

Evaluating the Efficiency of Trap-Neuter-Return Programs in Bucks County

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Abstract:

The research aims to aid in answering the question of “Should we be using TNR as a method of population control in free-roaming cats”. This study utilizes camera placement and community feedback to determine whether TNR programs are effective throughout Bucks County, PA specifically. Based on the results, it was found that TNR has the ability to create a closer community of cats and improve colony behavior. After the information and results were analyzed and the colony caretaker was interviewed, it was determined that TNR is an effective solution for managing free-ranging cats in Bucks County when done correctly.

Introduction:

Free-Roaming cats are present in high numbers throughout Bucks County. These cat colonies have the capability to disturb the ecological balance and pose a public health risk. (Levy & Crawford, 2004) Management of free-roaming cat populations has been widely debated in the conservation community and among other professionals. Currently, the most accepted form of management within the public is Trap, Neuter, and Return programs. The idea behind these programs is that rather than immediately reducing numbers through removal, TNR practitioners hope to slowly reduce populations over time (Hostetler et al.). This research assesses whether TNR programs throughout Bucks County are effective.

References

1. Levy, Julie & Crawford, Patti. (2004). Humane strategies for controlling feral cat populations. Journal of the American Veterinary Medical Association. 225
2. Hostetler M. How Effective and Humane Is Trap-Neuter-Release (TNR) for Feral Cats? The University of Florida.

Methods:

Participants:

- To be considered eligible a property owner needed to have brought in over two sets of cats for TNR; and have a location for camera setup where cats have been seen for a minimum of two consecutive weeks. To be eligible to complete the survey, a facility had to be involved in some aspect of TNR.

Measures:

- A TNR effort will be considered effective if 50-60% of the colony is neutered every six months and the immigration rate is 0-10%. This statistic is based on information from a publication by the University of Florida which utilized a population model and other studies to arrive at this baseline of success (Hostetler et al.).

Procedures:

- Two cameras were placed on the property for ten days with differing angles to allow for more complete data collection. Each cat was identified based on markings and relative weight and then assigned a number. Data recorded included: Cat Sighting Frequency, Presence of Ear-Tipping, Times of Activity, Cat behavior & Interactions, and other animal sightings.
- During this process, two TNR facilities participated in a survey to collect data on the effects of TNR on disease and euthanasia.

Results:

Camera Results

All interactions between the ear-tipped cats were friendly and they showed behavioral signs of happiness like upright tails. Cats 10 and 2 were observed stalking prey, even with supplemental colony feeding by the caretaker.

Five of the ten days produced a raccoon sighting, whether it is the same raccoon or multiple is unclear. The raccoon was observed spending a large amount of time around the part of the barn where cats frequently entered.

Survey Results

Both survey respondents saw the following: Decrease in stray cats following TNR, and Euthanasia being most common in cats that have not gone through TNR.

Only one respondent saw a decrease in diseases commonly transmitted by wild cats after TNR programs.



Figure 1. Cat #10 was identified as ear-tipped.



Figure 2. Free -Roaming cats often attract meso-carnivores like Raccoons.

Discussion:

- Based on the numbers of ear-tipped cats within the colony, and the low immigration rate of 9 percent (*1 out of 11 cats*), this TNR effort was successful at maintaining the colony. While this does not mean TNR can be highly effective everywhere, when also considering the decrease in stray cats in TNR facilities (*see survey results*), it remains a viable method of population control in Bucks County.
- One thing that TNR cannot stop is the spread of disease and outside animal interactions. This was seen by the raccoon presence multiple nights of the study. Not only are raccoons a rabies vector species, but free-roaming cats are also becoming a problem in many places of the world when it comes to rabies. Many diseases can be transmitted between cats and other wildlife, with some of them being a danger to humans as well.

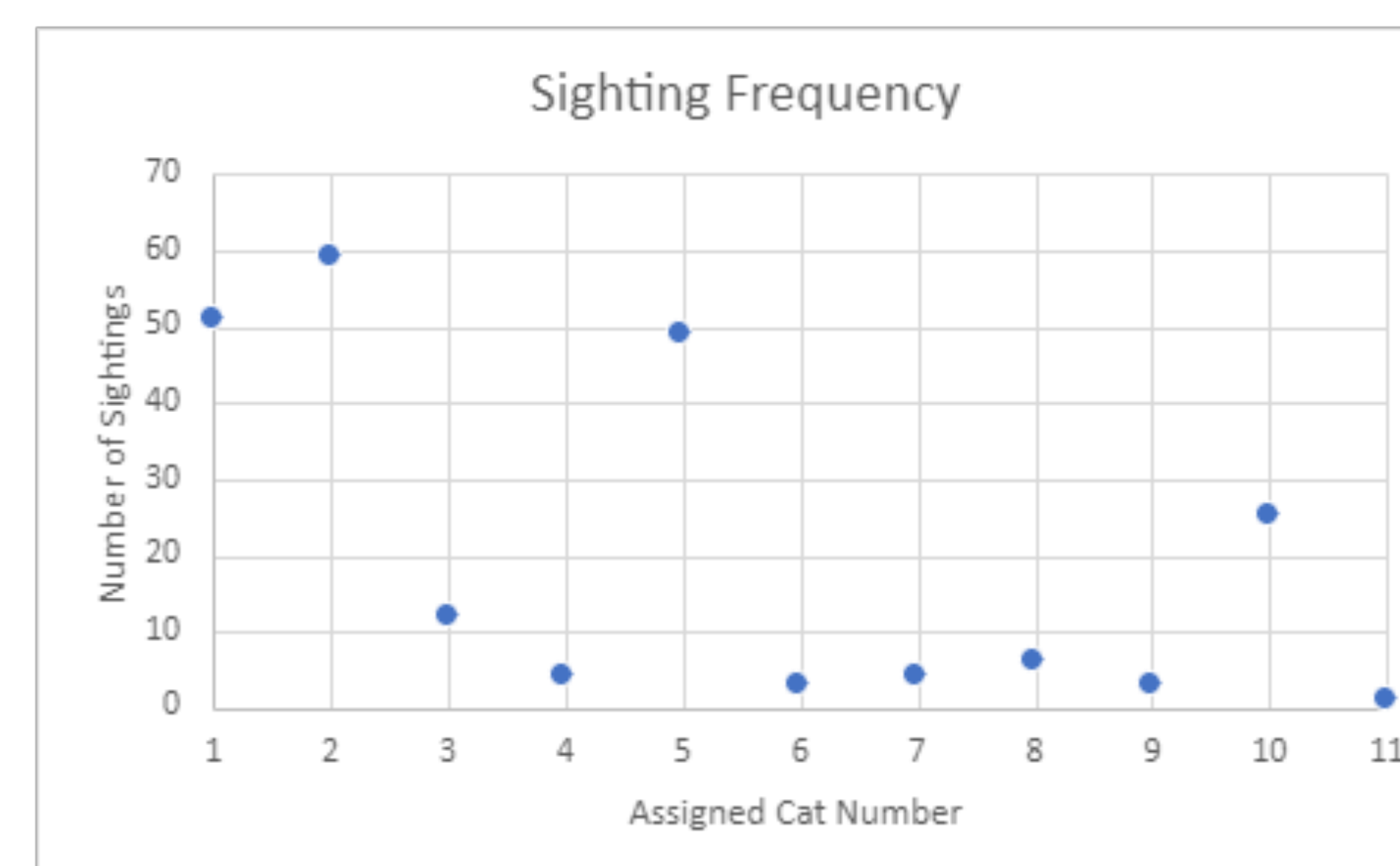


Figure 3. The five most frequently seen cats were ear-tipped. Cat 11 was the only non-colony cat observed.

Ear-Tipped Cats in Colony

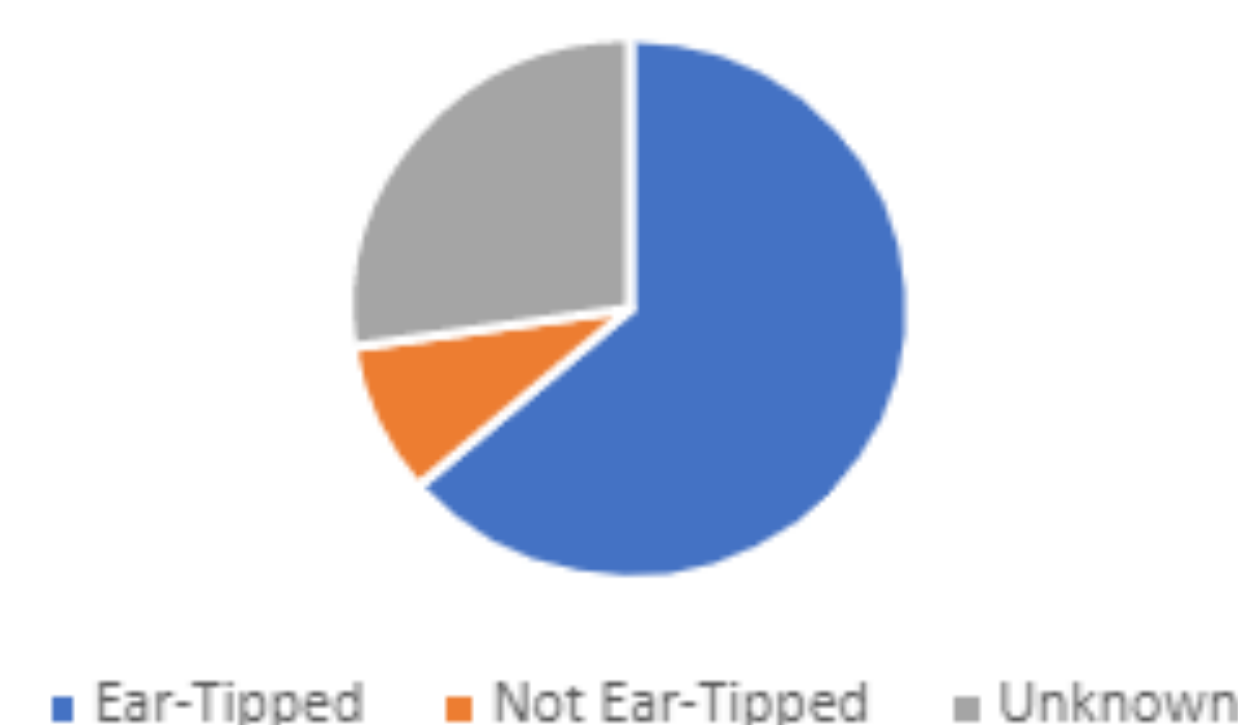


Figure 4. Over 60% of the cats identified were ear-tipped. This percentage allowed the colony to reach the efficiency rate.

Conclusion:

- TNR should be used as a main method of population control, but only if enough of the colony can be trapped and neutered to reach the efficiency rate. TNR does not consider many outside variables so it should not be considered a complete cure to the free-roaming cat epidemic.
- Further questions and studying should be done surrounding cost-effectiveness and disease control to evaluate the other aspects of TNR when making decisions.