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# Control of Small Mammals and Birds<sup>1</sup>

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Through extensive habitat alteration, clearing of fields and planting of crops, building of structures, and so on, man has produced situations that are often conducive to exploitation by wildlife. Damage control measures seek to limit the amount of damage and not to eliminate the species responsible. Man and other animals are integral parts of ecosystems. Control measures practiced by man have effects on all other parts of an ecosystem, including man himself. The effects of control practices on the ecosystem should be considered versus the effects of using no control practice.

Habitat modification also can be used as a control practice through reduction or elimination of physical characteristics that attract wildlife. Food and shelter are major limiting factors. Reduce food for wildlife by not feeding pets outdoors, securing garbage cans, protecting poultry and livestock in proper enclosures, fencing gardens, etc.. Shelter for wildlife may be limited by preventing access to structures and practicing 'clean' agriculture.

Sometimes it is better to accept small losses than to attempt control measures. Plan for some losses to rabbits or raccoons in a garden by planting some extra crops. Predatory animals preying on game species such as deer generally weed out weaker members, thus maintaining a healthier herd. Many predatory animals are useful controls against crop-attacking animals and should be considered as a natural part of some control programs.

If it becomes necessary to use poisons as control measures, please remember that most are toxic to other animals and humans as well. Poisoned target animals should be disposed of immediately to prevent

secondary poisoning of predators or scavengers. Most poisons are registered for specific species and only in certain situations. Keep poisons away from children and pets, and always read the directions on the product label before application. Also in cases where control may involve firearms, be sure you check with local authorities about shooting and hunting regulations in your area.

## ENVIRONMENTAL CONTROL

All animal and bird problems occur because we have created inviting living conditions for these pests. Lush field crops offer a much greater food supply than is available on wild lands.

Sometimes it is possible to lessen the amount of animal and bird damage by locating high damage crops away from adjacent wild lands, to plant "buffer zones: of desirable animal or bird crops between the wild lands and the crops to be protected.

The most dramatic examples of environmental effects are those which often develop right at the farm headquarters. Farm buildings and livestock pens can be completely free of rats, but if they are managed in a sloppy, wasteful manner for an extended time, rats will come from some place and accept the invitation of bountiful board and room. By the same token, if a rat-infested farmstead is cleaned up and managed in a neat and careful manner, the rat population will immediately begin to lessen. Heavy rat populations are positive indicators of sloppy wasteful housekeeping on the farmstead.

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1. This document was published December 1992 as RF-AA086, Florida Cooperative Extension Service. For more information, contact your county Cooperative Extension Service office.
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## RABIES DATA

Rabies is a virus disease that affects all warm-blooded mammals. The dog, cat, raccoon and skunk are all common carriers. The disease is always fatal.

Rabies can only be transmitted during the final stages of the disease (10 to 15 days). The virus is carried in the saliva and is transmitted from bites or from handling animals thought to be choking, etc. The highest danger and the shortest safe time in which to begin anti-rabies shots, follows deep bites which are close to the head. In dogs, incubation after exposure is known to have been longer than one year, and the shortest times are 21-30 days.

The first visible symptoms of rabies usually include such things as: drastic changes in temperament and disposition; changes in the sound of the voice; high nervous state; tendency to wander; lack of appetite and loss of weight.

Animals suspected of rabies should not be killed unless necessary, but they should be confined for observation. Unless the disease runs its full course (or nearly so), it is nearly impossible to make laboratory diagnosis.

Report all suspected bites and other exposures to a doctor and to the State Board of Health Representatives.

## ANIMAL IDENTIFICATION AND CONTROL

### House Mouse

**Description:** Up to 5 inches; long hairless tail, same color top and bottom; footprints up to 3/4 inch.

**Range and Habits:** Range includes entire state. Lives in small areas, as desk drawers or one corner. May occasionally reach high number in outdoors.

**Control Measures:** Entrance into buildings can be reduced by blocking all holes of diameter equal to or greater than the diameter of a pencil. Glue boards, snap traps.

### Norway Rat

**Description:** Up to 15 inches; tail same length as body; dark brown color; 3/4 to 1 1/2 inch footprint.

**Range and Habits:** Entire state, especially inland. Excellent climber; usually lives above ground.

**Control Measures:** Closing off holes larger than 1/4 inch into buildings. Glue boards and/or snap traps.

### Tree Squirrel

**Description:** Up to 18 inches; excellent tree climber; bushy tail; grayish color. Footprints 2-3 inches.

**Range and Habits:** Entire state. Lives close to trees and shrubs. Eats nuts and fruits, occasionally strips bark.

**Control Measures:** Closing off openings into attics where they may nest. Naphthalene will occasionally discourage nesting squirrels in attic. Problem individuals may be eliminated by shooting (where firearms are legal).

### Pocket Gopher

**Description:** 9-12 inches; medium long tail is hairless; furlined cheek pouches; strong stock body; tan color.

**Range and Habits:** Most of state in dry sandy areas; no surface tunnels; earth mounds of 2 gallons or more.

**Control Measures:** Specially designed traps set down in gopher tunnels. Poisoning is illegal in Florida.

### Mole

**Description:** 4-6 inches; short tail and pointed nose. Very short padded-like front feet; eyes and ears not visible.

**Range and Habits:** Entire state. Lives underground. Sometimes makes small lumpy mounds; mostly makes tunnels just under surface of ground. Feeds on worms, grubs and other insects.

**Control Measures:** Harpoon traps set in tunnels.

### Bats

**Description:** Small mammals with wings. The only truly flying mammals. Most bats have a membrane connecting the hind legs. Eyes are small and beady.

**Range and Habits:** Entire state. Eat insects. Solitary species hang in foliage at night, others hang in hollow trees or attic of buildings.

**Control Measures:** Closing off holes into buildings where bats may roost. This should be done at night after the bats have gone out to forage and outside the breeding season. Naphthalene sometimes works to repel bats from attics.

### Beaver

**Description:** 35-40 in. including tail. Weights 30-60 lbs. Rich brown fur. Tail naked, scaly and shaped like a paddle. Huge front teeth. With its tail, it often slaps the water's surface while diving, making a loud report.

**Range and Habits:** North Florida. May build dams of sticks and mud across a stream, or build large conical house of similar material at the edge of a lake. Occasionally floods ponds or field. Eats willow, maple and other trees.

**Control Measures:** The most consistent method of control is trapping. Shooting is also effective. But lethal measures should be avoided if possible. Corrugated plastic tubing may be used to control water levels and minimize the damage in areas flooded by beavers. See Kenneth J. Roblee (1983) in First Eastern Wildlife Damage Control Conference.

### Raccoon

**Description:** Size of small dog; Black face marks, color rings on tail; grizzled gray color; tracks 2-3 inches with long toes.

**Range and Habits:** Entire state. Wooded areas and around water. Eats fish, clams, frogs, corn, melons, peanuts. Common rabies carrier.

**Control Measures:** Capture alive in box traps and translocate to another location at least 15 miles away. Relocation is discouraged because of the potential for disease transmission. Fences with underground extensions (to prevent burrowing) may be built around poultry yards. Shooting may eliminate problem individuals.

### Skunk

**Description:** House cat size; black and white markings; bushy tail. Tracks 1 1/2 inches, dainty. Bad smell.

**Range and Habits:** Entire state. Roots for insects and literally upends some areas. Hunts mice and eggs around farm buildings. Common rabies carrier.

**Control Measures:** Capture alive in box trap and relocate at least 10 miles away. Fence, with underground extension, surrounding garden or poultry yard will keep out skunks.

### Fox

**Description:** Small dog size; tan to grayish color; bushy tail. Tracks 1-2 inches and dainty.

**Range and Habits:** Entire state. Dry wooded areas. Eats rodents, insects, birds, fruits, melons, poultry, and young livestock. Common rabies carrier.

**Control Measures:** Capture alive with box traps, and relocate at least 25 miles away. Leg-hold traps; shooting; fencing around poultry yards; hunting w/dogs.

### Black Bear

**Description:** Nearly black coat. Large in size; height at shoulder 3-3 1/2 feet; length 4 1/2 to 6 1/2 ft. Adults weigh several hundred pounds.

**Range and Habits:** Much of Northern Florida and parts of southern Fla. Forests and swamps. Diet consists mostly of vegetation, including twigs, bark, leaves, nuts, roots, various fruits, corn, berries. Tears apart rotting logs to get grubs, beetles, ants. Small to medium size vertebrates often eaten. Rips open bee trees to eat the honey, honeycomb, bees, larvae.

**Control Measures:** Properly constructed electric fence around apiary should keep them out. Live trapping and relocating by Fla. Game and Fresh Water Fish Commission if fencing fails.

### **Rabbit**

**Description:** Long ears, long hind legs, short cottony tail.

**Range and Habits:** Entire state. Feeds on vegetation. The marsh rabbit feeds on bulbs and rhizomes as well. May do damage to gardens. May also girdle trees by chewing on the bark.

**Control Measures:** Live trap and relocate at least 5 miles. Shooting. Fencing around gardens. Wire mesh cylinders around bases of trees.

### **White-tailed Deer**

**Description:** Hoofed mammal with antlers that are shed each year. As it flees, the large white tail may be seen waving back and forth. Usually much larger than dog.

**Range and Habits:** Entire state. A browser. Feeds on twigs, fungi, acorns, grass and herbs. Can do damage to young orchards and vegetable crops. Inhabits forests, swamps and juxtaposed open areas.

**Control Measures:** Fencing around crops or orchards. Introducing hunting on unhunted populations can help reduce pressure on crops and orchards.

### **Armadillos**

**Description:** Size of large housecat. Horny shell and scaly tail. Dark brown color; tracks 1 1/2 to 2 inches with prominent toes.

**Range and Habits:** Entire state. Most eat in coast and central inland areas. Woodlands and bush areas where soil is suitable for digging. Digs many holes. Digs numerous small holes while foraging. Feeds on insects and other small invertebrates.

**Control Measures:** Live trap and transport. Search at night with flashlight and capture alive with a net.

### **Bobcat**

**Description:** Head and body 25-30 in; body wt. 15-35 lbs. Short with dark spots. Eartufts.

**Range and Habits:** Mostly nocturnal. Feeds on small mammals and birds, also carrion food if not tainted.

**Control Measures:** Live trap and relocate over 25 miles away.

### **Blackbirds (Redwings and Cowbirds)**

**Description:** 6-8 inches; black; often in large flocks.

**Range and Habits:** Redwing occurs throughout the state. Cowbirds in Northern half of state during winter and Northern one third during spring and summer. Digs and pulls sprouts. Pecks vegetables and fruits. Eats standing grain.

**Control Measures:** Anti-bird netting over individual fruit trees. Scaring devices such as recorded alarm and distress calls, 12 gauge exploding shells (Secondary explosions produced over field); Gas exploders. A varied combination of the scaring devices should be employed.

### **Crows**

**Description:** 16-20 inches; black, raspy voice.

**Range and Habits:** Entire state. Digs and pulls sprouts and eats ripe and harvested corn.

**Control Measures:** Scaring devices such as recorded alarm and distress calls, 12 gauge exploding shells, gas exploders. It is important to integrate several scaring devices to be successful.

### **Starlings**

**Description:** 4-7 inches; stubby tail; black and white speckles; yellow beak.

**Range and Habits:** Entire state. Sometimes with blackbirds. Often flies to city roofs in large numbers and defaces buildings, etc. with droppings. Insect eater.

**Control Measures:** Integration of scaring devices such as recorded alarm calls, 12 gauge exploding shell (with secondary explosion), gas exploders. Exclusion from airplane hangers and other structures with plastic or nylon netting. Installing slanted boards or sheet metal on ledges to render them less appropriate for nesting. Installing sharp upright spines. (Will (1983) in the Second Eastern Wildlife Damage Control Conference).

**House Sparrow**

**Description:** 3-4 inches. Male has black bib and white cheeks. Female has unstreaked dingy breast, streaked back.

**Range and Habits:** Entire state. Eats small grains. Fouls grains and feeds; fouls buildings and city parks. Carries bird mites.

**Control Measures:** Plastic or nylon netting to keep out of airplane hangars, screening or wire mesh over holes in buildings.

**Table 1.** Types of Damage and Animal Responsible

Type of Damage and/or Location	Indicators and Signs	Animal
Rats Inside Building	Feed sacks cut; 1 1/2 inch holes; droppings 1/4 to 1/2 inch; footprints over 1/2 inch; large gnawed holes; ground burrows or attic runs; night activity	Norway or Roof Rat
	Feed sacks cut; holes 1 inch or less; droppings 1/4 inch or less; footprints less than 1/2 inch, bulky nests of fine material; musty odor.	House Mice
Dense Grass and/or Weeds	Often dampish; dim runways; holes 1 1/2 inches if present; vines, fruits, stems gnawed or clipped at ground level to 5 inches above; young trees girdled above ground.	Cotton Rat
Sparse Cover or Bare Fields	Small mounds or open holes on bare ground, 1 - 2 1/2 inch size; footprints 1/2 inch; freshly dug seed or sprouts with holes nearby.	Deer Mouse Family (Watermelon mouse)
Seed Digging and Sprout Pulling	Mouse footprints and tail marks; seed dug before sprouting; dug not pulled	Watermelon Mouse
	Bird tracks; only when sprouts visible; pull and break sprout from top	Blackbird, Grackle
	Extensive digging by large animal; 2-3 inch track	Coon, Skunk, 'Dillo
Rooting	Extensive rooting; ground "upended" rather than just scratched	Skunk, Armadillo
Nuts, Fruits, Stems of Trees Clipped	Seedling clipped or girdled from ground level to 5 inches above	Cotton Rats
	Top of seedling clipped more than 5 inches above ground; twigs clipped, fruits and nuts of large trees damaged	Cottontail Deer, Tree Squirrels
Mounds of Soil Without Open Holes	Mounds 4-5 inches or more high and 12 inches across; no visible connecting tunnel. Often line of mounds indicates direction of deep burrow	Pocket Gopher Salamander
	Mounds 1-2 inches high and 3-6 inches across, lumpy appearance; raised ridge of earth indicating close-to-surface tunnel connecting mound	Moles

Type of Damage and/or Location	Indicators and Signs	Animal
Poultry Kills	Small dog-like tracks; birds generally carried away; enter near ground level.	Fox
	Long-toed tracks; numerous feathers; sometimes multiple kills; may climb	Raccoon
	Tracks and sign scarce; may enter over high fences; sometimes multiple kills	Bobcat
	Many feathers; smaller birds generally; heads bitten	Skunks
	Few or no feathers and heads eaten, sometimes by pulling through mesh wire	Owls, Raccoon
House and Barn Attic Active only at night	No rat sign inside buildings, no runway marks, no gnawed partitions	Flying Squirrels
	Rat signs inside buildings; gnawed partitions and runway marks; rat feeding signs at garbage cans	Roof Rats

### METHODS OF MAMMAL DAMAGE CONTROL

**House Mouse:** lethal trap, glue boards

**Norway Rat:** lethal trap, exclusion and protective guards, glue boards

**Roof Rat:** lethal trap, exclusion and protective guards, glue boards

**Tree Squirrels:** exclusion and protective guards, repellents, shooting

**Pocket Gophers:** lethal trap

**Moles:** lethal trap

**Bats:** exclusion and protective guards, repellents

**Beavers:** live trap, lethal trap, habitat modification, shooting

**Raccoons:** live trap, exclusion and protective guards, shooting, sentry dog in yard

**Skunks:** live trap, exclusion and protective guards, shooting, sentry dog in yard

**Foxes:** live trap, exclusion and protective guards, shooting, sentry dog in yard

**Black Bear:** live trap, exclusion and protective guards

**Rabbits:** live trap, exclusion and protective guards, shooting

**Deer:** exclusion and protective guards

**Armadillos:** live trap, shooting (hunt at night with flashlight - shoot, or net)

**Bobcat:** live trap

### METHODS OF BIRD DAMAGE CONTROL

**Blackbirds:** exclusion and protective guards, scaring devices

**Crows:** exclusion and protective guards, scaring devices

**House Sparrow:** exclusion and protective devices

**Starlings:** exclusion and protective guards, habitat modification, scaring devices

**Pigeons:** exclusion and protective guards, habitat modification, repellents

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