ANIMAL PESTS LIBRARY



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Protecting Your Garden Investment

Identifying Rabbits and Deterring Them in Your Landscape

Innocent eyes, soft furs and billowy tails characterize the many species of rabbits and hares found across North America. But the warm-and-fuzzy pictures painted by what appears to be nature's most gentle wildlife are frequently blurred when the flop-eared rodents – yes, rodents – forage and shred homeowners' prized shrubs, gardens and flowerbeds. In fact, it's been said that it's easier to identify what's not eaten by rabbits than what is.

Cottontails, snowshoes and jackrabbits are the common names for members of the family Leporidae, which includes a number of subspecies. Both hares and rabbits are included in this family of small mammals that are distributed around the world, but "rabbit" is used interchangeably to describe these prolific breeders. Adult males, called bucks, fight one another with their teeth when they court the same females, which are known as does. Both species bear four to eight litters a year, with three to eight young in each litter. On average, 15 percent of the young survive their first year.

North American Rabbits & Hares

Arctic Hare, Tundra Hare, Snowshoe Hare, European Hare, Whitetail Jackrabbit, Antelope Jackrabbit, Blacktail Jackrabbit, Eastern Cottontail, Mountain Cottontail, New England Cottontail, Desert Cottontail, Brush Rabbit, Marsh Rabbit, Swamp Rabbit, Pygmy Rabbit.

Because of their high productivity rate, rabbits are an important link in the food chain and are principle prey for many species. It is also a popular game species throughout its range. Rabbits of all species live about 10 years. They weigh from about 2 pounds to 13 pounds and attain a length of about 12 to 28 inches. They prefer to live in regions where the soil is loose and dry, and where brushwood offers shelter. Rabbits are valued as game by hunters, as food and for their fur, but they often are pests to farmers whose trees and crops they destroy.



Eastern Cottontail

The primary wild rabbit of North America is the cottontail, of the genus Sylvilagus, and of which there are two species – the New England or Appalachian cottontail, and the eastern cottontail. Its name is derived from the white undersurface of its short tail, which resembles a puff of cotton. The cottontail is noted for remaining motionless to avoid notice when it senses danger. The rabbit, which swims and includes among its cousins the so-called "cane-brake", "marsh" or "swamp" rabbit of the Southern wetlands, also evades enemies by plunging into lakes or streams.

Combined, the cottontails range east of the Rocky Mountains from southern Canada south to eastern Mexico and points south. Another population is found in Texas, New Mexico and Arizona. The eastern cottontail is more abundant and is expanding its range, while the New England cottontail's range is diminishing.

The cottontail rabbit is a somewhat stocky animal with large hind feet, long ears, and a short, fluffy tail that resembles a cotton ball. Its long, coarse coat varies in color from reddish-brown to a black or grayish-brown. The underparts are white. The New England cottontail and the eastern cottontail are almost identical in appearance, except for a slight variation in color. About half of the eastern cottontail population show a white, star-like shape on the forehead while none of the New England cottontails exhibit this trait.

Cottontails have very keen sight and hearing. When danger is sensed, the animal will usually freeze in place until the danger has passed, but they will flush readily if approached too closely. Rabbits normally move slowly in short hops or jumps, but when frightened they can achieve speeds up to 18 miles per hour over a short distance. They often zig-zag to confuse a pursuing predator.

Cottontails prefer to live and forage among the edges of open fields and meadows, areas of dense high grass, in wood thickets, along fencerows, forest edges and along the borders of marshy areas. Dense forests and thickets attract cottontails at high elevations, especially birch/red maple forests, hemlock and rhododendron areas within oak-hickory forests, blueberries, mountain laurel and coniferous forests. It has been cited, too, that they prefer 6- to 7-year-old clearcuts and old overgrown farmsteads and pockets of heath-conifer habitat.

It is largely nocturnal, active from early evening to late morning. In summer, cottontails feed almost entirely on tender grasses and herbs; crops such as peas, beans, and lettuce are also eaten. In winter, bark, twigs and the buds of shrubs and young trees are eaten.

The varying hare -- Lepus americanus -- known popularly as the snowshoe rabbit, is distributed widely throughout North America, from throughout Canada, extending south along the Rockies and into the southern Appalachian Mountains of Tennessee, but not into the Great Smoky Mountains.

Four subspecies of snowshoes are recognized among a common abundance of animals in good habitat. However, numbers of snowshoes are decreasing in areas of deforestation and increased white-tailed deer populations, which out-compete the snowshoe for many foods both animals prefer. It is a forest species, never far from dense woods including swamps and



Snowshoe Rabbit/Varying Hare

thickets. It is often found in dense second-growth forests of beech, birch, maple and young spruce. Rhododendron and mountain laurel thickets are its habitat in the southern mountains.

Snowshoes are so named because of its large rear feet, the toes of which can spread out to act like snowshoes. Their feet also have fur on the bottom, which protects them from the cold and gives them traction in the snow. During wintertime, the large track prints are conspicuous. The hind foot print is in front of the front foot print.

In summer, the hare's coat is rusty, grayish brown to dark brown in color; however the animal's fur grows in wintertime -- except for a black edging on the ear tips -- lending it camouflage to thwart its predators. The change sometimes occurs in patchwork fashion and generally requires about two months, completed about the same time the ground is covered with lasting snow. In the Coast Range the winter color may change only to a patchwork of brown and white or it may not change at all.

The snowshoe hare is a strict vegetarian. It is usually active at night and in the early morning, when it feeds on juicy green plants and grass in summer, when among its preferred foods include the southern highbush

cranberry. During winter it is dependent mostly on shrubs and trees and is fond of aspen, willow, alder and maple. It eats the bark, twigs and often the needles of conifers, including fir, cedar, hemlock, spruce and



Jackrabbit

Another hare, Lepus californicus, known as the jackrabbit, is found in the western parts of the United States and Canada. Known for its speed, both white-tailed and black-tailed jackrabbits can run up to 45 miles per hour and can bound 15 to 20 feet in a single jump. Because this species competes with grazing animals for food, livestock owners in the western US have undertaken great drives to reduce the hare population, which has been estimated to be as high as 8,000 per square mile. Jackrabbits may carry tularemia, a bacterial disease that can be fatal to humans.

Long ears – as much as 5 inches long -- big feet, long hind legs and brushy tails characterize the jackrabbit. Its fur is typically a dark buffed color or silver that is

peppered with black. A prominent black stripe runs from its rump to the top of its tail. Its distinctive long ears, which are tipped with black, helps keep them cool as blood passes into their ears and is cooled by the breeze before passing into other parts of their bodies. The soles of a jackrabbit's feet are covered with fur. This cushions their feet on hard ground and insulates them from the scorching heat of the desert sand. The jackrabbit's eyes are situated on the sides of its head, giving it all-around vision that enables it to spot danger coming from any direction.

Jackrabbits live in the extreme environments of the desert, high plains and chaparral, where temperatures are hot during the day and cold at night, and there isn't a lot of rain. They can be found on brushlands, prairies, pasturelands and meadows -- open areas where they can see predators coming. An individual jackrabbit ranges across about 10 acres.

Under the cover of darkness – from dusk to dawn – jackrabbits forage with relative security but they always seem to be on their guard. Alert to their surroundings and watchful of potential threats, they rely on their speed to elude predators, and, if they are lucky enough to escape, they will flash the white underside of their tail to alert other jackrabbits in the area.

Jackrabbits are strict vegetarians. During the spring and summer, they feed on clover, alfalfa and other abundant greens. During the lean fall and winter months, they subsist on woody and dried vegetation. They will also eat sagebrush and cacti. Jackrabbits rarely must drink, ingesting most of their water from the plants they eat. Fifteen jackrabbits can eat as much as one full-grown cow in one day. Occasionally, they raid crops and flowerbeds and cause extensive damage.

Jackrabbits are herbivores. They leave their resting spots at dusk to feed on tough grasses, leaves, and twigs. They will also eat sagebrush and cacti. They only come out at night to feed. Fifteen jackrabbits can eat as much as one full-grown cow in one day. Occasionally, they raid crops and cause extensive damage.

Other protective adaptations include keen senses of smell, eyesight, and hearing. And they depend heavily on shrubs such as sagebrush for protective cover. Jackrabbits are the principal prey of golden eagles and are an important food source for coyotes, common ravens, the great horned owl, long-eared owl, barn owl, ferruginous hawk, Swainson's hawk and red-tailed hawk. Humans, too, are a predator of jackrabbit.

Managing rabbit populations is often done with and "educated guess." Because rabbits are greatly nocturnal, humans rarely see them feeding and foraging in both wild and landscaped settings except near dawn or dusk. When not active, rabbits rest in a depression in the ground called a "form." Their home range

can extend to as much as 15 acres, which is covered on generally the same trails every day. All of life's needs are found along their daily trails. Even when running from danger a rabbit will usually stay on its trail, which generally loops around in a wide circle.

Rabbits leave signs of their presence. They include prints and scat (droppings). Rabbit scat changes depending on what the animals have been eating. Usually, they are dark pellets the size of peas, and they are sometimes found in piles.



The presence of rabbits in manmade landscapes is also characterized by damage to garden plants, ornamental flowers and shrubs. Rabbit browsing can be distinguished from deer browsing by the appearance of gnawed older woody growth and clean-cut clippings of young stems. A rabbit will leave a clean, angled cut while a deer will leave a rough, jagged cut. Browsing and debarking by rabbits usually does not extend more than 2 1/2 feet above the ground or snow line.

The presence of rabbits does not always result in damage to personal property. Before implementing a control program, correctly identify the species that caused the damage and compare the time and costs of control to the expected level of damage and economic returns. Many people have tried scarecrows, owl and snake effigies, pinwheels, pie pans spinning in the wind and several other creative devices to frighten rabbits out of gardens and other areas.

Certainly, frightening devices are simple to use, but they cannot be relied on to protect plants from damage because rabbits acclimate very quickly to noise and movement. Excluding rabbits from valuable plants is a long-term solution to costly damage and relatively easy to enforce. A fence of 1-inch mesh chicken wire will keep all rabbits out of a garden or flowerbed. But where rabbits are found, so too are deer a frequent visitor.

When it comes to accessing urban food-scapes, rabbits are, perhaps, more likely than deer to approach homes and manmade landscapes, and are likely to feed on valuable shrubs, trees, vegetables and ornamental flowerbeds. At first glance, rabbit foraging seems like it would be less damaging than the browsing of deer. And while rabbits are frequently lone feeders, over time several feeding rabbits can inflict heavy foraging damage on the plants they can reach.

As a result, rabbit deterrents range wide across the horizon of the imagination. Numerous offensive products – both professionally and personally cooked up to protect ornamental shrubs, trees, flowerbeds and vegetable gardens – are made to attack their tastebuds and their noses. Many temporarily turn rabbits away, but their cleverness eventually results in failed remedies.

Fencing, too, is often tried to prevent rabbits from getting into gardens, and, it is, indeed, a great solution. Rabbit fencing is often attractive and need not be over 2 to 3 feet tall. But rabbits readily dig under fencing unless it's extended below the surface ... as much as 12 inches!

Instead, rabbits must be instilled with the fear of physical harm, which almost always naturally occurs with predators. Indeed, it is only the fear of death that effectively breaks their behavior, whether it's in a yard or in the woods. To turn rabbits away from the foods they want, they must sense an assault upon their security. This is best done by taking advantage of their sense of smell for locating food and survival. Their nose will lead them to return over and over again to areas where food is tasty, abundant and safe to forage. Disrupt their sense of security and you've achieved the primary factor for turning rabbits away from your valuable plants, gardens, shrubs and trees.

Rabbit Scram is your best rabbit repellent because it attacks a rabbit's sense of safety and invokes their defense in fleeing. Blended from selected organic components, Rabbit Scram will keep rabbits off your plantings because, through their sense of smell, Rabbit Scram convinces rabbits that harm is nearby. Rabbit Scram will change rabbit behavior. As they near the applied barrier of Rabbit Scram, rabbits actually alert to a sense of danger – even death! Rabbit Scram's unique scent of death reaches the rabbits and triggers a genetic biological defense mechanism to flee from predators. The association of the fear of death with Rabbit Scram will lead to a profound learning experience for the rabbits and, with proper re-application of Rabbit Scram, the rabbits will not return to the area.

And where trenching and burying your rabbit fencing isn't in your game plan, simply sprinkle Rabbit Scram around the perimeter of the fence in the usual 16-inch barrier strip. Rabbit Scram will STOP the rabbits from digging under the fence!

Rabbit Scram is an all-natural, biodegradable rabbit repellent that guarantees pesky rabbits will stop feeding on your prized gardens, shrubs and trees for 30 to 45 days with a single application. Rabbit Scram is a fully organic, granular, rabbit-control product that contains no harmful chemicals or toxins that could hurt the animals, environment and, most importantly, you or your family.

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