



**Northern Saw-whet Owl Portrait**

## **Northern Saw-whet Owl Migration Monitoring Report 2017**

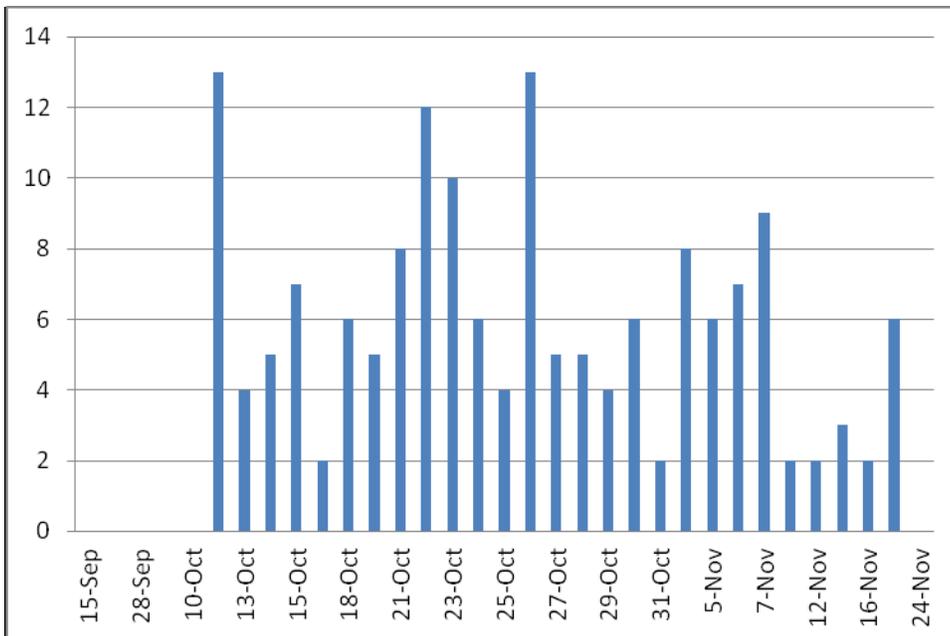
Dawn Garcia  
NSWO Monitoring Project Assistant  
[avifan59@gmail.com](mailto:avifan59@gmail.com)  
[www.birdbling.blogspot.com](http://www.birdbling.blogspot.com)  
Altacal Audubon Society  
[www.altacal.org](http://www.altacal.org)



## Northern Saw-whet Owl Season Summary 2017 at the Big Chico Creek Ecological Reserve

### Abstract

Ken Sobon directed the spring and fall banding efforts as the new NSWOW Migration Monitoring Director. We banded 16 new owls during late January and February and early March during our winter/spring migration banding efforts. Seven of these individuals were recaptured during the same season. No fall 2016 owls were recaptured. Our fall migration monitoring season was amazing, with a total of 162 new owls banded, the highest number of owls we have encountered over all monitoring years. We aged 75% of the owls as HY (n=120) and 25% as AHY (n=40). We had one recapture of an owl previously banded at the Reserve during Snow Goose Festival 2017, nine months earlier. We also had a record number of same season recaptures (n=13). We set up nets on 19 nights from 15 Sept- 24 Nov, but only captured owls on 14 nights from 12 Oct – 18 Nov (Figure 1). This range of arrival falls in line with our previous years timing of fall migration at the BCCER. We took feather samples from 32 owls for a researcher who will be conducting isotope analysis to determine where the Reserve owls come from. We continued our efforts to engage the community to learn about NSWOW by leading field trips and recruiting new volunteers.



**Figure 1.** 2017 Banding dates (N=19) and number of new owls captured (N=162)

### Results and Discussion

#### Winter/Spring Summary

We captured 16 new owls and recaptured seven individuals; one bird was captured three times after its original capture from 26 Jan. We ran the station for 16 nights spanning from 26 January – 11 April. We captured owls from 26 Jan-2 March on eight nights. Two owls were captured during the Snow Goose Festival event on 26 Jan (a similar effort was conducted at B CEP, but no owls were detected). One owl was captured 9 months later during fall migration. Of the 16 owls, six owls were hatched in 2016, the remaining 10 were older. Nine were females, six were of unknown sex, and one was male. The male was at least three years old. We speculated that the male might stay to breed on the Reserve. Nest boxes were installed but there was no use by NSWOW. A Western Screech Owl (*Megascops kennicottii*) did nest in box #15 and raised two young (Figure 2).



**Figure 2.** Western Screech Owl mom and two chicks, box 15

### **Fall 2017 Owl Population**

Our fall migration monitoring season was amazing, with a total of 162 new owls banded, the highest number of owls we have encountered over all monitoring years (Figure 3). We also had a record number of same season recaptures (n=13).

### **Age**

Young owls made up 75% of the population this year (N=36) and 12 of these were three years or older (Figure 2). 19 hatch year (HY) owls were hatched in spring 2016 (Figure 2). Although NSWOW can live over 9 years (info based on banding), these tiny predators don't typically have a long lifespan. It was good to see so many older birds this year.

### **Sex**

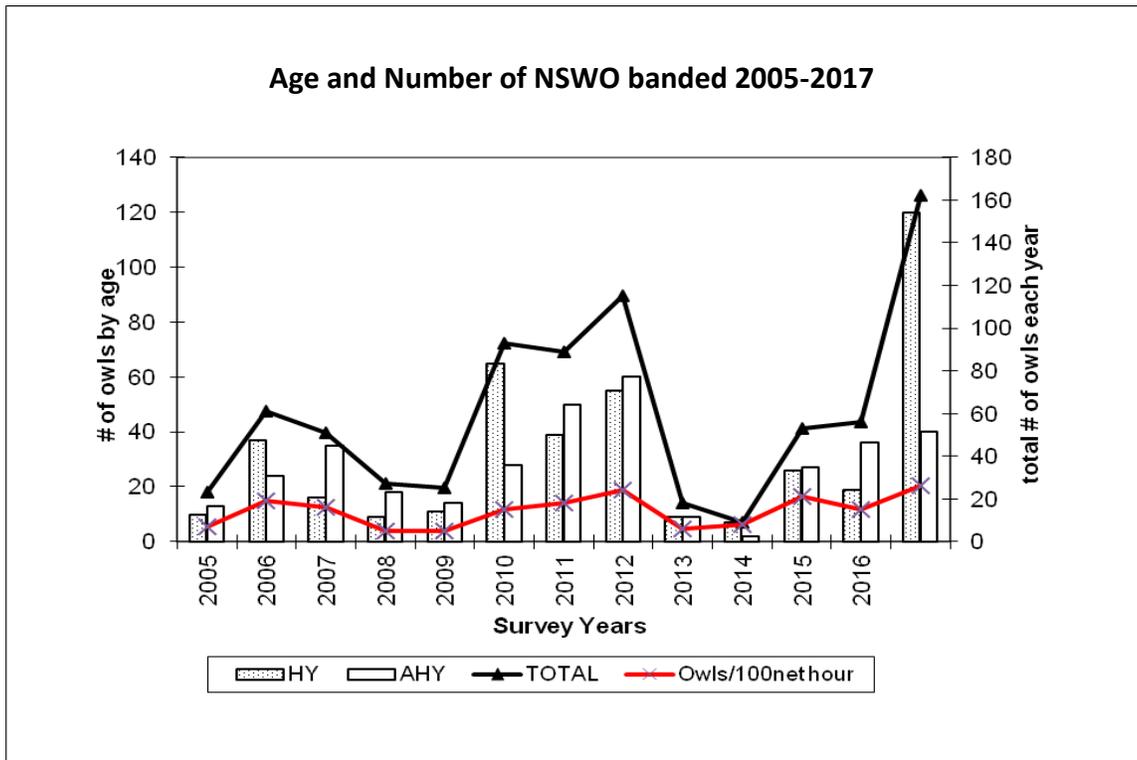
Sex is determined by the wing chord length and mass of the owl. Females are larger than males and there is an overlap zone between the sexes. As usual, our population consisted of mostly females, 121 females, 11 males, and 30 of unknown sex. Theories about this dramatic ratio seen at all NSWOW owl banding stations include, 1) the males remain on territory and do not migrate and 2) males are not attracted to the broadcast of the audiolure we use to attract the owls, and therefore rarely fly into the nets. We heard several of them calling around the nets, competing with the audiolure.

### **Recaptures**

This year we had only one recapture from our January 2017, and recaptures are generally low over all years ranging from 0-2 recaps. The low recapture rate indicates that the owls don't always use the same migration route and wintering areas used in previous years, and/or are savvy to the nets and audiolure after being captured before (but see below), or may have a variable adult survival rate year to year. I assume a combination of the three.

We had 13 same-season recaptures, ranging from 3-14 days from original banding, indicating some owls are spending time on the Reserve. The factors that would keep them around would be a good prey base and adequate

habitat for foraging and roosting. This is a record number of same-season recaps and most owls maintained a good weight, proving there were a good amount of rodents out there!



**Figure 3.** The number of owls by age: young (HY) shown as hatched bars and adults, (AHY) shown in solid white bars, banded during fall migration. The second Y axis (right) and black line show the total number of owls banded each season. In 2017, we captured 162 owls total consisting of 120 hatch year birds and 40 adults (data were not collected on two owls). The red line indicates how many owls we captured per our efforts that season (owls/100 net hours), and is the best way to compare our results each season.

**Banding Effort and Owls per Effort**

We captured more owls for our banding efforts than all previous years; in 2017 we captured 26 owls for each 100 net hours of banding. That translation means we averaged 26 owls over five nights of banding. Our second highest year was in 2015, with 20 owls captured over five nights of banding. Our lowest year was in 2009; we averaged four owls over five nights of banding (Figure 3). The low years can make for very long nights!

The banding effort is defined as the number of owls captured/number of hours we had the nets erected (net hours). It defines how much time we spent attempting to capture owls and standardizes our efforts so we can compare them between years and with other banding stations. Here is an example. In one evening, we have 5 nets up = 5 net hours. We band for 4 hours, so each night = 5x4 =20 net hours each night. In 2017, our total net hours were 619 and we captured 162 new owls. So=162 owls/619 hours = 0.26 owls/net hour. To make more sense of it we multiply by 100=26 owls per 100 net hours.

**Incidental Captures**

Every year we capture a few species incidental to our NSWO targets, This year we netted one Northern flying squirrel (*Glaucomys sabrinus*) and three Pallid bats (*Antrozous pallidus*). Atypically, not one Western Screech Owl was captured this season, although a pair called randomly throughout the season around the barn and ranch house.



**Figure 3. Pallid Bat, internet picture**

### **Isotope Analysis**

We took small feather clips from the owls and sending them to a University student for isotope analysis. The analysis should reveal where these birds were hatched, and if an older bird, where they have traveled. We are very excited to learn the results of this project! Where these birds come from is one of our main questions and purposes for banding. At our site, banding has not revealed the answer, other than the two foreign recaptures, one from Montana in the same season and one from Iowa (a year later). Fortunately we are involved with a new research project to determine just that.

### **Community Outreach**

Educating the community about the saw-whets is an important part of our project. Ken brought up several students and we also conducted field trips with the Reserve naturalist Jon Aull and had several guests visit over the season. We recruited and trained several new volunteers that helped throughout the season.



**Figure 3. Two new volunteers Jessica and Tanner, with NSWO**

**Project Support and Volunteers**

Logistical support continued this year from CSU Research Foundation and Altacal Audubon Society. Main banders were Project Directors Ken Sobon and Julie Newman, and banders Dawn Garcia and Julie Woodruff. We had many volunteers new and seasoned including Amber P, Brian C, Carol Anderson, Jessica Shippen, Tanner Hansen, Erika Iacona, Wyatt Hersey, Mary Muchowski, Dan Roskopf, Scott and Liam Huber, Cris Cline, Maureen Morales and Brenda Sobon. Thank you project sponsors, banders and volunteers!