



Female Common Nighthawk in Concord, NH. Photo by Mark Suomala.

## ***PROJECT NIGHTHAWK 2007 SUMMARY***

Project Nighthawk is a statewide research initiative, coordinated by New Hampshire Audubon, aimed at conserving a state-threatened bird species, the Common Nighthawk (*Chordeiles minor*). Data from coordinated summer nighthawk surveys in 1990–91 showed a total of 108 individuals in 16 towns. In 2006 they were reported from only two towns, Concord and Keene, during the nesting season. The reasons for their decline are not clear, but one possibility is changes in roofing substrate from pea stone to rubber and PVC. In 2007 New Hampshire Audubon initiated Project Nighthawk to investigate the potential for restoring nesting nighthawks by placing simple gravel “nest patches” on flat rooftops. We chose to target Concord and Keene for testing nest patch design and

success because they were the only two towns with nighthawks still remaining. If the gravel patches are successful, we hope to expand the project to other towns in the state.

### **Project Objectives And Goals**

The objective is to determine if gravel nest patches on rooftops will reverse the decline of nighthawks in urban areas. Our initial goals for the first two years are as follows:

1. Place nest patches in appropriate sites in Concord and Keene and monitor for nighthawk use.
2. Conduct coordinated watch to census nighthawks in Concord and Keene.
3. Photo document activity at active nest patches.
4. Determine if patches attract nesting nighthawks and if there appears to be an optimum location, size, shape or other feature of successful patches.

### **Project Details & Outcome**

Using a gravel patch design pioneered by a Maine researcher, pea stone patches were placed on flat rooftops at identified sites in Concord and in Keene. Volunteers were trained to monitor the sites to determine if they were used for nesting and to document nighthawk activity around and near the nest patches.

New Hampshire Audubon spearheaded the Concord activities and provided statewide coordination for the entire project. Results from the Concord area are described below. The Keene effort was spearheaded by the Ashuelot Valley Environmental Observatory (AVEO) in partnership with Antioch University New England graduate student Ken Klapper. The Keene results are described in a separate section.

The Project received considerable media attention and generated interest from places as far away as Oregon. Building owners in other New Hampshire towns expressed interest in participating. There was clearly a need for information on patch installation.

### **Plans For Next Year in Concord (and beyond!)**

The presence of a male booming over one of the patches in Concord gives hope for potential success. It will be important to continue monitoring sites with patches, especially since quite a few were installed later in the nesting season.

1. Evaluate how well current nest patches held up over the winter and determine any necessary modifications.
2. Experiment with the addition of shade structures on patches.
3. Determine priorities for 2008 nest patch installations.
4. Develop web site information describing patch installation.
5. Create project poster/display.
6. Monitor nest patch sites for nighthawk presence.
7. Confirm 2008 nesting status/attempts through rooftop access checks.
8. Conduct coordinated watches to confirm nighthawk status in Concord and Keene.

## CONCORD SUMMARY

**Nest Patches.** Seven rooftop nest patches were installed and monitored at the following locations:

- Concord Public Library, Green Street
- Statesman Building, 18 N. Main Street
- Sheraton Building, 114 N. Main Street, (2 patches, in opposite corners)
- Chase Building, 15 N. Main Street
- Sulloway and Hollis, 9 Capitol Street
- Sulloway and Hollis, 29 School Street



Installing a gravel patch at Sulloway & Hollis. Photo by Stephanie Parkinson.

**Coordinated Watches.** Volunteers conducted coordinated watches in Concord on three dates, June 14, June 27 and July 16. A total of seven males were observed calling and booming regularly at the following locations:

- Concord Public Library - 1
- Sheraton Building - 1
- Steeplegate Mall, northeast section - 2
- Chenell & Regional Drive junction - 2
- State Complex, Hazen Drive - 1

**General observations.** In addition to the coordinated watches we received additional survey forms with observations between May 29 to August 28. Birds were observed at the same general locations as the coordinated watches. Late in the season some birds appeared to have moved from their original calling sites. During the July watch the Concord Public Library bird alternated between the library and the James C. Cleveland Federal Building to the south, and a male was heard calling over Ocean Bank on Loudon Road. One female with a chick was observed (see details below), and two other possible females were reported. Detecting females was very difficult as was ascertaining rooftop nesting at sites without patches. This usually requires rooftop access which was not always possible. Other than the one chick mentioned above, none of the observed males were confirmed with a mate or attempting to nest.

### Special Surprise..A Chick!



Nighthawk chick. Photo by Mark Suomala.

One of the most exciting finds of the season was a newly-hatched nighthawk chick in an industrial section of East Concord on July 30th. Norman and Virginia Drew reported the chick after seeing a Project Nighthawk story in the newspaper. Business owners and workers accommodated the chick as it grew and it was last seen on the expected fledge date of August 21.

## Funders, Volunteers and Cooperators

Project Nighthawk is a partnership made possible by support from many sources including building owners and volunteers, and contributions from individuals, corporations, and other entities. We'd like to thank the following individuals and businesses whose donations of time, space and funding helped make the 2007 Nighthawk project possible.

### Donors

Jeannine C. Ayer  
Lou-Anne Conroy & Jonathan Sacks  
Dr. & Mrs. G. Donald Niswander  
Mr. & Mrs. Arthur Stavros

Jean Tasker  
Mary P. Wright  
Betsy Janeway

### Cooperators and Partners

Asheulot Valley Environmental Observatory  
Mark Ciborowski  
Pat Immen, Concord Public Library  
Sulloway and Hollis

### Volunteers

Volunteers recorded a total of 169.6 hours of time working on Project Nighthawk project in Concord. Volunteer activities included nest patch construction, nest patch monitoring, conducting surveys, photo documenting project activities, and engaging in public education/awareness.

Ross Bennett	Sheridan Brown	Larry Denoncourt	Pamela Hunt	Kathie Palfy	Rebecca Suomala
Terry Bronson	Deb Callahan	Carol Foss	Vanessa Jones	Stephanie Parkinson	Robert Vallieres
Tabor Browder	Mark Ciborowski	Scott Franzblau	Jane Kolias	Bob Quinn	Robert Woodward
Phil Brown	Melissa Coppola	Lindsay Herily	Gail Page	Mark Suomala	Mary Wright

## **Nighthawk Population Research**

By comparing New Hampshire Audubon nighthawk population data dating back to 1982 with quantified information about the loss of peastone roofs, Antioch University New England M.S. candidate Ken Klapper will explore the relationship between the decreased use of peastone roofing material and the decline of Common Nighthawk populations in Keene and Concord. Klapper's thesis work will also include a thorough overview of the Project Nighthawk nest patch study and nighthawk population monitoring, and a summary of historical changes in nighthawk nesting in New Hampshire. Ken would like to thank New Hampshire Audubon for their generous support of his research.

## **KEENE SUMMARY**

Ashuelot Valley Environmental Observatory (AVEO) and Ken Klapper, a M.S. student in Conservation Biology at Antioch University New England, partnered to build nighthawk nest patches, establish the Nighthawk Patrol monitoring program, and provide interpretive programming (Nighthawk Night Walks) in Keene. More than forty volunteers came together in Keene to install nest patches and survey nighthawks on the wing. The Melanson Company, Keene's largest roofing firm, dove into the project with donations of materials, funding, expertise, and labor.

**Nest Patches.** Seven rooftop nest patches were installed and monitored at the following locations:

- Keene State College Science Center (2 patches)
- Keene State College Redfern Arts Center
- Keene High School, 43 Arch Street
- Prime Roast, 16 Main Street
- The Cracker Factory, 16 Church Street
- Antioch University New England, 40 Avon Street



Completed nest patch. Photo by Ken Klapper.

**Coordinated Watches.** AVEO volunteers (the “Nighthawk Patrol”) conducted coordinated watches in Keene on seven dates: June 13, June 20, July 10, July 12, July 18, July 25, and August 2. The highest nighthawk count occurred on July 18 with four individuals observed simultaneously in the following locations:

Central Square – 1  
Bike Park, Gilbo Avenue – 1

Savings Bank of Walpole, Marlboro Street - 1  
Subaru Dealership, Production Avenue - 1

**General Observations.** Although the four individuals observed on July 18 were not engaging in the booming display, the Marlboro Street nighthawk was seen diving and booming on multiple occasions, and volunteers regularly saw a booming individual bird over 19 West Street. According to the Melanson Company, the 19 West Street building has one of the few remaining peastone roofs in Keene. (Unfortunately, a July 17 visit to this roof turned up no evidence of nesting.) Volunteers also saw two nighthawks flying in close proximity at 33 West Street on June 21. One of the birds was clearly smaller than the other, suggesting that both a male and female (smaller bird) were present.

Nighthawk Patrol volunteers additionally observed and photographed up to four nighthawks in West Swanzey in late July and early August. Whether these were local breeding birds or early migrants is unknown, given the late date; however, we plan to search for possible breeding birds in West Swanzey in 2008.

**Funders, Volunteers and Cooperators**

AVEO and Ken Klapper would like to thank the following individuals and businesses whose donations of time, space, and funding helped make Nighthawk Patrol possible in 2007.

**Donors**

Cheshire County Conservation District  
Fritz Restaurant  
The Melanson Company

Phoenix Meidcal Supply  
Prime Roast Coffee  
Rick’s Ice Cream

**Cooperators and Partners**

Antioch University New England  
Keene State College  
The Melanson Company

**Volunteers**

In 2007, the following Keene Nighthawk Patrol volunteers spent approximately 250 hours monitoring local nighthawk populations and helping to construct nest patches:

Jean Amaral	Joe Friedlandert	Brian Kurtz	Rory Moon	Cliff Seifer	Brett Thelen
Nancy Ancharski	Stu Goldberg	Marcy Leversee	David Morrill	Colin Seifer	Jenny Twohig
Michael Anderson	Andrea Hand	Gordon Leversee	Roby Morrison	Scott Semmens	Cherly Woods
Barbara Breen	Pam Harmon	Steve Lindsey	Kathleen Murphy	Rachel Sheridan	Mary Wright
Alexis Clark	Dave Hoitt	Lily McGartland	Cynthia Nichols	Mary Kate Sheridan	
Eric Clark	Bonnie Hudspeth	Nancy McGartland	Mary O’Rourke	Barbara Skuly	
Melissa Diven	Brad Hutchingson	Rachel McGartland	Larry Reynolds	Norm Spicher	
Dori Drachman	Cary Jardine	Wayne Miller	Jill Rolph	Kaitlyn Taft	
Kim Dupuis	Bob Kelley	Davie Moon	Sofi Rubinstein	Lance Tanino	
Heather Fletcher	Ken Klapper	Lindsay Moon	Sigrid Sholz	Frank Taylor	

**Other Acknowledgements**

The following people provided essential roof access for nest patch creation and monitoring, and/or contributed their significant ornithological, scientific, and planning expertise to the design of Project Nighthawk in Keene:

Jon Atwood	Richard Levine	Melissa Prindiville	Pete Throop
Peter Howe	Steve Marazoff	Tom Remillard	Dave Wells
Pam Hunt	Greg Marsh	Bob Salmon	Paul Whicker
Tim Keating	David Moon	Tom Sintros	Bud Windsor
Rhett Lamb	Dave Nallett	Bruce Soper	Captain Jack Zeller
Gordon Leversee	Marianne O’Brien	Becky Suomala	

**For Information on Project Nighthawk**

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- In Keene, contact Brett Amy Thelen, AVEO, [brett@aveo.org](mailto:brett@aveo.org), 603-358-2065, [www.aveo.org](http://www.aveo.org).