Wildlife

chapter 8

In a nutshell...

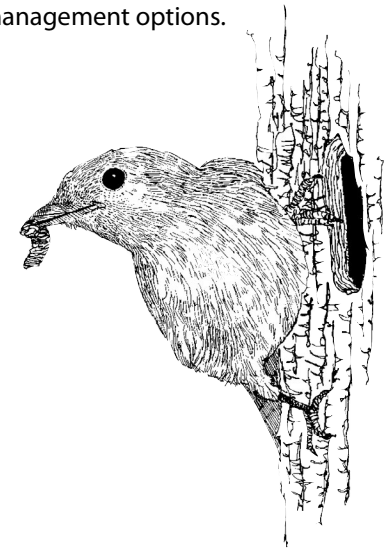
- Bunnies (and Bambis) can be cute…until they eat your plants.
- Relocating an animal may not be the best or most humane solution.
- Rather than fighting your animal problems, consider planting plants your animal pests don't prefer.
- Check the resources at **hort.extension.wisc.edu** for issues not covered in this chapter.

MASTER GARDENER
UNIVERSITY OF WISCONSIN–MADISON
DIVISION OF EXTENSION

Introduction

Wisconsin is home to a diverse array of wildlife species that brings enjoyment to many people. While it is unrealistic to expect to attract certain species—such as large predators—gardeners can create, enhance, and maintain habitat in their yards to attract an assortment of birds, mammals, reptiles, and amphibians. Attracting wildlife to your yard can be an absolute delight and great source of pride in a home landscape. Sometimes, however, wildlife can become a nuisance or cause damage, necessitating some form of management.

To develop a better understanding of what you as a homeowner can do to benefit—and live harmoniously with—wildlife, this chapter provides information on both attracting wildlife to your landscape and identifying damage and implementing management options.



Learning objectives

1. Understand the biology and habitat requirements of wildlife.
2. Understand the basic tools and techniques to attract wildlife.
3. Understand the principles of "keep wildlife wild."
4. Understand the concepts of randomness and diversity.
5. Understand wildlife laws and general principles of wildlife damage management.

Wildlife habitat

Each species of wildlife has specific habitat requirements. Wildlife habitat consists of food, water, shelter, and space, and although each species' habitat requirements can be consistent throughout most of a year, they may change depending on time of year. For example, a bird that is primarily a seedeater most of the year will switch to a high protein, insect-based diet during nesting season in order to feed growing young.

Food, water, and shelter can be provided naturally or supplementally. An example of a natural water feature is a lake, but water may be supplementally provided via a landscape pond or birdbath. In many yards, habitat provision is a mix of what is naturally available supplemented by humans.

Wildlife utilize a wide variety of foods. Some species are strict carnivores and feed on other animals, some are strict herbivores and eat a plant-based diet, and others are omnivores and eat both animals and plants.

Water requirements of wildlife depend largely on their diet. Species that eat a drier diet require an external source of water compared to animals (like carnivores) that satisfy their hydration requirements primarily through their prey. If you provide a supplemental source of water like a landscape pond or birdbath, keep the water moving. Water that trickles, drips, or moves has several advantages over a stagnant source. Moving water:

- Generally attracts more wildlife.
- May stay cleaner.
- Is more likely to remain open during freezing periods.

Animals utilize shelter for a variety of reasons, from seeking shelter from inclement weather to finding a safe place to rest and raise young.

Space, the final habitat component, can be the most limiting in the sense that you are confined by the amount of property available.

Attracting wildlife

Certain types of wildlife (e.g., European starlings and English sparrows) will utilize your property even if you don't do anything to create, enhance, or manage the habitat because they have adapted to living in an urbanized environment. However, for most species, providing food, water, and shelter on your property will maximize your ability to attract wildlife.

Keep the following in mind when considering how to manage your property:

- First, be realistic. Based on your property size, the type of vegetation and other habitat components present, and the surrounding landscape, certain types of wildlife may not use your property at all, or for short periods of time and perhaps during only certain times of the year. For example, wolves (*Canis lupus*) require very large blocks of habitat (at least 300 square miles), so a ½-acre lot would not hold a wolf.
- Second, greater diversity of vegetation equals greater diversity of wildlife. For example, planting native grasses, annual and perennial flowers, shrubs, and trees provides good vertical structure and food and shelter for animals that are primarily ground dwelling or arboreal.
- Third, lot sizes are relatively small in many suburban neighborhoods, so collaborating with your neighbors to coordinate your management activities can provide a larger block of contiguous habitat than managing your single lot.
- Lastly, locate your property on an aerial map and consider how your property or larger neighborhood fits into the landscape surrounding you.

Create, enhance, and manage habitat that is similar to what surrounds you. Use your lot and neighborhood as a stepping stone or travel corridor for larger animals as they move across the land, or as refuge for smaller animals that may use your property as a home.

Types of wildlife

Birds

Approximately 400 bird species call Wisconsin home. Roughly 15% of these stay in our state year-round, and the other 85% use Wisconsin primarily during the breeding season (spring and summer). Other avian species visit our state for only a week or two in the spring and fall as they migrate further north and south, respectively.

Perhaps more than any other group of wildlife, birds will commonly utilize human-provided habitat like bird feeders, baths, and nest boxes.

Food

Feeding birds is a very popular activity and provides a great opportunity to see birds relatively closely. The types of feeders and food you use will determine the types of birds that you will attract to your yard. The greater diversity of feeder and food types, the greater diversity of bird species you could potentially attract.

Some examples include platform or shelf, tube, suet, traditional house, and hummingbird feeders.

Where you place your feeders is important. Keep the following considerations in mind:

- Shelter the feeders from prevailing winds and snowdrifts for the benefit of the birds and humans who have to refill feeders in winter.
- Locate any feeders mounted on poles or suspended from limbs or wires at least 5 to 6 feet from the ground.
- Increase the numbers of feeders available to reduce competition and fighting amongst birds visiting your feeders. Perhaps most important from the birds' standpoint, feeders should be within 5 feet of cover—shrubs, trees, or both. Cover provides a place of retreat from cats or other threats, a gradual approach route for "shy" birds, and a convenient perch for opening a sunflower seed. In the absence of natural cover, a tree branch with lots of twigs can be attached to the feeder support post or rail.

Millions of birds are killed by window collisions annually. Recent research has found that placing feeders closer to windows results in fewer window strikes and dead birds. When feeders are placed close to windows, startled birds are less likely to impact the glass with enough force to cause injury. Place feeders within 3 feet of windows, if possible.

Types of bird food include safflower, sunflower, and niger (thistle) seeds, suet, fruits, nuts, and sugar water (nectar). Seed-eating birds need grit to digest, using it like teeth to grind the food and possibly obtaining minerals as well. Roadsides and sanded sidewalks are common winter sources of grit, but many birds will accept it if you offer it in addition to food. Do not mix grit with seeds. Coarse sand and oyster shell grit are both suitable; others are available from poultry suppliers or game bird breeders. Oyster shell grit is a good source of calcium, a mineral in short supply but necessary for birds laying eggs in the springtime.

Water

By providing water, which birds use for both drinking and bathing, you may save birds a long flight to a natural source in very cold weather. Watering trays are commercially available, but you can use almost any shallow container—the container must be shallow if the birds are to bathe in it.

Small heating elements, available from bird-feeding equipment suppliers, farmers' co-ops, and some hardware stores, will keep the water from freezing in the winter.

Unlike feeders, place water baths in a relatively open area with good sight lines for bathing birds to see predators from as far away as possible. When bathing, birds' feathers are wet and heavy with water, so it takes them a little longer to gain flight—the farther away birds can see predators, the more time they have to shake off excess water and escape danger.

If birds don't seem to notice the water you provide, try creating a slight drip with a hose or faucet to disturb the surface—this should attract them.

Shelter

One important way to benefit birds is installing nest boxes. Cavity-nesting birds like Eastern bluebirds, wrens, and chickadees use nest boxes somewhat readily. When buying or constructing and installing a nest box, here are a few things to consider:

- Each cavity-nesting species is particular about the size of the entry hole, so make sure to match the diameter of the entry hole to the species you are trying to attract.
- Place nest boxes at the appropriate height per species and face the front of the nest box away from the general direction of prevailing weather.
- Many species that occupy nest boxes will raise more than one clutch of eggs per season, so watch carefully for the fledglings of the first clutch and clean out the box so it can be used for another clutch.
- Many predators find nest boxes and will prey on the eggs and chicks if given a chance, so you may want to install a predator guard on the pole or tree that is supporting the nest box.

Note: Domestic cats are very efficient predators of birds and other native wildlife if left to roam free outdoors. For the health of cats and wildlife, cats should be kept indoors at all times. If cats are let outside of the house, they should be kept on a relatively short leash and the leash should be anchored away from areas used by wildlife. Attaching a bell to a cat's collar is not effective, as cats move stealthily when pursuing prey, and the bell often does not ring or ring loud enough to alert wildlife that a cat is nearby.

Specific species

Ruby-throated hummingbird

The ruby-throated hummingbird (*Archilochus colubris*) is the only species of hummingbird commonly found in the eastern half of the US. The upper part of the male is brightly colored with iridescent green feathering from the top of his head to the base of his tail, and the throat region is covered in ruby-colored feathers. The female is similar in appearance but lacks the ruby-colored throat.

Hummingbirds are primarily nectar feeders and will make an appearance at hummingbird feeders as well as nectar-producing plants, although they will also eat insects. Because of their diet they migrate south once cold weather arrives in Wisconsin and nectar and insects are no longer available. Their habitat includes woodland edges and openings, yards, and feeders. They build small nests (about 2 inches in diameter and 1 inch deep) suspended from a tree limb 10 to 40 feet above ground, and include lichens and moss in the construction. The easiest ways to attract ruby-throated hummingbirds are by planting brightly colored, nectar-producing plants and putting out hummingbird feeders.

Sharp-shinned hawk

Sharp-shinned hawks (*Accipiter striatus*) are common hawks and year-round residents of Wisconsin that inhabit suburban neighborhoods with forested areas. They are relatively small compared to red-tailed hawks (*Buteo jamaicensis*), only measuring about 1 foot long from their head to the tip of their tails. These hawks have relatively long tails for a raptor and short wings, allowing them to be very maneuverable in flight. The chests and underside of wings are heavily barred, and the tail has alternating bands of dark and white horizontal striping, with the end of the tail containing a narrow, white band.

Sharp-shinned hawks eat smaller birds by catching them during flight and are often seen hunting around bird feeders. Maintaining forested areas in your yard, erecting perch poles where trees are not sufficiently mature or abundant to support perching raptors, and erecting bird feeders to attract prey birds are ways to attract sharp-shinned hawks to your yard.

See table 1 for information on habitats and plants for common Wisconsin birds.

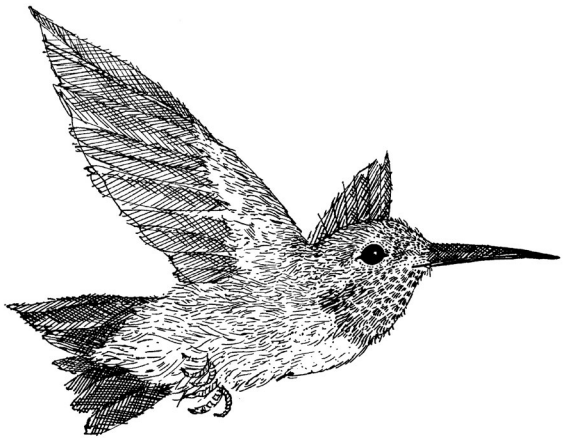
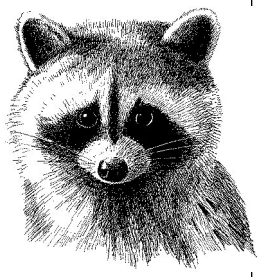


TABLE 1. Habitat and plant needs for some common Wisconsin birds

Species name	Plants needed	Nesting habitat	Nest location	Food
American goldfinch	Tall herbaceous plants, late summer food	Wide variety of habitats with openings in woods	Tree or shrub	Seeds
Black-capped chickadee	Trees for winter viewing	Woodland, open areas with openings in woods	Excavated, often in rotted birch or pine	Insects, berries
Brown thrasher	Thick shrubs, preferably multiples	Wide range of low, thick vegetation	Very low in shrub or bush	Insects, fruits
Cedar waxwing	Loves juniper berries	Wide variety of habitats, generally woods or orchards	In a tree, well out on a horizontal branch	Fruits, insects
Chipping sparrow	Variety of smaller trees, larger shrubs	Open woodland, woodland edge, clearings	Dense conifers, shrubs, or vines	Insects, seeds
Common nighthawk	None, just needs open space	Open areas, clearings, gravel pits	On ground, no materials used	Insects
Eastern kingbird	Slightly scattered mature trees	Open areas with scattered trees, forest edge	Toward end of horizontal branch, often over water	Insects, fruits
Eastern screech owl	Mid-sized to tall trees for perching, nesting	Woodlots, forests, orchards	Natural cavity or nest box	Rodents
Gray catbird	Thick, shrub rows, groups	Wide range of low thick vegetation	Small tree, shrub, or bush	Fruits, insects
Great crested flycatcher	Mature trees	Mixed woodland, near clearings, or scattered trees	Natural cavity or woodpecker nest, nest box	Insects, fruits
Hairy woodpecker	Mature trees	Mature woodland, edges, orchards, parks	Tree trunk or large limb, often alive	Insects, fruits
House finch	Tall herbaceous skeletons, fall and winter	Cultivated areas and around buildings	Trees, shrubs, cavities, ledges	Seeds
Indigo bunting	Thickly grown trees, shrub groups, rows	Scrub forest edges and clearings, hedgerows	Shrub, low bush, sapling, vine tangle	Insects, seeds
Killdeer	Grasses for cover adjacent to nest site	Lawns, roadsides, cemeteries	On ground, no materials used	Insects
Mourning dove	Trees or taller shrubs	Usually scrubby thicket or vine tangle	Loose nest on branches	Seeds
Northern junco	Herbaceous skeletons, mixed woods in winter	Coniferous, mixed forest and forest edge	Under weeds or grasses, often on slopes	Insects, spiders, seeds
Northern oriole	Loves nesting in mature American elms	Open woods, shade trees, wooded residential areas	Twig fork at the end of deciduous tree branch	Insects, fruit, nectar
Rose-breasted grosbeak	Mix of tree types	Shrubby growth by streams and woodland	Shrub or small tree	Insects, fruits, seeds
Ruby-throated hummingbird	Tubular flowers	Wide variety of wooded habitats	Tree or shrub on downward-sloping branch	Nectar, insects
Scarlet tanager	Most common in mixed pine and oak	Deciduous, coniferous woodlands	Well out on a limb of a tree, commonly oak	Insects
Song sparrow	Thickets with undergrowth	Variety of low shrubby habitats, mostly moist	Under tuft of grass or in weed clump	Insects, berries
Tree swallow	Open habitat plants, such as prairies	Open woodland, farmland relatively near water	Cavities: natural, woodpecker, nest boxes	Insects, berries
White-breasted nuthatch	Mature trees	Deciduous woodland, orchards, park-like settings	Cavities: natural, woodpecker	Insects, berries occasionally
Yellow-bellied sapsucker	Thin-barked trees, especially birch, mountain ash	Somewhat dense stands of trees	Excavated hole in tree trunk	Insects, some sap

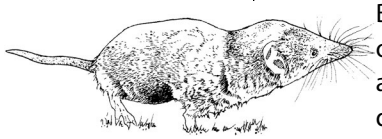
Mammals

Seventy-one mammal species are found in Wisconsin, ranging from some of the larger species like black bear (*Ursus americanus*), white-tailed deer (*Odocoileus virginianus*), and elk (*Cervus canadensis*) to small mammals like the rodents (Order Rodentia), bats (Order Chriroptera), and shrews (Family Soricidae). In terms of number of individuals, the small mammals far outnumber the larger mammals because small mammals are the base of the food web.



In suburban areas where yard size is relatively small and the habitat is fragmented and somewhat isolated, your management objectives must be realistic. With the exception of white-tailed deer, most mammals in urbanized areas are medium to small in size:

- Medium-sized mammals include coyote (*Canis latrans*), red fox (*Vulpes vulpes*), and raccoon (*Procyon lotor*).
- Small mammals include the northern short-tailed shrew (*Blarina brevicauda*), eastern chipmunk (*Tamias striatus)*, and gray squirrel (*Sciurus carolinensis*).



Because of the way development occurs, wildlife habitat in urban areas are fragmented and edge habitat dominates. Edge is defined as an area where two or more different vegetation types meet or two or more age classes of vegetation meet. One example of an edge is where a forested area meets a grassy area. Many wildlife species that do well in urban areas thrive in areas abundant with edge habitat because it is rich in cover types and food resources. These wildlife species are termed "habitat generalists" because they can range across varying habitat types and utilize a wide variety of food. If you are interested in managing for or attracting a diversity of wildlife, creating, enhancing, and maintaining edge habitat is a good management choice because of the habitat diversity provided.

Building brush piles, leaving snags (a dead or dying tree) standing, and reducing the amount of turf in your yard are additional habitat management practices that benefit mammals and other wildlife.

Brush piles

Brush piles are just as they sound—a pile of brush. They benefit wildlife primarily by providing cover for smaller mammals, birds, and reptiles. Wildlife that utilize brush piles may also attract raptors and other predators because of the food source they provide.

There is a method to creating a functional brush pile:

- Build a base from logs or stones before piling brush on the top to provide different size spaces, which allows a greater diversity of wildlife to use the brush pile.
- Place brush piles in areas of your yard that lack suitable cover. However, be aware that many municipalities have zoning laws that govern aesthetics, so you may need to locate brush piles in your backyard or other areas of the yard not easily visible to the public.

Snags

Leaving snags in the landscape may be the single best habitat management practice for wildlife. **Snags**, or standing, dead trees, are used by dozens of wildlife species for their cover and shelter. As a snag decays it attracts insects, which in turn attract wildlife species that eat insects. In urbanized areas, leaving snags standing can endanger people, pets, and property should they fall. If you decide to leave a snag(s) on your property, contact a certified arborist and ask the arborist to top the tree at a height that, should it fall, would not harm anything of value.

Reducing turf

Regularly mowed turf is too short to provide ample cover to wildlife, and with the exception of the Northern flicker (*Colaptes auratus*) and the American robin (*Turdus migratorius*), provides no food for wildlife. To the extent possible, replace your turf with vegetation that is more beneficial to wildlife.

Another approach, if your community's zoning laws allow it, is to stop mowing your turf, letting it grow to a height that provides cover and food. If you choose this option be sure to manage any noxious weeds and invasive plants.

Specific species

Bats

All of our Wisconsin bats have egg-shaped, furry bodies, large ears to aid in echolocation, fragile leathery wings, and small, short legs and feet. Our bats are insectivores and are the primary predator of insects that fly at night, such as mosquitoes, beetles, moths, and June beetles.

Wisconsin bats are classified as either cave-dwelling or tree-dwelling; cave dwellers hibernate over the winter in Wisconsin while tree dwellers migrate south into warmer climates.

- There are four cave-dwelling bat species: the big brown bat (*Eptesicus fuscus*), little brown bat (*Myotis lucifugus*), northern myotis (*Myotis septentrionalis*), and eastern pipistrelle (*Perimyotis subflavus*).
- The migratory, tree-dwelling species include the eastern red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), and silver-haired bat (*Lasionycteris noctivagans*).

The year-round resident bats are classified as threatened species in the state because of white-nose syndrome, a disease that has killed millions of bats. The migratory bats are classified as species of special concern.

Management practices that benefit bats include reducing or eliminating pesticide use and installing a bat house on your property. For more information about Wisconsin bats, white-nose syndrome, and bat house design, construction, and installation, visit the Wisconsin Bat Program website (wiatri.net).

Flying squirrels

Wisconsin is home to two species of flying squirrels. The southern flying squirrel (*Glaucomys volans*) is the more common of the two, with the northern flying squirrel (*Glaucomys sabrinus*) concentrated in only the northern portion of the state. Flying squirrels are squirrel-like in appearance—although smaller than gray squirrels—and have broad, flat tails that help them steer as they glide through the air.

Flying squirrels inhabit mature forested areas, are nocturnal, and are cavity nesters. They are not true fliers as their name would suggest, but instead have loose folds of skin attached between their body and front and hind legs that allows them to glide through the air as they leap from elevated perches.

Management practices that benefit flying squirrels include creating and maintaining mature forested areas with natural cavities. If natural cavities are not present, flying squirrels will occupy nest boxes.

Reptiles and amphibians

Reptiles and amphibians make up a significant portion of the natural biomass. Collectively, reptiles and amphibians are referred to as "herps" or "**herptiles**." Herptiles are cold-blooded, unlike birds and mammals, which means they take on the temperature of their surroundings. They are hot when their environment is hot and cold when their environment is cold. As a result of Wisconsin's cold and sustained winters, herptile diversity is quite limited, and the herptiles that are found in the state are inactive from about October to April.

Reasons why you might want to attract herptiles:

- Herptiles add to the overall wildlife species diversity.
- They play a significant role in many aquatic and terrestrial food chains, serving as both predators and prey.
- They consume large quantities of insects and small vertebrates.
- Frogs and salamanders are indicators of local environmental conditions.
- A frog or toad is often a child's first encounter with nature, and their calls are pleasing to listen to in the spring and summer.

Reptiles

There are 37 reptile species in Wisconsin, including 22 snakes, 11 turtles, and four lizards. Reptiles have scales rather than hair or feathers covering their bodies, which helps with water conservation. As a result, many reptiles do well in dry environments. Most reptiles lay shelled eggs and exhibit little parental care. A young reptile develops in the egg and hatches as a miniature version of an adult. Some Wisconsin snakes—namely rattlesnakes and garter snakes—give birth to live young, but that occurs after the young developed within eggs that were retained in the female's body.

Most snake species eat insects and rodents, so they serve a beneficial role in your landscape. Snakes wander through or live in almost any environment during the growing season. In general, most Wisconsin snakes and lizards prefer little to no tree canopy, but they do like ground cover. Ground cover offers hiding places from predators and for hunting, and allows reptiles greater opportunities to regulate their body temperature.

To attract larger numbers of these beneficial species, you may need to create winter hibernation areas for them and areas for them to safely sun themselves (brush and rock piles, log piles) during the spring, summer, and fall. Creating such areas and increasing your (and maybe your neighbor's) tolerance of having snakes around will reward you with more snake sightings and potentially more species.

Attracting turtles to your property depends on whether you live near a body of water and whether or not your property currently possesses suitable nesting habitat. Wetlands, ponds, or lakes will likely attract painted turtles, snapping turtles, stinkpots (musk turtles), and, occasionally, Blanding's turtles.

Monitoring nesting habitats during the nesting season to frighten away potential nest predators (like raccoons and opossums) can be beneficial. You can help protect the nest from these predators by placing a wire mesh material (openings of 3 inches or slightly larger) over the nest area and burying it several inches on each side. This will prevent predators from getting into the nest, but the openings are large enough so that the hatchlings can exit the area once they emerge.

Another way to benefit turtles is by not mowing up to the bank of the wetland or water body. You can also add several large, sturdy logs in the water perpendicular to the shoreline to act as basking sites for turtles. Protecting egg-laying sites is very important, but adding larger water features is probably the only way to significantly increase your chances of viewing of them.

Common garter snake

The common garter snake (*Thamnophis sirtalis*) is Wisconsin's most abundant snake. These snakes are found in every county of the state and in most habitat types, although they prefer forest and woodlot edges. They are dark in coloration with yellow stripes on the side and a light stripe running down the back. Common garter snakes are typically 17 to 26 inches long, and the females are usually much larger than the males.

Their diet includes frogs, toads, salamanders, fish, earthworms and other invertebrates, and occasionally young mice and young birds. They can sometimes be found communally "denning" in very large numbers.

Painted turtle

Wisconsin has two subspecies of painted turtles—the western (*Chrysemys picta bellii*) and the midland (*Chrysemys picta marginata*)—that can be found throughout much of the state. Painted turtles have a relatively flat, smooth carpace (top shell). The plastron (bottom shell) is usually light orange to reddish in color.

Although not a necessary part of their life cycle, most turtle species readily use water bodies, preferring marshes, ponds, and shallow bays of lakes and rivers that support dense aquatic vegetation. A painted turtle's diet includes aquatic plants, snails, crayfish, insects, and small fish. They spend a great deal of time basking on logs and rocks to warm themselves, speed up egg development, and digest food.

Amphibians

Wisconsin is home to 19 amphibian species (11 frogs, one toad, and seven salamanders). Amphibians differ from reptiles in that they lack the protective covering of scales that are

so useful to reptiles. Amphibian skin is thin and generally moist—thus water is a key element in an amphibian life cycle. In fact the name amphibian means "on both sides" or two lives, referring to the fact that most species have both a terrestrial and an aquatic phase in their life cycle.

Most species of amphibians lay numerous eggs in the water in gelatinous strands or masses. The eggs hatch into a larval stage which may or may not look much like the adult. Frog and toad larvae are called **tadpoles** and bear little resemblance to a frog. Salamander larvae look more like a salamander, but have feather-like external gills to breath in the water. In either case, the larvae grow and eventually transform (metamorphosize) into an adult frog, toad, or salamander.

Adults leave the breeding ponds to live in a variety of habitats near, or not so near, water. A leopard frog never strays far from water, but a toad, with much drier skin, may move a long way away to live in a garden, rock wall, wood pile, forest floor, or other home with at least some moisture.

To attract amphibian species, you generally need to provide water or naturally moist habitats. Natural water bodies are usually more effective, but artificial ponds may also attract these species.

- If you want amphibians to thrive in your pond, do not stock it with fish. They will eat adult amphibians, as well as their eggs and larvae.
- If you are constructing a pond or wetland, remember it must be deep enough not to freeze to the bottom, as many amphibians overwinter underwater.

Other species of amphibians, like leopard and chorus frogs, require open grasslands that are not frequently mowed. Natural forest floors with layers of leaf litter, moss, and other plant debris that stays moist all year long can harbor salamander populations in excess of 1,000 per acre. Because salamanders spend most of the time under cover to stay moist, and hunt only at night, very few people know that they are even there. The frog species, along with the American toad, form nature's nighttime spring chorale, so it is easy to know that they are nearby—although actually seeing them is much more difficult.

Amphibians, due to their semi-permeable skin and dependence on water, make excellent environmental barometers for pollution, UV radiation, and other problems. Because they rely on clean water for egg laying and for their larvae to develop, they are usually the first species to manifest environmental problems as decreased populations.

Eastern gray treefrog

The eastern gray treefrog (*Hyla versicolor*) can vary its background color from gray to green with blackish mottling, depending on the temperature and the surface it is on. Eastern gray treefrogs have a white spot below their eyes and bright yellow inner thigh markings. Their toe pads are pronounced and serve as suction cups to cling to various surfaces.

They are commonly observed on windows at night, especially if outdoor lighting is attracting insects. Eastern gray treefrogs prefer forests and woodlots and breed in semi-permanent wetlands. They breed from May through mid-July and their call sounds like a short, loud trill lasting up to 30 seconds.

American toad

The eastern American toad (*Anaxyrus americanus*) is Wisconsin's only toad species. It can easily be identified by its dry rough skin and the large paratoid glands located behind the eyes. Its background color can vary from brown to reddish to olive with scattered black spots. Toads have thick skin, which helps retain body fluids better than most amphibians and allows toads to be less dependent on water than most frogs.

Toads can be found in a variety of habitats where there are insects and shallow waters for breeding. They are also adapted to urban settings, where they persist in gardens and parks. They breed from April through June, and their call is a musical trill lasting up to 30 seconds. Each individual male toad has a slightly different pitch to its call. Unique to Wisconsin's amphibians, toads lay their eggs in long strands.

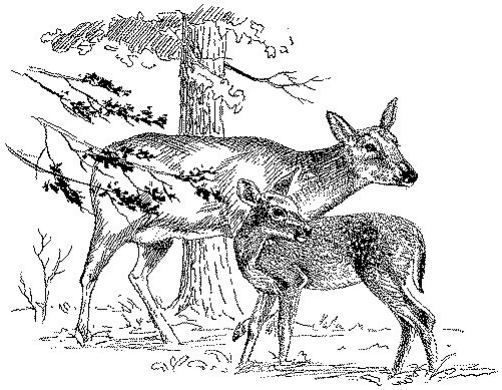
Keep wildlife wild

Spring is an exciting time for wildlife in Wisconsin. It is also the time of year when wildlife are having their young. There are a number of considerations to keep in mind should you encounter baby animals:

- The vast majority of baby animals encountered in the wild are NOT orphaned or abandoned. Their parent is usually hidden nearby or will return shortly.
- It is common for wild animal parents to leave their babies unattended for periods of time while they gather food.
- For some species, leaving babies hidden and unattended is an adaptation to protect them from predators.

Here are a few examples of the habits of common wildlife species you may encounter:

- Eastern cottontail rabbits only feed their young at dawn and dusk, so the mother will very rarely be at the nest during the day. A rabbit nest is a small depression in the ground, lined with grass or fur. Young rabbits grow quickly and will leave the nest within two to three weeks. A small rabbit seen outside of a nest with its eyes open and ears standing up is most likely on its own.
- White-tailed deer fawns will move very little their first few weeks, relying on their nearly scentless condition and spots for camouflage. During this time the mother is not in constant contact with the fawn but will return frequently to nurse. By staying away, the mother may also be diverting a predator's attention away from the fawn. Fawns can walk shortly after birth but won't begin to follow their mother until about one month of age. A fawn lying still, quiet, and by itself should be left alone.



- Raccoons and squirrels use trees to nest in. Squirrels will use tree cavities or build a nest out of leaves. A raccoon will also nest in tree cavities as well as caves, brush piles, rock crevices, and buildings. Baby raccoons become more mobile as they grow and open their eyes. They are often seen playing in trees or yards during the day without their mother. The mother is nearby, but will maintain her mostly nocturnal behavior and only be seen toward nightfall. Mothers of both species will retrieve their young when they fall out or wander away from the nest.
- Songbird **nestlings**, which lack feathers and are covered with down, may fall out of the nest. If the nest is easily accessible, place the bird back in its nest. Birds have a poor sense of smell—minimal handling will not cause the adults to abandon it. When the birds are **fledglings** they are fully feathered but not yet expert fliers. They may leave the nest and hop along branches or the ground. If you see a bird in this state, it's fine—adult birds will continue to care for it.

In addition to being familiar with the basic ecology of the various wildlife species, here are other ways you can help wildlife and protect young animals:

- Check for nests before cutting down trees, removing brush, or mowing.
- Keep pets indoors or on a leash to prevent injury to wildlife.
- Place caps on chimneys and vents to prevent animals such as raccoons from nesting there.
- Educate children to respect wild animals and not harass or catch them.
- Slow down when driving and keep your eyes open for wildlife, especially at dawn and dusk.
- Place covers on window wells so small animals do not get trapped or try to nest there. Seal off spaces under decks or buildings and in attics, garages, or other buildings so wild animals cannot make nests.
- Make potential food items inaccessible to wild animals, including pet food and garbage.

Be careful trapping and relocating adult wild animals during warmer months. You may unknowingly separate a wild animal adult from its babies.

In some cases, you may determine that an animal is injured, sick, or truly orphaned. In these situations, the first thing to do is call a licensed wildlife rehabilitator or the DNR's Call Center. Wildlife rehabilitators are licensed individuals trained and equipped to provide temporary care and treatment to injured, sick, and orphaned wild animals for the purpose of releasing them back into the wild. Contact a wildlife rehabilitator immediately if:

- The animal's parent is dead or no longer in the area (trapped and relocated).
- The animal has been attacked by a predator (dog, cat, other wild animal).
- The animal is bleeding and appears injured (bruises, punctures, cuts, broken bones).
- The animal is emaciated, very weak, cold, or soaking wet.
- The animal has diarrhea.
- There are flies, fly eggs, maggots, or many ticks, lice, or fleas on the animal.
- The animal is in a dangerous location (busy street, parking lot).

NEVER attempt to rehabilitate wildlife on your own. Wild animals can carry diseases that can be transmitted to humans and pets. They are also capable of inflicting injury to themselves or others as they fight to defend themselves against a perceived threat (humans or pets). They also have very specific dietary and housing requirements that are not easily met in captivity.

Note: Rehabilitating wildlife without a license is against the law in Wisconsin. For more information on how to keep wildlife wild, visit the DNR's Keep Wildlife Wild web page.

Wildlife management plans

To create or enhance wildlife habitat on your property, develop a written management plan. The plan doesn't need to be detailed or complicated, but it will help you efficiently and logically budget and plan as you landscape your property. If you are collaborating with neighbors, work together to develop a coordinated management plan.

A wildlife management plan usually consists of four parts:

- Deciding your management objectives.
- Assessing your existing habitat.
- Creating or enhancing your habitat.
- Determining if you were successful.

1 The first step is deciding on your management objectives. Your objectives should be meaningful to you, and can range from managing for a single species to managing for biodiversity. Even if you manage for a single species, a host of other species will benefit directly and indirectly. Regardless, it is important to quantifiably define your objectives. For example, if you want to attract southern flying squirrels *(Glaucomys volans*), you may write your objective as "I want two flying squirrels on my property." Quantifying your management objective(s) makes it easier to determine if you have satisfied your management goals. Your management objectives might stay the same over time or they may change as you satisfy them.

2 The next step in your management plan is to assess existing habitat on your property and determine what components of habitat are present or missing based on the species you are planning for. You might want to walk around your yard and list existing vegetation on a sheet of paper or sketch a map of your yard that locates and identifies all existing vegetation. With a map you can display the location and proximity of the habitat components to one another, identify the location of underground utilities, and better understand your property's boundaries.

3 The third step in the management plan is perhaps the most fun—this is where you implement your management plan by creating or enhancing wildlife habitat in your yard. This may mean planting vegetation, erecting bird feeders and nest boxes, or installing a landscape pond.

One thing to think about is creating a budget and timeline for landscaping your property. This will allow you to implement your plan in stages, which can alleviate pressure on your household budget and the feeling of having to accomplish too much too soon.

Another consideration is using native vegetation as much as possible, as native plants are generally adapted to the growing conditions and climate of Wisconsin and more likely to endure our sustained winters. Make sure to include plants that provide food and shelter in all four seasons. Wildlife most needs food resources during the late winter and early spring, before most vegetation begins producing food and when our year-round resident, hibernating, and returning migratory species have exhausted their energy reserves, so include plants that produce buds, fruit, or other food resources at that time. Evergreen trees and shrubs are good plants to have in your yard because they don't lose their needles and provide shelter during the winter for many species of wildlife.

4 The final step is to evaluate your plan to see if you have accomplished your management objective(s). If you wanted to attract two flying squirrels to your property, for example, periodically monitor your property to see if at least two flying squirrels are using it. If yes, then you've accomplished your management objective. If no, then consider why not. Perhaps you are looking for flying squirrels during the day, when the animals—which are nocturnal—are inactive. Perhaps there's a critical component of a flying squirrel's habitat is lacking. Perhaps there are no flying squirrels in your neighborhood!

Wildlife damage management

With animal problems, the old adage "an ounce of prevention is worth a pound of cure" rings very true. Further, animal problems become increasingly difficult to solve once animals have established a strong behavioral pattern in the way they use a food source, nest site, or shelter.

Be aware that activities that encourage wildlife, such as feeding during the winter, may have unintended consequences at other times of the year—animals that are used to handouts will probably remain in the area and could then cause damage to growing plants or structures. Consider these human–wildlife interactions:

- The challenges of gardening in the face of deer, rabbits, or raccoons.
- The aggravation caused by a woodpecker on the exterior walls of your home, moles in your lawn, squirrels or bats in your attic, or mice in your kitchen cupboards.
- The serious economic damage deer, Canada geese, bears, and other wildlife cause to farm crops, nurseries, and orchards.

The list could go on, but the message is clear. Abundant wildlife can be a double-edged sword. The good news is that armed with good information and a willingness to act, you can solve most common wildlife problems.

Take stock of the problem

When facing any damage or nuisance problem that involves wildlife, consider the following steps to improve your chances of successful problem resolution, keep you out of trouble with neighbors or the law, and save both effort and money.

Understand the wildlife laws

Find out what you can and cannot do in terms of harassing, relocating, or killing any wild animal. A very few species such as rats and mice, a few other small mammals, and several birds (pigeons, starlings, and house sparrows) are unprotected under wildlife law. The vast majority of animals—especially birds—are protected by state or federal law (or both).

Although some special provisions allow homeowners, gardeners, farmers, and landowners to control several otherwise protected species (squirrels, raccoons, fox, rabbits, woodchucks, and blackbirds) when they are causing problems, you will not be able to capture or kill some species no matter how serious the problem. Permits, licenses, or other forms of permission may be required, and even then, some actions, such as the use of poisons on certain species, are strictly prohibited. Laws vary from state to state and even within some municipalities (firearm use, for example). If you have any doubts about whether what you plan to do is legal, check first with your local DNR conservation officer or a USDA wildlife services office.

Identify the culprit

Knowing what you're dealing with is essential for successful control. First, you must be able to determine the identity of the animal causing the problem. You may see a deer in your orchard or rabbits in the garden, but often you only discover the damage—a hole, missing produce, damaged landscape plants—when no animal is present. In such cases you must do a little detective work to examine tooth marks, tracks, hairs, droppings, or other signs to determine the culprit. If you don't, you risk applying a control technique inappropriate for the situation or animal. Choose one of the many good field guides or online resources to help identify the animal or consult with an expert.

Once you know the identity of the animal involved, learn enough about the animal—when they're active, what they eat, how abundant they may be, etc.—to help you select appropriate bait for a trap, determine proper trap placement, and know the best time to set traps out. All these things will maximize your chances for success.

Be sensitive to others

People have a wide range of emotions when it comes to wildlife. A serious problem for you may be a delight for your neighbors, or vice versa. The "bunnies" your neighbor's children feed and know by name may mean the demise of your prized spring flowers. On a larger scale, the deer devastating your orchard by night may spend the day in the woodlot your neighbor manages for deer hunting. In either example, hasty control measures could lead to some serious relationship problems.

Basic techniques of wildlife damage management

Wildlife damage management is very different from weed or insect management—few chemical pesticides are available for animal control. "Success" may be reducing the problem to a level you can tolerate. Completely eliminating the population of a given animal is rarely possible—and generally not desirable.

Exclusion

Exclusion techniques are designed to keep an animal from getting to the site of the damage or problem.

- Examples: a garden fence, a chimney cap, a wire or wooden skirt around a deck, a plastic mesh net over fruit trees and berry bushes.

Removal

You can remove an animal from the affected area either by capturing (live trap, net, hand capture) and relocating it or by killing it (usually a last resort).

- Caution: moving live animals is complicated and controversial. You cannot release unwanted animals on public or private property without permission of the land manager or owner. Further, moving problem animals may create problems for someone else, spread disease or parasites, and stress and possible injure the captured animal or other animals at the release site.

Repellents

Repellents use olfactory (smell) or taste-based substances to prevent animals from gaining entry or doing damage.

- Examples: moth balls (naphthalene) in an attic, pepper sprays on landscape plants, commercial repellents sprayed on garden plants.

Scare tactics

One common technique is to frighten the animal away from the site of the damage.

- Examples: noise makers, owl decoys, mylar or plastic streamers.

Habitat modification

Eliminating a key component of the pest animal's habitat can make the area less attractive.

- Examples: remove brush piles that harbor rabbits, mow long grass used by meadow mice (voles), eliminate nest/roost sites in buildings used by pigeons or sparrows.

Cultural changes

Change the way you garden or the cultivars you select to avoid potential damage.

- Example: rabbits cause overwinter damage to raspberry canes. By switching to a fall bearing variety that bears fruit on first-year canes, overwinter rabbit damage becomes irrelevant.

Randomness and diversity

Wildlife are creatures of habit and often have the same routine day after day. The more you can upset an animal's daily routine, the less likely an animal will stay in the area. You can prevent animals from feeling safe on your property by randomly employing management methods.

- Example: don't always use scare tactics at the same time of the day and in the same location. Instead, randomly change how, when, and where scare tactics are used.

Using more than one management method (diversifying your management approach), especially when using non-lethal tools such as scare tactics, will increase your chance for success in resolving a wildlife damage problem.

- Example: combine a scare tactic using noise with a visual scare tactic or rotate through different scented repellents to keep them unfamiliar with what they smell.

Increased tolerance

Rethink the situation. The benefits provided by the animal in question may be worth the trouble or damage. Strive for "peaceful coexistence" with the wildlife that shares your space.

For more information

Resources for wildlife identification, control, and removal

UW–Madison Division of Extension
Division of Extension provides a wealth of information through county educators, state specialists, and a wide variety of publications on wildlife management.

USDA-Wildlife Services
This federal agency is responsible for most agricultural or commercial wildlife damage situations in Wisconsin. Wildlife Services field staff administer the Wisconsin Wildlife Damage Abatement and Claims Program. Wildlife Services has a state office in Sun Prairie and district offices in Rhinelander and Waupun. The district offices maintain animal damage hotlines during normal business hours to offer advice on wildlife damage problems.

Wisconsin Department of Natural Resources
Local DNR offices and service centers can provide information on program participation, and local wildlife managers are familiar with wildlife identification, population status, and local issues. DNR conservation offices are the authority when it comes to the legality of any proposed control action.

Private contractors
National pest control firms offer limited assistance with wildlife problems. Local companies and individuals with expertise in trapping and wildlife may remove problem animals. The Wisconsin Trappers' Association (WTA) maintains a Nuisance Wild Animal Removal Referral List on their website. The list contains contact information for members who offer wildlife control services.

Management of select species

Many wildlife species can cause damage to gardens, turf, and landscapes. When responding to wildlife damage:

- Refer to appropriate resources and stick with tried-and-true techniques, such as fencing, and an integrated approach, which outperforms gadgets and gimmicks. Remember that creativity and persistence are important to success.
- If you decide to use pesticides of any kind, be sure to read and follow the product label. You have an obligation to be familiar with the proper use of pesticides and the risks they may pose to members of the public, to wildlife, and to the environment.

White-tailed deer

Deer are found everywhere in Wisconsin, from rural areas to urban backyards, and they can cause a variety of damage.

- Most damage is in the form of browse damage to crops and landscaping—deer feeding damage on woody stems appears as frayed ends, as opposed to the smooth cuts caused by rabbit feeding.
- Deer will feed on almost any kind of vegetation, but favor plants in the rose family (such as serviceberry, apples, and other fruit trees) and many evergreens, especially cedar, arborvitae, yew, and white pine. In the spring, damage can be extensive to emerging perennials and tulips.
- Buck rubs can also cause damage to small (less than 6-inch diameter trunk) smooth-barked trees, including green ash, plum, maple, and some evergreens.

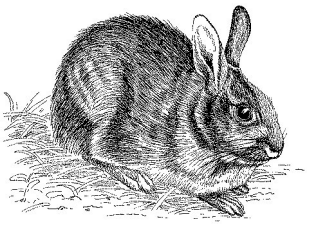
Use portable and temporary fencing (such as electric fencing) or permanent fencing (like 8-foot high tensile woven wire) to reduce or eliminate deer damage. Select from a variety of commercial deer repellents to reduce browse damage to vegetation or grow deer-resistant plants. Note that plants listed as deer-resistant are not necessarily deer-proof. Various visual and audio harassment devices may provide some relief from deer damage.

Rabbits

Although snowshoe hares (*Lepus americanus*), white-tailed jackrabbits (*Lepus townsendii*), and eastern cottontail rabbits (*Sylvilagus floridanus*) all call Wisconsin home, the eastern cottontail causes most of the damage, especially around residential areas.

- Rabbit damage primarily occurs in vegetable patches and ornamental gardens. Rabbit-chewed plants are cut off cleanly and small, round droppings are usually found nearby.
- In the winter, rabbits strip bark and young shoots from young evergreens and deciduous trees and shrubs.
- In the summer, rabbits feed on succulent green vegetation, including tender vegetables, annuals, and perennials.

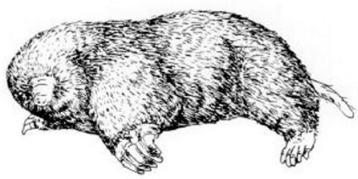
One effective and easy management tool is using non-plastic fencing to keep rabbits out of garden areas. Eliminating brush piles and other hiding spots may reduce the number of rabbits in your garden. A number of commercial rabbit repellents are available to prevent damage to vegetation. Wrapping young tree trunks with wire mesh or other guards in winter will protect against bark damage. Make sure the guards are at least 18 inches higher than the average winter snow line. Trapping and shooting, where legal and safe, provide additional options.



Moles

Two species of moles are found in Wisconsin: the common, eastern, or prairie mole (*Scalopus aquaticus*) and the star-nosed mole (*Condylura cristata*). Both are 7 to 8 inches long and have large claws for digging and sharp teeth.

- Moles are insectivores; they eat insects, grubs, and worms and rarely feed on plants.
- Although rarely seen, moles cause problems by creating raised tunnels and mounds of soil in lawns and gardens.



Trapping is an effective method of controlling moles. Choker- and harpoon-type traps are typically set along a recently used raised tunnel. Poisons are not very effective

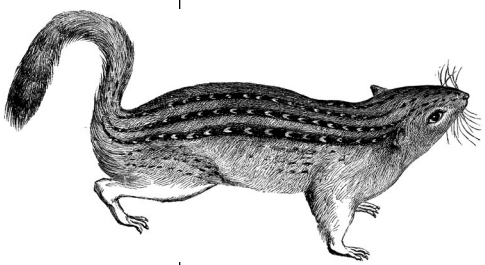
because it is difficult to get moles to eat the bait. Castor oil-based repellents have been shown to be effective. Controlling large grub populations will reduce the mole's food source and make the area less attractive, although the pesticides that kill grubs may also kill beneficial organisms.

Chipmunks and thirteen-lined ground squirrels

Wisconsin is home to two species of chipmunk: the eastern chipmunk (*Tamias striatus*), which is present statewide, and the least chipmunk (*Tamias minimus*), whose range is the northern two-thirds of state. Chipmunks and ground squirrels (*Ictidomys tridecemlineatus*) tend to cause problems by digging up plants in containers, feeding on plants, pulling up bulbs, and tunneling in rock retaining walls, causing them to shift. Ground squirrels will also feed on vegetables, particularly biting into tomatoes, squash, and pumpkins.

One of the most effective management practices is to trap chipmunks using peanut butter or seeds as bait. To keep chipmunks out of rock walls or other areas where they are not wanted, use wire mesh with a mesh size no larger than 3 inches, caulking, or some other type of exclusionary device. Eliminating attractive food sources such as bird seed and sources of cover (such as wood piles) may reduce the number of chipmunks you have around your home.

Because thirteen-lined ground squirrels are so good at digging and climbing, excluding them from areas may not be practical or cost-effective. Try using traps baited with peanut butter to eliminate ground squirrels around homes and gardens.



Birds

A host of bird species can cause a variety of problems in rural and urban areas statewide. Keep birds off of fruits and vegetables with mesh netting. Overhead grids made from wire, fishing line, and other materials can deter geese and other types of waterfowl from open water bodies, and mesh netting strung over small ponds can prevent birds from getting in. Assorted audio, visual, and audio-visual harassment devices are available to reduce or eliminate bird presence, but birds can become accustomed to these. Commercial repellents are also an option.

Conclusion

Creating, enhancing, and managing the habitat in your yard to attract and benefit wildlife is a very rewarding effort. You will be amazed at how much wildlife co-exists with us in a human-dominated landscape. However, there is a balance between attracting wildlife and managing wildlife in a damage situation. By applying integrated pest management practices and understanding the needs and behaviors of the wildlife in question, that balance can be struck and all can co-habitate together.

Resources

Wisconsin Horticulture publications are available at hort.extension.wisc.edu.

FAQs

How do I get rid of whatever is eating my plants?

First identify the pest. Look for signs specific to various animals, such as the neatly angled pruning by rabbits, or hoof prints left by deer. A motion-activated trail camera is helpful. Animals are attracted to a food source. Try repellents or live trap smaller critters to remove them. The best way to protect your plants is with fencing or other barriers (although it doesn't always work).

Does hanging a bar of soap or human hair work as a deterrent?

Sometimes. There is some evidence that these things will repel some wildlife. But over time, many animals will become accustomed to it, so you may have to change the repellant or try another approach.

What can I plant that's deer-proof?

Nothing is totally deer-proof if a deer is hungry or has developed a taste for something. See the Division of Extension publication *Plants Not Favored by Deer* (A3727) for a list of good options.

How do I take care of the critter I rescued from my yard?

Some live trapped critters can be released into an area with more habitat. Contact your local DNR wildlife specialist for details and information about local laws. Also contact them about sick or injured animals, but do not keep them as pets.

Wildlife, practice exam questions

1. **An effective non-chemical technique to control ground squirrels in a vegetable garden is:**
   a. Use a repellent on the perimeter of the garden
   b. Apply a rodenticide to the area
   c. Bait a large snap-trap with peanut butter
   d. Use a fumigant in a burrow
2. **Randomness and diversity with wildlife control techniques are important because:**
   a. It aids in an animal establishing a feeding routine
   b. It is illegal to control some animals by lethal means
   c. It prevents the animals from becoming habituated with the control technique
   d. Blowing loud horns at night will make you popular with your neighbors
3. **An example of non-lethal, proactive management as it pertains to wildlife control in in the backyard:**
   a. Spraying a fumigant to suffocate the pest
   b. Placing baited traps in the flower beds
   c. Constructing a fence around the garden
   d. Deer hunting
4. **Which of the following is not a sign of animals in a garden?**
   a. Bite marks on stems
   b. Wilted leaves
   c. Fecal droppings
   d. Tracks
5. **An example of a habitat modification technique to manage rabbits in a community garden:**
   a. Live trapping and relocating to a farm field
   b. Mowing weeds and tall grass on the perimeter of the garden
   c. Planting marigolds in between your carrots
   d. "Acute lead poisoning"
6. **To manage chipmunks in the garden:**
   a. Use a rat-trap baited with peanut butter
   b. Keep a tight lid on the bird seed containers
   c. Increase your tolerance
   d. All of the above
7. **To manage snake populations in the garden:**
   a. Use an insecticide to reduce the grub population
   b. Install a chicken-wire fence around the garden perimeter
   c. Modify the number of rock and wood piles in the area
   d. All of the above
8. **An issue which may hinder attracting birds to your landscape may be:**
   a. Planting a diverse landscape
   b. Installing a bird bath
   c. Living in an urban area
   d. Ensuring appropriate nesting locations are nearby
9. **A sign of deer presence includes:**
   a. Clean cuts on ends of branches
   b. Frayed ends on stems of fruit trees
   c. Ransacked trash bins
   d. Raised mounds and tunnels in lawns and gardens
10. **Regarding laws and wildlife control**
    a. Lethal tactics are always legal on private property
    b. A permit is required for the control of rats and mice
    c. The fines and hassle for illegal control can be substantial
    d. Use of toxicants is always allowed
11. **When live-trapping and relocating animals**
    a. You may release unwanted animals on public property without permission
    b. You may inadvertently spread disease/parasites
    c. The process is stress-free for the animal
    d. All of the above

Answer key
1. (c) 2. (c) 3. (c) 4. (b) 5. (b) 6. (d) 7. (c) 8. (c) 9. (b) 10. (c) 11. (b)