

Eastern chipmunk (*Tamias striatus*)

Size:

Body is 5–6" long. Tail is 3–4". About 3 ounces.

Signs of their presence:

- The animals themselves.
- Sounds: Chipmunks use a sharp repetitive chirp to alert others of danger. When startled, they'll often respond with a single chirp followed by a short burst of chatter (1–2 seconds).
- Holes that are about 2" in diameter. Holes usually go straight down, with no dirt mound in front.
- Evidence of their feeding: Like squirrels, chipmunks leave gnawed nut shells.
- Garden and landscape damage: they dig up and eat flower bulbs and seeds. The digging and tunneling also cause damage.
- Occasionally, chipmunks will damage buildings, but not nearly as often as other rodents.

Diet:

Opportunists, primarily herbivores. Their favorite foods are nuts, seeds, and fruits. Chipmunks eat nuts (acorns, hazel nuts, beechnuts), seeds (from many ornamental trees, wildflowers, clover, ragweed, and sunflowers, and bird seed), flower bulbs, berries (such as raspberries, strawberries, blackberries, and chokecherries), fruit (watermelon, apples, pears, peaches, cantaloupe, cherries), and wild mushrooms. They will occasionally eat corn, wheat, oats, grass seed, insects, worms, snails, slugs, bird eggs, nestlings, mice, moles, frogs, salamanders, small snakes, and carrion. Although they spend most of their time on the ground, they will climb trees to take nuts, fruits, and seeds. Chipmunks cache food in a storage chamber in their burrow. During the breeding season, they must drink up to a quarter of their body weight in water each day.

Typical activity patterns:

Social style: Generally solitary, except for female with dependant young. They can be fairly aggressive to each other.

Daily activity: Diurnal.

Hibernator? No. They'll stay in their burrows for days at a time during the winter, in a sleepy state. Chipmunks rely on their food caches during the winter. They may come out on warm days, often to travel to another food cache.

Migrates? No.

Where found:

Distribution in NY and the Northeast: Everywhere.

Habitat: They adapt to a variety of habitats, but are usually found in areas with at least a few mature trees. Common in rural, suburban, and urban areas (yards, gardens, campgrounds, parks, urban lots). Chipmunks often burrow under old stone walls bordering pastures or woods; under piles of brush, rocks, or garbage; among a tree's roots, or near buildings. The only places you're not likely to find them are marshy areas with very dense undergrowth.

Territory and home range: The home range varies from $\frac{1}{10}$ –3 acres, but most don't venture more than an acre. Males have larger home ranges than females. Densities may be as high as 10 chipmunks/acre. Will defend an area of about 50 feet around burrow entrance.

Breeding habits:

Pair bonding style: Polygamous. Females raise young alone.

Breeding dates: They mate twice a year, in April and July.

Birthing period: Two litters, in May and August. Gestation takes about 31 days.

Litter size: 2–7 young.

Weaning dates: 4–6 weeks.

Amount of time young remain with parents beyond weaning date: Not long. Young will leave the burrow at about 6–8 weeks old.

Common nuisance situations:

Time of year: Spring through fall.

What are they doing?

- The most serious economic damage is caused by their burrowing under porches, stairs, patios, or into foundations. They may undermine the structure.
- They gnaw on the tubes used to collect maple syrup.
- Chipmunks raid bird feeders and stashes of pet food.
- They dig in flower beds and vegetable gardens, uprooting plants. They eat flower bulbs, seeds, seedlings.
- Their loud warning chirps in the morning may disturb some people's sleep.
- Disease risks: minimal. They are host to a variety of parasites, including fleas, lice, mites, worms, and botflies.

Legal status in New York:

Unprotected.

Best practices

- Chipmunks rely on food caches to survive the winter, so if you move them too far away during that time, they'll probably starve to death. Limit relocation to times when food is readily available.
- Chipmunks raise their young in underground burrows. They don't raise their young in buildings (we can't say it would never happen, but it's extremely unlikely). Very young chipmunks might enter a building on their own, leading someone to believe there's a "nest" in there. No. Those chipmunks are mobile.

Remove artificial food sources (bird seed, pet food):

- If anyone is feeding the chipmunks, persuade them to stop.
- "Squirrel-proof" bird feeders that use the animal's weight to close the feeder won't stop chipmunks unless the feeder's set so it will close when a very light weight is applied. Unfortunately, at that setting, you'll also stop all but the smallest birds from using the feeder.
- Hang bird feeders on a rope between two pulleys. Ideally, feeders should be 15–30 feet away from the building so any seed that collects below doesn't lead the chipmunks right to the foundation.
- Keep the area underneath the feeder clean.
- Feed pets indoors.
- Store food, birdseed, and pet food in metal, glass, ceramic, or heavy-duty plastic containers.

Block their travel routes:

- Screen gutter pipes, downspouts, and foundation drain pipes with $\frac{1}{4}$ " hardware cloth.
- Chipmunks often gain access to houses through attached garages. Screen the eaves and overhangs of the garage with $\frac{1}{4}$ " hardware cloth.
- Remove ground covers and hedges that are next to the foundation.
- Move firewood and piles of debris, rocks, and brush away from the foundation.
- Maintain a foot-wide gravel border around the foundation that's free of vegetation (best), or keep the foundation plantings well trimmed. Don't stack anything (such as firewood) against the foundation.
- Interrupt any routes that connect woods to the foundation in one continuous line by removing plants or a section of stone wall.

Protect vulnerable crops and ornamental plants:

- Plant bulbs within a cylinder of 1" poultry wire. Lay the wire in a trench then plant the bulbs in it. Add some dirt, finish wrapping the wire around the bulbs, then cover with soil.
- Another option for bulbs is to plant them, and then lay a piece of $\frac{1}{2}$ " hardware cloth over the soil surface to reduce the chipmunks' ability to dig up the bulbs. The hardware cloth should extend at least a foot around the plantings, and be covered with soil. Its mesh must be large enough for the stems to grow through, so you may need to experiment with different sizes for different plants.
- Establish a barrier around gardens and fields with fences (wire mesh, electric, or combination wire/electric fence). Use $\frac{1}{4}$ " hardware cloth or welded wire. The fence must be 30" high, buried 6–12" deep, with a foot-wide "L"-shaped shelf that sticks out to prevent the chipmunks from burrowing underneath it. Or use a 2-wire electric fence (if allowed by local ordinances) with the wires 1" and 3" off the ground. A combination fence should have an electric wire at 1" off the ground, and along the top of the fence.
- If there aren't any mammals nesting in the tree, wrap two-foot wide bands of sheet metal around fruit trees at 6–8 feet, to prevent chipmunks from climbing the tree. This will only work if the chipmunks can't leap from another tree or other object onto this tree. (Attach the band loosely, so the tree has room to grow. Don't staple the band onto the tree because that can prove dangerous if someone needs to cut down the tree.)

Prevent entry into building:

- Remove any current residents. Exclude them with a one-way door.
- Close the door! (Use screen doors.)
- Install door sweeps and weather-stripping (garages, too).
- Seal openings with $\frac{1}{4}$ " hardware cloth. Or poke steel wool, wire mesh, or flexible aluminum "gutter guard" into the hole, then caulk, or spray expanding foam (such as Great Stuff®) over it to strengthen the barrier. Focus on holes at ground level, especially those in foundations. Chipmunks tend to stay on the ground, so you don't have to look for holes that are high up, as you would with squirrels.
- Check vents (especially clothes dryer vents that are close to the ground). If the vent is damaged or dicey, replace it with an animal-proof design, or screen it with $\frac{1}{4}$ " hardware cloth.

- Plug gaps around water, gas, and heating pipes with latex caulk. For large holes around pipes, use galvanized metal pipe chase covers, sheet metal plates, mortar or plaster of paris, or cement.

Trapping strategies:

Live traps:

- Small cage traps (app. 16x6x6") or Sherman traps (app. 10x3x3").
- Bait with nuts, peanut butter, sunflower seeds.
- Place the trap near the tunnel's entrance or along their travel route.

Lethal traps:

- Rat-sized snap-back traps. There are now models that have built-in safety catches. The bait's under a cover, which must be lifted before the trap will fire. This means that an animal that's just investigating won't set off the trap. The design also helps ensure proper positioning, which is more humane.
- If using a traditional snap-back trap, place it within a cage trap, a box, a coffee can with both ends cut out, or in PVC pipe, to prevent the capture of songbirds. If the trap's next to the foundation, you could lean a board over it.

Other lethal techniques, for NWCOs with a commercial pesticide applicator license:

- In New York, there are registered fumigants for chipmunk burrows (phosphine gas, carbon monoxide gas cartridges). The phosphine gas products are restricted-use pesticides.
- Zinc phosphide bait, another restricted-use pesticide, is also available in New York. The bait is oats, treated with the zinc phosphide.
- These products aren't commonly used against chipmunks in New York. The fumigants could pose a fire hazard.

Preferred killing methods:

- CO₂ chamber
- Lethal trap
- Shooting, using an air rifle, a shotgun, or a .22 caliber rifle with bird shot
- Cervical dislocation
- Stunning and chest compression

Acceptable killing methods:

- Pesticides

Control strategies that don't work particularly well, or aren't legal in New York:

- There are brands of sunflower seed and suet that are treated with a repellent. The active ingredient is capsaicin, the chemical that makes hot peppers taste hot. Doesn't bother chipmunks, however, because they have fur-lined cheek pouches.