



Cleveland Metroparks®

FIND YOUR PATH

Natural Resources Update: the Adapted Hunt Drift Fence Technique (AHDriFT)

Dr. Nathan W. Byer
August 17, 2023



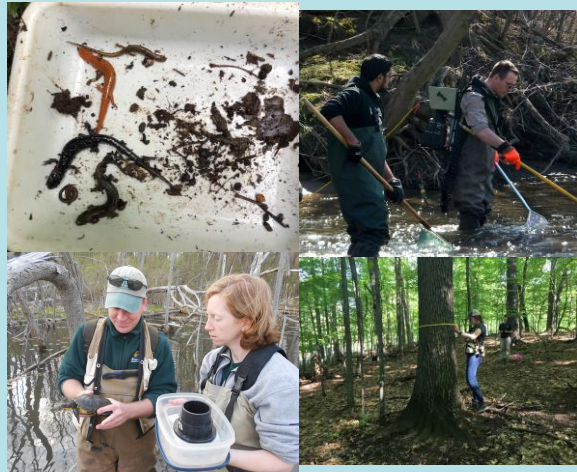
The role of NR monitoring



Conserve land, wildlife and water to protect the beauty and ecological function and resilience of our region and the world.



Active vs. passive monitoring



Active monitoring: manual, human-centered data collection

Examples: stream surveys for salamanders, electrofishing, turtle trapping, plant community assessment

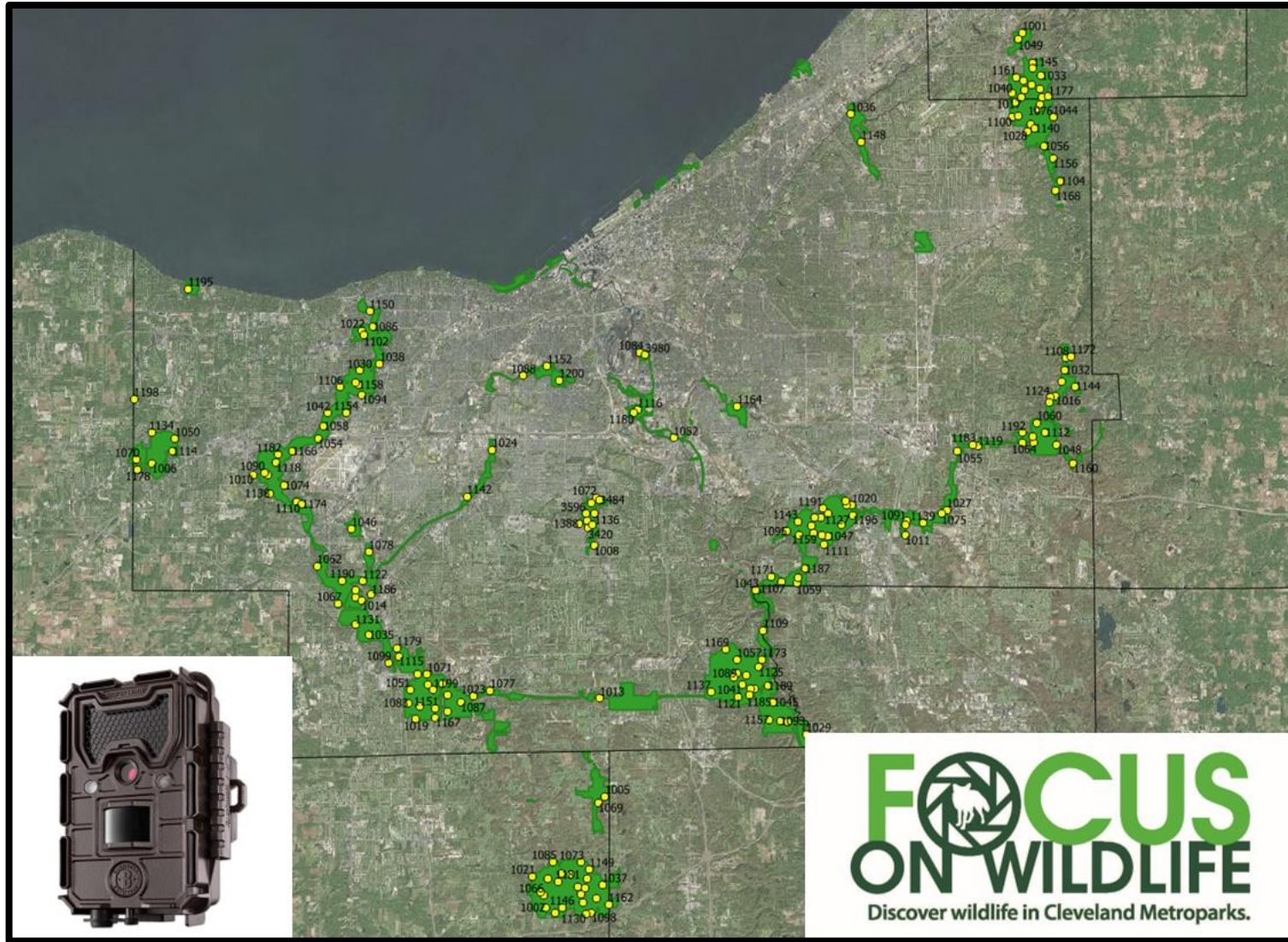


Passive monitoring: Automated, tech-focused data collection

Examples: acoustic detectors; camera traps



Wildlife cameras at Cleveland Metroparks



Things we find on cameras



Things we are likely missing

Small Mammals



Meadow vole



Short-tailed shrew



Woodland jumping mouse

Amphibians



Spotted salamander



Wood frog



Jefferson's salamander

Reptiles



Common gartersnake



Easter milksnake



Dekay's brownsnake

AHDriFT

Set AHDriFT: Applying Game Cameras to Drift Fences for Surveying Herpetofauna and Small Mammals

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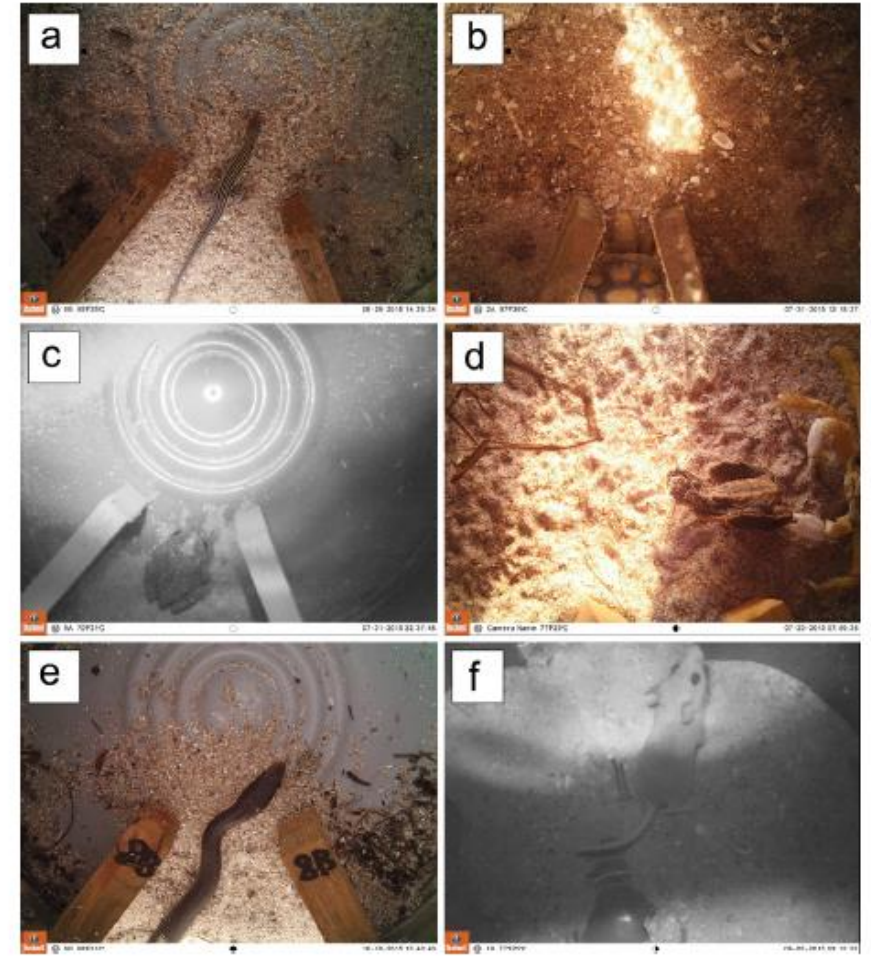
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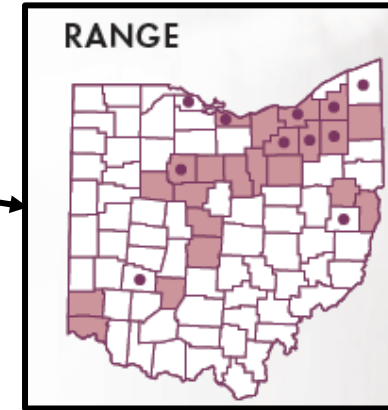


Amber et al. (2021)



Martin et al. (2017)

Impetus for the current project – the Smooth Green Snake



- Habitat: grassy, open areas
- Observed declines over its range in Ohio - State endangered species
- Most recent observations – northeast Ohio and Cuyahoga Valley
- Cleveland Metroparks observations: Brecksville and Bedford

Building collaboration



4 fences
(3 new)



THE OHIO STATE
UNIVERSITY

**Equipment
loans**



5 fences
(2 new)



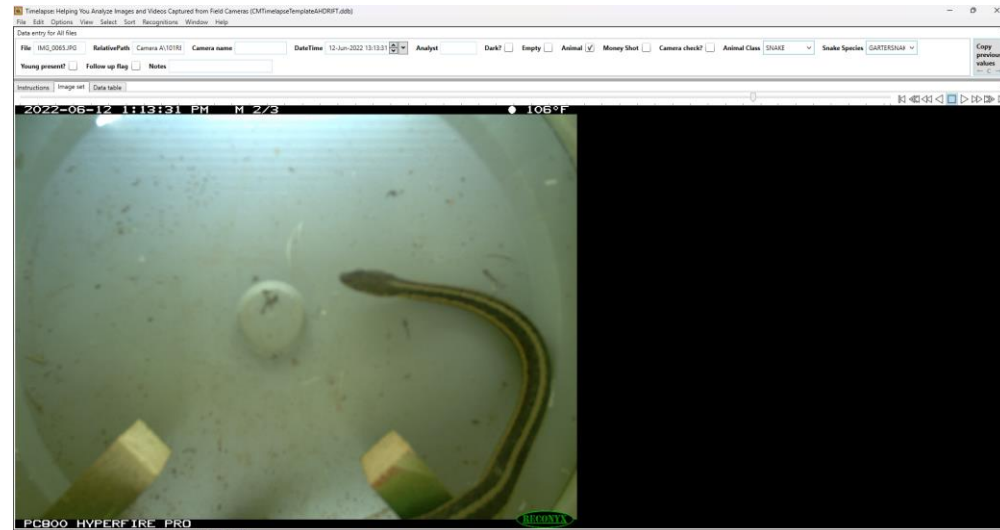
7 fences
(5 new)



October 2022 – partner meetings

AHDriFT workshop – April 2023

Greater Cleveland Partnership – Micro-internship

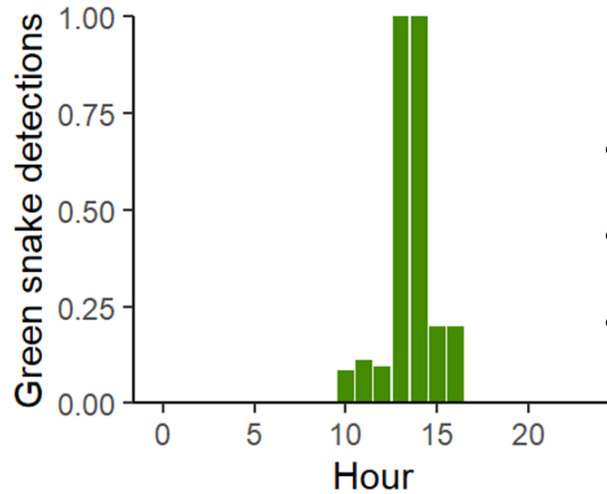


TimeLapse – software for image annotation



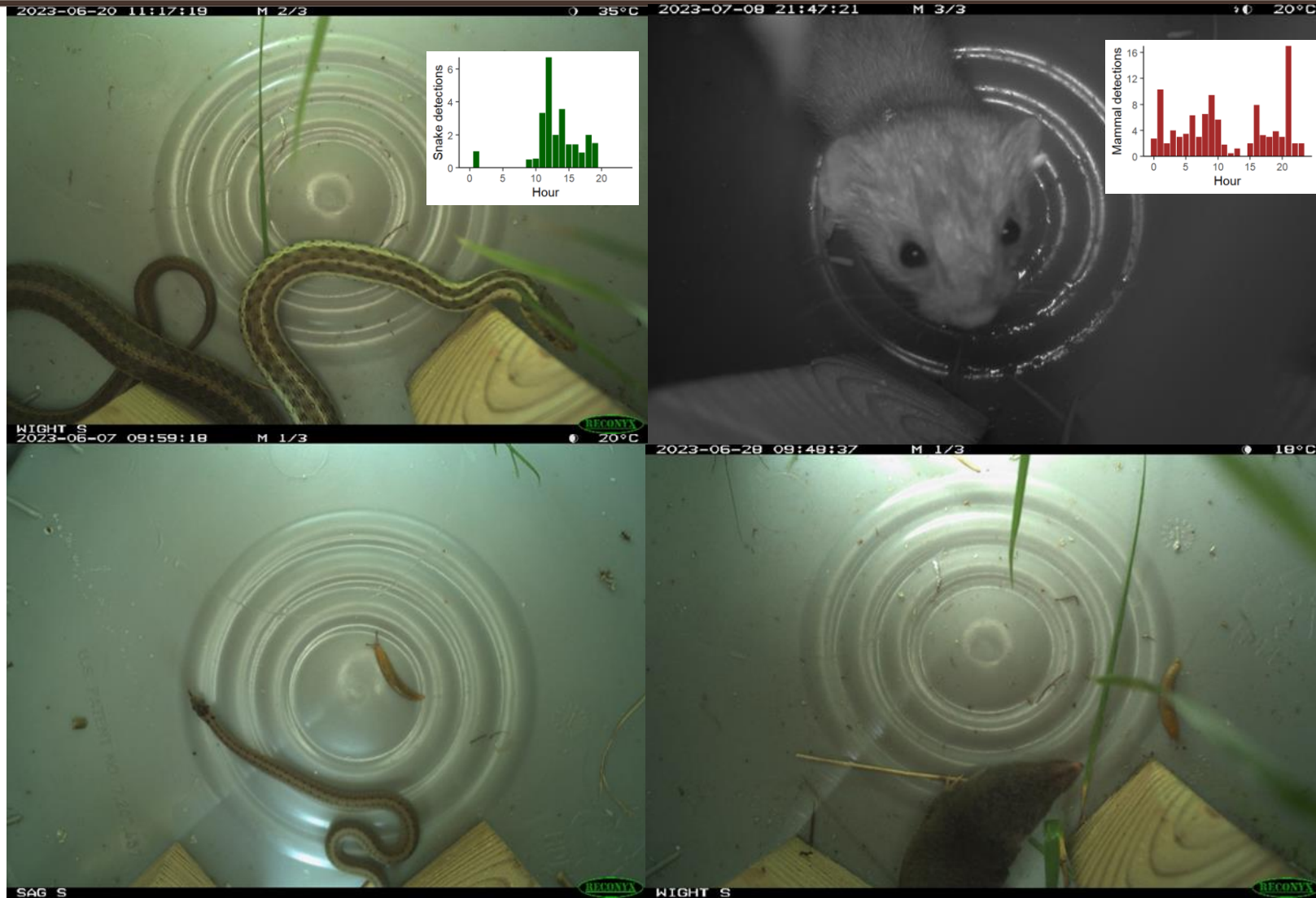
R- coding language for data analysis

Findings to date – Smooth Green Snakes



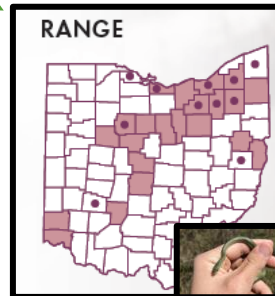
- Detections of smooth green snakes at every site!
- Only observed green snakes between 10:00 am and 4:00 pm
- More common at the Brecksville site – index of population size?

Findings to date – other snakes and mammals!

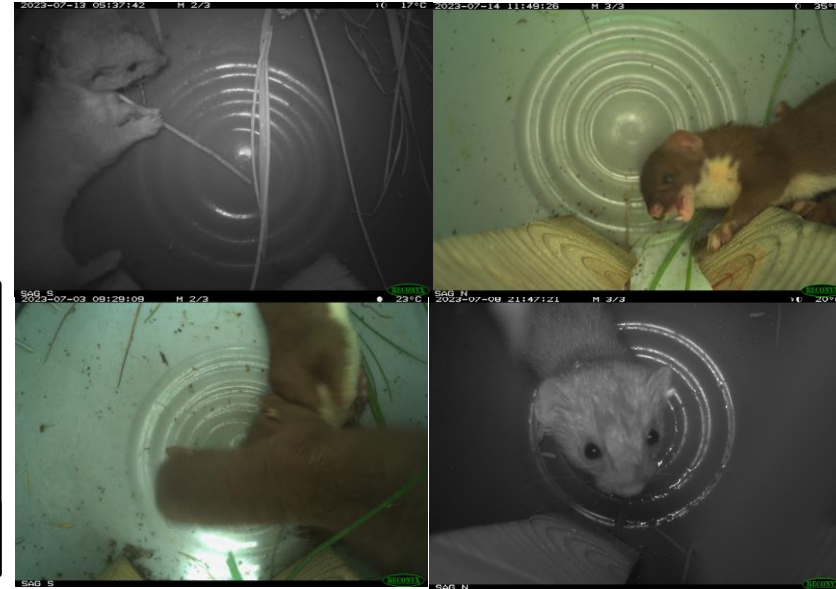


Going forward

1. Smooth green snake - data integration across partners



2. Further investigation of elusive mammals - weasels



3. Addition of new arrays – external funding opportunities



Questions?

