

# Look Hoo's Out There!

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Zoology - Independent Research

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## Introduction

Surveys conducted in the spring of 2016 and 2017 determined that three different owl species inhabit the area around Lane Community College's main campus. Species identified in the surveys included the Great Horned Owl (*Bubo virginianus*), the Northern Saw Whet Owl (*Aegolius acadicus*), and the Western Screech Owl (*Megascops kennicottii*)<sup>1,2</sup>. Some of the area surveyed in previous years has been logged since the time of the surveys. The purpose of this occupancy survey is to determine if the same species are still present around the LCC campus.

## Methods

Weekly night surveys conducted at five stations arranged around the LCC main campus area. The method consisted of broadcasting owl calls taken from the Cornell Lab of Ornithology's website via speaker, followed by periods of listening for responses. The Great Horned Owl and adult Barred Owl used the same calling protocol, whereas the juvenile Barred Owl's protocol was different. The data collection protocol went as follows: initiate the broadcast, listen during the wait period, then repeat (if protocol suggests). 15 minute long sessions with no electronic devices used to record. Broadcasted calls came from the Great Horned Owl, Barred Owl, and juvenile Barred Owl. The juvenile Barred Owl call was added upon discovery.

Owl Species:	Great Horned Owl	Barred Owl	Juvenile Barred Owl
Protocol:	15 minute listening post broadcast	15 minute listening post broadcast	5 minute listening intervals x3

## Discussion

During the Summer 2019 survey, we noted an increase in the Barred Owl population from Spring 2019. We observed juvenile Barred Owl around Stations 2-4, which weren't present in prior survey. We predict that the population will continue to expand in the forest behind LCC, unless however, human intervention becomes involved; logging, conservationists, etc.. Even though the Barred Owl wasn't discovered in previous owl surveys, it's a possibility that they were already present, further away from LCC, but migrated towards the LCC area. The recent land management of 2017-2018 behind LCC created clearings which opened up the forest and provided habitat within the brush for small vertebrates such as mice, rats, and voles. These occupants are prey for the larger owl. This could suggest why the Barred Owl is reproducing and expanding because of nutrient availability.

## Results

We identified the Barred Owl as an expanding species in the LCC forest. Barred Owls were not present in previous surveys, however, recently identified in the Spring 2019 survey. They appear to be the dominant owl species within the region, and Barred Owl offspring became known during the Summer 2019 survey. Both adult and juvenile Barred were highly active around Stations 2-4 (southwest region, see figure 2), holding the highest call activity for the survey, but activity was minimal elsewhere. The Great Horned Owls' activity within Stations 1-4 have declined since the Spring 2019 survey, but the activity at Station 5 was high (figure 2). In the Spring 2019 survey, the Great Horned Owl was the most vocally active species, however, the Barred Owl dominated the total calling activity in Summer 2019.

Station Number:	Habitat:	coordinates:
1	Light forest, partial marsh	44.005765 -123.032453
2	Open field, tree line	44.046085 -123.003696
3	Dense forest, neighboring field	43.998699 -123.03494
4	Logging road in forest	44.001884 -123.03679
5	Taphonomy, few trees	45.0000 -123.12345



Specie:	Pellets:	Visual:	Station:	Calls:
Barred Owl	1	0	2, 3, 4	10
Juvenile Barred Owl	0	0	3, 4	7
Great Horned Owl	1	1	3, 5	3