

The Effects of Cats on Wildlife - With many species in danger due to habitat loss or pesticides, predation by house cats is yet one more hardship - but a controllable one - imposed by humans on wild animals already struggling to survive.

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At Cascades Raptor Center's educational displays, I am frequently approached by people who tell me, somewhat abashedly, that their cats are constantly bringing in birds. I'm not sure why they feel compelled to share this with me, because when I offer suggestions, they brush them aside - they seem to be seeking absolution instead of a viable solution. When I suggest that here is something that a single individual can do to positively mitigate human impact on wildlife, their eyes glaze over. While many cat owners may believe their pet cannot possibly have a significant impact just because it hunts, the cumulative devastation of cat attacks on wildlife is substantial. With many species in danger due to habitat loss, predation by house cats is yet one more hardship we humans impose on wild animals already struggling to survive in our human-dominated world. Yes, tropical forests are being cleared, wetlands are being destroyed, migratory birds are losing habitat along their entire migration route, they are losing insect prey and even their own lives to pesticides... but much of that feels beyond our individual, immediate ability to effect significantly. Limiting the toll that cats take on wildlife, however, is an action that is immediate and effective on an individual basis.

The Migratory Bird Treaty Act protects native birds from being killed or kept by people. Any person who willfully allows his or her cat to injure or kill migratory birds is, in effect, in violation of this federal law. While this may seem like an extreme interpretation, the "sport" hunting of wild animals by our well-fed pet cats is a waste of life and a crime against our wildlife, at least ethically, because it is preventable.

Consider the following:

1. In 1987, Peter Churcher and John Lawton asked the owners of cats in a Bedfordshire, England, village to keep any 'gifts' brought to them by their cats; owners of 78 house cats participated (all but 1 cat owner in the village), with the researchers extrapolating from these findings to estimate that the 5 million house cats in England were responsible for killing approximately 70 million animals each year, 20 million of which are birds. [PB Churcher and JH Lawton, 1987, "Predation by domestic cats in an English (UK) village. *Journal of Zoology*. (London.) 212:439-455.]

2. A four-year study in rural Wisconsin by Coleman and Temple confirmed the UK findings; 30 cats, radio-collared for various periods of time, led researchers to conclude that, in Wisconsin alone, cats may kill 19 million songbirds and some 140,000 game birds in a single year. The researchers focused on rural areas, where residents averaged more than 4 cats apiece, working out to a density of 57 cats/sq mile. [JS Coleman and SA Temple, 1993. "Rural residents' free-ranging domestic cats: a survey. *Wildlife Society Bulletin* 21: 381-390] In urban areas, however, cat populations can be more than 2,000 cats/sq mile. [Marin Conservation League, Sept 1995

issue of the MCL News, "Is There a Fluffy Killer in Your Home?"] Temple, a professor of wildlife ecology at the University of Wisconsin, also stated that house cats are probably the principal predator of birds and small mammals in many areas of rural America. Using figures from Wisconsin and Illinois, he found that outdoor cats kill 47 million rabbits a year - more than human hunters kill with guns. Temple points out that cats may also be the chief threat to some bird populations, especially grassland birds (many of which are in decline already due to habitat loss.)

3. In Virginia, Dr. Joseph Mitchell, an ecologist at the University of Richmond, and his colleague, Dr. Ruth Beck, conducted a study using their own cats. During the 11 months of their test, their 5 cats killed at least 187 animals, mostly small mammals. Of special interest to the researchers was the impact on songbirds, which are in decline in the state - they conservatively estimate that domestic cats each kill at least 26 birds each year in urban areas or 83 in rural areas, representing over 26 million birds in Virginia alone. Mitchell says "The figures may be conservative, because the study only counted confirmed kills - not cases in which cats ate their victims or left the bodies hidden." [JC Mitchell, 1992. "Free-ranging domestic cat predation on native vertebrates in rural and urban Virginia." *Virginia Journal of Science*, Vol 43 (1B):107-207.]

4. 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 Burrowing Owls, Least Terns, Piping Plovers and Loggerhead Shrikes. In Florida, marsh rabbits in Key West have been threatened by predation from domestic cats. 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. [Humphrey, S.R. and D.B. Barbour. 1981. "Status and habitat of three subspecies of *Peromyscus polionotus* in Florida." *Journal of Mammalogy* 62:840-844. Gore, J.A. and T.L. Schaefer. 1993. "Cats, condominiums and conservation of the Santa Rosa beach mouse." Abstracts of Papers Presented, Annual Meeting of the Society for Conservation, Tucson, Arizona, June, 1993.]

5. Many humane societies and rehabilitation centers doing education, quote the following for a country-wide estimate of the impact of owned cats on birds. Richard Stallcup of the Point Reyes Bird Observatory estimated that of the 55 million domestic cats in the US, excluding Hawaii and Alaska, some 10% never go outside, and another 10% are too old or slow to catch anything. Of the remaining 44 million, a conservative estimate is that 1 in 10 cats kills a bird a day - this would yield a daily toll of 4.4 million birds - or 1.6 billion cat-killed birds in the US each year. ["Cats take a heavy toll on songbirds / A reversible catastrophe," *Observer*, Spring/Summer 1991, 18-29, Point Reyes Bird Observatory; *Native Species Network*, Vol 1 Issue 1, Fall 1995.] Research has shown that rural cats, with more wildlife contact, kill many more, with the result that the feral cat population, most of which is rural, has an even more significant impact on the bird population. Alley Cat Allies estimates that there are 60 million feral cats in the United States. Combining feral and domestic cat predation, it is estimated that more than 3 billion birds are killed annually.

6. Cat predation can also negatively impact our native predators, including raptors (hawks, falcons, and owls). A study in Illinois concluded that cats were taking 5.5 million rodents and other vertebrates from a 26,000 square mile area, effectively depleting the prey base necessary to sustain wintering raptors and other native predators. [WG George, 1974. "Domestic cats as predators and factors in winter shortages of raptor prey." *The Wilson Bulletin* 86(4):384-396. O Liberg, 1984. 'Food habits and prey impact by feral and house-based domestic cats in a rural area in southern Sweden." *Journal of Mammalogy*, 65(3): 424-432.]

7. Domestic cats have passed diseases (feline leukemia, distemper, and an immune deficiency disease) to wild populations of felines, including the endangered Florida Panther. [Jessup, D.A., K.C. Pettan, L.J. Lowenstine and N.C. Pedersen. 1993. "Feline leukemia virus infection and renal spirochetosis in free-ranging cougar (*Felis concolor*)." *Journal of Zoo and Wildlife Medicine* 24:73-79. Roelke, M.E., D.J. Forester, E.R. Jacobson, G.V. Kollias, F.W. Scott, M.C. Barr, J.F. Evermann and E.C. Pirtel. 1993. "Seroprevalence of infectious disease agents in free-ranging Florida panthers (*Felis concolor coryi*)." *Journal of Wildlife Diseases* 29:36-49.]

The impact of cats on native wildlife has been the topic of worldwide attention. A 1992 National Wildlife article by George Harrison, "Is there a killer in your house?" (*National Wildlife* 30(6): 10-13), shows that even well-fed cats will hunt and discusses the problems of people who want songbirds on their property but who refuse to acknowledge the impact of their free-ranging cats. (And add into the equation of the dangers facing an outside cat the problem of them being injured or captured by a bird-loving neighbor tired of them hunting the wildlife on HIS property.) Sherbrook Shire, near Melbourne, Australia, has imposed a curfew on cats (Australia has suffered a severe decline in native mammals and some birds, in large part because of domestic cats) - owners whose cats are out at night face a \$100 fine. The University of Wisconsin Cooperative Extension office has issued a bulletin authored by three biology, conservation, and extension professors, expressing concern over the impact of cats on wildlife, making available (free of copyright) in print and over the Internet [John Coleman, Stanley Temple, Scott Craven, 1997, "Cats and Wildlife - A Conservation Dilemma," published by the University of Wisconsin Cooperative Extension Service, at <http://www.wisc.edu/wildlife/e-pubs.html>.]

Animal intake data from many wildlife rehabilitation centers across the U.S. corroborate the toll of cat predation that the above findings document. Overwhelmingly, cat predation (including cat attack cases and animals orphaned by cats) is the single largest reason for admission to many wildlife centers, over car and window collisions, oil spills, pesticides, tree felling, and all else. Unfortunately, the prognosis for recovery of cat attack victims is poor. Typically less than 10-20% survive. Necropsies of cat attack victims admitted to wildlife rehabilitation centers reveal massive internal hemorrhaging and soft tissue damage from crushing even when external damage appears minor. Also, even small puncture wounds expose the victim to over 60 types of bacteria in cat saliva.

Perhaps the answers to some commonly asked questions about cats and wildlife will provide some ideas and solutions.

Q. Isn't hunting by cats natural?

A. While it may be "instinctive" for them to hunt, house cats are not native to North America and they cause imbalances in the ecology of an area by killing so many native wild animals. By being at large at any time, day or night, they have an advantage over native wild predators that tend to be either nocturnal or diurnal. Because their population numbers are artificially large due to being kept as pets, cats are also far more common than the balance of nature would allow for native predator species, such as fox or bobcat. Predators are supposed to be rare, not abundant, in nature. Normally, the population of prey species (i.e., the amount of available food) determines the population of predators. With pets, who are not dependent on the animals they catch for food, their numbers are dependent only on the area's human population.

Q. Will putting a bell on my cat's collar help?

A. A bell is not normally a sound birds would associate with danger. Although neighborhood adult birds may learn that the bell sound of the local cat represents danger (assuming they escape initially), young birds and less common birds that are migrating through your yard will still be at risk. Also, many cats are bright enough to figure out how to stalk silently even with a bell. Some people have found that a 'rhinestone' collar that reflects light, as well as two bells or more, may help some - but there is no solution better than keeping the cat under your control at all times.

Q. Aren't well-fed cats less of a threat to wildlife?

A. Because hunting is instinctive for cats, even well-fed cats still hunt. "Studies of housecats suggest that hunger and hunting are controlled by different parts of a cat's brain. Hunting is a form of amusement for the cat, much as a dog enjoys chasing a stick." (Guy Hodge, Humane Society of the United States, "Mitigating the Impact of Free-Ranging Cats on Wildlife," Proceedings of the 1995 International Wildlife Rehabilitation Council Conference, 1996.) A well-fed pet cat is apt to be more fit, and thus a more successful hunter, than a feral cat that hunts to survive. By the same token, feral cat 'colonies' that are fed only amplifies the devastation of having such a concentration of small predators.

Q. My cat just helps keep my yard free of mice or other small rodents. How can this be harmful?

A. Particularly in suburban/rural situations, the prey base for hawks and owls may be depleted, and this may have far-reaching consequences. A study in Maryland found that Cooper's Hawks, which depend heavily on chipmunks to feed their young during the nesting season, were forced to prey more on songbirds if chipmunks were eradicated. (Mosher, J. 1989. Status reports: accipiters. In Proceedings of Northeast Raptor Mgmt. Symposium. Washington D.C.: National

Wildlife Federation.) Not only did this put additional pressure on the songbird population, but the increased hunting time and difficulty caused the hawks' nestling survival rates to suffer. Similar population effects would arise from limiting the mouse population for the local screech owl or kestrel pair.

Q. When are birds more at risk?

A. At any time during the nesting season (March through October), both adults, which are harried with nesting duties, try to defend their young and are at risk. Often the female bird is taken while brooding her young on the nest, in which case the nestlings will die of cold or starve to death, if they are not killed as well. Young birds still unable to fly well are at great risk. All birds are also at risk at night, at any time of the year. Diurnal birds are night blind and if surprised while asleep are virtually helpless to escape a cat attack. In addition, birds may be vulnerable at birdbaths and/or feeders, if there is low vegetation close by in which cats can hide. Birds are most active in the early morning and at the very least, cats should thus be confined for the first few hours after dawn and at night.

Q. Is there any way to protect birds from neighborhood cats at my feeder or birdbath?

A. Provide escape cover with brush piles and thorny shrubbery for the birds to fly into, but keep the ground clear under the feeder or near the bath so that cats cannot hide within pouncing distance. In extreme situations, erecting a circle of 2' tall chicken wire around a feeding station may be effective.

Q. I feel terrible that my cat hunts, but he is used to roaming outdoors and drives me crazy to go out. Can I train him to stay indoors?

A. It may be hard to break an adult cat of the urge to roam outdoors, but let your cat out as infrequently as possible, keep him confined to your yard under your observation, and gradually increase his stays indoors. Having your cat spayed or neutered will help as well. It's best not to let a cat roam outdoors to start with. A kitten which is not allowed to roam will not expect to do so as an adult, and you will gain a loving pet for many more years. A cat that lives indoors has a long life expectancy. Cats that roam do not. The outdoors is dangerous for cats, too! And your vet bills will be much lower without the risks of exposing your cat to cars, cat fights and diseases, dogs, or larger predators.

Q. How else can I help?

A. Defend your backyard sanctuary against marauding cats. Fencing a yard helps. Repel intruding cats with spray from a garden hose. Speak up in support of laws that prohibit cats from running at large on others' property.

All native birds (no matter how common!) are protected by state and/or federal law, as are many mammals. Certainly they deserve the additional, so easily ensured protection from domestic cats. In Oregon, a dog chasing livestock can be put to death; this is not so much out of

consideration for the livestock as it is the fact that such animals are is deemed 'personal property' and the owner's rights are thus imperiled by harm to them. Surely our wildlife merits at least an equivalent protection - not as personal property but as a shared resource that both provides benefits for all of us.

For further references, see A bibliography of feral, stray, and free-roaming domestic cats in relation to wildlife conservation, compiled by Ronald Jurek, April 1994, California Dept of Fish & Game, Nongame Bird and Mammal Program Report No. 94-5.

Some portions of this adapted with permission from "Cat Facts," a bulletin of the Ohio Wildlife Rehabilitators Association and "Cats and Wildlife - A Conservation Dilemma," published by the University of Wisconsin Cooperative Extension Service.

Also see an article about the American Bird Conservancy 'Cats Indoors' Campaign - [www.abcbirds.org/cats](http://www.abcbirds.org/cats)