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Wildlife Damage NEWS

Volume 3, Summer/Fall 1992 Co-editors: Paul Curtis and Michael Fargione Produced by: Carol Rundle

New York's Beaver Management Program: An Update

by Paul Bishop, Bureau of Wildlife, Delmar (Reprinted from *Furbearer Management Newsletter*, Vol. 3, No. 3)

Indeed, beaver are doing a little too well in some Wildlife Management Units (WMUs). In the 1960s, there weren't that many beaver in parts of the state. Except for their fur value, beaver had been viewed primarily as pests. Long trapping seasons had kept beaver populations low. However, during the 1970s and 1980s, beaver populations were actually increased by the Bureau of Wildlife, N.Y.S. Department of Environmental Conservation (BOW). Why on earth would BOW do such a thing?

The reason is that there is a positive side to beaver. This is difficult to appreciate when your crops are under water, or a road washes out. However, trappers know that beaver ponds benefit waterfowl and a variety of other wetland wildlife. People use and enjoy wildlife and beaver ponds in many ways including: hunting, fishing, trapping, bird watching and nature study.

The BOW felt it was in the public's best interest to consider these benefits, along with damage costs, when deciding how high beaver populations should be in each WMU. This is consistent with our mission: "To provide the people of New York the opportunity to enjoy all the benefits of the wildlife of the state, now and in the future."

The Bureau set beaver population goals for each WMU by balancing the benefits and costs of beaver. We set low population goals in WMUs with intense land-use and high potential for beaver problems. We set higher population goals in WMUs where land-use was more compatible with beaver. Trapping seasons were closed or shortened to increase beaver populations in the WMUs that needed increases to meet the new goals.

To insure that beaver populations remain at these levels, BOW staff count active colonies during the fall by flying over beaver habitat. We set annual trapping seasons for each WMU to increase, decrease, or stabilize the population as needed. We also help people with beaver problems as much as we can. Where possible, we help install devices to lower the water to a tolerable level and maintain some pond area for wildlife.

This system works fairly well, but we need to refine some aspects and make beaver management consistent across the state. In 1989, Gary Parsons, Chief of the BOW, assigned a team of biologists to do this. The team recently completed a report summarizing our accomplishments.

The team's accomplishments include the development of standard procedures for aerial surveys, habitat inventory, season setting, data entry and retrieval, nuisance complaints; a standard nuisance complaint record and permit form; and flight safety requirements for beaver aerial surveys. We also developed a nuisance beaver policy.

Finally, we identified future concerns facing beaver management. BOW will not be able to control beaver populations with fur trapping if current fur market trends continue. Low harvests mean that population control is now impossible in some northern WMUs and only marginal in several other WMUs. Beaver populations will continue to increase unless beaver prices improve or we find some other way to remove excess beaver. With a lot more beaver, the wildlife habitat benefits of beaver will pale in comparison to the problems. In fact, extremely high beaver densities would degrade beaver habitat and that of many other wildlife species.

Things could get a lot worse if, as a result of the European Economic Community (EEC) regulations, beaver harvests are reduced to minimal levels. By the year 2000, there would be nearly three times as many beaver colonies in New York as

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This is a quarterly publication of the Cornell Cooperative Extension Wildlife Damage Management Program.

(New York's Beaver cont.)

there were in 1990 or about 46,000 colonies. This would mean over 8,000 beaver problems statewide compared to about 2,500 in1990.

BOW and landowners need to prepare for such possibilities. As long as there is a market, BOW needs to encourage additional fur harvest. All options for doing this should be considered, including new approaches. We also must consider other ways to remove excess beaver.

BOW should explore ways to reduce the effect of beaver problems, including research on new prevention methods. We need better ways to inform people about solutions to existing problems, and to assist them with the installation of beaver damage control devices. New approaches that involve local governments and other agencies with a wildlife interest should also be considered. Incentives are needed for landowners to maintain beaver ponds that provide valuable fish and wildlife habitat.

We will have to make hard choices between the various options for controlling beaver and solving beaver problems. All citizens have a definite stake in the outcome of these decisions. I think we should involve the various stakeholders, such as conservation, environmental and agricultural interests, local government agencies, and private landowners in making these decisions.

Together, I know we can meet the challenge of managing beaver in the next century. Of course it is possible that the fur market will rebound, and that our current management system will work smoothly once again. We can all hope that this will happen. In fact, one way to help it happen is to spread the word about the negative consequences of things like the EEC regulation. In any case, I think we should begin now to consider what we will do if the market doesn't improve so that we will be prepared.

Important Note:

The EEC regulation, starting in 1995, will prohibit the importation of beaver pelts (plus 12 other species) to the 12-nation EEC *unless* they come from countries that have banned foothold traps or adopted international trap standards.

☞ This publication is also available on the CENET Damage News BulletinBoard.

Species Profile- White-tailed Deer

by Michael Fargione, Research Support Specialist

Description

The white-tailed deer *(Odocoileus virginianus)* is the most abundant member of the deer family (Cervidae) in North America. Their long legs make them well-adapted for escape from predators through a variety of habitats. Keen hearing, good eyesight and an acute sense of smell provide additional protection from danger. White-tailed deer are valuable components of our wildlife heritage, and are avidly sought by hunters, photographers, and nature observers.

In New York, adult white-tailed bucks (males) are 3'-3.5' tall at the shoulder, and typically weigh 125-200 pounds. Does (female deer) are generally smaller and lighter than males. Deer are red-brown during summer and grow brown-grey winter coats each fall. Their most conspicuous feature is their tail, which they raise during flight to expose its white underside. Fawns (deer less than 1 year old) are typically born weighing 4-8 lbs, and have red-brown hair covered with numerous white spots. They lose these spots as they grow their first winter coat. Bucks, but not does, grow antlers annually which are used as weapons and in social displays, particularly in relation to reproduction.

Range

White-tailed deer have an extensive range covering much of North and Central America. Whitetails are also found in portions of South America, and have been introduced into parts of Europe, New Zealand and many Caribbean Islands. In New York, deer are found in all counties with the exception of some metropolitan areas. Although generally thought of as wildlife of forest and field, deer have become a common sight (and pest) in many suburban and urban parts of New York.

Life History

White-tailed deer breed from mid September through late February, with the peak breeding occurring during mid November. Fawns are born in the spring after 200 days gestation. Does (and occasionally fawns) usually produce a single fawn during their first pregnancy. Twins are typically born in subsequent years, with triplets not uncommon in areas with adequate food sources.

Bucks begin antler development in spring, and antler size depends on both age and nutrition. The growing bone is covered with hairy skin called velvet which nourishes the antler. The bone hardens and the velvet is rubbed off in the fall. Bucks shed their antlers each winter.

Deer consume a variety of vegetative foods and show considerable preferences for individual plants and plant parts. Commonly eaten foods include grasses, fruits, nuts, forbs and mushrooms, as well as

(Species Profile cont.)

leaves and stems from trees and shrubs. Deer concentrate their feeding on woody materials when herbaceous plants are unavailable.

Description of Damage

Deer damage to agricultural crops and forest regeneration is a serious and widespread problem in New York. Deer cause economic losses when males remove bark and branches from trees and shrubs during their fall and early winter antler-rubbing activities. They may occasionally trample crops, but the primary form of damage consists of feeding on selected plant parts. Deer readily browse forage, grain and vegetable crops, fruit and nut trees, ornamental woody plants, and flowers. Without control measures, damage levels may severely reduce crop yields on many sites. In forested areas, excessive deer numbers can reduce or eliminate regeneration of important lumber-producing tree species.

Deer browsing damage is readily distinguished from damage caused by rabbits or rodents. Deer leave a ragged, broken end on browsed branches, compared to the cleanly nipped terminal left by other wildlife. Deer browsing on agricultural crops and landscape plants is most frequent and severe when natural foods sources are limited, particularly during winter and early spring. However, damage occurs year-round on many sites.

Legal Status

Deer are classified as game animals and can be killed only during legal hunting seasons by persons holding a valid New York big game license. Under Section 11-0521 of the N.Y. S. Conservation Law, the Department of Environmental Conservation (DEC) can issue permits allowing landowners to destroy deer when they become a nuisance or destructive to property. DEC will issue these "crop damage permits" for the harvest a specified number of deer outside the regular hunting season if sufficient damage is evident. However, the use of damage permits is time consuming, wasteful of wildlife resources, and considered to result in limited damage reductions. Whenever possible, deer populations should be controlled via regulated hunting during the appropriate seasons.

Damage Management Methods

Population control.- Annual reductions in deer populations via sport hunting is an effective way to reduce deer damage. Deer have the potential to double their population about every 2.5 years if no mortality takes place. Buck-only harvests are incapable of reducing or stabilizing deer numbers in many parts of New York. Where legally possible, landowners suffering damage should require hunters to harvest sufficient does, as harvesting these females is essential to reduce deer numbers and damage.

Physical barriers.- Fencing, wire cages and plastic netting are the most cost-effective deer damage controls in many circumstances. Woven-wire fences 8' high are very effective barriers to deer, but are cost effective for only the most valuable crops and ornamental plantings. High-tensile electric fence designs have been developed which are less costly and almost as effective as tall woven-wire fences. When prorated over their expected life-spans, fences are often more cost-effective than repellent spray programs. Individual cages and plastic netting are effective controls for small plantings or individual plants. Physical barriers are the only effective means of preventing antler-rubbing damage.

Chemical repellents.- A variety of commercial deer repellents are labeled for use in New York. BGR Deer-Away™, Hinder™ and products containing the fungicide thiram have been shown most effective in several studies. Several home-remedies have been reported to effectively repel deer also. However, these products may be less cost effective than commercial repellents when their labor requirements are considered in the total application cost. In addition, their effectiveness is often highly variable and their long-term impact on the environment has not been studied.

Repellents are most effective when applied prior to the occurrence of deer damage, and in situations where damage is expected to be light to moderate. Repellents are considered cost effective on small acreages when < 3 sprays are needed annually. However, sprays may need to be reapplied every 3-4 weeks during the growing season to cover new plant growth. Spray costs can be reduced by tank-mixing repellents with other crop-protectants. Repellents should be applied when temperatures are between 40 and 80 degrees F. on days when precipitation in not expected. Consult the label for application and tank-mixing compatibility information.

Scare Devices.- A variety of deer-frightening devices including lights, whistles, loud noises and scarecrows have been used to prevent deer damage. However, deer quickly habituate to these devices and re-sume feeding activity. In addition, many of the devices are expensive, have high maintenance requirements, and may be dangerous to humans.

Cultural Practices.- Deer damage may be reduced by planting less-preferred plant species. Considerable interest also exists in planting adjacent areas with preferred foods to draw deer away from primary crops. However, little information is available on the use or success of such supplemental plantings.

Health Risks

A variety of diseases and parasites may be carried by deer which have potential deleterious effects on humans and domesticated animals. These include anthrax, various arboviruses, foot and mouth disease, and tuberculosis. Lyme disease and rabies have been the major health concerns associated with deer in recent years. Deer serve as one of several potential hosts for the tick *Ixodes damini* which transmits the lyme disease bacterium. Lyme disease has reached epidemic proportions in coastal areas and portions of the lower Hudson Valley. Individuals who are active outdoors, and in particular hunters who handle and transport deer, should examine themselves and their clothing frequently for ticks during these activities. Persons bitten by a tick should consult their doctor.

Rabies in white-tailed deer has rarely been reported. However, 3 spill-over cases of raccoon rabies into deer were reported in New York during 1991. A deer observed behaving abnormally should be treated with caution. Hunters should wear rubber gloves when dressing game animals, and

(Species Profile cont.)

all wild game should be thoroughly cooked before consumption. Further information on preventing lyme disease and rabies is available from your state or local county health department.

The 1992 Bureau of Wildlife Coyote Damage Control Workshop

by Ben Tullar, Associate Wildlife Biologist, NYSDEC

Logically, an ounce of prevention is worth a pound of cure in most wildlife damage control problems. But the killing of sheep or similarly vulnerable livestock by coyotes is often reported after preventive measures could or should have been applied. Producers of vulnerable livestock who began their businesses with damage prevention in mind seldom need to contact agencies or personnel who handle wildlife damage, except when prevention fails. However, people who lose stock to coyotes have usually been caught off guard and are at the mercy of depredating wildlife. They need first aid and will usually listen to advice about prevention only after the culprit is dead.

Demonstrations of the difficulties and applied skills in stopping coyote damage in progress, as well as prevention, were presented by personnel of the Federal Animal and Plant Health Inspection Service, Animal Damage Control Section (APHIS-ADC) in a recent workshop for DEC personnel. The workshop, attended by technicians and biologists from DEC regions 3, 4, 5, 6, 7 and 9, was a big success. It was an informative and inspiring demonstration of applied science that is all too unusual.

The field example was a visit to the Lucky Star Ranch, now devoted to the commercial production of exotic, old world deer. Except for a few days after birth, their deer are seldom vulnerable to coyotes. However, one can depend on the eastern coyote to sense that many does are dropping easily taken fawns at the same time. Once a coyote develops a taste for fawns, an electric fence will not stop the damage.

Does had been transferred to a maximum-security pen before their fawning began. In spite of an elaborate and expensive fence of woven and electrified wire, more than 40 fawns had been killed in typical coyote fashion. The perimeter of the fawning pen was searched and coyote sign (i.e., droppings and tracks) was found. It was very difficult to see how the coyote had gotten in, but it had been doing so for more than a year. Since the workshop, another fawn has been killed and the culprit remains at large.

The highlight of the workshop was a demonstration of calling coyotes to confirm their presence, or get them to come into shooting range. The demonstration increased almost every attendee's understanding about the practicality of predator calling.

The predator calling instructor also showed several clever ways of using a dog in confirming the presence of coyotes, and as a decoy in trapping or shooting them. The dog (he prefers a female because they stay close to the handler) is taken to the site of the complaint and allowed to search for and identify coyote signs and scent posts. If coyote sign is present, the urine of the dog is also used to lure coyotes to the set. The dog easily learns to stay out of traps and is also used to attract the attention of the coyote when it is called into shooting range.

The most encouraging aspect of the workshop was learning that coyotes are not necessarily elusive and impossibly mysterious adversaries. They are creatures of instinct that can be detected, manipulated, or caught by anyone with the patience to learn about their behavior and to develop the skills to call, shoot, or trap them. The information presented in the coyote workshop increased the self confidence and effectiveness of any attendee willing to practice the skills demonstrated. Mastery of those skills will not only aid in capturing depredating coyotes, it will also help convince livestock producers who experience coyote damage of the credibility of those recommending preventive measures after the stock is saved.

For the reasons above, the coyote damage control workshop was a big step in increasing the technical ability and in boosting the self confidence and morale of all who attended. All of us would benefit greatly from more of this kind of training session. We also now know that we have very skillful friends in the ADC program who we can call for help in our most frustrating hours.

The development of a more effective short-term coyote damage control skill will also increase the value of the eastern coyote as a game animal in New York State, especially to many who attended the workshop. I doubt that I am the only novice predator sleuth waiting for a good reason or a season to use my new predator call.

Norplant for Beavers?

(Reprinted from *The Probe* September 1992)

According to the August 24 issue of *Time Magazine* the beaver population explosion is about to run into an enforced slow-down. A Colorado environmental group, Wildlife 2000, is attempting to find a humane solution to the burgeoning beavers. The group has proposed the use of Norplant™, the contraceptive agent devised for humans.

(Norplant cont.)

Wildlife 2000 believes the beaver population is somewhere between 6 and 12 million as a consequence of the "...crippled fur trade" and because "killing helpless animals for sport is no longer fashionable." With the likelihood that fur coats will never return to great popularity, the beaver population will more than likely continue to increase dramatically. The environmental organization stated that inflated beaver populations have decimated the beaver's woodland habitat.

Harvest Season Wildlife Damage Reminders

by Michael Fargione, Research Support Specialist

Preventative actions are usually more effective than late reactions when mitigating wildlife damage. The following reminders and updates can help reduce wildlife-related problems over the coming season.

Rodents

Don't cut corners with your vole management efforts as both species may be abundant this fall. Wet conditions and luxurious vegetative growth have made 1992 an ideal year for meadow vole reproduction. Increased pine vole damage has been seen in some Hudson Valley orchards. Reducing vegetative cover is the key to limiting vole numbers and damage. Post-harvest mowing greatly reduces vole habitat, may improve rodenticide bait acceptance, and increases natural predation on voles. Clear weeds from around trees where herbicide treatments are less than ideal. Remove or mow dropped fruit and prunings to eliminate these preferred vole and deer foods. Install, replace or adjust wire mouse guards around trees. Plastic guards are not recommended as we have seen voles chew through them. Delay placement of orchard bins until picking begins, and immediately remove unused bins to prevent mice from using them as protective cover.

Zinc phosphide baits are the only rodenticides registered for use in New York orchards and tree farms. As is the recommendation in Vermont this year, we suggest growers avoid using zinc-treated corn. Results of some studies suggest this product may be the least effective bait, and may more likely be consumed by nontarget wildlife. Steam-rolled oats or commercial pelletized baits (both materials should be unwaxed) may be preferable baiting materials. Scout plantings to determine if mouse populations are abundant, as all sites may not need treatment. Rodenticide applications must be delayed until after fruit harvest, and should be postponed until November or later to maximize effectiveness and minimize nontarget losses. Baiting should be undertaken during a period of fair weather before snowfall.

Broadcast bait at labeled rates by hand or tractor to control meadow voles. It is illegal to let bait accumulate in piles or fall on bare ground, including herbicide strips. Handplace bait under shingles instead of broadcast baiting those sites frequented by wild turkeys. Hand-baiting is the only recommended practice for pine voles. Effective control may be achieved by applying commercial baits or zinc-phosphide-treated apple cubes in active burrows or pre-established bait stations within the tree's dripline. Zinc phosphide powder (EPA #56228-0006) can be obtained by written request on farm stationary from James Forbes, USDA APHIS/ADC, P.O. Box 97, Albany, NY 12201. Include a photocopy of your DEC pesticide applicator's licence and the amount of material requested. One pound of zinc phosphide powder (billed to you at $10.64/lb. + shipping) will treat approximately 50 acres at 180 trees/acre. Directions for making apple baits are available from your local extension agent.

Deer

Deer damage typically increases during fall. Repellent programs will be most effective if the first application occurs prior to the onset of damage. Two applications (one during Sept./Oct. and another late in Nov. /Dec.) is recommended. Recent research indicates adding a sticker to Hinder™ can significantly increase its effectiveness during the dormant season. Do not apply Hinder™ to bearing trees until after the fruit has been harvested, as fruit finish problems may result.

Deer-exclusion fences should be checked for broken components and adequate wire tension at this time. Voltage levels should be monitored to ensure that sufficient shocking power exists (> 3,000 volts) to turn away deer.

Deer Management Unit (DMU) permits will be legal for use on antlerless-only deer in many southeastern and western units this fall. Applicants can apply for a second permit in the same or a different unit. Second permits will be issued in under-subscribed units. Be sure to apply for your permits, and remind sportsmen who hunt your farm that you expect them to do the same. Harvesting adult female deer is the key to controlling deer populations and reducing damage.

Other Species

Rabbits are abundant this year, and damage has been reported in some orchards. A repellent application using a thiram-based product plus sticker may limit damage, as will reducing rabbit numbers through hunting. The most cost-effective and long-term control may be gained by eliminating unmown areas and other protective cover in and adjacent to orchard sites.

Due to the current rabies outbreak, agriculturalists are reminded to warn their employees to be cautious of wildlife acting in an unusually tame or aggressive manner. Raccoons which act sick or are visible during the day are especially suspect. Many other species including foxes, skunks, bats and domestic pets may also transmit rabies. Avoid contact with suspect wildlife. Dispatch sick animals as humanely as possible, leaving the head undamaged. Call your local health department to pick up the animal for testing if anyone contacts an animal suspected of having rabies.

Birds of Prey Assist Farmers

by Chuck Ingels, SAREP (Reprinted from *Sustainable Agriculture*, Fall 1992, Vol. 5, No. 1)

Farmers seeking to reduce or eliminate chemical inputs are often frustrated by their inability to control vertebrate pests. Preventive strategies, such as controlling vegetation around orchard tree trunks and field borders, can help with meadow mice and gopher control. Common nonchemical methods include shooting, trapping, and flooding. While these methods can be very effective, they are not without limitations; flooding is not always possible, and trapping and shooting can be very time-consuming and impractical where large areas are infested.

Birds of prey can contribute to vertebrate pest management, especially in fields located near riparian areas. While raptors are seldom relied upon as the primary means of vertebrate control, they can, with a little help, be more effective than many people think. This article explores the effectiveness of owls and hawks in vertebrate pest management and techniques for enhancing their populations.

Barn Owls

There are many different species of owls, but the barn owl (*Tyto alba*) is the most helpful to farmers. It is often called "the most beneficial bird in the world" because of its hearty appetite for gophers, ground squirrels, and meadow mice. Farmers who have learned of the barn owl's virtues strive to keep this "cat with wings" in close proximity to crops. One nest of six young barn owls and two adults may consume more than 1,000 small mammals during the nesting season.

Because of their high first-year mortality, short life-span (four years maximum), and dependence upon the fluctuating nature of rodent populations, barn owls have developed a tremendous reproductive capability in order to survive. They are often referred to as "reproductive machines." This capability functions in response to availability of prey; they can quickly colonize an area if suitable habitat (prey and nest sites) is available.

Barn owls are strictly nocturnal hunters, having the remarkable ability to see their prey in complete darkness. They hunt from perched or flying positions, and have been known to spot prey from a distance of several hundred feet. Barn owls routinely fly one mile from their nests to hunt, and may venture up to three miles or more. Their preferred hunting sites are grassland and wet meadow habitats, either with a few trees or in wooded areas.

Barn owls do not build nests. They lay eggs in hollow trees, crevices in cliffs, and holes in sandbanks, and also find home sites in abandoned buildings, granaries, or barns. According to many researchers and farmers, it is fairly easy to attract barn owls to fields, orchards, or vineyards by constructing nest boxes.

Grower Success

Merced County farm advisor Lonnie Hendricks reported that several almond growers have drastically reduced gopher populations in orchards by installing barn owl nest boxes. One such grower, Bill Genn of Hilmar, had orchards so badly infested with gophers that his flood irrigation water often spilled onto neighbor's land from gopher holes at the edge of the orchard. Owls now live in the boxes and Genn's gopher problems have disappeared; rodent bones litter the ground under the boxes.

Hawks

Hawks can also aid in vertebrate pest management. Important species include the red-tailed hawk (*Buteo jamaicensis*), and the American Kestrel (*Falco sparverius*), also known as a small falcon, sparrow hawk or kitty hawk. Hawks eat meadow mice, small birds, grasshoppers and other insects. To encourage hawks, whose presence also frightens starlings and other pest bird species, some farmers install perches and nest boxes near their crops. Perches may be especially important in winter and early spring to aid hawks in spotting food sources before the rodents' breeding season, and when many crops are either absent or provide little cover.

Kestrel Houses

Kestrels prefer to nest in dead trees and other crevices, but also use secluded buildings and wood raptor houses. Open fields, meadows and fence rows are good locations for kestrel houses. Houses can be mounted on utility poles, buildings, lone trees or posts. According to a Soil Conservation Service (SCS) bulletin, the house can be made of long-lasting redwood or cedar, and should be mounted 10 to 15 feet from the ground with the entrance clear of branches. Because the house needs to be checked and cleaned periodically, it should be erected where it can be reached. November through January is the best time to build a kestrel house. Houses should be checked weekly in the spring to make sure starlings and other pest birds are not using the box. Kestrels bring no nesting material into the house, so any material found in the box is from pest birds and should be removed. Kestrel eggs are white/cinnamon colored with spots of brown and hatch in about 28 days. Starling eggs are pale blue. Screech owls, which may also use the boxes and are desirable birds, have white eggs. Kestrel houses should face south or east, and should be located within 200 yards of a tall tree or pole because the raptors like high perches nearby.

Davis Survey

How effective are perches and nest boxes, and how effective are hawks in vertebrate pest management? The data is mixed; many growers report success, yet others contend that avian predators alone cannot keep populations of meadow mice low for extended periods of time because predators leave the area when prey abun-

(Birds of Prey cont.)

dance is low. Surveys show mixed results of perch and box effectiveness.

Shawn Smallwood, a researcher in the Agronomy and Range Science Department at UC Davis, recently completed a two-year survey of the use of perches by hawks. His survey covered 200 miles in the Sacramento Valley, and included farms of all major crops grown in the region. He studied artificial perches, trees, telephone poles, and fence posts.

Smallwood found that most hawks avoid the smaller perches installed by farmers (horizontal dowels or boards supported by posts or metal pipes); only occasionally did he find a small hawk using one of them. Most hawks were found using telephone poles or vertically-oriented "snags" on trees. Hawks prefer large perches which can comfortably hold their whole body, according to Smallwood. He also found that the height of a perch was not as important to the raptors as the fact that it provided a broad view of the surrounding land. Large trees are ideal roosts Smallwood reported, but they function best as perches if the canopy is opened so raptors can get a clear view. Dead limbs sticking up above leaves are used more than branches within the canopy.

Washington Study

Researchers in Washington sate conducted a study examining the use and effectiveness of artificial perches and nest boxes. Three orchards in the Wenatchee area were used in the study. Researchers made direct observations and examined predator pellets.

In this study, none of the barn owl boxes and only 13 percent of the kestrel boxes were inhabited. However, more birds were attracted to the orchards where perches were placed than those without perches. The biomass and height of the understory vegetation had no bearing on the use of perches in this study. The effect of raptors on meadow mice populations was unclear; populations were reduced in one orchard only. However, the level of human activity may have played a major role. Where houses and roads were most heavily used, few birds visited the perches. Human activity was minimal near the orchard in which raptor use of perches was high and the mouse population was reduced.

Other Studies

In an Oregon study, American kestrels and great-horned owls showed a preference for 5-meter perches over 2.5-meter perches, but the raptors accepted the shorter perches in the absence of taller ones. Barn owls did not show a height preference.

Pest bird activity in vineyards was not affected by the presence of artificial perches, according to a Napa study. Although four hawk species were observed in the area, none was seen using the artificial perches. Pest birds were not deterred by hawk models on some of the perches.

We gratefully acknowledge the information provided by Paul Gorenzel, Cooperative Extension Wildlife Unit, University of California, Davis.

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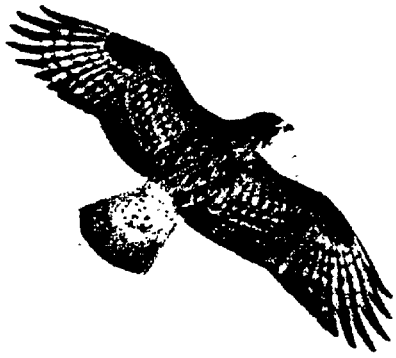

Putting People First

by Carl Parker (Reprinted from N.Y.S. Chapter TWS Newsletter, Summer 1992)

We are all aware of many groups that actively speak out for animal rights. But who takes the other side of the argument? In the past two years, a Washington-based lobbying group has actively engaged animal rights groups "head on." This group is called "Putting People First" (PPF).

PPF began as the brainchild of Kathleen Marquardt, a woman who grew up hunting and fishing in Montana. After she moved east and had a family, Marquardt noticed that her son was being subjected to animal rights viewpoints in his school. She looked around to see if anyone was telling the other side of the story, and found that she'd better get working at it herself.

PPF strives to bring together all groups that may be affected by animal rights' extremists, such as sportsmen, the fur and leather industries, agriculture, zoos, and biomedical research interests. By joining together, Marquardt believes these groups' political influence may be greater than it would be if they stood alone.

PPF tracks legislation, lobbies and testifies on pending legislation, files law-suits, and organizes letter-writing campaigns. PPF serves as an information network to those who are concerned about the influence of animal rights groups, and also provides speakers for important events.

PPF publishes a weekly column entitled *From the Trenches* and a newsletter called *The People's Agenda.* If you would like more information on PPF, write them at 4401 Connecticut Avenue, NW, Suite 310 A, Washington, DC 20008-2322.

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