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# Owl Banding at Whitefish Point, Michigan - Spring 1988

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Whitefish Point is located in the eastern Upper Peninsula of Michigan at 46°46', 84°57'W. The point itself is a broad peninsula that extends northeastward into Lake Superior and is bound by Lake Superior and Whitefish Bay on three sides. This creates a funnelling affect for north-bound spring migrants and tends to concentrate birds here (Wood 1914, Kelley 1971).

The Whitefish Point Bird Observatory was established in 1979, with research of the spring bird migration its primary goal. Volunteer banders were scheduled for the banding program. Coverage generally ran from mid-April to mid-May, but the capture effort varied greatly from bander to bander and year to year (Carpenter 1987). In 1988, a station bird banding permit was obtained, a seasonal raptor luring station was established, and a staff of two experienced banders was hired to run the banding program. This paper presents the results of the spring 1988 owl banding program at Whitefish Point.

## Methods

Large mesh nets (generally NEBBA model ETX 12 meter, two tier nets with 121mm stretched mesh) were operated nightly from 1 April to 31 May, unless inclement weather forced their closure. The nets were placed irregularly in the predominantly jack-pine, tag alder woods near the tip of the point, and were run nightly. Ten of these sites, called the "standardized nets," were located at sites that have been used in years past. Previous results have shown these net locations to be very good for catching a variety of birds, including owls. Several other nets were run as additional help was available.

A luring station was established to census the larger owls that otherwise might not be caught in stationary mist nets. Pigeons, (*Columba livia*), were used as lure birds, in conjunction with bow and mist nets. Active luring was done nightly for at least one hour.

All owls captured were weighed and their natural and flattened right wing chord and tail were measured. Plumage and molt details were recorded, as well as the location and time of capture. Whenever possible, owls were aged per remex molt and fault bar pattern and sexed (wing chord data) based on the criteria set forth in the Bird Banding Manual (USFWS

1977). Nets were checked at least every hour, or more often if the night's flight was heavy.

## Results

From ten to thirteen large mesh nets were run on forty-five complete and five partial nights during April and May (see Table 1). Inclement weather (strong wind, rain, or snow) cancelled banding on parts of five nights and all of seven nights.

A record total of 285 owls of six species were captured during this period (Table 2). This includes 266 owls that were banded, two casualties (both Boreal Owls, *Aegolius funereus*, that were killed in the nets by larger owls), two local retraps from a nearby bander, fourteen recaptures of same-season owls, and one owl that was released unbanded. The unbanded owl was a Northern Hawk Owl, *Surnia ulula*, caught in the early morning of 20 April. As no cut down bands were available to use on the bird's short tarsus, he was processed and released unbanded.

Near or slightly above average numbers of Long-eared (*Asio otus*), Northern Saw-whet (*Aegolius acadicus*), and Barred Owls (*Strix varia*) were caught, and an unprecedented total of 163 Boreal Owls were banded, more than triple the previous high total (Wiens 1989).

Twenty-six owls that were banded were not caught in the standardized nets. This includes sixteen owls caught in non-standardized nets, five owls that were caught by hand, and three owls whose capture method was not recorded. Additionally, one Great Horned Owl, *Bubo virginianus*, and one Long-eared Owl were caught by active luring. Nocturnal luring was done on thirty-five nights for a total of 57 hours. A low capture rate of 3.51 owls caught per 100 lure hours resulted.

The banding period ran from 1 April to 26 May, with owls being caught on the first night and next to the last night of banding. Ten or more owls were banded on twelve nights from 7 April to 11 May, with a maximum of 30 on 30 April. The major portion of the owl flight occurred during the 24 April to 1 May period, when 118 owls (44.4% of the season's total) were banded. A secondary peak occurred during the nights of 6-12 April, when 82 owls (30.8%) were banded (see

Figure 1). During both these periods, high pressure weather systems dominated the upper Great Lakes.

No owls were banded on twelve different nights that the nets were open, three in April and nine in May. Not unexpectedly, six of these nights occurred from mid-May on, when the majority of owls have already passed through.

### Species Summary

1. Long-eared Owl. A total of 36 Long-eared Owls were banded, 28 after-hatching-year birds (AHY) and eight after-second-year birds (ASY). Long-eareds were caught from 6 April to 17 May, with the peak occurring during the 25-30 April period, when 19 (52.8%) of the total banded were caught (Figure 1.)

2. Barred Owl. Seven Barred Owls were banded on five nights during the 26 April to 4 May period.

3. Boreal Owl. Boreal Owls were caught from 1 April to 23 May, with the migration peaking in late April. Of the 152 caught in the standardized nets, 83 (54.6%) were adults (ASY) and 69 (45.4%) were SY birds. The adults arrived at Whitefish Point before the SY birds did. The median arrival for adults was 21 April and for sub-adults, 26 April.

4. Northern Saw-whet Owl. A total of 59 Saw-whet Owls were banded--43 (72.9%) SY birds and 16 (27.1%) ASY birds. The median arrival date for adults and sub-adults was the same, 28 April. Of the SY birds, 23 were males, two were females, and 18 were of unknown sex. We were only able to sex one ASY bird (a male) according to wing chord.

5. Great Horned Owl. Only one Great Horned Owl was banded during the spring of 1988, a brown-plumaged bird on 11 April.

### Acknowledgements

The dedicated efforts of the Whitefish Point Bird Observatory staff banders, Peter Polisse and Susan Blackshaw, and seasonal director Terry Wiens made the 1988 banding season very successful. This paper is contribution number 6 of the Whitefish Point Bird Observatory.

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**Table 1.** Nocturnal net hours for the 10 standardized mist nets used during the spring of 1988.

	<u>Total</u>	<u>Percent</u>
Nets Opened	4123.0 Net Hours	75.5%
Nets Closed, due to:		
Inclement Weather	886.8 Net Hours	16.2%
No Bander Present	449.9 Net Hours	8.3%
Net Damage	1.0 Net Hour	+
TOTAL	5461.1 Net Hours	100.0%

**Table 2.** Owls banded at Whitefish Point during the spring of 1988.

<u>Species</u>	<u>Total</u>	<u>For the Standardized Nets Only:</u>		
	<u>Number Banded</u>	<u>Number Banded</u>	<u>Banding Rate<sup>1</sup></u>	<u>Owl Index<sup>2</sup></u>
Long-eared Owl	36	32	0.75	2.02
Barred Owl	7	7	0.17	0.46
Boreal Owl	163	152	3.69	9.91
N. Saw-whet Owl	59	49	1.19	3.20
Great Horned Owl	1	-	-	-
TOTAL	266	240	5.80	15.59

<sup>1</sup>Owls banded per 100 net hours.

<sup>2</sup>Owls banded per 1000 M<sup>2</sup> netting effort for the season.

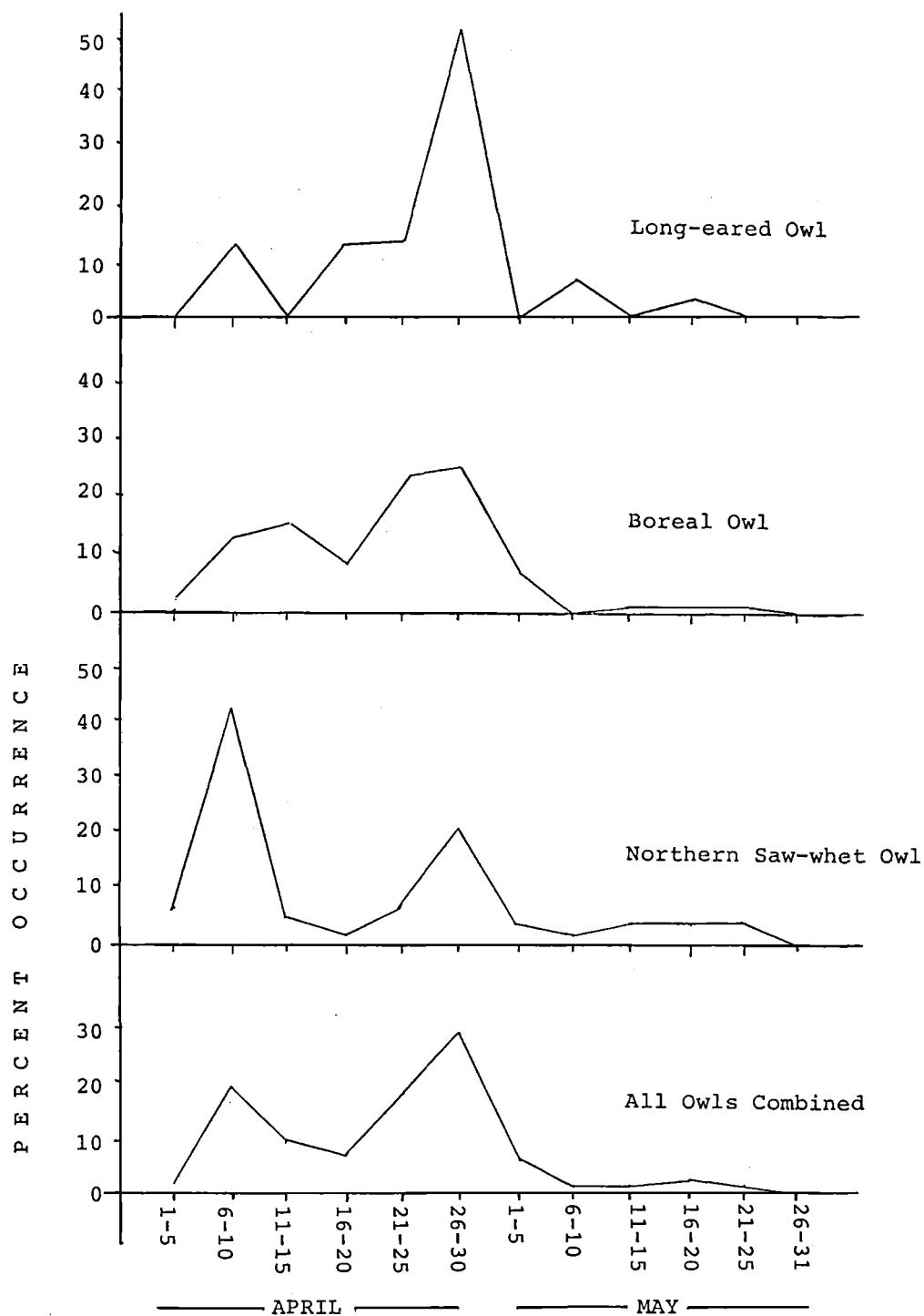


FIGURE 1: Seasonal variation in capture of the three most common owl species and all owls combined, caught in the standardized mist nets.