
RACCOONS

Integrated Pest Management Around the Home and Landscape

The raccoon (*Procyon lotor*) is a stocky mammal about 2 to 3 feet long and weighs 10 to 30 pounds (Fig. 1). It is distinctively marked with a black "mask" over the eyes and is heavily furred with alternating light and dark rings around its tail. Raccoons are active year-round but may take cover in dens during periods of severe winter weather.

BIOLOGY AND BEHAVIOR

Raccoons prefer wooded areas near water and in natural habitats. They den in hollow trees, ground burrows, brush piles, or rock crevices. This nocturnal animal adapts extremely well to urban and suburban environments, where it often dens in backyards, beneath decks, or in accessible outbuildings. Attics, chimneys, and the spaces beneath houses are also used as dens if access can be gained. Because they are active mostly at nighttime, raccoons are often present but may go undetected for some time.

Raccoons are omnivorous, eating both plants and animals. Plant foods include all kinds of fruits, berries, nuts, acorns, corn, and other types of grain. Animal foods include crayfish, clams, fish, frogs, snails, insects, turtles, rabbits, muskrats, and the eggs and young of ground-nesting birds, including waterfowl. In urban settings, in addition to feeding on backyard fruits, nuts, and vegetables, they scavenge from garbage cans and compost piles. Pet food left outside overnight ranks high as a food resource and then, of course, some people deliberately provide food for raccoons.

Young are generally born in April or May, but earlier and later litters are not

uncommon. Litter size ranges from three to six young, averaging about four. Family groups usually remain together for the first year; the year-old young begin to assert their independence the following year when the new litter arrives. Because of the availability of food and den sites, urban and suburban raccoon populations can become very large.

DAMAGE

Damage to gardens may be relatively minor compared to the potential damage a raccoon can do to a house. Females in search of nesting sites may rip off shingles, fascia boards, or rooftop ventilators to get into the attic. Once inside the attic, insulation on walls may be torn up and displaced, and insulation on heating and air conditioning ducts may be ripped off and destroyed. Raccoons may begin using an area of the attic for a latrine, and the ceiling beneath may become stained with urine, accompanied by an objectionable odor. Ectoparasites may infest the attic and migrate to other parts of the house. Uncapped chimneys are often used as den sites, as are spaces beneath porches and decks. Doors covering crawl spaces are sometimes damaged in an effort to den beneath the house.

Raccoons are known to carry a number of diseases and internal parasites. The raccoon roundworm, an infection spread to people by the accidental ingestion or inhalation of roundworm eggs from raccoon feces, has caused increased concern in recent years. Roundworm infection can cause serious disabilities, and young children are thought to be most susceptible. Raccoons are also carriers of rabies.



Figure 1. Adult raccoon.

LEGAL STATUS

In California raccoons are classified as furbearers. The fur harvest season is set by the California Department of Fish and Game, which further determines when and how raccoons may be taken. Raccoons causing damage may be taken at any time by legal means. The California Department of Fish and Game Regulations prohibit the relocation of raccoons and other wildlife without written permission of the Department. For further information, contact the Department of Fish and Game.

MANAGEMENT

There are various approaches to resolving raccoon problems. In some communities the situation has become so severe that it is beyond the ability of the individual homeowner to solve the problem. In these instances, a community effort may be the only effective solution. City parks, green belts, golf courses, and highway and street plantings may serve as reservoirs for raccoons by providing them with den sites

and travel routes. Storm drains and street and road culverts are commonly used as dens. Since these areas are under the control or management of the city, it is often imperative that the city be involved in finding solutions. The city can also invoke and enforce a ban on feeding raccoons. The city can also do much to educate the public on the best ways to handle an area-wide urban raccoon problem and discourage individuals from live trapping and relocating animals, which only exacerbates the problem.

Detection

Raccoons in the garden may be observed at night or they may come up to a sliding glass door and peer inside. Evidence of feeding, tracks, and droppings may provide clues to their visits. Of course, noises on the roof, in the chimney, or in the attic let you know of their presence. An occasional visit by a raccoon or a family of raccoons may not be a cause for major concern, but if these visits become commonplace and raccoons are also climbing on your roof, some action is probably warranted.

Habitat Modification

Raccoons are attracted to gardens or homes because they offer a food resource and potential den sites. Efforts to reduce available food can include using metal garbage cans with secure lids. To prevent raccoons from tipping over garbage cans, place the cans in a rack or tie them to a secure post. Pet food left outdoors should be removed before nightfall. Pick up fallen fruits and nuts frequently. Never intentionally provide food for raccoons, and discourage your neighbors from this practice as well; it only attracts more raccoons.

If possible, remove woodpiles or other materials raccoons can den in or under. Thinning out overgrown shrubbery will reduce cover. To reduce access to the roof, tree branches that overhang rooftops should be cut back if possible, leaving a gap of at least 5 feet between the roof and the tree. Trellises and arbors attached to homes may facilitate

access to the roof and consideration should be given to their removal. While habitat modification is often helpful, it is rarely a total solution.

Exclusion

Exclusion is the key to eliminating den sites, but remember that raccoons are powerful animals and can become vicious when cornered. Their front paws are handlike, with toes that are long, flexible, and considerably dexterous. Raccoons are known to unhook simple latches.

Ordinary fences will not keep raccoons from gardens or yards, as the animals will either dig under or climb over them. Raccoons readily locate weaknesses in fences and will rip off loose boards or enlarge holes in wire fences for easy access. By exploiting the raccoon's sensitivity to electric shock, an ordinary fence can be made raccoon-proof by adding a single electrified strand of wire 8 inches above the ground and about 8 inches out from the base of the fence. A pulsating high-voltage, low-amperage fence charger, similar to that used for confining cattle, is used to electrify the fence. Electrified wire wrapped around the trunk of a tree will discourage climbing. A low, two-wire electric fence can be very effective for excluding raccoons from sweet corn, melons, and other highly preferred crops. The two wires are fastened on evenly spaced wooden posts; one wire is 6 inches above the ground and the other is 12 inches above the ground. The fence charger needs to be activated only from dusk to dawn. This type of low electric fence can be installed around a newly laid sod lawn to prevent raccoons from rolling back the new sod in search of insects or grubs. The fence is removed once the turf has taken root. Such fences around ponds are sometimes used to protect koi and goldfish from raccoons.

Before installing an electric fence, explore the pros and cons of its use and, if used, be sure the electric charger is appropriate for the task. Remember that electrified fences are not appropri-

ate for all situations, must be installed properly, and should always be identified with warning signs.

Prevent access to chimneys by covering them with a spark arrester that meets the fire code of your area. These caps will keep raccoons, tree squirrels, rats, and birds out of the chimney, but be sure they are tightly secured to prevent raccoons from pulling them loose.

Open spaces beneath structures, such as porches, decks, and garden and tool sheds, should be tightly screened with ¼- or ½-inch galvanized hardware mesh. The bottom edge of the wire should be buried at least 6 inches deep, extended outward for 12 inches, and then back-covered with soil. Such measures will exclude not only raccoons but skunks, opossums, squirrels, and rats as well.

Frightening

A variety of materials, gadgets, and devices designed to frighten raccoons and other wildlife are on the market. These include flashing lights, sound-producing devices, and water-squirting units, all of which can be activated by motion detectors. In addition, radios, scarecrows, and flags and windmills that spin or flutter in the wind have been used. Unfortunately, none of these are very effective and, at best, may frighten only for a few days, after which the raccoons seem to ignore them, having learned that they present no real threat.

Repellents

There are a few commercial chemical repellents available to repel various forms of wildlife, but none have been effective for raccoons. Mothballs, blood meal, and a wide variety of other home remedies have been tried, also to no avail as raccoons are quick to adapt.

Trapping

For the average homeowner, unfamiliar with trapping raccoons, it is advisable to hire a professional wildlife control operator to remove the animal. The professional will have the proper equipment to accomplish the task and

will be able to tell if a trapped female is nursing its young. This is very important because you don't want to leave young behind to starve. The professional will also have the means to euthanize the animals, since releasing them elsewhere is prohibited by law. Released animals may return or present a problem to someone else and, in fact, the animal you have trapped may have been deliberately released near you. Release of animals is a major factor in the dissemination of numerous diseases to other animals. Some counties have trapping programs for nuisance animals, including raccoons. Contact your local agricultural commissioner to see if this service is available.

Raccoons are fairly easy to trap; however, occasionally a clever and cunning animal will be quite elusive. A live cage-type trap is usually the preferred

trap for homeowners, although others are available that may be used by professionals to capture the more difficult animals. The single-door trap should be sturdily constructed and its dimensions should be at least 10 x 12 x 32 inches. Larger 15 x 15 x 36 inch traps are even better. Canned tuna or canned fish-flavored cat food make excellent baits but may also attract nontarget cats and dogs. To avoid catching cats, try using marshmallows, grapes, prunes, peanut butter, or sweet rolls. Small pieces of bait should be placed along a path leading up to the trap. The rear of the trap should be covered with 1/2-inch wire mesh to prevent the raccoon from reaching through the trap from the outside to steal the bait. Traps should be well anchored to the ground or weighted to prevent the animal from tipping the trap over to obtain the bait. Traps should be set at night and closed in the morning to

avoid trapping nontargets. Remember, raccoons are intelligent and clever animals. They are also powerful and can be vicious when trapped or cornered.

Other Control Methods

Dogs kept outdoors may alert you to the presence of raccoons and may frighten some away; however, some raccoons will attack dogs and cause serious injuries. Since they are usually active at night when they are most difficult to see, shooting is rarely the solution to nuisance raccoons, even in rural areas where shooting is legal.

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WARNING ON THE USE OF CHEMICALS

Pesticides are poisonous. Always read and carefully follow all precautions and safety recommendations given on the container label. Store all chemicals in the original labeled containers in a locked cabinet or shed, away from food or feeds, and out of the reach of children, unauthorized persons, pets, and livestock.

Confine chemicals to the property being treated. Avoid drift onto neighboring properties, especially gardens containing fruits or vegetables ready to be picked.

Do not place containers containing pesticide in the trash nor pour pesticides down sink or toilet. Either use the pesticide according to the label or take unwanted pesticides to a Household Hazardous Waste Collection site. Contact your county agricultural commissioner for additional information on safe container disposal and for the location of the Household Hazardous Waste Collection site nearest you. Dispose of empty containers by following label directions. Never reuse or burn the containers or dispose of them in such a manner that they may contaminate water supplies or natural waterways.

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