

Large Mammal Study at Cathance River Preserve

By Nick Merrill, Lauren Sturgess and Blair Kopp

Problem: To determine which species of large mammals that are carnivores, herbivores, and omnivores are indigenous to the Cathance River Preserve and their preferred habitats. Also, to determine the frequency at which these mammals are documented through time, date, and temperature.

Hypothesis: If three different locations are monitored by motion sensitive cameras, then there will be more activity at night than during the day. If there are three different locations with three different habitats, animals caught on camera will be seen in their preferred habitat.

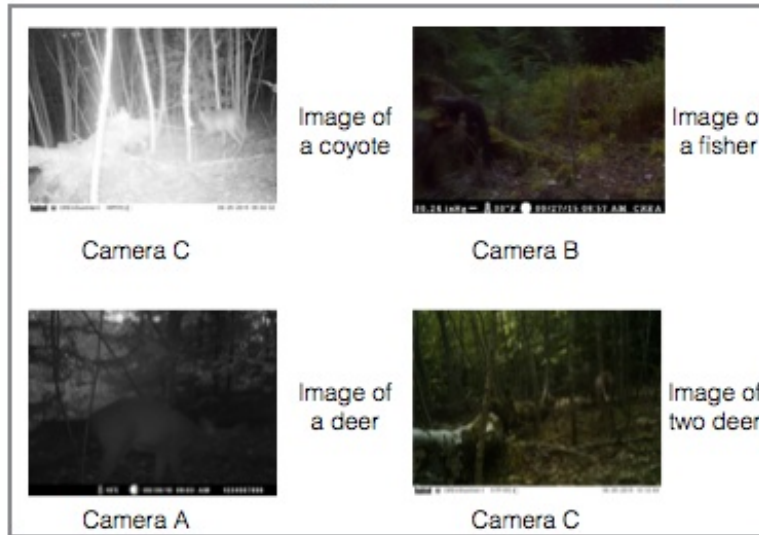
Procedure:

- Set up 4 motion sensitive cameras (two are in the same area catching different views) each in different habitats (vernal pool: Camera A, soft wood forest: Camera B, hard wood forest: Camera C&D).
- Transfer pictures taken from each camera onto a laptop each week, using an SD card reader.
- Examine the data from the pictures, by recording the date, time, temperature, location and habitat of the picture, when the photo was taken and when the species seen.
- Enter data into the data table.



Checking images captured in the cameras on site

Blair Kopp



Observations:

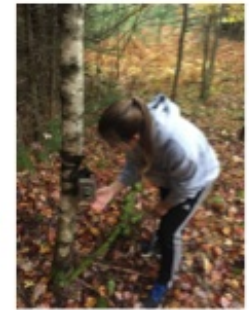
- Camera A is positioned about 30 yards from the entry road, to the left of the road if walking towards the Research Center.

- Camera A is also positioned to view a possible intersection of game trails. There was a sighting of both a snow shoe hare and bobcat in pursuit near this location before camera setup.

- Camera B is located in a patch of soft wood, coniferous forest 40 yards from the river. The camera is positioned to view an intersection of game trails. There were multiple white tailed deer identified at this location.

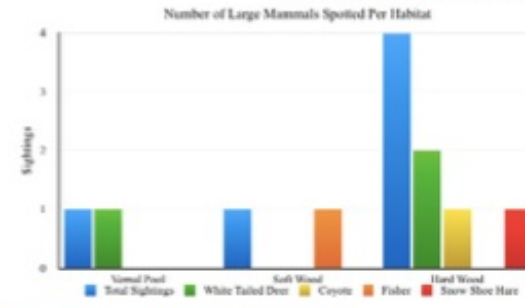
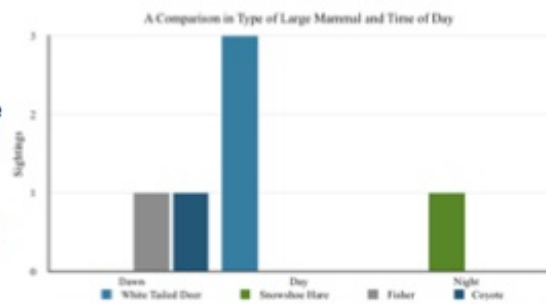
- Cameras C and D are located 60 yards left off the Highland Trail if walking away from the Research Center.

- Coyote scat was identified near Cameras C and D on the Highland Trail and deer scat was identified directly at the camera location.



Resetting Cameras each week after retrieving images

Lauren Sturgess



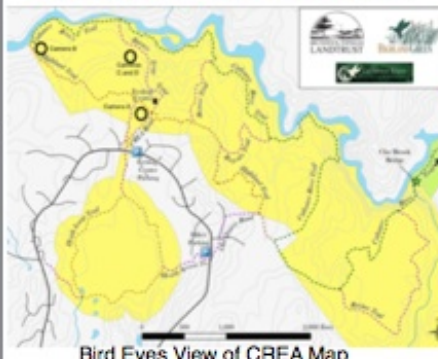
Conclusion:

- Of the animals documented on camera, five out of six were photographed at dawn or during the day. This didn't support the hypothesis that more overall activity would be documented at night.

- All mammals documented were found in habitats they preferred. This supported the hypothesis that had all animals photographed would be photographed in the habitats they prefer.

Date and Time	Temperature (C)	Location	Animal species	Habitat, Camerak, or Orientation	Preferred Habitat
9.24.15 19:23	14.4	C Hardwood Forest	Snow Shoe Hare	Herbivore	Coniferous, some Deciduous
9.25.15 6:04	11.2	C Hardwood Forest	Coyote	Omnivore	Coniferous
9.25.15 10:12	11.2	C Hardwood Forest	White Tailed Deer	Herbivore	Coniferous in winter, mixed forest and wetland borders is also preferred year round
9.27.15 4:57	9.5	B Softwood Forest	Fisher	Carnivore	Softwood forest or wetland
9.30.15 8:03	15.9	A Vernal Pool	White Tailed Deer	Herbivore	Coniferous in winter, mixed forest and wetland borders is also preferred year round
10.7.15 10:06	5	C Hardwood Forest	White Tailed Deer	Herbivore	Coniferous in winter, mixed forest and wetland borders is also preferred year round

- Camera A is the vernal pool location at : N 43°57'20.9" W 069°57'02.0".
- Camera B is the softwood forest location at: N 43°57'29.6" W 069°57'19.4".
- Camera C and D are the hardwood forest location at N 43°57'27.3" W 069°57'02.7".



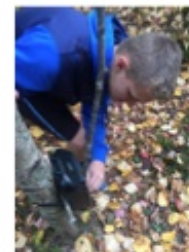
Improvements:

- Finding better locations for the cameras, looking for places with more promising signs of mammal activity or with signs of more mammal diversity.

- It would be very interesting to see how active the locations would be if bait had been used like previous years.

Switching batteries in the cameras each week

Nick Merrill



Thanks

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