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2-17-1994

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MANAGING RACCOONS, SKUNKS, AND OPOSSUMS IN URBAN SETTINGS

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ABSTRACT: Increased urbanization and decreased government funding, plus increased numbers of certain wildlife species, have combined to provide a greater need for wildlife management of nuisance animals in the urban environment.

Proc. 16th Vertebr. Pest Conf. (W.S. Halverson& A.C. Crabb, Eds.) Published at Univ. of Calif., Davis. 1994.

INTRODUCTION

The pest control industry has been increasingly called upon to face this challenge, and the pest control operator (PCO), when properly trained, is well suited to provide wildlife removal services. They generally have the basic tools and equipment (ladders, flashlights, traps) to handle pest animal problems. PCOs must not only be aware of the biological aspects of wildlife pest control, but must be well versed in the sociological aspects as well. Integrated pest management, utilizing ecologically responsible control techniques, customer education and a realistic expectation of what results are to be achieved pave the way to successful urban wildlife management.

Most nuisance wildlife problems occur in urban and suburban environments simply because you have large numbers of people who are often unfamiliar with wildlife, and large numbers of various wild birds and animals displaced by urban sprawl. While we hear a lot about endangered and declining species, many animals (deer, geese, raccoons) have adapted well and are more numerous today than 100 years ago.

To some people the sight of a raccoon in the yard is a rewarding wildlife encounter—to another person it may be a frightening experience in which they perceive a threat to their own safety.

The modern urban American faced with a wildlife problem today is torn by conflicting emotions of dealing with an animal that is both a pest and an aesthetic enhancement to the quality of life in the city. When there is a conflict, the home owner rarely has the tools or know-how to alleviate the problem. Unfortunately, some people don't care how the problem is solved, be it with guns, poisons or indiscriminate use of steel traps-which may lead to secondary poisoning, injured wildlife, and negative public relations.

Table 1 takes a look at what the pest control industry is doing in the field of nuisance wildlife control: (Table #1 of 1989 NPCA Vertebrate Control Survey).

Table 2 takes a look at the preferred control techniques of PCOs: (NPCA Vertebrate Control Survey Table #2).

COMMON NUISANCE ANIMALS

Tree Squirrels - (classified as game animals in most states)

Fox squirrels *(Sciurus niger),* grey squirrels *(Sciurus carolinensis, griseus)* and red squirrels *(Tamiasciurus hudsonicus, douglasii)* are diurnal, and usually feed on mast (fruit, nuts). Flying squirrels *(Glaucomys volans, sabrinus)* are nocturnal, and in addition to mast, they also eat bird eggs, nestlings, and insects.

Squirrels usually breed at one year old, normally in January and June, and have a 42 to 45 day gestation. A litter usually contains two to three young that are weaned at 10 to 12 weeks. They live up to four years old in the wild.

Squirrels nest in tree cavities, leaf nests, attics, and have a home range of 1 to 100 acres, but may migrate up to 50 miles. Damage concerns include their chewing bark, raiding crops and bird feeders and gnawing wires. They travel powerlines, short out transformers, enter dwellings for shelter and to raise young.

Trapping techniques for squirrels include cage traps for live-trap and release (bait with nuts/peanut-butter), body-gripping and snap-traps for lethal control. Glue-boards are not recommended. Traps should be set in a

Table 2. NPCA Vertebrate Control Survey 1989 (N=440)

Do You Control:	Yes (%)	Do You Control:	Yes (%)
Mice/Rats	99.8	Opossum	38.0
Squirrels	74.0	Snakes	31.0
Birds	72.3	Woodchuck	20.0
Bats	70.6	Rabbits	12.0
Raccoon	55.0	Muskrat/Nutria	7.0
Skunks	47.2	Armadillo	6.0
Moles	45.0	Coyote/Foxes	3.0

Adapted from: Pest Management August, 1989

Table 2. NPCA Vertebrate Control Survey 1989

Spp.	N	Preferred Control Techniques (%)
Mice/Rats	439	Pesticides (53.9), Killtraps (22.4), Exclusions (17.6)
Squirrels	326	Livetraps (50.0), Exclusion (33.5)
Birds	318	Exclusion (45.2), Repellents (32.5), Pesticides (18.8)
Bats	311	Exclusion (50.0), Repellents (30.3), Pesticides (15.3)
Raccoon	242	Livetraps (66.5), Exclusion (25.2)
Skunks	208	Livetraps (61.3), Exclusion (22.3)
Moles	198	Pesticides (50.0), Killtraps (20.1), Fumigation (17.2)
Opossum	167	Livetraps (70.2), Exclusion (22.5)
Snakes	136	Exclusion (37.9), Repellents (24.2), Livetraps (16.4), Killtraps (15.5)

Adapted from: Pest Management August, 1989.

line of travel outside the den. There is poor light in the attic—it is a shelter, not a feeding site. Common entries are roof vents, louvre vents, soffit vents, construction gaps, and rotten fascia boards.

Other management tools for squirrels include trimming trees back 8 to 12 feet from structure. Use sheet metal, hardware-cloth, or other impervious materials to board up entry holes. Be sure all squirrels are removed prior to closing entries. Squirrel repellents include tactiles and taste repellents. Shooting may be performed outdoors in rural areas, but is not recommended in urban areas or enclosed spaces.

Squirrels in the fireplace can be removed with a control stick. Squirrels in the basement almost always come in through the furnace chimney and can be removed with a trap or control stick. Cover chimneys with NFPA 221 approved chimney caps.

Toxicants (ZP) are not recommended as animals may die in wall voids and cause odor problems. There may also be a secondary hazard to pets (i.e., dogs), and kids trying to assist a sick animal may be bitten.

RACCOONS *(Procyon lotor)*

Raccoons are nocturnal, two to three feet long, and average 10 to 20 pounds. They are usually classified as a fur-bearer or game animal. Raccoons are omnivorous, eating both plant and animal foods.

Raccoons usually breed in February and March, with a 60 day gestation, and have one litter per year. Young open their eyes at about three weeks of age. There are usually three to five young in April, May or June, and are weaned at 10 to 15 weeks.

Nests may be in tree cavities, ground burrows, sewers, attics, garages, etc. Raccoons do not truly hibernate, but hole up for days, weeks, or even months depending on the weather. Their home range is 3 to 20 square miles for males, one to six square miles for females. Home ranges may be less in urban areas where there is easier access to life requirements.

Damage concerns for raccoons include preying on birds, nests and feeders, and garden crops (especially sweet corn). They are notorious garbage can raiders, and will roll sod for worms, grubs, and insects. They enter dwellings (attics, crawl spaces) for shelter in the winter, and to raise young in the springtime, often causing damage to vents and shingles. Raccoons enter chimneys (both fireplace and furnace) and rest behind the damper in a fireplace.

Trapping techniques include cage traps for live-trap and release (cat-food, fish, chicken for bait). You can use marshmallows to reduce non-target catches. Body-gripping traps are used for lethal control as a last resort. Set live-traps in line of travel outside den. Blind set or den set body-grip traps over entry hole for lethal capture.

Common entries are roof vents, louvre vents, soffit vents, construction gaps, rotten fascia boards, chimneys, and they may even rip through the roof if wood is soft. Leg-hold traps are not recommended for PCO work in urban areas.

Other management tools for raccoons include trimming trees back four to eight feet from structures, use sheet metal or hardware-cloth to board up entry holes. Be sure all raccoons are removed prior to closing entries.

Repellents are generally ineffective on raccoons, although you may use ammonia in garbage cans (do not use moth-balls) to discourage garbage can raids. Shooting outdoors may be allowed in rural areas, but is not recommended in urban areas or enclosed spaces. Raccoons in the fireplace can be removed with chimney rods, brush, and a control stick. Raccoons in basement almost always come in through the furnace chimney. Remove them with a trap or control stick, and cover chimneys only with approved chimneys caps. No toxicants are registered for raccoons.

SKUNKS

Striped skunks *(Mephitis mephitis)* are usually not protected, while the spotted skunk *(Spilogale putorius),* hog-nosed skunk *(Conepatus leuconotus)* and hooded skunk *{Mephitis macroura)* may be protected in some states.

Skunks are nocturnal, two feet long, and weigh six to eight pounds. They are slow and deliberate—confident they can defend themselves. They discharge musk from the anal gland, and are capable of several shots, 10 to IS feet with accuracy. Skunks are omnivorous (eat both plant and animal foods) and prefer insects in summer, mice in winter.

They usually breed in February or March, have a seven to ten week gestation period, with usually one litter per year. There are usually four to six young that stay with the female until fall.

Skunks usually nest in ground burrows or crawl spaces, although spotted skunks climb and may go in attics or trees. They may be dormant for approximately four to six weeks in the coldest part of winter. Their home range is one to two square miles, while males may travel four to five miles during breeding season.

Damage concerns include garbage can raids, bee hive damage, loss of bird eggs, etc. They dig holes in sod for worms, grubs and insects, and may live under dwellings (porches, crawl spaces, sheds) causing objectionable odors.

Trapping techniques include covered cage traps (cover with canvas or blanket) for live-trapping, using cat-food, fish or chicken for bait. Body-gripping traps may be used for lethal control but will usually result in release of scent. Skunks are generally mild-tempered and give warnings (stomp feet when nervous). If you avoid loud noises, quick and aggressive actions, and handle the cage gently there are usually no problems. Set traps near entrance to den with blind set or den set over entry hole. Common entries are under porches, sheds and crawl spaces.

Other management tools include using hardware-cloth for installing rat-walls. When sealing entry holes, be sure all skunks are removed prior to closing entries. Repellents are generally ineffective. Shooting outdoors may be allowed in rural areas, but is not recommended in urban areas or enclosed spaces. Skunks will usually spray if shot. Electric fence may be used for site specific exclusion. No toxicants are registered for skunk control. Habitat modification (cleaning up wood piles/brush) and reducing access will help.

OPOSSUM *(Didelphis virginiana)*

Opossum are nocturnal, approximately three feet long with tail, have a long pointed face, and weigh five to ten pounds. They eat animal matter (insects, carrion) and have a home range of 10 to 50 acres.

Opossum usually breed from January to July, have two litters per year, average seven young that stay in a pouch for seven to eight weeks (marsupial), then stay with the mother another six to seven weeks before weaning.

Damage concerns include raids on garbage cans, bird feeders, pet food and bird nests.

Trapping techniques include cage traps for live-trap and release (cat-food, fish, chicken), and body-gripping traps for lethal control (usually not needed; only as a last resort).

Set traps in line of travel outside den (not inside), or blind set or den set over entry hole.

WHAT TO DO WITH THE ANIMALS

Relocation is controversial. Stress from relocation and territorial disputes may cause high injury and mortality rates among relocated animals. Displaced animals are unfamiliar with food sources and shelter sites.

Relocation is popular with most customers who feel that relocating an animal to suitable habitat gives animals another chance. There are not many practical ways to humanely euthanize animals for the average PCO, making relocation an easy option.

There are needs for further research on relocation. Little research on urban wildlife relocation and mortality rates has been done. To obtain meaningful data, studies need to be done on a species by species, and season by season basis, with comparisons to mortality rates under normal conditions.

Release on site is becoming increasingly popular, and a requirement in some states. Animals that are released after exclusion and/or habitat modification do not suffer relocation stress, although on site release may not be practical for some species (example-squirrels may cause additional damage trying to chew back in to food supply or young).

SUMMARY

There is a societal need for land development. As we continue to develop wildlife habitat there will continue to be conflicts between man and nature. Growing communications between government agencies and the private sector involved in urban wildlife management are called for, as are integrated control techniques, and customer and PCO education.