

# **2016 Peregrine Falcon Monitoring Summary for New York State's Adirondack and Lake Champlain Region**



Photo Credit: Connor Paschke  
New York State  
Department of Environmental Conservation  
Division of Fish and Wildlife  
Bureau of Wildlife, Region 5

## Executive Summary

Twenty six peregrine falcon nesting sites located throughout the Adirondack Mountains and along Lake Champlain were monitored during the 2016 breeding season. Monitoring reports for the Adirondack, Lake Champlain, and Lake George region are included.

Seventeen of 26 monitored eyrie sites were confirmed occupied by territorial pairs and of those sites, active eyries were confirmed at all of the sites. At two of the 26 sites, Cascade Lakes and Eagle Mountain, only a single territorial bird was ever seen. Of the 17 confirmed active eyries, 14 were successful, producing 27 chicks for a total of 1.59 young/breeding pair and 1.93 young/successful pair. This represents an average level of production for this region, however 2016 was much more successful than the 2015 breeding season.

<i>2016 Active Sites</i>	<i>Status</i>
Anthony's Nose	AF
Black Mountain	AF
Cascade Lakes/ Pitchoff Mountain	S
Catamount Mountain	AU
Chapel Pond	3/3
Cobble Hill	?/1
Crane Mountain	2/2
Diameter Mountain	2/2
Eagle Mountain	S
Glens Falls Quarry	2/1
Marble Ledges	?/2
Odell Island	4/4
Palisades/ Split Rock Mountain	AF
Pharaoh Mountain	1/1
Poke-O- Moonshine	2/2
Rogers Rock	1/1
Shelving Rock	1/1
Sleeping Beauty	2/2
Silver Lake Mountain	?/2
Willsboro Bay	3/3

# Peregrine Falcon Nest Monitoring in the Adirondack and Lake Champlain Region

## 2016 Final Report

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### **Abstract**

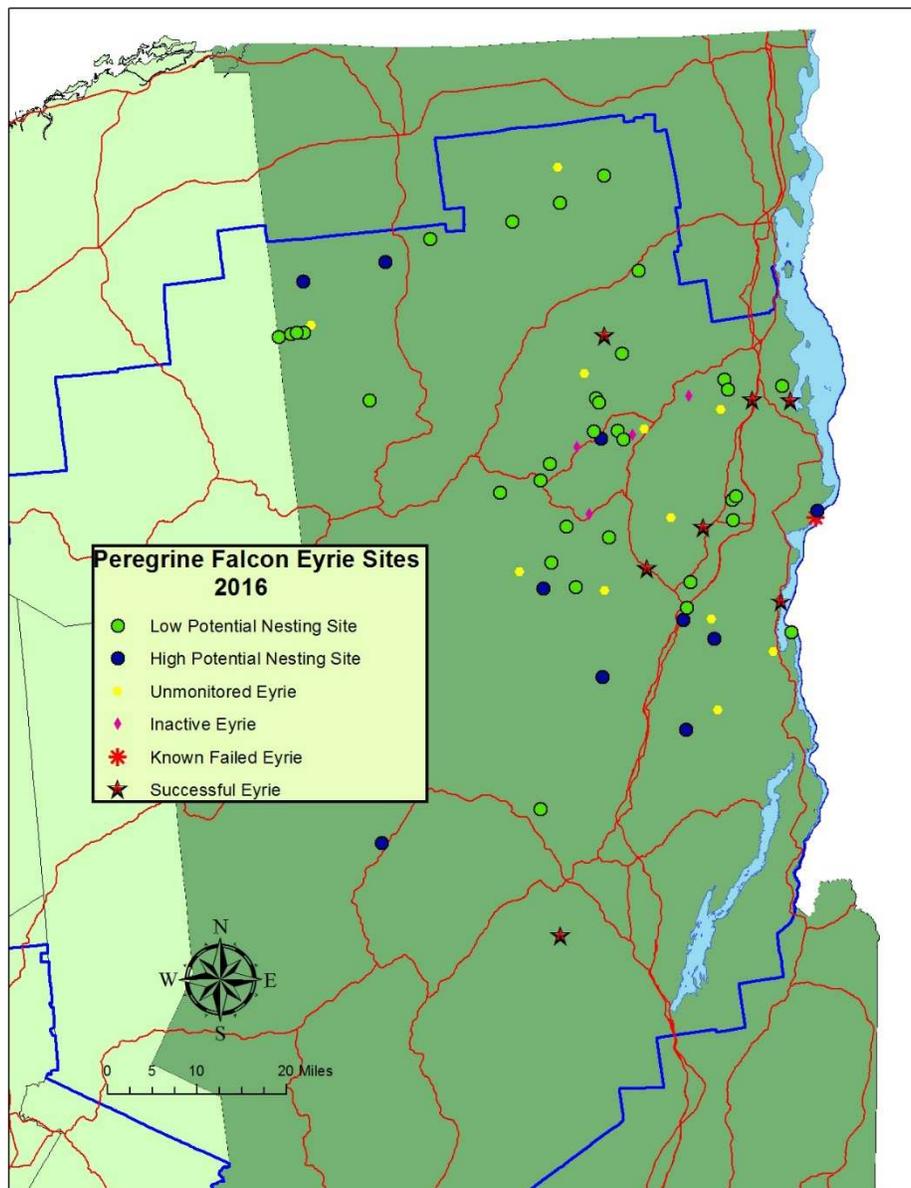
In total, 26 peregrine falcon (*Falco peregrinus*) eyrie sites were monitored during the 2016 breeding season. This was an increase from the 12 sites monitored in 2014, but a reduction from the 42 sites observed in 2013. The sites were monitored from the months of April to August to determine breeding activity, hatching success and fledging success. Seventeen of the 26 sites were confirmed occupied by territorial pairs and of those sites, active eyries were confirmed at all. Of the 17 confirmed active eyries, 14 were successful, producing 27 chicks.

### **Methods**

Known peregrine falcon eyrie sites were monitored from early May to August 2016 in the Adirondack and Lake Champlain region of New York State. At each site, observers utilized binoculars and high powered spotting scopes to observe the falcons while also listening for different vocalizations. Data recorded during observations included site name, date, observer, start time, end time, total observation time, and general weather conditions; along with any peregrine falcon activity and the time associated with it. Activity of other specific avian species was also recorded, with turkey vultures (*Cathartes aura*), common ravens (*Corvus corax*), and broad-winged hawks (*Buteo platypterus*) being the most prevalent (Appendix A. Sample Data Form). At active peregrine falcon eyries, the reproductive status of each pair was determined by breeding behavior such as courtship displays, food exchanges between adults, nest exchanges during incubation and brooding, territorial displays and disputes with other avian species, the feeding of young, and vocalizations. The previously mentioned behavior was also observed to accurately locate the exact ledge of the active eyrie. Chick counts were mainly conducted during times of feeding or fledging, allowing for the direct observation of each chick at the same time. At sites that produced young, age estimates were recorded. Estimates were based on feather development and behaviors such as standing, walking, rowing of wings and vocalizations (Ratcliffe 1980, Cade 1996). The chick aging guide on the Canadian Peregrine Foundations website was also used to determine the age of chicks by comparing observations to the photos of chicks of known ages.

Nest site status codes were assigned to every site based on the observations recorded, at the conclusion of the breeding season (Table 1). A map was created to show all of the eyries present in NYS DEC region 5, along with potential eyrie sites (Figure 1).

Table 1. Nest Site Status Codes	
U	Unknown, or site not monitored
S	Single bird
IA	Site inactive, no confirmed reports of a bird
T	Territorial Pair = the presence of two potentially breeding birds within a suitable nesting habitat during the breeding season.
TU	Territorial Pair, Unknown status
AF	Site active (breeding pair) but failed.
AU	Site active, but production unknown
#/#	Number of hatchlings vs. Number of fledglings



**Figure 1.** The above map shows the various locations of peregrine falcon eyries and potential eyries within NYS DEC Region 5. The blue line represents the boundaries of the Adirondack Park and the dark green indicates the boundaries of region 5. Lake George sites are not included.

## Rock Climbing Route Closures

As with most raptors, peregrine falcons are highly territorial and sensitive to disturbances near the nest or eyrie. One such disturbance is rock climbing activity. The historic peregrine falcon eyrie sites of the Adirondacks and Lake Champlain region are now famously known for adventure style rock climbing. The large sheer rock cliffs offer some of the best known climbing but are highly conducive to the breeding of peregrine falcons. Disturbances can cause the peregrine falcons to leave the nest during incubation or brooding. This leaves the eggs or chicks vulnerable to the heat, cold, precipitation and predators. Though the young can be left for short periods of time, significant or frequent disturbances can lead to failure. For this reason, five of the most frequented rock climbing cliffs are temporarily closed during the nesting season. Once the eyrie locations are identified, specific climbing routes are opened and the cliffs are fully opened once the young that have fledged are well developed or the eyrie has failed. Table 2 shows the route closure dates, the dates of partial re-openings of cliffs, and the dates of reopening of the entire cliffs to rock climbing at six sites for the 2016 season.

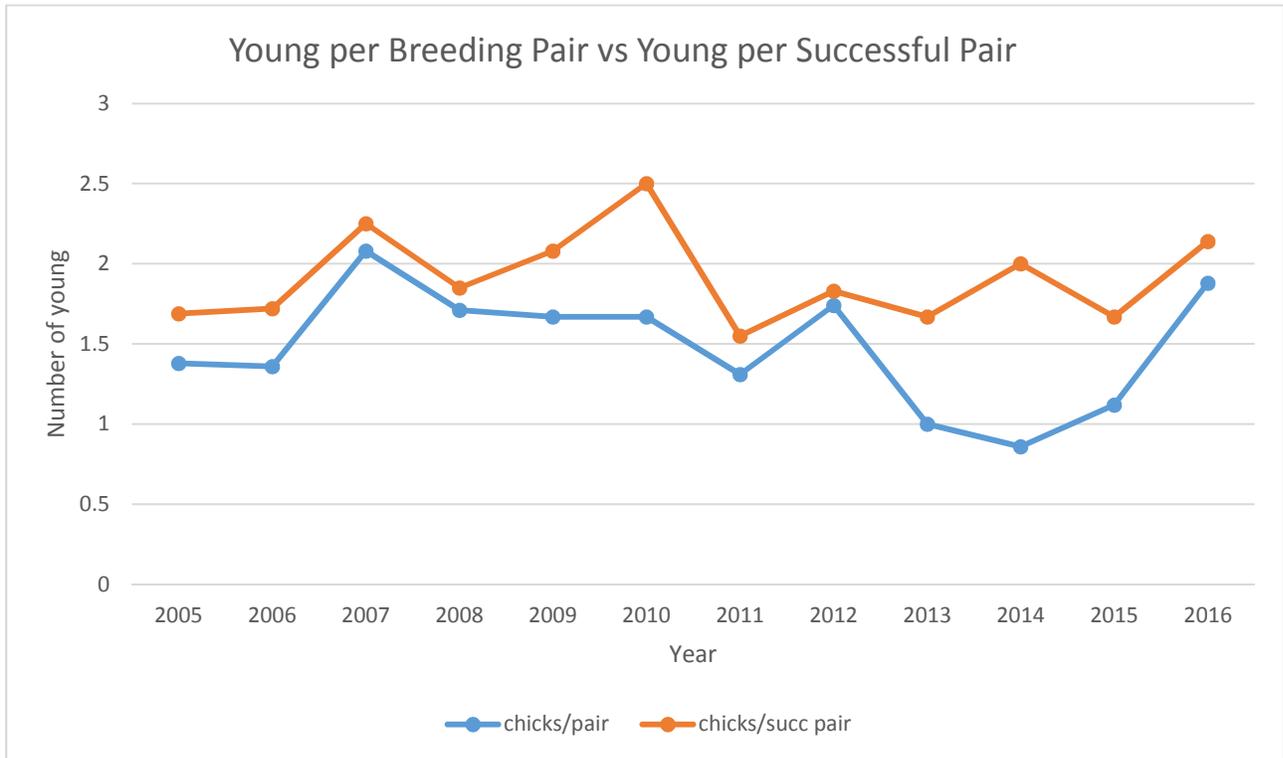
Rock climbing routes on Sleeping Beauty were closed for the first time this year due to an aggressive nesting pair of peregrine falcons. Reports were received from rock climbers of aggressive peregrines during the month of June. The eyrie was promptly located and due to Sleeping Beauty's small size, all rock climbing routes were closed.

Cliff Site	Original Closure Date	Partial Re-opening Date	Full Re-opening Date
Poke-O-Moonshine - Main Face	4/1/16	5/27/16	7/15/16
Moss Cliff	4/1/16	N/A	7/1/16
Chapel Pond - Washbowl Cliffs	4/1/16	5/13/16	7/15/16
Shelving Rock	4/1/16	5/13/16	7/15/16
Crane Mountain	4/1/16	5/13/16	7/1/16
Sleeping Beauty	6/20/16	N/A	7/22/16

## Results

Of the 26 sites monitored, 17 had territorial pairs present. Of the 17 territorial pairs, 17 eyries were confirmed. In total, 27 chicks were confirmed and all were presumed or confirmed fledged (Table 3). Cascade Lakes and Eagle Mountain were the only sites in which only a single bird was observed. Copies of the Nest Site Monitoring Reports may be reviewed at the DEC Office in Ray Brook.

Number of sites monitored	26
Number of sites where a single bird was observed	2
Number of territorial pairs	0
Number of breeding pairs	17
Number of successful pairs	14
Number of young produced	27
Young/breeding pair	1.59
Young/successful pair	1.93



**Figure 2.** The above graph depicts the developing trend from the past 10 years of the Peregrine Falcon Monitoring Program. This shows the cyclical pattern of the peregrine falcon’s production. Data presented excludes data from the Lake George Region which had been reported separately in the past.

The final status for each of the monitored sites in 2016 is shown in tables 4 and 5. Table 4 consists of potential nesting sites while table 5 consists of confirmed nesting sites. Potential sites are characterized by certain criteria that would make it possible to support a nesting pair of peregrine falcons (Table 4). Confirmed nesting sites are those that have been previously utilized by a nesting pair of peregrine falcons between 1984 and present (Table 5). The nest site status codes used below in Tables 4 and 5 are explained in Table 1 on page 2.

<b>Table 4. Potential Nesting Sites (9)</b>	<i>2015 Status</i>	<i>2016 Status</i>
Crown Point Bridge	U	U
Kipp Mountain	U	U
Mill Bay – Lake Champlain	U	U
Moxham Mountain	U	U
Plattsburgh Monument	U	U
Ragged Mountain	U	U
Rouse’s Point Bridge	U	U
Snowy Mountain	U	U
Tsunami Crag	U	U

<b>Table 5. Confirmed Nesting Sites (40)</b>			
<i>Site</i>	<i>Nesting Last Observed</i>	<i>2015 Status</i>	<i>2016 Status</i>
Anthony's Nose	2015	2/2	AF
Azure Mt.*	2012	IA	U
Barton High Cliffs	2013	U	U
Black Mt.	2015	AF	AF
Broughton Ledge	2015	?/1	U
Cascade Lakes/ Pitchoff Mt.	2015	?/3	S
Catamount Mt.	2012	U	AU
Chapel Pond	2015	AF	3/3
Cobble Hill	2015	?/2	?/1
Coot Hill	2008	U	U
Crane Mt.	2015	2/2	2/2
Deer Leap	2013	S	IA
Diameter Mt.	2015	4/4	2/2
Eagle Mt.	2012	U	S
Ebenezer/Rattlesnake Knob	2005	IA	IA
Glens Falls Quarry	2015	1/1	2/1
Hadley Pond	2009	IA	U
Haystack Mt. (Green Street)	2012	IA	IA
Hurricane Mt.* / Pitchoff Mt.	2000	IA	U
Indian Head Mt./Fish Hawk Cliffs	2012	U	U
Knob Mt.	2012	U	U
Marble Ledges	2013	U	?/2
Odell Island	-	-	4/4
Palisades/ Split Rock Mt.	2015	AF	AF
Panther Hill	2009	U	U
Pharaoh Mt.	2013	U	1/1
Poke-O- Moonshine	2015	AF	2/2
Potash Mt.	2013	IA	IA
Pyramid Lake	2012	U	U
Rogers Rock	2015	AF	1/1
Shelving Rock	2015	2/2	1/1
Sleeping Beauty	2015	AF	2/2
Silver Lake Mt.*	2010	IA	?/2
South Tongue Mt.	2001	IA	U
Louis Clearing/Spring Louis Bay	2001	U	U
Wainwright Mt.	2003	U	U
Wallface Mt.	2014	U	U
Welch Hollow	2012	IA	IA
Willsboro Bay	2015	1/1	3/3
Wilmington Notch/ Moss Cliff	2013	TU	IA

\*Hack site - Between 1974 and 1994, 169 Peregrine falcons were released through hacking in five different areas in New York State. Four cliff sites in the Adirondacks were used as hacking sites between 1981 and 1988 with a total of 99 young released in the Adirondacks. Thirty-four birds were released at Silver Lake, 17 at Hurricane Mt, 31 at Azure Mt, and 17 at Horseshoe Lake.

## **Discussion**

The 2016 season experienced an increase in peregrine falcon nesting productivity compared to the 2015 season, but overall production was average. Several factors may have contributed to the increased success in comparison to the year prior, one being the low amounts of rainfall when incubation and brooding were taking place. The nesting season also seemed to have been earlier or accelerated this year, possibly due to the mild winter and spring throughout New York State.

The Palisades/ Split Rock Mtn. site failed, as it did the year prior. The one chick produced was found dead in the water beneath the cliffs at approximately 30 days in age and was collected and sent to the pathology lab for examination. The previous technician believed the failures may be caused by the level of recreational use of the lake waters near the cliff. This may have caused the failure this year, though continuous nesting at the site may indicate a level of tolerance of human activity or lead to such. Failure this year is likely due to the chick falling from the nest ledge and then drowning.

Moss Cliff has continued to be a difficult site to locate an eyrie, and during the 2016 nesting season peregrine falcons were not observed at all. As the program continues it may be beneficial to leave the climbing routes open until a climber report of peregrine activity is received. This cliff is infrequently climbed, and the vast alternative cliffs provide virtually undisturbed nesting habitat.

Two adult and two juvenile peregrine falcons were observed frequenting midway cliff and the tsunami wall at Silver Lake Mountain by experienced rock climbers. An actual site visit did not occur until August 15, which resulted only in finding peregrine whitewash on the midway cliff. Most of Silver Lake Mountain does not provide suitable nesting habitat for peregrine falcons, and the only observed sites that did provide likely nesting habitat were closer to Potter Mountain. For that reason, years of inactive recordings may be due to observing the wrong cliffs. The combination of Silver Lake Mountain and Potter Mountain provide a large stretch of rocky but fragmented cliffs. If previous observations were focused on the areas outlined in the DEC files and previous monitoring reports, eyries were most likely missed.

A factor that cannot be ignored is the drastic reduction of staff focusing on the peregrine falcon program and the late start of the technician hired to monitor the eyrie sites. In 2012, a Biologist, a Fish & Wildlife Technician, an Intern, and paid contractors all worked together on monitoring the peregrine falcon sites which lead to much more intense monitoring of each site and allowed each site to be properly monitored. Numerous volunteers also contributed to the program, providing large volumes of information.

Though the 2016 season yielded average productivity, overall the peregrine falcons have been extremely successful in the Northern Adirondack and Lake Champlain region as well as the rest of the state of New York.

## **Acknowledgements**

We would like to thank Sharon Tabor, Connor Cincotta, John O'Connor, and Ryan Kelley for locating and monitoring multiple eyries early in the season along with Rachel Bakerian for her assistance monitoring the Crane Mountain site. Special thank you to climber Jay Harrison, whose knowledge of Crane Mountain was very helpful in keeping appropriate routes closed and discovering the best locations from which to view the eyrie. Scott Crocoll observed peregrine activity on Eagle Mountain, and Scott and John Ozard visited Catamount. Also, thank you to volunteers Eric Teed, Royce Van Evera, Mark Bealor and Ramona Bearer for their knowledge and expertise, and for the monitoring of several nest locations. Finally we would like to thank and recognize Sheila Tuttle for her continued monitoring of the many Lake George Region sites; and Doc Livingston, Jeremy Haas, and Ranger Laczko for their support and assistance with these cliffs.

## **Recommendations**

The monitoring of peregrine nests has received a late start in recent years. Either an earlier employment date should be set or a permanent position be implemented due to the fact that intense, early monitoring is crucial to the program's success. With the appointment of new technicians every year, the gain of institutional knowledge is hindered causing the technician to play a game of catch-up each year.

Also, identifying individual peregrines by distinct markings and determining the sex of each at every site would be highly beneficial. Not only would it allow for the technician to determine which falcon they are observing, it will also aid in determining new mates at each site. Banding may also help in identifying returning offspring and where the Adirondack peregrine falcons are migrating to. Experienced rock climbers have expressed on multiple occasions that they would be willing volunteer to assist a technician in climbing to or near eyries. Not only would banding take place, but possible prey analysis also.

Due to Crane Mountain's many climbing walls there is the potential that additional breeding pairs could be residing on other cliff sites across the mountain. In continuing years searching these areas for other nests could be beneficial.

## **Sources Cited**

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The Canadian Peregrine Foundation, <http://www.peregrine-foundation.ca/>

Weather Data Base, <http://www.weatherdb.com/>

**Appendix A. Sample Data Form**

**PEREGRINE FALCON CLIFF SITE MONITORING  
DATA FORM**

Site Name: \_\_\_\_\_ Date: \_\_\_\_\_

Observer: \_\_\_\_\_ Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_

Total Observation Time: \_\_\_\_\_ Miles Traveled to Site: \_\_\_\_\_

General Weather Conditions: \_\_\_\_\_

TIME	SPECIES AND ACTIVITY <sup>1</sup>

<sup>1</sup>Record activity of any peregrines, other raptor species, ravens, and turkey vultures observed at the site. Note time of observation and describe the nature of the activity briefly and concisely.

TIME	SPECIES AND ACTIVITY

**OBSERVATION SUMMARY:** Mark the box(es) that best summarize what you observed

Observation	Confirmed	Suspected
Single bird seen		
Territorial pair		
Courtship/Copulation		
Incubation		
Hatching		
Fledging		
Nest failure		
Human disturbance		

Comments: \_\_\_\_\_

Was there any observation hindrance? If so, total time lost: \_\_\_\_\_

**RETURN A COPY OF THIS FORM AFTER EACH SITE VISIT TO: John O'Connor, NYSDEC Bureau of Wildlife, 1115 Route 86, Ray Brook, New York 12977-0296 or fax to (518) 897-1370 or e-mail [johnr.oconnor@dec.ny.gov](mailto:johnr.oconnor@dec.ny.gov) .**