November 1999

The Probe, Issue 206 – November 1999

The NADCA Probe
ISSUE 206
NOVEMBER 1999

Wildlife Damage Conferences: When, Where, and Why?

Robert M. Timm, Editor, THE PROBE

Historical Background

Since the early 1980s, three recurring conferences that focus on wildlife damage management have been held on a regular basis in North America: the Vertebrate Pest Conference (California), the Great Plains Wildlife Damage Control Workshop, and the Eastern Wildlife Damage Management Conference. In a number of ways, these professional meetings have helped wildlife damage management to become a more visible and more accepted part of the wildlife profession.

Increasing interest and activity in dealing with wildlife-human conflict have appeared during the 1990s, sometimes in more focused and specialized ways. Considerable growth in the private wildlife industry has occurred, in response to the public's need for professional assistance with nuisance wildlife problems in urban and suburban habitats. For example, the 5th annual Wildlife Control Technology (WCT) Seminar was held in February 1999, dealing primarily with issues of interest to the private nuisance wildlife control industry. In May 1999, the Bird Strike Committee USA held its 9th annual meeting (this time in conjunction with its Canadian counterpart), drawing an attendance of more than 300 persons to discuss the topic of bird-aircraft hazards. The Wildlife Society, since initiating its own Annual Conference in 1994, has offered special symposia and other sessions highlighting wildlife damage issues. These sessions have been organized primarily by the Society's Wildlife Damage Management Working Group. For example, at the most recent TWS Conference held in Austin, Texas in September 1999, an entire session dealt with the topic of bats and bat management, rabies, and public health risks. While no Proceedings from the TWS Annual Conference is published, abstracts of wildlife damage-related papers given at this meeting have been re-printed in THE PROBE in recent years.

Current Issues

Despite this increasing interest in studying and managing wildlife-human conflicts, two of the ongoing wildlife damage conferences (the Great Plains Workshop and Eastern Conference) have experienced increasing difficulty in organizing, funding, and hosting these events on a predictable and continuing basis. This problem has been noted and discussed for several years. NADCA members may recall having received in THE PROBE a survey concerning these conferences, distributed and compiled by NADCA Treasurer Grant Huggins on behalf of the TWS Working Group. Results from his survey were published in the Proceedings of the 13th Gt. Plains Workshop (1997, pp. 186-190).

Here is a brief synopsis of the history and current status of each of the three principal wildlife damage conferences:

Vertebrate Pest Conference (VPC): Originated in 1962, its purpose was to improve communication among those working in wildlife damage management, as well as to provide a Proceedings as an outlet for those who wished to publish in this field. Since the 4th Conference (1970), it has been held every 2 years during the first week of March of even-numbered years. Traditionally, it has been held within California, however in March 2002 it will be in Reno, NV. It is the largest of the three conferences and most diverse in scope, with significant participation among attendees and speakers from throughout the U.S. and from a number of foreign countries. The Conference is organized and managed by a non-profit, incorporated Vertebrate Pest Council, comprised of approximately 30 members primarily representing California institutions and agencies. Since 1986, 1-day training workshops in wildlife damage techniques, formerly incorporated within the conference, have been held at 2 or 3 locations in March of odd-numbered years. For the past two cycles, these workshops have been sponsored jointly by the Pesticide Applicators Professional Association (PAPA), and in 1999 these workshops drew more than 1,200 attendees.

Great Plains Wildlife Damage Control Workshop: Founded in 1973, it was nominally sponsored by the Great Plains Agricultural Council until 1995, after which this Council (a consortium allied with Land Grant Universities in the ten Great Plains states) disbanded. From 1987 through 1997, it occurred in the spring of odd-numbered years, and it has not been held since April 1997. In its early years, it was largely an informal workshop for discussion and sharing of issues among Extension Specialists and invited state and federal agency personnel. Topics typically focused on issues of interest in the Great Plains region.

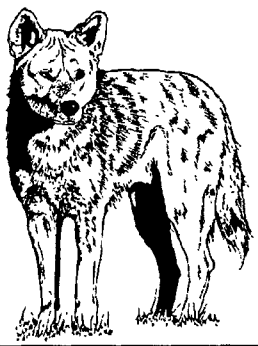
Continued on page 7, col. 1

CALENDAR OF UPCOMING EVENTS

December 5-8, 1999: 61st Midwest Fish & Wildlife Conference, Chicago, IL. Conference theme "Pathways to the Future." For more information, contact Larry A. Jahn, Steering Committee Chairperson, phone (309) 298-1266 or email <la-jahn@wiu.edu>.

February 7-9, 2000: Sixth Annual Wildlife Control Instructional Seminar, Imperial Palace, Las Vegas, Nevada. Sponsored by W.C.T. (Wildlife Control Technology). For more information, phone Lisa at (815) 286-3039, email <wctech@ix.netcom.com> or visit website http://www.wctech.com.

February 23-26, 2000: Beyond 2000: Realities of Global Wolf Restoration, Duluth Entertainment and Convention Center, Duluth, MN. Hosted by University College, University of Minnesota-Duluth and the International Wolf Center. Conference will feature presentations by biologists, researchers, and professionals exploring the complex and emotional issues associated with wolf recovery around the world. Topics will include: Status of Wolves Around the World, Conflicts Between Wolves and Humans, Effect of Wolves on Natural Prey, Legal Policy Issues Affecting Wolves, Environmental Ethics in Wolf Restoration, Education and Public Attitudes Regarding Wolves, New Discoveries in Wolf Behavior and Ecology, and The Wolf in Human Cultures. Speakers will include L. David Mech (U.S.), Anders Bjarvall (Sweden), Luigi Boitani (Italy), Y. Jhala (India), and Christoph Promberger (Germany). For more information, visit website http://www.d.umn.edu/wolf2000 or contact Beyond 2000, University College Duluth, UMD, 251 Darland, 10 University Dr., Duluth MN 55812-2496, phone (218) 726-6296, fax (218) 726-6336, email <wolf2000@d.umn.edu>.



The Probe is the newsletter of the National Animal Damage Control Association, published 11 times per year.

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Your contributions of articles to *The Probe* are welcome and encouraged. The deadline for submitting materials is the 15th of the month prior to publication. Opinions expressed in this publication are not necessarily those of NADCA.

March 6-9, 2000: 19th Vertebrate Pest Conference, Mission Valley Hilton, San Diego, CA. One-day field trip (Mar. 6) plus three days of plenary and concurrent sessions covering diverse topics including rodent, bird, and predator research and management. To receive program and pre-registration materials, contact Dr. Terry Salmon, Wildlife Fish & Conservation Biology, UC Davis, One Shields Ave., Davis CA 95616-8571, phone (530) 752-8751, fax (530) 752-4154, or visit web site: http://www.davis.com/~vpc/welcome.htm

October 5-8, 2000: 9th Eastern Wildlife Damage Management Conference, Nittany Lion Inn, State College, Pennsylvania. Proposed session topics: "Sustainable Ecosystem Management: The Course for 2000," "Wildlife Wars: Writing the Peace Agreement for the New Century," "20/20: The Latest News on Wildlife Damage Management," "Population Dynamics: When is Enough Enough?" "Origins, Innovations, and Futures of Wildlife Damage Management." Abstracts for papers or posters should be submitted to Jim Parkhurst, Program Chairperson (email <jparhur@vt.edu>) by Feb. 15, 2000. For further information, contact Conference Chairperson Gary San Julian, Penn State University, phone (814) 863-0401, or email <jgs9@psu.edu>.

Abstracts from the 2nd International Wildlife Management Congress...

Continued from October Probe, #205

Human Disturbance as a Design Factor to Aid Displacement of Canada Geese from Urban Parks

P. C. Whitford
Biology Department, Capital University, Columbus, OH

Giant Canada geese populations have increased dramatically in urban areas across the upper Midwest region of North America in the past decades with a concomitant increase in complaints of human-goose conflicts. Yet, while may cities report problems of excess geese in parks, several sites within Minnesota and Wisconsin have urban lakes or ponds surrounded by parks that are free of goose problems. Analysis of human use patterns, vegetational characteristics, and shoreline topography of these few parks without problems was done to try to determine what factors might be responsible for the absence of geese at these sites. Behavioral study of goose responses to human approach was incorporated to determine distances at which geese assumed alert postures and/or moved away from humans. These data were compared to mean distances from water where geese were observed to feed and rest in parks where geese were abundant. The most probable explanation for absence of geese in the parks studied was presence of relatively smooth shorelines without projections or islands where geese could escape from constant human disturbance of people on foot and bike paths adjacent to the water. Geese were found to have a strong preference for resting within 20 m of the water's edge, and exhibited avoidance behavior when people approached to within 8-10 m. As a result, goose disturbance was greatest when the walking path was consistently about 10 m from the water's edge and human traffic on the path exceeded 12 people/hour during daylight hours. Constant low levels of disturbance seemed to prevent colonization of these parks by urban geese.

Abstracts from the 2nd International Wildlife Management Congress, Hungary — June 28-July 2, 1999

(continued from October 1999 Probe, issue #205)

Leopard Problems in Nepal

T. M. Maskey, National Parks and Wildlife Conservation Department, Kathmandu, Nepal

The leopard is a common species and is found almost everywhere in the country of Nepal. Unlike the tiger, it can thrive in sparsely forested areas, living on domestic stock. There has been a tremendous increase in leopard-human encounters in recent years. Most of these cases result in injury to one or both sides. In recent years, public pressure is building upon the government to formulate a specific system to allow hunting of the leopard. Management of such a problem, and capturing leopards, is becoming a challenge in Nepal primarily because of the lack of funding.

Elk-human Conflict Management in Banff National Park, Alberta, Canada

J. A. McKenzie, Banff National Park Wildlife Laboratory

The spatial distribution of elk in the Bow Valley of Banff National Park changed considerably in the last decade. Elk population density near the town of Banff increased following the recolonization of wolves in the mid-1980s. The present population of 450-500 elk near the town of Banff creates a significant human safety problem, resulting in numerous elk-human conflicts (i.e., aggressive elk behavior resulting in human injury). We investigated home range patterns, survival, and recruitment of elk in the Bow Valley to determine whether the town of Banff provides a refuge from predation in the Bow Valley. Elk near Banff showed high site fidelity to the town of Banff. Elk near Banff had higher survival and recruitment rates than did elk in other areas of the Bow Valley. Management actions to restore predator-prey dynamics and reduce elk-human conflicts include translocation of selective herds from the town of Banff to other areas of the Bow Valley, community involvement in elk management decision making, and extensive public education programs.

The Avoidance of Virtual Barriers by Wolves in Captivity

M. Musiani, E. Visalberghi*, and L. Boitani*
**CNR Psychology Institute, Rome, Italy*

The technique known as *fladry*, traditionally used to hunt wolves in Eastern Europe, consists of driving them into a bottleneck formed by 50 x 10-cm red flags hanging from ropes stretched over the ground. Okarma and Jedrzejewski (1997) have employed this technique to live trap wild wolves. The aim of this study was to see whether 5 captive wolves living in 2 enclosures (120 m^2 and 850 m^2) at the Rome Zoo were also responsive. We found that avoidance was maximal when the flags were $\leq$50 cm apart and the ropes were 50 cm above the ground. Wolves never crossed red flags (nor gray of the same brightness) intersecting their usual stereotyped routes (baseline: 7.4 + 2.17 SD crossings/min.). Flags were not crossed even when the daily food ration was placed on the other side of them. In contrast, crossings took place when the flag distances were $\geq$75 cm, or the rope heights were $\leq$25 cm or $\geq$75cm, though their rates decreased below the baseline ($P<0.02$, Mann-Whitney U Test). There was no significant reduction in the crossing rates when plastic pipes and branches, instead of flags, were used, and interactions with them were fewer than with the flags ($P<0.01$). These results indicate that (1) in contrast to what Okarma and Jedrzejewski have argued, *fladry* is effective on captive wolves; and (2) *fladry* can be employed to confine wolves to a limited space. Our study provides knowledge relevant for capturing wild wolves and for the short-term protection of livestock from wolf predation. Therefore this technique has great potential for future wolf management.

Successful Field Trials of a New Slow-Release Capsaicin-Based Animal Repellent for Reducing a Variety of Human-Wildlife Conflicts in Israel

S. C. Nemtzov, Dept. of Terrestrial Ecology, The Nature and National Parks Protection Authority, Jerusalem, Israel

In recent years there has been increased interest in the use of non-lethal methods for keeping wildlife away from points of conflict with humans. Effective chemical repellents can assist nature conservation by reducing conflicts between wildlife and farmers. Although previous work has shown that mammals are usually repellent by bitter or spicy compounds (e.g. capsaicin, the active ingredient in hot peppers), these have not been widely used because of the lack of an effective delivery mechanism. An Israeli chemical company has recently developed a new long-lasting capsaicin-based product that provides slow-release of the active ingredient, and high persistence outdoors. In initial field trials, this new product has been effective in Israel in repelling wolves and jackals from depredation on livestock, foxes from various crops, wild boar from military installations and from crops, gazelles from orchards, and hyrax from a variety of vegetation. The Israeli Nature and National Parks Protection Authority continues to promote the use of chemical repellents as an aid in reducing wildlife-human conflicts, provided they meet the following criteria: the chemical provides effective repellence of the target species, causes no lasting harm to the affected animal, and is benign to the environment, to people, and to crops. The farmer can then determine the cost-effectiveness of using the approved chemical repellents as opposed to other non-lethal methods.

Educational Workshops: A Proactive Approach to Conflict Resolution in Wildlife Management.

K. B. Reis, H. R. Campa III, R. B. Peyton, and S. Winterstein Dept. of Fisheries & Wildlife, Michigan State University, East Lansing, MI

Crop damage by white-tailed deer has been an ongoing issue in Michigan since the 1940s and reached its present peak during the 1980s. Like other human-wildlife problems, this issue is rooted in conflicting interests over wildlife access, protection, and management objectives. A previous study at Michigan State University (MSU) discovered that deer crop damage is perceived differently both between and within stakeholder groups. Consequently investigators at MSU recommended a communication program that described the diversity of views. Our study pursued this suggestion and explored the utility of educational workshops as a method for teaching stakeholders about wildlife biology / ecology and the diverse objectives wildlife biologists must consider when developing management plans. Also, it evaluated the ability of such workshops to contribute to conflict resolution among stake-

Continued on page 5, col. 1

Booklet Review: Stephen Vantassel, NWCO Correspondent

"The Problem with Skunks!!" by Edward Kellems (34 pages, illustrated. $14.95)

A new booklet on skunk control has been produced by Ed Kellems. This booklet is only 34 pages long (5 by 8 -inch pages), but it covers a number issues you should be aware if you are planning to trap skunks.

The first three chapters cover general information and misinformation about skunks. Mr. Kellems dutifully covers the natural history of the skunk that every responsible trapper should know. He rightly points out that contrary to the beliefs of some, skunks are cautious about spraying. He claims it takes a month for them to produce one ounce of the spray. I appreciated his brief discussion of why skunks are living in town. It is truly a poorly known fact that many animals, skunks included, are actually more populous today than they were in times past. As Mr. Kellems noted, there is plenty of food in the town.

The next two chapters cover exclusion/repair and customer relations, respectively. The brevity of the exclusion/repair section must relate to the building practices in his part of the country. He gives no discussion of trench screening porches and decks. It made me wonder whether the houses were built above crawl spaces, because he warns of the importance of making sure the vents are screened. This is just another indication of how diverse this industry is. Construction practices truly determine our techniques. The 'dealing with customers' section provides some basic instruction on marketing yourself, pricing, and how to talk to your customer. It provides helpful questions that everyone brand new to the animal damage control business needs to answer.

The bulk of the booklet covers trapping techniques and euthanasia. It is apparent that the author has caught a lot of skunks. I have used a variant of the bait he recommends. It does work. But you will have to buy the booklet to find out the recipe for yourself. I have heard reports that it has worked well in the East. Now that Mr. Kellems has spoken, we know it works in Indiana too. Mr. Kellems spends a lot of time talking about single-door trapping techniques and placement. If you are looking for information on using two-door traps, there isn't any. He correctly mentions the importance of protecting the lawn from trapped skunks as well as animal welfare. I just wish that he would have mentioned using trap covers over the traps as another option for humane trapping.

Readers interested in using dimethyl ketone to euthanize skunks will be impressed with the discussion. Clearly this euthanasia information is a strength of this book. Mr. Kellems walks you through the steps of lethal injection. A word of caution is required here. The animal rights protest industry successfully banned the use of dimethyl ketone in the state of Connecticut. As typical of this protest industry, these irrational extremists banned something not because they knew it was cruel but because they didn't know it was humane. I would like to see a biologist/veterinarian study this chemical, but I doubt many if any would come forward. From the visual evidence I have seen, this chemical is profoundly humane. For, as Rob Erickson says, if the skunk was experiencing pain, it would spray. But the fact is, the skunk doesn't. I should also note that Mr. Kellems takes you through shooting as a euthanasia method.

The book closes by covering some basic problems you may encounter and how to solve them. I am always glad to see a book that covers problems because like life, we all get them. It is also important to know how fellow animal damage controllers resolve problems so that we can better develop and disseminate industry practices.

If you are looking to learn about trapping skunks from scratch, this booklet can be very helpful. This is especially true if you live in a state that allows you to possess the materials needed to use dimethyl ketone. There is no doubt that you will learn how to successfully capture skunks. The booklet is well illustrated with a copious amount of excellent photographs. I have little doubt that the high cost of this booklet was due to the color cover and large number of b+w photos. Mr. Kellems' writing style is clear and certainly unpretentious. You will find no cloudy language here. You should also know that this book only covers box traps (which the author unfortunately calls "live traps").

I was left wishing that he would have added information on using other traps like the two-door, plastic catch, etc. I also wished he wouldn't have shown a picture of himself working with his trap and skunk without gloves on. Personal safety should always be encouraged. As the saying goes, familiarity breeds contempt, and contempt in this business can get you killed or very sick.

The price of the book is $14.95 plus $1.50 shipping and handling. You can obtain a copy by calling Mr. Kellems at (812) 389-2831. He can also be reached by email at ed.kellems@gte.net. He accepts Visa and MasterCard. His snail mail address is 3720S Harts Gravel Rd., Birdseye, IN 47513.

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New NWCO Web Page

I would like to announce the National Wildlife Control Operators Association web page. This page lists the purpose of the association, its officers, and has a copy of a membership application that can be printed out. More information will be added in the coming days.

The page's url is http://www.wildlifedamagecontrol.com/nwcoa.htm. This is a temporary page until NWCOA establishes its own website domain. We encourage the submission of website links of state nwco associations. This will help us communicate better with one another.

Continued from page 3, col. 2

International Congress Wildlife Management Abstracts

holders on any wildlife management issue. Day-long workshops were piloted in the northern Lower and Upper Peninsulas of Michigan. They began with the formation of 5 multi-disciplinary group, each containing 4 farmers, 4 hunters, and 2 wildlife biologists, followed by a discussion of deer biology / ecology to prepare participants for a management planning exercise. Goals of the planning activity were to develop habitat and population management strategies for a deer crop damage scenario and to identify issues that demand further consideration during management planning. Groups were instructed on how they may use aerial maps and a variety of data describing the scenario's deer population, habitat, and crop-damage levels to address activity goals. Workshops concluded with a presentation of each group's management decisions and a debriefing of the learning experience. A survey evaluated whether the participants believed the workshops achieved educational goals and whether they developed collaborative working relationships among stakeholders.

Traps and Trapping in Sweden

T. Svensson, Swedish Environmental Protection Agency, Stockholm, Sweden

Hunting with traps has been done since time immemorial. The first traps used were some kind of box-trap, snare, dead-fall, or pitfall. The income from trapping was large until the middle of the 20th Century. Species trapped for their fur were red fox, marten, squirrel, and ermine. For meat, hares and forest birds were trapped. No regulations existed and trapping could be practiced by anyone. Since the beginning of the 20th Century, hunting rights, trapping included, are regulated by law. The hunting rights belong to the landowner and can be let out on lease. Hunting with weapons or traps is strictly regulated in the hunting ordinance decided by the Swedish environmental protection agency. Concerning trapping, it is allowed to use traps that are tested and approved. Sweden has been testing traps since 1984 and today we have about 130 approved traps for different species. Hunting ordinances also regulate when traps should be checked and which kind of traps require an education program. In general, education is voluntary and not a requirement for trapping in Sweden. The most commonly trapped species today are red fox (by box-trap or foot snare); badger (by box- or cage-trap); mink (box-, cage-, or killing-trap); and marten (killing-trap). Other species that are trapped are muskrat, beaver, lynx, and various birds. In the future, there will be an obligatory education program for those who want to use traps, and a more extensive testing program and coordination in the area of research.

Actual Problems of Predator Management in Hungary

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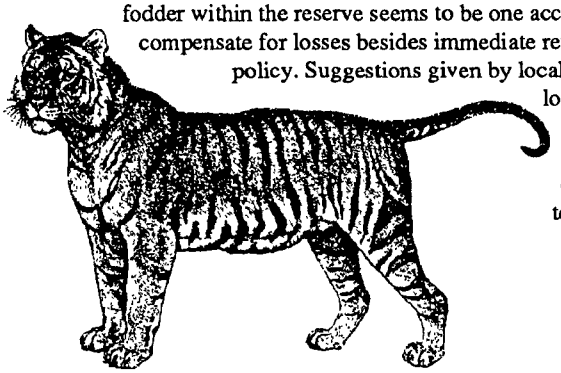
Dept. of Wildlife Biology & Management, Godollo University of Agricultural Sciences, Godollo, Hungary

There are many problems with predator management in Hungary: (1) the rules of nature protection are very rigorous, 9 of 15 carnivores are totally protected; (2) the methods of control are strictly restricted; (3) the immunization against rabies probably increases the predator density; (4) the hunters' efficiency is insufficient. Moreover there is no sufficient information about the populations of various predators. That is why mail questionnaire surveys were made among hunting associations 5 times between 1987 and 1997. The density of population and burrows, the number of cubs and the bag records were collected. The hunting efficiency was characterized by the bag density/ population density. It could be found that both the population and the burrow density increased during the years, but this growth was more intensive in Transdanubia, where the immunization was made. This trend could not be caused by the growth of the litter size, but rather, the better survival of young animals. The effectivity of control is very low. Only of the hunting associations could decrease their fox populations. Moreover, the efficiency of control decreased with the increased population density, so it can be concluded that hunting was not able to control effectively the predator population with the recently used methods. The solution could be that the simple control would be changed by planned predator management: (1) powerful and density dependent methods should be applied, for example live trapping; (2) the surplus should be estimated and removed; (3) the foxes should be hunted also during the period of rearing cubs; (4) new methods should be used to decrease the litter size, for example, contraception or effective live trapping.

Crop and Livestock Depredation by Wildlife

N. Udaya Sekhar, Centre for Int'l. Environment & Development Studies, Aas, Norway

Wild animals often destroy standing crops and prey on livestock, causing economic losses to farmers. Crop and wildlife damage are becoming serious for many Indian protected areas, and this study aimed to characterize the problem in villages in and around the Sariska Tiger Reserve (STR), Rajasthan, India. Data were collected using a semi-structured questionnaire in 37 villages followed by a semi-structured questionnaire administered to 180 households, quadrant sampling, and focus group discussions. Crop and livestock depredation evidently affected nearly half of the households in villages adjacent to the STR, but damage varied considerably among villages and with distance from the reserve border. Wild animal distribution and protection measures that people adopted also influenced the damage. Nilgai (*Boselaphus tragocamelus*) and wild boar were reported to be responsible for at least half of the total damage to the major crops caused by wild animals. Tigers and leopards were the main livestock predators; the former preyed mostly on the larger livestock and the latter on smaller animals such as goats and sheep. More than two-thirds of the villagers spent considerable time and money guarding crops and protecting livestock. Guarding was the most popular means followed by physical fences around fields. In spite of damage to crops and livestock, the local people still had a positive attitude towards the STR, because of tangible benefits derived from the reserve in terms of fodder and fuelwood, and cultural and religious attitudes towards wild animals. Settlement of rights to collect fuelwood and fodder within the reserve seems to be one acceptable measure to compensate for losses besides immediate review of hunting policy. Suggestions given by local people to minimize losses have implications for the long-term sustainability of the STR as a protected area.



Continued on page 6, col. 1

Continued from page 5, col. 2

International Congress Wildlife Management Abstracts

Conservation of the Iberian Wolf in Portugal—The Everlasting Conflict with Man

J. V. Vingada, C. Eira, S. Scheich, C. Fonseca, M. Soares, F. L. Correia, M. Faria, P. Carmo, A. Ferreira, A. Soares, and B. Bobek. *Dept. de Biologia da Universidade do Minho, Campus de Gualtar, Portugal*

In Portugal, some of the main problems related with wolf conservation are livestock damage, associated with illegal killing, and habitat degradation (fires, monocultures, decrease of forest). Other important problems are the decrease or absence of wild prey such as roe deer, red deer, and wild boar, as well as the reduction and fragmentation of habitats favorable to the maintenance of sustainable wolf populations and prey populations. In this work, we present the results related with the conservation of the wolf in Portugal. Data were obtain from distribution of wolf damage, wolf diet, and restoration of wild ungulates populations, integrated with an analysis of habitat suitability in terms of domestic prey distribution, wild prey distribution, habitat type, human pressure and fragmentation. Data were analyzed as a whole to achieve a better understanding of the wolf population distribution. This analysis revealed the main problems of wolf preservation and important clues that will help in the definition of future management strategy plans. The main conclusions achieved in this work emphasize that Portugal has potential areas for the conservation of the wolf. Thus the physical actions already started (such as ungulate restocking) are key factors for the preservation and restoration of the wolf population. However this species will be saved only with a change in human attitudes toward the wolf and with a strong definition of the "political strategy for the wolf conservation."

Barkpeeling Damage in Relation to Red Deer Density and Forest Structure in Austria

F. H. Voelk, Institute of Wildlife Biology & Game Management, Universitaet fuer Bodenkultur Wien, Vienna, Austria

Relationships between red deer management, barkpeeling damage, and forestry structure were analyzed for the Austrian provinces. The main objective was to evaluate the importance of different factors influencing barkpeeling damage in spruce-dominated forests. Indicators for forest structure and barkpeeling damage were recorded since 1960 by the Austrian continuous forest inventory. Information about red deer density was derived by analyzing hunting statistics (comparison of hunting bags and other mortality factors of the last 30 years, with consideration of meteorological conditions). Information about supplemental winter feeding (intensity and feeding stuff) was gathered by questionnaires via provincial hunting organizations. The dimension of barkpeeling damage is positively correlated with the peeling damage susceptibility of forests, which was increased by forest practices (e.g. clear felling system and following spruce cultivation). In particular, dense uniform stands with more than 9/10 evergreen conifers are highly susceptible to peeling damage. The lowest barkpeeling damage was found in Vorarlberg, where red deer density throughout was very high, but the proportion of natural and near natural forests is the highest of all provinces. Low peeling damage susceptibility of alpine spruce forests is mainly positively correlated with high proportions of multi-storied stands and an amount of at least 20% admixed deciduous trees. Twenty years of reducing red deer densities (shooting 8-11 red deer/1,000 ha) did not reduce peeling damage satisfactorily. No statistically significant correlations between barkpeeling damage and red deer density could be found. I conclude that future measures of game damage prevention in Austria will focus more on forestry practices.

Human-Wildlife Conflict Resolution: National Imperatives and Strategies

P. O. Wandera,Kenya Wildlife Service, Nairobi, Kenya

Human-wildlife conflict resolution is the single biggest challenge most wildlife conservation and management bodies face today in Africa. The lower population pressure, and the lesser degree of technological sophistication in the earlier years may have allowed for more harmonious co-existence between human beings, on the one hand, and the wildlife on the other. But with the hunger for agricultural land ever increasing and attendant population growth, human-wildlife conflict is increasing to the extent that the wildlife is experiencing the brunt of unsparing economic exploitation and destruction. Unless far-sighted solutions are given, this valuable resource would soon be nonexistent in many rural areas, and the biological diversity of the parks and reserves would be adversely affected. The direct realities described above are recognized and are being addressed in different ways by most Africa countries. Some of these ways, as is the case in some Africa countries, are already paying dividends.

An Overview and Evaluation of Deer Herd Management Programs in Urban and Suburban Communities of the USA

R. J. Warren, Warnell School of Forest Resources, Univ. of Georgia, Athens, GA

Since the successful restoration of white-tailed deer herds in the USA during the early 20th Century, wildlife managers have primarily controlled deer populations through the use of regulated public hunting. Recently, however, deer populations have become overabundant in many areas where public hunting may not be acceptable as a method of deer herd control. Wildlife professionals are increasingly facing more diverse challenges and nontraditional public groups in their efforts to manage and control deer populations, especially in urban and suburban communities. This presentation will provide an overview of the methods and programs that have been used for controlling deer herds in various urban and suburban areas of the USA. Examples of the specific methods used by various communities to control deer herds include live capture and relocation, controlled public hunts, sharpshooting, trap and kill, and fertility control. The presentation will also include an evaluation of regional trends in the use of specific methods among different geographical areas of the USA. These various deer herd control methods vary in their economic feasibility, efficacy at the population level, public acceptability, and legal and political complexity. Regardless of the methods employed, these urban and suburban deer herd management programs must be based on specifically defined objectives (e.g., the incidence of deer-vehicle collisions, landscape damage, etc.). In most areas, the use of a combination of methods (i.e. integrated pest management) may have the greatest potential of achieving the stated objectives for a deer control program.

Continued from page 1, col. 2

Wildlife Damage Conferences: When, Where, and Why?

Eastern Wildlife Damage Management Conference: From its inception in 1983 through the 8th Conference in October 1997, it was held in the fall of odd-numbered years. Topics covered largely represent subjects of interest in those states east of the Mississippi River. As with the Great Plains Workshop, its occurrence has been dependent upon the willingness of Cooperative Extension wildlife specialists or other associated professionals to organize and host the event, as well as to publish its Proceedings.

Data on recent occurrence, location, attendance, and the number of papers presented at these three conferences are summarized below:

VPC (Calif.)

Yr held	*location*	*attendance*	*papers*
1990	Sacramento	359	80
1992	Newport Beach	327	87
1994	Santa Clara	318	63
1996	Rohnert Park	340	56
1998	Costa Mesa	409	77
2000	San Diego		~90

Gt. Plains

Yr held	*location*	*attendance*	*papers*
1991	Lincoln, NE	116	42
1993	Kansas City, MO	200+	37
1995	Tulsa, OK	169	39
1997	Nebraska City, NE	129	36

Eastern

Yr held	*location*	*attendance*	*papers*
1991	Ithaca, NY	156	50
1993	Asheville, NC	125	38
1995	Jackson, MS	206	30
1997	Roanoke, VA	160	35
2000	State College, PA		

In addition to recent difficulties in finding willing hosts for the Great Plains and Eastern conferences, persons seeking to attend and participate in such conferences often are limited by time and travel funds. Hotel costs, as well as meeting registration costs, have continued to climb. Participants must therefore choose among an increasing number of professional opportunities.

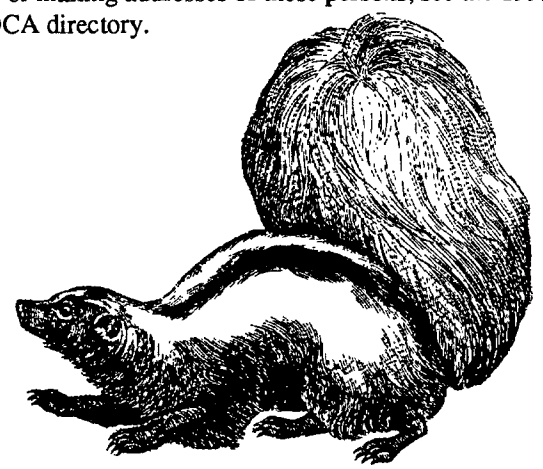
The difficulty in maintaining the three continuing conferences was discussed at the recent TWS Annual Conference within the meeting of the Wildlife Damage Management Working Group. A similar discussion was held at a workshop of Cooperative Extension wildlife, fisheries, and aquaculture specialists in Portland, Maine in early October. From both discussions, a consensus was reached that the most viable alternative would be to hold a combined Great Plains / Eastern conference in the spring of odd-numbered years beginning in 2003. There is a possibility that the TWS WDM Working Group would be willing to serve as the coordinating body for such future conferences, and the Working Group leadership will seriously consider this possibility during the coming months. Representatives of the Berryman Institute at Utah State University have offered their assistance in co-planning and coordinating future wildlife damage conferences, and additionally have suggested the idea of starting a new peer-edited journal of wildlife damage management as a possible replacement for the proceedings from current conferences.

Within the discussions, it was clearly recognized that many professionals who deal with wildlife damage couldn't easily attend such conferences if they are held a great distance from the person's place of employment. For example, wildlife biologists employed by state wildlife agencies, as well as NWCOs, often find the costs and travel time associated with out-of-state meetings to be insurmountable.

NADCA members who have interests and opinions on the topic of continuing wildlife damage conferences can express these to any of the following persons:

NADCA President Robert Schmidt
(email <rschmidt@cc.usu.edu>);
Treasurer Grant Huggins (email <jghuggins@noble.org>);
Probe Editor Bob Timm (email <rmtimm@ucdavis.edu>);
or former VP-East Jim Miller
(email <jmiller@reeusda.gov>).

For mailing addresses of these persons, see the 1999 NADCA directory.



The Editor thanks the following contributors to this issue: Guy Connolly, Alan Merrifield, Lee Fitzhugh, Gary San Julian, and Stephen Vantassel. Send your contributions to THE PROBE, *4070 University Road, Hopland, CA 95449.*

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**TIME VALUED MATERIAL –
DO NOT DELAY**

Membership Renewal and Application Form

NATIONAL ANIMAL DAMAGE CONTROL ASSOCIATION

Mail to: Grant Huggins, Treasurer, Noble Foundation, P.O. Box 2180, Ardmore, OK 73402

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:

[ ] Agriculture
[ ] USDA - APHIS - Wildlife Services
[ ] USDA - Extension Service
[ ] Federal - not APHIS or Extension
[ ] Foreign
[ ] Nuisance Wildlife Control Operator
[ ] Other (describe) _____
[ ] Pest Control Operator
[ ] Retired
[ ] ADC Equipment/Supplies
[ ] State Agency
[ ] Trapper
[ ] University

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