

New Jersey Department of Environmental Protection
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**Peregrine Falcon
Research and Management Program
In New Jersey, 2021**

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Banding atop the Betsy Ross Bridge, May 2021.



Program Objective: *To enhance the population of the peregrine falcon (Falco peregrinus anatum), restoring them to a self-sustaining level throughout their range in New Jersey.*

Summary of Results

The 2021 New Jersey peregrine falcon population increased slightly in total pairs, 44, but about the same number of active pairs, 39 known to lay eggs. Successful pairs remained the same, with 28 producing 74 young, for a productivity rate of 1.95 (known) young per active nest and a success rate of 71% (Table 1). A brief summary of data collected during the 2021 nesting season follows:

- ❖ The coastal region (Atlantic and Delaware Bay coasts) supported 17 pairs that produced 2.18 young/nest and 50% of the young produced statewide. Most coastal nests are on towers and buildings.
- ❖ The Delaware River region (Burlington County and north) supported five pairs that produced 2.80 young per nest (14 young). Most nests are on bridges, with one building also in this region.
- ❖ The urban region of northeastern NJ supported eight nests that produced 1.50 young/nest with 12 young fledged. Most of these nests are on bridges with two on buildings.
- ❖ Natural cliff and quarry sites in northern NJ supported eight pairs that produced 1.38 young/nest (11 known fledged) and had the lowest success rate at 63%. These nests are on natural cliffs and, more recently, on inland quarry walls.

We were able to band 52 of the 74 young produced, with an aluminum federal band and a bicolor (black over green) band engraved with an alpha-numeric code. The 22 young we were unable to band fledged from sites that could not be accessed at the appropriate time.

In recent years we documented nestling mortalities that resulted from lead-poisoned prey, leading us to take blood samples at 23 nests in 2018-2020, which Dr. Erica Miller tested for lead. The results ranged from <0.01 to 0.95 ppm. Nests with the higher lead exposure tended to be urban sites. In 2021, we collected 12 samples from eight sites; those results are not yet completed. Lead-caused mortality seems to be a recent but spotty problem that we will be monitoring to understand the risk and possible sources of lead for urban peregrines.

For a second year, the pair at Jersey City's 101 Hudson Street roof was absent, with no sightings this spring. The webcam there was suspended, but the cameras on the roof of Union County courthouse provided excellent views. The courthouse pair raised four young this year, and also fostered a fledgling that was found in the Delaware River and treated at Raptor Trust. All five fledged well and were visible on webcam for weeks.

Pairs that nested on natural and quarry cliffs increased to 10 occupied, nine that nested, and produced 11 chicks from 8 known-outcome sites. Access to some sites has made close monitoring difficult or impossible. Weather and intense storms did not, for the most part, play a role in causing widespread failures at cliffs, however, nest success and productivity remains lower than the other regions.

Resightings and Recoveries

We continued to use small, motion-activated cameras to photograph peregrines at accessible nests to read the leg bands on 21 adults, and an additional 17 adults were identified using optics and photographs. A minimum of 16 adults were unbanded and therefore unidentifiable to origin and age. Two of the previous oldest birds (15) were gone this year, the oldest female now at 13 years of age. The median age of males and females was 7.0, for 16 males and 18 females. The information that these identifications provide is valuable for relating peregrine origin and age to nest success, site fidelity and turnover rate in the population.

In addition to the resightings recorded at NJ nest sites, we received reports of peregrines sighted here and elsewhere:

- 08/AE, a 2010 Whitman Bridge female, nested on the Commodore Barry Bridge, 2013-2020.

- 10/BX, a 2019 GW Bridge male, nested at Palisades and was recovered injured in Oct. 2021.
- BD/54, a 2017 Sea Isle female, nested in Oceanside, NY in 2021.
- BD/94, a 2018 Secaucus female, was sighted in Westville, NJ, in March 2021.
- BD/95, a 2018 Atlantic City female, was sighted in Merrick, NY, in March 2021.
- BD/98, a 2019 Logan female, was sighted in Jersey City in April 2021.
- BM/01, a 2019 Atlantic City female, was sighted in Lewes, DE and Stone Harbor, NJ.
- BM/03, a 2019 Ocean Gate female, nested on a building in Virginia Beach, VA, in 2021.
- BM/11, a 2019 Sedge Island female, was seen at IBSP in Dec, 2021.
- BM/15, a 2019 Stone Harbor female, was seen in Long Island, NY, in Sept 2021.
- BM/16, a 2019 Stone Harbor female, was seen in Long Island, NY, in Jan and April 2021.
- BM/27, a 2019 Newark female, nested on a building in Phila in 2021.
- BM/37, a 2020 Atlantic City female, was seen at Sandy Hook and Long Island, NY.
- BM/54, a 2020 Manahawkin female, was photographed at Forsythe in winter and fall, 2021.
- BM/70, a 2021 Union Co female, was seen in Queens, NY, Dec 2021.
- BM/71, a 2021 Union Co female, was photographed at the Palisades, Aug, 2021.
- Y/4, a 2006 Burlington-Bristol Bridge female, nested in VA.

Conclusions

The peregrine population increased slightly, with good nest success on the whole. Natural sites did moderately well, though nest success and productivity were lower than the regions with man-made structures. Natural nesting sites had somewhat better success than recent years, perhaps due to fewer severe rainstorms during the egg and early nestling stages; however, Hudson River cliff nests had just 40% nest success, while a few inland quarry sites fared slightly better. The tower and building sites are more consistent in terms of nesting and fledging success and account for the greatest number of fledglings. The management of nest sites that are on buildings and bridges is important to annual success statewide, and providing safe, undisturbed nesting sites continues to be significant for the stable and productive population.

Staff and project volunteers continued to use our online data management system, *NestStory*TM. NestStory enables us to track all nests through each nesting season, and to track individually-marked birds resighted here and elsewhere. Banding and resighting data will be used in the coming year to study the population demography and dispersal.

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Some Resightings:



Table 1. Site-specific results of peregrine falcon nesting in New Jersey by region, 2021.

Site Name	Occupied	Active	Eggs	Young Hatched	Young @ band age	Young Fledged	2021 Comments	Yng/Active @Fledging	%Succ
Atlantic City water tower	Y	Y	4	4	4	4			
Atlantic City Sheraton	Y	Y	U	3	3	3	Nest in the "S" sign		
Atlantic City Hard Rock	N								
Avalon Osprey	Y	Y	3	0			Osp nest		
Bayside Prison Water Tower	Y	Y	U	U	3	2	1 fell bef fledging		
Drag Island BL England	Y	Y	U	2	2	2			
Drag Island Tower	Y	Y	4	3	3	3			
Egg Island WMA	Y	Y	3	0			No box; ground nest		
Forsythe NWR/Barnegat Mana	Y	Y	5	0					
Brig/Seaview	Y	Y	4	4	4	4			
Golden Nugget	Y	Y	1	0			Possibly from Harrahs		
Hilton/Grand/Atl Club	Y	Y	4	1	1	1			
Marmora WMA	Y	Y	5	5	5	5			
Ocean Drive Bridge	N	N							
Ocean Gate	Y	Y	4	3	3	3			
Route 72 BOIS	Y	Y	3	1	1	1			
Rumson-Oceanic Drive Bridge	Y	N?							
Sedge Island WMA	Y	Y	4	U	2	2			
Stone Harbor	Y	Y	4	4	4	4			
Swan Bay WMA	Y	N	0				Single M; no nest.		
Tuckahoe WMA	Y	Y	4	3	3	3			
Wildwood Crest	Y	N					Single F, no nest.		
All Coastal Sites:	20	17			38	37		2.18	76%
Ben Franklin Br. NJ	Y	Y	3	0			On NJ anchorage		
Betsy Ross Bridge	Y	Y	4	2	2	2			
Burlington-Bristol Br.	Y	Y	4	4	4	4			
Logan Generating Plant	Y	Y	4	4	4	4			
Paulsboro Refinery	N	N							
Tacony-Palmyra Br.	Y	N					Adult M, subad F.		
Trenton RR Bridge	U	U							
Walt Whitman Bridge	Y	Y	4	4	4	4	On NJ tower.		
All Delaware River Sites:	6	5			14	14		2.80	80%
Natural Site C-1	Y	Y	U	0					
Natural Site C-2	Y	Y	U	0					
Natural Site C-3	Y	Y	U	3	3	3			
Natural Site C-4	N	N							
Natural Site C-5	Y	Y	U	U	2	2			
Natural Site C-6	Y	Y	U	0					
Natural Site C-7	N	N							
Natural Site C-8	N	N							
Natural Site C-9	Y	Y	U	2	2	2			
Natural Site C-10	Y	Y	U	U	2	2			
Natural Site C-11	Y	N	0						
Mercer Co Quarry (new 2021)	Y	Y	U	2	2	2			
Pompton Lakes Quarry	U	U	U						
Yards Creek	Y	Y	U	U	U	U	No access.		
All Cliff Sites:	10	9			11	11	adjusted for K-O	1.38	63%
101 Hudson, Jersey City	N	N							
Boonton Rt 202 Bridge	Y	Y	U	0					
Elizabeth-Union County CH	Y	Y	4	4	4	4			
Hotel Indigo	Y	Y	U	U	2	2	Street-level obs.		
Montclair State Univ	N								
New Brunswick: J&J	N								
NJTP Br/Rahway River	Y	Y	U	3	3	0			
Pulaski Skyway Bridge	Y	Y	U	U	2	2			
Route 1 Br./Raritan	Y	Y	U	U	U	2	2 obs post-fledging		
Route 3 Br./Hackensack	Y	Y	U	0			Long incub, no hatch.		
Rt 80 Br./Hackensack-Bogota	Y	Y	U	2	2	2			
Secaucus-Kearny NJTP Bridge	U	U							
Sewaren Generating Station	N	N							
Trenton-Roebling Bldg.	N	N							
Vince Lombardi-NJTP Bridge	U	U							
All Urban Sites:	8	8			13	12		1.50	63%
TOTALS (NJ Only)	44	39			76	74	adjusted for K-O	2.00	71%