



SUMMARY OF SELECTED STUDIES OF FERAL CATS AND TNR

1. Schmidt et. al. (2009). Evaluation of euthanasia and trap-neuter-return (TNR) programs in managing free-roaming cat populations. *Wildlife Research* 36:117-125. Mathematical modeling shows that removal and TNR, when implemented at the same intensive levels, achieve comparable reductions in cat numbers. Treatment effort is much, much higher for removal than for TNR— in most situations, over ten times more effort is required for removal (control by increased mortality) than for TNR (control by reduced fecundity) to reduce the population by the same 1%.
2. Stoskopf and Nutter (2005). Analyzing approaches to feral cat management—one size does not fit all. *Journal of the American Veterinary Medical Association* 225(9): 1361-1364; and dissertation by Felicia Nutter (2005). Evaluation of a Trap-Neuter-Return Management Program for Feral Cat Colonies: Population Dynamics, Home Ranges, and Potentially Zoonotic Diseases. North Carolina State University, available at http://www.carnivoreconservation.org/files/thesis/nutter_2005_phd.pdf. The only controlled study of TNRed and non-TNRed colonies showed that within the first two years, all TNRed colonies decreased in size, by an average of 36%, and one went extinct. Within the same time period, all non-TNRed colonies increased in size by an average of 47%. After 7 years, all TNRed colonies had 5 or fewer cats, while the non-TNRed colonies continued to increase in size. Immigration into both TNRed and breeding colonies was consistent but occurred at low levels in both.
3. Robertson, Sheila A. (2008). A review of feral cat control. *Journal of Feline Medicine and Surgery* 10:366-375. Reviews literature on feral cats and feral cat control, including studies of TNR. Concludes that TNR, when done correctly, has been shown to reduce cat populations, and that it needs to be practiced on a larger scale with government support, combined with education programs.
4. Levy and Gale (2003). Evaluation of the effect of a long-term trap-neuter-return and adoption program on a free-roaming cat population. *Journal of the American Veterinary Medical Association* 222(1): 42-46. TNR program on college campus in Florida reduced cat population from 155 to 23 in 11 years—over 85% reduction.
5. Natoli et. al. (2006): Management of feral domestic cats in the urban environment of Rome (Italy). *Preventive Veterinary Medicine* 77:180-185. A TNR-only policy in Rome resulted in overall decrease in cat numbers of 22% over pre-TNR control methods. Colony shrinkage was greatest after 3 years; colonies neutered 3-6 years before the final survey showed decreased of 16-32%, respectively, indicating that passage of time would further reduce cat numbers. Researchers concluded that

populations would be reduced more quickly if there were not such a high rate of pet cat abandonment in Rome and advised efforts to reduce abandonment.

6. Mendes-de-Almeida et. al. (2011). Reduction of feral cat (*Felis catus* Linnaeus 1758) colony size following hysterectomy of adult female cats. *Feline Med Surg.* Mar 24. [Epub ahead of print]. “The population was estimated to be 40 cats in 2004, 26 in 2006, and 17 cats in 2008. . . . these results show that free-roaming feral cat colonies could have their population controlled by a biannual program that focuses on hysterectomy of sexually active female cats.” This was a follow-up to Mendes-de-Almeida et. al. (2006): The Impact of Hysterectomy in an Urban Colony of Domestic Cats (*Felis Catus* Linnaeus). *International Journal of Applied Research in Veterinary Medicine* 4(2) 134-141. “Before we started this work in 2001, the population of cats of the RIOZOO suffered constant interventions but without a pre-established methodology and only with the simple objective of eliminating the population. Therefore, the population of cats fluctuated, the animals showed weak social relations and behavioral interactions reflected by weak individual territorial defense, and this probably opened the way for high migration rates. . . The impact of hysterectomy on the population living in the zoo met our expectations. Between 2001 and 2004, the estimated population became stable, showing a trend to decrease. . .after 2 consecutive years . . . we conclude that programmed biennial interventions submitting all adult females to hysterectomy constituted an efficient measure for controlling the urban colony[.]”

7. Centonze and Levy (2002). Characteristics of free-roaming cats and their caretakers. *Journal of the American Veterinary Medical Association.* 220(11): 1627-1633). One of the earlier studies of TNR, this study looked at 132 colonies in north central Florida and concluded that TNR had reduced colony populations by an average of 27%.