

Introduction

- Gardening is an adventure, with some frustrating times
 - Untimely frosts that kill blossoms
 - Animals that eat buds ready to open into flowers
- Little can be done with events of nature i.e., drought, frost, heavy rain
- The good news is various animals that are attracted to home landscapes can be managed
- All birds **except** house sparrows, European starlings, pigeons, or rock doves are protected in the U.S. and cannot be taken (killed, captured, destroyed, caught or seized).
- The U.S. Department of Agriculture-Wildlife Services Athens https://www.aphis.usda.gov/aphis/orfocus/wildlifedamage.



The HERL Model

The goal is to reduce human-wildlife conflict in the most efficient way possible.

Both the UGA Warnell School of Forestry and Natural Resources and Extension recommend a four-step procedure to landowners for dealing with nuisance wildlife.

The program is known by its acronym - HERL.

The letters represent the steps for dealing with human-wildlife conflicts in a landscape setting.



Step 1: H-Habitat Modification or Harassment

Harassment can include active and passive methods of NON-LETHAL activities.

Pyrotechnics (firecrackers) can be used for dispersing vultures or Canada geese.

This is one form of active harassment.





Passive harassment could include scarecrows, plastic snakes or plastic owls.

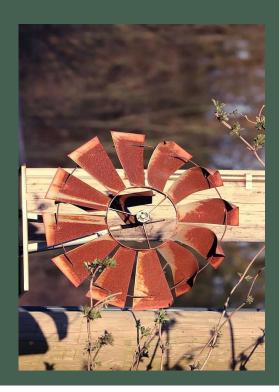








Motion-activated devices fall somewhere between "active" and "passive" harassment.

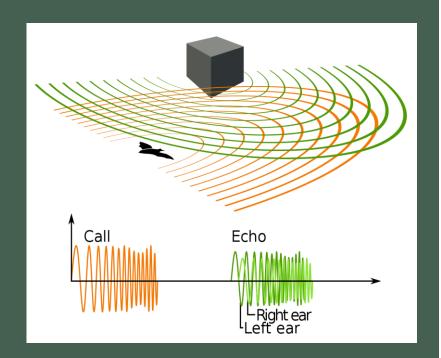






Ultrasonic repellers or devices have generally not been proven effective.







Wildlife quickly acclimates to static harassment

devices.





Step 2: E-Exclusion

Use fencing and conduct home repairs as necessary to prevent nuisance wildlife from gaining entry from property and home.







Exclusion may be the most effective and costefficient control method available for residential situations









Step 3: R-Repellent

- Use REGISTERED repellents in a manner consistent with product labeling to discourage unwanted wildlife!
- Many products have not been rigorously tested in a scientifically controlled manner
- Many repellents have limited efficacy
 - Product washes off in rain
 - Product can break down in sunlight
 - Animals simply become accustomed to to the product
- There are a lot of claims about efficacy of repellents, but most are not effective.



Step 4: L-Lethal Control

- As a last resort and with PROPER TRAINING and PERMITS!
- May include placement of commercially available toxicants (for example, rat poison)
- May include traps (usually purchased at garden supply stores and home centers)
- Trapping nuisance wildlife is never recommended
- It is illegal to move some species
- Permits are required to trap most species
- Relocation is generally very stressful to the animal and almost always results in the animal's death.
- Releasing animals on another property is trespassing and illegal.









This cut shows the best Mole Trap ever offered, and only has to be tried to be appreciated.

THE SECRET OF MOLE CATCHING is a GOOD TRAP, and to know their habits.

Full information sent with each trap.

Send \$5° for Sample Trap, SENT POSTPAID.



Identifying Animals Responsible For Damage

- The first step in addressing pest damaging your landscape is identifying the problem pest.
- Nuisance wildlife will leave clues to help with identification.



Chewing Damage

First determine whether chewing is above or below ground.

- Georgia has a few subterranean chewers.
- Pocket gopher has larger teeth and chews larger roots.
- Pine vole has smaller teeth and can chew up to 2-3 inches above ground
- Above ground chewers
- If only bark is chewed (with teeth 1/16 wide) up to 12 inches it could be a cotton rat.
- Larger teeth with chewing up to 20 inches could be a rabbit. Rabbits will also clip off pencil-sized stems at an angle like being cut with a knife.
- Nearly all chewers can be identified by the marks left on trees or shrubs.





Pocket gopher chewing, rabbit chewing, beaver chewing







Holes

- Identification How big is the hole?
- Clues How the hole was dug?
- Habitat Consider an animal's habitat.



DEALING WITH COMMON WILDLIFE SPECIES



ARMADILLO

- Named for the 9 moveable rings of armor between the shoulder and hip shields.
- Three toe prints and sharp claw marks are typical tracks.







Armadillo Habitat



- Armadillos live in forests, scrub, and brush lands, but are most abundant in moist, bottomland hardwood forests.
- The armadillo digs burrows for nesting and for protection during the day.
- Burrows can be from 4 to 24 feet in length and 20 inches deep and may have multiple entrances.



Damage

- When foraging for food armadillos dig small holes in the ground. The holes are about 3 inches in diameter
- Armadillos will uproot flowers and other vegetation in loose soil while foraging for food.







Prevention and Control

- Eliminating the armadillo's food source is not practical since they feed on grubs, insects and worms. Removal of the food source would be detrimental to plants and other life forms in the area.
- There are no commercial attractants or bait proven effective for armadillo traps.
- No toxicant, fumigants, or repellents currently registered for armadillo control.
- ALL IS NOT LOST!



Live Traps are best.

Wooden box traps and wire cage traps seem to work equally.

These traps work best when wooden "wings" are added to direct the animal into the trap.

Wings reconstructed by placing 2 foot by 6 foot lumber in a manner that funnels the animal into the trap. Wings should be at least 8 feet long but can be much longer. Wings should block travel of the animal. Set traps where the damage is occurring.

IMPORTANT! Captured individuals SHOULD NOT be relocated. Research at WSFNR suggests low survival in experimentally relocated animals.

Homeowner should euthanize the animal according to local laws and ordinances or employ local wildlife control operators to solve armadillo problems.



Examples of wooden traps and wire traps







Armadillo Prevention and Control

If damage is isolated to a garden area, and electric fence may be an effective form of control.

- A single strand 3-4 inches off the ground should be sufficient
- Poly tape electric fence wire with a New Zealand-type charger makes an effective and safe exclusion device

BE VERY CAREFUL WHEN PLACING A FENCE IN AREAS WHERE CHILDREN PLAY.





Armadillo - Prevention and Control

Shooting armadillos at night is an effective and SELECTIVE method. HOWEVER, this method requires constant vigilance to find the animal. In addition, local regulations on discharging firearms may prohibit this activity.







Chipmunks.....cute, but not so cute!





Chipmunk Habitat

- The Eastern chipmunk is found in the Piedmont region and mountains of northern Georgia but not on the southeastern Coastal Plain.
- Chipmunks live in suburban yards, wooded parks and forests, near clear cuts, and rocky outcrops.
- Densities can reach 3-10 per acre in natural habitat and 20-30 per yard in suburban areas.
- House cats love to hunt them and they bring their kill to homeowner's doorsteps to show their love and devotion



Chipmunk Food Habits

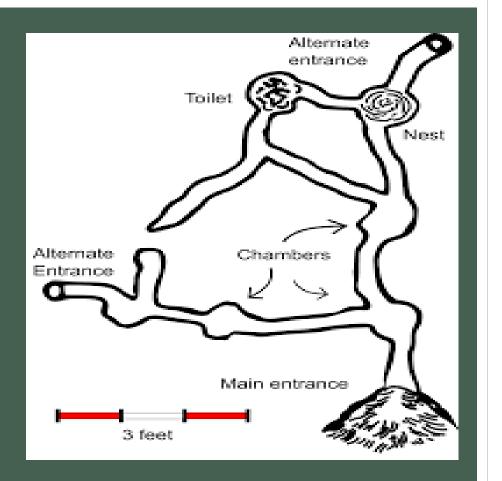
Chipmunks are omnivores

- They eat a variety of seeds and nuts in addition to bulbs, fruits, insects, meat, snails, and eggs.
- They can also be predator on mice and young songbirds.
- They readily climb in to shrubs and can feed on young birds

Chipmunk burrows can be up to 30 feet long with side branches leading to little "rooms" which they use for pantries.



Example of Chipmunk Burrow





Chipmunk Prevention and Control

Homeowners request advice about poison.

Poison is NOT the best way to eliminate
chipmunks

- Chipmunks are hoarders and may hide poisoned food for later consumption.
- Chipmunks are territorial and do not share food and may hide so other chipmunks cannot get to the poisoned bait.





Chipmunk Prevention and Control

Best control method:

Using standard mouse traps baited with peanut butter is an excellent strategy for control. Place a plastic flower pot with a "door-hole" over the trap to keep other animals from springing the trap.







Chipmunk Prevention and Control

Chipmunks have 3-5 young per litter and they mature in about 3 months. With such production a yard which has been cleared of chipmunks can be re-colonize very quickly.

Continue control efforts year round.

In the South, chipmunks may hibernate for only a short period of time.



Deer.....They are pretty but do ugly things to plants!







Deer Habitat

White tail deer is found in all habitats, from high mountain forests to coastal marshes.

White tail have been recorded in all 48 contiguous states, but are rare in California, Nevada, and Utah.







Deer Food Habits

- White tail deer is a browser feeding on leaves, buds, and twigs of a wide variety of plant.
- Agricultural crops like alfalfa, corn, milo, cotton, peanuts and soybeans are also favorites.
- Feeding activity peaks are at dawn and at dusk.
- White tail deer generally beds down during the day, but occasionally is seen during daylight hours.



Food Habits and Damage

- In many areas of the US, deer have become a nuisance, feeding on ornamental plants, fruit and vegetable plants
- Deer prefer plants that have been watered and fertilized (our precious gardens). They are tastier and more nutritious than untended plants.
- Male deer (or bucks) damage young trees by scraping their antler against them during mating season.











Prevention and Control Methods

Repellents: There are two types of repellents.

Taste repellents - Those that are put on the plant to give it a bad taste.

- Thiram
- Capsaicin
- Bitrex

Bad odor or scent repellents

- Milorganite, putrefied egg and tankage (putrefied slaughterhouse wastes)
 *****DO NOT put repellents on plants to be consumed by humans unless label indicates that it is safe to do so.

Research indicates that rotten egg smell is most effective in repelling deer temporarily. NOT recommended for use on plants for human consumption

DO NOT WAIT FOR DAMAGE TO START. It is difficult to discourage deer once they have begun browsing the area.



Fences

Electric fences

- Expensive
- Most effective solution
- Must be built correctly or deer will get in anyway.

Other fences-Hot tape

- Nylon webbing with low voltage thin wire embedded.
- When deer comes into contact with the wire they get a mild jolt
- People put peanut butter on the wire to encourage deer to touch the tape and speed up the learning process.



Other Scare Devices

- Dogs can be trained to chase deer.
- Pie pans and scarecrows can be used, but lose effectiveness since they are static.
- New devices such as motion activated water blasters. They can be expensive and may not work.
- To discourage bucks from rubbing trees spikes can be placed vertically around trees.

And finally.....



Shooting

White-tailed deer are managed in Georgia with strictly controlled hunting seasons

1) Archery season

2)Firearms season

Check with local/regional authorities for seasons.







Moles

Two species in Georgia

- Eastern mole inhabits the entire state of Georgia
- Star nosed mole is primarily in Northeast Georgia

Both related to the shrews with stout bodies and short legs.

Both have eyes covered by skin and can only distinguish between light and dark.

Moles literally swim through soft earth with powerful hand-like front feet with

Flattened toenails



Eastern Mole Star Nose







Habitat

Moles are most common in areas of well drained loam or sand throughout the state.

Moles live in burrow systems that are about a foot underground

When moles are hungry they move up and travel the upper few inches of soil to a productive feeding area. They plow new ground looking for food.

















Damage

Moles do not eat plants, plant roots, bulbs, tubers, grass, or gnaw on plant trunks.

The damage they cause in yards result from their attempts at hunting their desired food

Raised earthen tunnels in lawns and gardens may be indicative of runways.

Tunnels in lawns and landscapes are unsightly and may cause roots of grass and plants to dry out.



Overwatering forces worms and grubs to the surface where moles hunt.

- Reduce watering and kill grubs for success.
- Killing the moles diet helps, but limited efficacy.

Using insecticides sparingly in feeding areas diminishes the food supply, but has slow and uncertain results.

A direct approach is trapping and killing moles. Traps are sold can be purchased at nearly any garden store, home center, or large discount store that has a garden center.



Tree Squirrels

Three Species of squirrels in Georgia: fox squirrels, gray squirrels, and flying squirrels.

Fox and gray squirrels are active during the day.

Flying squirrels are active at night.

Fox squirrels are about twice as large as gray squirrels and exhibit several color phases.



Habitat

Squirrels nest in tree cavities, man made squirrel boxes or in leaf nests.

Home range size varies the the season and availability of food.

- Home ranges have been commonly described from 1-100 acres.
- Squirrels move within their range according to availability of food.
- In the fall they prefer food bearing forests. Squirrels may travel
 5 miles or more in search of better habitat in poor food bearing years.



Food Habits

Squirrels flourish where there is an abundant supply of acorns and nuts

They also eat flowers, vegetables, seeds, fruit, mushrooms, insects and bird eggs.

They will chew through bird feeders and feed storage to eat bird seed.









Damage

Nut Orchards

- Squirrels can severely curtail production by eating nust prematurely and by carrying off mature nuts.
- Both fox and gray squirrels can cause losses in pecan orchards
- Fox squirrels may chew bark of various orchard trees.

Residential areas

- Squirrels sometimes travel power lines and short out transformers.
- They may gnaw wires and enter buildings
- They will gnaw the aluminum tie wires on chain link fences.



Damage

Residential yards

- They will che bark on ornamental trees or shrubbery.
- They take food out of bird feeders
- Sometimes they chew to enlarge openings of birdhouses and then enter to eat nestling songbirds
- Flying squirrels are small enough to enter most birdhouses and are especially likely to eat nestling birds and eggs
- In gardens they may eat planted seeds, mature fruits or grains such as corn.



Exclusion: Prevent squirrels from climbing isolated trees and power poles by encircling them with and 18-24 inch wide collar of metal

- Place metal 3-4 feet off the ground
- Attach metal using encircling wires held together with springs to allow for tree growth.

Trim trees appropriately to prevent squirrels from jumping onto roofs

Close openings to buildings with heavy half-inch wire mesh or make other suitable repairs.



Repellents: Thiram painted on plant stems or bark may reduce or prevent chewing. Check label on squirrel repellent.

Toxicants: Use of toxicants in residences may result in undesirable odors from animals that die in out-of-the-way places

Fumigants: There are no fumigants registered for controlling tree squirrels.

Traps: There are a variety of traps that will catch squirrels

- Snap traps for regular sized rats will catch the smaller squirrels and flying squirrels.
- Box and cage traps—best to "pre-bait" live traps so squirrels become
 accustomed to the trap before the actual trapping begins.
- Remember that after the animal is trapped and alive call proper authorities for removal—-do not relocate animal yourself.



Shooting: Where firearms are permitted, shooting is effective.

- A shotgun with #6 shot or .22 rifle with rat shot is suitable.
- Check with state wildlife agency for regulations pertaining to the species in the area
- A BB-gun or air rifle can also be effective.

Other Methods: Several methods used simultaneously are more successful that single method. Example, finding squirrel entry into an attic and close entry along with using baited live traps to catch any squirrels that accidentally caught in the attic.



Using Traps

Many local animal control agencies will provide traps and assistance in dealing with nuisance wildlife. It is important to use the trap's correctly to be successful in trapping the intended animal.

What happens after the animal is caught? There are very few options.

- Wild animals can bite when threatened or frightened.
- It is often illegal to relocate animals and can cause undue stress to the animal.
- Other landowners do not want the problem animal

 A veterinarian could be contacted to euthanize the animal

Generally wildlife control is best handled by nuisance wildlife professionals tith proper credentials.



Have More Questions? Need Help?



Contact us at waltonmg@uga.edu 770-267-1925

Walton County Extension 1258 Criswell Rd. | Monroe, GA 30655

Office hours: **Monday - Friday** 8:00 am-Noon & 1:00-5:00 pm

MG Help Desk hours: Tuesdays 1:00-4:00



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Walton County Master Gardeners invite you to

Free Fall 2023 Gardening Talks

Mondays 2:00-3:00 p.m. O'Kelly Memorial Library 363 Conyers Road, Loganville GA

Aug 7: Fall Bulbs for Spring Color

Aug 14: Cool Weather Vegetables

Aug 21: Walton County Gardens

Aug 28: Outsmarting Nuisance

Wildlife

Sept 7: The Nature of Compost





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Free Fall 2023 Gardening Talks

Tuesdays 4:00-5:00 p.m. W.H. Stanton Memorial Library 407 W. Hightower Trail, Social Circle GA

Aug 8: Fall Bulbs for Spring Color

Aug 15: Cool Weather Vegetables

Aug 22: Walton County Gardens

Aug 29: Outsmarting Nuisance

Wildlife

Sept 5: The Nature of Compost





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Free Fall 2023 Gardening Talks

Wednesdays 2:00-3:00 p.m. New UGA Extension Office 1258 Criswell Rd SE, Monroe GA



Aug 16: Cool Weather Vegetables

Aug 23: Walton County Gardens

Aug 30: Outsmarting Nuisance

Wildlife

Sept 6: The Nature of Compost







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Don't forget to fill out the evaluation!



Let us know what classes you would like to attend in spring 2024.

Want to be a part of a great group of gardening enthusiasts who love to share their time and talents with home gardeners?

Join us!

Fall classes have already begun, but there's always next year.

Download the application for the Class of 2024 next spring!

