



## Counting Cats: Some Guidance and An Example

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## Overview

- Purposes of counting cats
- Population monitoring
- A few key points
- Our NYC experience



## Why count cats?

- How many cats are there?
  - For trapping and s/n
  - Resource allotment
- How do cat populations change with time?
- Is what we are doing changing the population?
  - Research
  - Accountability
    - Money and time



## What is Population Monitoring?

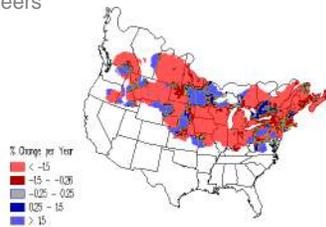
- Ongoing measurement of key information
  - Number, sex, ear-tip, etc.
- Done in a consistent way
- Repeated on a regular basis
- In the right locations
  - Representative or random



## North American Breeding Bird Survey

- Bobolink trends

- US Geological Service
- Data collected by volunteers
- Roadside counts
- 1966 to present
- Severe limitations but incredibly useful data



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## What Could Population Monitoring Of Cats Tell Us?

- Baseline data about numbers
  - May be able to count all if small enough
- Population trends over time
- Changes in populations from TNR etc.
- Explore reasons for differences or change

Site	Transect length (km)	Total marked	Total unmarked sightings	Bowden's Pop Estimate (95% CI)	JHE Pop Estimate (95% CI)	Min # Known Alive	Density (cats per km)

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## What would we need to do this?

- Public and government interest in FRC
- Volunteers with interest
- Existing structure for oversight
- Current cats management activities
- Basic understanding of cat behavior
- Clear understanding of NEED for monitoring



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## Critical considerations

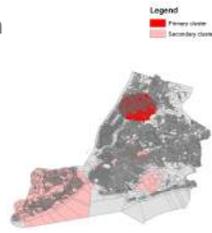
- Appropriate design of the process
- Is an actual number needed OR
- Is information about change in population enough?
- This drives the methodology
  - Rapid methods
  - Intensive methods



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## NYC Cat Counting Project

- Goal to measure changes before and after sterilization efforts
  - Two counts 1 year apart
  - Trap and sterilize in between
  - Two intervention areas
  - Two control areas
  - All with past high intake of stray cats to ACC



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## What we did

- Found Lincoln Park Zoo to design counts
- Walked standard routes
  - 4 times over 4 weeks
  - Two observers to see “detectability”
  - Noted juvenile, adult
  - Noted collars, tags, ear-tips
- Program used to estimate cat numbers/density



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## Motion Triggered Cameras

- Placed near transects in some areas
- Placed in areas not accessible on foot in other areas
- Identified individual cats
- Also examined behaviors
- Both intensive
- But could have used walking as a rapid



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## Key Design Points

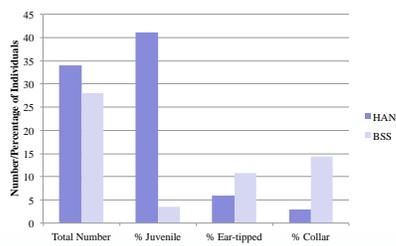
- Carefully selected locations
- Used same protocols repeatedly
- Assessed specific cat characteristics
- Assessed difficulty in spotting cats on transects
- Assessed similarity in spotting ear-tipped and non-ear-tipped cats



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## A Few Results

- Lots of variability between locations and years
- In age distribution and numbers/density



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## A Few Results

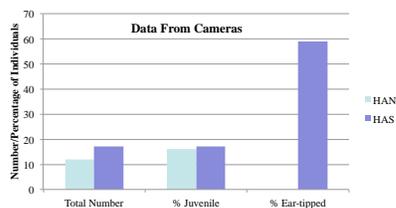
- In these short time periods cats traveled short distances (< 1 block)
- Cameras saw different cats than walking
- Extremely high turnover between years



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## A Few Results

- Did increase cats seen ear-tipped to 52%
- Compared to 8% in control areas



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## Conclusion

- There are ways to count cats
- Consulting with someone with experience will give best results
- Are some resources to help!
- Can build on existing pools of caretakers or volunteers
- Simple methods yield useful data OVER TIME
- Need consistent methods to get good info



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## Resources

- Cat counting document on ACC&D website
- This is for dogs but some is helpful background
  - [http://www.icam-coalition.org/downloads/Humane\\_Dog\\_Population\\_Management\\_Guidance\\_English.pdf](http://www.icam-coalition.org/downloads/Humane_Dog_Population_Management_Guidance_English.pdf)
- Some camera work with cats:
  - [http://www.ius.edu/ccp/biology/fieldstation/files/Blackacre\\_camera\\_trap\\_poster.pdf](http://www.ius.edu/ccp/biology/fieldstation/files/Blackacre_camera_trap_poster.pdf)
  - Bengsen et al. Estimating and indexing feral cat population abundances using camera traps. Wildlife Research 2011 38, 732–739
  - Cove et al. camera traps and predators in the midwest. Am Midland Naturalist 2012



## Articles on transects and cats

- Haspel & Calhoon. Free-ranging cats in NY. J Mammol 1993.
- Finkler et al. Socio-demographics and cat densities in urban Israel. Wild Res 2011
- Jones & Downs. Feral cats on a campus. JAAWS 2011.

