



THE SOCIO-ENVIRONMENTAL PROBLEM BEHIND FREE-RANGING CATS IN PUERTO RICO'S WALLED CITY



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Introduction

Almost five hundred years ago domestic cats (*Felis catus*) were introduced in Puerto Rico to control rat populations. Cat's roaming behavior, animal's abandonment, high fecundity rates, large amounts of food and water supplied by humans are some of the reasons for the current large abundance of free-ranging cats in Old San Juan, one of the most preserved historic and touristic city in the Caribbean.



Figure 1. Map of Puerto Rico showing the location of Old San Juan (red rectangle), and a photograph of the Fort San Felipe del Morro National Historic Site and a typical neighborhood in the walled city.

Past strategies (euthanasia, relocation and Trap Neuter and Release) proposed to reduce cats populations in this city (1, 2) have been ineffective due to social disagreements and conflicts, and other limitations of the NGO Save a Gato (SaG) which advocates for free ranging cats in Old San Juan.

The management of free ranging cats in this city is a controversial socio-environmental issues as it involves different actors of the society with contradictory opinions and concerns. For some humans, free ranging cats represent a "wild" lovely pet, and a symbol of historical value and cultural inspiration in this city (Figure 2). While for others these cats are a public nuisance, a health hazard (3, 4) and an important predator of the native wildlife (5, 6) (Figure 4).

Objectives:

Our Agents of Change Project has three main objectives: 1) to estimate the size and distribution of the population of free ranging cats in Old San Juan, 2) to assess the perception of residents and visitors about this situation, and 3) to develop a community-based approach to improve the management of the populations of free ranging cats.



Figure 2. Sculptures, books and e-stores shows the cultural value of free ranging cats in Old San Juan.

Methodology

Cat's survey and population size estimation

Two days census were conducted for five hours each by walking across streets in both North to South and East to West directions to report cats and feeding stations (Figure 3).

Observed cats were identified using a short description of their fur pattern, color, gender, life stage, scar, collar and eared-marked individuals (to identify those in the TNR program). In addition, we photographed individuals and recorded sites of encounter using a GPS waypoint.

To estimate the population size (N) of free-ranging cats in the Old San Juan we used the Petersen method based on a single episode of marking (photographed) animals and a second single episode of recapturing (re-sighting) individuals. Cat location points were integrated to the map of San Juan parcels using Arc Gis 9.3.



Figure 3. Free-ranging cat census in Old San Juan streets.

Perception assessment

Interviews will be conducted to adult humans (≥ 21 year old) randomly selected, by walking across the same streets used for cats' population surveys. Demographic data of each respondent will be also included in this questionnaire in order to understand the most important drivers of perception.

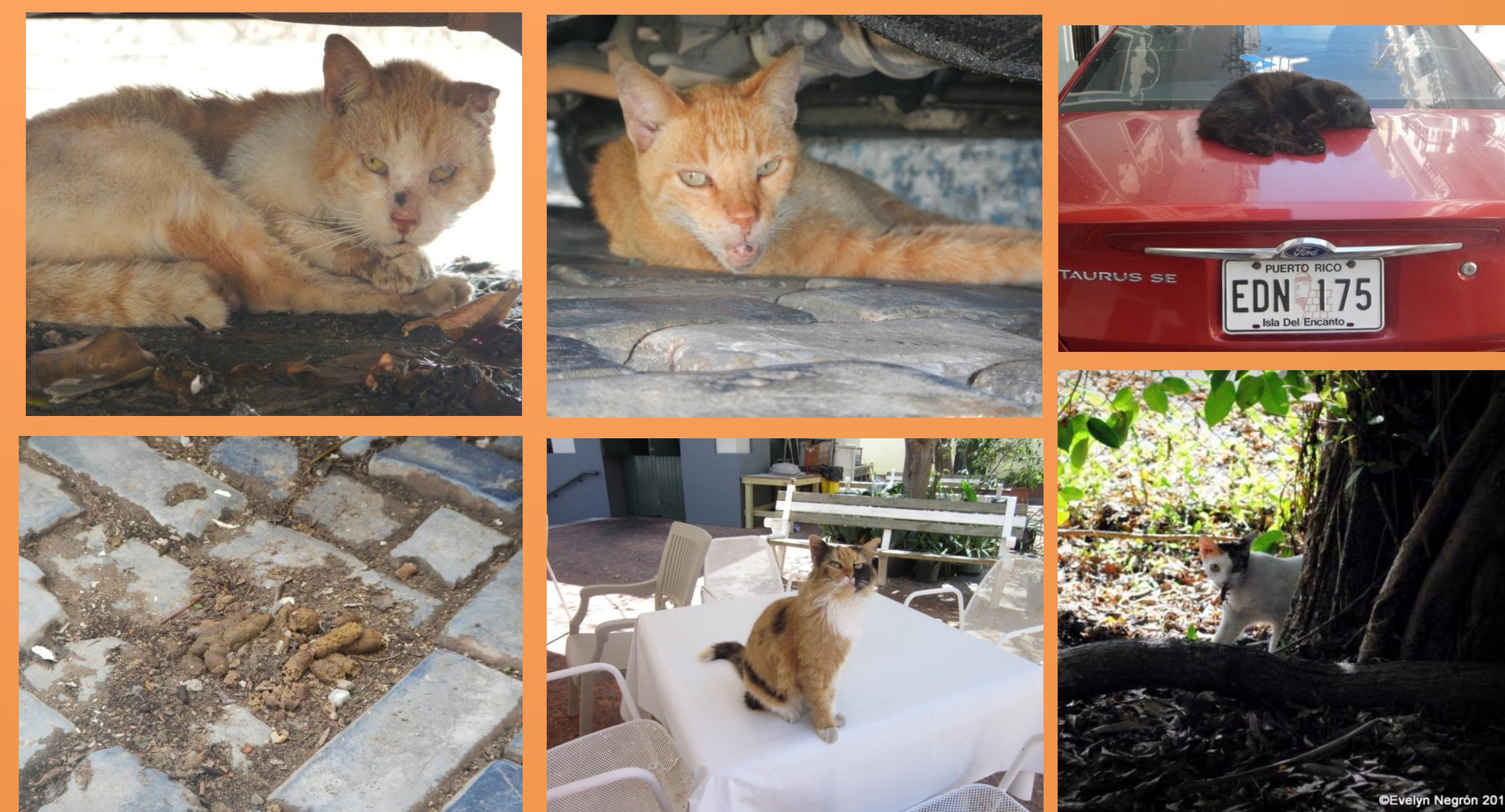


Figure 4. This mosaic of photographs depicts some problems associated with free ranging cats, including: injured animals, feces in public areas and other type of public nuisances, and wildlife predation.

Findings

- A total of 413 free-ranging cats were estimated in Old San Juan streets. Our estimate is different from SaG's who estimate the population of free-ranging cats in 250 individuals.
- For the 150 observed cats during both census, we found that 70% (105) of them were neutered.
- In most cases, cats were associated with residential parcels (or neighborhoods) located in the west of the town, and close to feeding stations (Figure 5).
- In general cats are aggregated closed to feeding and resting stations provided by humans, and stay closest to them.

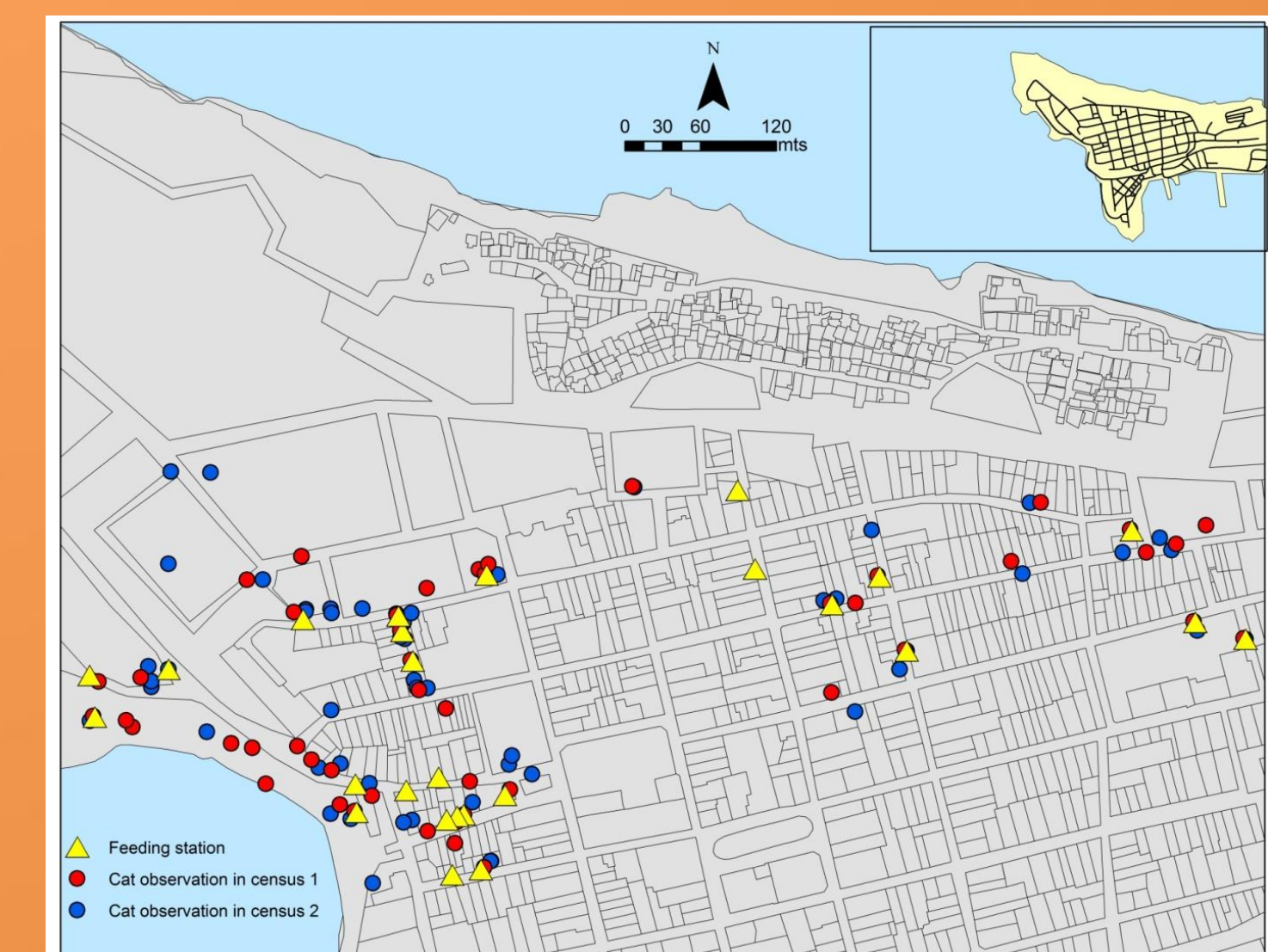


Figure 5. Map of Old San Juan showing feeding stations, and cats observations during census 1 and 2. Note: one point may represent more than one cat.

Next steps

- Perception assessment: data collection and analyses.
- Communication campaign: 1) produce and present a 3 minute video to explain this issue, and 2) organize a community workshop with stakeholders.

Conclusion

Making informed decisions about free ranging cats management in Old San Juan should take into account the social, cultural, ecological, economical and legal frame of this issue. We understand that a community-based approach is the most real solution.

Acknowledgements

To Colibrí Sanfiorenzo-Barnhard and Johnny Lugo for their valuable help during the different stages of this project. This project is funded by NSF-IGERT Grant # 0801577.

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