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RACCOONS

WITH THEIR BANDIT'S mask and ringed tail, raccoons are familiar to just about everyone, even if their nocturnal habits mean they are infrequently seen (Figure 69). Raccoons are one of the best examples of a wild animal that seems to have benefited from contact with humans. We raise crops for them and build structures in which they can take refuge. We have even installed an underground transportation system for them in cities—the storm sewers through which they travel at night and in which they often sleep by day. These animals are true generalists, able to tolerate widely different habitats and live on many different foods.

Requests for help with raccoons and squirrels make up the bulk of a growing business in urban-wildlife control. Raccoons den in attics and chimneys, dig up lawns, and tip over garbage cans, making them unwelcome in many neighborhoods, despite the fact that the troubles they get into are often unintentionally “invited” through our own actions. Whatever might be said about them, raccoons are here to stay, so we ought to enjoy occasional glimpses, resolve the occasional conflict humanely, and make peace with the permanency of their presence as wild neighbors.

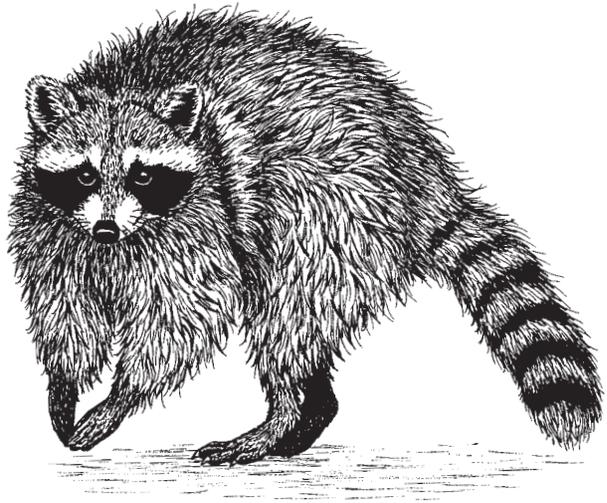


Figure 69 *Raccoon*

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- ◆ Raccoons are North America's answer to non-human primates: tree-based, dexterous, and highly intelligent mammals who spend a lot of time trying to work around that clumsy primate—us.
 - ◆ The famous washing behavior of the raccoon is more of a tactile orientation than a cleaning operation. These animals learn about their food by manipulating it with their hands.
 - ◆ Far from being the oft-described solitary animal of popular literature, raccoons seem to be highly social and organized at different levels in kin-based groups.
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Classification and Range

Raccoons (*Procyon lotor*) are truly New World animals, part of a larger family that includes several South American relatives, as well as the ringtail “cat” (*Bassaricus spp.*) and coati (*Nasua spp.*) also found in parts of the United States. Quite modern-looking raccoons (at least their skeletons) are found from deposits dating close to a million years old. Today they are found in almost every major biome (habitat) throughout the forty-eight contiguous states and have made recent inroads into southern Canada as well. Many species and subspecies are reported, but the taxonomy of the group badly needs a modern revision.

The raccoon may be two to three feet long from nose to tip of tail. The average adult male usually weighs no more than ten to fifteen pounds; females are even smaller, typically somewhere between six and twelve pounds. Raccoons in the northern parts of their range may be much larger, exceeding sixty pounds, as will animals who have been fed (or overfed) by humans. Coat color varies from dark, almost black, to sandy or pale. Although sometimes less noticeable on pale animals, the mask and ringed tail are the hallmarks even casual wildlife observers know best. Raccoons are probably color-blind, although they have excellent night vision. Their eyes sometimes reflect light in a greenish glow at night, while the eyes of fox and deer appear more yellow.

Raccoons are at least as intelligent as cats or dogs and far more dexterous. In fact, their sense of touch may be even more developed than their other senses. The scientific name of the raccoon refers to the “washing” behavior, once thought to be instinctive and mandatory in these animals. They manipulate food, dunking and soaking it when water is available, and so appear to be doing laundry. When water is not available, however, they handle food with much the same motion, suggesting that this activity is more a tactile exercise than a cleaning one.



Figure 70 The flimsy insect screen has been pushed aside as a raccoon has moved into this attic. Eviction with a one-way door and replacement of the screen with material sturdy enough to prevent another intrusion is called for here, not trapping.

Habits

Although they prefer mature woodlands, raccoons adapted long ago to almost every natural habitat in North America, except those where water is scarce. They thrive along seashores and in marshes and swamps as well as in woods. Their range is expanding as they exploit sheltering opportunities that human beings provide, from barns in prairies to sewers in cities. Cities and suburbs provide both natural foods and abundant castoffs from human tables. Raccoons frequently find shelter in uncapped chimneys, in attics, under porches, or in outbuildings along back alleys (Figure 70). Raccoons will use their old standby, the hollow tree, if available, even if it is right next to a busy street. In addition to shelter, sewer systems provide extensive travel corridors for raccoons when these are not too flooded.

A raccoon’s diet is so highly varied that it almost seems easier to describe the foods he doesn’t eat, rather than those he does. Small pieces of tinfoil, newspaper, and even an occasional cigarette butt in raccoon scats testify to their use of human refuse (Figure 71). The mainstays of their diet, however, are fruits, vegetables, high-energy mast foods such as acorns, and earthworms in early spring, when other foods are scarce. They eat fish and aquatic ani-



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Figure 71 *The presence of raccoons sometimes can be evidenced by the neatness they exhibit in exploring unprotected trash. Being highly manipulative and manually oriented, the raccoon often just reaches into the bag, finds, and removes edibles without spreading the contents all over the yard.*

mals, such as crayfish, when available, but many degraded urban streams no longer support these forms of life. Raccoons will eat small animals such as birds, amphibians, and mice opportunistically, but they are not effective or efficient hunters. Their appetite for garden produce, such as grapes and sweet corn, leads to frequent conflicts with gardeners.

There is often a seasonal pattern to raccoon feeding activity. In the Mid-Atlantic states, for example, an early-spring diet of insects and earthworms is followed by meals of mulberry, the first of the ripening fruits. The summer diet follows the order of ripening fruits: blackberries, cherries, grapes, and, last, persimmons in late fall. Between September and the end of December, raccoons gorge themselves on whatever fruits remain, along with acorns, which are a staple. They add as much as 30 percent to their summer body weight before the start of winter, building up critical fat reserves on which to live during the coldest periods of the year. In severe cold, or when deep snows are on the ground, raccoons will remain in dens in a state of general torpor for days on end. They do not go into a deep state of hibernation, however, as do woodchucks.

Raccoons are usually active at night,

although along coastal areas they are often active at low tide, when the gleaning is best, regardless of the time of day or night. By day raccoons usually retire to dens or resting sites. Dens are made aboveground in tree cavities, chimneys, and attics, and underground in old woodchuck burrows, storm sewers, or crawl spaces under buildings. When they feel secure enough, raccoons may simply lie in bramble thickets. Raccoons may also commonly share den sites; wintertime dens with more than twenty animals have been found.

Raccoon population density is typically higher in urban and suburban areas than elsewhere, with as many as one animal for every three acres at certain times of the year. Urban populations, however, seem to suffer a higher toll from diseases, especially distemper, and, in most of the East now, rabies.

Breeding seasons vary from north to south and may also be affected by city dwelling. It is possible now that some births occur during every month of the year. However, the norm in central and northern states is for the mating season to begin sometime in January and extend no later than March, with most births in April or May.

Litter size ranges from one to seven, with three to five the usual. Young are weaned at about two months of age and may remain with the mother through the first winter. Young raccoons may move out of their birth area and travel extensively looking for new homes. This often leads to conflicts with people, as they explore and seek shelter in garages and chimneys, get into the trash, or engage in other behaviors that draw human attention. The most recent studies of raccoons in both urban and rural habitats are beginning to show far more complexity to their social lives than researchers believed existed before. Home ranges overlap extensively in both male and female raccoons, and there is growing speculation that related adult males form bonded groups, perhaps along the same lines that lions do. Adult females occupying an area may be related also, as grandmothers, mothers, and daughters remain together throughout their lives and form the core of the raccoon social group.

Public Health Concerns

The raccoon is one of four wild animals (along with the fox, skunk, and bat) considered to be primary carriers of the rabies virus in the United States, and is, therefore, classified as a rabies vector species. Long present in Florida, raccoon rabies was first documented outside that state in 1977, in West Virginia and Virginia, where it was apparently imported with a shipment of animals brought in to repopulate a hunting area. Large-scale oral rabies vaccination programs have been launched in parts of the eastern and midwestern United States and in Canada. Vaccines are packaged inside fish-flavored baits and widely distributed in raccoon habitats.

Another growing raccoon public health issue is the roundworm (*Baylisascaris procyonis*), which can infect humans who accidentally ingest or inhale eggs passed through raccoon feces. Prevention is the key to this problem. Keeping raccoons out of attics and crawl spaces and supervising young children outdoors to make sure they do not come into contact with feces will help prevent exposure to this parasite.

Problems

Raccoons can cause real damage, as when they invade crops in force, or can be merely nuisances, as when they occupy chimneys or panhandle at campgrounds. They are often blamed for more damage than they actually do, while the neighborhood dogs who have scattered trash come off blameless.

Raccoons using attics or chimneys usually begin to make noise at dusk and are heard again just before dawn, while squirrels are active by day and quieter at night (except flying squirrels, who are nocturnal). Even mice can make considerable amounts of noise, and it is important to verify the source of any unknown scratching or tapping noises.

Solutions

Tolerance

Because raccoons are generally secretive, they do not always alert people to their presence soon enough to allow immediate control measures. Calmly and deliberately encouraging a raccoon to abandon an attic or chimney is far preferable to the frantic and demanding first response people often have on discovering that these animals are present. On the other hand, the first sign of raccoon damage to crops such as sweet corn demands immediate action, because the animal can be expected to revisit the garden and to continue eating the crop as long as it is available.

Eviction

Many situations with raccoons in chimneys and attics involve mothers with litters, since these are often ideal places for them to give birth and raise young. Raccoons are born blind and helpless, but noisy. Frequently the first indication that kits (young raccoons) are present is the persistent chattering noise they make. It will be eight or nine weeks after birth before they venture out of the den, and the mother, as educator and protector, will stay with them for at least several months afterward.

Within their home range, raccoons always have multiple dens, moving freely from one to another unless tied by dependent young to any given one for longer periods. Even then mother raccoons can, and often do, carry their young to a new den if the old one becomes unsuitable. If the raccoon

Raccoons Out by Day

The raccoon seen in the yard during the day is not necessarily sick or dangerous. She may merely be foraging longer hours to support her young, visiting a garden while the dogs are indoors, or moving to a new location.

mother can be persuaded to leave and move her young with her, then the homeowner's goal will be satisfied humanely. If not, a humane wildlife control company can reunite a mother with her young and "relocate on site," the most humane and responsible resolution. The humane options in summary are:

- Leave the family alone for the few weeks that the young are helpless. Monitor until the family moves on their own accord and prevent them from reentering the chimney or attic after they leave.
- Gentle harassment may cause the mother to relocate her litter, but there is always the chance the mother may abandon one or more youngsters in this process. Combinations of aversive stimuli (lights, sounds, and smells) are likely to be more successful than use of one technique alone. The Connecticut Wildlife Rehabilitators Association reports much success placing a bowl of household ammonia under a closed damper along with a blaring radio in the fireplace. It recommends starting this "multisensory deterrence" at dusk, right before the mother's normal activity period.
- Trapping the family almost inevitably will lead to separation and the probable death of the young unless it is done professionally. A professional must use a proven reunion strategy that allows the mother to move the young to an alternate den site at her own pace.
- Some professionals use a "one-way door" to get raccoons out of attics or crawl spaces. These require particular care and sensitivity in their use, given the need to ensure that mothers are not prevented from returning to their litters. To use this technique properly, the young must be old enough and mobile enough to exit through the one-way door with their mother.

Chimney Exclusion

Chimneys should be capped to prevent raccoons and other animals from using them but only after it has been confirmed that no animals are present. The fireplace flue, because it has a horizontal smoke shelf just above the damper, is usually preferred by raccoons, but all flues should be checked and secured, preferably before they are ever occupied. Avoid driving an animal out of a chimney or attic during the day. Being primarily nocturnal, raccoons may be easily confused in daylight, and they are certainly more vulnerable, as they are more likely to encounter people or their pets. Never use smoke or fire to try to "smoke" animals out of chimneys. The mother may abandon the site, but the young can be too immature to climb and will die a horrific death.

Attic and Home Exclusion

Attics, crawl spaces, and sometimes even the void between floors can provide harborage for raccoons. Inspection and monitoring are in order to find where animals are coming from and going to. Where raccoons have been in residence for a long time, and feces have accumulated in an attic or crawl space, take care to avoid exposure to the roundworm eggs described previously. Protective clothing and a dust mask should be worn, and feces should be disturbed as little possible until the raccoons have left. Then, a thorough cleanup is recommended, which is generally best accomplished by a professional service. Obviously, a secure and permanent fix to prevent reentry is in order after the raccoons are safely out. This often means contracting with a professional service.

Occasionally, raccoons enter a house through a pet door and then fail to find their way back out. Our recommendation is to prevent entry in the first place by not having an unsecured—or unsecurable—pet door. Because raccoons can cause considerable damage when they are panicked, it is advisable in such a situation to keep both yourself and the raccoon as calm as possible. Move slowly. If it can be done safely, close doors to other parts

of the house, open windows and doors through which the raccoon can exit, and wait quietly for the animal to escape. If the animal does not leave, call local animal control for assistance. Only properly equipped professionals should attempt to capture and handle live raccoons.

General Exclusion

The only long-term, permanent means of coping with troublesome raccoons is to exclude them from areas where they are unwanted. Raccoons are intelligent animals with routines dictated by their needs; if they cannot get a meal at one place, they will look elsewhere, and they will remember where they can and cannot expect to satisfy their hunger. Many homeowners decide that the only solution is to put out a live trap, catch the raccoon, and destroy or relocate it. Before too long, another raccoon moves into the area, and the cycle begins all over again.

Heavy material, such as wire mesh or sheet metal, is necessary to prevent raccoon entry and to keep the animals out if they are evicted. Where wire mesh is used, at least 16-gauge material (about 0.06 inches in diameter) is generally recommended.

Yard Protection

Raccoons can damage lawns by digging for earthworms and grubs. Recently sodded lawns are the most commonly damaged. Because new lawns have to be well irrigated, lots of worms and grubs collect under the sod, which attracts raccoons and, sometimes, skunks. Often they simply reach under the strips and feel around for their meal, pulling out the grubs and worms without any disturbance. Occasionally they tear up the sod and cause significant damage. On small areas, a hot sauce (capsaicin) repellent may be effective. This is generally a short-term problem that lasts only as long as the watering continues.

Garden Protection

Raccoons readily help themselves to unprotected fruits and vegetables in the garden: among their favorites are grapes and corn.

Foraging often occurs just before foods are ready to be picked, so extra vigilance may be called for just prior to harvesting the crop. One possible solution is a battery-operated radio, tuned to an all-night talk show, left out for a few nights with the crop. Single-strand electric fencing can be effective where damage is frequent and raccoons are numerous.

Pond Protection

With the increasing popularity of ornamental ponds, raccoons are finding another attraction to homeowners' yards. Visiting raccoons will catch and eat fish, frogs, or other aquatic life that a homeowner may be trying to raise. They may tear up plants in search of food and generally make a mess of most small ponds once they discover them. Depending on the size of the pond, stacking cinder blocks (the kind with the holes) next to one another in groups of three or four, piling rocks, or sinking sections of ceramic tile (the sort used to line chimneys) creates shelters where fish can take refuge when a raccoon visits. Ponds should be at least three feet deep at places for these shelters to work effectively. In extreme cases, and where it is allowed, deter raccoons from disturbing plants and other unwanted activities by erecting single-strand electric fencing around the pond anywhere from four to eight inches off the ground.

Domestic Animal Care

On occasion, raccoons will kill small animals housed outside, such as chickens and rabbits, and they will sometimes get into scraps with dogs and cats. The obvious solutions are not allowing dogs to roam unsupervised and unleashed and keeping cats indoors at all times—practices that are always in your pet's best interest in any case. For their health and safety, pet rabbits should be housed indoors. Encounters between raccoons and pets should be treated very seriously. Consult the animal's veterinarian and local animal-control officials to ensure that pets have either proper disease protection or adequate follow-up to a potential exposure.

A Last Word

The success raccoons have reaped from the changing American landscape comes at a cost to them. Both rabies and canine distemper take a toll on urban raccoon populations. No doubt the species will adapt to these scourges, and natural selection will work in its favor in the long run. In the interim some interesting experiments in disease control are being conducted, such as oral rabies vaccination programs. Our technological capabilities are truly amazing, and every day seems to bring some new potential tool to our attention. In the future there may be ways to immunize wild animals against all sorts of diseases with some very simple approaches that can distribute vaccines widely without ever touching an animal. This is promising, as well as scary, because the technology to deliver things that help animals can also deliver things that harm them. The moral brake on how technology is used is the human conscience, something that always needs to be kept in good tune and fine repair.

Resources

Dorcas MacClintock's classic *Natural History of Raccoons* is our favorite for many reasons and has recently been reissued (Blackburn Press, 2003); another good read is Virginia Holmgren's *Raccoons: In History, Folklore, and Today's Backyards* (Capra Press, 1990).

