

Cats & Wildlife

A Conservation Dilemma

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



Introduction

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 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

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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 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

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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].

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Additional reading

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Contacts

Humane Society of the United States, 2100 L Street, NW, Washington D.C. 20037. Website: <http://www.hsus.org>

American Bird Conservancy, 1250 24th Street NW, Suite 220, Washington, DC 20037. Phone: (202) 467-8348

Native Species Network, P.O. Box 405, Bodega Bay, CA 94923. E-mail: nsn@wco.com

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Authors:

John Coleman is a biologist with the Great Lakes Indian Fish and Wildlife Commission.

Stanley Temple is the Beers-Bascom Professor in Conservation in the Department of Wildlife Ecology at the University of Wisconsin-Madison.

Scott Craven is a professor and Extension wildlife specialist in the Department of Wildlife Ecology at the University of Wisconsin-Madison.

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