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Research, Cooperation Pays Off for Fish Farmers

Peter Butchko, District Supervisor, USDA-APHIS-WS, Mississippi and NADCA Vice-President, East

Protecting fish from double-crested cormorants got a little easier this year when the Fish and Wildlife Service (FWS) issued a depredation order allowing fish farmers to kill cormorants at their ponds without the customary federal permit. This depredation order is similar to orders already in effect for other injurious birds such as blackbirds, horned larks, white-crowned sparrows, purple gallinules, scrub jays, and Steller's jays. This rule, which went into effect on March 4, 1998, is the result of efforts by a coalition of government and industry representatives.

The FWS issued the depredation order based on the following facts:

• The continental breeding population of double-crested cormorants is healthy (360,000 pairs) and increasing approximately 6% per year;

• The wintering population of double-crested cormorants in the catfish producing states is increasing approximately 16% per year;

• Losses to fish farmers are significant, e.g. 1990-91 loses caused by double-crested cormorants to Mississippi Delta catfish producers were $1.8 - 2.0 million.

Specifically, this depredation order:

• Is for the protection of “commercial freshwater aquaculture in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Minnesota, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas.”

• Allows double-crested cormorants to “be taken by shooting during daylight hours only, and only when necessary to protect freshwater commercial aquaculture and State-operated hatchery stocks.”

• Requires that taking be done within the boundaries of the aquaculture facility of state-operated hatchery, that persons using shotguns must use non-toxic shot, but allows the use of decoys, taped calls, and other devices to lure birds.

• Must be exercised “in conjunction with an established non-lethal harassment program as certified by officials of the Wildlife Services program” of USDA.

The Fish and Wildlife Service gave lengthy consideration to other aspects of the proposed depredation order but eventually rejected provisions allowing the take of:

• double-crested cormorants for the protection of sport fish populations and mariculture;

• double-crested cormorants in conjunction with roost dispersal activities;

• double-crested cormorants on breeding grounds;

• other species of fish-eating birds.

Fish farmers living outside the 13 states covered by this order still have the option of

Continued on page 3, col. 2
Thoughts...

Robert H. Giles, Jr., President, NADCA

I have been working with geographic information systems before they were called that, the GIS. Back in 1969 we were making computer overlay maps and didn’t know what to call such a modest advance over what some had done for years at the drafting table with some transparent paper. GIS was the wrong name for it because these things were more than geographical and much more than information and only a few people realized how big the system really was. A GIS is office floor space and people and data and field forms and satellite images and training sessions and software and filing cabinets and... It is hardly a piece of software that a person can buy off the shelf for a few hundred dollars. That is what some people now mean by GIS. The bottom line is that there are some things out there that produce wonderful, detailed maps. They also do some analyses and provide tables of data about the maps.

A GIS is office floor space and people and data and field forms and satellite images and training sessions and software and filing cabinets... It is hardly a piece of software that a person can buy off the shelf for a few hundred dollars.

I have used the technology with my graduate students to map ownerships, describe forest cover and habitats over large areas, locate where power lines should be located, locate where small airports should be placed, give priority or sequence to areas that should be purchased for deer management areas, locate optimum solid waste disposal sites, map probable temperatures, precipitation, and evapotranspiration rates. Most was done in the name of environmental impact analyses, especially those of wildlife. Recently students made a map of the appropriate areas for white pines in Virginia, land form, and latitudinally and longitudinally equivalent areas. As part of the gap-analysis activity being conducted in many states, we made a map of the probability of finding the endangered northern dusky flying squirrel. In another map we displayed the likely locations for a salamander.

I am reading the final draft of Dave Morton’s MS thesis that describes a cover map from satellites for the entire state of Virginia!

I have been critical of GIS sales people because I fear that the software will be purchased, a problem solved, and then the expensive equipment and software shelved...or training and capabilities not fully exploited. The best place for a GIS is in the middle of a group of creative people with real problems and real potentials for solving them. I use the example of the answer box of the old Johnny Carson show. The GIS and its data base has the answers; but we have not yet heard all of the questions!

Continued on page 3, col. 1

CALENDAR OF UPCOMING EVENTS

August 6-9, 1998: 39th Annual Convention, National Trappers Association, Boone Co. Fairgrounds, Columbia, Missouri. Contact: NTA Convention Coordinator, 648 S. Main Street, Oregon, WI 53575.


Oct. 5-9, 1998: International Conference on Rodent Biology and Management, Beijing, China. Organized by Inst. of Zoology, Chinese Academy of Science, and CSIRO Div’n. of Wildlife and Ecology, Australia. For additional information and mailings, contact: Zhibin Zhang, Secretary General, Int'l. Conference, 19 Zhongguancun Road, Haidian District, Beijing 100080, P.R. China, or e-mail: <zhangzb@panda.ioz.ac.cn>
**Thoughts...**

I have heard of only a few uses of the GIS in animal damage management. I think the applications and possibilities are enormous and unlimited. They range from some pretty trivial applications to some that are wonderfully complex. I believe NADCA can benefit from the systems work, perhaps provide genuine leadership. I’m not advocating members become computer specialists; I merely suggest working with those who are, asking for help, asking for special service, and trying to think in the terms that will allow the GIS to payoff for each person or agency.

The uses within our diverse field probably include: a map of an area beyond which no profit can be made from a service call; improved strata for reducing costs of sampling and monitoring; maps of probable areas for vectors and hosts; probable occurrence of pests (based on conditions at which past observations have been made); potential customers (based on a set of criteria of need or profit, etc.); zones around food sources; weekly maps of fruit ripening progress (related to bird damage); crop values related to reported losses; distance from waterways (vector control); distance from roads (control application costs or area that can be covered by a tactic applied from roads and trails); flight pathways (related to bird strikes); auto strikes of deer (occurrence maps); soil maps and other maps that allow control of statistical variance in observed deer (etc.) damage; statewide and regional maps of reported problems and control agent centers of operation.

From the last Probe Ki Faulkner’s woodchuck burrows could have been mapped and compared to those from other areas, soils, population levels, reported losses, etc. The GIS can be used from the microbe to the moonscape but there is no need to get fancy. This system, with its almost daily advances, can become a very profitable, valuable tool to the practicing animal damage management person or their company or agency. (For ideas and examples, check out the internet at http://fwie.fw.vt.edu/index.htm and click on “GIS”. Also, see this site: http://info.er.usgs.gov/research/gis/title.html.)

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**Research, Cooperation Pays Off for Fish Farmers**

applying for depredation permits from the FWS. Fish farmers living within the 13 states covered by the order still must have a permit to take other birds besides double-crested cormorants. The procedure for certification of non-lethal harassment programs by USDA-Wildlife Services is being developed now and is expected to be similar to site visits currently employed.

As important as this depredation order is for a segment of the aquaculture industry, it is even more important for all of us to recognize just what made it happen.

“We represent the interests of fish farmers,” said Hugh Warren, Executive Director for Catfish Farmers of America (CFA). “We need relief from the double-crested cormorants and for several years have sought this depredation order. In order to convince FWS, we realized it was critical to have solid documentation and have supported the government agencies able to develop credible research.”

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Not only did CFA support research, but they also encouraged participation in the public comment phase of the process. “We encouraged our membership to request serious consideration of this by the FWS,” said Warren.

“This is something we can all be proud of,” said Dr. Mark Tobin, USDA-National Wildlife Research Center project leader in Starkville, MS. “We worked closely with Wildlife Services Operations and growers to document the severity of double-crested cormorant depredations, the ineffectiveness of non-lethal measures, and the lack of impact current lethal measures are having on overall double-crested cormorant numbers. We believe in science-based management and the research was critical in gaining approval of the depredation order.”

This small but significant victory ought to be seen as a reminder of the value of good science and effective advocacy making the system work.
Stephen Vantassel and his collaborator, Tom Olander, have written a handbook quite different from Stephen's earlier book entitled *Wildlife Removal Handbook* (1993). In this new handbook the authors have assembled useful information on how to conduct site inspections, and identify the animal problem based on sign plus the observations and comments of the client.

This loose leaf volume is divided into five chapters: Getting Started, Inspections Over the Phone, On Site Inspections, When You're At Wits End, and The Animals. The first chapter is concerned with the most basic equipment needed for making an inspection. The chapter would have been more valuable if expanded upon. For example, in the discussion of lights, a portable black light should be mentioned, for it can be extremely helpful in detecting rodent urine which fluoresces under ultraviolet (black light). Also, there is no mention of how frequently respirator filters should be changed.

I found the chapter Inspections Over the Phone to be one of the most informative, event though it is only 1-1/2 pages long. The On Site Inspections chapter is based on the experience of the authors acquired in a variety of situations. These may not be particularly different than those experienced by others in the same occupation in that region, however, they could be most valuable to individuals just starting out. The included "side bar" discussion of vision does not seem relevant to animal damage control.

A single-page inspection check list is provided which also serves as a service estimate. However, clients usually want to know more about the specific services to be performed and the materials used. This form may serve as a guide to those starting out in the business. I find the mention of the installation of smoke and carbon monoxide detectors very unusual and inappropriate for an animal damage inspection form.

Chapter 4 on what do When You're At Wits End is relatively weak in providing usable techniques. The use of tracking patches is mentioned but little positive is offered. Since strategically placed tracking patches of flour, talc, or clay can be very effective in resolving difficult cases, this technique could have been expanded upon. It would be helpful if some discussion had been included in regard to the characteristics of animal tracks which the authors have deliberately chosen to omit.

About half the volume is devoted to the discussion of specific vertebrate pests of the Northeast and does not include the vertebrate pests unique to other regions of the country. For each animal listed, a very brief description is given of its biology, its signs, and the problems reported by the client. The signs include knowing how to expediently assess the problem and avoid the pitfalls of misidentifying the offending animal can make a big difference in profits, if not the survival of the business.

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British Fox Hunting Ban Fails Passage

The British House of Commons won’t be voting any time soon on a measure to ban foxhunting, or at least until after the next election. Members of Parliament who opposed the bill flooded the House of Commons with hundreds of amendments, and gave lengthy speeches blasting the anti-hunting bill, causing the failure of the measure.

Mike Foster, the bill’s sponsor, told the Associated Press that the purpose of the measure is “to protect wild animals from cruelty and from unnecessary pain and suffering inflicted in the name of a so-called sport.”

The British legislation passed the House of Commons late last year after a spirited debate with an overwhelming vote of 451-208. However, Prime Minister Tony Blair decided Friday, March 13, 1998 not to vote on the measure, in hopes of squelching a possible heated debate. The Prime Minister’s decision may have been based on a civil protest held just two weeks ago by over 250,000 opponents of the fox hunting ban, attended by WLFA / WCFA ally Dennis Foster, President of Master of Foxhounds Association of America.

A supporter of the failed bill, Labor Party member Ian Cawsey was quoted as saying, “We are seeing increasing moves toward legislation on this matter. Whether it is this bill or not is almost irrelevant. We want to make sure that hunting with dogs is banned by the next general election and I have never been more confident... that that is going to happen.”

Not this year, Ian.

“With so many British citizens opposing the ban on fox hunting, it appears that legislation of this nature would be unfavorable for British legislators,” said Walter ‘Bud’ Pidgeon, President of The Wildlife Legislative Fund of America. “It also appears that the British hunting community has the upper hand, not the legislators who want to outlaw foxhunting.”

—Excerpted from the WLFA web site

Recent Coyote Research From Texas

Diets of coyotes (Canis latrans) in the Edwards Plateau and Trans-Pecos regions of Texas

J. Harris Glass*, S.K. Canon, and D. Rollins
Div. of Range Animal Science, Sul Ross State Univ., Alpine, TX

Coyote diets were investigated in the Edwards Plateau and Trans-Pecos regions of Texas. A total of 208 coyote (98 male and 110 female) stomachs containing food items were collected from both regions during the period of September 1994 to May 1997. A total of 154 coyotes were collected from the Trans-Pecos regions, while only 54 coyote were collected from the Edwards Plateau. Samples were collected mainly during the fall, winter, and spring periods. Major food items and their overall percent occurrence were as follows: livestock 33%, lagomorphs 25%, plants, 12%, big game 11%, rodents 8%, insects 4%, birds 4%, exotics 2%, and reptiles 1%. Frequency of domestic livestock and exotics was greater (P<0.05) in the Edwards Plateau than in the Trans-Pecos. Lagomorphs occurred more often (P<0.05) in the winter than fall, while spring was intermediate between the two. More big game occurred in spring than fall (P<0.05), with intermediate winter occurrence. Frequency of rodents was greatest (P<0.05) in the winter, and considerably lower in the spring and fall. Plant frequency was greater in fall than winter (P<0.05), with no plant occurrence in the spring.

The PROBE Needs Your Tips, Ideas, and ADC News

The PROBE wants to bring you the kind of information you need. To do that, we’d like your help. Please send in your tips, ideas, and news. Items can be mailed to The PROBE, 4070 University Road, Hopland, CA 95449, or e-mail directly to editor Robert M. Timm at <rmtimm@ucdavis.edu>

The Editor thanks the following contributors to this issue: Peter Butchko, J. Harris Glass, Rex Marsh, and Bob Giles, Jr. Send your contributions to The PROBE, 4070 University Road, Hopland, CA 95449.
Long-time NADCA Member Featured in Associated Press Article on Nuisance Animal Control Industry

Robert H. Schmidt, long-time member of NADCA and former co-editor of The PROBE, was featured in a recent Associated Press article, “Getting Wild Animals Out of the House.” Author Marta W. Aldrich referred to Schmidt, associate professor at Utah State University, as “a leading authority on the business” of nuisance animal control services.

The article detailed how the animal control industry has mushroomed in recent years. Schmidt was quoted as saying there are an “estimated 10,000 operators nationwide.” The rapid increase in a business that was almost nonexistent only ten years ago is being attributed to the increased pressures of human population growth and the development which is quickly decreasing wildlife habitat acreage.

As discussed by Schmidt and various other wildlife control authorities, the newly-developing nuisance animal control industry varies dramatically from state-to-state. Not only is each state different in what wildlife habitat and animal species are present, state regulations governing control operators vary widely from state to state. Some states require intensive testing and certification procedures, while others, such as Tennessee, merely ask an applicant to prove his or her “experience working with wildlife.” Some of the training cited included workshops available through “a trade magazine and the National Animal Damage Control Association.”

As to regulations, Schmidt stated that he believes each state should oversee operators and their activities because wildlife problems vary so greatly.

Some of the problem animals mentioned included bats, beavers, deer, opossums, skunks, rabbits, raccoons, snakes, songbirds, squirrels, woodchucks, and woodpeckers. Simple hints for resolving related problems vary from placing ammonia-soaked rags at the animal’s entryway into a dwelling to placing a bright light or radio outside an animal’s hole for several days.

Research Continues in New Zealand and Australia on the Efficacy of Rabbit Calicivirus Disease as Rabbit Population Control Method

While rabbit calicivirus disease (RCD) seems to be an effective biocide, researchers are now trying to determine whether it would be just as effective to allow the disease to cycle naturally. New Zealand animal scientists believe RCD to be the most cost-effective and safest method of controlling the high rabbit populations which can decimate agricultural lands.

But at two different sites at Otago, the virus occurred both in baits, but also in a natural epidemic. Approximately 70 percent of all rabbits died at both sites. The surviving rabbits at the “baited” site showed a much higher antibody level. Researchers speculate that the antibody levels indicate that rabbits may be consuming dead virus on baits and were developing an immunity to the disease.

As a result, researchers in Australia are running extensive field trials, attempting to determine whether baiting methods used by farmers may be outmoded. Now a purer strain of the disease is being sold which researchers hope will reduce the risk of spreading harmless or weak strains of the virus.

Research is being funded by the Ministry of Agriculture and Forestry and the Foundation for Research, Science and Technology. Scientists from Lincoln, Auckland, and Massey Universities, AgResearch, the Canterbury Regional Council, and the Rural Futures Trust are participating in the research consortium. (The Rural Futures Trust is a farmer-led organization which has contracted with Landcare Research to maintain a communications link with farmers and the public about ongoing research projects.)

The use of the disease as an animal control method does have its opponents. There are studies underway to determine possible long-term impacts, such as harm to other vulnerable species, or permanent massive declines in rabbit populations.

Some people fear that if rabbit populations decrease their natural predators will begin to seek easier prey—domestic animals and pets or ground-nesting birds. Ferrets are a special cause for concern as they are known carriers of Tb, and could bring the disease into contact with domestic stock.

Proponents for the use of RCD claim that negative effects would be short term because predators that naturally prey on rabbits would eventually adjust their own population rates to the availability of prey, and rabbit/predator numbers will basically be unchanged.
ADC in the News

Latest Rabies Trends Subject of Meeting of State and National Health Experts: Keeping Physicians and the Public Informed on Managing Deadly Disease

Both state and national health experts gathered in Atlanta, Georgia, in mid-May to discuss the rabies virus and its increasing effects on public health in the United States. Attended by physicians, epidemiologists, veterinarians, and state public health officials, as well as representatives from the Centers for Disease Control and Prevention (CDC), the program was titled "The Changing Epidemiology of Rabies: The Effect on Public Health and the Public's Health."

Supported by an unrestricted grant from Chiron Corporation and sponsored by the Council for State and Territorial Epidemiologists, the meeting was held to examine the disease as reports of new rabies cases continue to appear in many parts of the U.S.

The objectives of the meeting were stated as:

- examining the latest and most effective methods of treating and controlling rabies,
- awareness and public education programs,
- defining the role of healthcare providers and emergency room specialists in the prevention and treatment of this fatal disease.

Other topics included: available post-exposure treatments, surveillance and reporting of rabies, and immunization of high-risk groups (such as veterinarians, park rangers, and spelunkers).

According to CDC statistics, approximately 7,000 animals, the majority of them wild, contract the rabies virus each year. Humans contract the disease through contact with animal saliva, usually through a bite, but possibly through a scratch.

However, in the case of bats, health experts warn that rabies can be contracted with no visible sign of animal contact. They now recommend that anyone who discovers they have been exposed to a bat should receive treatment, especially if the child is a potential victim as they are often unable to communicate about possible contact. Vaccination should occur even when a bite or scratch mark is not visible.

Healthcare providers also recommend that people employed in high-risk careers should receive pre-immunization. These would include researchers, wildlife damage control specialists, veterinarians, park rangers, and others.

Bogus Gizmos and Gadgets No Help With Homeowners' Wildlife Problems

As in every industry, the wildlife nuisance control industry has spawned its share of companies that try to pawn off an arsenal of quick remedies to answer consumers' requests. These products, which range from noise repellents to scent repellents, are available through a myriad of catalogs, home-improvement centers, hardware stores, nurseries, and even through television advertising.

According to Michael Conover, director of Utah State University's Berryman Institute, wildlife-related damages reach an estimated $4 billion a year in the U.S. No wonder consumers are prime targets for the gizmos and gadgets that promise quick relief from wildlife conflicts. Unfortunately, the devices, while wildly creative, seldom fulfill their producer's claims. Usually they don't work for long, if at all.

The products are widely marketed and new ones arrive on the scene with great frequency. Why? Perhaps because the only regulations these devices fall under are those provided by the federal Environmental Protection Agency, concerned with whether the products are nontoxic and harmless to the environment, not whether they're effective.

Perhaps the worst types of product on the market are the electronic devices. Ultrasonic units designed to scare away wildlife from bats to birds are a popular purchase for homeowners. Unfortunately, these noise-making machines are almost useless. One device promoted as a way to frighten nuisance birds with sounds in the above-20,000 hertz range is a total failure and no wonder. Birds don't hear in that range.

Another sound emitter supposedly chases gophers from their tunnel systems and sends them packing. This machine uses sound from 5,000 to 50,000 hertz, which both gophers and humans can hear. However, the gophers, ever determined and adaptable, just pile dirt on the machine, and continue tunneling away. Sound "protection" doesn't come cheap either. One of these gopher devices cost around $60 and will only "protect" about 1,600 square feet. A homeowner with a quarter-acre lot would have to invest in four of them, a hefty $240 for little or no results.

Besides their initial lack of effectiveness, a major problem is that many animals have the ability to adapt to almost anything. According to Robert H. Schmidt, professor at Utah State University and moderator of the “WDAMAGE” Internet chat line, “Evolution favors habituation...It is to his advantage to become used to irritants.”

Schmidt says that manufacturers rely on testimonials from people who experience a “placebo effect.” People want to believe they've found a solution to their problem. But until consumers demand reliable solutions, gizmos and gadgets will continue to be offered. Homeowners should always remember the old maxim, “Buyer beware.”
Membership Renewal and Application Form

NATIONAL ANIMAL DAMAGE CONTROL ASSOCIATION

Mail to: Grant Huggins, Treasurer, Noble Foundation, P.O. Box 218, Ardmore, OK 73402

Name: ___________________________________________ Phone: (___) _____-______ Home

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Dues: $__________ Donation: $__________ Total: $__________ Date: __________

Membership Class: [ ] Student $10.00 [ ] Active $20.00 [ ] Sponsor $40.00 [ ] Patron $100

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[ ] USDA - APHIS - ADC or SAT [ ] Retired
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[ ] Federal - not APHIS or Extension [ ] State Agency
[ ] Foreign [ ] Trapper
[ ] Nuisance Wildlife Control Operator [ ] University
[ ] Other (describe) ____________________________

ISSUE 190 The Probe JULY 1998