

VERTEBRATE PEST CONTROL

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NOTE: For recommendations on the use of chemicals to control vertebrate pests, contact your Cooperative Extension agent.

It is necessary to obtain a permit prior to killing protected animals in Georgia. Get a permit by writing the Wildlife Resources Office of the Georgia Department of Natural Resources, 2070 U.S. Highway 278, S.E., Social Circle, GA 30279; or call (404) 656-4994.

In the following section, non-game animals include pocket gophers, chipmunks, bats, amphibians, and rep-

tiles. A permit is also required to take furbearing animals or game animals out of season. A current hunting or trapping license is required to take game or furbearing animals in season.

To begin the permit process for taking protected birds, call the USDA Wildlife Services at (706) 546-5637. For permits to kill other protected animals, call the Wildlife Resources office of the Georgia Department of Natural Resources (770) 761-3044.

MAMMALS

| SPECIES | HABITAT MODIFICATION | EXCLUSION | FRIGHTENING | REPELLENTS | TOXICANTS/FUMIGANTS | TRAPPING | OTHER |
|----------------------------------|---|---|--|--|---------------------|---|--|
| Beaver | Eliminate food, trees, woody vegetation where feasible Continually destroy dams Install water control device (Clemson beaver pond leveler) | Fence small areas along stream and yard Fence around valuable trees | Continual destruction of lodges and dams | None are registered | None are registered | Very effective if done by a trained Wildlife Control Expert | None |
| Chipmunk | Store food such as bird seed and dog food in rodent-proof container Ground cover, shrubs, and wood piles should not be located adjacent to structural foundation | Seal all cracks and holes in foundations ¼-inch mesh hardware cloth buried 1–2 feet deep to exclude from gardens and flower beds | Not effective | Taste repellents containing bitrex or thiram applied to seeds, bulbs, or vegetation not meant for human consumption | None are registered | Very effective; using standard mouse or rat snap traps baited with peanut butter Other bait—peanut butter, oatmeal, bacon drippings (equal parts) mix to paste or dough-like | Toxicant not effective; chipmunks hoard food and may not consume toxic baits. CAUTION: use of toxic baits for rodents can result in secondary poisoning of hawks, owls, bobcats, and other predators. |
| Gray squirrel or flying squirrel | Trim trees away from house Remove diseased trees or trees with cavities | Sheet metal bands on isolated trees to prevent climbing in order to protect developing nut crop Seal all openings to buildings especially around chimneys, eaves, and soffits Install excluder in attics to allow squirrel to escape and prevent re-entry | Not effective | Some products containing hot sauce (capsaicin) and other distasteful compounds may work (may also be used with deer) | None are registered | Can be very effective but should only be done by qualified Wildlife Control Expert Permits may be required | On bird feeders suspended by rope. Place rope through plastic conduit to reduce climbing |

■ VERTEBRATE PEST CONTROL: MAMMALS

| SPECIES | HABITAT MODIFICATION | EXCLUSION | FRIGHTENING | REPELLENTS | TOXICANTS/FUMIGANTS | TRAPPING | OTHER |
|---------|---|--|---|---|--|--|---|
| Voles | Eliminate ground cover such as grass and weeds Remove mulch from base of trees and plants Cultivate soil to destroy burrows, tunnels and ground cover | Recommended to protect trees, ornamentals and gardens Use ¼-inch mesh hardware cloth buried 1–2 feet deep | Not effective | None proven effective | Some anticoagulant poisons are labeled for home garden vole control. Always use extreme caution around pets and children | Very effective using standard rat or mouse traps baited with peanut butter | Toxicant not effective; voles hoard food and may not consume toxic baits. CAUTION: use of toxic baits for rodents can result in secondary poisoning of hawks, owls, bobcats, and other predators. |
| Moles | Reduce soil moisture and food sources by reducing watering. Cautious use of lawn pesticides to treat for insects and grubs | May be cost effective in very small area like flower bed or garden ¼-inch mesh hardware cloth or sheet metal | Not effective | None are registered | Several toxic products are labeled for placing in the tunnel or hole. Use with caution around pets and children | Difficult, but can be effective in some situations | Toxicant not effective; moles hoard food and may not consume toxic baits. CAUTION: use of toxic baits for rodents can result in secondary poisoning of hawks, owls, bobcats, and other predators. |
| Deer | Difficult; habitat modification is not generally recommended Plant deer resistant plants Harvest crops early Lure crops may draw deer away from valuable crops | Fences—up to 8 feet tall; less if with dog Electric fences can be effective Individual tree protector; fence or pipe to prevent antler rubs Many attractive and effective fence designs for gardens | May provide some limited protection in certain situations | Many are available; some commercial, some “home” remedies Effectiveness varies with ingredients and timing; start applying prior to damage; high density deer population will not likely be repelled Taste and odor repellents are available; beware of advertising Sound repellents are generally ineffective | None | Not available to landowners | Contraception is not legal in Georgia Hunting is best in most situations but not allowable in some instances Sharpshooting with wildlife professionals may be necessary in some communities |
| Coyote | Destroy dens if possible Reduce habitat for mice and other food items | Fencing pastures and yards to reduce danger to livestock and pets Keep pets inside, especially at night | Guard dogs can be effective for livestock | None shown to be consistently effective | Available to livestock producers and wildlife control experts; generally not available to homeowners/gardeners | Can be very effective but requires considerable knowledge; best left to wildlife control experts | Hunting if safe and legal |
| Hogs | Difficult | Fencing may be effective for small areas 3 feet tall with electric wire can be effective in small area | May provide limited protection in some instances | None | None | Very effective Use large corral traps ONLY. Avoid small cage or box traps | Shooting or hunting. Check all game regulations |

REPELLENTS FOR DEER, RABBITS, AND OTHER MAMMALS

These materials may give temporary protection. Repellents are most likely to produce satisfactory results if protection is needed for a week or two. If protection is required, fencing is often a more effective treatment. Retreatment may be necessary, especially after rain. Repellents are most effective when applied before damage

starts. Local density of animal may negate efficacy of any repellent treatment. Some repellents are contact and water soluble; others are systemic and therefore require less frequent application. Read and follow all label instructions. Some repellents are not labeled for use on food crops. Contact wildlife specialist for additional products.

| PROBLEM OR LOCATION | CHEMICAL AND FORMULATION | METHOD AND RATE | TARGET SPECIES | REMARKS AND RESTRICTIONS |
|--|--|--|--|---|
| Browsing on conifer seedlings, ornamentals, hardwoods | Putrescent Whole Egg solids. Can be homemade. | | Deer | A taste repellent. Not for use on edible plants. Brands or product names: Deer Away, BGR. |
| | Liquid 15% Powder 36% | Apply to vegetation—spray, dip, or shake as per label. | | |
| Fruit trees, field crops, ornamentals, nursery stock, vegetables, non-crop areas | Ammonium soaps of higher fatty acids | Dilute as per label. Spray on crops to be protected. | Deer Rabbit | Retreat after rain or as necessary. |
| | Liquid 15% | May work as border treatment. Label may include use as paint for stems and trunks. | Deer Rabbit | Brand or product names: Hinder |
| | Other taste repellents: <ul style="list-style-type: none"> Mint Oil Garlic Oil Capsaicin Bitrex® | | Deer Rabbit | Retreat after rain or as necessary. Apply before damage is noticed. Follow label instructions—some products not labeled for edible crops. Brand or product names: Tree-Guard, Liquid Fence, Deer-Off, Phantskydd, This-1-Works®. |
| | Odor Repellents: <ul style="list-style-type: none"> Milorganite® | Apply as per label | Deer Rabbit | Retreat as necessary. Most home odor repellents are not effective. Milorganite® is a mild organic fertilizer. Somewhat effective if used properly. |
| Gnawing on wood siding, decks, fence posts | <i>benzylidylethyl-methyl ammoniumsaccharide</i> and <i>thymol</i> sources | Apply as per label. Do not apply indoors. Avoid contact with water or food sources. Do not mix with other chemicals. | Rats Squirrels Skunks Rabbits | Manufacturer claims of effectiveness may need further testing. May repel woodpeckers. Brand name: Ro-Pel® |

REPTILES, AMPHIBIANS, AND BIRDS

There are no toxicants or fumigants registered for reptiles and amphibians. Commercial snake repellents are available but none have been shown to be consistently effective. Snakes lack a sense of smell and do not hear sound so repellents are of questionable efficacy. Nearly all reptiles, except venomous (poisonous) snakes, are protected. Amphibians receive less legal protection. All native birds are protected and require state and federal

permits. Harassment and repellents (non-lethal only) are generally allowed. Check with local wildlife law enforcement officials prior to working with birds. Insect repellents (like DEET applied to clothing) repel chiggers and ticks and keeps them from biting. There is no such thing as snake repellent. No product is known as effective to repel snakes from yards or gardens.

| ANIMAL | PROBLEM OR LOCATION | CHEMICAL AND FORMULATION | METHOD AND RATE | REMARKS AND RESTRICTIONS |
|--|---|--|-------------------------|---|
| Reptiles Snakes, lizards, turtles, and alligators | Yards, basement | None Mothballs (naphthalene) are illegal to use as snake repellent. There is no such thing as snake repellent despite claims to the contrary. | | Georgia has no venomous lizards. Six of Georgia's 40 species of snakes are venomous. All harmless snakes are protected. Do not kill. Send high quality photographs to state wildlife specialist for identification. Do not damage the head. Alligators are protected in Georgia. Contact Georgia Wildlife Resources biologists for alligator problems. Use traps to remove nuisance turtles. |
| Amphibians Frogs, toads, salamanders, and their tadpoles | Animals getting into swimming pools, houses | None | | No chemical controls are currently available. Hand removal with a dip net is recommended. Keeping sticks or rocks in small garden pools will allow animal to climb out. |
| Birds | Nesting in rafters of pole barns; pecking holes in siding; roosting; eating fruit | No toxicants or fumigants registered. | | Recommendations are for physical exclusion with fence, net or barrier. Brand name: Bird-X® netting, Nix-A- Lite®, sticky caulking. |
| Goose | Droppings on lawn, playground, driveway; eating grass; nesting | methyl anthranilate | Follow label directions | Goose repellent made from Concord grapes. Expensive. Must reapply after mowing, rain or irrigation. |