

VERTEBRATE PEST CONTROL

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NOTE: For recommendations on the use of chemicals to control vertebrate pests, contact your Cooperative Extension Service 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, Georgia 30279; or call 404-656-4994.

In the following section non-game animals include pocket gophers, chipmunks, bats, amphibians, and reptiles. 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 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	COMMENTS
Armadillos	No habitat modification options available; armadillo are habitat generalists.	Fencing may be effective for gardens and high-value land areas (flower beds, etc.).	Not effective	None	None are registered	Possibly effective if done properly. See armadillo publication http://www.warnell.uga.edu/outreach/pubs/wildlife.php	Lethal control if legal and safe.
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. 1/4-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; use standard mouse or rat snap traps baited with peanut butter.	None

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Coyote	Destroy dens if possible. Reduce habit at for mice and other food items.	Fence 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	
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.	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 possible in lab situations and limited effectiveness in field; expensive. Hunting is best in most situations but not allowable in some instances. Commercial control at night with licensed professionals.
Gophers or Pocket Gophers	No habitat modification options available.	Limited efficacy for small gardens. Not practical for fields or landscapes.	Not effective	None	Some are registered. Check Georgia Department of Agriculture pesticide database for current list.	Difficult to trap—requires expertise and special traps.	Not effective except with registered toxicant.
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 chimney, eaves and soffets. 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.

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Hogs – Feral Hogs, Feral Swine, Wild Hogs, Wild Pigs, Wild Swine	Difficult	Fencing may be effective for small areas.	May provide limited protection in some instances.	None	None – NO legal toxicant is available.	Trapping is the best method of control. Effective trapping requires training or knowledge of methods. Very effective but often costly and time intensive.	Shooting or hunting offers limited control. Check all game regulations. Hunting, especially dog hunting, may make the problem worse. Relocating or transporting live wild pigs is illegal and punishable by strict penalties.
Moles	Reduce soil moisture and food sources by reducing watering and cautiously using lawn pesticides to treat for insects and grubs	May be cost effective in very small area like flower bed or garden. 1/4-inch hardware cloth or sheet metal.	Not effective	None are registered	Several products (poisons) are available for placing in the tunnel or hole.	Difficult but can be effective in some situations.	None
Voles	Eliminate ground cover such as grass and weeds. Remove mulch from base of trees and plants. Soil cultivation to destroy burrows, tunnels and ground cover.	Recommended to protect trees, ornamentals and gardens. Use 1/4-inch mesh hardware cloth buried 1-2 feet deep.	Not effective	None proven effective	Anticoagulants, such as rat poisons. Always use caution around pets and children.	Very effective using standard rat or mouse traps baited with peanut butter.	None

BIRDS

SPECIES	PROBLEM STATEMENT	TOXICANTS/ FUMIGANTS	PRECAUTIONS	COMMENTS
Birds, general	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.
Canada 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. Addling (shaking) eggs or coating with oil may be allowed – contact Wildlife Specialist or USDA APHIS Wildlife Services.
Woodpeckers	Pecking holes in siding and wooden decks – often in search of food or nesting sites.	No toxicants or fumigants		Physical exclusion with netting; harassment with shiny flagging often called “Mylar Tape”. All birds are federally protected – cannot be killed. Permits for persistent problems are available – Contact Wildlife Specialist or USDA APHIS Wildlife Services.

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 longer 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 animals 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. Most commercial repellents are **not labeled** for use on food crops. Contact wildlife specialist for additional products.

PROBLEM OR LOCATION	CHEMICAL & FORMULATION	METHOD AND RATE	TARGET SPECIES	COMMENTS
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.	Deer	
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	Brand or product names: Hinder Rabbit
	Other taste repellents: Mint Oil, Garlic Oil, Capsaicin, Bitrex®		Deer, Rabbit	Retreat after rain or as necessary. Apply before damage is noticed. Follow label instructions—some products are not labeled for edible crops. Brand or product names: Tree-Guard, Liquid Fence, Deer-Off, Phantskydd, This-1-Works®
	Order Repellents: Milorganite®	Apply as per label	Deer, Rabbit	Retreat as necessary. Most home odor repellents are not-effective. Milorganite® is a mild organic fertilizer that is very effective if used properly.
Gnawing on wood siding, decks, fence posts	Benzylidylethyl-methyl-Ammonium-Saccharide and Thymol	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 AND AMPHIBIANS

There are no intoxicants 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 enjoy less legal protection.

ANIMAL	PROBLEM OR LOCATION	CHEMICAL AND FORMULATION	METHOD AND RATE	COMMENTS
Reptiles: snakes, lizards, turtles and alligators	Yard, in home, barns and outbuildings.	No toxicants or fumigants registered.	Not Applicable.	No venomous lizards in Georgia. Six of 40 species of snakes are venomous. All harmless (non-venomous) snakes protected. Send skins, frozen or preserved specimens to state specialist for identification. Call DNR. Do not kill. If dead, specimen should be frozen. Do not damage 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 currently available. Hand removal with a dip net is recommended. Keeping sticks or rocks in small garden pools will allow animal to climb out.