornamental plants and bulbs, and steal food from bird feeders. During the winter months, it is important to remember that chipmunks are only doing what is

natural to them to find food during an often limited and sparse time of the year. Tolerance is especially important if at all possible during this time of year.

Bulbs can be protected by soaking them in certain repellents before planting, or by planting them below 1 x 1 inch wire or plastic screening. Spraying repellents on ornamental plants can help deter inquisitive chipmunks. Humane repellents can be found on-line and at most gardening stores.

Wrapping ripening fruit trees with netting and using various squirrel-proof bird feeders can also keep them away. Sprinklers triggered by motion detectors that are sensitive enough to detect small animals can also discourage chipmunks from investigating gardens. Most gardening and hardware stores sell netting, squirrel-proof bird feeders and motion sensitive sprinkler attachments.

### Public Health Concerns

Chipmunks are generally not a significant source of infectious disease transmittable to humans.

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### Humanely Managing Coyotes in Our Neighborhoods and Backyards

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main street.*

*Generally, coyotes shy away from humans and avoid contact with them. In urban and suburban areas, however, coyotes may be less likely to fear people and more likely to associate them with an easy, dependable food source. Here is some information on coyotes and on ways that you can effectively and humanely keep them afar.*

#### General Information

The coyote is a member of the same family as foxes, dogs, and wolves—the canids. The name comes from the Aztec word for the species, *coyotl*, which, loosely translated, means “trickster.” The eastern coyote is the type found in Massachusetts.

Coyotes vary in size depending on location but generally are 4–4½ feet long including the tail, stand 18–25 inches tall at the shoulder, and weigh 20–50 pounds. A coyote may be gray, brown, or tan above and white or light color underneath, with a straight, bushy tail.

Coyotes are adaptable and can live in a wide range of climates and conditions—from suburbia to

wilderness, sea level to more than 10,000 feet in altitude—and are now found in all states except Hawaii. They are territorial. The males mark their boundaries with urine, as do many canids. The size of the territory is directly related to the quality of the habitat, and often it can take several square miles to support a coyote family.

Coyotes are omnivorous and make use of an astonishing variety of plant

**Make sure you are not inadvertently attracting coyotes by leaving out open trash containers, feeding pets outside, or leaving spilled bird seed on the ground, which can attract small rodents that then can attract coyotes.**

and animal foods, including garbage, insects, rodents, rabbits, birds, deer, carrion, and even berries and fruits. Coyotes also play an important role in controlling rodent populations.

Coyotes breed during February or March and give birth in April or May. The litter size varies, depending, in part, upon environmental conditions and coyote population density. The pups nurse for up to two months, mature quickly, and

are fully independent at about nine months. As long as offspring are small and unable to hunt, the male coyote provides protection and food for the family unit.

#### Possible Conflicts and Solutions

Generally, coyotes are extremely shy and avoid contact with humans. In urban and suburban areas, however, coyotes may be less likely to fear people and more likely to associate them with an easy, dependable food source. Some have been known to come up to the doors of homes if food is regularly present. Pets, especially cats and small dogs, are seen by coyotes as a food source and should be protected. If you live in an area where there are coyotes, it is important to supervise children and pets when they are outside. Make sure you are not inadvertently attracting coyotes by leaving out open trash containers, feeding pets outside, or leaving spilled bird seed on the ground, which can attract small rodents that then can attract coyotes.

Numerous nonlethal strategies can discourage coyote predation on livestock, including guard animals (dogs, donkeys, llamas), smell and taste aversion substances, shock devices, noise devices, and portable fencing. Poultry and hobby livestock can be well protected from coyotes with fencing (both structural and electric) and by ensuring that the animals are properly con-

fined in well-built cages or pens each evening.

Historically, trapping has never been a method for managing coyote populations in Massachusetts. In the past few decades, there have only been two land trapping seasons for taking coyotes. Hunting is more commonly used in the state for killing coyotes; the coyote-hunting season lasts four months.

If coyotes should pose a threat to public health or safety, the law allows for the use of prohibited traps for capturing those problem animals. Because conflicts most often occur in suburban areas, trapping should be conducted responsibly. A special permit is required.

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### **Public-Health Concerns**

Like all warm-blooded animals, coyotes may contract rabies. If you suspect that an animal has rabies, contact your local animal-control officer.

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## HAZING TIPS

- **Stand your ground.** Make eye contact. Advance toward the coyote with your hazing tools if there is hesitation on the part of the coyote. Haze until the coyote retreats. Allow room for the coyote(s) to escape.
- **Make sure the coyote is focused on you** as the source of danger or discomfort. Do not haze from buildings or your car where the coyote can't see you clearly.
- **If you see more than one coyote, continue** your hazing efforts; multiple animals will most likely respond to the same hazing techniques at the same time.
- **Make it multisensory.** Use tools that scare with sound, light & motion.
- **Variety is essential.** Coyotes can learn to recognize and avoid individual people, so the more often a coyote has a negative experience with various hazing tools and different people, the faster he will change his behavior to avoid human contact.
- **Hazing should be exaggerated, assertive, and consistent.** Communities should always maintain some level of hazing using a variety of tools so that coyotes do not return to unacceptable behavior over time.
- **Coyotes have routine habits.** Make note on when and where you encounter them. Ask neighbors in those areas to help you scare the coyote, or avoid those areas.
- **Think prevention first!** Coyote pups begin coming out of dens in the early summer and parents are very protective. Keep pets close and don't let them roam.

## COMMON COYOTE RESPONSES

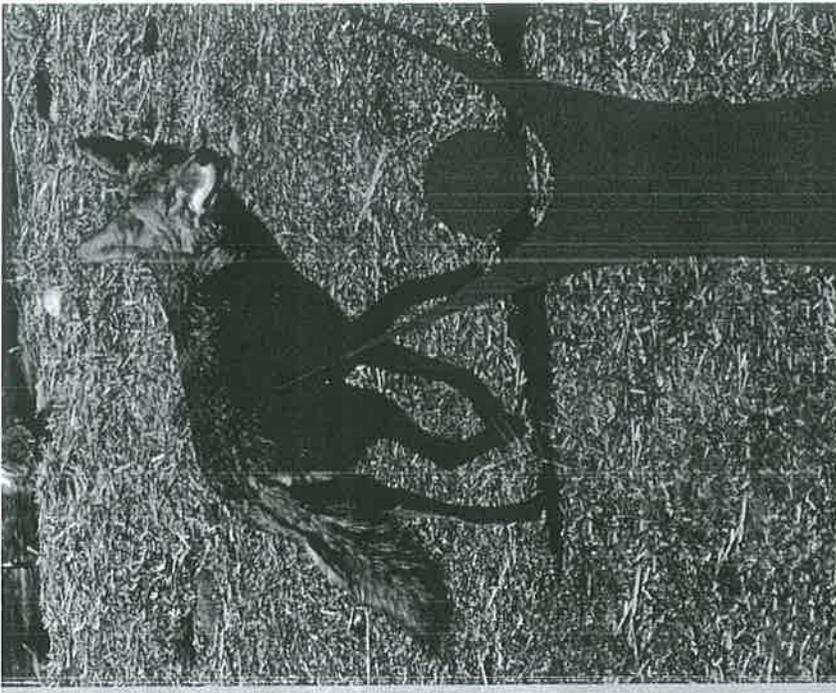
- **Being startled and running off.**
- **Freezing and staring at the hazer.** Keep hazing and increasing the intensity of your efforts.
- **Running/walking off a short distance, stopping, then looking back.** The coyote is unsure if the hazing is directed at him. Keep hazing until he gets your message to leave.

**Living safely and comfortably with coyotes isn't difficult.** Removing attractants (and asking your neighbors to do the same), and knowing when and how to scare a coyote gives you an effective and non-lethal tool for comfortably coexisting with our urban wildlife. With this field guide in hand, you can take advantage of the many benefits that a coyote provides, including free and healthy rodent control. Coyotes can make good neighbors!

**Share this guide! Coexistence between people & their domestic animals and coyotes is an active process that requires community involvement.**

## Coyote Hazing Field Guide: What-When-How

Helping coyotes be good neighbors



*“Coyotes are naturally timid animals. Hazing is an effective method for keeping coyotes wild and wary.”*

-Dr. Paul Paquet, Scientific Advisory Board, Project Coyote

*“Knowledge conquers fear. Learning to haze empowers people and saves coyote lives.”*

-John Maguranis, Belmont, Massachusetts Animal Control Officer & Project Coyote MA Representative

*“Coyotes are keenly intelligent, adaptable and resourceful animals deserving of respect and appreciation.”*

-Camilla H. Fox, Executive Director, Project Coyote

For more information about coyotes and to help your community enact a coyote coexistence plan:

Visit us

[ProjectCoyote.org](http://ProjectCoyote.org)

Contact us

P.O. Box 5007

Larkspur, CA 94977

[info@ProjectCoyote.org](mailto:info@ProjectCoyote.org)

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*photography donated by Pirjo Pellon*

# COYOTE HAZING FIELD GUIDE





## WHAT

Coyotes are common throughout North America, including urban areas. You may see and hear them more during mating season (Dec.-Feb.) and when juveniles are dispersing from family groups (Sept.-Nov.). Living safely with wildlife is easy when you know how.

This field guide teaches you about “hazing,” a powerful tool for keeping coyotes at a distance by reinforcing the coyote’s natural wariness of people. Discover what hazing is, when and how to do it, and how to avoid common mistakes. Keeping coyotes wild and wary is the key to successful coexistence.

“

*“Coyotes have much to teach us about peaceful coexistence & this is largely about altering human behavior and better understanding coyote behavior.”*

—Dr. Maic Bekoff, Scientific Advisory Board member,  
Project Coyote



## WHAT IS “HAZING?”

Hazing simply means scaring a coyote away from you, your yard, or your neighborhood. Coyotes are members of the dog family, and just as we train our dogs to adopt good behavior, we can reinforce a coyote’s natural instinct to avoid people without harming them.



## WHEN

➤ **Don’t haze...** if you think the coyote is sick or injured. Call your local wildlife rehabilitation center or animal control/services office.

➤ **Don’t haze...** if it is March through July, and you are in a park or open space and think you could be near a coyote den, or if you think that pups could be present. Allow them breathing room to raise and protect their new families. Be aware that you may encounter a coyote who is trying to haze you away from his den by acting anxious and/or assertive. He may attempt to escort you to a safe distance by hunching his back and walking towards you, or by vocalizing (barking or “huffing”). Please leash dogs and pick up small pets and leave the area calmly. Do not run.

➤ **Don’t haze...** if the coyote is at a comfortable distance from you. Seeing a coyote at a distance is no cause for alarm. They have adapted to urban environments and may be seen during the day and at night.



## WHEN SHOULD I HAZE?

Haze if a coyote approaches you in a park or in a neighborhood, or if you see a coyote who is comfortable walking your street or visiting yards. Be consistent and persistent: haze every time you see this too-close-for-comfort behavior. Do not teach until the coyote has left the area or you risk “normal,” and is nothing to be concerned about.



## HOW

Hazing can be as simple as removing attractants (passive) or asserting yourself by yelling and waving your arms above your head as you walk toward a coyote (active). The aim is not to harm or harass the coyote.

**Passive hazing** involves removing attractants to create less welcoming habitats for animals. Examples include using motion activated lights or sprinklers, not feeding pets outside, cleaning around bird feeders and BBQs, and thinning vegetation where coyotes may den. **Active hazing** involves reacting to the inappropriate presence of a coyote so that he is frightened or startled and leaves the area. The response to your efforts may vary depending on the individual. Be persistent until the coyote “gets it.”

### Hazing Tools:

**Noise makers:** your loud voice, whistles, bells, pots, pan lids, shaker cans (soda can filled with pennies & wrapped with aluminum foil), slapping a newspaper

**Surprises:** pop-up umbrella, motion-activated lights or sprinklers, garden hose, supersoaker spray gun filled with vinegar water

Common coyote responses ➤  
(on back)



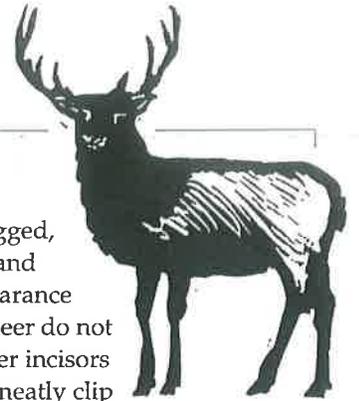
## HOW SHOULD I HAZE?

Begin by acting “Big, Bad, and Loud.” Make and maintain eye contact. Wave your arms, a stick or jacket over your head; jump up and down, yell, or throw objects toward, not at, the coyote. The more dominant you act, the better the coyote will get the message that you are something to be afraid of! Keep at it until the coyote leaves.

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### Take Preventative Steps to Keep Deer Away

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*As herbivores, deer feed on a variety of plant material throughout the seasons, sometimes damaging landscapes and helping themselves to the fruits of gardeners' labor. Here are some things that you can do to encourage deer to keep off your property and minimize—and even eliminate—damage to your property.*

#### General Information

One of the ungulates, or hoofed mammals, deer are among the best-known of animals. The white-tailed deer, one of the most common species, can be found throughout the United States except for parts of the Far West.

Adult male deer, called bucks, can weigh more than 400 pounds and usually live in small groups. Does, adult female deer, can weigh up to 40 percent less than bucks and live in larger groups including offspring. Mating season, known as the rut, occurs between October and January, with one to three fawns usually born in May or June. Deer can jump over fences eight feet high and can run up to 40 miles per hour.

They are often found living at forest edges where they can retreat into the forest for shelter and escape and can browse in open areas or fields.

Agricultural lands with woodlots, fields, and streams are common areas for deer. Deer have home ranges that are used by related females and exclude sexually mature related males. White-tailed deer are most often active at dusk and dawn, when there is less danger. Herbivores, they feed on a variety of plant material throughout

**Repellents can be used to discourage deer; they work by either directly making the plants distasteful or by deterring deer from an area using sight, smell, or sound.**

the seasons, including flowers, shrubs, acorns, cultivated plants, and ornamental shrubbery. They will even eat grass if need be. The feeding habits of deer can vary widely depending on location.

#### Possible Conflicts and Solutions

It is usually not difficult to determine deer damage, especially in gardens and landscaped areas. Tracks and droppings are good signs of their presence. Another easy way to tell if the animal is a deer is to look at twig ends. Plants or trees that are browsed by deer

have a ragged, squared, and torn appearance because deer do not have upper incisors and can't neatly clip plants. Areas with high deer density may show a "browse line," where vegetation has been trimmed from the ground up to the deer height (usually around three to six feet). Sometimes damage to tree bark can occur when bucks rub their antlers along tree trunks.

There are a variety of techniques that can be used to minimize and even eliminate damage done by deer. Landscape design, including careful selection and placement of plants, is helpful. Planting native species of shrubs and trees can help, as well as beginning preventative measures against deer damage before it begins, especially in the spring. Consulting with local nursery or landscaping companies about appropriate plants is a good first step, as they often have listings of deer-resistant and deer-attracting plants and know what kinds of plants are being eaten in various areas and at different times.

If deer browsing is heavy, deer-proof fencing is the most effective and long-term way to protect resources such as crops or landscape plants.

A range of fencing designs is available, from high-tensile strand wiring, which may be angled for

better effectiveness, to standard mesh-woven wire, chain-link designs, and various types of electric wiring. Fences should be at least eight feet high and extend underground to prevent fawns from crawling underneath them. Very simple fencing designs can be used if there are other food sources available in the area, but if food is in high demand, deer can jump fences even ten feet high. Fencing individual plants is often effective if fencing an entire area is too expensive (netting can sometimes be used, too). Trees can be protected from buck rubs by wrapping them with corrugated plastic sleeves or surrounding the trees with two-inch wooden stakes four to five feet high.

Repellents can be used to discourage deer; they work by either directly making the plants distasteful or by deterring deer from an area through sight, smell, or sound. Repellents work well in smaller areas and gardens. Homemade repellents can be made by placing human hair, soap, or garlic in netting or stocking and tying it to tree branches or fences around an area that needs protection. Commercially made contact repellents are also

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available that can be sprayed directly onto plants (many cannot be used on food crops, however).

With any kind of repellent, the key is to begin using it as soon as you see deer damage, and change or reapply them often, especially after rain or when new growth appears.

Another kind of harassment technique that may repel deer is the use of scarecrows and effigies (especially ones that move). Motion-sensing lights, scare tape, balloons, mirrors, strips of tinfoil, and even wind chimes and radios can be effective in frightening deer away from an area. Varying these devices and using them in combination with other strategies can ensure that they remain successful.

### Public-Health Concerns

Deer can be hosts to the ticks that carry Lyme disease, although there is debate about their role in contributing to the spread and prevalence of this disease. The adult tick can live on deer or other hosts at this stage of its life cycle. Declining deer densities do not affect the production of new ticks.

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### The Little Known Fisher: Resolving Conflicts

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*Fisher sightings are on the rise, yet actual conflicts have been minimal. By understanding the fisher and by following a few simple steps, you can reduce the likelihood of experiencing a conflict with a fisher.*

#### General Information

Fishers, or "fisher cats" as they are sometimes called, are not a member of the feline family at all. In fact, they are the largest members of the weasel family. Their physical appearance is similar to that of a weasel, long and slender with short legs and a bushy tail. Males can weigh up to 16 pounds, and females usually top the scale at a mere 6 pounds. From head to tail, males grow to be approximately 3 feet long while females tend to grow to an estimated 2 feet long. The tails of both sexes account for approximately 1/3 of the animals' length.

Fishers were hunted to a point of total elimination in Massachusetts by the end of the 19<sup>th</sup> century. Over the past few decades, fishers have been slowly making a comeback and can now be found in most parts of the state.

Fishers breed from February to March. Within 12 – 14 months an average litter of 3 kits is born. The kits are raised by the female until they are approximately 5 months old, at which time the kits disperse in search of their own territory.

#### Possible Conflicts and Solutions

Although active year-round, it is unlikely that you will have the chance to see a fisher, even if for only a split second. Fishers are timid and elusive and will generally try to avoid conflicts with humans.

Fishers have erroneously earned a reputation for being vicious. They are curious and playful, yet shy. They usually never attack an animal larger than a rabbit. Their main diet consists of mice, voles, squirrels, fruits and berries, and the occasional carrion. They are also one of the few predators of porcupine. Pet owners should not allow their cats or small dogs to be outdoors unsupervised, as the fisher may prey upon them. Make sure you are not inadvertently attracting fishers by leaving out open trash containers, feeding pets outside, or leaving spilled bird seed on the ground, which can attract small rodents that then can attract fishers.

If a fisher does come into your yard, using scare tactics is your best option. Loud noises such as clapping your hands or yelling at them is usually enough to drive them away. Spraying fishers with a garden hose will also send them on their way. Special devices can be

purchased that attach to your standard garden hose and act as a motion sensor. When an animal triggers the motion sensor, the device activates the sprinkler spraying the animal with water. This device is convenient because you do not have to be present when an animal enters your yard for it to work.

If you do see fishers in your neighborhood, it is a good idea to discuss these solutions with your neighbors as well.

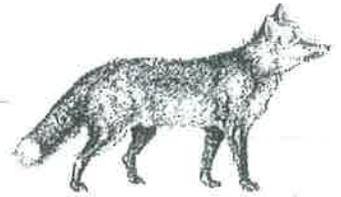
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# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

*A Program of the Massachusetts Society for the Prevention of Cruelty to Animals*



### That Sly Fox: Resolving Conflicts with Fox

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*Fox are becoming more and more prevalent in suburban and urban places. Conflicts with humans are minimal and fox do little to step on the toes of the human species. The following information provides tips on how to keep your pets safe and prevent fox from inhabiting your lawn or denning near your home.*

#### General Information

Both red and gray fox inhabit New England. Although cat-like in appearance and hunting behavior, fox are from the *canid* family, as are coyote, domestic dogs, and wolves. Red fox weigh 7-15 pounds and are the larger of the two species (about 3 feet without the tail); Gray fox are smaller and usually weigh no more than 11-12 pounds. While it is not uncommon to confuse the two species by color since red fox can appear gray, and vice versa, a white-tipped tail indicates a red fox. Fox inhabit diverse habitats, and readily adapt to suburban and urban areas. They are omnivorous, and feed on a variety of animals and plants, including squirrels, mice, and fruits. Young fox are called kits and litters of 3-8 are born in the early spring. They will usually remain with their

parents, learning to hunt, until late summer or early fall.

#### Possible Conflicts and Solutions

Conflicts with humans are minimal and fox do very little damage. Often they are blamed for damage they did not do, but benefit from, such as spilled garbage. Fox are typically shy animals and usually retreat near humans. It is not uncommon, however, to see a fox in an area where they feel secure or

### Make sure young are old enough to leave the den before trying to evict fox from under your porch or foundation.

in areas close to cover. Fox generally try to be active when humans are not. Although primarily nocturnal (active at night), fox are often seen in suburban or urban areas during the day.

Fox are also fairly transient animals and move from place to place often. Fox present no danger to humans unless they are rabid, which is rare, or if they are being captured or handled. If you catch a glimpse of a fox that appears healthy, enjoy the opportunity to observe this fascinating animal. If you notice signs of lethargy, stumbling, or erratic behavior, contact your local animal control.

Fox are becoming more and more prevalent in suburban and urban places. Human homes and yards provide fox with optimal habitat and food. In addition, humans often inadvertently invite fox and other wildlife to yards by leaving garbage in open containers and feeding pets outside. To avoid conflicts, feed pets inside or supervise outdoor feedings, making sure to clean the area and bring leftover food inside. A bird feeder can also draw a fox closer, as they will feed on the rodents that feed on the spilled seed. Temporarily bringing feeders inside if fox are in an area is recommended. Compost piles can also attract fox and should be kept in secure containers. Fox are cautious animals around people, and if you see one and want to discourage its presence, a loud voice and/or banging pots and pans together can frighten them.

Common conflicts with fox often occur in the spring when they are looking for denning sites and may build a den under a porch or shed. If a fox is denning under a porch or shed, tolerance for the family until the young are old enough to follow the parents out each night is recommended. Once the kits are seen playing and romping outside of the den, it is a sign they are maturing and will most likely be moving on soon. Mild harassment techniques can be used if needed to encourage a fox family to move on their own more quickly. Successful harassment techniques include

playing a radio close by, placing items with a strong human scent near the area (like dirty socks or old sneakers), using sprinklers in your yard, and/or putting up pinwheels and scare balloons. Once fox have moved on, follow up with the necessary exclusion work to keep the problem from reoccurring. Hardware cloth is often effective when critter proofing a deck or shed. It is important to bury the hardware cloth about 8 inches into the ground. Turn the end of the cloth outward in an L-shape to prevent fox and other wildlife from burrowing under it.

Supervising pets while outdoors is important as it is not uncommon for a fox to prey upon small domestic cats or kittens. Keeping cats indoors is the best preventative measure (which the MSPCA recommends regardless of whether

or not there are fox nearby). Special consideration should be taken for outdoor pets like rabbits and poultry, which will need to be protected with secure hutches or pens.

#### **Public-Health Concerns**

Fox are a rabies vector species (they are a primary carrier of one of the major strains of the disease). In certain areas of the country they can

also carry the echinococcus tapeworm that can cause disease in humans.

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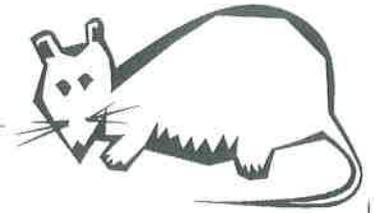
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# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

A Program of the Massachusetts Society for the Prevention of Cruelty to Animals



### Mice and Rats: How to Humanely Keep Out These Common Intruders

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*Mice and rats are all-too-familiar unwanted guests in and around human homes and industrial areas. Killing is not a humane, long-term, effective, or economically sensible solution to problems with these little creatures.*

#### General Information

Mice and rats are widespread throughout North America. Both rats and mice are nocturnal. Mice can enter holes the size of a dime, and rats can enter holes the size of a quarter. When dealing with these creatures, it is important to realize that the widespread killing of them at problem sites is not an effective solution, for, as long as there is viable habitat, the likelihood that more will arrive, and in a relatively short period of time, is high. Mice and rats breed year-round, with mice having about eight litters of 4 to 7 young annually; one female rat can give birth to about 20 young each year. There are two kinds of mice that are likely to cause problems for homeowners: native mice such as the white-footed mouse and the deer mouse (more common in rural areas) and the house mouse (anywhere there are buildings).

Exclusion techniques are the same for all of these mice. House mice prefer to live in comfortable areas between walls, behind appliances, and in unused drawers, and often the only signs of them are gnawed food items or their small droppings the size and shape of grains of rice. Native mice often seek the shelter of homes in early fall or winter. Mice are omnivorous, preferring grains and seeds, and can live without water if the food they eat is moist.

#### **With both mouse and rat problems, it is important to locate and eliminate their food and shelter sources and then permanently exclude them.**

As with mice, there are two kinds of rats that cause most problems for people, the Norway, or brown, rat and the black, or roof, rat. Norway rats are common in dense areas of human settlement and live in 18-inch-deep burrows underground or in lumber piles or similar environments. In the United States, black rats are most often found in coastal areas of the South, Southeast, and West. Black rats are excellent climbers and live higher off the ground, usually in the upper levels of buildings or nesting in trees or vines. Rats are good swimmers and jumpers, capable of leaping three

vertical and four horizontal feet.

Like mice, rats are omnivorous, eating a variety of plant and animal foods. Rats do need access to a water supply. Signs of rats in and around your home can include three quarter-to half-inch droppings, gnawed holes in baseboards or door frames, and burrows (although these can be confused with burrows of squirrels and chipmunks).

#### Possible Conflicts and Solutions

The most common problems resulting from rats and mice are contamination of human food sources from urine and feces, and gnawing damage to electrical wiring. With both mouse and rat problems, it is important to locate and eliminate their food and shelter sources and then permanently exclude them.

Here are some suggestions:

- Clean kitchen areas well, clean up spills quickly, and store food in the refrigerator or in sealed metal, glass, or heavy plastic containers. A diluted bleach solution will get rid of any scent trails that are present.
- If possible, human or pet food should not be stored outside, and if it is in a garage or basement, it should be placed in sturdy plastic, glass, or metal containers. Always feed pets indoors and thoroughly clean up the area afterward.
- Trimming and clearing away brush and debris within 18 inches of house or building foundations can help eliminate protective cover and expose the animals' burrows and

Illustration by Accent Design

entry points. To find entry points for mice inside, sprinkle powder along the perimeters of walls. This will show where there is mouse activity and where exclusion is needed.

- Eliminate indoor mouse nesting areas, such as old clothing, books, or papers in bags or boxes (store them in plastic).

The entryways rats and mice use must be sealed for permanent exclusion from dwellings. To avoid trapping the animals in your home, it is best to deter them before beginning any exclusion work. This is especially important if their entryway does not lead outside but goes into a wall. The most effective deterrents are cleanliness, placing cat hair around entryways, and moistening rags with pure peppermint oil (a natural repellent to mice and rats). To exclude mice, find their entryways (making sure to check in hard-to-reach places such as behind the dishwasher and stove, under the sink and cabinets, near where utility pipes and wires lead into the house, and cracks in the foundation) and seal them. Steel wool, copper wire mesh, or quick-drying cement works well for smaller openings; for larger ones, balling and stuffing galvanized window screening and covering it with caulking or cement can do the trick. Expanding foam insulation is often also effective. Attach rubber or metal runners at the bottom of doors if that is where the mice are gaining access. After you have cleaned areas well and removed old woodpiles, ground cover, and trash, rats can be excluded with heavy quarter-inch hardware cloth or heavy-gauge screening. Check all accessible areas, such as heating vents and the openings where electrical or utility lines enter a building.

Indoor holes in walls and floors can be sealed with caulking and

foam sealants, but because rats can chew through these materials, they need to be combined with copper wire mesh or aluminum window screening. If rats have an obvious exit way, place food outside it for them and seal the hole after the animals have left. When rat infestation is a problem around buildings, blocking the foundation with hardware cloth or a concrete L-shaped footer can prevent burrowing. Be sure to bury the footer at least a foot deep and extend it at a 90 degree angle outward for another foot.

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Live trapping is another option for eliminating mice and rats, but it should be used only as a last resort. The reasons for this are that trapping can break up family groups, trapped-and-relocated animals can find it hard to survive in new surroundings, and, unless conditions are made less appealing, new animals will simply move into the home or building to take the place of those caught in traps. If all other efforts to deter mice or rats fail, humane box traps (Hav-a-Hart is a common brand name) can often be found at grocery and hardware stores. These traps catch mice without harm and enable them to be released elsewhere. Trap and release mice only in warm weather, and release mice in an area close by the home or building where they were caught (this increases their chances of surviving both the elements and unfamiliar territory). Traps should be

placed in areas where mice are present, and close to walls, since mice like to travel along a wall or barrier. The traps can be baited with appealing substances, such as peanut butter, popcorn, or sunflower seeds. Home-made traps can also be made by tilting a small bathroom or kitchen wastebasket on its side with bait in the bottom of it and a ladder of bricks or books on the outside leading up to the top of it. Mice are likely to climb up the ladder, slide or jump into the bottom to get the bait, and not be able to climb back out. Any traps should be checked every few hours. Traps and wastebaskets can be cleaned with a mild bleach solution (1:30) and used again.

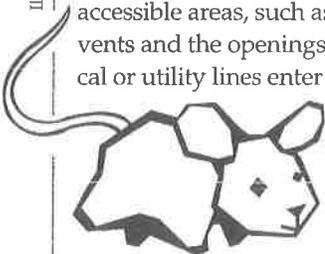
Killing is not a humane, long-term, effective, or economically sensible solution to problems with mice and rats. As with most problems of animals in buildings, remember that unless proper exclusion, habitat management, and sanitary measures are taken, it probably won't be long before new animals move in to take advantage of the available habitat. Poisons and sticky glue traps, which are especially inhumane, causing intense suffering of target nontarget animals, and should not be used. They can take days to kill and often cause an agonizing death.

### Public-Health Concerns

Both mice and rats can carry a number of diseases that are transmittable to humans, such as hantavirus and salmonellosis. It is important to clean with a mild bleach solution areas that have come into contact with mouse or rat droppings and to see a doctor if you are ever bitten by a rat.

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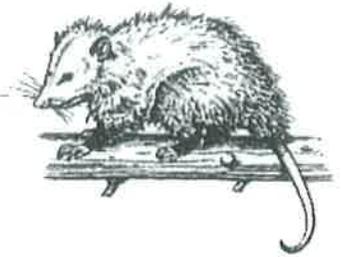
Illustration by Chris Hill



# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

A Program of the Massachusetts Society for the Prevention of Cruelty to Animals



### Opossums - Living with this Amazing Marsupial

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*Opossums are the only marsupial (the female carries the young in a pouch) found north of Mexico. They are highly adaptable and are able to live wherever water, food, and shelter exist. They are shy animals that seldom cause problems for humans. On the rare occasions when there are conflicts with opossums, we should humanely encourage these animals to find shelter and/or food somewhere else.*

#### General Information

The opossum is a medium-sized mammal, about the size of a house cat, with grey to black fur, a pink nose, naked ears, opposable thumbs on the hind feet, and an almost hairless prehensile tail (able to grasp, hold or wrap around). They are solitary, slow moving animals that are most active at night, when they wander randomly in search of food.

Opossums are omnivorous and are beneficial to humans because they consume undesirable insects, snails, and slugs.

Although they are excellent climbers and have been known to live in tree cavities, they prefer to den on the ground in old woodchuck burrows, brush/wood piles, or spaces under decks or patios - they do not dig burrows.

Opossums are usually shy and harmless animals, with two main defense mechanisms. If an opossum is frightened and unable to flee, it may display its teeth and hiss. Although this behavior might appear fierce, it is usually just a warning. If an opossum feels it is in danger, it might "play possum" and have the appearance of being dead. When the opossum feels that it is no longer in danger, it will revive itself and move on.

The life span of opossums is very short - a 4 year old wild opossum is a rarity. The average female probably lives through 1 breeding season in which time she may raise 2 litters of approximately 12 young. The large litters help accommodate for the high mortality rate opossums face.

Once born, the tiny, blind, hairless young instinctively crawl upward into the mother's pouch where they will nurse for almost 2 months. They are fully independent of their mother at approximately 3 months.

#### Possible Conflicts and Solutions

Conflicts with opossums are minimal but usually concern an opossum making a den under a deck or patio. When this occurs, the eviction strategy is relatively simple since opossums carry their young on their backs, and there is far less chance of helpless young being left behind.

If an opossum has taken up residence under your home, the first step is to encourage it to leave. This can easily be accomplished with mild harassment techniques such as placing leaves or straw in the entranceway, or placing items with a strong human scent (dirty socks or old sneakers) near, not blocking, the entrance to the den.

Exclusion using a one-way door is also easy and effective. Wait until approximately 2 hours after dark when the opossum should be out foraging, and after confirming the opossum is out of the den, loosely close the opening with netting, straw, a one-way door or another material. This way an animal inside can easily push its way out but an animal on the outside will not be

If an opossum has entered your house or a building, these slow-moving animals can be guided out with as little as a broom to gently nudge them along to an open door.

If an opossum is seen in your yard or neighborhood, the best thing to do is to be patient since they will most likely move on within a short time without the need for human intervention.

While it is not common for opossums to raid garbage cans or gardens, you should discourage visits by opossums or other urban wildlife by securing trash containers with tight-fitting lids, and picking up food bowls if your pets have been fed outdoors.

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### **Public Health Concerns**

Opossums are susceptible to a variety of diseases but their role in transmitting these to humans is uncertain. Similar to all warm-blooded animals, rabies occurs in opossums but it is very rare.

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# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

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### Cottontail Rabbits

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

#### General Information

Two types of cottontail rabbits live in Massachusetts: the more common Eastern Cottontail and the New England Cottontail. These two animals look a lot alike but do differ slightly in appearance.

Cottontails like to live in brushy "edge" areas, such as in fields bordering woodlands, brush piles, and thickets. They survive well in the suburbs because they get all they need for food, water, and shelter there.

Eastern Cottontails are sexually mature at about 2 months of age and breed from April to September. They usually have 3 to 4 litters of about 5 young, called kittens. New England Cottontails are sexually mature at age 2, breed from March to about August, and have 3 litters a year.

Nests typically are made in small depressions in the ground and are lined with grass and fur from the mother.

In the springtime concerned people often mistake kittens left alone to be orphaned. Remember, it is quite common for kittens to temporarily be left alone while their parents are out foraging. The parents conceal their kittens and return to the nest to feed and care for them only at dusk and dawn. If you find a nest of kittens, it is best to leave it alone, unless it is facing imminent danger. You should not touch or even approach a nest of kittens, as the scent of a human will often deter parents from reclaiming their kittens and may attract predators. It is best to watch from a safe distance and observe until the parent returns, which could take several hours.

Cottontails are most active at dawn and dusk and forage for food into the early nighttime hours. In the spring and summer they eat grasses and leafy plants and in the fall and winter they primarily eat buds, twigs, bark, and young trees.

#### Possible Conflicts and Solutions

Damage to gardens and ornamental shrubbery is the most common conflict between humans and rabbits.

Rabbit damage to plants is identifiable by the neatly-clipped appearance of browsed vegetation, as well as obvious animal tracks and scat in the form of small piles of pea-sized pellets.

The most effective way to keep rabbits out of a flower or vegetable garden is to erect a fence around the garden 2 to 3 feet high. This is best done using chicken wire or hardware cloth (a heavy gauge woven wire mesh fencing material) staked about every 4 feet and buried into the ground at least 8 inches (preferably 12 inches) with a bend at the bottom to prevent animals from burrowing underneath. Chicken wire and hardware cloth can be purchased at most gardening and hardware stores.

Commercial repellants with the active ingredients ziram, thiram, capsaicin, or dentonium saccharide may work to repel rabbits in the yard or garden but remember to read labels before using these products on plants that will be eaten. Also, attaching a motion sensor to your garden hose will encourage rabbits to look elsewhere for their next meal.

The following homemade hot pepper repellent can also be effective, when applied to flower bulbs and plants: Ingredients: 1 chopped yellow onion, 1 chopped jalapeno pepper, and 1 tablespoon Cayenne pepper. Directions: Boil ingredients for 20 minutes in 2 quarts of water. Let it cool and strain through cheesecloth. Apply with spray bottle. This homemade repellent will deter any animal where it is applied and will last

3 to 5 days. This recipe is courtesy [www.UrbanWildlifeRescue.org](http://www.UrbanWildlifeRescue.org). If using this mixture with a vegetable garden make sure to wash vegetables well before eating them.

Remember that this homemade repellent and other repellents need to be reapplied regularly, as well as after rain, in order to be effective. Remember to always follow the directions on any commercial product purchased.

Keeping grass mowed short and removing ground cover near the garden also helps limit rabbit movement and reduce damage. Sprinklers triggered by motion detectors can also encourage rabbits to look elsewhere for their next meal. These devices can be purchased from most gardening stores.

Protect tree bark from rabbit chewing by wrapping trees with hardware cloth or wire mesh. The cloth or mesh should be wrapped loosely around the

tree with at least 4 inches of space between the tree and the cloth/mesh to allow for growth. It should also extend into the ground about 6 inches, if possible without causing root damage, and about 2 feet above the snow line. Hardware cloth and wire mesh can be purchased from most hardware stores.

#### **Public Health Concerns**

Like any mammal, rabbits can get rabies. Rabbits also can be infected with tularemia, which is transmissible to humans if an

infected rabbit is handled or eaten undercooked. Ticks that transmit Rocky Mountain spotted fever may use rabbits as a host.

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# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

A Program of the Massachusetts Society for the Prevention of Cruelty to Animals



Illustration by Chris Hill

### Raccoons: Managing These Adaptable, Intelligent Foragers

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*Raccoons are highly adaptable and appear to flourish in places where humans have developed the land. If these intelligent animals have taken up residence in or around your home, becoming a nuisance when foraging for food or shelter, this publication can help.*

#### General Information

The raccoon is a small, nocturnal mammal, typically 20–30 inches long and weighing 15–30 pounds, though raccoons can weigh up to 60 pounds in urban areas where they thrive on our refuse. Their fur is grayish brown with a bushy banded tail and black masked face. They are highly adaptable, extremely intelligent animals that live well in cities, suburbs, and rural environments. Raccoons are omnivorous and will eat almost anything, from fish, insects, eggs, and young mammals to fruits, vegetables, and nuts. Most active at night, raccoons sometimes also forage for food by day. They will make their nests almost anywhere—in tree cavities, brush piles, abandoned burrows, chimneys, attics, crawl spaces, storm sewers, haystacks, and barn lofts—and

usually have more than one den site available for use at any one time.

Raccoons are as intelligent as dogs and cats, and their front limbs provide them with great manual dexterity. They have routines for food and shelter, and remember places that are good for each.

#### Possible Conflicts and Solutions

Raccoons can cause damage by dumping trash cans, disturbing gar-

**If raccoons have taken up residence in or around your home, the first step is to encourage them to move out.**

dens and ponds, and injuring cats or small dogs, or they may simply be a nuisance for homeowners.

You can usually hear the often very vocal conversations of raccoon family groups in attics or chimneys at dusk and just before dawn.

If raccoons have taken up residence in or around your home, the first step is to encourage them to move out. This is easily accomplished by using mild harassment techniques and following up with exclusionary methods.

Please note that it is especially important that the animals leave before you seal their entrances in

the spring and summer months, when young are often present. If young raccoons are present in your home, please tolerate the animals for a few weeks to ensure that these babies are not abandoned to die in your home.

Inspect the area to determine how the animals are getting in, then close off all but one entryway. Here are some ways to encourage the animals to move on. It is best to do the following at dusk so raccoons can safely find new shelter at night.

- Use mild repellents, such as ammonia-soaked rags placed near or inside the entryway (to one side) so the raccoon has to pass them to get in or out. Replenish them as the smell fades.

- Place a flashlight (switched on) in or as close to the den site as possible. The light will annoy raccoons.

- Play a radio near the den site day and night to further annoy them.

- If possible, once raccoons have been excluded, trim back any tree branches or limbs that are close to the house. If it is impractical to eliminate all branches, tree trunks can be wrapped with two-foot-wide sheet metal beginning two feet above the ground. This prevents raccoons from climbing the trees.

Listen closely for raccoon young, called kits, before using any permanent exclusionary methods.

Young kits often sound like whining puppies.

Closely monitor the raccoons to determine when they have moved, and after the family is gone, tightly secure the area to prevent reentry. Trapping adult raccoons often leads to separation and probable death of the young and also makes the habitat available for more animals to move in. If there are no young present, install a one-way door over the den entrance, allowing the raccoon to leave in the evening but preventing its reentry. Once the animal is gone, be sure to permanently seal entryways with heavy-gauge wire mesh.

Make sure your chimney is securely capped. Raccoons have little hands that can easily dislodge loose screens or covers. They are agile climbers, and females like to use the flue or smoke shelf as a den.

Invasive techniques, such as using smoke or fire to drive animals out, should never be used, as the mother will most likely abandon the site, resulting in the death of the kits that are physically unable to climb.

If a raccoon enters your house, close the doors between the animal and the rest of the house, then open doors and windows to the outside. Let the animal escape on its own. Leave the capture and handling of wildlife to the experts.

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Vegetable and fruit gardens can be susceptible to raccoon damage, often as foods are ripening. Closely monitor your garden at these times and take steps such as netting, lights, and radios to keep the animals away until harvest time. For persistent raccoons, single-strand electric fencing can be an effective exclusionary method. The use of Mylar balloons, pinwheels, or aluminum strips will often frighten raccoons away from a site as well. Spreading cayenne pepper over an area can also often be an effective repellent against raccoons.

Secure pet doors, especially at night, to prevent raccoons from using them to enter your home.

### **Public-Health Concerns**

Raccoons are among the primary carriers of the rabies virus in the United States and are classified as one of four rabies vector species.

The other three rabies vector species are foxes, skunks, and bats. Raccoon rabies occurs primarily in the eastern United States.

Another serious public-health concern is a roundworm parasite that can infect raccoons. Humans can become infected if they accidentally ingest or inhale roundworm eggs that are passed through raccoon feces. Care should be taken and protective masks and clothing should be worn when you are cleaning areas that were inhabited by raccoons. Raccoons are also hosts for giardiasis.

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# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

A Program of the Massachusetts Society for the Prevention of Cruelty to Animals



Illustration by Chris Hill

### Evict Skunks Kindly from Your Property

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*Skunks have adapted well to human environments and have taken up residence in and around our homes. Here is some information about these animals and how they can be managed humanely and effectively, including how to neutralize their odor.*

#### General Information

Skunks are beneficial, nonaggressive creatures with a unique system of self-defense. If you've noticed the persistent faint smell of a skunk, you may have one living around your home or yard. Look for a four-to-six-inch diameter hole near buildings or woodpiles or for a den under a porch or deck. Skunks are omnivorous, primarily eating insects, fruit, eggs, human garbage, and sometimes even small vertebrates such as mice. Skunks have adapted well to human environments and live happily under porches, patios, sheds, and decks as well as in hollow logs, wood or rock piles, and abandoned burrows. Young are usually born in May or June and remain in the nest for about two months before accompanying the mother to forage. Except when young are present, skunks are usually solitary animals. They are

primarily nocturnal and can be active throughout the year.

If you encounter a skunk, back away slowly and quietly and you should be able to avoid getting sprayed, since they don't see well and are unlikely to notice you unless you harass them. Signs that a skunk is about to spray include stamping the ground with its front feet, shaking

every day with leaves, straw, or other materials.

This will harass the skunk, and it may get the message and move elsewhere. This is the best approach in April, May, and June, when there may be young present, if tolerance until they get older is not a viable option.

- Use mild repellents, such as ammonia-soaked rags placed near or inside the burrow (to one side) so the skunk has to pass them to get out.
- If you are sure no young are present, install a one-way door over the den entrance, allowing the skunk to leave but preventing its reentry.
- If a skunk is caught in a window well, carefully and quietly place a rough board in the well so the animal can climb out. Skunks are not good climbers and need something to grip on to.

- Using shiny objects like pinwheels or Mylar balloons and sprinkling cayenne pepper around an area can help to deter skunks.

The following recipe to neutralize skunk odor is safe for pets and clothing. Combine:

1 quart of 3% peroxide

1/4 cup baking soda

1 tsp. liquid laundry or dish soap

In addition, using liberal amounts of tomato juice or vinegar will make the odor tolerable.

#### Public-Health Concerns

Like all mammals, skunks can carry

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its tail, and fluffing its fur.

#### Possible Conflicts and Solutions

To discourage skunks from moving in with you:

- After exclusion, block or screen entry points to the spaces under your home and other buildings. Be sure the material used extends eight to ten inches underground because skunks are good burrowers.
  - Fill openings under concrete structures with dirt.
  - Remove all brush piles from your property.
- To evict a skunk:
- Pack the entrance to its home

# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

A Program of the Massachusetts Society for the Prevention of Cruelty to Animals



Illustration by Chris Hill

### Squirrels: Humanely Bid These Foragers Farewell

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*While many enjoy watching squirrels in their own backyards, these intriguing and acrobatic animals may also cause frustration if they enter and nest in human homes. Here is some information about these creatures and how they can be managed humanely and effectively.*

#### General Information

Squirrels are an abundant species worldwide. North America is home to a wide variety of tree squirrels and an even larger number of ground squirrels. The fox squirrel and eastern and western gray squirrels are the species most commonly involved in conflicts with humans. Highly adaptable creatures, squirrels have adjusted well to the urban and suburban landscape.

Squirrels primarily consume plant matter, and their diet varies with the seasons. They typically eat and store acorns and other nuts underground, which provide them food for the winter. Spring flowers and growing buds are also eaten as the weather warms. In the summer squirrels often eat fruits and berries.

#### Possible Conflicts and Solutions

While many enjoy watching squir-

rels in their own backyards, these intriguing and acrobatic animals may also cause frustration if they enter and nest in human homes. Squirrels naturally den and raise young in tree cavities and leaf nests, using trees for food and protection from predators and the elements. But attics, chimneys, and small openings in buildings are also very appealing to them. They often enter chimneys or attics through unscreened vents or openings left by loose or rotten boards and can sometimes cause damage by build-

### If a squirrel becomes an unwanted tenant in your home or building, take care when attempting to banish the animal.

ing nests in walls and floorboards. Eastern gray and fox squirrels have two litters each year, the first between February and April and the second between August and September. Squirrel activity is high during mating and after young squirrels are driven out of their mother's nest to disperse into new territory.

Digging in lawns, eating ornamental plants and bulbs, and stealing food from bird feeders are also common behaviors of squirrels. During the winter months, it is important to remember that these animals are only doing what is natural to them

in their quest to find food during an often limited and sparse time of the year. Tolerance is especially important, if at all possible, during this time of year. Bulbs can be protected by soaking them in certain repellents before planting or by planting them below 1x1-inch wire or plastic screening. Spraying repellents on ornamental plants can help deter inquisitive squirrels. Wrapping ripening fruit trees with netting and using various squirrel-proof bird feeders can also keep them away. Most bird supply centers sell these types of feeders. For a list of repellents that can be used to deter squirrels, please contact the Living With Wildlife program office.

If a squirrel becomes an unwanted tenant in your home or building, take care when attempting to banish the animal. In most cases squirrels are easier to deal with because, unlike other wild animals, they are active during daylight hours—in the early morning and then later in the afternoon. First, in order to ensure that babies are not orphaned, it is critical to check that young are not present. Locate the nest and listen for noises that will indicate the presence of young, such as squeaking and rustling. If young are present, please tolerate them until they are old enough to accompany the adults out of the building. If young are not present, install a one-way door or watch for when the animals have left the

building to seek food, then seal up the entry holes with quarter- or half-inch mesh hardware cloth while they are away. Though often exasperating, it is very important to locate the areas where the squirrels are gaining access, and permanently seal up those entryways. If the animal is removed without this necessary follow-up, another animal will most likely move in and take advantage of the available good habitat.

Trimming back any long tree branches close to rooftops, installing a chimney cap, using squirrel-proof bird feeders, and keeping your home in good repair are also good preventative measures.

#### **Public-Health Concerns**

Squirrels are carriers of disease organisms that can affect humans,

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but are rarely documented as causing human illness. Rather, squirrels are often regarded as a beneficial indicator of environmental quality. As in all mammals, rabies can occur in squirrels, but squirrel transmission of the disease to humans is not documented.

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# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

*A Program of the Massachusetts Society for the Prevention of Cruelty to Animals*

### Turkey Trouble: Resolving Conflicts with Turkey

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

#### General Information

Wild turkeys have lived in most parts of Massachusetts since the time of the Colonial settlement. However, human development and hunting took their toll and by 1851, turkeys were extirpated in Massachusetts. Restoration started around 1911, but it took many relocation attempts before the population was successfully restored in the late 1990s. Today you can find wild turkeys living in most parts of the state, with the exception of Nantucket and Martha's Vineyard.

The turkeys found in Massachusetts have rich, brown-shaded plumage with a metallic or iridescent sheen, and white and black stripes on their primary wing feathers. The males (called toms) can stand up to 4 feet tall and weigh more than 20 pounds, while the females (called hens) are approximately half the size and weight of the males.

Turkeys are social animals that live and feed together in flocks. They live in a wide range of habitats, including forested, semi-forested

and open habitat. Turkeys must have both trees and grasses for feeding, resting, roosting, and nesting. Trees provide food (nuts, seeds, and fruit), resting areas, cover from predators, and a place to roost at night. (Hens with young will roost on the ground until the young are able to fly.) Grasses are important for both adult and young because they provide food for adult turkeys, and an environment where the young can find insects.

Nesting season starts in late March or early April, during which time the hens build their nests on the ground, usually in the tall grass of fields or in the forest. The hens lay one egg a day until 10 – 12 eggs have been laid. The average incubation time is 28 days, and in late May or early June, the eggs will hatch over a 24 – 36 hour period.

During the first 4 weeks of life, baby turkeys (called poults) are unable to fly and rely on their mother for protection. Hens hiss and ruffle their feathers to scare away predators and will only abandon the nest as a last option. When the poults are between 4 – 5 weeks old, they are able to fly 25 – 50 feet and begin to roost in trees with their mother. Turkeys learn from each other, usually by imitating older birds. Through this process they learn how to find food and how to navigate the boundaries of their home range.

Unlike the domestic turkey, wild turkeys can fly up to 55 miles per hour and run up to 25 miles per hour. They have several predators, including humans, crows, snakes, skunks, raccoons, and opossums. The average life span for a wild turkey is 3 – 4 years.

Wild turkeys are social birds that live in flocks, which are organized by "pecking order". Sometimes turkeys view people as part of the "flock", especially if the birds have been fed by people. The turkeys may believe the human is part of the "pecking order" and will treat them accordingly. If a turkey views someone as dominant, they will act submissive or fearful. If someone is viewed as being a subordinate, the turkey will try to bully him/her. Turkeys may determine a person to be a male or a female, regardless of the person's true gender. Those perceived to be a male may be challenged by the adult male turkeys or followed and called to by the females. Likewise, those perceived to be a female may be courted by male turkeys.



## Possible Conflicts and Solutions

### **Do not feed turkeys.**

Whether intentional or not, feeding wild animals can cause them to act tame or can encourage bold or aggressive behavior.

### **Clean up bird feeder areas.**

Birdseed can attract wild turkeys so make sure you clean up spilt seed around bird feeders daily or use a feeder designed to keep seed off the ground.

### **Do not be intimidated by a turkey.**

Aggressive or bold turkeys can be deterred by loud noises, spray from a water hose and/or a leashed dog.

### **Protect your garden.**

Turkeys looking for food in your garden can be humanely deterred by spray from a water hose, a leashed dog or fencing that covers the bulbs in your garden.

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# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

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### Are Your Feathers Ruffled by Waterfowl?

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

*Issues regarding waterfowl have recently made headlines in newspapers. Their grazing on people's property does not permanently disturb or damage turf and rarely puts people at odds with these birds. But usually people dislike the fecal matter that waterfowl leave behind. Here is some information about waterfowl and how they can be managed humanely and effectively.*

#### General Information

The general term "waterfowl" is used to describe birds—including geese, swans, and ducks—living in freshwater habitats. All species share the characteristics of webbed feet and flattened bills. Waterfowl are commonly associated with lakes and ponds, but most species spend time on land foraging and nesting. Although all are migratory birds, many remain present year-round in ideal locations. Man-made environments such as golf courses, office parks, artificial ponds and lakes, and municipal parks often provide waterfowl with irresistible grazing surfaces and an ideal habitat that can support them all year long.

The Canada goose is the species of waterfowl that causes the most conflicts with humans. Canada geese are distinguishable by their large size; black head, bill, and neck; and white cheek patch. They weigh about 12 pounds and have an average wing length of 20 inches. A strongly monogamous species, geese pair at about three years of age, have strong family ties, and often vigorously defend nests and chicks. Canada geese can often be

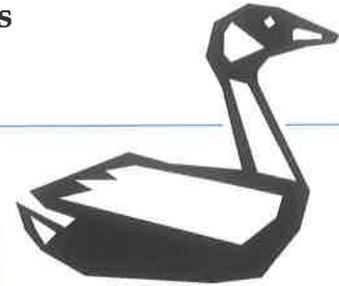
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seen and heard flying overhead in a V formation, which allows each bird to fly in the wind draft of the bird in front of it, thereby saving energy. They take turns as the leader.

#### Possible Conflicts and Solutions

Waterfowl cause conflicts with humans primarily where landscaped areas and maintained lawns are affected. When grazing, geese do not permanently disturb or physically damage turf. Conflict



usually occurs from fecal deposits and the aggregation of a large number of birds. Tolerance, vegetation management (the use of tall grass or other naturally occurring vegetation to deter geese and ducks), fencing, harassment techniques (including the use of trained Border collies), hazing, repellents, and oiling eggs are among the many solutions available for dealing with waterfowl. An integrated approach using a variety of these techniques is the best way to solve conflicts.

#### Public-Health Concerns

Waterfowl are not a health threat to humans, but large accumulations of their droppings are becoming cause for concern in water quality control at municipal lakes and ponds. The botulism strain that affects waterfowl is not transmittable to humans.

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Illustration by Chris Hill

# LIVING WITH WILDLIFE

## Humane, Effective Solutions to Human-Wildlife Conflicts

*A Program of the Massachusetts Society for the Prevention of Cruelty to Animals*

### Woodchuck: the diligent digger

*In cities, suburbs, and small towns across Massachusetts, people are noticing a change in their neighborhoods. Some think it's good. Some think it's bad. But everybody seems to be talking about it: more wild animals are making their homes in and around people's yards and houses, in parks and playgrounds, in business developments, even right on Main Street.*

#### General Information

Woodchucks, also known as groundhogs, are a member of the squirrel family and reside throughout the east and mid-west sections of the United States and Canada. Woodchucks are vegetarians and can often be seen grazing near the edges of fields and roadways.

Woodchucks have small, heavy bodies set atop short, powerful legs. They have broad, flat heads with small rounded ears. Their feet are black and slightly flattened. The hind foot has five well-developed digits, terminating in curved claws that are used for digging.

Breeding takes place soon after they emerge from hibernation in early spring. Females bear a single litter with an average of 3 to 5 young. The young are born in May, furless, pink, and wrinkled, and remain blind for more than a month.

Woodchucks are excellent diggers and live in complex underground systems of burrows. There is usually a main entrance to the

burrow distinguished by a mound of soil and/or rocks around it, with several secondary entryways often used as escape routes. Burrows are often found near rocks, tree roots, or other supportive structures. They are used for protection from weather and predators, for rearing young, and for six months of hibernation every winter. They are often also shared by other wildlife.

#### Possible Conflicts and Solutions

While some people welcome wildlife into their yards, some gardeners are naturally perturbed when hungry woodchucks view their plantings as all-you-can-eat buffets. If the culprit is nowhere to be seen, looking at the markings on the plants left behind can often indicate if a woodchuck was present, as woodchucks leave clean cut tears on plants, unlike the jagged edges of plants left by deer.

To deter woodchucks from gardens, attach a motion sensitive sprinkler to your garden hose. Placing scarecrows, balloons, and pinwheels and/or leaving a beach ball to blow in the wind near the garden, can also be effective. Visiting your garden often and mowing any long grasses near the garden will also help. Individual plants can be protected by sprinkling them with Epsom salts or covering them with fabric or gallon milk jugs with the bottoms removed. Placing rags soaked in ammonia on posts at intervals around the garden perimeter will also deter woodchucks.

Another highly effective way of discouraging woodchucks is to place wire fencing at least 3 to 4 feet high around the perimeter of the garden. Making sure the fence is somewhat loose and buried 1 foot underground will make it more difficult for a woodchuck to dig under or climb over it.



Woodchuck burrows can sometimes cause overlying structures to become unstable. In these situations, it is best to permanently exclude woodchucks from these burrows. Removing nearby ground cover, partially digging out the entryways, and placing ammonia-soaked rags nearby, will encourage evacuation of the burrow. A one-way door can then be installed to prevent reentry. However, care should be taken to make sure that there are no young that could be trapped inside the burrow (usually May through August). To see if the burrow is being used, loosely place grass in the entryway. If it goes undisturbed for several days, then the burrow is most likely unoccupied. To permanently seal the burrow, excavate the area around the entryway, and block the entryway with heavy-gauge welded wire, extending the wire well past the entryway on all sides and burying it at least 1 foot.