# The impact of *wildness* on biodiversity and public perceptions in CMP

ROBERT MONTGOMERY


# Urban Parks and *Wildness*

- Urban parks typically differ greatly to wildlands
- But that doesn't mean that user communities don't recognize that certain urban parks feel more *wild* than others
- *Wildness* is an attribute in urban parks which can have benefits for human use as well as plant and animal biodiversity
- First such effort to engage very underrepresented citizen science communities to measure ecological wildness and human perception
- Provide feedback to CMP about how best to manage for wildness so as to meet specific targets

# Urban Parks and *Wildness*

- Research questions
  - i) How does plant, bird, and mammal biodiversity vary across a network of urban parks?
  - ii) Can the human perception of wildness be predicted by biological diversity in the context of urban parks?
- Hypotheses
  - i) *Wilder* parks will be more biodiverse in terms of plant, bird, and mammal species richness
  - ii) We can develop strategies to manage for *wildness* – promote biodiversity

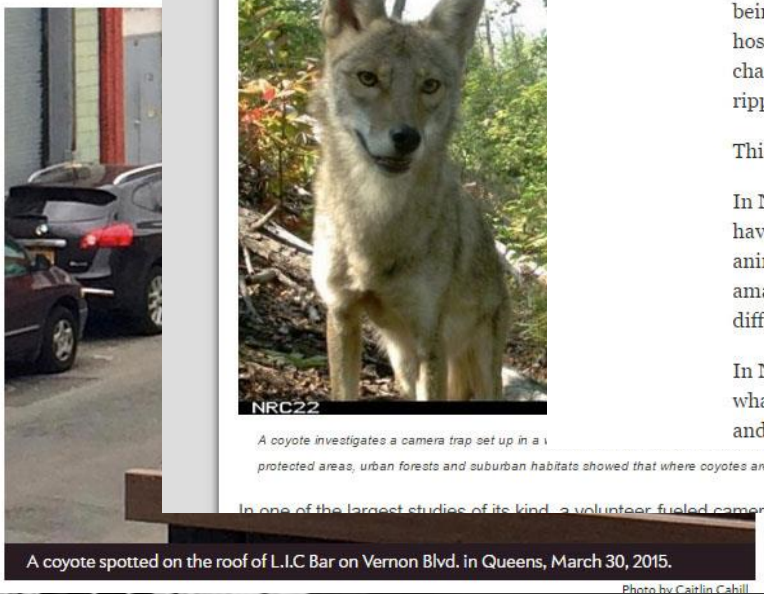
# Proposal

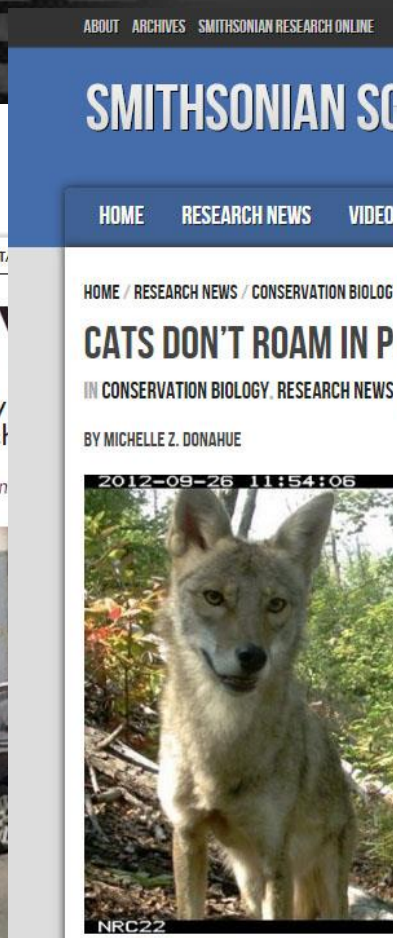
- We are proposing to;
  - Deploy 400 camera traps throughout CMP
  - Study biodiversity of plants, birds, and mammals via citizen-science driven data collection protocols
  - Interview park users across the CMP network to determine spatial variation in the perception of wildness

# Additional Benefit

- Enhanced monitoring will;
  - Achieve existing efforts for population monitoring of key species
  - Reveal the types of organisms that are using the parks when we are not looking
  - Develop a new research avenue for CMP including studies of wildlife habitat use as well as movement/disease ecology

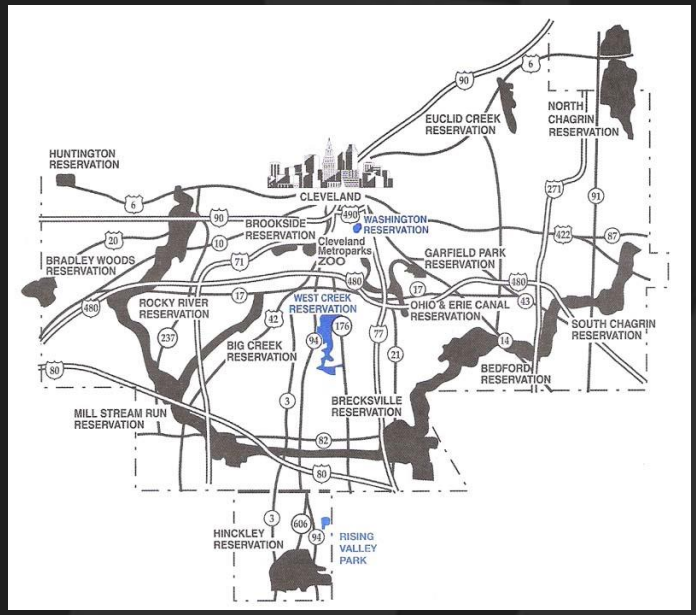
# Recent Scientific Attention




# The Cleveland Metroparks

- > 23,000 acres of parks that vary in their size, configuration, and integrity
- Diversity in parks and steadfast dedication to community engagement by CMP
- In the last 3 years CMP has implemented programs that have engaged >200,000 youth
- CMP is highly interested in engaging under- represented citizen scientists



# Underrepresented Citizen Science

- We will provide integrative opportunities for very-underrepresented citizen scientists
- Integrate blind citizen scientists in acoustic monitoring of birds (for bird monitoring)
- Work with underrepresented youth to deploy, maintain, and collate camera trap data (for mammal monitoring)

# Preliminary Results

- Established the research team
- Collected plant biodiversity data
- Developed grant applications
- Secured graduate student contracts
- Initiating collaboration with citizen science partners

# Meet the Team

- Jeremy Bruskotter

Associate Prof OSU

- Terry Robison

Director of NR - CMP

- Jon Cepek

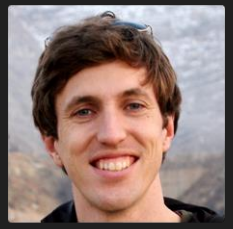
Wildlife Ecologist - CMP

- Pam Dennis

Veterinary Epid. - CMZ

- Patrick Lorch

Field Research - CMP



- Remington Moll

Ph.D. Student MSU

# Data Collection

- CMP has established 400 permanent research plots
- Staff monitor plant biodiversity in accordance with the Carolina Vegetation Survey
- Thus, we have a large dataset representing a portion of the data necessary to evaluate our questions
- Next, we need to conduct acoustic monitoring (birds) and deploy camera traps (mammals)

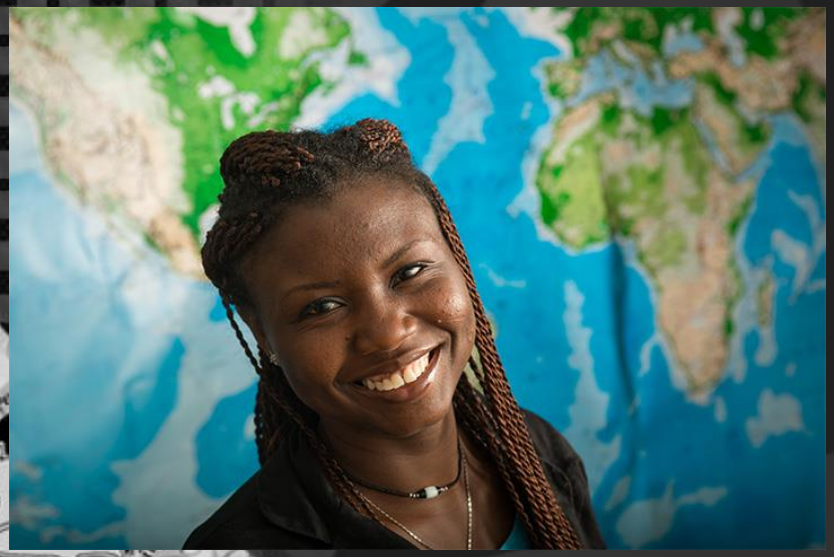


# Grantsmanship

- Application to the Earthwatch Urban Ecosystems Program - Currently in review
- "Harnessing the power of citizen science to address global change"
- Opportunity to develop additional applications to NSF, others

# Studentships

- Remington Moll is a MSU University Distinguished Fellow and a National Science Foundation Graduate Research Fellow
- The combination of these prestigious fellowships provide him with 5 years of funding totalling >$200,000
- Seek to integrate additional students onto the project as it grows



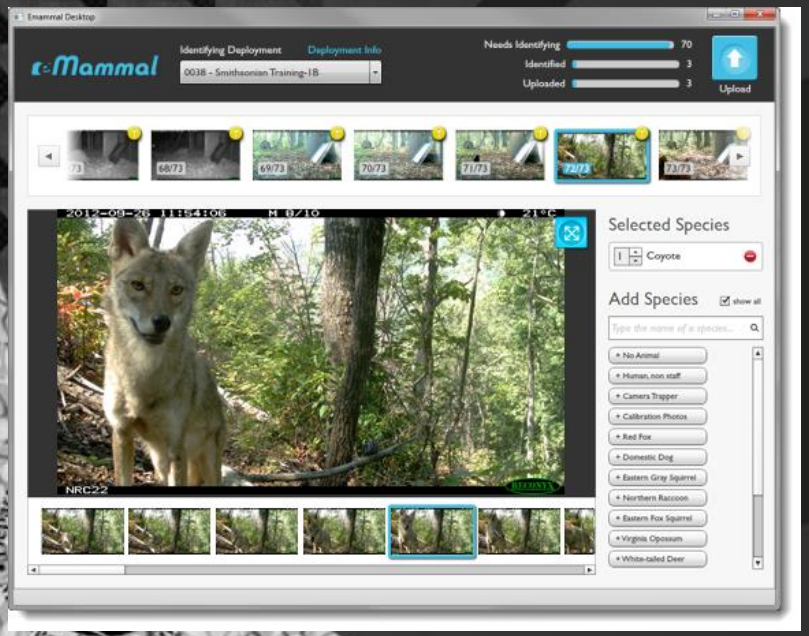
# Developing Project Contacts

- Contacts with the Cleveland Sight Center and the Montessori High School at University Circle
- Funding to associate camera traps with each of the 400 permanent vegetation plots distributed throughout CMP
- Established agreement with TrailCamPro to attain these cameras at highly discounted rates

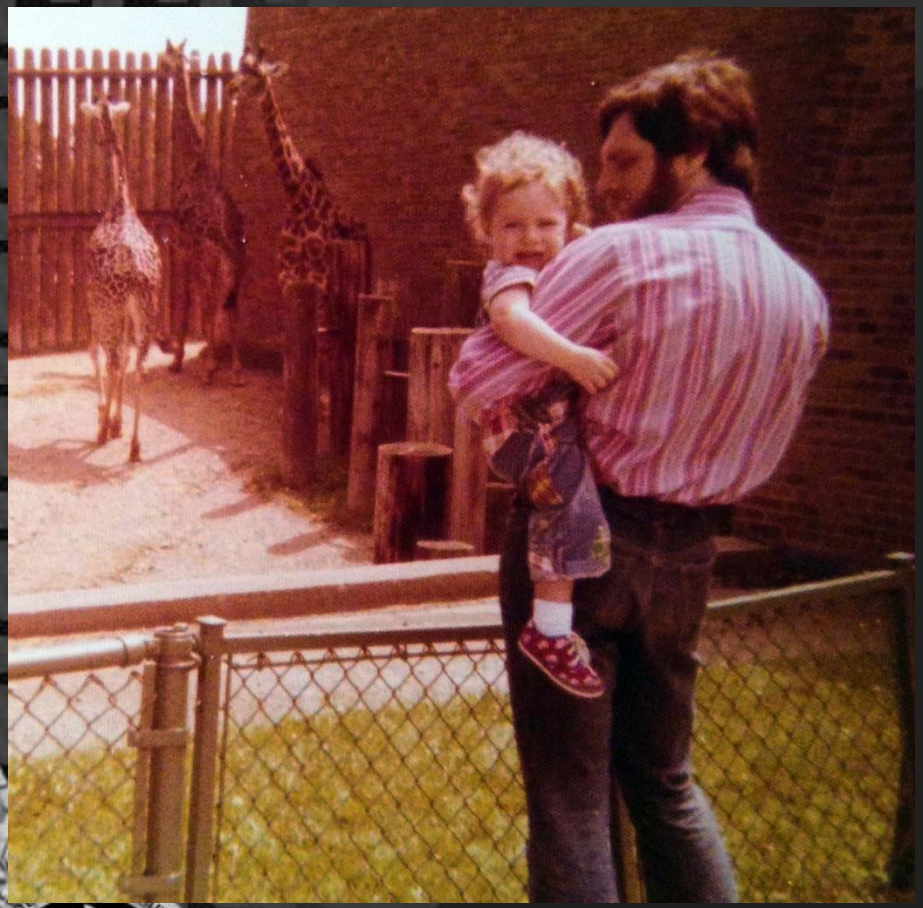


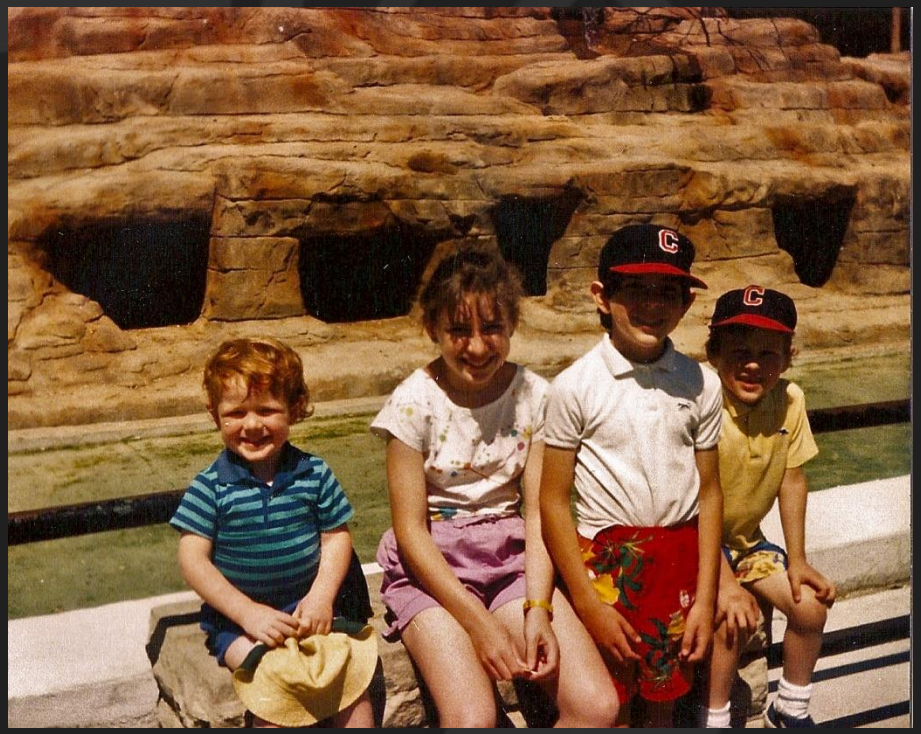
# Why will we be successful?

- CMP is setting us up for success
- We have worked on large-scale camera trapping initiatives both domestically and abroad
- E-Mammal
- Ruaha, Tanzania




# Why does this project matter to me?





# Thank you!

Cleveland Metroparks