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NADCA Services Directory

NADCA has three new services available to all members:

**Employment Service** to assist members in finding employment in the ADC field as wildlife biologists, technicians, trappers, and volunteers.

For resume forms and instructions, send a stamped, self-addressed business-size envelope to: Chris Engel
1002 Warren Court
Richland, WA 99352
telephone (509) 943-9187

**Information Clearinghouse** to provide members with quick, accurate answers to questions regarding ADC techniques and methods.

Contact: Dallas Virchow
3919 2nd Avenue
Scotts Bluff, NE 69361
telephone (308) 635-1337

**Inservice Training** to develop, sponsor, and conduct continuing education courses, workshops, and regional training courses to keep members abreast of the latest ADC information and developments.

Contact: Scott R. Craven
226 Russell Labs
University of Wisconsin
Madison, WI 53706
telephone (608) 263-6325

Assistant Director of DWRC Appointed

Richard D. Curnow, Director of the USDA Denver Wildlife Research Center, has recently announced the appointment of Dr. Richard L. Bruggers as Assistant Director. Prior to his appointment, Dr. Bruggers served as Chief of the International Programs Research Section of the Center.

NADCA Committees

The following are chairpersons of NADCA committees, and their telephone numbers. Each chairperson’s address will be found in the membership directory.

**Awards Committee:**
James E. Miller, (202) 720-5004

**Certification Committee:**
Larry Brown, (518) 785-1036

**Employment Committee:**
James E. Forbes, (518) 431-4190

**Information/Techniques Committee:**
Dallas Virchow, (308) 635-1337

**Inservice Training Committee:**
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**Membership Committee:**
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**Expired Member Subcommittee:**
Andy Montoney, (708) 252-9934

**New Member Subcommittee:**
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**Records Subcommittee:**
Wes Jones, (715) 468-2038

**Publications Committee:**
Richard Chipman, (802) 828-4467

**Spokesperson Committee:**
Dennis Slate, (603) 225-1416

**Ways and Means Committee:**
Tom Tomsa, (717) 238-4127

Your Treasurer is Happy!

Treasurer Wes Jones reports that he is smiling! Many of you are renewing your membership without being prompted, as requested in the October ’94 PROBE. Help keep that grin on his face! A clarification— if you are saving your PROBE issues and don’t wish to clip off the membership application form, no problem. A photocopy will be acceptable, of course. If your mailing label is correct and other data hasn’t changed, your check alone might be sufficient identification. In any case, the pertinent information on a piece of plain paper will do the job.
Calendar of Upcoming Events


April 10-13: 12th Great Plains Wildlife Damage Control Workshop, Doubletree Hotel, Tulsa, OK. Contact: Ron Masters, (405) 744-6432.

July 16-21: 10th International Conference on Bear Research and Management. University of Alaska, Fairbanks, AK. Contact: Harry Reynolds, AK Dept. of Fish & Game, 1300 College Road, Fairbanks, AK 99701-1599, (907) 452-1531, FAX (907) 452-6410.

NADCA Caps Available

NADCA’s high-quality logo baseball caps are still available for order. Order caps by sending $10 each plus shipping charge of $2.50 (for up to 3 caps shipped to the same address) to Wes Jones, Treasurer, Rt. 1 Box 37, Shell Lake, WI 54871. Checks should be made payable to NADCA. Specify 1st and 2nd color choice: light blue, dark blue, teal, maroon, khaki, and black (subject to availability).

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Your contributions to The Probe are welcome. Please send articles, descriptions of new techniques, meeting notices, and other information of potential interest to NADCA members to The Probe, c/o Hopland Research & Extension Center, 4070 University Rd., Hopland CA 95449. If you prefer to FAX materials, the FAX number is (707) 744-1040. The deadline for submitting material is the 15th of each month. Opinions expressed in this newsletter are not necessarily those of NADCA.
Evaluation of the Super YardGard Electronic Device for Repelling White-tailed Deer
by Chris Fitzgerald, Paul Curtis, and Milo Richmond, Department of Natural Resources

Ultrasoundic devices are sometimes used in pest control because homeowners believe they possess properties aversive to animals. The range of detection of audible sound in humans is approximately 20 Hz to 20,000 Hz. Frequencies below 20 Hz (infrasound), and above 20,000 Hz (ultrasound), are not heard by the human ear but can be detected by other species. However, there is little research evidence that indicates ultrasound is more likely to repel animals than is audible sound.

We have received several inquiries from Cornell Cooperative Extension county staff concerning the effectiveness of this new YardGard electronic device. There is no evidence that ultrasound can be detected by or is aversive to birds. Mammals, including rodents, bats, and dogs, are known to detect ultrasound, but similarly exhibit no clear-cut aversive response. In this pilot study, we examined the efficacy of the Super YardGard ultrasonic device (Weitech, Inc., Sisters, Oregon) for deterring deer from feeding on a preferred food (apples), to determine if future experimentation was warranted.

Four feeding stations were installed at two residential sites near Ithaca with a history of deer damage to ornamental plants. Stations were established so that control (A1 and B1) and experimental (A2 and B2) plots existed at each site. Twenty apples were placed at each feeding station and restocked daily from mid February to mid March 1995. After 3 days of baiting, Super YardGard devices were set up at one station at each site. Speakers were set on posts 0.9-1.2 m above the ground and 10 m from the apples, so that the sound ellipse emitted would encompass the feeding station. After another 4 days, the devices were activated at the medium frequency. We monitored deer activity by counting the apples remaining, deer tracks, and deer fecal pellet groups at all feeding stations every 24 hours.

During experimentation at site A before the devices were activated, 128 (91%) and 137 (98%) apples (n = 140 offered at each station) were consumed at control (A1) and experimental (A2) stations, respectively. While the devices were on at site A, 175 (97%) and 180 (100%) apples (n = 180 offered) were consumed at control and experimental stations, respectively.

At site B before the devices were activated, 68 (68%) and 72 (72%) apples (n = 100 offered at each station) were consumed at control (B1) and experimental (B2) stations, respectively. While the devices were on, 188 (94%) and 197 (98%) apples (n = 200 offered) were consumed at control and experimental stations, respectively.

Apple consumption at feeding stations was the only quantitative data which provided a consistent measure of deer activity, while track and pellet counts, and direct observations were useful in confirming that deer were in fact the primary source of apple consumption. At site A, there was very little difference in apple consumption between control and experimental stations during the pre-baiting or treatment phases of this study. More than 90% of the apples were consumed at both feeding stations whether the device was on or off. At site B, apple consumption during the pre-baiting phase was considerably less (68-72%) than during the treatment phase (94-98%), illustrating both the effect of supplemental feeding in attracting deer and the poor effectiveness of the YardGard for repelling deer.

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This is a publication of the Cornell Cooperative Extension Wildlife Damage Management Program.
Behavioral observations made by the homeowners at each site revealed that several deer visited the control and experimental feeding stations while YardGard devices were on. For example at site A, on two separate occasions, 3 deer (one doe and two yearlings) were observed at the experimental feeding station (A2). Apparently, the deer were alerted by the ultrasonic signals but were not deterred from consuming apples. The doe was noticeably more alert and/or agitated (determined by frequent head-lifting, ear-twitching, and hoof-stomping) by the ultrasonic device than were the yearlings, and was the last to approach the apples. The doe fed for a few minutes at the apple pile and then grabbed an apple in her mouth and moved away approximately 30 m before stopping to eat it. The yearlings continued to consume apples at the feeding station while the doe remained at a distance. When the doe had finished her apple, she again approached the feeding station, took another apple and returned to the same spot several meters away.

The YardGard devices exhibited no persistent effects in repelling deer from yards, or in deterring apple consumption. Because these devices did not deter deer from feeding on apples, therefore, YardGards would likely not deter herbivory of other highly-preferred ornamentals (i.e., yews, arborvitaes, azaleas, etc.). Ultrasonic devices may be more effective if they are installed before a deer feeding pattern is developed. However this may be unrealistic as most homeowners react only after an intolerable level of deer damage is observed. In conclusion, this study produced no evidence that the Super YardGard electronic device protected the experimental yards from deer activity, or preferred foods from deer damage.

Penn State Researchers Develop New Bat House Design
by Paul D. Curtis, Natural Resources

Bat houses have been used for more than 60 years in Europe, and are increasing in popularity in the United States. Bat Conservation International (Austin, Texas) has promoted bat conservation and provided homeowners with an Official Bat-House Builder’s Guide. However, anecdotal reports of bat-house acceptance has indicated marginal use by brown bats (Myotis spp.). Roost fidelity and acceptance of boxes appears to vary by species, roost type, and geographic range. A recent research article by Alison Neilson and Brock Fenton (see Wildlife Society Bulletin 22: 8-14, 1994) substantiates these reports for little brown bats. Ninety-nine percent of 547 little brown Myotis banded in colonies that were excluded from structures did not join other nearby colonies, nor did they occupy bat houses constructed at the Chautauqua Institute in southwestern New York. During the 3-year study, none of the 43 bat houses of 4 different designs installed at the institute attracted a resident colony of bats. It was speculated that low temperature conditions may have been partially responsible for bats avoiding these boxes, as temperature affects the metabolism of the mother bats and growth rates of their young. Building roosts with active colonies tended to be about 6 degrees C warmer than the bat houses.

Lisa Williams-Whitmer and Margaret Brittingham, from Penn State University, have developed a new bat-house designed to overcome temperature-related problems. The top half of the box is contained in black roofing paper to absorb sunlight and increase the internal temperature. These boxes should be oriented between southeast and southwest to receive at least 6 hours of full sun during morning and afternoon. Bat boxes should be attached to a building or pole at least 10 feet above ground, as those secured to trees are not as readily accepted by bats. Following these instructions, bat acceptance has been quite high.

The Pennsylvania box design will house between 150 and 200 bats. The overall size is 30 x 30 inches, and the box is 7 inches deep. Remember to install boxes away from window sills, porches, or decks where droppings falling from the box will cause problems. Penn State Cooperative Extension is currently preparing a brochure describing bat-box construction and location guidelines. For more information contact: Lisa Williams-Whitmer, 302 Forest Resources Lab, Penn State University, University Park, PA 16802 (814-865-2150).

Eastern Wildlife Damage Control Conference Proceedings Are Still Available
by Carol Rundle, Natural Resources

For those of you who may be interested in purchasing proceedings from past Eastern Wildlife Damage Control Conferences, Cornell Cooperative Extension has a limited supply from the First (Ithaca), Fourth (Wisconsin), and Fifth (Ithaca) Conferences. Please send a $20.00 check (includes shipping costs) made out to CORNELL UNIVERSITY and specify which proceedings you desire. Orders should be mailed to: Carol Rundle, Cornell Cooperative Extension, Department of Natural Resources, Room 108 Femow Hall, Cornell University, Ithaca, NY 14853-3001.

This publication is also available on the CENET Damage News Bulletin Board.
The Wildlife Society’s Wildlife Damage Management Working Group to Sponsor a Session at the 1995 TWS Annual Conference in Portland, Oregon

by Paul Curtis, Natural Resources

Bill Andelt, Kathleen Fagerstone, Scott Hygnstrom, Rick Owens, and Alice Wywialowski, serving on The Wildlife Society’s Wildlife Damage Management Working Group Program Committee, developed a symposium titled, Complexities of Addressing Human-Wildlife Conflicts. This session has been accepted for presentation at the 1995 TWS Annual Conference in Portland, Oregon (scheduled during 12-17 September). The session will take place during an afternoon and evening, however, the date has not been finalized.

A wide range of issues will be covered during more than a dozen presentations. A sampling of topics include: managing carnivores to protect endangered species and waterfowl, reintroducing wolves to Yellowstone Park, incidence of mountain lion attacks on humans, urban deer and goose problems, translocation vs. euthanization of nuisance wildlife, international trap standards, and immunocontraception as a tool for managing overabundant wildlife. This session should be of interest to professionals involved with all aspects of wildlife damage management.

The TWS Wildlife Damage Management Working Group consists of professionals specializing in wildlife damage management. Members represent a wide array of state and federal agencies, private organizations, universities, and private industry. There are also several international members. If you wish to join the Working Group, annual dues are $5 and may be paid through the National TWS Office in Bethesda, Maryland (phone: 301-897-9770, e-mail: tws@wildlife.org). To join the Wildlife Damage Management Working Group, you must be an active Wildlife Society member.

Species Profile - Tree Squirrels
by Philip A. Wellner and Paul D. Curtis, Natural Resources

Description of Species and Damage

Five different tree squirrel species are native to New York State, including the fox squirrel (Sciurus niger), red squirrel (Tamiasciurus hudsonicus), eastern gray squirrel (Sciurus carolinensis) and both southern (Glaucomys volans) and northern (G. sabrinus) flying squirrels. Fox, red, and gray squirrels may cause conflicts with homeowners and agriculturists. Squirrels may damage or remove valuable nuts and fruits from orchard trees; feed on corn, tomatoes, and strawberries from gardens; and sometimes will damage the bark or eat the buds of ornamental trees and shrubs. Squirrels are quite comfortable in suburban landscapes, and may make their homes in the attics, walls, and other accessible spaces in houses and other structures. Though this damage may be of a nuisance in many cases rather than an economic burden, squirrels are capable of inflicting serious damage to property (i.e., by chewing electrical wiring, insulation, etc.). In many suburban areas, tree squirrels are responsible for the largest proportion of nuisance wildlife complaints.

Range

The range of the eastern gray squirrel, both flying squirrels, and the red squirrel includes all of New York State, except for regions with the highest elevations in the Catskills and central Adirondacks, where there are deep winter snows and a minimal mast crop. Because New York is on the northeastern edge of the fox squirrel’s range, this species inhabits primarily Chautauqua, Cattaraugus, and Allegheny Counties, though individuals may occasionally be found in other Southern Tier counties.

Legal Status

Gray and fox squirrels are protected game animals in most states, and they can be hunted in season with a valid small game hunting license. Section 11-0523 of the New York State Environmental Conservation Law states that, “whenever black, gray, and fox squirrels are injuring property on farm lands or dwellings, they may be taken at any time and in any manner by the owner or occupants thereof.” Red squirrels are unprotected in New York State and may be taken at any time without limit with a small game hunting license. When nuisance squirrels are taken under Section 11-0523, they must be immediately buried or cremated. Section 11-0511 of the Environmental
Conservation Law specifies that squirrels cannot be possessed or transported except under license or permit from the Department of Environmental Conservation.

**Damage Management Methods**

**Exclusion-** Squirrels can be prevented from climbing isolated trees by the installation of a two-foot-wide sheet-metal band on the trunk (fastened with springs to allow for tree growth) at least 4 feet above the ground. They can be prevented from traveling across wires by installing 2-foot lengths of 1- or 2-inch-diameter plastic pipe over the wires, which will rotate when the squirrels cross over these barriers. Squirrels should be excluded from buildings by sealing all openings that could be used as entrances with heavy galvanized metal or concrete. Travel from tree-to-tree and onto roofs can be prevented by pruning or removal of branches. Gaps of at least 10 feet wide should be maintained between tree limbs and houses to prevent squirrels from jumping onto rooftops.

**Traps-** Trapping is one of the most effective ways to remove problem squirrels. A variety of traps can be used, and the type of trap selected should be matched to situation, considering the risk of capturing non-target species. To eliminate squirrels from a residence, it is best to seal off all entrances except one, and then place a trap at the remaining opening. When squirrels are a problem in fruit or nut orchards, traps can be secured to tree branches in order to avoid capturing non-target species. Effective baits include walnut and pecan meats, sunflower hearts, peanut butter, apple, and orange slices.

**Repellents-** Naphthalene or paradichlorobenzene mothballs and flakes are registered in New York State as animal repellents, and may be somewhat effective for repelling squirrels from buildings if used in confined spaces. However, the New York State Department of Health is concerned that young children may develop hemolytic anemia after exposure to fumes from mothballs. Care should be taken to avoid mothball odors within human-occupied rooms in structures.

**Shooting-** Squirrels can be effectively removed from trees with a .22-caliber rifle or a shotgun if safe conditions are available, and local ordinances permit the discharge of firearms. In suburban areas, check with local law enforcement agencies before using firearms.

**Toxicants-** No toxicants (i.e., rodenticides) are registered for homeowner use to control nuisance squirrels in New York State.

**Health Concerns**

Squirrel are often infected with internal parasites (i.e., roundworms, tapeworms and hookworms), as well as external parasites (i.e., mites, fleas, and ticks). Cutaneous warbles caused by larval Cuterebra flies or fibromes caused by pox virus may be unsightly, however, they have no reported public health implications.

**Current Literature**

_by Paul Curtis, Natural Resources_


Deer damage has increased dramatically in many areas of the United States during the past decade. Browsing on Christmas trees and ornamentals has been particularly severe, with plant replacement costs exceeding $6.5 million annually in one NYS county. Recent development of a pest confinement system (Invisible Fence Co. Inc., Berwyn, Pa.) enabled sheep producers to confine livestock guarding dogs in pastures. Extending this concept further, the authors evaluated the effectiveness of dogs confined electronically for protecting white pine (Pinus strobus) seedlings from deer browsing.

Each of the 3 experimental plots was 2 ha (5 acres) in size, and contained 1- to 4-year-old white pine seedlings planted 2 m apart. Two border collies were used in the dog-protected plot, and they ranged freely, receiving a shock from battery-operated collar if they ventured within 2-3 m of the buried perimeter wire. Dog houses were placed at major deer travel lanes to increase the chance of deer-dog contacts. For comparison, Hinder deer repellent was used to protect a similar plot, and a third plot with no protection was used as a control. Damage was assessed monthly during December through March of each year.

Dogs were a much better deterrent to deer damage than Hinder or no treatment. Browse rates in plots protected by dogs and Hinder, or with no protection averaged 13%, 37%, and 56%, respectively, over the 3-year study. Net present values (NPV) calculated for simulated crops of white pine trees subjected to deer browsing indicated higher eighth-year retail crop values for plots protected by dogs versus those with Hinder or no protection. Adjusting for repeated browsing on replaced trees, plots protected with dogs had an estimated NPV of $48,000, and those treated with Hinder had a NPV of $1,400. Unprotected plots had a NPV of -$5,700.

**Editor’s Note:** A similar study is currently underway using invisible fencing and dogs to protect three orchards from deer damage in Oswego County, New York. Pairs of dogs are protecting plots about 12-15 acres in size, with unprotected trees of a similar age and apple variety nearby. For more information contact: Regina Rieckenberg, Cornell Cooperative Extension of Oswego County (phone: 315-963-7286, or via e-mail: riecken@cce.cornell.edu).
Urban Wildlife Management Association Supports Nuisance Wildlife Control Industry
by James Rambuski, NYSUWMA

The NYS Urban Wildlife Management Association (NYSUWMA) is for all Nuisance Wildlife Control Operators and others interested in urban wildlife management in New York. NYSUWMA provides an outlet for wildlife control professionals to become personally involved with their industry and develop responses to public and governmental expectations. The purposes of NYSUWMA are to: (1) serve as a non-profit trade organization for people who engage in nuisance wildlife control and wildlife damage management; (2) foster humane standards for the treatment of wildlife; (3) develop and promote high ethical, technical, and business standards; and (4) educate and inform members concerning issues that may affect the profession.

Benefits of membership include communication with other wildlife damage management professionals; education concerning wildlife ecology, management, and specific control practices; a quarterly newsletter, discounted rates for workshops and seminars sponsored by NYSUWMA, free access to wildlife control literature and videotapes in the NYSUWMA library; and an opportunity to become actively involved with committees and the Executive Board. The most effective way to have a voice in the development of the nuisance wildlife control profession is to support this recognized association representing our interests.

Currently, NYS has about 1,300 licensed nuisance trappers. Concerns are being raised about the ethical and business practices of trappers who may lack training and experience. NYSUWMA plans to address these issues by providing more knowledgeable wildlife control operators. If you are interested in joining this group, send a $10 check (made payable to NYSUWMA) to: NYSUWMA, c/o Susan Greene, 71 Station Rd., Spencer, NY 14883.

New Wildlife Removal Handbook Available
by Paul Curtis, Natural Resources

Wildlife Removal Handbook- A Guide for the Control and Capture of Wild Urban Animals, was published in 1994 by Stephen Vantassel. This 70-page book is filled with information concerning nuisance wildlife control, from starting your own business to actual trapping practices. The book is written primarily for new wildlife control operators, however, even experienced trappers will be able to gain new tips and insights. The book illustrates that trapping is often more of an art than a science.

It’s important to remember that trapping regulations vary state-to-state, and some methods recommended in the booklet may not be appropriate for New York State. However, chapters contain interesting techniques for the removal of skunks, raccoons, tree squirrels, woodchucks, and feral cats. The author shares personal experiences and methods that have worked well for him in Massachusetts. To obtain a postage-paid copy of this handbook, send $12.95 to Stephen Vantassel at 332A Cooley Street, Box 102, Springfield, MA 01128.

WDAMAGE Bulletin Board Continues to Provide Information
by Paul Curtis, Natural Resources

Questions and responses on the WDAMAGE bulletin board are increasing as new users contribute to this computer service. Recent topics have included trapping skunks in buildings, position announcements, and photo requests for publications.

WDAMAGE is available through Internet or Bitnet networks. The listserver is being coordinated by Dave Bergman at North Dakota State University. To subscribe to the list (at no charge), send a subscription message to LISTSERV@VM1.NODAK.EDU. As your message, state only: subscribe WDAMAGE Firstname Lastname. Insert your name instead of “Firstname Lastname.” If your communications program has a signature block, turn it off for this message. If you need additional instructions, or have difficulty signing on, contact either Dave Bergman (DBERGMAN@VM1.NODAK.EDU) or Robert Schmidt (RSCHMIDT@CC.USU.EDU).

When you send a message to the list, it will be forwarded to all subscribers. Messages can include results of studies, requests for information, meeting announcements, job openings, or other topics of interest to professionals interested in wildlife damage management. Those people who have participated in this electronic discussion group received much useful information. The value of this service will continue to increase as other users sign-on and actively join in.