



Beaverhill Bird Observatory

Weekly Update September 13 - 19, 2023

This week marks the start of an exciting new project here at the BBO: Motus tagging northern saw-whet owls. The Motus Wildlife Tracking System ('motus' is Latin for movement) relies on an expanding network of stations to receive transmissions from tiny radio tags deployed on birds, bats and even insects. A major reason Motus tagging represents an exciting innovation in the study of migration is that tags can be deployed on small passerines and insects that transmit data for real-time tracking. Most other tags are either too heavy for smaller animals or can only store data and not transmit it (e.g., geolocators, GPS loggers), requiring recapture of tagged individuals to access data. To receive data from Motus tagged individuals they just need to fly within 15 km of a receiving station. For more information, see the article by Ethan Denton in the August 2023 edition of our newsletter *The Willet* (<http://beaverhillbirds.com/publications/the-willet/>).

The BBO has been home to a Motus receiving station for several years and on September 16th we deployed our first Motus tag. The purchase of fifty Motus tags was made possible by the generous donations of individual sponsors, who were given the opportunity to name the tagged owls. Therefore, our first owl not only received a Motus tag but also the name Daisy. We wish Daisy the best of luck on her journeys and hope that she will provide us with valuable data. The expansion of Motus is enabling much greater insight into the migratory habits of birds and other animals and we are excited to be involved!



Figure 1. Daisy, our first northern saw-whet owl equipped with a Motus tag.

College. While the class was here, the captures were slow but the students still got observe the banding of a nice handful of birds because we opened the feeder nets. This allowed us to additionally capture a white-breasted nuthatch, along with a bunch of chickadees.

This week we thank the following volunteers for their contributions to the BBO's operations: Leonard, Gabby, Maud, Foster, Megan, Marissa, Kelsi, Jennifer, Jay, and Jenelle.

It has been a slow week for fall songbird migration with 112 captures, including five white-crowned sparrows. Unlike their close relative, the white-throated sparrow (which we capture in greater numbers), this species consists of multiple subspecies. The subspecies we capture here is the Gambel's white-crowned sparrow (*Zonotrichia leucophrys gambelii*). It is the most northerly breeding subspecies, nesting throughout Alaska, British Columbia, the territories, and eastward to Hudson Bay. Visually the subspecies vary most strikingly in lore colouration (dark or white) and bill colouration (yellow, orange, or pink). Our Gambel's has a whitish loreal region and orange bill. There are widely considered to be five subspecies. The other subspecies that is present in Alberta is the mountain white-crowned sparrow (*Zonotrichia leucophrys oriantha*), which breeds in our southern Rockies and mountains of the western US. It can readily be told from the Gambel's by its dark lores and more reddish bill. Next time you see a white-crowned sparrow, see if you can delve a bit deeper and identify what subspecies you are looking at!

There were some other notable happenings this week. We hosted our first owl banding event of the season. A fourth pileated woodpecker was captured for this fall. We hosted an ornithology class from our head biologist's alma mater, Lakeland



Figure 2. The two subspecies of white-crowned sparrow found in Alberta: mountain white-crowned sparrow (*Zonotrichia leucophrys oriantha*; left) and Gambel's white-crowned sparrow (*Zonotrichia leucophrys gambelii*; right). Note the difference in bill and loreal colouration.

Table 1: Migration Monitoring banding totals for Standard Nets.

Species	Banded	Repeat ¹	Return ²	Foreign ³	Other ⁴	Total
American Redstart	1					1
Black-capped Chickadee	1	5				6
Hermit Thrush	1					1
Magnolia Warbler	1					1
Myrtle Warbler	12	1				13
Pileated Woodpecker	1					1
Ruby-crowned Kinglet	1					1
Slate-coloured Junco	10	1				11
Sharp-shinned Hawk	1					1
Swainson's Thrush	2					2
Wilson's Warbler	1					1
White-throated Sparrow	3					3
TOTALS	35	7	0	0	0	42

449 net-hours

9.4 captures/100 net-hours

1 Banded recently (within 90 days) at the BBO

2 Banded at the BBO >90 days prior to recapture (e.g., in a previous year).

3 Banded at a location other than the BBO

4 Caught in a mist-net but not banded (e.g., escaped net).

Table 2: Migration Monitoring banding totals for Experimental Nets.

Species	Banded	Repeat ¹	Return ²	Foreign ³	Other ⁴	Total
Black-capped Chickadee	6	2				8
Clay-coloured Sparrow	2					2
Common Yellowthroat	1					1
Downy Woodpecker		1				1
Gambel's White-crowned Sparrow	5					5
House Wren	1	1				2
LeConte's Sparrow	1					1
Lincoln's Sparrow	1					1
Myrtle Warbler	12	1				13
Orange-crowned Warbler	4					4
Ruby-crowned Kinglet	3					3
Slate-coloured Junco	8	2				10
Swainson's Thrush	2					2
Tennessee Warbler	1					1
Wilson's Warbler	5					5
Western Palm Warbler	2					2
White-throated Sparrow	9					9
TOTALS	63	7	0	0	0	70

137 net-hours

51.1 captures/100 net-hours

1 Banded recently (within 90 days) at the BBO

2 Banded at the BBO >90 days prior to recapture (e.g., in a previous year).

3 Banded at a location other than the BBO

4 Caught in a mist-net but not banded (e.g., escaped net).

Table 3: Owl monitoring banding totals.

Species	Banded	Repeat¹	Return²	Foreign³	Other⁴	Total
Long-eared Owl	3					3
Northern Saw-whet Owl	30		1		1	32
TOTALS	33	0	1	0	1	35

1 Banded recently (within 90 days) at the BBO

NSWO Male (23 captures)

2 Banded at the BBO >90 days prior to recapture (e.g., in a previous year).

37.5 playback hours

3 Banded at a location other than the BBO

61.3 captures/100 playback hours

4 Caught in a mist-net but not banded (e.g., escaped net).

NSWO Female (9 captures)

36.5 playback hours

24.7 captures/100 playback hours

Long-eared Owl (3 captures)

36 playback hours

8.3 captures/100 playback hours