October 1991

Wildlife Damage News, Volume 2, Fall 1991

Follow this and additional works at: http://digitalcommons.unl.edu/icwdm_wdn

Part of the Environmental Sciences Commons

http://digitalcommons.unl.edu/icwdm_wdn/3

This Article is brought to you for free and open access by the Wildlife Damage Management, Internet Center for at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Wildlife Damage News by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
Cornell University Attacks Raccoon Rabies in Ithaca  
by Paul Curtis, Extension Associate

Cornell veterinarians and Wildlife Damage Management Program staff have consulted with professionals from the NYS Departments of Environmental Conservation (DEC), Health, and Agriculture and Markets, to coordinate a raccoon livetrapping study during winter and spring. The goal is to immunize 70 to 80% of the raccoons in the greater Ithaca area with a "killed-virus" vaccine in order to contain the spread of rabies. Raccoons will be released unharmed at the site where captured, and the vaccination should provide 1 to 2 years of protection from rabies. DEC has approved the use of an intramuscular vaccine on wild raccoons in the state.

The raccoon population in Ithaca is estimated at 1,000 animals, based on previous studies conducted by the NY Cooperative Fish and Wildlife Research Unit at Cornell. Consequently, researchers plan to capture and vaccinate about 750 raccoons during the next 6 to 8 months. Other reports have indicated that at least 70% of a wild raccoon population must be immunized in order to control a rabies epidemic. If this research effort is successful, the epidemic should skip over the Ithaca area as it advances northward. The urgency of moving ahead quickly with this project is apparent, as 3 rabid raccoons have already been found in the Town of Newfield, just southwest of Ithaca.

Dr. Susan Stehman, extension veterinarian in the Cornell Diagnostic Laboratory, is the program coordinator. For additional information, please contact Dr. Stehman at 607-255-3900.

5th Eastern Wildlife Damage Control Conference Held in Ithaca  
by Paul Curtis, Extension Associate

More than 175 wildlife management professionals and educators attended the 5th Eastern Wildlife Damage Control Conference in Ithaca during October 6-9. Thirty-four states and 2 Canadian provinces were represented at the meeting. Cornell Cooperative Extension agents and NYSDEC biologists participated in several conference sessions.

The focus of the meeting was human-wildlife interactions, and participants discussed the latest research and management technologies. Technical sessions included wildlife problems in suburban, agricultural, and forested landscapes; wildlife-related human health and safety issues; and the economical, social, and political aspects of wildlife damage management. Panel discussions focused on wildlife management college curricula, and involving citizens in the wildlife management decision-making process. Sharing information and experiences with colleagues throughout the country is always a highlight of national meetings.

Proceedings from the conference are currently being edited, and should be available in early 1992. The anticipated cost will be $20 (including shipping). To order a copy of the proceedings, contact Carol Rundle at 607-255-2814. For additional information about the conference, contact Paul Curtis at 607-255-2835; or Internet: pc90@nysaes.cornell.edu.
Citizen Task Force Slated for Greater Rochester Area
by Paul Curtis, Extension Associate

Cornell Cooperative Extension staff from Ithaca, and NYS Department of Environmental Conservation (DEC) biologists from Region 8, will be working with citizen groups in Deer Management Unit (DMU) 96 in an effort to actively involve various publics in making decisions about deer population levels. Paul Curtis, Extension Wildlife Specialist from Cornell University, will facilitate the meetings with a task force of local representatives from the Greater Rochester area in Monroe County. A series of meetings scheduled during January through March, will provide task force members with an opportunity to discuss each others' perspectives on deer, focus on the effects current deer numbers have on various interest groups, and decide on their preferences for future deer population levels in DMU 96.

Although the white-tailed deer is one of New York's most popular animals, high deer densities may cause excessive deer-vehicle collisions, or damage to agricultural crops and ornamental plants. To balance the viewpoints of various groups affected by deer, task forces include a broad range of interests including homeowners associations, sportsmen, agriculture, wildlife interest groups, highway safety personnel, tourism, and local businesses. Task force members will be asked to solicit input from other local residents who may have similar deer management concerns. Task force membership will be finalized by early January, and people in the Greater Rochester area will have an opportunity to contact individual members and voice their thoughts on deer populations in DMU 96.

By Becky Stout, Research Support Specialist with the Human Dimensions Research Unit at Cornell, will be evaluating the task force process. Task force meetings provide a learning experience for both the participating citizens and professional wildlife managers. A critical evaluation will allow biologists to streamline and improve methods for obtaining future public input in wildlife management decisions. For additional information concerning the DMU 96 task force meetings, contact Becky at 607-255-2828.

Animal Rights or Animal Welfare*

*Editor's Note: This article is reprinted from the Fish and Wildlife Reference Service Newsletter, Number 89, Summer 1991.

The animal rights movement is impacting wildlife management programs across North America. An important distinction must be made between the philosophy of animal welfare and animal rights. Animal welfare, a social movement since the mid 1800’s, is concerned primarily with ensuring the humane treatment of animals. The philosophy of animal rights can also trace its beginnings to the mid 1800’s, but it really did not become widespread until 1976, with the publication of the book “Animal Liberation” by the Australian philosopher Peter Singer. Animal rights goes several steps beyond the philosophical tenets of traditional animal welfare. The philosophy of animal rights promotes the belief that animals have rights similar to humans and that “speciesism”, or the exploitation of any one species by another, is morally wrong. It's important to remember that animal rights as a philosophy does not simply mean “anti-hunting”, but is a broader philosophy opposing most, and in some cases all, human use of animals (including the use of animals for food, sport, entertainment, scientific investigation, zoos, pets, fur and wool, etc.). While many animal rights organizations have targeted trapping and hunting as major wildlife-related issues, some of these organizations are, in fact, opposed to any human manipulation of the environment.

The animal rights movement is represented by local, regional and national organizations with diverse missions and degrees of stridency. Some animal rights organizations focus on specific issues like hunting, while others cover a broader agenda including everything from opposing biomedical research and animal husbandry to hunting and trapping. Organizations also vary considerably in their approaches. For instance, some organizations believe in civil disobedience and hunter harassment, while others try to influence the legislative process.

The methods used by the animal rights movement to challenge fish and wildlife management agency operations are numerous and varied. One common method is challenging the biological data state fish and wildlife agencies use to justify harvest seasons and methods. Legal challenges to California’s waterfowl season last year is a visible example of this type of challenge. The argument was that, in spite of the Federal guidelines, the California Department of Fish and Game could not biologically justify its proposed harvest levels on waterfowl populations under the California Environment Quality Act (CEQA) within the state.

Animal rights advocates also challenge the use of animals in research conducted by or for fish and wildlife agencies. Techniques such as collecting animals, toe clipping, and transmitter implants are viewed as unnecessary and unjustified.

(continued on page 5)
Species Profile-Eastern Cottontail
by Paul Curtis, Cornell Cooperative Extension

Description

The eastern cottontail (Sylvilagus floridanus) is the most common rabbit species in New York. Cottontails appear brownish gray in the field, however, closer examination reveals a grizzled blend of white, gray, brown, and black guard hairs over a soft grayish underfur. This rabbit's distinct brown and white, powder-puff tail is responsible for its common name. Eastern cottontails weigh 2 to 4 pounds, and are approximately 15 to 19 inches in length.

Range

Eastern cottontails are abundant throughout the United States except for the mountainous western states and northern New England. Within New York, eastern cottontails are found in western and southern portions of the state, but absent in the central Adirondack Mountains because of the area's long, cold winters and inadequate brushy field edges.

Life History

Rabbits are herbivores (eat mostly plant food), and prefer to eat succulent leaves, stems, shoots, and flowers rather than bark or twigs. During summer, goldenrod, raspberries, timothy, chickweed, clover, alfalfa, soybeans, wheat, rye, fallen fruit, and garden crops are frequently consumed. As green vegetation becomes less available during winter, rabbits feed on the bark and twigs of sumac, white and red oak, dogwood, sassafras, maple, rose, willow, mountain ash, and apple. Young trees with smooth, thin bark are preferred. Cottontails may take a variety of other plant materials depending upon the season and local availability. Rabbits also ingest their own feces in order to recycle wastes and utilize nutrients from tough, fibrous plants. Foraging usually takes place just before sunrise and just after sunset, although rabbits are often active at other times of the day or night.

Mating activity may extend from late February through September in New York. Litter sizes range from 3 to 7 young, which are born after a 28-day gestation period. Females often are bred within a few hours after birth, and may produce 5 litters during a single breeding season. Sexual maturity may be attained in 3 months in areas with ideal habitat, and juvenile females may contribute up to a quarter of the fall population. Young cottontails are born nearly hairless with their eyes closed, but mature rapidly, and leave their nest in 2 to 3 weeks.

Description of Damage

Rabbits may damage crops, flowers, and vegetable gardens in spring and summer. Young tulip sprouts that appear in early spring are particularly susceptible, and few garden crops are immune to cottontail feeding. During fall and winter, rabbits may strip bark, or cut twigs and buds from a variety of trees and woody shrubs. Plants may be eaten above the height of the deepest winter snows, and damage occurs in both suburban and rural areas.

Eastern cottontail foraging usually can be easily distinguished from that of white-tailed deer (Odocoileus virginianus) because stems damaged by rabbits will be cleanly cut. Deer have no upper incisors, and must twist and tear a branch while foraging, leaving a bite with a ragged appearance. Meadow voles (Microtus pennsylvanicus) may also girdle fruit trees, however, vole damage is usually closer to ground level, and individual tooth marks are much smaller than those of cottontails. Distinctive round droppings and tracks also make rabbit damage easy to identify, especially during winter.

Legal Status

Eastern cottontails are classified as game animals, and protected except during legal hunting seasons. Section 11-0523 of the NYS Environmental Conservation Law states that "Varying hares, cottontail rabbits, and European hares which are injuring property on occupied farms or lands may be taken thereon, at any time, in any manner, except by the use of ferrets, fitch-ferrets, or fitch, by the owners or occupants of such farms or lands or by a person authorized in writing by them and actually employed by them in cultivating such farm lands. No license or permit from the department is required for any taking authorized by this section. ... cottontail rabbits taken pursuant to this section in the closed season shall be immediately buried or cremated." All local laws or ordinances must still be followed.

Damage Management Methods

Exclusion is the best method for preventing rabbit damage to garden plants or ornamentals. A 3-foot-high...
(Eastern Cottontail cont.)

chicken-wire fence supported by wooden stakes will effectively protect small areas. The lower edge of the fence must be held tightly against the ground surface to prevent cottontails from pushing under it. Rabbits will not dig under a fence, but they will check for loose places and squeeze through existing openings. With proper storage, a simple fence may last 5 to 10 years, and is often the most cost-effective solution for rabbit problems.

Cylinders of 1/4-inch hardware wire will protect tree trunks or shrubs. Guards should be at least 2 inches larger in diameter than the trunk to allow for future tree growth, and should extend 2 feet above the average snow depth. Commercial plastic or paper tree wraps do not reliably protect trees, especially if rabbit numbers are high, or the weather is severe.

Several commercial taste repellents are registered for rabbit control in New York, and the fungicide thiram is the active ingredient in many of the products. Label instructions should be followed exactly, as most materials are only available for dormant season use, and cannot be used on plants or plant parts destined for human consumption. The effectiveness of repellents may be influenced by the thoroughness of application, weather conditions, and distance to alternative food sources. Excessive rain or snow may dilute the repellents, requiring repeated applications for adequate plant protection. As with fencing, trees should be treated at least 2 feet above the average snow depth. No toxicants or fumigants are currently registered for cottontail control.

Rabbits can be easily captured in traps. Livetraps with at least a 9 x 9 inch door, baited with apples, dry ear corn, or carrots, should be placed at entrances to the garden, or at sites where feeding has been observed on trees. Several styles of commercial livetraps are available from garden centers, hardware stores, and seed catalogues. Wooden box traps can also be constructed by homeowners. NYS Environmental Conservation Law permits only licensed Nuisance Wildlife Control persons or Wildlife Rehabilitators to transport live-captured animals, so the landowner must euthanize cottontails caught in cage traps, or release them at the site of capture.

Shooting is a quick and effective control method, however, local firearms laws must be followed, and shooting must be done in a safe manner. If cottontail numbers must be lowered, hunting during open seasons provides recreational opportunities. The 1985 National Survey of Fishing, Hunting, and Wildlife Associated Recreation noted that more than 69 million rabbit hunting days occur in the United States annually, and 6.5 million hunters contribute to cottontail's status as the most popular small game species.

Because of the eastern cottontail's reproductive potential, removal of animals usually provides only short-term relief from damage. Lethal control measures are most effective when implemented during winter, prior to the rabbit breeding season. Habitat modifications or exclusion methods provide the best long-term regulation of rabbit populations. Removing brush piles, weed patches, stone piles, or other debris where cottontails live and hide can quickly reduce their numbers. Rabbits are seldom found far from some form of dense protective cover.

Health Concerns

Cottontails are frequently infected with a variety of external or internal parasites that cause no public health implications. However, 2 diseases may cause problems for humans, and rabbits should always be handled with care. Tularemia, or "rabbit fever," is caused by the bacterium Francisella tularensis, which is usually transmitted by blood-feeding insects, especially fleas and ticks. The liver and spleen of infected rabbits is often covered by pinhead-sized white or yellow spots, and abscessed mesenteric lymph nodes are common. Tularemia is a life-threatening human disease, and anyone who has signs of illness after a potential exposure should consult a physician. With prompt antibiotic treatment, few cases are fatal. Fortunately, this disease is more prevalent in southern states, although cases have been documented in New York.

Larvae of 2 intestinal roundworms, Baylisascaris procyonis of raccoons and B. columnaris of skunks, are known to infect cottontails. Infection causes neurologic disease with a variety of symptoms including loss of balance, circling, and blindness. Eggs containing larvae are infectious for humans, and can produce the disease if ingested. Two human fatalities have been confirmed in the U.S., and several nonfatal cases have been documented. People should avoid handling rabbit intestinal tracts or feces, and wash hands thoroughly with a disinfectant soap after a potential exposure.
Active management that results in one species being favored over another has also been challenged. Animal rights organizations have challenged the proposed culling of feral goats on San Clements Island, in spite of evidence that goats overgrazing the island have caused the disappearance of 48 indigenous species of flora and have endangered six plant and animal species. Similarly, animal rights proponents have sued over the USFW's program to trap and kill non-native red fox preying on endangered bird species, the least tern and the lightfooted clapper rail, at the Seal Beach National Wildlife Refuge.

Protesting planned hunts and hunter harassment also are becoming commonly used strategies. The protest of planned hunts has successfully attracted the media and the public's attention. Nationally publicized examples are the protests and lawsuit over the planned hunt at Mason Neck National Wildlife Refuge and the protest of the annual bison cull outside of Yellowstone National Park. The technique of hunter harassment involves a group of activists following and confronting one hunter while he/she hunts, badgering the person with personal opinion and the animals rights philosophy on animal use. Last fall in New York, this type of confrontation led to a hunter firing into the air to dissuade the group. Because of the danger and potentially lethal implications of this sort of situation, 40 states have passed hunter harassment legislation to protect individuals engaged in lawful hunts. These laws are being challenged in court under the argument that hunter harassment is a component of First Amendment Rights to free speech under the U.S. Constitution.

Time for Newsletter Subscription Renewal
by Paul Curtis and Mike Fargione, Co-editors

For those readers who have a paid subscription for "Wildlife Damage News," now is the time to renew for 1992. This will be the fourth and final issue of Volume 2 (1991). We hope that the articles published during the past year have been both interesting and informative. The readership survey conducted last summer will allow us to continue to provide you with targeted and timely information. The subscription fee for Volume 3 will be $5. This charge covers printing and handling costs for the 4 issues you will receive in 1992. Checks should be made out to "Cornell University- Wildlife Damage News," and mailed to: Carol Rundle, Cornell Cooperative Extension, Room 108, Fernow Hall, Cornell University, Ithaca, NY 14853-3001.

At their fall meeting, the Wildlife Damage Management Advisory Committee voted to continue providing the newsletter free-of-charge for state agencies and specific program cooperators. Given the tight state budget situation, achieving this goal will be even more difficult than in past years. However, we will make every effort to meet this request if funding is available.

Department of Natural Resources Initiates Master Forest Owners Program
by Gary Goff, Extension Associate

Cornell Cooperative Extension has joined the ranks of a dozen states across the nation in initiating a "Master Forest Owners" Program. A select corps of 32 experienced and highly motivated forest owners were certified at a 3-day training in November at Cornell's Armot Teaching and Research Forest in Van Etten, NY.

The program's goal is to have the volunteer Master Forest Owners meet with local, less experienced forest owners in their woodlots to encourage and motivate them to practice sound forest management principles. The Master Forest Owners' primary responsibility is to be "information brokers", not paraprofessional foresters. Training included sawtimber and wildlife management, forest economics, forest ecology, and educational methods. In addition, Master Forest Owners learned how forest owner needs can be met with the assistance of public and private agencies and organizations, and the services of professional resource managers such as foresters.

The NY Master Forest Owner/COVERTS Program is sponsored by the Ruffed Grouse Society, The National Wild Turkey Federation and the NY Forest Stewardship Program with cooperation from Cornell Cooperative Extension, NYS Department of Environmental Conservation and the NY Forest Owners Association. The term "coverts" refers to good habitat for the popular game bird, the ruffed grouse. As such, coverts is symbolic of the importance of habitat management for all wildlife.

The training workshop was conducted by a variety of volunteers and professionals including Cornell faculty and staff, College of Environmental Science and Forestry faculty, NYS DEC foresters, professional consulting and industry foresters, and volunteers from the NY Forest Owners Association.

This year's program was limited to about two-thirds of the state. Next year's program will be state-wide and train 60 volunteer Forest Owners via two regional training workshops.

For more information about the program contact Gary Goff, Cooperative Extension Associate, MFO Program Leader, Fernow Hall, Cornell University, Ithaca, NY 14853 (telephone 607/255-2824).
New Urban Wildlife Newsletter Available
by Paul Curtis, Extension Associate

The Urban Wildlife Control Association (UWCA) has recently formed (see related article by Patrick Martin, p. 7), and has published the first issue of "Urban Wildlife News." This newsletter is "intended to share information, promote interaction, and project a positive public image for the operators of nuisance wildlife control businesses." The UWCA is a nonprofit organization formed to assist nuisance wildlife control operators (NWCOs), and those who join the group will receive "Urban Wildlife News."

The UWCA plans to address industry concerns such as liability insurance, training, and continuing professional education. There have also been discussions of minimum standards for NWCOs in order to eliminate the unsafe and inhumane practices of a few unscrupulous operators. An organizational meeting is scheduled for 25-26 January at the TropWorld Casino and Entertainment Resort (800-345-8767) in Atlantic City. Group room rates are $62 per room (single or double occupancy). For further information, contact the UWCA at 313-453-8274.

Current Literature
by Paul Curtis, Extension Associate


Birds may cause significant damage to ripening sweet cherries, and the ripening date of various cultivars may affect the percentage of fruit lost. During 1988, bird damage was assessed in 7 cherry orchards in the mid-Hudson Valley of New York. Each orchard contained 3 or more cultivars of sweet cherries.

Birds pecked or removed an average of 13.5% of the total crop at each orchard. Damage ranged from 0% to 86.5% among the 17 cultivars, with an overall average of 15.4% per cultivar. The 3 earliest ripening cultivars ("Early June," "Governor Wood," and "Black Tartarian") had an average loss of 62%, and the remaining 14 cultivars had an average loss of 55%.

Fifteen species of frugivorous birds were observed in the orchards, and the most frequently recorded species were house finches (Carpodacus mexicanus), American robins (Turdus migratorius), and European starlings (Sturnus vulgaris).

This study confirmed, that in the mid-Hudson Valley, early-ripening cultivars were much more susceptible to bird damage than those which ripened later. Early-ripening cultivars provide the only available fruit in orchards early in the harvest season, and birds likely concentrated their foraging on those varieties. As other cultivars ripened, damage was spread more evenly throughout the orchard. Similar damage patterns have been observed in early-ripening grapes, apples, and field corn. Although previous research has indicated that dark-colored cherry cultivars may experience more severe bird losses, this study showed no consistent differences with respect to fruit color.

Cherry growers may increase the cost-effectiveness of their damage management programs by protecting only cultivars which are susceptible to intense early-season bird foraging pressure. If bird repellent chemicals become available in the future, pesticide applications could be reduced by treating only damage-prone trees. Netting, and other techniques which may not be practical for orchard-wide use, may be feasible for protecting fewer trees which attract birds early in the cherry harvest season.
Nuisance Wildlife/Wildlife Rehabilitator Information

by Patrick Martin, NYS-DEC, Special Licenses Unit

The Professional Organization by Patrick Martin, NYS-DEC

The Fifth Eastern Wildlife Damage Control Conference was held in Ithaca during October. Experts in wildlife nuisance control, wildlife biology, and related disciplines exchanged information and renewed acquaintances. More importantly, ideas were shared, and there was discussion about the future of nuisance wildlife control work. By all measures, the conference was a success. Unfortunately, such conferences occur too infrequently to adequately address the issues and concerns facing people who do nuisance wildlife control work on a regular basis.

People and wildlife interact everyday, and in many cases, the nuisance wildlife control person is called upon to mitigate the encounter. Most requests for assistance with “problem animals” can no longer be resolved by trapping and euthanasia. People who experience wildlife damage often do not want the offending animals destroyed, but they do want the nuisance wildlife control person to remedy the situation.

A competent nuisance wildlife control person must be able to respond to any damage situation with an array of possible solutions, or he or she will not be in business very long. This means that the nuisance wildlife control person must have access to technical information, knowledge of current state regulations, and basic business acumen. In addition, the public demands ethical standards for wildlife damage work. A nuisance wildlife control person must employ techniques that ensure the welfare of nuisance animals, as the welfare of the individual animal does matter to many people. The days of the fur and nuisance trapper are numbered.

Nuisance wildlife control work is evolving into a “discipline” within the wildlife management profession. At the backbone of the discipline must be a professional organization that represents the interests of people who do nuisance wildlife control work. The following issues should be addressed: (1) the United States Department of Agriculture - Animal Plant Health Inspection Service’s (USDA-APHIS) Animal Damage Control (ADC) program is under intense public scrutiny concerning the mission of the program and the methods used to resolve nuisance wildlife problems; (2) the public’s perception of leg-hold traps and trapping is negative; and (3) few states have mandatory proficiency or ethical standards for people who do nuisance wildlife control work. In addition, the wildlife management profession has failed to adequately distinguish, for both wildlife managers and the public, the differences between “animal rights” and “animal welfare.” Animal welfare is the civilized concern for humaneness in our interactions with animals. It must be a tenet of the nuisance wildlife control profession. The wildlife management profession must actively support “animal welfare” to garner credibility as the stewards of the public’s wildlife, and to maintain public trust. All of these issues will affect individuals in the nuisance wildlife control business and wildlife management profession.

Fortunately, steps are being taken to form a national organization for people who conduct nuisance wildlife control work. The organization is called the “Urban Wildlife Control Association (UWCA).” There will be a $20.00 membership fee to join this group. Information is available from:

UWCA, c/o Mike Dwyer
2744 Festival Lane
Dublin, OH 43017
(313) 453-8274 (8 am-4 pm EDT)

The next step for nuisance wildlife control people in New York is to form the New York Chapter of the NWCOA. Interested professionals may contact Lynn Braband (716-235-2530). It is your profession, your future, and our wildlife. It is time to work together so all of us can better coexist with wildlife. Join the NWCOA and become a charter member of the NYS Chapter.
Current Literature
by Paul Curtis, Extension Associate


Canada goose populations have increased in many suburban areas of North America during the last 50 years. Goose grazing on lawns and gardens, and the accumulation of feces, has lowered the goose tolerance level of many property owners. Suburban goose problems are difficult to manage because hunting is usually restricted by local ordinances and limited hunter access. Conover and Kania evaluated the characteristics of goose feeding areas, and randomly selected lawns nearby, to determine which factors could be used to make lawn habitats unattractive to geese.

Variables which appeared important to geese included the flight clearance angle (FCA, the angle a goose would have to fly to clear surrounding obstacles), and a detection index (DI, average distance to the closest visual obstruction that would conceal 60% of a 0.5 x 0.5 m object). Canada geese in Connecticut selected lawns for foraging sites which had the lowest FCA's and the highest DI's. Every nuisance site had a lawn adjacent to a body of water, so geese could seek refuge on the water if disturbed.

What does all this mean to a residential property owner with goose problems? Eliminating the pond near your lawn is probably not a practical or acceptable option. However, planting tall trees around the lawn and pond to increase the lowest FCA to >13 degrees, and by establishing more shrubs and hedges to reduce a goose's ability to detect predators at distances of more than 10 yards, may significantly reduce the attractiveness of the foraging site for geese. Integrating this approach with harassment and pyrotechnics will likely increase the chances of successfully frightening the geese.

Also, lawns with nuisance goose problems were more likely to be located in towns that restricted hunting. Consequently, hunting may reduce damage either by directly reducing goose numbers, or by making the geese more wary and less willing to occupy lawns near people.

These same techniques may also provide some relief for golf course managers who suffer fairway damage from resident goose flocks.

NRA Forms Wildlife Management Department
by Paul Curtis, Extension Associate

The National Rifle Association (NRA) has recently created a "Wildlife Management Department," which will be managed by Gary Kania (formerly a wildlife biologist with the Connecticut Agricultural Experiment Station). According to the NRA, the department's objectives include: "the development of educationally sound pro-hunting materials for school curricula, and providing biologically sound expertise on hunting-related issues, legislation, and regulatory proposals." Hopefully, the new materials produced can be incorporated into a variety of environmental education programs.