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March 2005

## The Probe, Issue 237 – March/April 2005

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# President's Message

*"The more things change, the more they stay the same."*

I don't know who said this originally, but my major professor was the one who said it to me. He was the Cooperative Wildlife Research Unit leader, and when he said it, the Coop Units had been shuffled from agency to agency and had just landed under the US Geological Survey. We documented the procession of different agencies by hanging blank letterhead on our walls. With each agency came changes, but in the long run, everything remained the same. This saying come to mind for one reason: cats.

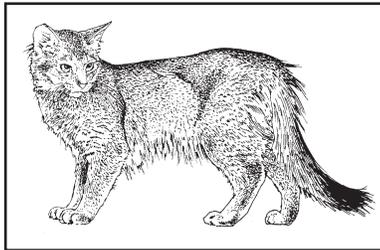
As many of you are probably well aware, the management of feral cats has resurfaced in the minds of the public and press. Started in Wisconsin by an admittedly naive person suggesting a collar-requirement be made for cats so those without collars could be killed without fear of retribution, the waves of opinions have hit all corners of the continent. Here in South Dakota, I get many emails and calls from the public asking what is the state's stance on feral cats. The following is typical of a call, although it is a compilation of at least 2 separate inquiries from the public:

"I recently learned your state allows the hunting of cats. How can you allow them to be used as target practice?" [My answer: South Dakota statutes do not mention cats, feral or otherwise, anywhere. There is neither a season nor a program to shoot cats. There are, however, numerous laws that enforce safety and there are laws against shooting firearms within city limits.]

"How would someone know if it was a feral cat or the neighbors pet out for a walk?" [If a neighbor's pet is out for a walk, one would assume that, if it is a pet someone cares about, it would be properly leashed as required by most municipalities across the nation. If so, there should be no danger of a properly leashed pet being shot while accompanied by its owner.]

"A healthy bird cannot easily be caught by a cat..."  
 [Short answer - WRONG!]

*Continued on page 3, col. 1*



# Cats & Wildlife: A Conservation Dilemma

*John S. Coleman, Stanley A. Temple, and Scott R. Craven*

*Editor's Note:*

*An earlier draft of this article was published in the December 1996 issue of THE PROBE. Due to space restrictions, the article reproduced here does not include the list of literature cited. The complete literature citation can be found at :*

<http://wildlife.wisc.edu/extension/catfly3.htm>

Domestic cats first arrived in North America with European colonists several hundred years ago. Since that time, cats have multiplied and thrived as cherished pets, unwanted strays, and semi-wild predators. Although often overlooked as a problem, free-ranging cats affect other animals, often far from the homes and farms they share with people.

Because we brought the domestic cat to North America, we have a responsibility to both the cats and to the wild animals they may affect. Here are some interesting and perhaps surprising facts concerning the contemporary dilemma posed by free-ranging domestic cats in the United States.

## ***How cats became domesticated***

Domestic cats originated from an ancestral wild species, *Felis silvestris*, the European and African Wild Cat. The domestic cat is now considered a separate species, named *Felis catus*. In appearance, domestic cats are similar to their wild relatives, and many of their behaviors, such as hunting and other activity patterns, remain essentially unchanged from their ancestral form. Cats were first domesticated in Egypt around 2000 BC [1]. Domestic cats spread slowly to other parts of the globe, possibly because Egyptians prevented export of the animal they worshiped as a goddess. However, by 500 BC the Greeks had acquired domestic cats, and they spread cats throughout their sphere of influence. The Romans introduced the domestic cat to Britain by 300 AD. Domestic cats have now been introduced around the world, mostly by colonists from Europe.

## ***How many cats are there in the United States?***

The estimated numbers of pet cats in urban and rural regions of the United States have grown

*Continued on page 3, col. 2*

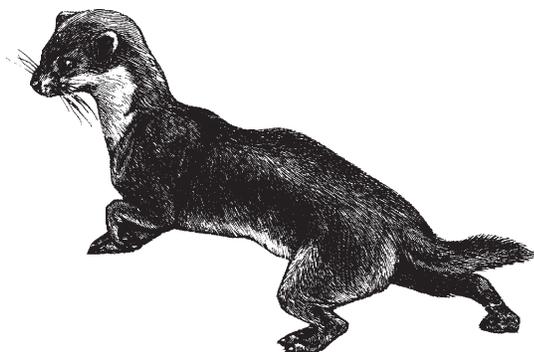
# CALENDAR OF UPCOMING EVENTS

**August 9-11, 2005 - Professional meeting of the Southwest Section of TWS, Sul Ross State University in Alpine, TX.** Additional information at: <http://www.swtws.org>

**September 25-29, 2005 - The Wildlife Society's 12th Annual Conference, Madison, WI.** Information at: [WWW.wildlife.org](http://WWW.wildlife.org).

**October 2-7, 2005 -- 4th International Congress of Vector Ecology, John Ascuaga's Nuggett Hotel/Casino, Reno, NV.** Includes 13 separate, topical symposia plus multiple poster sessions. For additional information see <http://www.love.org> To be put on the mailing list for further Congress information, contact Jared Denver <[jdenver@northwestmosquitovector.org](mailto:jdenver@northwestmosquitovector.org)>

**August 18-25, 2005- National Trappers Association, National Convention, Elkhart County Fairgrounds, Goshen, IN.** See <http://www.nationaltrappers.com/>



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Your contributions 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.

## From the Editor

*Larry Sullivan*

As you may have noticed, this is the March/April issue of *THE PROBE* and you haven't received a January/February issue. Well, that's because there wasn't one. There were a couple of articles pending, but they didn't come through and there just wasn't any material to put an issue together. So, after consultation with our president, Art Smith, I choose to skip the January/February, keep the issue number sequential and try to get back on a more timely schedule from here on.

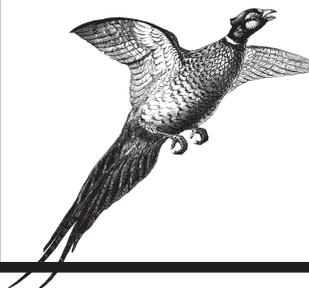
I do, personally, accept the responsibility for not doing more to come up with material from somewhere. In the way of excuses, I have been teaching a class this semester and have been involved in some other projects. Well, the semester is over and all but one current project is complete. That's not to say there aren't more alligators swimming up to my posterior, but I have dealt with those that were that were ready to bite me. So I should (had better) get back on the ball.

That said, there are some serious problems in coming up with articles for a printed newsletter. It is difficult to come up with original material and excerpting from other sources carefully enough to avoid copyright infringement is tedious and getting permission to reprint is almost impossible and very time consuming. Considering the time it takes to set up, proof, print, and mail a printed newsletter, we really need original material. Otherwise, reprinted or excerpted material is old news by the time members receive the newsletter.

If we're going to continue with a printed newsletter, we need original stuff. I prefer the printed form to an electronic format, but the hang-up is getting original material. One possible solution is to get a commitment (voluntary or assigned) from the officers and directors for one lead article. One lead article from each officer and director would provide lead stories for two years. They could author the article, find someone else to write it, get reprint permission, excerpt something, or whatever. If they get reprint permission or excerpt, they would need to use a source that most of our members haven't already read.

For those members that would like to submit an article, here are some guidelines. I think it is more reader-friendly to have several short articles rather than one or two long articles. Lead articles maybe up to about 1000-1200 words and "inside" articles may be up to about 500 words. These word numbers are not hard and fast. If longer pieces are required to get the story told, we'll use them (e.g. this issue).

My apologies for the missing issue. Please contact me if you have ideas, suggestions or submissions. (Contact information is found in the box at the left.)



# New Rattlesnake Vaccine for Dogs

Red Rock Biologicals of Sacramento, CA has recently produced a pre-exposure, rattlesnake vaccine. The following article appeared on the website for the Placerville Veterinary Clinic, Placerville, CA, and is reprinted here with permission.

Ranchers and veterinarians have long known that after having been repeatedly bitten, dogs become resistant to rattlesnake bites. Vaccination works the same way — it will make your dog resistant but not immune. A vaccinated dog is much less likely to suffer permanent injury or die from a rattlesnake bite, but it is still possible. The vaccine is usually administered as two the first year, with a booster each year after that. It costs about \$18.00 per dose.

## **Reasons not to vaccinate:**

Although rattlesnake bites make dogs very ill and can do serious damage, even untreated bites are seldom fatal and generally cause no permanent damage.

Rattlesnake bites don't happen very often.

Immunization of any kind can cause an allergic reaction. Most vaccine reactions are mild and easily treated. Rarely they can be severe or even fatal. Local veterinarians who use and recommend it report no problems. The clinician we spoke with at the U.C. Davis veterinary clinic said they don't use it and don't recommend it.

## **Reasons to do it anyway:**

If your dog has a high risk of being bitten. Certain neighborhoods have a lot of rattlesnakes. If you live where there are lots of snakes or if you take your dog hiking in the mountains and don't use a leash, then vaccination is probably a good idea. If your dog has already been treated with rattlesnake antivenin. Rattlesnake antivenin is made from the blood serum of hyper immunized horses. A single dose can make dogs so sensitive to horse serum that a subsequent dose of antivenin is rapidly fatal. There may be exceptions, but dogs that have been treated once with antivenin should never be treated with it again. The risk from a second dose nearly always exceeds the risk from the rattlesnake bite. Immunizing your dog eliminates the risk from antivenin by eliminating the need for antivenin.

Source —  
<http://www.placervillevet.com> with permission



*Continued from page 1, col. 1*

## **President's Message**

“There must be hordes of wild dogs in your state also, are they permitted to be shot as well?” *[If they are on private property and outside of any firearms restrictions, then, yes dogs are allowed to be shot.]*

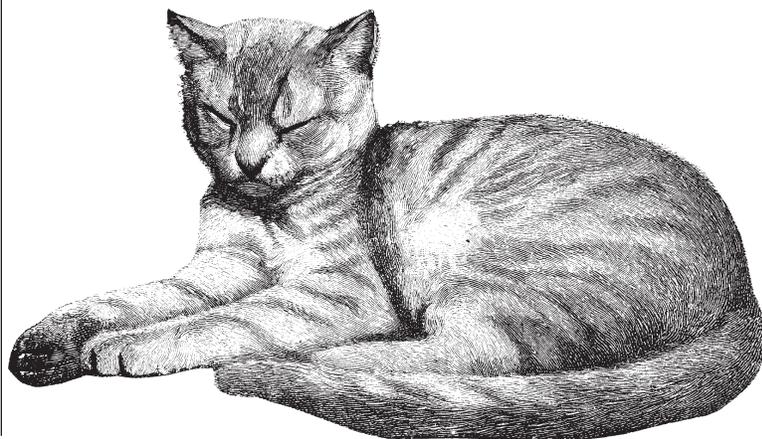
“Because you allow things to be killed, you are immoral and should be given the same treatment as the cats you think should be exterminated” *[That's not what my mother thinks about me!]*

I have requested our Editor to re-run a 1996 **PROBE** article on cats. The original article mentions an eventual publication, and looking through my archives the published piece was found. That is the article presented in this issue. I hope you enjoy re-reading the article.

However, I believe there is one question that this article, or any article to date, that cannot answer. That question is: when, where, and why did the animal welfare organizations, wildlife agencies, and all others concerned about the welfare of native species completely lose the message to society that it is unacceptable behavior to let one's house cat roam freely outside? It seems that allowing cats free reign outside is a deeply ingrained “right” assumed by many. Consider that many municipal leash laws specifically apply only to dogs, and if they do not, operationally they are restricted as such. And when a suggestion like the one from Wisconsin is made, the vast public outcry about the barbaric nature of the proposal quickly sends the policy makers and everyone else running for cover.

Perhaps the message was lost many centuries ago. If that is the case, then the new question is: what we've done to now hasn't worked yet — what do we need to change to successfully get that message across?

*Art Smith, NADCA President*



## Cats & Wildlife: A Conservation Dilemma

from 30 million in 1970 [2] to 60 million in 1990 [3]. These estimates are based on U.S. Census data and include only those cats that people claim to “own” as pets, not cats that are semi-wild or free-ranging. Nationwide, approximately 30% of households have cats. In rural areas where free-ranging cats are usually not regarded as pets, approximately 60% of households have cats. In the state of Wisconsin alone, with approximately 550,000 rural households, the number of rural free-ranging cats (not house pets) may be as high as 2 million [4]. The combined total of pets and free-ranging cats in the U.S. is probably more than 100 million. Because of their close association with humans, most of these cats are concentrated in areas where people live rather than in remote undeveloped areas.

### *The legal status of domestic cats*

The laws that relate to domestic cats vary by local government. In most areas, the person who provides care for a cat is legally responsible for its welfare and control. As with other domestic animals, if ownership can be established by collars or other means of identification, a cat is considered personal property [5]. It is usually the responsibility of the owner to control the cat's movements. In most areas, cats can be live trapped and either returned to the owner or turned over to authorities if they wander onto other peoples' property. Many municipalities have leash laws and require vaccination and neutering of pet cats. Because laws vary, one should check local ordinances for the appropriate way to deal with stray cats.

### *What effects do domestic cats have on wildlife?*

Although rural free-ranging cats have greater access to wild animals and undoubtedly take the greatest toll, even urban house pets take live prey when allowed outside. Extensive studies of the feeding habits of free-ranging domestic cats over 50 years and four continents [6] indicate that small mammals make up approximately 70% of these cats' prey while birds make up about 20%. The remaining 10% is a variety of other animals. The diets of free-ranging cat populations, however, reflect the food locally available. Observation of free-ranging domestic cats shows that some individuals can kill over 1000 wild animals per year [7], although smaller numbers are more typical. Some of the data on kills suggest that free-ranging cats living in small towns kill an average of 14 wild animals each per year. Rural cats kill many more wild animals than do urban, or suburban cats [8]. Several studies found that up to 90% of free-ranging rural cats' diet was wild animals, and less than 10% of rural cats killed no wild animals [9]. Recent research [10] suggests that rural free-ranging domestic cats in Wisconsin may be killing between 8 and 217 million birds each year. The most reasonable estimates indicate that 39 million birds are killed in the state each year. Nationwide, rural cats probably kill over a billion small mammals and hundreds of millions

of birds each year. Urban and suburban cats add to this toll. Some of these kills are house mice, rats and other species considered pests, but many are native songbirds and mammals whose populations are already stressed by other factors, such as habitat destruction and pesticide pollution. Despite the difficulties in showing the effect most predators have on their prey, cats are known to have serious impacts on small mammals and birds. Worldwide, cats may have been involved in the extinction of more bird species than any other cause, except habitat destruction. Cats are contributing to the endangerment of populations of birds such as Least Terns, Piping Plovers and Loggerhead Shrikes.

In Florida, marsh rabbits in Key West have been threatened by predation from domestic cats [11]. Cats introduced by people living on the barrier islands of Florida's coast have depleted several unique species of mice and woodrats to near extinction [12, 13]. Not only do cats prey on many small mammals and birds, but they can outnumber and compete with native predators. Domestic cats eat many of the same animals that native predators do. When present in large numbers, cats can reduce the availability of prey for native predators, such as hawks [14] and weasels [15].

Free-ranging domestic cats may also transmit new diseases to wild animals. Domestic cats have spread feline leukemia virus to mountain lions [16] and may have recently infected the endangered Florida Panther with feline panleukopenia (feline distemper) and an immune deficiency disease [17]. These diseases may pose a serious threat to this rare species. Some free-ranging domestic cats also carry several diseases that are easily transmitted to humans, including rabies and toxoplasmosis [18].

### *Domestic cats vs. native predators*

Although cats make affectionate pets, many domestic cats hunt as effectively as wild predators. However, they differ from wild predators in three important ways: First, people protect cats from disease, predation and competition, factors that can control numbers of wild predators, such as bobcats, foxes, or coyotes. Second, they often have a dependable supply of supplemental food provided by humans and are, therefore, not influenced by changes in populations of prey. Whereas populations of native predators will decline when prey becomes scarce, cats receiving food subsidies from people remain abundant and continue to hunt even rare species. Third, unlike many native predators, cat densities are either poorly limited or not limited by territoriality [19]. These three factors allow domestic cats to exist at much higher densities than native predators. In some

*Continued on page 5, col. 1*



*The editor of THE PROBE thanks contributors to this issue: John S. Coleman, Scott R. Craven, Art Smith, and Stanley A. Temple.*

## Cats & Wildlife: A Conservation Dilemma

parts of rural Wisconsin, densities of free-ranging cats reach 114 cats per square mile. In these areas, cats are several times more abundant than all mid-sized native predators (such as foxes, raccoons, skunks) combined. With abundant food, densities can reach over 9 per acre, and cats often form large feeding and breeding “colonies” (81 cats were recorded in one colony, and colonies of over 20 are not uncommon) [20, 21]. Unlike some predators, a cat’s desire to hunt is not suppressed by adequate supplemental food. Even when fed regularly by people, a cat’s motivation to hunt remains strong, so it continues hunting [22].

### *In summary*

Free-ranging cats are abundant and widespread predators. They often exist at much higher densities than native predators. They prey on large numbers of wild animals, some of which are rare or endangered. They compete with native predators, and they harbor a variety of diseases. Yet, cats are popular pets. In order to have and care for our pets—and still protect our native wildlife—we must make an effort to limit in a humane manner the adverse effects free-ranging cats can have on wildlife.

### *What you can do*

...Keep only as many pet cats as you can feed and care for. Controlling reproduction and humanely euthanizing unwanted cats will keep cat populations from growing beyond the size that can be adequately cared for. On farms, keep only the minimum number of free-ranging cats needed to control rodents. Well-fed, neutered females will stay closest to farm buildings and do most of their killing where rodent control is needed most. Traps and rodenticides, as well as rodent-proof storage and construction, will usually contribute more to effective rodent control than cats.

...If at all possible, for the sake of your cat and local wildlife, keep your cat indoors. Confinement will eliminate unwanted reproduction, predation on wild animals, and the spread of disease. Bells are mostly ineffective in preventing predation [23] because, even if the bell rings, it’s usually too late for the prey being stalked. Declawing may reduce hunting success, but many declawed cats are still effective predators. Keeping your cats indoors helps protect the wildlife around your yard and prevents your cat from picking up diseases from strays or

getting injured. The two most common causes of death for rural cats in south central Wisconsin are disease and being struck by automobiles. If cats must be allowed outdoors, consider using a fenced enclosure or runway.

...Neuter your cats or prevent them from breeding, and encourage others to do so. Support or initiate efforts to require licensing and neutering of pets. In areas where such laws already exist, insist that they be enforced. For information on local licensing and neutering laws, contact your local health department or humane society.

...Locate bird feeders in sites that do not provide cover for cats to wait in ambush for birds. Cats are a significant source of mortality among birds that come to feeders [24]. To prevent cats from climbing to bird nests, put animal guards around any trees in your yard that may have nesting birds.

...Don’t dispose of unwanted cats by releasing them in rural areas. This practice enlarges rural cat populations and is an inhumane way of dealing with unwanted cats. Cats suffer in an unfamiliar setting, even if they are good predators. Contact your local animal welfare organization for help.

...Eliminate sources of food, such as garbage or outdoor pet food dishes, that attract stray cats.

...Don’t feed stray cats. Feeding strays maintains high densities of cats that kill and compete with native wildlife populations. Cat colonies will form around sources of food and grow to the limits of the food supply. Colonies can grow to include dozens of animals [21]. Maintenance of colonies of free-ranging or feral cats through supplemental feeding benefits no one. The cats suffer because of disease and physical injury; native wildlife suffers from predation and competition, and colonies can be a source of disease for animals and humans. Those concerned with the welfare of animals can improve the lives of the many native species that suffer from lack of food and shelter by protecting and improving the habitats they require [25].

