



SNAPSHOT NY

A Community-Based Statewide Wildlife Monitoring Project

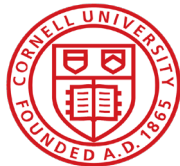


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Wildlife Monitoring in NYS

- NYS DEC – state agency managing wildlife
- Monitoring methods
 - Harvest reports
 - Public sightings
 - Systematic surveys (biologists and technicians)
 - Live trapping
 - Camera trapping
- Many monitoring methods can introduce bias, are time consuming, costly, and labor intensive



New York Furbearer Sighting Survey

Photos from left to right: Weasel (photo by Dale Robert); Gray fox (photo by Dale Robert); Bobcat (photo by Scott Smith)

The Bureau of Wildlife wants to learn more about the occurrence and distribution of various furbearers throughout New York. Visit the [Furbearers](#) page (link leaves survey) to read profiles for various species, including physical traits and tips for identifying them.

Use this form to report sightings of:

- **bobcat, fisher, fox squirrel, gray fox, marten, otter, snowshoe hare, and weasel** in upstate New York (Westchester County and north; DEC Regions 3 through)
- **beaver, gray fox, otter, weasel, mink, coyote, and skunk** in New York City and Long Island (DEC Regions 1&2)

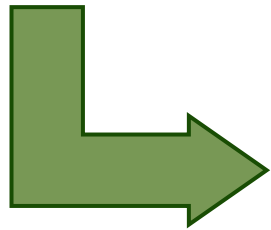
Please note that survey responses are not monitored in real time. If you have a question on identification or would like a response to a question, please email wildlife@dec.ny.gov.



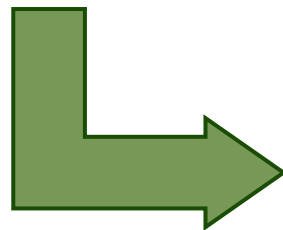
Monitoring Goals



The NYSDEC wanted to more accurately estimate population changes for wildlife across the state.



NYSDEC Goal: Detect 25% change in abundance of species of interest over 5 years.



How many sites need to be surveyed to achieve this, and for how long do they need to be surveyed?



Cornell University

Simulation and Power Analysis Results

Requirement: Statistical power ≥ 0.80

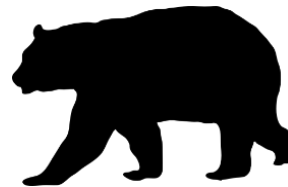
Number of sites required:

Detect 25% pop decline over 5
years
(initial population size= 1000)



320 sites

Detect 25% pop decline over 5
years
(initial population size=5000)



960 sites

Detect 25% pop decline over 5
years
(initial population size=1000)



2,020 sites

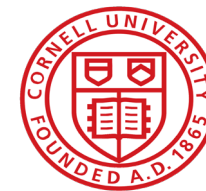
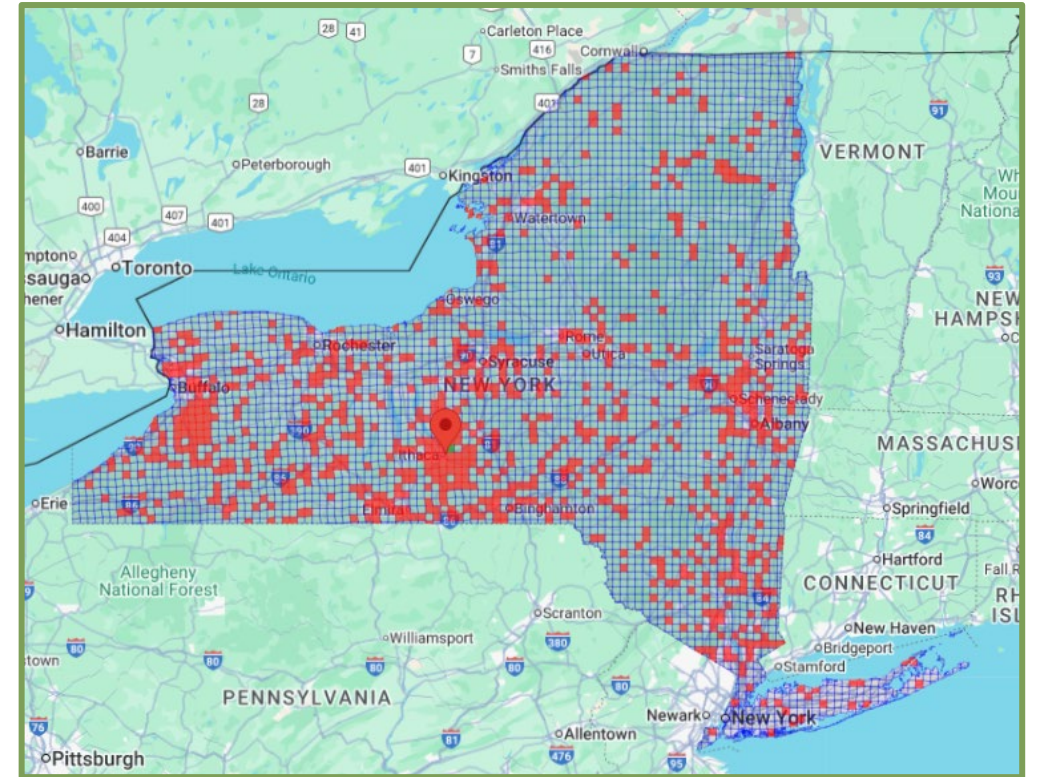
Project Development

The problem:

- Not enough staff/time/resources to sample that many sites.
- Private lands permissions are time consuming/not reliable.
- Over 60% of NYS is privately owned.

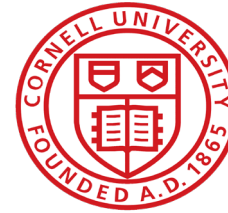
The solution:

- Develop a participatory science project for monitoring mammals and other wildlife statewide.



Snapshot NY – What is it?

A collaborative participatory science project between the NYS DEC and Cornell University for statewide wildlife monitoring - Uses trail cameras and to detect species of interest.



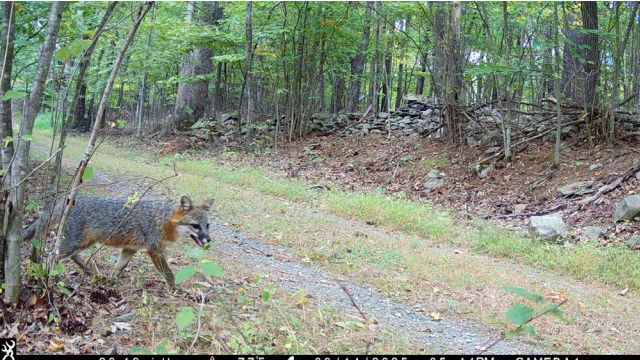
Goals:

1. Collect trail camera images from across NYS on both public and private lands
2. Engage the public in collecting data for wildlife conservation and management decisions
3. Expand the knowledge of the status of mammal species and other wildlife in NYS

Species of interest

Species		
High	Medium	Low
Bear	Coyote	Opossum
Bobcat	Gray Fox	Porcupine
Deer	Hare	Raccoon
Fisher	Red Fox	Skunk
Marten*	Weasels	Squirrels
Moose*		
Turkey		

*Species not a priority in southern zone



What kind of data does Snapshot NY collect?

Metrics

- Occupancy
- Population trends over time
- Sex ratios
- Juvenile/adult ratios
- Distribution
- Abundance/Density*

*for certain species



Management applications

- Data visualization
- Set annual tag allocations
- Develop management plans
- Inform habitat management
- Modify:
 - Bag limits
 - Season length
 - Open/close units

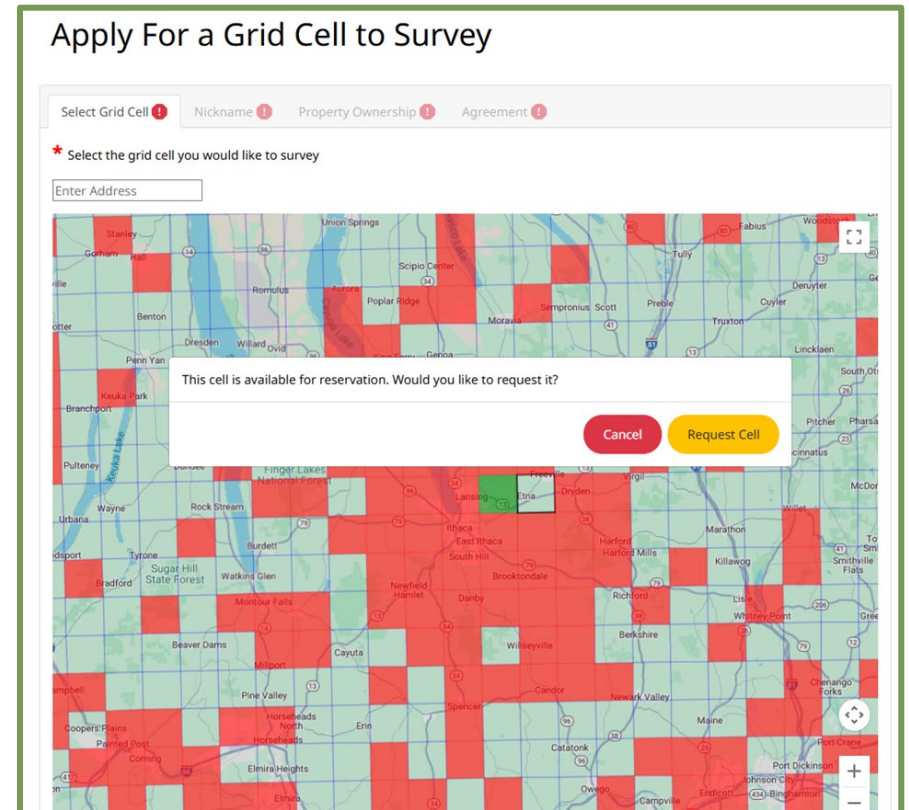
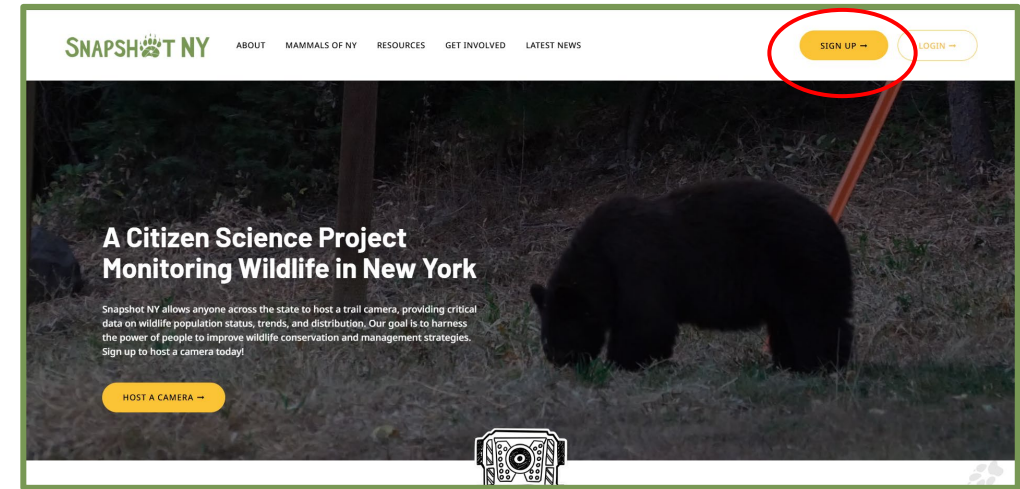
What's the process?

Sign up for
an
account!

- Sign up at www.snapshotny.org
- Fill out your profile information

Select a
grid cell

- ~4500 cells to choose from
- Each cell is 30km²
- One camera per cell
- Waitlist feature



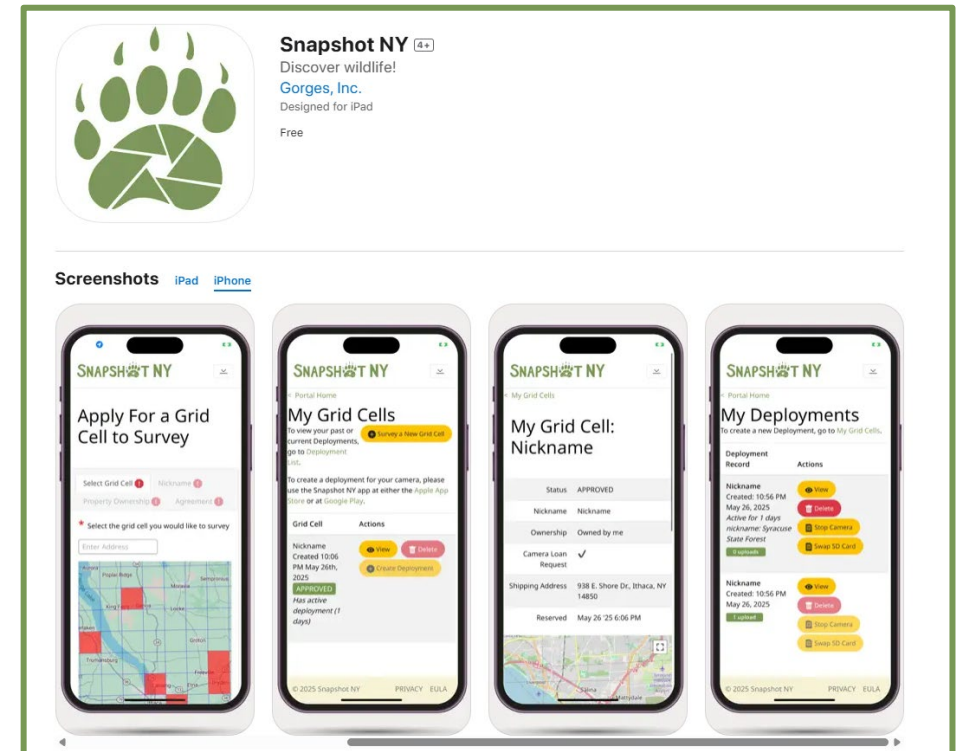
What's the process?

Pick a spot to place the camera

- Trails, streams, forest
- Medium sized tree
- 30-50 ft of clearing
- Face camera North

Record in our custom-built app

- Create camera "deployment"
- Date, time, GPS location, camera brand etc.



What's the process?

Retrieve the SD card

- Check on camera
- Put in a new SD card

Upload photos to website

- Go to account portal
- Upload the folder of images



My Deployments

To create a new Deployment, go to [My Grid Cells](#).

campus

Created: 12:02 PM Jun 10, 2025

Active for 2 days nickname: htgfd

0 uploads

View

Delete

Stop Camera

Swap SD Card

Upload Photos

campus

Created: 12:01 PM Jun 10, 2025

0 uploads

View

Delete

Stop Camera

Swap SD Card

Upload Photos

campus

Created: 1:22 PM Jun 4, 2025

View

Delete

Stop Camera

Swap SD Card

Upload Photos

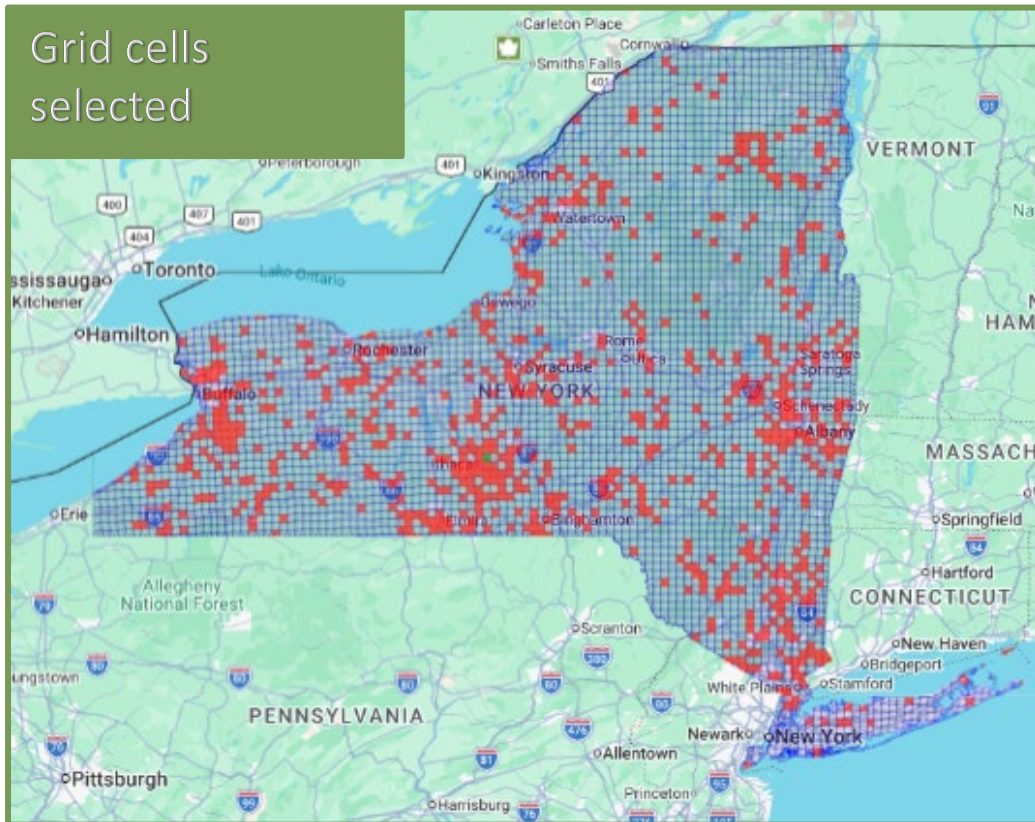
Loan-a-camera program

- Includes: A Reconyx, Browning or Bushnell camera, lock box, cable and key, tree strap, 2 SD cards, initial set of lithium batteries.
- As well as a folder with a welcome letter, protocol, quick guides, a drawstring bag, sticker and pen!

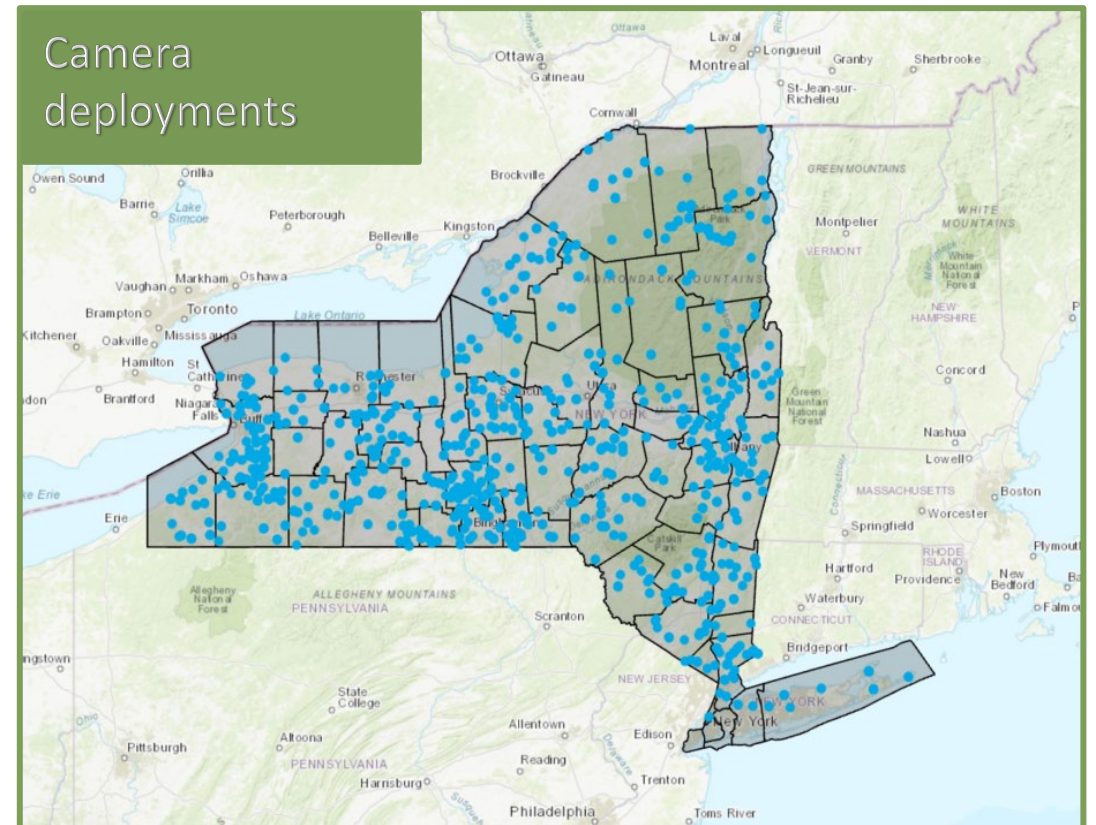


Current status

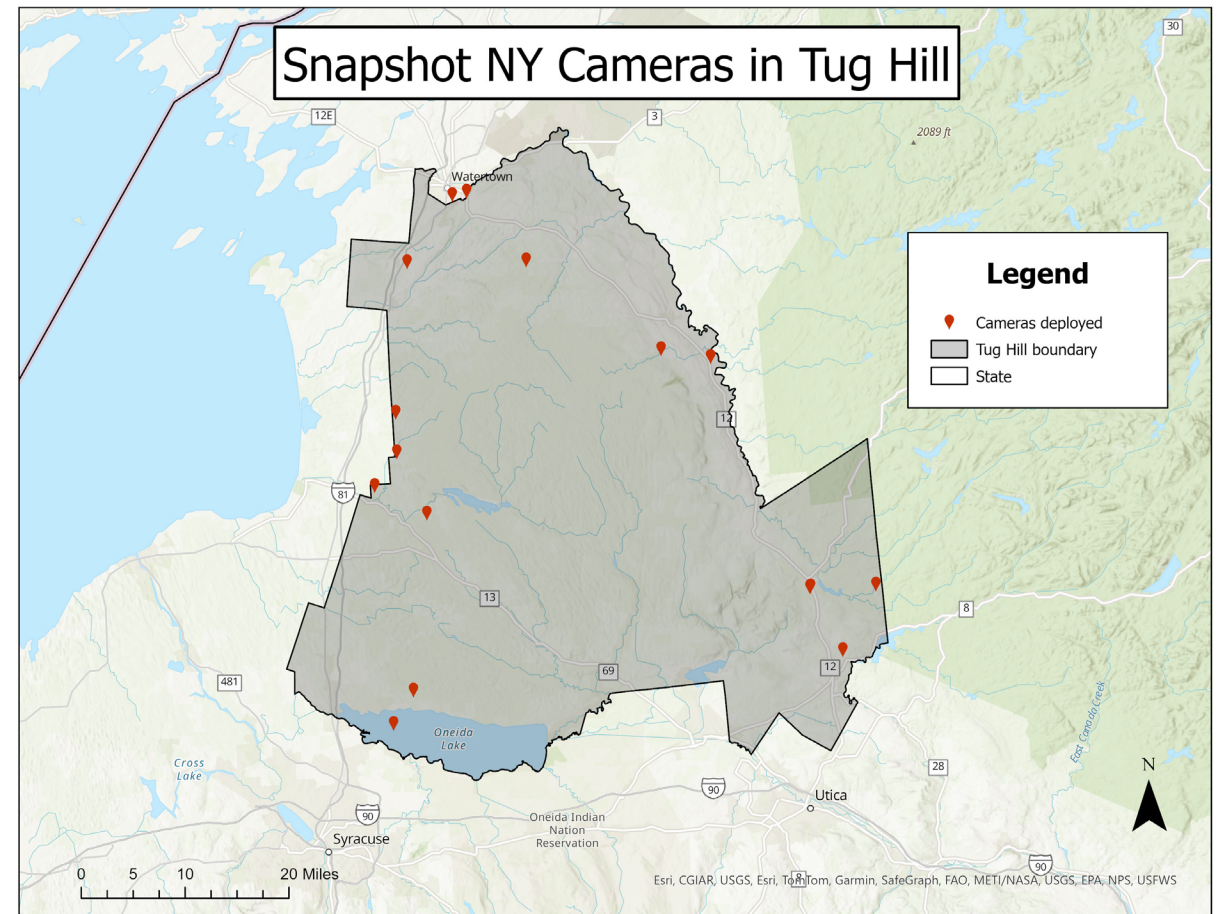
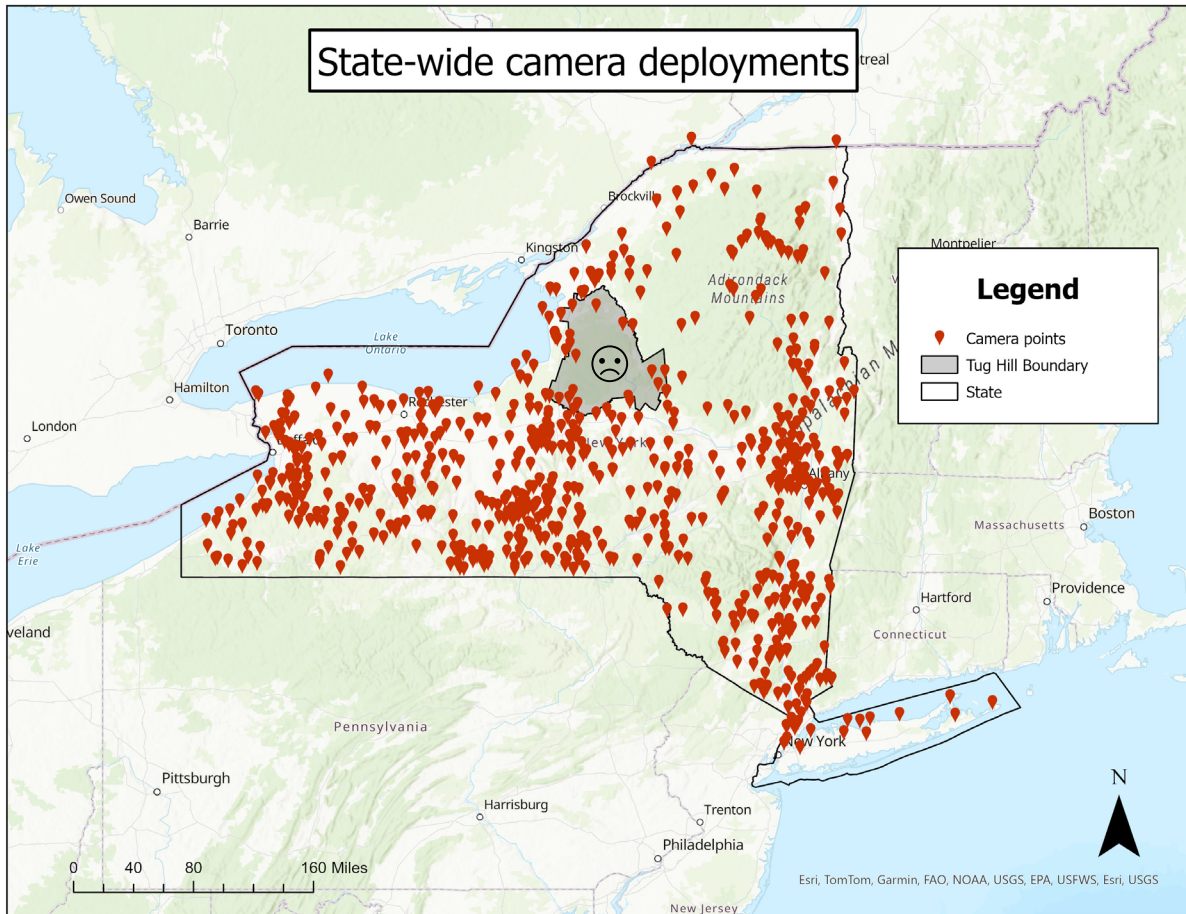
- Officially launched 6/23/25
- 756 active grid cells



- 350 camera loans sent
- Cameras deployed in 58/62 counties

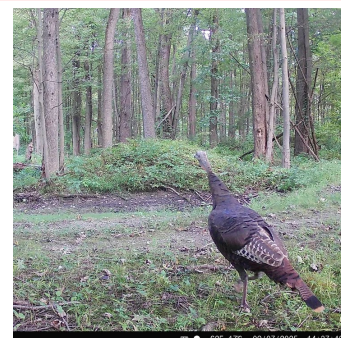
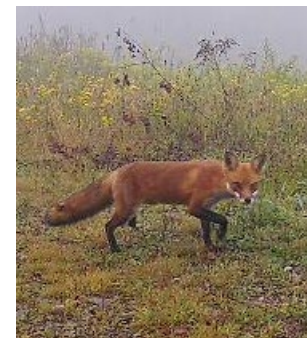
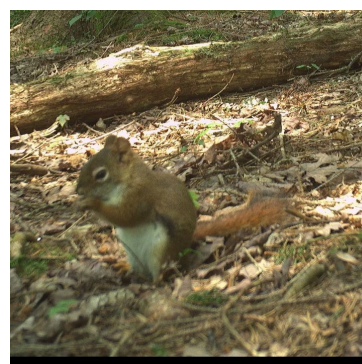
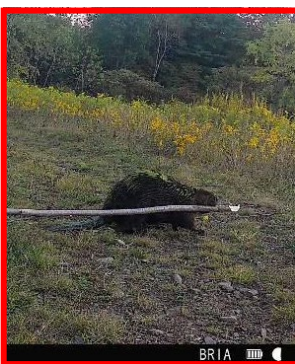
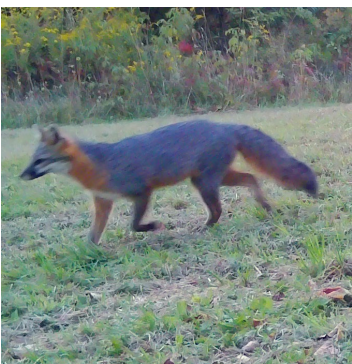
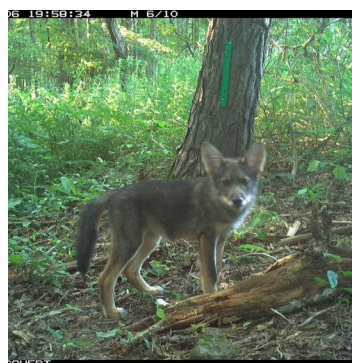
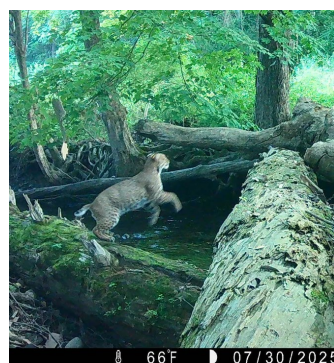
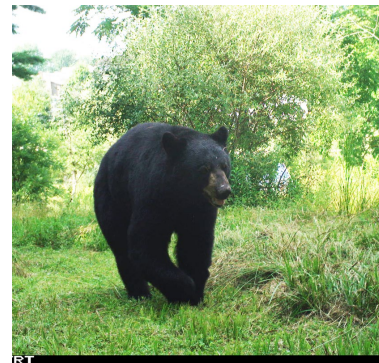


Current status cont.



Species detected

- 25 identified species + various small mammals and birds (owls, herons, woodpeckers etc.)
- Over 7 million images submitted!



Tug Hill species highlights



28.12 inHg ↓ 66°F 09/23/2024 01:04PM FOOD PLOT



28.35 inHg - 48°F 09/30/2024 10:20PM FOOD PLOT



54°F 09/03/2025 07:31AM CAMERA1



74°F 07/28/2025 07:21PM CAMERA1



65°F 07/20/2025 08:02PM CAMERA1



28.75 inHg ↓ 32°F 11/23/2025 11:56AM CAMERA1



29.24 inHg ↑ 46°F 09/01/2025 08:05AM CAMERA1





61F 08/30/2025 10:23PM CAMERA1



STEALTH CAM 06:14AM 08/05/2025



45F 08/30/2025 07:05AM CAMERA1



63F 08/16/2025 09:27AM CAMERA1
2025-10-01 8:07:11 PM M 3/5



54F 08/21/2025 05:47AM CAMERA1
54F 2025-10-03 3:11:06 PM M 3/5



29.22 inHg 44F 09/01/2025 06:11AM CAMERA1



57 F13 °C 09-28-2025 00:30:58



09-11-18



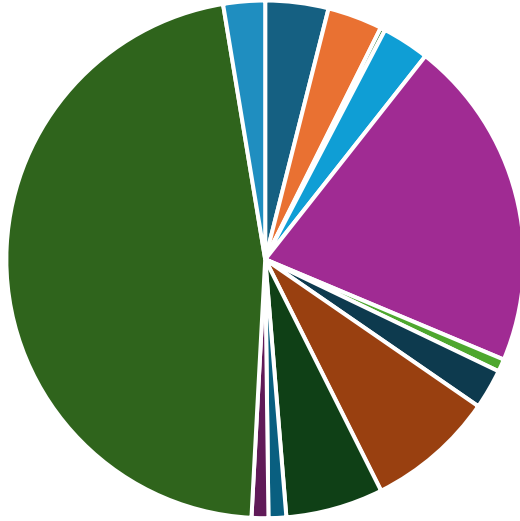
09-11-18



50F 09/18/2025 12:07AM CAMERA1

Total high confidence detections

Total high confidence detections



- Bird sp.
- Coyote
- Fisher
- Gray Fox
- Gray Squirrel
- Mouse sp.
- Opossum
- Raccoon
- Red Fox
- Red Squirrel
- Skunk
- White-tailed Deer
- Wild Turkey

Species	Detections
Bird sp.	1779
Coyote	1548
Fisher	134
Gray Fox	1336
Gray Squirrel	9352
Mouse sp.	356
Opossum	1124
Raccoon	3614
Red Fox	2748
Red Squirrel	499
Skunk	473
White-tailed Deer	21021
Wild Turkey	1177



Next steps and long-term goals



Use DeepFaune to analyze camera photos



Manually review low confidence images



Create occupancy and abundance models



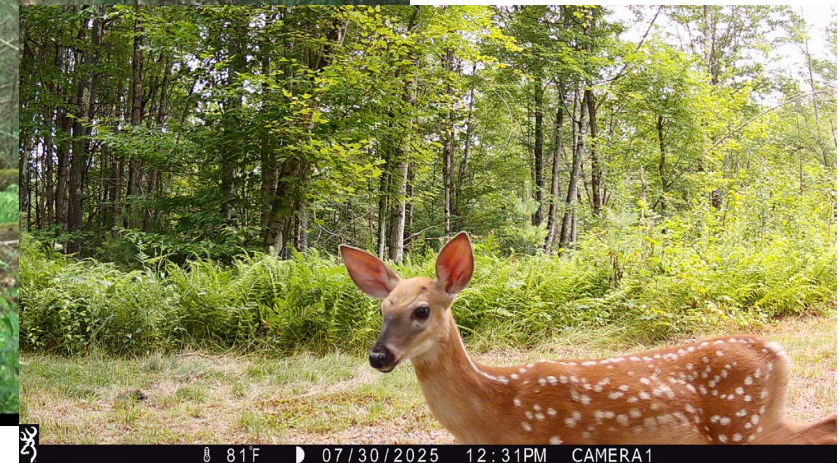
Fill a majority of grid cells



Create a dashboard with project stats (public)



Expand project staff and collaborate



Acknowledgments

- Snapshot NY participatory scientists!
- The New York State Department of Environmental Conservation
 - Funding for this project was provided by Federal Aid in the Wildlife Restoration Grant W-173-G.
- The Snapshot NY working group (NYSDEC)
- The New York Cooperative Fish and Wildlife Research Unit (NYCFWRU)
- Mandy Watson, Furbearer biologist, NYSDEC
- Dave Kramer, Research Scientist, SUNY ESF Roosevelt Wildlife station and NYSDEC
- Michael Muthersbaugh, Upland game biologist, NYSDEC
- Todd Kautz, Big game biologist, NYSDEC
- Kelly Perkins, Research Support Specialist, Cornell University
- Haley Turner, PhD student, Cornell University
- Angela Fuller, NYCFWRU lead, USGS, Cornell University



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