

Prey selection and predation behavior of free-roaming domestic cats in an urban ecosystem
 Implications for urban cat management



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BACKGROUND

Free-roaming domestic cats are efficient predators, and pose a serious risk to biodiversity. Some advocates of free-roaming cats claim that supplemental feeding and sterilization programs (e.g., trap-neuter-return, hereafter 'TNR') reduce predatory behaviors

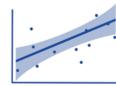
METHODS



Camera traps
 documented predation events in DC



Remote sensing and surveys
 produced variables



Linear regression
 uncovered relationships

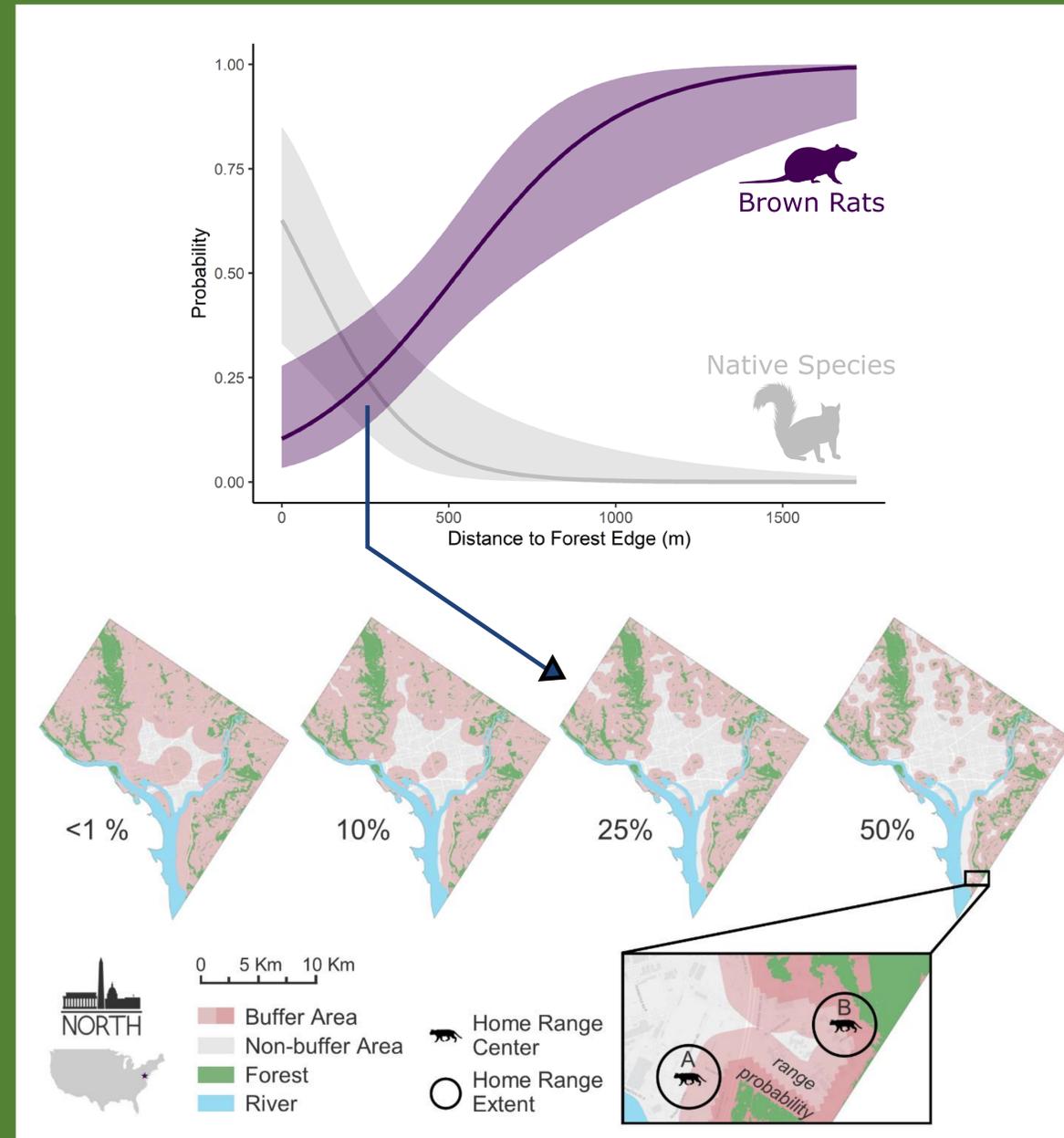
RESULTS

Access to supplemental food and proximity to forest edge both increased overall predatory behavior. At the forest edge, prey was likely to be a native species. However, at 250 meters from the forest, the probability of predation on rats surpasses the probability of predation on native species. There is no evidence that TNR reduced predatory behavior.

CONCLUSION

Free-roaming cats (including TNR programs) should not be permitted within 350 meters of a forest edge.

Excluding cats within 350 meters of an (urban) forest may prevent most predation of native species.

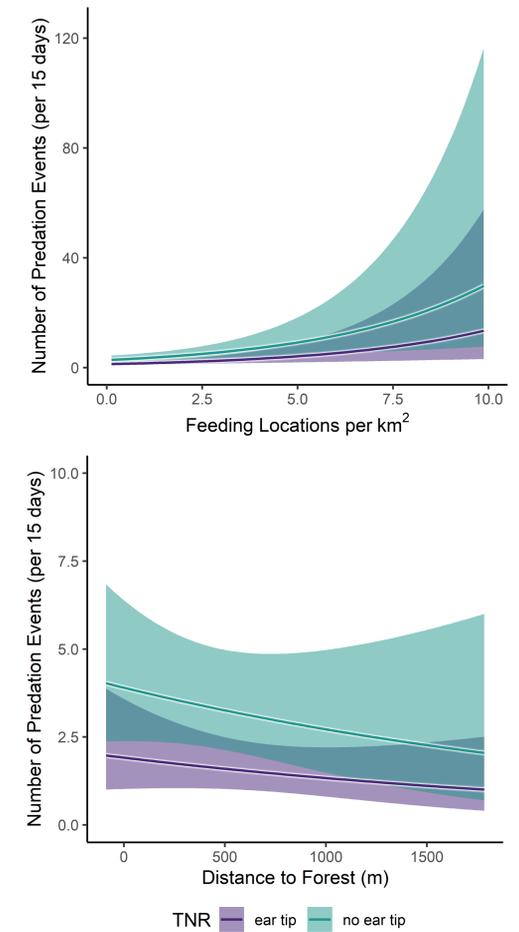


▲ Various exclusionary buffer widths depicting various thresholds of acceptable risk of predation of native species.

Focus your cellphone camera on this code to access the paper, or see citation.



TOP MODELS (TIED) EXPLAINING TOTAL PREDATION FREQUENCY (REGARDLESS OF SPECIES)



PREDATION EVENTS BY SPECIES

- native in blue, invasive in red*
- Brown rat (34)
 - House mouse (9)
 - Unknown rodent (6)
 - White-footed mouse (3)
 - Eastern gray squirrel (1)
 - Flying Squirrel (1)
 - Unknown bird (4)
 - European starling (1)
 - Mourning dove (1)
 - Warbler sp. (1)
 - Unknown snake (1)
 - Unknown sp. (12)

CITATION

Herrera DJ, Cove MV, McShea WJ, Flockhart DT, Decker S, Moore SM, Gallo T. 2022. Prey selection and predation behavior of free-roaming domestic cats (*Felis catus*) in an urban ecosystem: implications for urban cat management. *Biological Conservation* 268(109503): 1-10.

