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Cat Fight! The TNR Wars

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ABSTRACT: Although trap-neuter-return (TNR) programs for feral cats are in use or being proposed in many communities, a number of non-governmental organizations have gone on record as being opposed to them. For example, The Wildlife Society's (TWS) policy statement on feral cats (2011) includes a comment that TWS "Oppose the passage of any local or state ordinances that legalize the maintenance of "managed" (trap/neuter/release) free-ranging cat colonies." Similarly, the American Bird Conservancy's (ABC) resolution on free-roaming cats (feral and tamed) states that ABC "strongly opposes managed free-roaming cat colonies." Wildlife managers often lament the loss of tools and techniques (e.g., traps, pesticides, regulatory authority) for managing "nuisance" animals. The attack against TNR programs is indicative of an active program to eliminate a management tool. Is the negativity toward TNR justified? Stated another way, do the negative aspects of TNR programs outweigh any positive elements? I argue that the complete rejection of TNR is premature, erroneous, and without merit.

KEY WORDS: cat colonies, euthanasia, *Felis catus*, feral cats, TNR, trap-neuter-return

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INTRODUCTION

How are decisions made regarding what methods to use in any wildlife damage management program? Slate et al. (1992) presented a model that emphasized a comprehensive assessment of the damage occurring as well as an evaluation of potential methods. They suggested "conceptual screens" to filter all potential methods, with managers assessing all possible techniques through legal, administrative, biological, physical, economic, and sociocultural screenings, resulting in, hopefully, at least one management recommendation available for consideration. This decision model was integrated in the Final Environmental Impact Statement for USDA's Wildlife Services Program (1994; then called Animal Damage Control). Slate et al. (1992:61) concluded, "Wildlife managers should emphasize sound decision making as the key to balancing human interests and wildlife needs".

The concept of "having many tools in the toolbox" is well understood and appreciated, because one technique does not work under all situations, in all areas, under all conditions, and in all communities. Thus, preventing damage from beaver (*Castor canadensis*) may involve trapping and snaring, exclusion, destruction of the dam and lodge, habitat alteration, water level control devices, relocation, or tolerance, all depending on where the problem is occurring, economics, the specific type of damage, and stakeholder support. In fact, it is difficult to come up with a "one size fits all" strategy for any species of wildlife, whether wild pigs (*Sus scrofa*), white-tailed deer (*Odocoileus virginianus*), or Canada geese (*Branta canadensis*). The last fifty years of the *Proceedings of the Vertebrate Pest Conference* is testament to both the variety and the evolution of wildlife damage management programs and technologies.

Feral cats (*Felis catus*) are a legitimate wildlife conservation concern in many areas, particularly on islands, near nature preserves, when they are in close proximity to threatened and endangered species, and when

feral cat densities exceed the social carrying capacity of a particular community. Because of this, a variety of techniques have been used worldwide to reduce or eradicate local cat populations, including traps (live and kill traps, including trap and euthanasia), sterilization, toxicants, shooting, disease, and relocation, among others. Not all techniques are permissible, legal, effective, or desirable in all locations. As with other wildlife damage management techniques, a management program that is effective in one location may not be effective in another. For example, Nogales et al. (2004) reviewed cat eradication programs on islands, and noted that in the majority of eradication plans reviewed, several techniques were utilized, stating, "It is difficult to evaluate the relative effectiveness of these techniques because they were used by different individuals in different habitats. However, toxins and biological controls tended to be most effective at the beginning of an eradication operation, whereas hunting and especially trapping appeared to be the only effective techniques to eradicate the few remaining cats" (p. 313). This strategy clearly would not be appropriate in urban areas. In other words, having a range of techniques allows for the development of effective programs. Trap-neuter-return (TNR) programs are being challenged as one feral cat management strategy (Berkeley 2004).

TRAP-NEUTER-RETURN

What is Trap-Neuter-Return?

In trap-neuter-return (or release) programs, feral and stray cats are trapped, sterilized, returned to the site of capture, and released (Levy et al. 2003, Vox Felina 2012). There is a fair amount of variability in TNR programs when it comes to details. A TNR program could include:

Initial Monitoring of a Cat Colony

A colony could be as small as two or three cats, or include dozens of cats. A colony caregiver may notice that some cats are not approachable (probably feral), while others are socialized and may be handled (strays, free-

roaming pets). Baiting where appropriate may facilitate getting an accurate count. Any ear-tipped or collared cats can be recognized at this time.

Establishment of a Feeding Station

The establishment of a feeding station initiates the training of the resident cats to find food at a set time in a set place. Monitoring during feeding allows for the identification of individuals, the recognition of dominance patterns, and may allow some cats to become approachable.

Develop a Trap-Neuter-Return Protocol

Cage traps need to be obtained. Prebaiting must occur. Coordination with a veterinarian is required. Transportation between the trap site and the surgical location, then back to the capture site is necessary. Coordination with neighborhood councils or law enforcement is encouraged. Record keeping, obtaining necessary financial resources, and training volunteers are all necessary components of an effective TNR program.

Begin Prebaiting

Cats often need to be trained to enter the traps. Prebaiting traps is an effective method for getting cats to enter the traps. Food is withheld for 24 hours prior to trapping.

Initiate Trapping Program

Traps need to be monitored constantly to remove captured cats from the capture area and reset traps as necessary. Trap covers assist in keeping captured animals relatively calm as they are transported to the veterinarian. Food remains withheld throughout the trapping period.

Triage, Neuter, Spay, Vaccinate, and Mark

The veterinarian may decide that some cats are injured or diseased to an extent that surgery is contraindicated, and apply an American Veterinary Medical Association approved form of euthanasia (AVMA 2007). Other cats may be deemed as candidates for adoption. All cats are checked for identification tags. The rest of the animals will be spayed or neutered, probably receive a rabies vaccination, perhaps some pain medication, and marked with an “ear-tipping” (removing the top 6 mm of the left ear).

Return and Maintenance

After surgery, cats are held for a medically appropriate recovery period, and then returned to the site of capture. Initial feeding allows the monitoring of recovery, but after recovery continued feeding encourages treated cats to remain in the area, and allows for the identification of any additional untreated cats, as well as continued attempts to capture cats that were missed in the initial trapping.

As should be expected when thousands of people apply TNR in their respective communities, there is a significant degree of variability in the application of this technique. Some caregivers are fastidious regarding spilled or uneaten food. Others coordinate their activities closely with municipal animal control personnel. Still others construct durable feeding stations and, in cold climates,

shelter boxes as well. This variability makes it difficult to compare the results from one managed colony to another.

WHY IS TNR CONTROVERSIAL?

Simply put, feral cats are able predators, whether they are neutered or not. Estimates of the numbers of feral cats in the U.S. range from 25-100 million (Robertson 2008). These cats eat birds, rodents, lizards, and other small animals and, in some cases, particularly but not exclusively on actual or geographical islands, cat predation may have a profound effect on some wildlife populations. Cats are involved in the transmission of *Toxoplasma gondii* to certain sensitive species as well (e.g., Work et al. 2000), and researchers are looking into the potential effect of a “fear of cats” on population dynamics of birds (Beckerman et al. 2007). For people concerned about the effects of cats on wildlife, capture and euthanasia makes some sense; if cats are causing environmental harm, then removing cats should decrease this harm. Cat removal programs are thus encouraged to reduce the populations or densities of feral cats and their effect on wildlife. TNR opponents argue that since TNR does not permanently remove cats from the landscape, risks to wildlife remain present. In addition, TNR is criticized for encouraging population growth of cats. Feeding stations may attract additional cats, and managed cat colonies may encourage some pet owners to abandon their animals at these locations (Castillo and Clarke 2003). In summary, when the problem is defined as cats impacting wildlife, then leaving cats on the landscape (which includes TNR programs) is considered counter-productive.

On the other hand, the purported alternative to TNR, trap and euthanasia, is controversial as well. Cats are very popular companion animals, and most communities have laws banning their mistreatment. Although most cats brought to an animal shelter are killed (NCPPSP 2009), there are an increasing number of active programs encouraging “no-kill” animal shelters, with a general goal of “no more homeless pets.” These programs promote responsible pet stewardship, and a humane existence for unowned cats. To many, TNR seems like a humane alternative to taking unsocialized cats to a shelter to be euthanized.

The controversy over the management of feral cats is complex, and fits the general definition of a “wicked problem,” or a problem without clear definition, exhibiting high uncertainty, and with fragmented stakeholders (Salwasser 2002). The Wildlife Society, in its position statement on feral cats, noted “Perhaps no issue has captured more of the challenges for contemporary wildlife management than the impacts of feral or free-ranging domestic cats and their impacts on native wildlife” (TWS 2011). Expecting either TNR or trap and euthanasia to be a “solution” to the feral cat management is a conundrum, since there is not even a consensus as to the extent of the problem.

WHAT ARE THE MAJOR PLAYERS SAYING?

Although there are a number of organizations and agencies that have taken a position either for or against TNR, below are four examples that are a fair representation of the viewpoints toward this technique.

American Bird Conservancy

The American Bird Conservancy (ABC) lists its mission as “to conserve native birds and their habitats throughout the Americas” (ABC 2010a). ABC developed a program in 1997 called “Cats Indoors!” (ABC 2010b), encouraging cat owners to keep cats indoors, confined to an enclosure when outdoors, or trained to go outside on a harness and leash. Simultaneously, ABC came out against TNR programs, arguing that managed cat colonies were “bad for birds, do not help reduce the overpopulation of feral cats, and are inhumane for the cats, who lead short, harsh lives. Instead, feral cats should be kept in enclosures, trapped and adopted to loving homes, or euthanized.” Their 1997 resolution on free-roaming cats (ABC 1997) “strongly opposes managed free-roaming cat colonies” while encouraging governments to “ban and eliminate free-roaming cat colonies through humane capture by animal care and control facilities.”

The Wildlife Society

The Wildlife Society (TWS) lists as its mission “to represent and serve the professional community of scientists, managers, educators, technicians, planners, and others who work actively to study, manage, and conserve wildlife and its habitats worldwide” (TWS 2012). TWS dedicated a major portion of the spring, 2011 issue of *The Wildlife Professional* to feral cat issues, focusing on cat predation on wildlife, the transmission of diseases from cats to wildlife, and the ineffectiveness of TNR programs. Their 2011 position statement on feral and free-roaming cats (TWS 2011) states, in part, that TWS “oppose the passage of any local or state ordinances that legalize the maintenance of ‘managed’ (trap/neuter/release) free-ranging cat colonies,” and “supports and encourages the humane elimination of feral cat populations, including feral cat colonies, through adoption into indoor-only homes of eligible cats and humane euthanasia of unadoptable cats.”

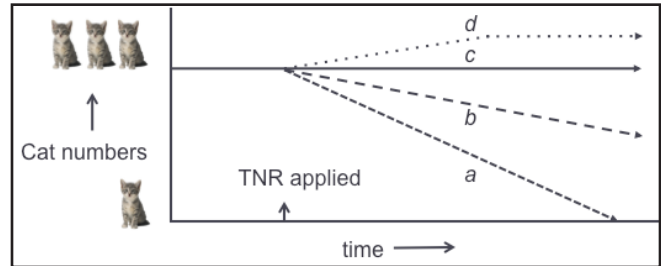
Alley Cat Allies

Alley Cat Allies describes itself as “the only national advocacy organization dedicated to the protection and humane treatment of cats,” with a mission “to transform and develop communities to protect and improve the lives of cats (Alley Cat Allies 2012a). Alley Cat Allies promotes the use of TNR, and instructs others in its use (Alley Cat Allies 2012b). They claim that TNR “stops the breeding cycle of cats and therefore improves their lives while preventing reproduction,” and that TNR is the “humane and effective approach for stray and feral cats” (Alley Cat Allies 2012c).

Best Friends Animal Society

The mission of Best Friends Animal Society is to “to bring about a time when there are No More Homeless Pets,” and the mission of its cat initiative is to “keep cats safe and out of shelters across the country” (Best Friends 2012). Best Friends has training programs for volunteers and organizations interested in TNR, provides funds for organizations developing TNR programs, and has a “fiscal impact of TNR” calculator that allows cities and counties to compare the costs of TNR programs against traditional trap and euthanasia programs (Best Friends 2010, John

Figure 1. Potential effects of a trap-neuter-return program on a localized cat population. Line *a* represents the oft-stated ideal, a gradual reduction to zero. A partial reduction in the population size (*b*) or no change (*c*) probably result when the percentage of sterilized animals is less than 75% (ref). Line *d* represents an increased population, perhaps due to additional cats attracted to the site by feeding, or additional cats being abandoned.



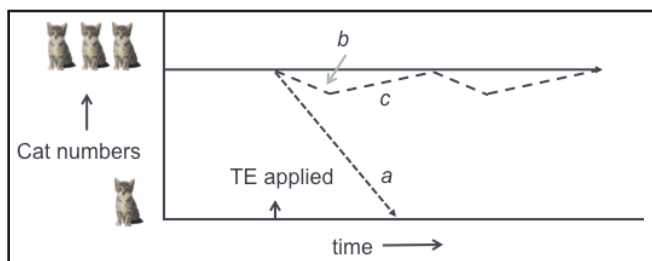
Dunham and Associates 2010). Their web community is a network shared by many colony caretakers. “We implement innovative trap/neuter/return (TNR) and educational programs to prevent ferals and strays - community cats - from entering shelters” (Best Friends 2012).

It is obvious that there are different value sets at work here. It’s not that Alley Cat Allies and Best Friends do not value birds. They value birds, but cats as well. Loyd and Miller (2010) suggested Illinois homeowners may perceive feral cats as either wildlife, or pets, or both. ABC and TWS also value birds (at least native species), but look at feral cats as invasive species to be controlled or eradicated. The erosion of either value set seems improbable. In their multi-state study of shifting wildlife values, Manfredo et al. (2003:301) predicted a “gradual shift away from traditional wildlife value orientations that emphasize the use and management of wildlife for human benefit.” It is unknown how these shifts affect alternative programs for feral cat management, but the increasing popularity of TNR programs may indicate a long-term value shift.

WHAT RESULTS CAN BE EXPECTED FROM TNR PROGRAMS?

The inherent variability in how TNR programs are conducted means results are mixed. Figure 1 details potential outcomes. The theoretical ideal is for the cat population to slowly move toward zero (*a*), when all cats are sterilized and these cats succumb over time to various forms of mortality. Models (Andersen et al. 2004, Foley et al. 2005) indicate that at least 75% of a colony needs to be sterilized before a significant reduction can occur; that probably is easier to accomplish with smaller, discrete colonies. Assuming a significant percentage of the population is sterilized, a reduction (*b*) is possible (mortality exceeds natality), but even a few breeding cats may offset any mortality, leading to no actual reduction in the population (*c*). And arguments have been made that a cat colony could grow in size (*d*) as cats immigrate to the location in response to food provided to the cats, as well as additional cats being abandoned at the site. Immigration rates can significantly affect results of both TNR and trap and euthanasia programs (Schmidt et al. 2009).

Figure 2. Potential effects of a trap and euthanasia (TE) program on a localized cat population. Line *a* represents an ideal application of this strategy, a relatively rapid decline of the population to zero. A partial reduction in the population size (*b*) may result in a temporary decline, but the population should rebound once control ceases (*c*). Future removal may continue to “harvest” cats from this population.



In many (not all) cases when TNR is practiced, the funds utilized by the caregivers for shelter development, cat food, and veterinary bills come from volunteers. Volunteer use reduces personnel costs. For these colonies, the application of trap and euthanasia programs is either resisted by caregivers (and allies) or contraindicated.

WHAT RESULTS CAN BE EXPECTED FROM TRAP AND EUTHANASIA PROGRAMS?

Trap and euthanasia (also referred to as trap and kill) programs are recommended by some as the appropriate and humane alternative to TNR. Figure 2 details potential outcomes. Line (*a*) represents an ideal application of this strategy, a relatively rapid decline of the population to zero. The decline will happen much more rapidly than with TNR. A partial reduction in the population size (*b*) may result in a temporary decline, but the population should rebound once control ceases. This pattern, with removal occurring as funding, complaints, staff changes, and local priorities vary over time, probably mimics many municipal cat management programs. In fact, if the “problem” being managed is not that there are a lot of cats, but rather that there are complaints about cats, then management programs seem more likely to persist for short periods of time. Future removal may continue to “harvest” cats from this population, with no overall, permanent reduction.

In many municipal animal control programs, the costs of personnel, cat boarding, and euthanasia is borne by the community. For colonies actively being trapped and removed, the application of TNR is usually contraindicated, since colony caregivers are less interested in investing in sterilizing cats that may soon be killed. Public relations considerations are also significant here.

Thus, TNR programs may not be well suited to deliver dependable, predictable reductions in cat populations (Foley et al. 2005), but neither are trap and euthanasia programs. Claims such as, “As it stands now, traditional animal control methods, including removing unclaimed, stray, and feral animals from the environment, remain the most effective way to control populations of free-ranging domestic animals, including cats” (Dauphine and Cooper 2009:212) seem premature, since these traditional

methods (chiefly removal) act more as harvesting mechanisms rather than control. Although accurate data is impossible to come by, if you assume that there are at least 1 million feral cats euthanized every year, and there are 100,000 feral cats in TNR programs, then euthanized cats outnumber those involved in TNR programs by a factor of 10. And if the main technique has been, and still is, trap and euthanasia, blaming TNR practitioners for the number of feral cats overall is nonsensical. Since traditional animal control methods are not controlling populations, it is difficult to accept their claims of efficiency, effectiveness, or their utility in all locations. TNR programs also cannot make a similar claim of success, although a few studies indicate that some TNR programs result in a reduced cat population (Levy et al. 2003, Levy and Crawford 2004, Stoskopf and Nutter 2004, Foley et al. 2005, Natoli et al. 2006, Robertson 2008). Similarly, when it is stated that “If removal and euthanasia of unadoptable feral cats is not acceptable to TNR proponents, then they need to offer the conservation community a logical, science-based proposal that will solve the problem of this invasive species and its effect on wildlife and the environment” (Gillin 2011:12), then it is appropriate to reverse this challenge and ask, if TNR of unadoptable feral cats is not acceptable to removal and euthanasia proponents, then they need to offer the cat community a logical, science-based proposal that will solve the problem.

Returning to the earlier comments on wildlife damage management decision-making, TNR is a “tool in the toolbox” that should be recommended and used under appropriate conditions. And, as with all tools, whether rodenticides, pig traps, or copper bullets, work should continue on TNR to make it as effective as possible in reducing cat numbers.

The collaborative efforts of the Audubon Society of Portland and the Feral Cat Coalition of Oregon (Sallinger and Kraus 2012) demonstrate what could be happening: “In the short-term, we have agreed that natural areas that have been set aside for wildlife need to be the top priority for removal of free-roaming cats, and we are working together to make sure that feral cat colonies are not established in these locations. On the rest of our urban landscape, we recognize that a variety of approaches, including trap, neuter and return, should be included as part of the solution.” Although not knowing the decision rules for determining which “natural areas” are selected to be cat-free, and what techniques are used to remove cats, make it impossible to evaluate this strategy, developing a common goal, then using all techniques at their disposal, seems appropriately similar to the Slate et al. (1992) decision model emphasizing a comprehensive assessment of the damage occurring as well as an evaluation of potential methods. Fundamentally, a successful, long-term feral cat management strategy for any particular location will need to incorporate site and circumstance-specific recommendations. This is fundamental to the application of “integrated wildlife damage management” (USDA 2010), which “...relies on a variety of methods and techniques - including both nonlethal and lethal approaches - to resolve conflicts.”

Clearly, there are going to be locations or situations where any one feral cat management program is

unsuccessful, prohibited, or otherwise contraindicated. In this context, the wildlife community's total and complete rejection of TNR seems premature, erroneous, and without merit.

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