A Public Policy Toward the Management of Feral Cats

SHAWN GORMAN * & JULIE LEVY **

I. INTRODUCTION

There is an ongoing debate concerning the environmental impacts and appropriate control measures for the domestic cat population. Domestic cats have become America's most popular choice for pets, and an estimated 9-12% of households feed "free-roaming" neighborhood cats. Almost 40% of the estimated seventy million cats in the United States may live a free roaming lifestyle without control of reproduction. With a seasonally polyestrous breeding structure and isolated from human influences, feral cats have acclimated to several habitats ranging from sub-Antarctic islands and urban settings to temperate farmlands. Because cats have been domesticated by humans and transported throughout the world, they are referred to as "non-indigenous," "exotic," or

* Shawn Gorman graduated from the University of Florida (1998) with a bachelor's degree in Agriculture and a minor in Environmental Sciences. He then completed a MS in Veterinary Medical Sciences at the University of Florida (2001) where his thesis investigated an experimental immunocontraceptive vaccine for the management of unwanted domestic cat populations. He is currently a 3rd year law student studying intellectual property law at Franklin Pierce Law Center. Upon graduation, he will be entering private practice in Chicago where he will focus on patent prosecution and litigation in the biotechnology-related fields.

** Dr. Julie Levy graduated from the School of Veterinary Medicine at the University of California at Davis in 1989. She completed an internship at Angell Memorial Animal Hospital (1990) and a residency in small animal internal medicine at North Carolina State University (1993), where she also completed a PhD in the immunopathogenesis of FIV infection in cats (1997). Dr. Levy a member of the American College of Veterinary Internal Medicine and is currently an associate professor with the small animal medicine service at the University of Florida. Dr. Levy's research and clinical interests center on feline infectious diseases, neonatal kitten health, and humane alternatives for cat population control. She is the founder of two university-based feral cat spay/neuter programs which have sterilized more than 20,000 cats since 1997. These programs form the basis for research on a variety of feral cat issues, including infectious diseases, caretaker characteristics, colony dynamics, and anesthesia protocols. Dr. Levy also maintains an active program investigating vaccines for potential immunocontraception in cats.


3. Johnson, supra n. 2.

4. Feral is defined as "not domesticated or cultivated; wild"; "having reverted to the wild state, as from domestication"; "of or characteristic of wild animals." Random House Webster's Unabridged Dictionary, 709 (2d ed., Random House 1998).

Several ecologists argue that feral domestic cats should be targeted for population control. These ecologists argue that feral cats prey extensively upon native wildlife and these cats act as a reservoir for infections such as rabies, toxoplasmosis, and other zoonotic parasites. Conversely, some ecologists argue that, unlike most other "pest species," cats have followed mankind for centuries and can no longer be considered non-indigenous because native species have since acclimated to their presence. Due to ambiguity in the laws and scientific literature, an emotional debate has ensued adding little insight toward a practical solution to this problem.

This paper examines the current wildlife laws, both federal and state, to determine what laws may apply to managing the feral cat population. It begins with a determination of how domestic cats are classified under these laws. Since many laws are vague, the intent of the legislatures is investigated to determine if domestic cats were meant to be defined as a non-indigenous species. The focus then shifts to indicate ways to control the feral domestic cat population. Current trends in the control of other non-indigenous species appear to revolve around public nuisance claims; however, due to the unique nature of domestic cats, these laws are poor candidates for managing the unwanted domestic cat population. On the other hand, given the recent increase in the enactment of leash laws, courts may be more inclined to apply public nuisance laws to cats.

On a national level, the Endangered Species Act (ESA) is an ideal candidate for controlling the feral cat population. Unlike earlier laws, which contain a list of species not permitted to be introduced, the ESA effectively prohibits the introduction of a species that will "harm" a threatened or endangered species. The importance of creating laws that cooperate with the nature of the biological systems is also discussed in detail. Lastly, the paper discusses the importance of public opinion when controlling any non-indigenous species and how failure to address this issue will lead to failure in the attempt to control the unwanted domestic cat population.

6. Although these terms have slightly differing definitions, domestic cats fall within all three classifications. All these terms are used throughout the legal and ecological literature interchangeably, including this paper.


8. Unwanted cat population refers to feral cats.

II. LEGAL CLASSIFICATION OF DOMESTIC CATS

A. Federal Law

The Federal Government does not classify domestic cats as injurious, non-indigenous wildlife. The government asserts this through its implementation of the Lacey Act. Passed in 1900, the Lacey Act became the first federal legislation to ban the importation of non-indigenous species.\(^\text{10}\) Domestic cats are not specifically mentioned in the Lacey Act, however, cats are considered domesticated animals\(^\text{11}\) not injurious wildlife\(^\text{12}\) in the federal regulations which implement the Lacey Act.

The Act utilizes a “black list approach,” requiring the Department of the Interior (Department) to demonstrate that an introduced species will cause harm before requiring a person importing an exotic species to have a permit.\(^\text{13}\) Examples of injurious wildlife recently banned from importation without a permit include the brown tree snake\(^\text{14}\) and the snakehead fish.\(^\text{15}\) These animals have a potentially devastating effect on native ecosystems. In contrast, the federal government groups domestic cats with cattle, horses, and white lab mice.\(^\text{16}\)

No permit is required for the importation of a domestic cat.\(^\text{17}\) Unlike the snakehead fish, where the Department ardently promulgated regulations to ban its importation,\(^\text{18}\) the Department declined to follow the same path of action for domestic cats. In 1973, the Department proposed a “white list” approach that would have required importers of non-native species to demonstrate that the introduction of the species would not harm the native species;\(^\text{19}\) however, due to pressure from certain groups, includ-

\(^{13}\) Id. at § 16.11.
\(^{14}\) 50 C.F.R. § 16.15a (2003). The brown tree snake (Boiga Irregularis) is perhaps best known for being responsible for “the extirpation of most of Guam’s native terrestrial vertebrates ...” 60 Fed. Reg. 22073, 22074 (May 4, 1995).
\(^{15}\) 50 C.F.R. § 16.13 (2003). The snakehead fish was banned because of its potential ecological impact (its predatory nature and its ability to walk across land) along with the difficulty in eradicating it once established. See 67 Fed. Reg. 62193, 62202 (Oct. 4, 2002).
\(^{17}\) Importers must only declare certain wildlife as a customs port in order to import it under 50 C.F.R. § 16.11(b).
\(^{18}\) See 67 Fed. Reg. at 62193 (promulgating rule in less than three months and making it effective immediately).
\(^{19}\) Steven A. Wade, Stemming the Tide: A Plea for New Exotic Species Legislation, 10 J. of Land Use & Envtl. L. 343, 347 (Spring 1995).
ing the pet trade, these regulations were not implemented. Because domestic cats have been present alongside humans for the century that the Lacey Act has been in place, it remains unlikely that the federal government will change its position and attempt to classify domestic cats as an injurious, non-indigenous species.

B. State Law

Most states do not categorize domestic cats as non-indigenous wildlife species. Domestic cats have been expressly excluded from lists which ban the importation of non-indigenous species. For example, the California Wildlife Code bans the importation of all species in the order Carnivora with the express exception of domestic cats and dogs. Other state legislatures more specifically categorize animal groups, and in doing so, reveal the intention that domestic cats are not to be governed by wildlife laws. Oregon’s statute defines exotic animals as those cats, dogs (except domestic cats and dogs), primates, wolves and bears that are not indigenous to the state. The majority of the states do not have statutes as specific as Oregon and California; however, the statutes from these states show the intent to exclude domestic cats from wildlife species. Even though, by definition, feral cats have returned to a wild state, it remains unlikely that feral cats would be covered under most states’ wildlife laws because they would be classified as a domestic animal rather than a wild animal under the state’s statutes.

III. TORT LAW AS A CONTROL MECHANISM

Increasingly, there has been interest in applying tort liability law to combat exotic species introductions. In *Colorado Division of Wildlife v.*

25. See generally, supra n. 23 (examples of state statutes).
Cox, the appellee argued that the defendants had created a public nuisance by failing to contain their exotic animals and therefore actionable under tort law. The Appeals Court of Colorado agreed, holding that escaped exotic wildlife constituted a public nuisance. Although the applicable statute covered "domestic or exotic wildlife," it is unlikely that feral cats would be considered wildlife, because Colorado defines domestic cats as "companion animals" rather than domestic wildlife. Performing a historical analysis of tort law, which has consistently maintained the viewpoint that domestic cats are harmless, lends further support to the hypothesis that cats will not be subject to state wildlife laws. Restatement (Second) of Torts §518, states:

Except for animal trespass, one who possesses or harbors a domestic animal that he does not know or have reason to know to be abnormally dangerous, is subject to liability for harm done by the animal if, but only if, (a) he intentionally causes the animal to do the harm, or (b) he is negligent in failing to prevent the harm.

The question then becomes when does a person "possess" or "harbor" a feral cat? If a cat eats from a dumpster at a shopping center, is the owner of the shopping center liable? Would an individual who feeds feral cats but does not neuter them be liable for harm done by future generations of feral cats? These questions are circumvented by comment j of the Restatement. The comment provides that:

There are certain domestic animals so unlikely to do harm if left to themselves and so incapable of constant control if the purpose for which it is proper to keep them is to be satisfied, that they have traditionally been permitted to run at large. This class includes dogs, cats, bees, pigeons and similar birds and also poultry, in a locality in which by custom they are permitted to run at large ...

Thus, the Restatement indicates that humans have allowed domestic cats to become feral because domestic cats are unlikely to cause harm. This suggests that, absent extreme circumstances, individuals would not be liable under tort law for harm caused by cats.

28. Id. at 663-664 (affirming that appellant's red deer, babary sheep, and ibex were not livestock but rather "non-native wildlife" or "exotic wildlife").
29. Id at 663.
32. Id.
33. Id. at § 518 cmt. j (permitting animals to run at large).
This belief that cats are generally permitted to roam free is also discussed in *Van Houten v. Pritchard*.

The *Van Houton* court decided whether owners of roaming cats were liable when the animal caused harm. In holding that the owner was not liable for the cat's actions, including those that occurred on private property, the court stated "[this case] involves a domestic animal that is not likely to do harm if allowed to run at large." This further supports the contention that feral cats have not been, and are unlikely to be, subject to current federal or state wildlife laws, but rather remain under the domain of domestic animal laws. Unfortunately, the laws regulating domestic animals generally govern animal husbandry and animal transportation without addressing the potential impacts on surrounding ecosystems.

Although it is not possible to pinpoint the logic behind every state court's ruling or the intent of every state legislature, the state statutes may be intentionally excluding domestic cats because of their unique history. Historically, domestic cats have been closely associated with humans and domestic cats have intentionally been introduced to almost every ecosystem in the world. Since cats have been present in large quantities for an extended period of time, they appear to have achieved the legal status of an indigenous species. Looking to the formation of general law enforces this conclusion.

Restatement (Second) of Torts states one who adds a few indigenous animals to an area is not responsible for any damage they may cause because his introduction "does not materially increase the previously existing danger." In contrast, one who imports a non-indigenous animal "has created a danger not normal to the area." Because domestic cats have historically been owned and relocated alongside humans, whether for utilitarian purposes such as hunting rodents, or for companionship, they are not usually viewed as a newly introduced species. Simply put, does a feral domestic cat present a danger not normal to a typical neighborhood? Even if a cat is shown to kill several birds in a given neighborhood, that danger may not be abnormal for the area if cats have been there for over 200 years. Since the Restatement and *Van Houten* both leave open the possibility for a leash law to negate this general rule, I will address this point later in this paper (Section VI).

34. 870 S.W.2d 377 (Ark. 1994).
35. Id. at 378.
36. Id. at 379.
37. Restatement (Second) of Torts § 508 cmt. b.
38. Id. at § 507, cmt. e.
39. Id., at § 518, cmt. j; see also *Van Houten*, 870 S.W.2d at 380 (stating the rule would not apply if the animal was in violation of a leash law).
classified as pets in a state's statutes, would the default classification be a wild non-indigenous pest species? Since many have defended this stance, I will briefly discuss the implications of this approach.

IV. CLASSIFYING FERAL CATS AS WILDLIFE

If feral domestic cats were classified as a non-indigenous wildlife species, should property owners be held liable for domestic cats preying upon wildlife? Although there is limited case-law on the subject, it does not appear that would be the case. Under the doctrine of *animals ferae naturae*, prevalent since Roman times, owning land does not confer ownership rights over the wild animals on the land. Once the owner reduces an animal to possession, however, there is an ownership right over the animal until such possession is forfeited. If the animal is released, then the ownership right is extinguished. An exception to this rule occurs for animals such as those feral cats that have the propensity to return to a person's land. The law provides that these animals are still considered the possessions of those who the animal returns to.

Examining how courts classify wandering bees that return to a landowner provides insight into how courts may classify feral cats. Bees, like feral cats, appear to straddle the line between domesticated and wild animals. In *People v. Kasold*, a bee owner claimed that his bees were domesticated animals and, therefore, allowed by the R-1 zoning of his premises. The court stated “it has been said that bees, while generally classed as *ferae naturae*, are so useful and common as to be all but domesticated ... although it may be proper still to class the bee among animals *ferae naturae*, it must nevertheless be regarded as coming very near the dividing line.” The *Kasold* court's reasoning for classifying bees as *animals ferae naturae*, therefore, indicates how other courts might attempt to classify feral cats.

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42. See *People v. Kasold*, 314 P.2d 241, 242 (Cal. Super. 1957)

43. *Id.* at 241.

44. *Id.* at 241-242 (citing *Parsons v. Manser*, 93 N.W. 86, 88 (Iowa 1903)); *Ammons v. Kellogg*, 102 So. 562, 563 (Miss. 1925) (finding that the general rule among states is that liability for injuries caused by bees will treated in the same manner as liability for injuries caused by domestic animals).
Additionally, although the doctrine of *ferae naturae* applies to "indigenous wild animals," it appears that some courts apply the doctrine to exotic species as well. The Texas Court of Appeals held in a 1999 case that “[f]ire ants, by legal definition, are indigenous wild animals, and, without more, they do not pose an unreasonable risk of harm in their natural habitat." It must be noted that fire ants are not indigenous to Texas, but were imported accidentally from South America in the 1930's. Furthermore, there is currently a concerted effort to control this invasive species by university researchers and the Federal government. The issue then becomes whether the court was ignorant to the fact that fire ants are not native to Texas or whether the court simply noted that the legal definition of "indigenous" might differ from the biological definition. It can be said that any given neighborhood in the U.S. might contain a feral cat or fire ant; therefore, these species may have obtained the legal definition of indigenous, yet not fulfill the ecological definition.

With so many classifications that are possible for the domestic cat, an ideal law for control feral cats would not depend entirely upon the ecological definition. A federal law, applicable in all of the states, would not only be more efficient and effective but also would add predictability, which cannot be achieved with differing state laws. The Endangered Species Act may be a law that can be used to solve this problem.

V. THE ENDANGERED SPECIES ACT

A. Introduction

Described as the "pit bull of environmental laws," the Endangered Species Act (ESA) empowers all federal agencies to use their authority to further the "conservation" of endangered or threatened species. The ESA does not focus upon the classification of the animal that is causing harm; rather, it focuses upon the classification of the species that is being harmed. The Act requires the Department of the Interior to classify species in danger of extinction as endangered, and species likely to become extinct as threatened. Although earlier legislation designed to protect the environ-

46. C. S. Lofgren, W.A. Banks & B. M. Glancey, *Biology and Control of Imported Fire Ants*, 20 Annual Rev. of Entomology 1, 3 (1975).
ment utilized a cost-benefit analysis, this practice was halted when Congress passed the ESA in 1973. Congress discarded economic analysis for a more precise test, one that utilizes the "best scientific and commercial data available" to determine if a species is endangered or threatened.

B. Best "Scientific and Commercial Data" Debate

Utilizing the "best scientific and commercial data available" test on feral cats leads to confusing results, further fueling the debate. A simple review of the scientific literature demonstrates the difficulty of ascertaining a concrete model to control the unwanted cats. The ecological studies employ different sampling criteria in vastly different ecosystems. To illustrate this point, I will briefly compare studies on Antarctic Islands with those conducted on mainland populations.

Cat predation on the Antarctic Marion Island has had a grave impact upon the native bird population. Studies on this island have estimated that feral cats killed 450,000 petrels annually and caused the extirpation of the burrowing petrel. In contrast, feral domestic cats residing in a mainland area without human disturbance, such as the Wichita Mountains Wildlife Refuge in Oklahoma, had only trace amounts of native birds in their diet. Provided with these two peer-reviewed studies, could the Department of the Interior logically conclude whether feral cats are detrimental to bird populations in an ecosystem different from those in the studies?

The mere presence of feral cats is often cited as evidence of damage to native species if feral cats are found within a study area. This occurred in studies concerning turtle predation in Australia. Several authors reported observing feral cats preying on green turtles (Chelona mydas) without investigating the impacts. In 1989, a quantitative study was conducted on Aldabra, which houses the world's largest green turtle population. Although it revealed 90.4% of cat feces contained turtle hatchlings, it also found a positive correlation between turtle nests and cat activity. Higher turtle densities existed where cats hunted most over a sustained period of time.

This is not to say that feral cats did not negatively affect the growth of the turtle population, only that the turtle population flourished in areas of

52. Van Aarde, supra n. 5.
53. Frank McMurry & Charles Sperry, Food of Feral House Cats in Oklahoma, a Progress Report, 22 J. Mammalogy 185, 186 (1941) (the study recorded higher avian predation levels in areas characterized by human disturbance, in these areas the highest recorded level was 6.5%).
55. Id.
highest cat densities. Direct human exploitation may be a more powerful factor in these turtle populations; one study noted that the green turtle population rose significantly since 1968, when it became illegal to capture the turtles on this island.\textsuperscript{56} Conversely, the author cited another study, in which cat predation occurred on a nearby island with much lower turtle densities. Theoretically, cat predation at these lower densities could lead to a decline in genetic diversity or even extirpation. This example demonstrates that feral cats may harm an endangered species in one area, but may not affect the same species in a different environment. Although these results suggest that the same turtle species can be threatened by feral domestic cats on one island, while not being harmed on other, the “best scientific and commercial data” analysis is still a well-suited test, as detailed below.

When interpreting the ESA, the court in \textit{Defenders of Wildlife v. Babbitt}\textsuperscript{57} (Defenders) held that the “best available data” test requires less than conclusive proof.\textsuperscript{58} In \textit{Defenders}, the United States Fish and Wildlife Service (USFWS) refused to list the lynx despite a decline in numbers, because the species was thriving in most other areas of its range.\textsuperscript{59} The court set aside the USFWS listing decision.\textsuperscript{60} The court reasoned that the ESA does not require the USFWS to have conclusive proof that an animal is threatened in an area in order to list it.\textsuperscript{61} Instead, the ESA requires the USFWS to issue a biological opinion with the best available data.\textsuperscript{62}

Applying the “less than conclusive proof” rule to the feral cat predations previously mentioned yields a solution. The main difference between the studies of cats on the Antarctic Islands and the study conducted in mainland areas appears to be the evolutionary history of the islands. These petrels are not only ground nesting, but also evolved in the absence of terrestrial carnivores.\textsuperscript{63} Additionally, there were no shrubs or trees to shelter birds on the islands, and various species of birds differed in susceptibility to predation.\textsuperscript{64} In this situation, harm, as defined in the ESA, could easily been demonstrated.\textsuperscript{65} This is not to say that expert biologists with the USFWS cannot disagree with the limited scientific data available. The

\textsuperscript{58} \textit{Id.} at 679.
\textsuperscript{59} \textit{Id.} at 677.
\textsuperscript{60} \textit{Id.} at 685.
\textsuperscript{61} \textit{Id.} at 679.
\textsuperscript{62} \textit{Id.}
\textsuperscript{63} Van Aarde, \textit{supra} n.5.
\textsuperscript{64} \textit{Id.}
\textsuperscript{65} The ESA currently requires that the listed species be “harmed.” This interpretation and applicability will be discussed in Section V of this paper.
agency may consider, and act on, its expert's opinion as long as the opinions are not arbitrary, capricious, or unsubstantiated.\textsuperscript{66}

When listing species under the ESA, the Department of the Interior considers more than just the best scientific evidence from independent ecosystems. The Department of Interior must also consider the best way to manage areas containing listed species that are threatened by these feral cats. The ESA requires the USFWS, in deciding management actions, to consider the distinct needs of separate ecosystems or recovery zones occupied by threatened or endangered species.\textsuperscript{67} To accomplish this, the USFWS creates a recovery plan. Under the ESA, recovery plans must include a practical outline of needed management actions for conservation of the listed species which will move the species closer to delisting and sustainable population levels.\textsuperscript{68} Because ecosystems are complex and often difficult to predict, such recovery plans are only framework approaches, and are not treated as binding contracts. In \textit{Fund for Animals v. Rice},\textsuperscript{69} the court stated the laws make it "plain that recovery plans are for guidance purposes only."\textsuperscript{70}

C. Harm Through a "Taking" - The Palila Cases

Construction of recovery plans requires a determination of whether there has been a "taking" of the species. \textit{Palila v. Hawaii Department of Land and Natural Resources (Palila I)}\textsuperscript{71} closely shadows the problem faced with feral domestic cats. The palila (\textit{Loxioidees bailleui}) is an endangered bird endemic to the Hawaiian Isles. Once plentiful, the palila has declined in numbers and range due to environmental pressures. Recent scientific studies attributed the decline to feral sheep.\textsuperscript{72} The feral sheep were permitted to heavily graze on two tree species which the palila utilized for nesting and feeding.\textsuperscript{73} The feral sheep were predominately located on state land managed by the defendant for preservation of natural resources. Because the defendant managed the sheep for hunting purposes, the plaintiffs contended that the defendants were "taking" the palila in violation of the ESA.\textsuperscript{74}

\begin{itemize}
\item \textsuperscript{66} 5 U.S.C.A. § 706(2)(A) (West 2002).
\item \textsuperscript{68} Id. at § 1533(f)(1)(B).
\item \textsuperscript{69} 85 F.3d 535 (11th Cir. 1996).
\item \textsuperscript{70} Id. at 547.
\item \textsuperscript{71} 471 F.Supp. 985 (D. Haw. 1979) [hereinafter \textit{Palila I}].
\item \textsuperscript{72} Ironically, the problem was originally thought be caused by domestic cat predation. A subsequent study demonstrated the feral cats were not a significant threat to the indigenous palila population.
\item \textsuperscript{73} \textit{Palila I}, 471 F.Supp. at 987-989.
\item \textsuperscript{74} Id.
\end{itemize}
The court focused on fact-specific scientific evidence that demonstrated a correlation between the sheep's grazing and the palila decline. Unrefuted expert testimony backed this evidence. The district court concluded removal of the sheep was a feasible solution. Substituting domestic cats into this scenario illustrates that a different result would have been likely. First, depending on the “scientific data” used, domestic cats may have not been directly correlated to the decline of the endangered species. Even if it were unequivocally shown that domestic cats were directly linked to an endangered species decline, the issue still would not be solved. The judge in Palila I based his decision on the fact that complete removal of feral sheep and goats was feasible. This has rarely been observed when dealing with domestic cats. Even when isolated on Marion Island, eliminating the domestic cat population with the combination of hunting, poisoning, and introducing infectious diseases took decades.

Following the Palila saga further demonstrates how the ESA may solve feral cat overpopulation. After the Palila I ruling, the Hawaiian Department of Land and Natural Resources (DLNR) removed the feral sheep. Nonetheless, within five years a different species of exotic animal, the mouflon sheep, was found in the area. The plaintiffs, again a coalition of concerned environmental groups on behalf of the palila, argued that the presence of the feral mouflon sheep was harming the palila through the degradation of palila habitat. The DLNR countered with evidence that the overall number of palila had not declined, but rather increased: therefore, there was no “harm.” Siding with the environmentalists, the court viewed the DLNR’s policy as a “shortsighted and limited interpretation” because actual injury to an individual animal must not be proven. The court reasoned that habitat degradation may harm species by altering breeding or feeding habits. This ruling, however, still required the show-
ing of a critical link between the habitat degradation and an actual injury to the species.\textsuperscript{84}

After the Palila rulings, there appeared to be a circuit split concerning the broad interpretation of "harm." The Court in Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, however, adopted the Palila I and Palila II rulings. The Supreme Court instructed that "harm" constitutes a significant habitat modification on private property that actually kills or injures wildlife by significantly impairing essential behavioral patterns.\textsuperscript{85} In Babbit, the Department of the Interior prohibited logging in forests where endangered avian species were present, believing such activity constituted a "taking."\textsuperscript{86} The Supreme Court upheld the broadened interpretation of taking which included "significant habitat modification or degradation that actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering."\textsuperscript{87} This holding expands the possibility that the actions of feral domestic cats would be found to constitute a "taking" of a listed species.

Although Babbitt is often cited as a case demonstrating how private land rights are easily reduced or how the judicial branch can broadly interpret a statute to achieve its goals, the six-three Supreme Court decision remains true to the ideals behind the ESA. In 1973, Congress believed the two largest threats to species survival were pressures from hunting and habitat loss. Although hunting would be covered under the statutory definition of "take," the Court's decision in Babbitt now encompasses the second leading cause of species decline, habitat loss. Protection under section nine, however, is a two-edged sword as it only offers protection for endangered species, not species which are threatened.\textsuperscript{88} Feasibly, domestic cats could heavily prey upon a threatened species, and no protection would be found under section nine until the numbers of a threatened species reduced to the point that the species was considered endangered. By then, genetic diversity could be greatly diminished, leading to the possibility of genetic bottlenecking.

D. If Cats Are Found to Constitute a "Taking"

If the presence of feral cats is found to constitute a "taking," removal of the individual cats may not be done without following guidelines. Be-

\textsuperscript{84} Id. at 1077 ("there can be no finding of taking unless habitat modification or degradation has an adverse impact on the protected species.") (quoting 46 Fed. Reg. 56736, 56748 (Nov. 18, 1981)).


\textsuperscript{86} Id. at 2408.

\textsuperscript{87} Id. at 2418.

fore an eradication or removal effort is undertaken, it must be determined whether such a removal would harm the targeted environment. In Animal Lover's Volunteer Association v. Carlucci, the United States Fish and Wildlife Service (USFWS) attempted to remove the non-indigenous red fox from parts of California. 89 The USFWS argued that since the foxes were not part of the natural ecosystem there was no need to assess the harm to the ecosystem. 90 The Court disagreed, adding there was evidence that the foxes had been present in the ecosystem for over 100 years and it should not be assumed that removal of the foxes would be without negative consequences. 91 Indeed, an attempt to remove an exotic species may harm the endangered species more than simply allowing the exotic species to remain. For example, non-indigenous fire ants were introduced into the Southwest United States throughout the early to mid-1900's, and quickly established. 92 For thirty years, the chemicals heptachlor and mirex were spread by plane in an attempt to kill the ants. 93 Although the pesticides were effective in killing the targeted ants, the chemicals also harmed the ant's competitors and predators. 94 The collateral destruction of these non-targeted organisms left the habitat suitable for recolonization. 95 Once the government stopped spraying the pesticides, the ants quickly recolonized. 96

As previously mentioned, cats have been introduced into almost every ecosystem. Because many of these introductions occurred centuries ago, cats may now serve a beneficial role in some of these ecosystems. For example, a year-long Australian study which collected prey items from domestic cats found avian species to constitute 27% of prey caught or scavenged by cats. The study concluded, however, that the majority (64%) of prey gathered was non-indigenous. 97 This is not the only instance of cats potentially controlling levels of non-indigenous species. A study conducted in Orongorongo Valley, New Zealand, concluded that by suppressing the introduced rat population, cats allowed a denser population of native birds to exist. 98 One of the same authors later demonstrated that the rat

90. Id. at *2.
91. Id.
93. Id.
94. Id.
95. Id.
96. Id.
population increased when the cats were reduced. As it turned out, the cats were eating the rats in higher quantities than they were eating the native birds. Fewer rats, therefore, preyed upon the native species. Feral cats also were found to consume a higher proportion of non-indigenous species on Antarctic Macquarie Island where the non-indigenous European rabbit constituted 82% of the diets of island cats, while all species of native penguins consumed were scavenged, not hunted. These studies, although not popular with some ecologists, reinforce other studies conducted by the government concerning other exotic species. The U.S. Congress Office of Technology Assessment has stated “[n]on-indigenous organisms of many types have beneficial uses as biological control agents, frequently for control of non-indigenous pests.”

Although the Department of the Interior is not required to, and could not possibly, predict every eventual action and result, the Department must adequately provide a plan of action that, if undertaken, is likely to “move the species closer to recovery.” In such cases, it may not be advisable to remove the feral cats, because they prey upon other exotic species. The fact that domestic cats may severely harm a protected species in one ecosystem, while controlling other exotic species in another, should not pose a problem. In Morrill v. Lujan, the court held that “the contents of [recovery] plans are discretionary.” While it is true that section 4(f) “does not permit an agency unbridled discretion” and “imposes a clear duty on the agency to fulfill the statutory command to the extent that it is feasible or possible,” it does not mandate the agency to abide by a one-size fits all management plan. In situations where the government decides not to reduce the feral cat population, it should continue to monitor changes in those populations. Obviously, a drastic increase in a feral cat population, whether occurring naturally or occurring due to “dumping” by humans, could alter the ecosystem’s dynamics. A management plan that includes this approach should periodically compare the listed species population in relation to the feral cat population.

Because of the ESA’s wording, the government should be able to avoid citizens’ lawsuits alleging that the government’s decision to allow populations of domestic cats to remain in some environments constitutes a

100. Id.
102. See OTA, supra n. 92, at 56.
"taking." When amending the ESA, the government realized not all Department activity could benefit all listed species; As amended, the Act contains the following provision:

The Secretary may permit, under such terms and conditions as he shall prescribe--

(A) any act otherwise prohibited by section 1538 of this title for scientific purposes or to enhance the propagation or survival of the affected species, including, but not limited to, acts necessary for the establishment and maintenance of experimental populations pursuant to subsection (j) of this section; or

(B) any taking otherwise prohibited by section 1538(a)(1)(B) of this title if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.\textsuperscript{105}

Such takings, though, must be incidental to the lawful activity of preserving the targeted environment, and should only be allowed where the takings are not more harmful to the survival of the listed species than if the cats were removed.

To extend similar protection to private landowners, Congress included incidental taking amendments within the 1982 amendments to the ESA.\textsuperscript{106} As on public lands, these amendments allow the Secretary of the Interior to permit incidental takings of endangered species for scientific purposes. The amendments also allow takings that are 'incidental' to another lawful activity.\textsuperscript{107} The Secretary grants permits to private landowners as long as such incidental takings are minimized as much as practicable.\textsuperscript{108} Such incidental takings do not lessen the likelihood of the species' recovery or survival,\textsuperscript{109} and such incidental takings meet other appropriate and necessary measures.\textsuperscript{110}

States' laws, incorporating the Federal Endangered Species Act, may also have provisions allowing for incidental takings. One such case involving a state statute for incidental takings deals with domestic cats directly. In *Mangrove Chapter of Izaak Walton League of America, Inc. v. Florida Game and Fresh Water Fish Commission*, the state wildlife commission granted a permit to subdivision developers to allow the developers

\textsuperscript{110} Id. at § 1539 (a)(2)(B)(iii), 1539 (a)(2)(B)(v).
to destroy the nests of endangered rodent species. In exchange for destruction of the nests, the developers agreed to create a new habitat for the rodents and to improve other lands that could be occupied by the protected species. Under the applicable state law, such permits are allowed if "[the] permitted activity will clearly enhance the survival potential of the species." In addition to mitigation, a Game and Freshwater Fish Commission finding of fact stated "one of the conditions imposed by the Proposed Permit would prohibit free ranging pets within the subdivision pursuant to a subdivision covenant to run with the land. The specific wording of such a covenant has not been provided." If enforceable, applying this law would allow development to occur while preventing an exotic species (cats) from potentially harming the listed species. Such a covenant would be a step in the right direction because preventing the introduction of an exotic species is much cheaper and effective than controlling the exotic species once they establish.

At trial, the question arose as to whether the Commission had such powers to enforce the covenant over a subdivision. The Mangrove court ruled that although state law allows the Commission to prosecute those who violate its rules and orders, the Commission would have no standing once the permitees relinquish their rights in the subdivision, nor would the Commission have privity through the buyers of the subdivision. The court also addressed whether predation of protected species by pet cats would violate any of the commission’s rules. In a footnote, the court questioned whether the cat owners would be responsible for lost wildlife. Applying the state’s statute, the court answered this in the negative. The court did acknowledge, however, that in certain circumstances owners may be responsible for their pets’ actions. The footnote appears to be a message from the court to subtly urge the state to amend the current laws if the commission wishes to prosecute such violations.

111. 592 So.2d 1162, 1163 (1992).
112. Id.
114. Mangrove, 592 So.2d at 1165-66.
115. Id.
116. Id. at 1166 (citing Fl. Stat. § 372.83 (West 1989)).
117. Id. at 1166, n. 3.
118. Id.; see also GFC Rule 39-27.0011, F.A.C. (West 2002).
VI. LOCAL REGULATORY CONTROL

Because the environmental impact of domestic cats varies in different ecosystems, perhaps the best and most efficient method to cope with this problem is through localized regulation. Increasingly, local governments are passing ordinances for controlling feral domestic cats. These ordinances, however, are not usually based upon the "best available scientific or commercial data," but are instead based upon public opinion. Accordingly, adjacent cities that share similar ecosystems may have differing and incompatible regulations to cope with the problem.

Looking to an exemplary ordinance in Akron, Ohio, the advantages and drawbacks of current public ordinances are illustrated. In Akron, an ordinance makes it illegal for cats to run "at large." The ordinance also prohibits cat owners from allowing their cats to be unrestrained outside of their property boundaries. The ordinance declares that it is officially the duty of the animal control warden to capture every cat observed "running at large." Because public parks and shopping centers are hardly the locations the ESA or other laws intended to protect, this law is not likely to perform any useful environmental solution. Akron's law is similar to most animal control laws throughout the country, except that it applies to any cat, including those with identification tags. Under the current trap and kill policies, however, millions of cats are already being euthanized annually and the problem has not improved - for the landowners, cats, or the wildlife.

This law, while at least identifying the problem, has two main flaws. First, most domestic cats are on private property, along with a large fraction of protected species. Second, domestic cats are currently the nation's most popular pet and roughly one in ten households feed "free-roaming" neighborhood cats. These people, along with thousands more, are unlikely to kill a cat or even report its presence to local animal control officials. Although this ordinance may be an attempt to solve the problem, it does not consider the public opinion. The ordinance may work in rural areas, but is most likely the driving factor for its enactment.

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119. Ordinance No 332-2002 (March 25, 2002) (amending and/or supplementing Title 9 Chapter 92, Sections 92.01, 92.13 and 92.15 of the Code of Ordinances of the City of Akron, Ohio to prohibit cats from running at large: and declaring an emergency).
120. Id.
121. Although it may not protect endangered species, it may reduce the number of cats defecating in public areas, which is most likely the driving factor for its enactment.
122. Michael J Bean, The Endangered Species Act and Private Land: Four Lessons Learned from the Past Quarter Century, 28 Envtl. L. Rptr. 10701, 10701 (1998) (reporting that most land is private and a large portion of protected species occur entirely on such land).
123. See Johnson, supra n. 2.
areas where the cats are "out of sight, out of mind" to the public, but these laws are increasingly being negatively viewed by the public.

VII. PUBLIC OPINION

A. Introduction

Public opinion is a powerful factor in the government's attempts to control feral cats and other "pest species." For example, public opposition to the culling of wild horses and burros led to the passage of the Wild Free-Roaming Horse and Burro Act in 1971.\textsuperscript{124} The Act protects the feral horse and burro population in the western United States, and does not allow management to include death as a control mechanism.\textsuperscript{125} Additionally, when public outcry in Canada ended the hunting of harp seal pups, the seal population increased from 10,000 in 1978 to 45,000 in 1996. Unfortunately, increased seal numbers are now implicated in the subsequent reduction of Canadian fish populations. Public insistence on humane population control has led to interest in non-lethal options such as sterilization, but is it effective?

B. Sterilization of Feral Cats

Increasingly, surgical sterilization of feral cats by veterinarians followed by release back into the environment has been proposed as a "public approved" tool to lower feral cat populations.\textsuperscript{126} Vaccinations usually accompany this procedure to halt the spread of diseases. The American Veterinary Medical Association and the Humane Society of the United States, among other organizations, accept this procedure. The California Veterinary Medical Association coordinated a three-year program in which more than 1,000 veterinarians surgically sterilized 170,000 feral cats with over twelve million dollars of private and donated funds.\textsuperscript{127}

Increasingly county animal control facilities join with community groups to perform Trap-Neuter-Return (TNR) as an alternative to continuous trapping and euthanasia. In Orange County, Florida, a five-year program, in which the county provides free sterilization and vaccination for

\textsuperscript{125} Id.
feral cats, has decreased cat complaints, admissions, euthanasia, and shelter operating costs. The program goal is to eventually reduce or eliminate the harm cats may have on wildlife there.

A comprehensive eleven-year study of 155 cats in a TNR program demonstrated that surgical sterilization, accompanied by the adoption of sociable cats, resulted in a long-term reduction of the feral cat population. A recent study concluded, however, that the practice of sterilizing the cats, followed by their return to their habitat, failed in a Florida park because it encouraged the dumping of abandoned cats. As previously discussed, there are many questions that must be answered about the TNR program's impact on feral domestic cats' predatory behavior.

California incorporated both mechanisms in an attempt to appease the general public while continuing traditional methods. A state law provides that:

[I]f an apparently feral cat has not been reclaimed by its owner or caretaker within the first three days of the required holding period, shelter personnel qualified to verify the temperament of the animal shall verify whether it is feral or tame by using a standardized protocol. If the cat is determined to be docile or a frightened or difficult tame cat, the cat shall be held for the entire required holding period ... [i]f the cat is determined to be truly feral, the cat may be euthanized or relinquished to a nonprofit ... animal adoption organization that agrees to the spaying or neutering of the cat if it has not already been spayed or neutered. In addition to any required spay or neuter deposit, the pound or shelter, at its discretion, may assess a fee, not to exceed the standard adoption fee, for the animal released.

This law retains traditional methods, while allowing the public to determine whether or not they wish to "humanely" reduce the unwanted cat population by donating their personal funds to support this goal. More importantly, it initiates a system that will help determine if the TNR method will successfully reduce the feral cat population.

The two-fold approach appears to be a step in the right direction; however, it may invite litigation from those who feed these feral cats on their

128. Haller, L., Director of Animal Control, Personal Communication, Orange County, FL.
129. Levy, supra n. 127, at 42-45. Other studies finding similar results are also discussed.
property. If a California resident regularly feeds a feral cat on her property, then she may have a property right in the cat. The citizen may argue that the new law reduces a person’s time frame to reclaim their animal and, therefore, unlawfully reduces her right to reclaim her property. Yet, if the locality in which this California resident lives in has enacted a “leash law,” the citizen may not have a right to the animal in the first place. Localities with this dual approach must be sure to incorporate such leash laws and other applicable ordinances. With the advent of animal cruelty laws, most municipalities are already entitled to these procedures. For example, Colorado’s companion animal statute states:

‘Mistreat’ means every act or omission which causes or unreasonably permits the continuation of unnecessary or unjustifiable pain or suffering …’Neglect’ means failure to provide food, water, protection from the elements, or other care generally considered to be normal, usual, and accepted for an animal’s health and well-being consistent with the species, breed, and type of animal.

It has been argued, though, that feral cats were not “protected from the elements” or were experiencing unjustifiable pain or suffering by not receiving veterinary care. Connecticut circumvented this whole debate by allowing municipalities to require individuals that keep feral cats to register with the animal control officer for the municipality. In exchange for remaining the possessor of the cats, the feeders must vaccinate all cats against rabies and sterilize them.

VIII. CONCLUSION /SOLUTIONS

Charles Darwin’s quote “what havoc the introductions of any new beast of prey must cause in a country, before the instincts of the indigenous inhabitants have become adapted to the stranger’s craft or power” summarizes the problem of exotic species generally and domestic cats particularly. There is an abundance of data demonstrating the impact of exotic

132. I think this argument will fail in most courts because courts have generally held that such actions are warranted under police powers. See e.g. Howell v. Daughet, 230 S.W. 559, 561 (Ark. 1921) (holding that a statute concerning animals running at large did not place an unreasonable limitation on the time period to reclaim an animal).
134. Conn. Gen. Stat. Ann. § 22-339d(a) (West 2001). In this section a “keeper” includes any person or organization regularly feeding a feral cat. Feral cat is defined as a free-roaming domestic cat that is not owned. Id.
135. Id.
species on native animals. This is especially seen in places where introductions concern species unlike those already present; however, as time goes on, the impacts of the introduction decline. Cats, being present along with man in almost every ecosystem for centuries, may no longer have significant impacts on native wildlife in some areas. In other areas, where humans have introduced cats into a new ecosystem or into one devoid of any terrestrial carnivores, such as Marion Island, we see the tell-tale destruction resulting from exotic species. For this reason, management plans must not merely assume cats are the culprit if present, or vice-versa, assume that domestic cats are not the underlying problem. Management plans must detail the impact of each input into the ecosystem to best place limited funds for recovering the species in a given area.

In short, feral cats have undisputed ecological impacts in some situations, including predation, limiting resources for indigenous species, or transmitting disease. Their impact is more likely observed in sensitive environmental areas or islands that have evolved without predators similar to the feral cat. Human-influenced areas may also increase the predation of feral cats for several reasons. First, cats may scavenge refuse or be fed by humans, which in turn causes their populations to be higher and healthier. On the other hand, areas inhabited by humans may attract artificially high numbers of birds and wildlife species, which the cats will capture in higher numbers than in natural areas. In such areas, feral cats may be desired to control rodent and other exotic populations; however, this desire may depend on the threat of disease and predation on native species posed by this situation.

One ecologist has suggested objectives to attain proper management of feral cats. They include:

- Explore methods to accurately determine the number of cats.
- Determine the scope of wildlife depredation by cats in various environments
- Discover acceptable means for controlling the domestic population of cats.\(^\text{137}\)

The third objective that the ecologist suggests might prove to be the most challenging to achieve. There is not a current method in use proven to be effective in reducing the number of feral cats that fits the definition of "acceptable means" by wildlife agencies in different jurisdictions. That does not mean, however, that the problem cannot be solved; rather, the

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solution requires a multi-faceted approach which depends on utilizing, with close scrutiny, the best scientific data available. Unfortunately, ecological data on domestic cats are limited to a few studies, each with drastically different conclusions. Due to the logistics and complexity of predation studies, these investigations are complicated by the means in which prey is captured or counted. But there are indicators that biologists can use to detect which path is best for the environment.

The current trend in applying nuisance laws to other non-indigenous species will probably not be effective in controlling feral domestic cats. This is due to their long-time association with mankind. For centuries, cats have been imported to aid humans in hunting rodents. Courts are reluctant to find a cause of action against an owner whose cat trespassed on another’s land. With the recent enactments of leash laws, however, the courts may be more inclined to apply these laws to cats. Leash laws affirmatively change the long accepted view that cats may freely trespass. Yet, the reach of leash laws remains limited because most cats reside on private land, not in city parks or beaches, where few endangered species are found.

The Endangered Species Act (ESA) is one avenue for solving this problem. Unlike earlier laws, that employ a “black list” of prohibited species, the ESA does not target specific invasive species, rather the Act concerns any “harm” to the protected species. Additionally, the judicial branch has allowed the broad interpretation of “harm” to include habitat degradation. This broad definition is likely to cover situations in which feral domestic cats may not be directly predating upon a protected species, but rather, killing the protected species’ preferred prey. Additionally, the ESA provides the government some leeway in effectively managing ecosystems in which removing the feral domestic cats will 1) harm the ecosystem more than simply leaving the cats, or 2) directly harm the species because the feral domestic cats are regulating a predator of the protected species. In these situations the government will not be held liable for not removing the cats that may be “harming” a few protected species.

Lastly, as observed in previous governmental attempts at controlling non-indigenous species, public opinion must be factored into the management plan. As well suited as the ESA is for assisting in the solution, it cannot be solely relied upon. As the nation’s most popular pet, most Americans would rather let a native rodent species go extinct, than to control feral cats by a lethal method. This is especially the case when past attempts at controlling the feral cats have included poisoning and shooting, with only success on remote islands uninhabited by the general public. In urban areas, governments, both local and state, should attempt to employ a method that encourages people to assist in solving the problem, rather than
fighting it. The Federal government has recognized this, but as of yet, has failed to act on it. When commenting on the Office of Technology Assessment's report on non-indigenous species, the House of Representatives stated: "Increasingly, State and Federal agencies[,] nongovernmental organizations, agricultural interests, and universities see harmful [non-indigenous species] as a unifying threat and public education as an important tool to alleviate it." Feral domestic cats are a perfect example to illustrate this point. Cats are such a threat because they reproduce quickly and efficiently. They can have multiple litters each year and reproduce at a young age. Currently, many localities are trapping and destroying feral cats, with no reduction of the overall number of feral cats. These same locales allow adoption of these feral cats with no requirement of sterilization or education on environmental impacts they may cause. Funds should be allocated to sterilize adopted animals and educate pet owners. For every cat adopted without sterilization or education, the animal catcher will may need to trap many more each year.

The law in California that allows non-profit organizations to remove feral cats from animal shelters as an alternative to destruction appears to incorporate past lessons on the need for public support. The California and Connecticut statutes provide an initial beginning to control the unwanted cat population with the public's support, but a final solution to the problem needs to incorporate laws that require more responsible pet ownership.

In summary, on the national level, the Department of the Interior should strategically utilize the ESA to regulate feral domestic cats. In doing so, the agency should be permitted to use its discretion when applying the "best available scientific and commercial data" to individual ecosystems. This practice will inevitably lead to situations where feral domestic cats are not removed from areas due to an increase of adverse impacts to the native wildlife. Courts should not interpret this as inaction and failure of the Department to protect listed species, but rather the proper utilization of its resources.

On the state and local level, governments should work with the public to control unwanted cats. Plans should include educating the public on the importance of sterilizing their cats and other pets and preventing possible predation of native wildlife. Plans could also incorporate stiffer penalties for those who fail to follow ordinances requiring sterilization and confinement. By providing the public with the option of humanely reducing the population, governments give the public the option of becoming responsi-

ble pet owners while retaining the option to utilize other means to control the population if the public fails to act.