

Effectiveness of TNR

- A TNR program on the campus of the University of Central Florida begun in 1991 led to the adoption of nearly half (47 percent) of the 155 cats living on campus over an 11-year observation period. In 2002, upon completion of a related six-year study, just 23 cats remained on campus.⁴
- Randolph County, NC, 1998–2005: 36 percent average decrease among six sterilized colonies in the
 first two years; three unsterilized colonies experienced an average 47 percent increase over the same
 period.⁵ Four-year follow-up census: one colony reduced from 10 cats to none; at seven years,
 another colony originally containing 10 cats had been reduced to one cat.⁶
- Rome, Italy, 2000–2001: survey of caretakers (103 cat colonies) revealed a 22 percent decrease overall in the number of cats despite a 21 percent rate of "cat immigration." Although some colonies experienced initial increases, numbers began to decrease significantly after three years of TNR: "colonies neutered 3, 4, 5 or 6 years before the survey showed progressive decreases of 16, 29, 28 and 32 percent, respectively."
- A two-year study by University of Florida researchers documented a 66% decrease in shelter intake
 of cats from a "target" ZIP code of focused TNR efforts, as compared to a 12% decrease from the rest
 of the county. Shelter deaths for cats coming from the target area decreased by 95% over the same
 period, compared to a 30% decrease observed in the rest of the county.
- Although the campus of the University of KwaZulu-Natal's Howard College (Durban, South Africa) is recognized as an "urban conservancy" (i.e., "urban areas interspersed with conservation-sensitive natural bush habitat and a nature reserve on the northern border"), researchers were unambiguous in their recommendation that "a suitable and ongoing sterilization programme, which is run in conjunction with a feral cat feeding programme, needs to be implemented" to control the population of feral cats. Removal, on the other hand, would likely create the "vacuum effect," thus "encourag[ing] subsequent reinvasion of the area. It may be more costly both financially in the long-term and in terms of effects on the indigenous wildlife populations if immigration of new, unsterilized cats were to take up residency on the campus."
- Beginning in 2001, hysterectomy has been used to control the population of feral cats at the Rio de Janeiro zoo. Between 2001 and 2004, "the estimated population became stable, showing a trend to decrease." Over the next four years, estimated population numbers dropped 58 percent, from 40 cats in 2004 to 17 cats in 2008. This is in contrast to the failure of prior trap and kill efforts to eradicate the cats: "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."
- A 2008 review of the literature on feral cats and feral cat control, including several studies of TNR, emphasizes the importance of context in effective management: "when considering feral cats, one solution does not fit all situations because all situations are different." Robertson found ample "scientific evidence that TNR under certain conditions can control the feral cat population, and is a viable, humane alternative to other methods previously used," and recommends "continued and increased funding (by private welfare organizations and by municipal and government agencies)... for long-term success." 13
- In December of 2009, the last of the Newburyport, Massachusetts, "wharf cats" died. According to both Alley Cat Allies and the local paper, this colony once included something like 300 cats. A 1996 story in the Boston Herald describes "an estimated 200 wild, roaming cats" 14

Literature Cited

- Levy, J. K., Gale, D. W. & Gale, L. A. 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**, 42–46, doi:doi:10.2460/javma.2003.222.42 (2003).
- 5 Stoskopf, M. K. & Nutter, F. B. Analyzing approaches to feral cat management—one size does not fit all. *Journal of the American Veterinary Medical Association* **225**, 1361–1364 (2004).
- Nutter, F. B. Evaluation of a Trap-Neuter-Return Management Program for Feral Cat Colonies: Population Dynamics, Home Ranges, and Potentially Zoonotic Diseases Doctor of Philosophy thesis, North Carolina State University, (2005).
- Natoli, E. *et al.* Management of feral domestic cats in the urban environment of Rome (Italy). *Preventive Veterinary Medicine* **77**, 180–185 (2006).
- 8 Levy, J. K., Isaza, N. M. & Scott, K. C. Effect of high-impact targeted trap-neuter-return and adoption of community cats on cat intake to a shelter. *The Veterinary Journal* **201**, 269–274, doi:http://dx.doi.org/10.1016/j.tvjl.2014.05.001 (2014).
- 9 Tennent, J. & Downs, C. T. Abundance and home ranges of feral cats in an urban conservancy where there is supplemental feeding: A case study from South Africa. *African Zoology* **2**, 218–229 (2008).
- Tennent, J., Downs, C. T. & Bodasing, M. Management Recommendations for Feral Cat (*Felis catus*) Populations Within an Urban Conservancy in KwaZulu-Natal, South Africa. *South African Journal of Wildlife Research* **39**, 137–142, doi:10.3957/056.039.0211 (2009).
- Mendes-de-Almeida, F. *et al.* The Impact of Hysterectomy in an Urban Colony of Domestic Cats (Felis catus Linnaeus, 1758). International Journal of Applied Research in Veterinary Medicine **4**, 134–141 (2006).
- Mendes-de-Almeida, F. *et al.* Reduction of feral cat (*Felis catus Linnaeus 1758*) colony size following hysterectomy of adult female cats. *Journal of Feline Medicine & Surgery* (2011).
- Robertson, S. A. A review of feral cat control. *Journal of Feline Medicine & Surgery* **10**, 366–375, doi:doi:10.1016/j.jfms.2007.08.003 (2008).
- Donlan, A. E. in *Boston Herald* (Boston, MA, 1996).