

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

The Probe: Newsletter of the National Animal
Damage Control Association

Wildlife Damage Management, Internet Center for

October 1996

The Probe, Issue 170 – October 1996

Follow this and additional works at: <http://digitalcommons.unl.edu/icwdmprobe>



Part of the [Environmental Sciences Commons](#)

"The Probe, Issue 170 – October 1996" (1996). *The Probe: Newsletter of the National Animal Damage Control Association*. 25.
<http://digitalcommons.unl.edu/icwdmprobe/25>

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 The Probe: Newsletter of the National Animal Damage Control Association by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Bird Strike! Potential Solutions

James E. Forbes, Chairman, Bird Strike Committee—USA
and Past President, NADCA

Editor's Note: The first portion of this article, which described the birdstrike problem, was published in the September 1996 issue of The PROBE.

There are two ways to solve the birdstrike problem: Habitat Modification and Bird Scaring Techniques. Habitat modification is the process of actually changing the airports' physical environment to make it less attractive to birds. Like most other animals, birds need three elements to survive: Food, water and shelter. Taken together, these elements comprise a birds' habitat. Each bird is dependent upon a specific set of habitat conditions.

Working with airport managers, professional wildlife biologists develop environmental assessment plans for major airports which have histories of bird strike problems. The plan identifies various habitat components on the airport which attract birds. A program is then conducted to remove or change these attractants. This usually results in a permanent solution to the current problem.

Some of the more commonly observed bird attractants at airports include: standing water on rooftops and hard stand areas; short grass rather than the less bird attractive tall grass; horticultural tree plantings which provide both food (nuts, seed and fruit) and bird roost locations (shelter); and discarded food from fast food restaurants, airline food provisioners and even people who intentionally feed birds at airports. Sanitary landfills, garbage transfer stations, sewage treatment plants, water reservoirs and storm water detention basins are also attractive to many birds.

Bird scaring techniques are used by many airports sometimes in lieu of habitat management and sometimes to enhance habitat management efforts. Some of the larger North American airports have full time bird hazing teams to locate, identify and move birds off the airport. Many of the bird hazing techniques are based on birds' natural fear of gunfire. These techniques are especially effective when used on gulls, geese, ducks, crows and starlings. Also, these techniques work best when used in combination with each other. Some examples of hazing techniques are:

Shell crackers: Special shotgun shells containing a large firecracker which when fired from a 12-gauge shotgun are propelled up

to 100 yards where they explode with a loud report frightening and flushing nearby bird flock.

Bird bangers: A less expensive, short range (25 to 30 yards) version of the above fired from an inexpensive 15mm flare pistol and producing a loud "BANG!"

Whistle bombs: Also fired from 15mm flare pistol. The device flies erratically, emitting a whistling scream. Range about 30 yards.

Gas exploders: Sometimes called gas cannons. These devices operate by propane or LP gas and are controlled by a timer which can be set from 5 to 60 minutes. Some exploders are turned on and off by photocells at sunrise and sunset. Several airports have gas exploders placed in re-ventments every 100 yards along runways.

Recorded Actual Distress Calls: The distress calls of various bird species are available on records, cassette tapes and, most recently, a computer chip. Distress calls are species specific—you must identify the bird species and match the distress call to the bird.

Repellents: A number of mechanical and chemical bird repellents are available.

Falcons: Some of the larger airports in Canada are currently using trained, captive falcons to move birds off runways and taxiways.

Most airport bird strike reduction work is carried out using information and help provided by the U.S. Department of Agriculture (USDA), Animal Damage Control Program (ADC). ADC is part of USDA's Animal Plant Health Inspection Service (APHIS) who also oversee the "Beagle Brigade" at the larger international airports.

ADC works closely with both Federal Aviation Administration (FAA) and the U.S. Air Force, Bird Aircraft Strike Hazard (BASH) Team under

Continued on page 2, Col. 1

Bird Strike! Potential Solutions

provisions of two memoranda of understanding between these agencies.

The ADC operational program can provide airports with a number of services: (1) Bird Assessment Plans (mentioned above); (2) Bird Surveys; (3) Bird Identification and Control Training; and (4) Information on Bird Control Techniques and Methods. These activities are usually coordinated through the Regional Airport Safety and Certification Office of FAA. Airport Managers could get more information by contacting Mr. Ed Cleary, FAA-AAS-317, 800 Independence Avenue S.W., Washington, D.C. 20591.

The USDA's ADC Program also has a very active research program dealing with bird strikes through the Denver Wildlife Research Center's Sandusky Field Station led by Dr. Richard Dolbeer. Currently Dr. Dolbeer's bird strike research is looking into: (1) compilation and analysis of all reported bird strikes; (2) grass height measurements on airports; (3) bird and deer repellents; and (4) relationship of gulls at landfills and other waste sites to airports.

There are three international organizations dedicated to reducing the number of bird strikes throughout the world: (1) Bird Strike Committee Europe; (2) Bird Strike Committee Canada; and (3) Bird Strike Committee—USA.

Bird Strike Committee—USA's goal is to increase communication and professionalism among the diverse groups dealing with wildlife management on airports. The Committee meets once a year to conduct a training and scientific program and present current research. Attendees include representatives from the air transport, solid waste management and pest management industries, airports, natural resource agencies, Federal

Aviation Administration and the Military. Airport managers and operational people are welcome and encouraged to attend. The most recent meeting was co-sponsored by the American Association of Airport Executives and held at Phoenix Sky Harbor International Airport in July 1996. For more information on future meetings, or to be placed on the mailing list to receive future meeting announcements, contact: James E. Forbes, Chairman, BSC-USA, P.O. Box 97, Albany, New York 12201-0097.

Persons wishing to contact Bird Strike Committee Canada may do so by writing Mr. Bruce MacKinnon, Transport Canada, Environmental and Support Services, 18C, Place de Ville, Ottawa, Ontario, Canada KIA 0N8.

Finally, we can ask the question: "What can pilots and airport managers do to help reduce the threat of bird strike hazards to aircraft?" Answer: *Two things actually—*

1. Report all bird strikes using the forms that are available to most pilots and airports in the United States and Canada. This information, when compiled and analyzed, is invaluable for defining the problem.

2. Be aware of the hazard from bird strikes. Remember, "Little feathered bullets can kill ya!"

CALENDAR OF UPCOMING EVENTS

November 14-15, 1996: Natural Resource and Environmental Policy for the 21st Century: Shaping the Vision, YO Holiday Inn, Kerrville, Texas. Information: Texas Agric. & Nat. Resources Summit Initiative, 113 Administration Bldg., TX A&M University, College Station, TX 77843-2142, phone (409) 845-8484, FAX (409) 845-9938.

December 3-5, 1996: 9th Annual Conference of the Australian Wildlife Management Society, Canberra, Australia. Information: Jim Hone, Faculty of Applied Science, Univ. of Canberra, PO Box 1, Belconnen ACT 2616, Australia, e-mail: hone@aerg.canberra.edu.au

December 8-11, 1996: 58th Midwest Fish & Wildlife Conference, Red Lion Hotel, Omaha, Nebraska. For information, contact 58th Midwest F&W Conference, PO Box 4558, Lincoln, NE 68504-0641, phone (402) 471-0641, FAX (402) 471-5528, or visit <http://www/ngpc.state.ne.us/iafwa/midwest.html>

April 16-19, 1997: 13th Great Plains Wildlife Damage Control Workshop, Lied Conference Center, Nebraska City, Nebraska. Will include the annual NADCA membership meeting. For information: contact Charles Lee, Kansas State University, (913) 532-5734, or Scott Hygnstrom, Univ. of Nebraska, (402) 472-6822.

The Probe is the newsletter of the National Animal Damage Control Association, published 11 times per year. Copyright © 1996 NADCA. No part of this newsletter may be reproduced in any form without the written permission of the Editors.

Editor: Robert M. Timm, *Hopland Research & Extension Center, 4070 University Road, Hopland, CA 95449*

Editorial Assistant:
Pamela J. Timm, *P.O. Box 38, Partridge, KS 67566*

Your contributions to *The Probe* are welcome. Please send news clippings, new techniques, publications, and meeting notices to *The Probe*, c/o Hopland Research & Extension Center, 4070 University Road, Hopland, CA 95449. Articles and notes can also be sent by e-mail to rtimm@ucdavis.edu. If you prefer to FAX material, our 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.

ADC News, Tips, Ideas , Publications . . .

Recent Retirements

Ed Knittle, project leader in the Product Development Section, National Wildlife Research Center, USDA, retired in September following 30 years of service. Most recently, he has been involved in projects such as the reregistration of DRC-1339, and raven predation on the endangered California least tern. From 1974 through 1988 he was a member of the Bird Section, where he studied blackbird migrations and roost dispersal techniques, and assisted in the development of DRC-1339 and Avitrol.

Don Mott also retired in March 1996, after 34 years of federal service. Most recently, he served as project leader of the NWRC's Mississippi Field Station in Starkville, where he led initiatives aimed at reducing bird damage at aquaculture facilities. Prior to this, he served from 1980 to 1989 as project leader at the Bowling Green, KY Field Station, where he and his staff developed methods to help solve problems caused by winter roosting blackbirds. His service at the Denver Wildlife Research Center from 1970 to 1980 included two temporary assignments in Uruguay.

Steve Palmateer retired in August as Chief of the Data Support Branch and Leader of the Data Support Team, TSS, USDA-APHIS, in Riverdale, Maryland. He joined TSS in 1990, following a number of years of service in the Office of Pesticide Programs at EPA. Prior to beginning federal employment, Steve was a research technician working with Rex Marsh and Howdy Howard at UC Davis. Most recently, Steve has been involved in consolidation of DRC-1339 and zinc phosphide registrations, and development of approvals for greater flexibility in various uses of DRC-1339. He has also been an extremely effective liaison between USDA and EPA, and his experience and knowledge will be sorely missed.

Dick Wetzel, ADC State Supervisor for Minnesota, retired in March 1996 following more than 30 years of service. In his most recent position, he was involved in oversight of the activities of the wolf damage management program in that state. He had previously served in supervisory positions in the ADC operational program in Wisconsin, South Dakota/Nebraska, and Texas.

Paul Woronecki retired in March 1996 following 35 years of federal service, 21 of those spent as project leader at the Ohio Field Station in Sandusky. His contributions in wildlife damage research are well known, notably in damage assessment, cultural and varietal factors to reduce damage, and in immobilizing agents. He has worked on vampire bats in Colombia, blackbirds in Ohio and the Dakotas, ducks and other nuisances in the Las Vegas area, gulls at JFK Airport, bird roosts in Tennessee, and starlings in California vineyards.

Treasurer Says "Time to Renew Your Membership"

Treasurer Wes Jones notes that many NADCA members' subscriptions expire during the last quarter of the year. It's time to check your mailing label— if your expiration date is getting near, please fill out the "Membership Renewal and Application Form" in this issue, and send it with a check to Wes at the address listed (please note that Wes' address has recently changed). Include your full 9-digit Zip Code, please! Your attention to this will save Wes from having to write you a reminder note (and will save NADCA the 32-cent stamp!).

Please DON'T send your renewal to the return address of **The PROBE** (Scott Hygnstrom's address); this return address at the University of Nebraska is utilized so that we can print and mail **The PROBE** under the University's non-profit bulk mail status.

Our Editorial Assistant Moves

Pamela J. Tinnin, who has served as Editorial Assistant for **The PROBE** since 1990, has recently moved from California to Kansas. Last spring, Ms. Tinnin graduated from the Master of Divinity program at Pacific School of Religion in Berkeley. On April 21 she accepted a call to become pastor of the Partridge Community Church, Partridge, Kansas. She and her husband Zack and son Tyrell arrived in Kansas on August 8, and she assumed her new position on August 15.

For 11 years, Pam and her husband operated a sheep ranch in Sonoma County, California. "The first night after I arrived in Partridge I heard some coyotes just south of our house calling back and forth," she commented. "That familiar sound certainly took me back to my years on the sheep ranch."

Prior to entering seminary, Pam worked as a program assistant and later as an editor for the Integrated Hardwood Range Management Program under Robert Schmidt at the UC Hopland Research & Extension Center. Upon entering seminary, she transferred to the UC Berkeley campus as an editor for the same program .

Even though she's living in a very small Kansas town (250 population), with e-mail, FAXes, and the Internet, Pam anticipates being able to continue to assist the Editor with desktop publishing to prepare **The PROBE** for the print shop. She can be reached at P.O. Box 38, Partridge, KS 67566, phone (316) 567-3021, or by e-mail at PamZak@ix.netcom.com. Thanks, Pam, for your continuing commitment to making our newsletter look great!

◆◆◆◆◆

*The Editor thanks the following contributors to this issue: Guy Connolly, Mike Fall, Grant Huggins, Wes Jones, Jim Miller, Robert Schmidt, and Craig Ten Brink. Send your contributions to **The PROBE**, 4070 University Road, Hopland, CA 95449.*

Video and Publication Review

Stephen Vantassel, Special Correspondent, The PROBE

Fur Institute of Canada's educational materials on the fur trade.

Editor's Note: This is a continuation of Mr. Vantassel's review of materials published by the Fur Institute of Canada, which began in last month's issue of The PROBE.

"Wild Furbearer management and Conservation in North America: North American Delegation to Europe October/November 1995." This spiral bound document sets forth in a concise way the rationale behind the fur trapping techniques used in North America. In short, the document defends North American trapping against E.U. criticisms/concerns in the following way.

First, trapping is more humane today than it was 20 years ago and research is making it even better. Second, E.U. countries such as Holland also trap, except that unlike Holland, we consider the muskrat a valuable fur resource. Third, trapping will continue no matter what. There will always be a need for trapping for research and animal damage control. Fourth, E.U. nations have not demonstrated that their trapping techniques are necessarily more humane than the foothold.

I found this document to be well written and hard hitting. It strikes a key blow against the assumption that footholds are necessarily inhumane. In its *Questions and Answers* sections, it outlines how trap systems should be chosen on scientific grounds, not on the basis of what various 'antis' groups happen to believe. The writers correctly point out how the E.U. is basically hypocritical. For example, the E.U. says footholds are inhumane and there are other humane alternatives. Yet these writers point out that the E.U. has never produced any of these other humane alternatives.

Second, thousands of animals are trapped in Europe each year by methods even the E.U. doesn't deem humane. In the conservation section, the authors tell of a number of animal conservation programs that use the foothold to reduce predators endangering the protected species. The economic need of animal control is also briefly discussed with accompanying photos of beaver damage and coyote-killed sheep.

This publication is well done and should be in the library of anyone wanting information to refute the animal rights agenda and that of the E.U. It is firm in stating the pro-trapping case without being shrill or petty—a truly professional piece of work. The publication "People of the Fur Trade, Partners in Conservation" is also included in the pages of this document.

"Focus on Trapping" is an eighteen-segment video series on the fur trade. It is actually used in most of the trapper education programs in Canada and I can understand why. As one who had to sit through trapping educational videos made in the 1950s-60s, I can see why Canadian courses would be using this video series. The course covers furbearing species

such as beaver, muskrat, mink, fisher, marten, lynx, fox, coyote, otter and raccoon. Some of the techniques discussed are useful only for areas which receive a great deal of snowfall.

I was impressed. The videos were well shot and provided essential but basic information on trapping these various species. Particularly noteworthy was the extensive coverage on pelt handling. I personally believe that pelting is among the hardest topics to cover in video form due to the need for excellent photography for such a subtle task. While I don't think these videos solved that problem, I was impressed with the foundation they would provide any beginning trapper. The pelt handling instructions would move the beginner well along in the learning curve. In this way, an older trapper could train the new trapper more quickly.

The pelt handling instructions would move the beginner well along in the learning curve. In this way, an older trapper could train the new trapper more quickly.

These videos also provided foundational information regarding the biology of each species covered. Emphasis was placed on the role fur trapping plays in modern wildlife management. Potential trappers are instructed about how trapping limits are placed to respond to fluctuations in furbearer populations. For example, the trapper is informed about how lynx populations are directly proportional to the snowshoe hare. Thus trapping bag limits must be set to account for these fluctuations. As with all the videos, the quality of the information and viewing is superb. Close-up shots on animal prints and animals in the wild were a nice touch.

The video portions on the fur trade were simply outstanding. I developed a deeper sense of awe at how many people are involved after the pelt is delivered to the fur buyer. An extensive amount of tape was spent on fur grading and the importance of prime pelts. With the amount of work needed to grade and categorize various pelts, I am thankful that I don't have to do it. It seems to take an eye much better than mine to classify the pelts into one of those many different categories.

The tapes cost \$99 plus GST plus shipping.

In conclusion, I think we should all be thankful that the Canadian Fur Institute is on our side. They have certainly done a fine job in producing quality materials that make the case for trapping. I think it would behoove any American agency to look

Continued on page 5, Col. 1

“Live Trapping” – ADC Internet News

Editor's Note: The following communications were taken from recent postings to the electronic bulletin board WDAMAGE.

Hello everyone:

First let me introduce myself. I'm Robin Culp from Omaha, NE. I have been a wildlife rehabilitator for almost 7 years. Not that long, in comparison with other rehabbers. But unlike most, I have specialized in one species, raccoons. I have worked with a minimum of 125 a year, and have seen lots of cruelty, abuse and unfortunate circumstances. I wanted to follow up on a topic that started a couple of weeks ago, since this happens to be one of my “hot buttons”.

I have always cared about animals, and there was a point in my life when I thought livetrapping was acceptable since I didn't know the results of livetrapping. In last week's WED, Louise Shimmel in Eugene spoke most of the words I wanted to say. I just wanted to follow up on some of her ideas:

1. Louise said that removing 1 animal creates a niche that another will move into. There is one man south of Omaha who lives outside of a nature preserve. He has a decorative pond with fancy fish. Simply can't figure out why the raccoons keep eating his fishes. Has been livetrapping and removing for 3 years. The humane society he calls every week has talked with him over and over. Seems obvious that if trapping hasn't solved the problem in 3 years, maybe it won't? Not only will another raccoon move into the area, but nature sees a reduc-

tion in the population, so the remaining raccoons will have larger litters to make up for the artificial reduction in numbers.

2. Louise mentions orphaning the young. Actually, she understated the results. Momma does stay with her little ones until the next breeding season. Since she has time, she weans slowly. After weaning she has to teach the kits what to eat and how to find it. Possibly, just possibly, if they are orphaned after September, they may be able to make it (altho, they will have trouble in winter deciding what is the best shelter and how to find food when things are scarce). Anytime before that, the babies will die.

Death by dehydration and starvation is not pretty. It is slow and painful. First the body eats the fat, then starts on the muscle. The organs are basically muscle tissue, so the body functions slowly shut down one by one. The kits may try coming out and someone may find them and bring them to a rehabber. However, after 2 days without momma, things get dicey. Three days and they are critical. It is very hard for a rehabber to bring back these types of cases. Most of us don't have the ability to IV fluids or get nutrition in by special means. We get by with subcutaneous and tubing fluids. I have cried over many babies who could have been wonderful animals.

3. Louise mentioned the animals immune system may not be able to handle the stress of capture and movement into a new and unfamiliar area. Louise didn't mention the actual physical damage that can be done. Wild animals (squirrels, opossums, raccoons) are used to living in open spaces. All of a sudden a door slams shut and confines them to a small area. The terror they experience is real. So, to survive they try their best to get out.

Our opossum person has received MANY animals with broken nose bones and holes in the nose area. They have lots of small bones that break easily and thin skin that tears easily. She has spent many, many hours and lots of money repairing faces. Raccoons use their hands and feet. I have received many adults with broken bones, some of which were so badly infected that the infection spread into the blood stream. Other people have reported seeing raccoons in livetraps with legs at odd angle. Last week I lost a 5-week-old baby from that very thing. His mother was live trapped at one house and he and his sibling were found 2 days later several houses down. His sibling had already died and his wrist was almost severed through. Between the dehydration, starvation, wound and infection, and anemia from parasites, he was in serious trouble. I worked for 4 days, but did lose him.

4. Transporting disease into a new area is a real problem. Louise mentioned rabies on the east coast which is an extreme example. On a small local level, the population may be rela-

Continued from page 5, Col. 2

Video & Publication Review

at their program and copy those elements applicable for our use. I am sure the fur industry's image would be better for it.

You can contact the Fur Institute of Canada at 255 Albert Street, Suite 804 Ottawa, Canada K19 6A9. Their phone number is 613-231-7099 and fax number is 613-231-7940. You can also contact them by e-mail at Fur@magma.com, although when I sent them e-mail (2x), I received no response. The secretary told me that they didn't receive my request at their end. I double checked the address and I did send it to the right place, so be aware of this potential problem.

Stephen Vantassel, NWCO Correspondent
340 Cooley St. Box 102,
Springfield, MA 01128.
E-mail ADCTRAPPER@aol.com
©1996 Stephen Vantassel

Continued on page 7, Col. 2

Translocation of Fox Squirrels: Looking at Individual and Population Effects

Craig E. Ten Brink, Department of Wildlife and Fisheries and Sciences, Texas A & M University

Translocation, the process of moving wild animals from one location to another, is a method of animal damage control that has been used for many different nuisance animals, from large animals such as black bears and moose, to smaller animals, like raccoons and squirrels (Boyer and Brown 1988).

Translocation has long been thought to be a humane and more publicly acceptable alternative to killing of nuisance animals. Some studies suggest, however, that translocation may not be a humane option and that relocated animals fare poorly in new and unfamiliar surroundings (O'Bryan and McCullough 1985, Rosatte and MacInnes 1989, and Schultz 1980).

Studies like these have given some people the impression that translocation does not work and may actually be less humane than killing, because death of animals happens over a number of weeks or months, due to factors like stress and starvation (Schultz 1980, Wright 1977, and Miller 1990). The fact is, there is still much to be learned about the effects of translocation.

One aspect of translocation that has not been looked at is the effect of an influx of translocated animals into an existing population. Even if relocated animals survive, what is the effect on the resident population, especially if that population is at or near its carrying capacity?

It may be wrong to assume that just because an area supports a population of a species, that it can handle an additional group of animals that will be competing for a limited amount of resources.

Of particular interest to my study is the fox squirrel (*Sciurus niger*). Fox squirrels are known to cause significant damage to property and crops, and are a common target for damage control efforts. In Oklahoma, fox squirrels cause significant damage to pecan crops (Hall 1984, Leppla 1980), sometimes damaging more nuts than can be harvested in areas adjacent to forest habitat (Huggins 1991). Obviously this kind of damage can be costly to pecan growers.

While translocation has been used to deal with nuisance fox squirrels (Dolbeer et al. 1991, and Hall 1984), the fate of those squirrels and the effects of adding animals to an existing population have not been adequately studied. The goal of my study was to develop a methodology to test the effects of translocation on the home range characteristics of fox squirrels that were translocated, remained in the area, and residents in the area of translocation. This preliminary study was designed to 1) determine whether translocated squirrels stay in the area of re-

lease, return to their home area, or move to an entirely new area; 2) determine pre and post-translocation home range statistics, such as size and center of activity (for residents and translocated squirrels); and 3) determine changes in mean distance between resident squirrels with the addition or removal of squirrels.

The study took place at the Noble Foundation's Red River Demonstration and Research Farm in Love County Oklahoma. The site consists of native pecan groves interspersed with pastures and surrounded by mixed forest.

Nineteen squirrels were fitted with radio collars in three different zones of the study site. One zone served as the control and contained 5 collared squirrels. A second zone, containing 10 collared squirrels, was the area from which 4 collared squirrels were taken to be translocated. The third zone, containing 4 collared squirrels, was the area of release for the 4 translocated squirrels. All 19 squirrels were monitored through radiotelemetry, before and after translocation of the 4 squirrels.

Of the 4 translocated squirrels, 2 were able to find their way back approximately 3 km to their original home area, and 2 remained in the release area. Of the two that remained near the release site, one was found dead less than 2 months after translocation. Only the radio collar of the other was found, and since the collar was not broken, and the squirrel had been collared for at least 60 days, I assumed that the squirrel had died and the collar had fallen off.

Even if relocated animals survive, what is the effect on the resident population, especially if that population is at or near its carrying capacity?

Of the 26 squirrel pairs with overlapping home ranges, 8 showed a significant increase in mean distance between simultaneous fix points. Although not statistically significant, all areas showed a mean increase in distance between squirrels after translocation. This may have more to do with the time of the year than the experimental treatment, which points out the importance of having a control population. Also, mean home range size increased, though not significantly, in all areas for males and females.

Because this was a preliminary test, designed to develop a methodology, the sample sizes were small and therefore could not provide statistically significant results. However, results of my study show that this type of study is feasible and can potentially provide a great deal of insight into the effects of translocation on all animals involved.

Continued on page 7, col. 1

Continued from page 6, col. 2

Translocation of Fox Squirrels

Although it is important to know the fate of translocated animals, that information does not tell the whole story. In most cases, if animals are surviving, then the translocation is considered a success. However, without knowing what is happening to the residents already living in release areas, we can't claim that translocation is an entirely feasible and humane option.

Literature Cited

- Boyer, D. A., and R. D. Brown. 1988. A survey of translocations of mammals in the United States 1985. Pages 1-11 in L. Nielsen, and R. D. Brown. eds. Translocation of wild animals. Wisconsin Humane Society, Milwaukee, and Caesar Kleberg Wildlife Research Institute, Kingsville, TX.
- Dolbeer, R. A., N. R. Holler, and D. W. Hawthorne. 1991. Identification and control of wildlife damage. Pages 474-506 in T. A. Bookhout, ed. Research and management techniques for wildlife and habitats. Allen Press Inc., Lawrence, Kansas.
- Hall, T. C. 1984. Wildlife damage and control in Oklahoma pecan orchards. M.S. Thesis., Okla. State Univ., Stillwater. 69pp.
- Huggins, J. G. 1991. Measuring wildlife depredation of native pecans. Proc. Annu. Conf. Southeast. Assoc. Fish Wildl. Agencies. 116:113-119.
- Leppla, R. R. 1980. An assessment of damage to pecans by wildlife in central Oklahoma. M.S. Thesis., Okla. State Univ., Stillwater. 71pp.
- Miller, B. K. 1990. Factors affecting survival of transplanted eastern wild turkeys in Indiana. Wildl. Soc. Bull. 18:65-70.
- O'Bryan, M. K., and D. R. McCullough. 1985. Survival of black-tailed deer following relocation in California. J. Wildl. Manag. 48:115-119.
- Rosatte, R. C., and C. D. MacInnes. 1989. Relocations of city raccoons. Proceedings Great Plains Wildl. Damage Control Workshop. 9:87-92.
- Schultz, W. C. 1980. Extent and causes of mortality in stocked snowshoe hares. J. Wildl. Manage. 44:716-717.
- Wright, G. A. 1977. Dispersal and survival of translocated raccoons in Kentucky. Proc. Annu. Conf. Southeast Assoc. Fish and Wildl. Agencies 31:285-294.

Continued from page 6, col. 2

"Live Trapping" – ADC News on the "Net"

tively free from roundworm, tapeworm, distemper, parvovirus. Bringing in a carrier could have devastating results on the population.

Unfortunately, people have different ideas of who should be allowed on their property. Some people understand nature works under different logic, some people decide that since they "own" the property they have control. In part of this town, some people put down food specifically to feed the squirrels, opossums, raccoons. While their neighbors trap to get the animals off. Imagine how confused the poor critters are.

This also got long, for which I apologize... The idea of livetrapping is noble. The result is cruel. Please consider all the scare-away methods (bright lites, loud music, ammonia, electric fence, baby powder, securing garbage cans, bringing in pet food at night, capping chimneys before baby season, putting wire netting over holes) first.

Thank you.

Robin Culp

<Hambird@aol.com >

Wildlife Rescue Team, Omaha, NE

A Response:

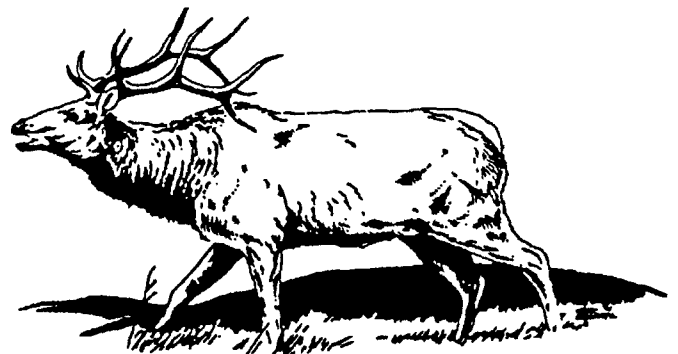
RE: Robin Culp's message—

Everything in nature is geared toward the health of the population, ALWAYS at the expense of individuals. Any time a more highly advanced species conflicts with a less advanced species the former is going to be the loser.

I am embarrassed by emotional talk about mourning the loss of an individual or her offspring. Let's focus our efforts on abating wildlife damage in such a way that populations remain healthy and productive and stop crying over "babies". Good Lord — get a grip!

Jim Heffelfinger

<jheffelfin@phx1.GF.STATE.AZ>



**DO NOT DELAY
- TIME VALUED MATERIAL -**

Nonprofit Org.
U.S. POSTAGE
PAID
Lincoln, NE
68501
Permit No. 46

Scott Hynstrom
Forestry, Fisheries & Wildlife
202 Nat. Resources Hall
University of Nebraska
Lincoln, NE 68583-0819

Membership Renewal and Application Form

NATIONAL ANIMAL DAMAGE CONTROL ASSOCIATION

Mail to: Wes Jones, Treasurer, W8773 Pond View Drive, Shell Lake, WI 54871, Phone: (715) 468-2038

Name: _____ Phone: (____) _____ - _____ Home

Address: _____ Phone: (____) _____ - _____ Office

Additional Address Info: _____

City: _____ State: _____ ZIP _____
Please use 9-digit Zip Code

Dues: \$ _____ Donation: \$ _____ Total: \$ _____ Date: _____

Membership Class: Student \$10.00 Active \$20.00 Sponsor \$40.00 Patron \$100 (Circle one)

Check or Money Order payable to NADCA

Select one type of occupation or principal interest:

- | | |
|---|---|
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Pest Control Operator |
| <input type="checkbox"/> USDA - APHIS - ADC or SAT | <input type="checkbox"/> Retired |
| <input type="checkbox"/> USDA - Extension Service | <input type="checkbox"/> ADC Equipment/Supplies |
| <input type="checkbox"/> Federal - not APHIS or Extension | <input type="checkbox"/> State Agency |
| <input type="checkbox"/> Foreign | <input type="checkbox"/> Trapper |
| <input type="checkbox"/> Nuisance Wildlife Control Operator | <input type="checkbox"/> University |
| <input type="checkbox"/> Other (describe) _____ | |