Frogs and Fur, the Amazing Biodiversity of Ridgefield!

Why is wildlife important?

- Predators maintain balance within ecosystems.
  - Over population
  - Minimize disease risk
- More diversity indicates a healthier ecosystem.
- We rely on wildlife for food, clothing, recreation, and aesthetic enjoyment.

Why should I care?

- It is important to know what areas have a higher presence of predator species, to avoid any potential human-animal conflict.
  - There is rarely any baseline data in suburban areas on how many animals there are, where they live, and where they move.
- Ecosystems with poor health may not be capable of supporting certain species.
  - The depletion of even one species can throw off an entire ecosystem.

Black bear knocks down Vernon man, steals sandwich

By Joe Meszczynski/The Star-Ledger
Email the author
on July 01, 2009 at 4:00 PM, updated July 02, 2009 at 2:03 PM

VERNON -- Police say it was an "attack." At this point, New Jersey wildlife officials say, it was an "incident."

Either way, Henry Rouwendal, who was nursing a head injury, dislocated shoulder and other injuries at his Vernon home last night, says his run-in with a hungry black bear was "a pretty wild ordeal."

Tony Kurdzuk/The Star-Ledger

Most Read

Bobbi Kristina Brown's last texts reportedly reveal anguish over Whitney Houston's death

Which N.J. towns have the highest property tax bills?

14-year-old and 4 other teens with guns lead Woodbridge

WHITE PLAINS DAILY VOICE

Have open appointment slots? Empty Tables? Unsold Seats?

Coyote Conflicts With Pets, Police, People On Rise In Westchester

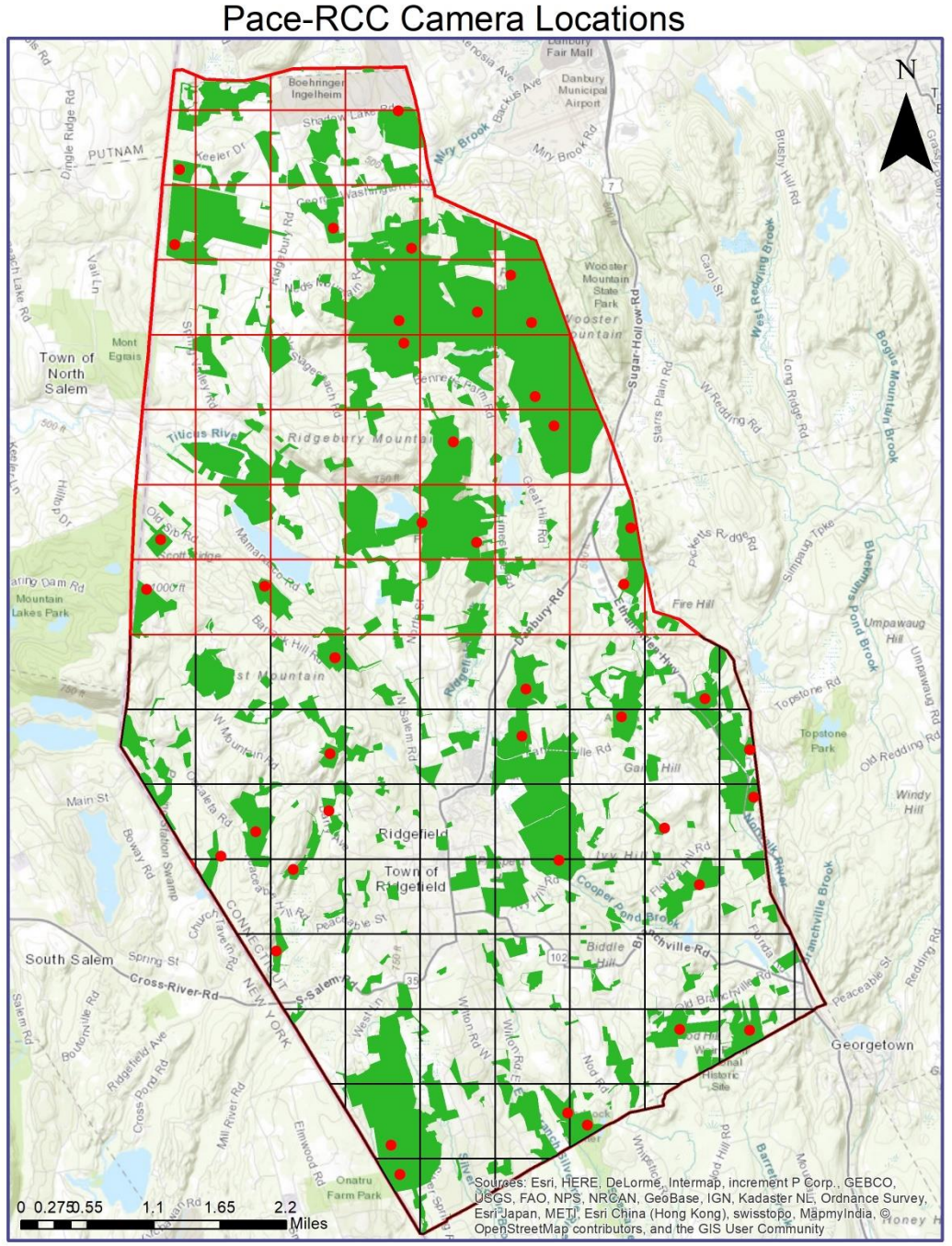
by Jon Craig

Background information on our study!

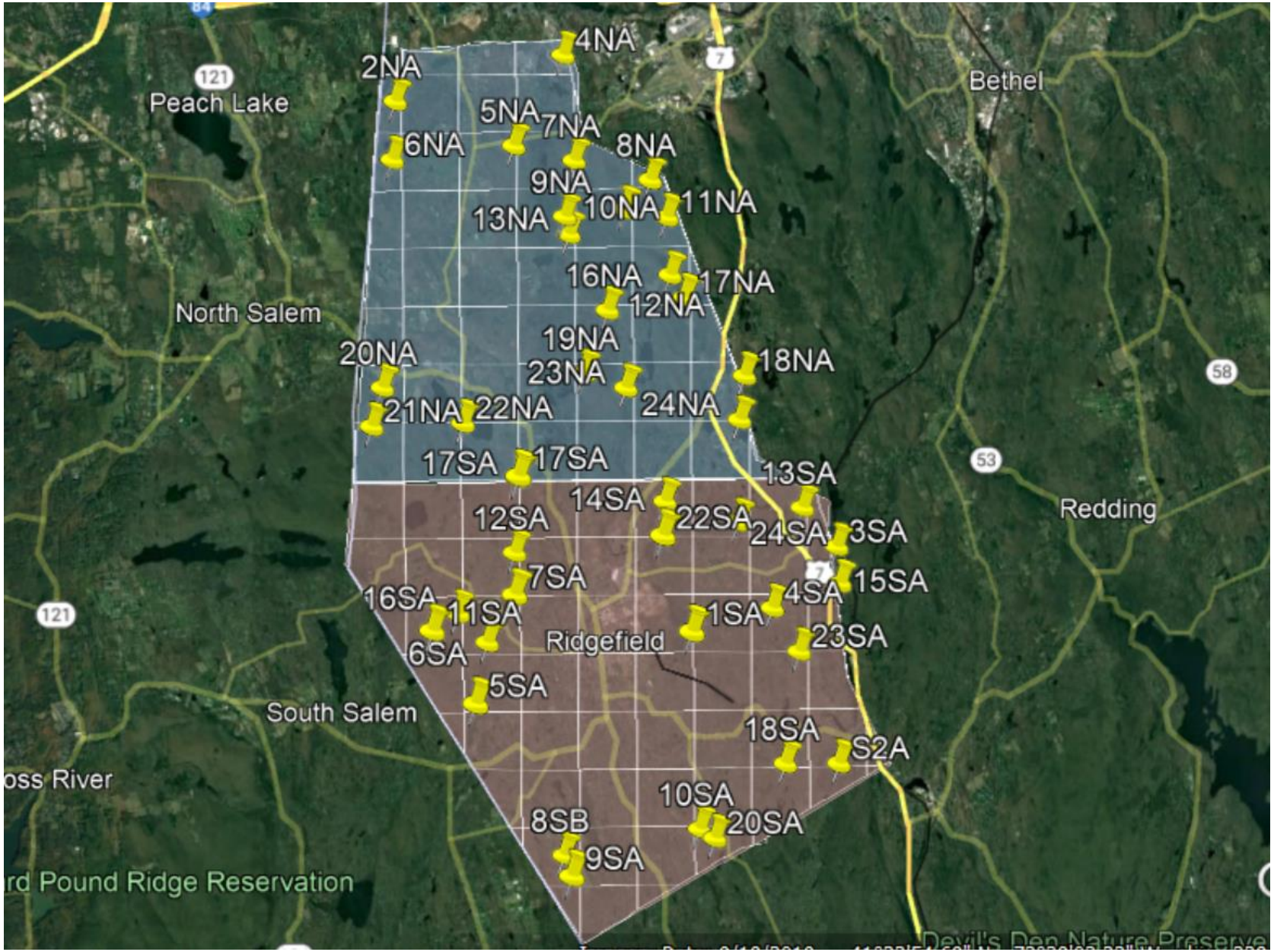
- 42 Cameras total
- Ridgefield divided into North and South Sections
- Goal: to assess the presence of various predator species and the biodiversity of large mammals in Ridgefield, Connecticut.

Selecting Study Sites

- Town divided in North and South Sections
  - North = 10,000 acres
  - South = 12,000 acres
- A grid made of 1 km^2 cells was placed over the town
- We assigned 1 camera to a cell
  - Cameras only assigned to cells containing publicly accessible open space
- Cameras placed minimum of 500 m from each other
- Minimum of 150 m from buildings or roads
- 50 m from trails
- Located in forest habitat
- Some cameras were not set due to poor location conditions
  - Wetlands
- Cameras set in two rounds, each for 3 weeks
  - Round 1 = Feb 11 – March 11
  - Round 2 = March 14 – April 12



Camera Locations

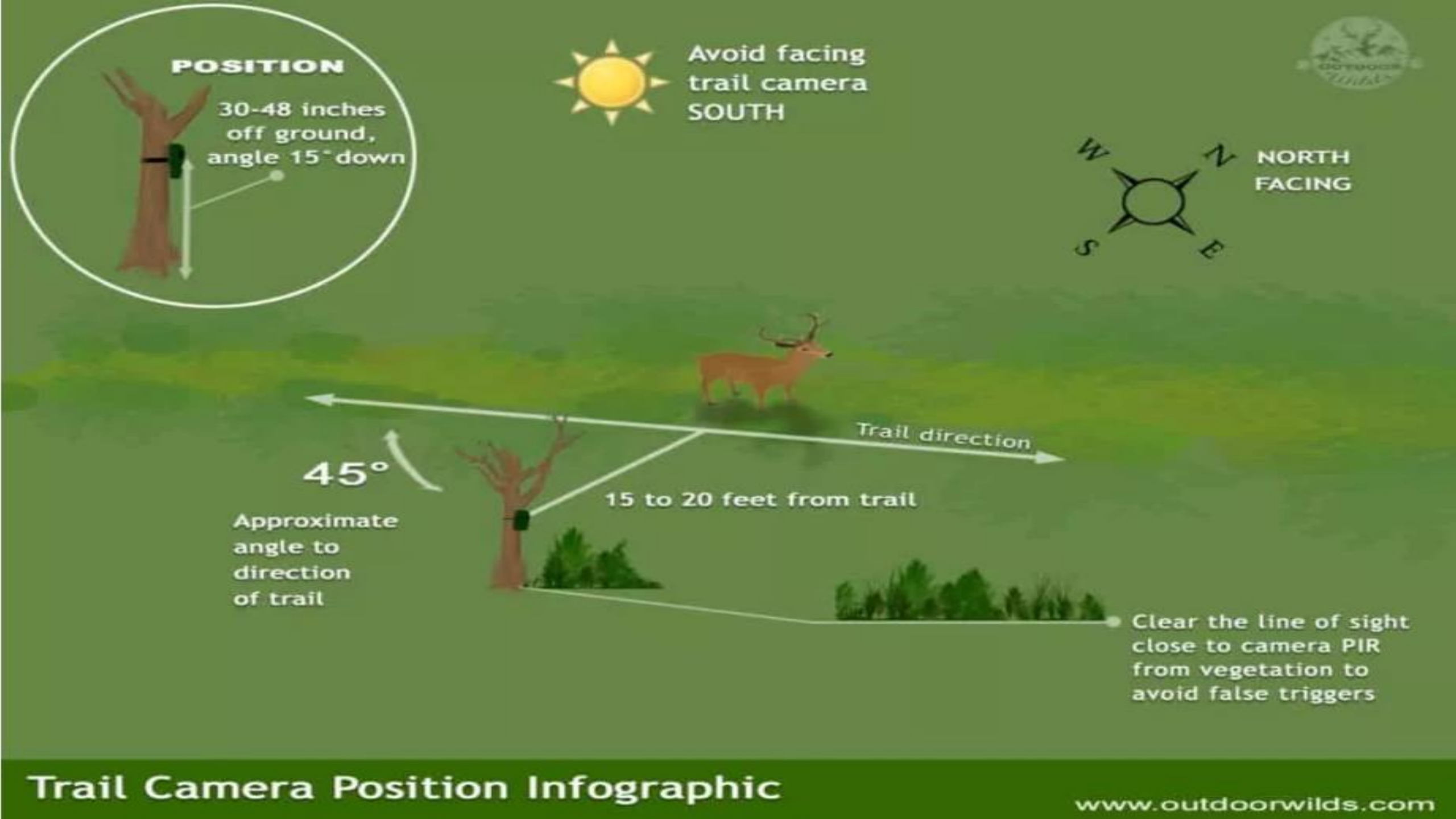


Preparing for the field

- Equipment check
  - Correct settings for cameras
- Driving to and from site locations
  - Navigator
- Bringing necessary equipment
- Hiking to the study site

Camera Trap set up

- Cameras faced North to minimize glare from sun
- Approximately 3 ft from ground on tree
- Bait and lure placed on another tree, approx. 5 ft from ground, 15 ft from camera
- Bait tree had sign with identified code
- Cameras were set to take videos for 30 seconds
- Delay of 30 seconds between triggers


POSITION
30-48 inches off ground, angle 15° down
Avoid facing trail camera SOUTH
NORTH FACING
W
N
S
E
Trail direction
45°
Approximate angle to direction of trail
15 to 20 feet from trail
Clear the line of sight close to camera PIR from vegetation to avoid false triggers
Trail Camera Position Infographic
www.outdoorwilds.com

Reviewing Footage

- North team and South team each reviewed footage of the cameras set up by their own group
- Video files were distributed evenly among group members
- Each person reviewed every video in their assigned files (Time, Date, Temperature, Species)
- Data was entered into a shared *Excel* spreadsheet on *Microsoft Teams*

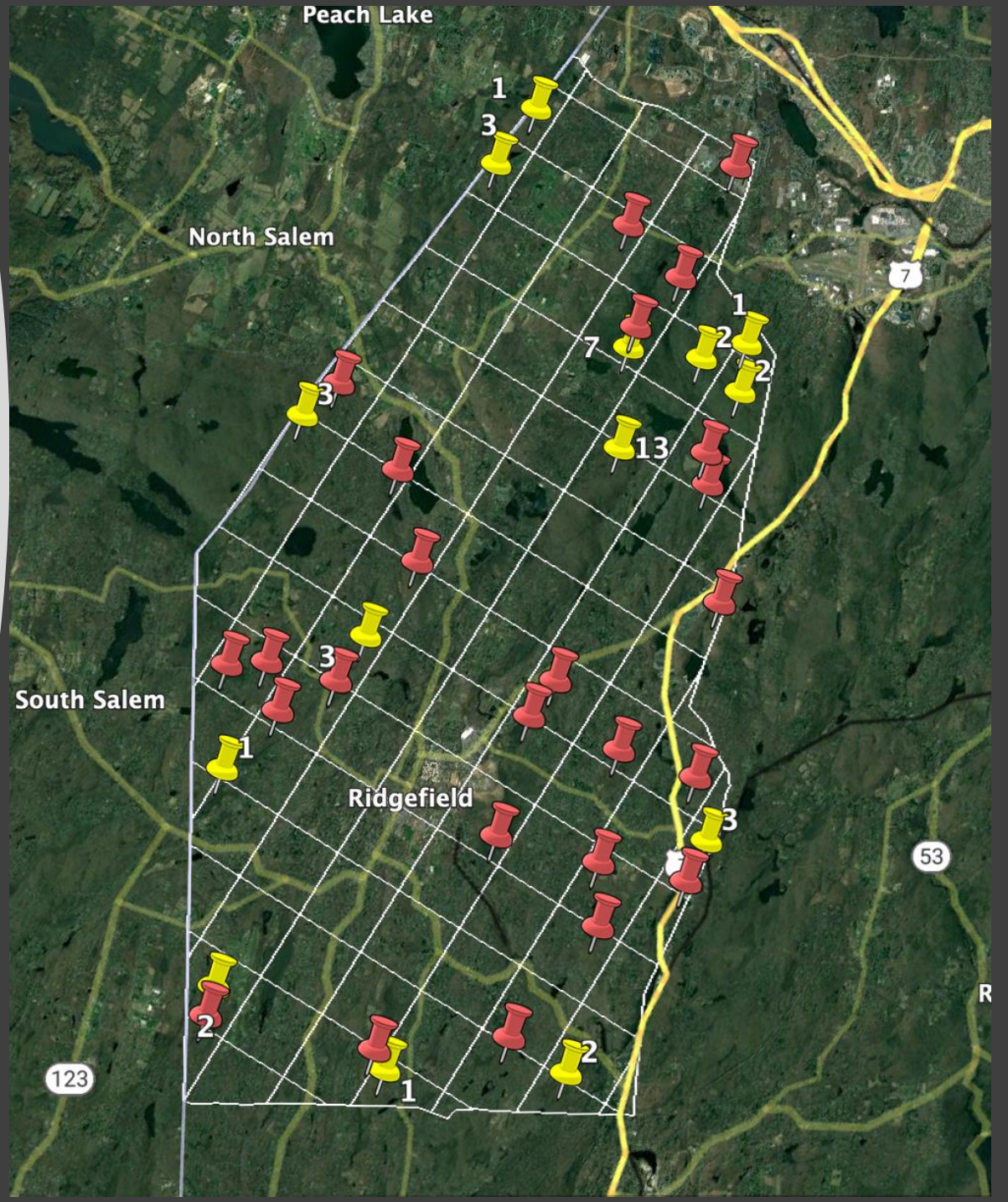
Reviewing Footage (cont.)

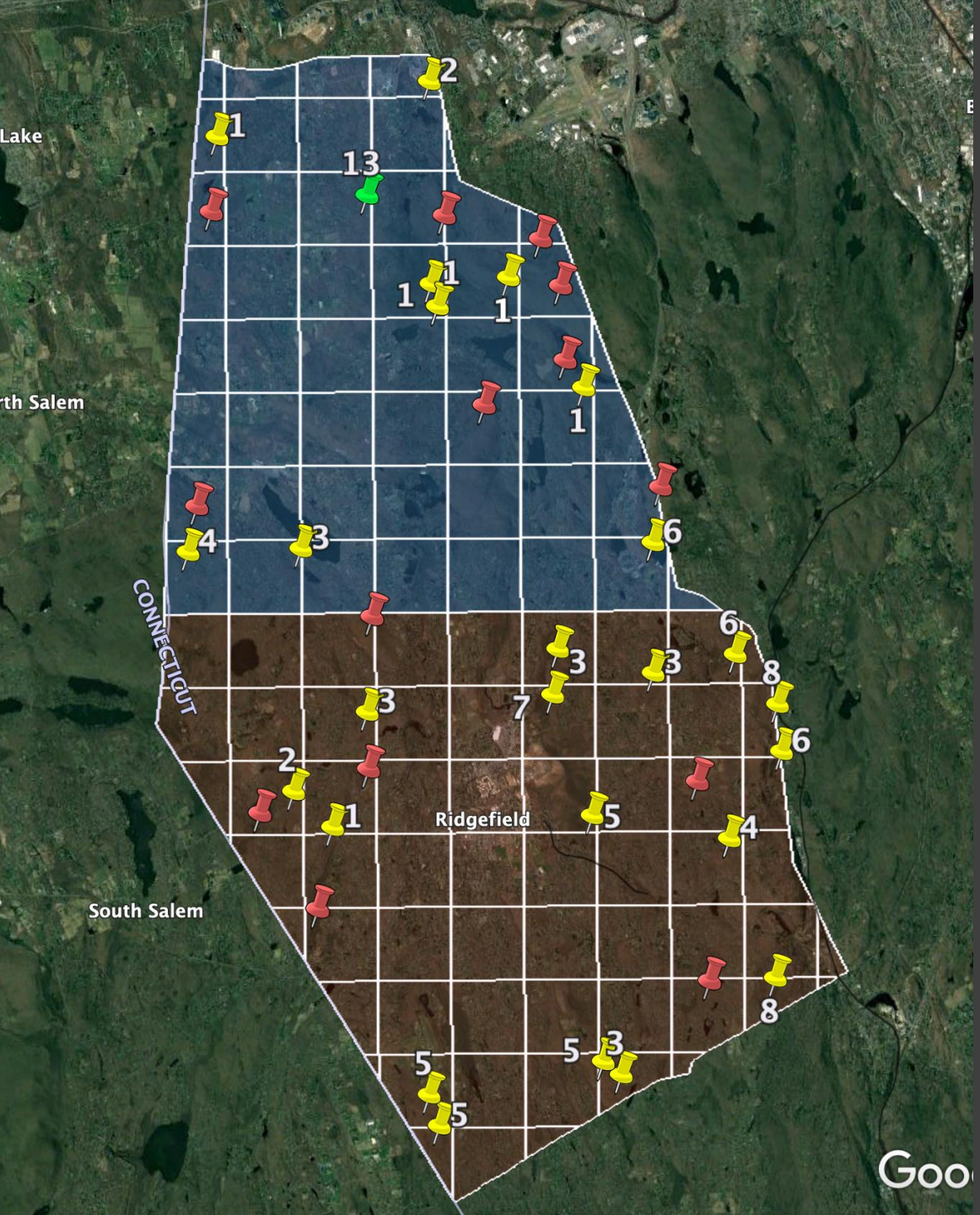
- Peer-Review (Each group member reviewed the same videos as one other teammate to find discrepancies in the data)

- Time Intervals (30 min):
  - Same species- videos must be at least 30 min apart, OR contain multiple individuals of the same species
  - Different species- Enter data for every individual animal of each species

Red Fox

- A total of 44 Red Foxes were spotted in Ridgefield
- North: 32
- South: 12
- Only 2 Grey Foxes were sighted in the Northern section of Ridgefield





Coyote

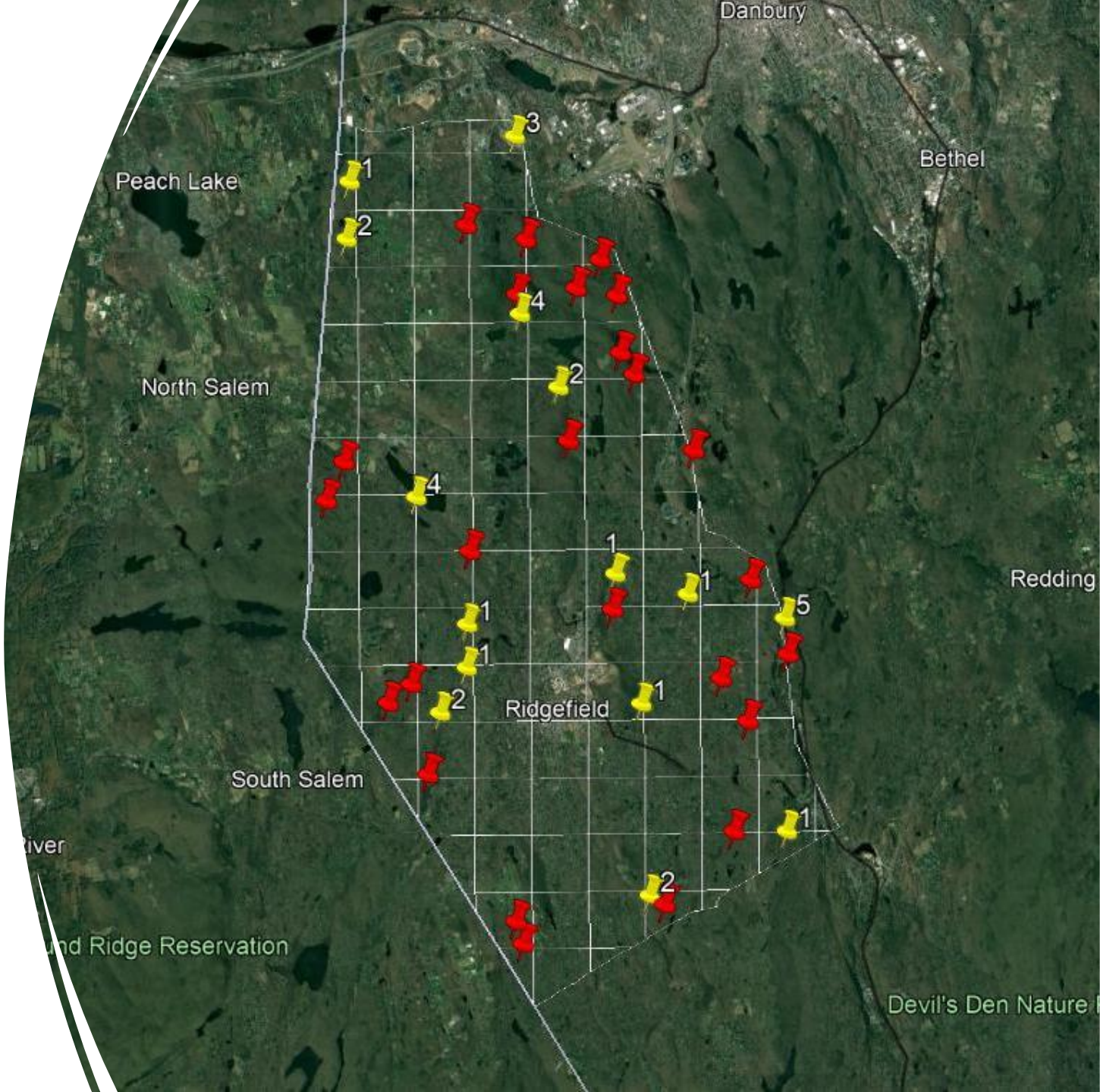
- A total of 107 coyotes were sighted in Ridgefield

- North: 33
- South: 74

Bobcat

- A total of 31 Bobcats were spotted in Ridgefield.

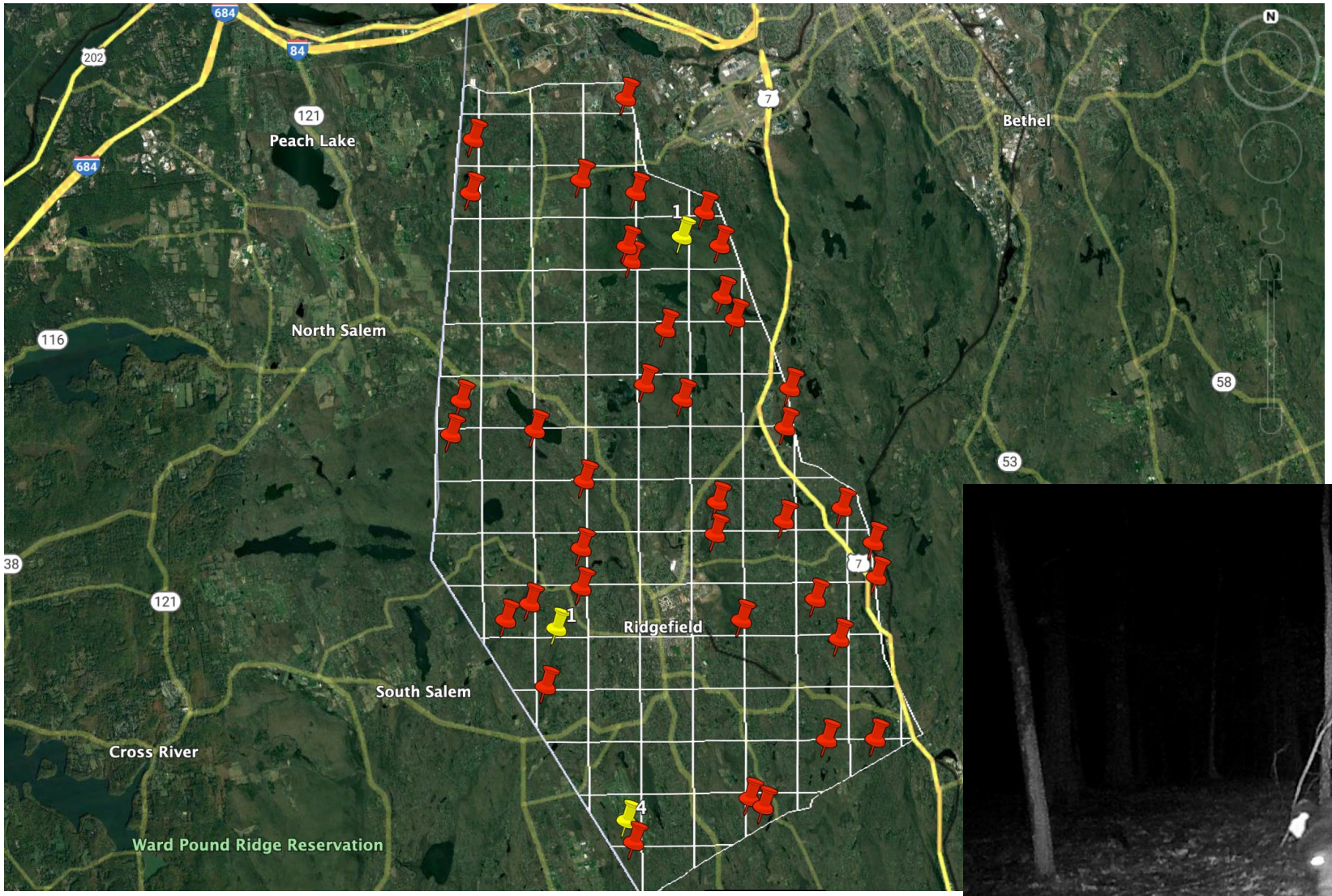
- North: 16
- South: 15

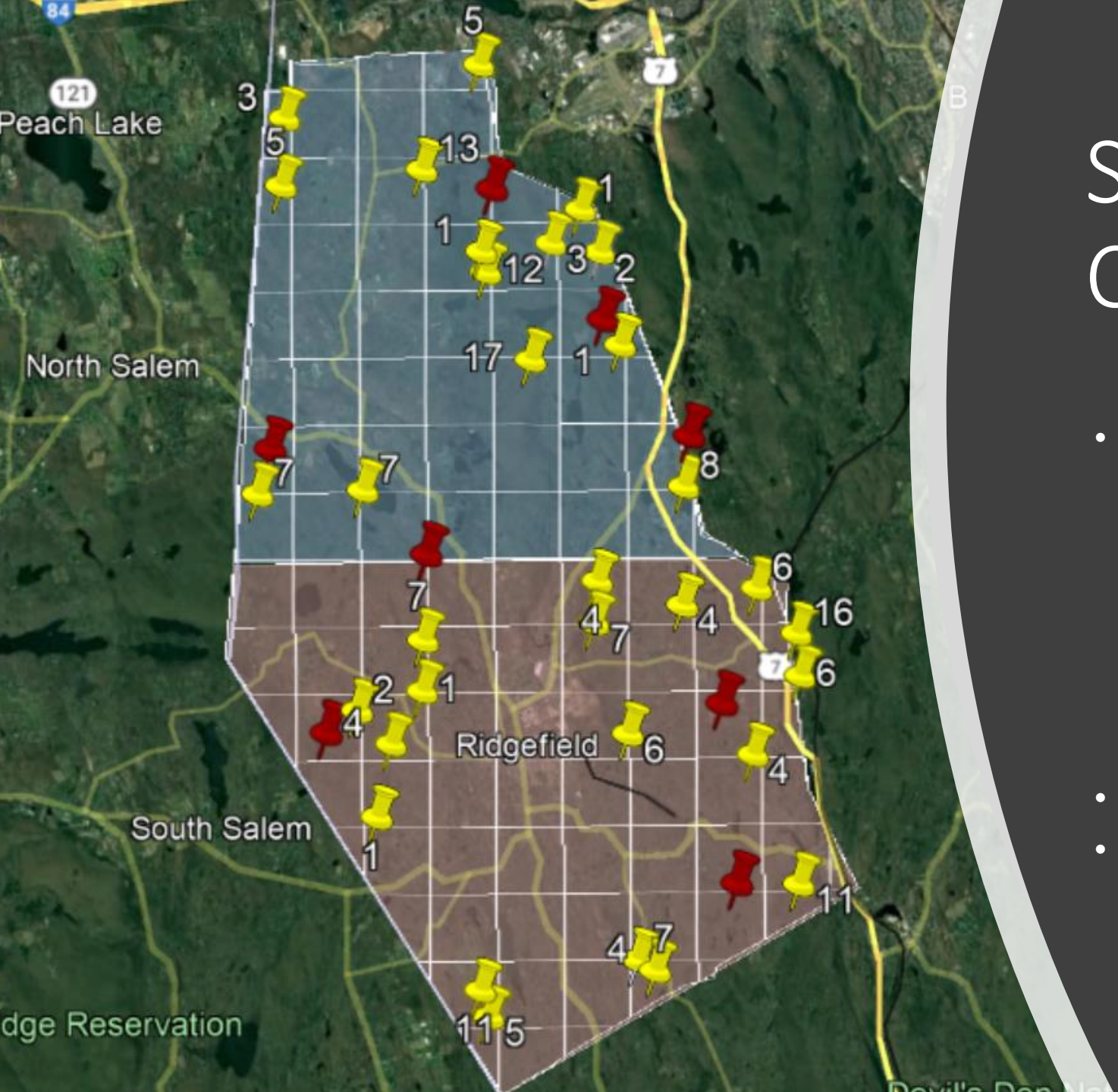


Black Bear

- A total of 6 Black Bears were spotted in Ridgefield

- North: 1
- South: 5



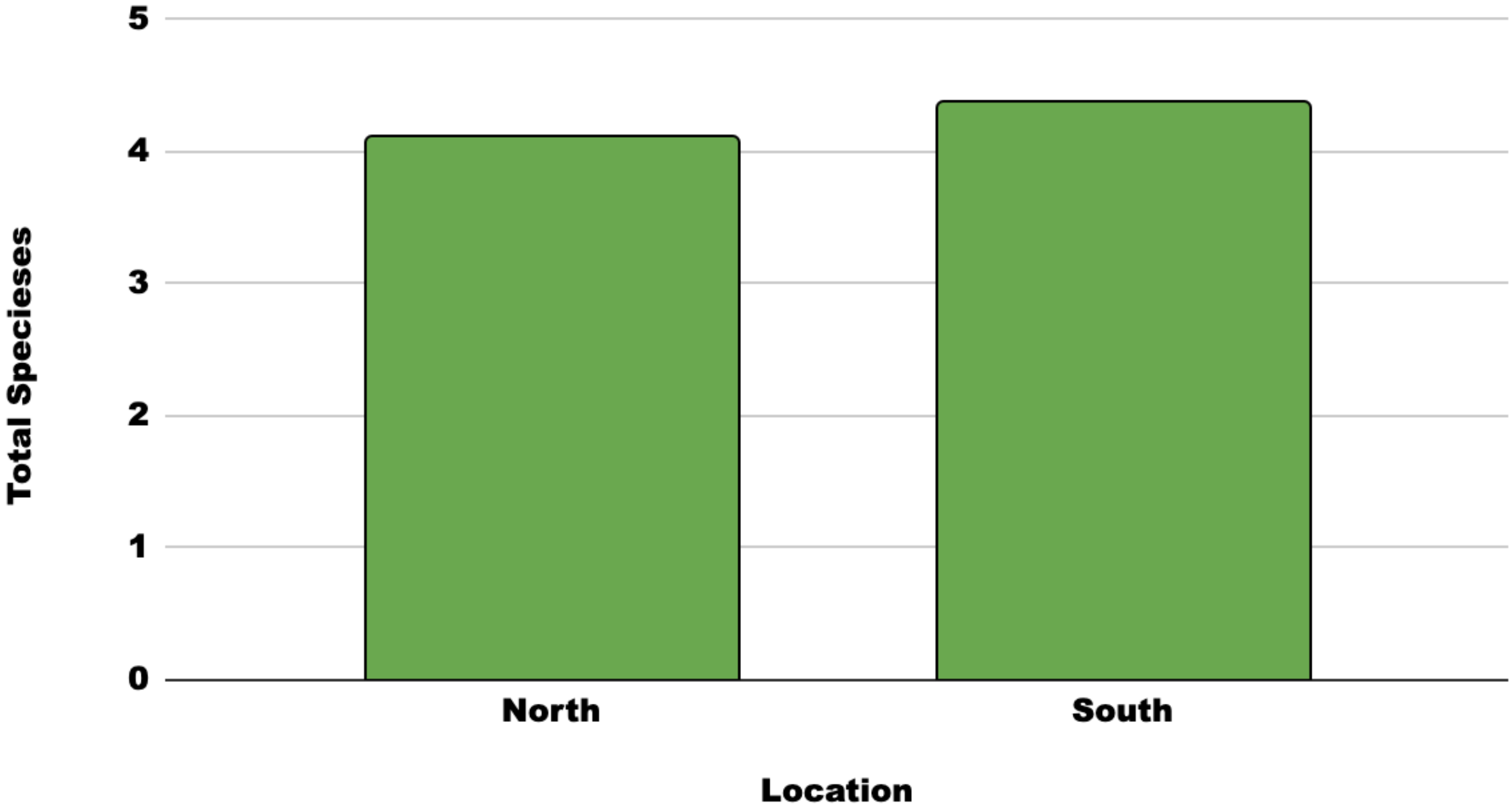


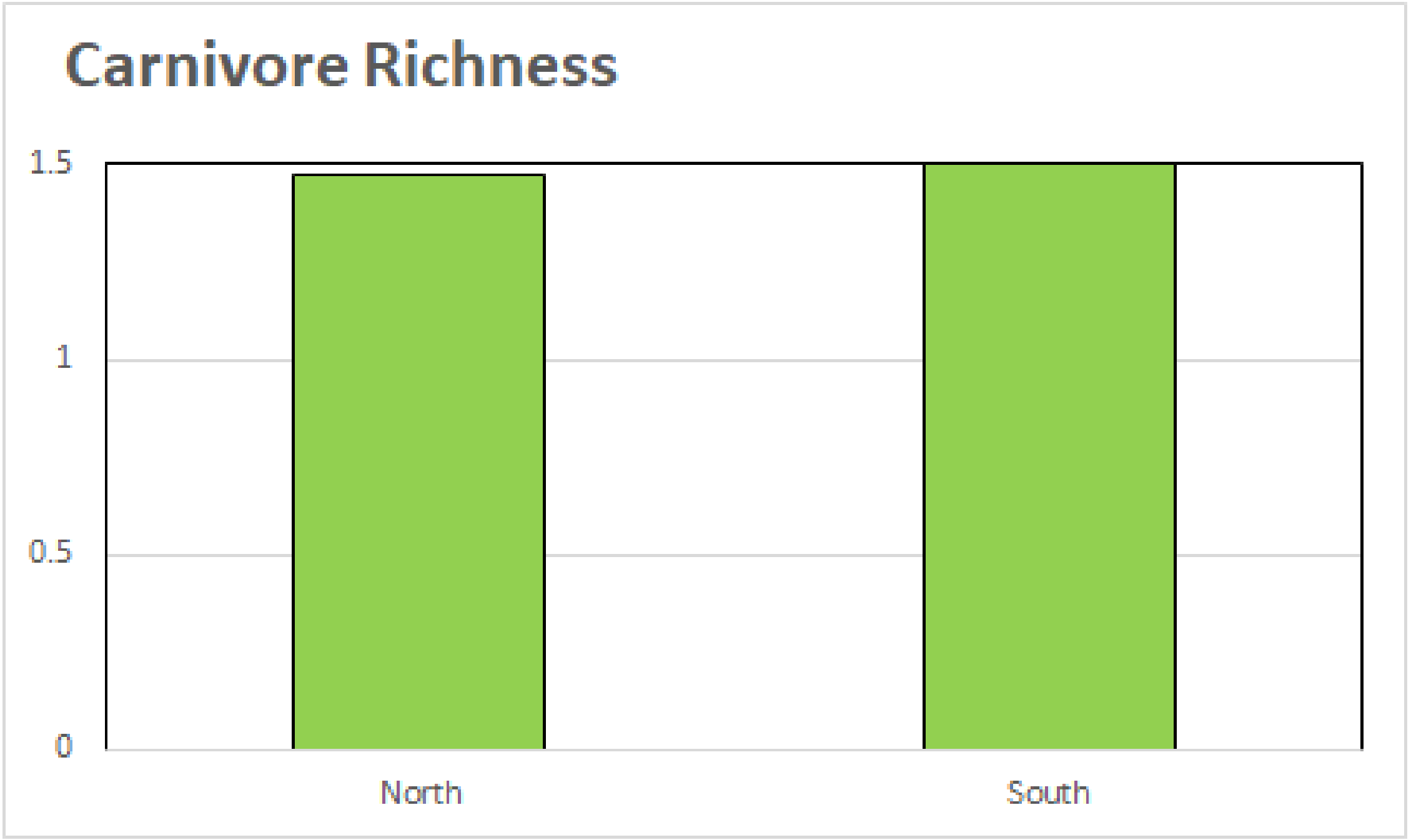
Summary of Total Carnivores

- 190 total carnivore events:
  - Red Fox
    - Grey Fox
  - Coyote
  - Bobcat
  - Black Bear

- North: 84 events
- South: 106 events

Species Richness




Carnivore Richness
1.5
1
0.5
0
North
South

Summary

- This study consisted of covering both the north and south regions of Ridgefield using 42 trail cameras.
- After reviewing the footage and compiling data, we found that, both the North and South regions of Ridgefield have similar species richness
  - 4.1 for average species richness in North and 4.4 in South
  - 1.5 for average carnivore species richness in North and 1.5 in South
- However, the North section had more red fox and the South had more coyote

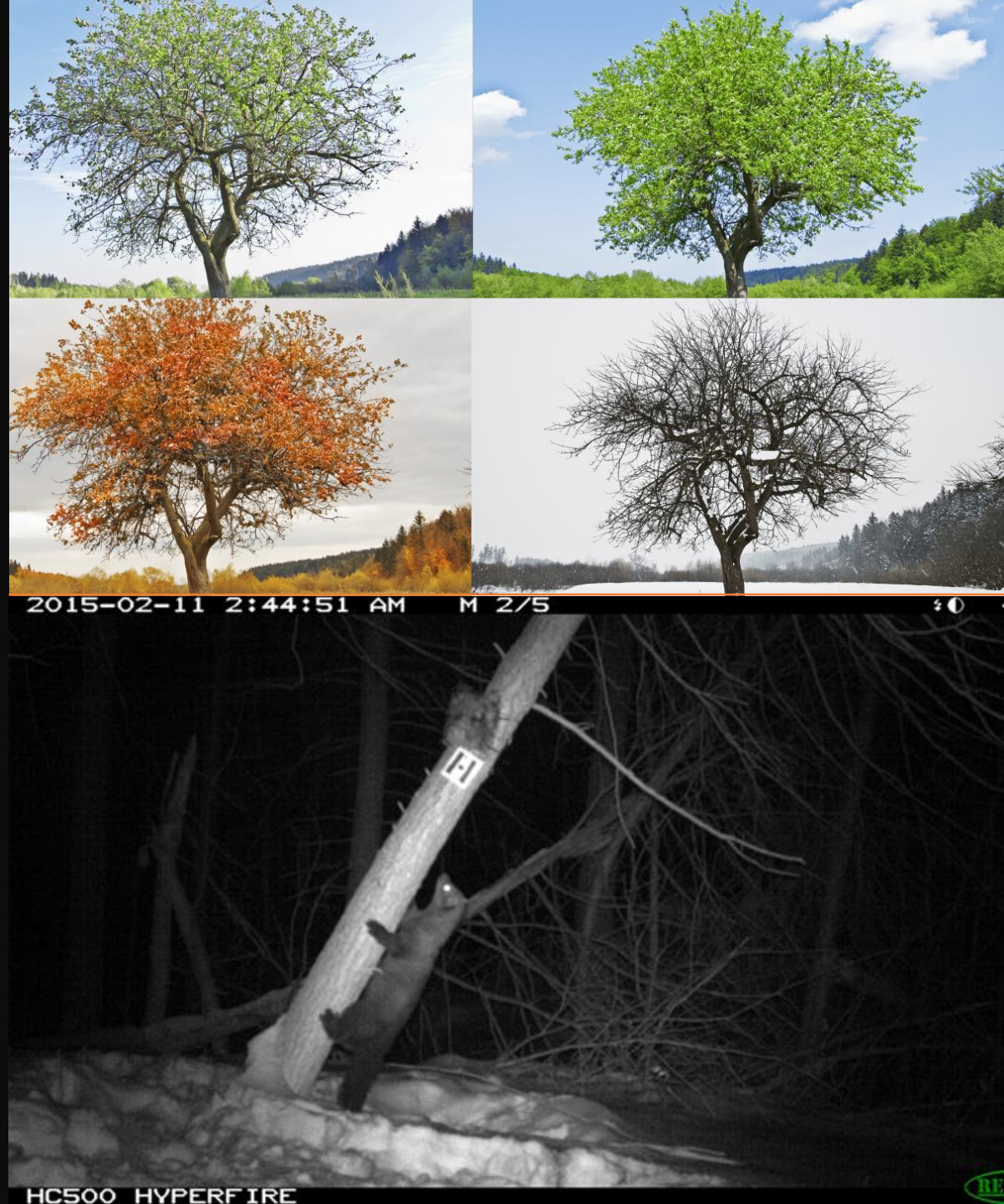
Location	Black Bear	Bobcat	Grey Fox	Red Fox	Coyote
North	1	16	2	32	33
South	5	15	0	12	74

Conclusions

- There is suitable habitat for these animals in both the North and South sections of Town
- Coyotes may be affecting the presence of red fox
  - Driving fox out of areas in the South
  - May also be related to different habitat preferences
- No fisher found in this study, but they have been found in nearby areas in NY

Future Directions

- Conduct studies in a variety of seasons
- Use different bait and lure
  - Fisher seem to prefer beaver meat
- Look at surrounding habitat and land use to see if they are affecting species presence
- Look at human use of various areas
  - High density of trails in Ridgefield
  - Dogs



Acknowledgements

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  - For access to study sites
    - Town of Ridgefield
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Questions?