



Report to the Nuttall Ornithological Club

Common Nighthawk Productivity Research

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Summary

New Hampshire Audubon's Project Nighthawk has been monitoring Common Nighthawk nesting since 2007 in conjunction with a rooftop gravel nest patch experiment. Few nests are confirmed in New Hampshire each year and many are not successful, especially on rooftops. Reasons for nest failure are not yet known and often the inability to access a roof restricts our efforts to determine the cause. In 2016 we anticipated a unique opportunity to monitor rooftop nesting success with cameras at two sites where there had been successful nests in 2015, providing a high likelihood that the birds would return to nest on these same rooftops. We received a \$5,500 grant from the Blake-Nuttall Fund which allowed us to place two cameras on these rooftops prior to nest initiation, but unfortunately the nighthawks did not nest at these sites in 2016. We relocated one nest at fledging, too late for camera monitoring. We relocated the second nest on a ground site unsuitable for camera installation, but with access for visual monitoring of productivity and post-fledging observations. There is little data on post-fledging nighthawk behavior or success and this provided valuable information on this time period. We conducted additional nest monitoring to attempt to locate nest sites in natural settings but were unable to find a nest where we could place a camera. We are still in the process of compiling final data on all potential or confirmed nighthawk nest locations in the state but there are less than 15 in total. Numbers at two traditional nesting areas have declined but we also have at least two new nest sites not previously known.

Nighthawk Nest Cameras

Prior to the 2016 nesting season we obtained two cameras and installed them on the two rooftops (one in Concord and one in Franklin) as soon as nighthawks were observed in the area of the rooftops but before nesting had begun. Both building owners were enthusiastic and provided logistical help and invaluable support. At the Concord site, our contact at White Mountain Imaging even loaned his personal solar panel to run the camera so we would not need to change the batteries (see photo in Appendix).

Unfortunately, the nighthawks proved yet again that when it comes to field work with wild birds, the best laid plans often require changing! The nighthawks did not nest on either roof. We continued to monitor the area but by the time we located the nesting site in Franklin, the birds

left shortly after, indicating probable fledging. The Concord pair finally settled in late June and we located the nest on the ground at a business near the original rooftop site (photos in Appendix). The site was not suitable for a camera installation because of theft concerns and ATV activity, but it could be monitored by volunteers. We set up a nightly watch schedule with volunteers monitoring nest success and recording behavior each night. One chick fledged successfully and we had unprecedented opportunities to observe the chick as it began flying and feeding itself but still being fed by the parents. The chick was last present on August 15 at 39 days old.

We also intended to install a camera at a natural nest site in the Broken Ground area of Concord where we have had as many as four male nighthawks displaying. Unfortunately, we had only one regular male in the area this year and it was not displaying near previous nests. We were never able to locate the nest or even confirm a female. We will try again to deploy nest cameras in 2017. We determined that it was not feasible to deploy radio transmitters on young nighthawks this year given available funding and the presence of only one nest in our primary study area.

Additional Nighthawk Monitoring

In addition to the Concord and Franklin locations, we also continued to monitor nighthawks in the Ossipee pine barrens. We had fewer birds in traditional locations and were unable to confirm any nests although behavior indicated that nesting was likely attempted at three locations. Vegetation growth at these sites may be contributing to fewer nighthawks and we are communicating with The Nature Conservancy who owns and manages the lands.

We received reports of nesting nighthawks at two new sites. One was on a mountaintop near the Ossipee pine barrens that was confirmed by defensive behavior but nest success is unknown. The other was a nest with two eggs photographed on July 20 at an old timber site in Conway. We were unable to determine nest outcome on two subsequent visits.

Our Keene partner, the Ashuelot Valley Environmental Observatory (AVEO), confirmed a successful rooftop nest with one chick that was found a few days before the chick fledged. The chick was located on a side street after it left the roof, but could not be relocated the next day. We also assisted AVEO in checking a stone roof at Keene State College that was scheduled to be demolished in July. The roof had nighthawk activity in June but no nest was found.

We are still compiling the final data from the nesting season but the number of confirmed nest sites is five at present, slightly higher than most years due to the new sites. As is often the case, productivity is only known from one nest (Concord) and the grant from the Blake Fund made that possible. Probable nesting occurred at four sites and possible nesting at four additional sites for a total of 13 potential nest sites in the state. We have also been corresponding with the NH Fish & Game regarding nighthawk mortality in relation to wind turbine sites.

Funding and Volunteer Contributions

The 2016 Blake-Nuttall Fund grant helped to leverage a \$2,700 grant from the Gertrude Couch Trust. The project also received donations from individuals. Volunteer nighthawk watchers are critical for monitoring efforts. Total hours have not yet been compiled for 2016, but will be more than 400 hours and 2,500 miles traveled.

Appendix

1. Camera set up with solar panel on White Mountain Imaging rooftop prior to nest initiation, Concord, NH. Photo by R. Suomala, 6/1/16.



2. Common Nighthawk nest site and nest with two eggs near White Mountain Imaging, Concord, NH, 7/3/16, by R. Suomala.

