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Peregrine Falcon Research and Management Program In New Jersey, 2016

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Eighteen-year-old falcon *P/*G has nested on the Atlantic City Hilton/Atlantic Club since 2002. She is pictured here with a foster chick, introduced because she can no longer lay eggs but who, with her mate, is still an excellent parent.

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 2016 New Jersey peregrine falcon population remained relatively stable with 35 known pairs (30 active) occupying suitable nesting habitat across the state. There was average nesting success with 20 pairs successful in producing 47 young, for a productivity rate of 1.57 young per active nest and a success rate of 67% (Table 1). A brief summary of data collected during the nesting season follows:

- ❖ Sixteen pairs nesting on towers and buildings continued to be the core of the nesting population, producing 28 young, for a productivity rate of 1.75 young per active nest. This is close to the long term average. We used bird-lice spray at nests in the winter, and treated <2-week old hatchlings at two sites to reduce infestations of parasitic flies (*Carnus hemapterus*). These flies have caused mortality of young hatchlings in recent years. We did not see any total brood failure due to flies that we saw in 2014.
- ❖ Seven pairs were known to occupy territories in natural cliff habitat in northern NJ. Eight young fledged for a productivity rate of 1.14 young per active nest.
- ❖ Seven pairs of falcons were known to nest on bridges this year. Four of those bridges lie completely within the boundaries of NJ, while three span the Delaware River between NJ and PA and are monitored by NJ. All bridge pairs fledged a total of 11 young for a productivity rate of 1.57 young per active nest. Nesting can be difficult to confirm, as the nest sites are often located out of sight or on inaccessible sections of the bridge. Some previously occupied bridges (e.g., Trenton and Newark Bay) were not tracked due to insufficient staff or volunteers. Other bridges may have been occupied, but the program lacked monitors in northern NJ to document all possible sites.

We were able to band 36 of the 47 young produced this year, fitting nestlings with an aluminum federal band and an auxiliary, bicolor band engraved with an alpha-numeric code. The 11 young we were unable to band fledged from sites that could not be accessed at the appropriate time.

The Conserve Wildlife Foundation of NJ operated the webcam at 101 Hudson Street in Jersey City, but it appeared that nesting was disrupted after the first egg was laid. We suspect the male was lost, and the female (banded 41/AX in 2012) was courted by a new, unbanded tiercel, but failed to lay or incubate a clutch. The nest can be viewed online during the season at: <http://www.conservewildlifenj.org/education/falconcam/>

Resightings and Recoveries

We continued to use remote, motion-activated cameras to photograph peregrines at nests. Using this method we read the leg bands on 16 breeding adults at 10 nest sites. An additional 12 adults were identified using optics. A minimum of 6 adults (15%) were unbanded. The oldest female identified was an 18-year old Atlantic City bird (*P/*G, black/red) who failed to lay eggs a fourth consecutive year, but who successfully raised a fostered chick. The oldest known male was 12, at the Burlington-Bristol Bridge where he has little fear of people. The median age of males and females was 9.0 and 6.0, respectively. 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 we recorded at NJ nest sites, we received reports of peregrines sighted here and elsewhere:

- 85/AN Stone Harbor 2014 female recaptured/released September 2015 at Assateague National Seashore.
- 92/AN Paulsboro 2015 female resighted October 2015 on a building in Tyson Corner, VA.
- 98/AN Drag Island 2015 female recaptured/released September 2015 at Cape May.
- 91/AM Forsythe-Brigantine 2015 male found dead December 2015 near Skidaway Island, GA.
- Adult female 1687-02937, banded as an adult at the nest in Paulsboro, died in December 2015 with an impacted crop; possibly the result of injuries sustained in a territorial battle.
- BD/14 Atlantic City 2015 female, resighted August 2015 at Brigantine Natural Area. She was later captured and moved off JFK Airport in August 2016.
- 15/AM (Atlantic City 2012 male) and 15/AE (Dividing Creek 2010 male) were resighted in Stone Harbor in October 2015. 15/AM also resighted there in September 2016.
- 72/W Jersey City 2009 male had been nesting at NY Presbyterian Hospital in 2014-15, was euthanized December 2015 after being found with a serious wing injury.
- 61/Y Ocean Gate 2007 female was recaptured at Assateague October 2007; resighted nesting on Queens, NY, Marine Parkway Bridge 2012.
- 79/AN Jersey City 2014 female recaptured/released September 2015 in Toronto; resighted March 2016 Regent Park, Toronto.
- 23/AN Atlantic City 2012 female resighted nesting in Bergen County.
- 27/AW NY 2012 male resighted nesting in Secaucus.
- Y/98 NY Throgs Neck Bridge 2010 female took up nesting in Elizabeth, replacing G/*S (black/red) who had initiated nesting there in 2005 as a two-year-old.
- 13/BR banded in Reading, PA in 2015 was resighted at Holgate beach October 2015 through June 2016.
- 56/AN Sea Isle 2013 female resighted July 2016 in Avalon.
- BD/31 Atlantic City 2016 female resighted August 2016 at Forsythe-Brig, later killed at Phila Airport 8/21/16.
- A/11 Jersey City 2009 female has been nesting at Middle River power plant in MD; recovered injured, treated and released in MD in September 2016.
- 94/AM Tacony-Palmyra 2016 male was killed at Harrisburg Airport August 6 2016.
- BD/37 Elizabeth 2016 female was recovered injured September 2016 and treated in Cutchogue, NY.
- BE/04 Elizabeth 2016 male resighted September 2016 at Sandy Hook.

Conclusions

The peregrine population remained stable in 2016 with average nest success and productivity. Across all sites – towers, buildings, bridges and cliffs – nest success was 67% and 1.57 young produced per active site, figures that are average and well below last year's results (Figure 1). The tower and building nest sites are the consistent center of the population in NJ, without which the population would fluctuate widely year to year. Management of nest sites, mainly to provide safe, undisturbed nesting environments for the birds, continues to be the predominant factor in a stable and productive population.

Nest success at cliff sites declined in 2016. We had documentation on seven occupied territories, with eight young fledged from just three sites yielding a 1.14 productivity rate. Observations continued to be difficult in the more remote locations and where nest sites cannot be viewed after leaf-out. One adult female was injured in a territorial battle just as she initiated nesting, and was replaced at the nest; the injured bird was successfully treated at The Raptor Trust and released in August. The highly variable nest success at the cliff territories continues to be a problem if we consider occupancy of historic habitat important to a fully recovered population. Investigation of the cause of those losses is necessary to guide future management.

Management of nesting pairs and nest sites is essential to maintain peregrines in New Jersey. Bridge-nesting birds are especially vulnerable to nest-site problems, and many other pairs occupy human-constructed sites. With site management and the cooperation of bridge and building staff, these sites can contribute to population viability and stability, but proper site management requires staff time and attention. Managers of buildings, in particular, are key partners in improving some nest sites and expanding the potential peregrine population.

Our Thanks To: Volunteers who protect and watch over peregrine falcons in New Jersey, including McDuffy Barrow, Mike Girone, Ray Gilbert, Bonnie Talluto, Greg Gard, Steve Sachs, Rick Weiman, Kristen Nicholas, Herb Houghton, Elmer & Bunny Clegg, Dan Brill, Frank Budney, Beth Balbierz, Keith and Jackie Parker; Forsythe NWR staff and volunteers; Delaware River Port Authority staff (Bill Stricker, Joe McAroy, Joe Riehs); Palisades Interstate Park Commission and the Palisades Interstate Parkway Police; Betty Ann Kelly, Thomas MacDermant and John Salerno at Union County; the Burlington County Bridge Commission and their engineers Mike Ott and Glen Miller; Palmyra Nature Center and Kristina Merola; Don DeRogatis; Diane Joraskie at the Atlantic Club; the Port Authority of NY/NJ; Barbara Deen and Mack-Cali engineers at 101 Hudson Street; Dave Demsey and staff at PBF Energy; Ed Konopka and Lois Knowlson at Sewaren Generating Station; Stan Kupsey and David Hinton & staff at Logan Generating Plant; Tina Shutz and Bruce Hawkinson of NJDOT.

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We remember Elmer Clegg, a faithful and dedicated Bald Eagle Project “employee,” who also had a love of peregrine falcons, especially the boisterous nestlings!



Table 1. Site-specific results of peregrine falcon nesting in New Jersey, 2016

Site Name	Occupied	Active	Eggs	Young Hatched	Young @ Band Age	Young Fledged	2016 Comments
101 Hudson, Jersey City	Y	Y	1	0	0	0	Post-term egg removed 4/29
Atlantic City – ACUA water tower	N	N					Tower blocked/igloo provided.
Bayside Prison Water Tower	Y	Y	?	3	3	1	1 st nest failed. Renest: 2 fledglings died 8/8.
Drag Island	Y	Y	3	3	3	3	
Egg Island WMA/Dividing Cr	Y	Y	3	2	2	2	
Elizabeth-Union County C.H.	Y	Y	4	3	3	3	
Forsythe NWR/Barnegat	Y	Y	4	4	3	3	Tx 1 chick to AC 5/16
Forsythe NWR/Brigantine	Y	Y	3	2	2	2	
Great Bay WMA/Water Twr	N	N	-	-	-	-	
Hilton/Casino/Atl Club	Y	N	0	0	1	1	Old F. Fake egg 4/29, fostered chick 5/16.
Logan Generating Plant	Y	Y	4	3	3	2	1 died @fledging
Margate Marsh	N	N					
Marmora WMA	Y	Y	5	2	2	2	
Newark: Unknown site	Y	Y	?	?	?	1	1 fledgling to TRT 6/7 from Prud Ctr
Ocean Gate	Y	Y	4	4	4	4	
Paulsboro Refinery	Y	Y	?	0	0	0	New, young F.
Sedge Island WMA	Y	Y	4	?	1	1	
Sewaren Generating Station	Y	N					
Strathmere Marsh	Y	Y	?		3	3	Found 6/20 w/3 fledglings
Stone Harbor	Y	Y	4	0?	0	0	
Swan Bay WMA	Y	Y	?	0	0	0	
Trenton-Roebling Bldg (box 2015)	N						
Tuckahoe WMA	Y	N	0	0			
Wildwood Crest-Grand Condo	Y	N	0?				
SUBTOTAL: TOWERS & BUILDINGS	20	16			24	28	Young/Active=1.75
Delaware Water Gap	N	N					
Natural Site C-1	Y	Y	3	2	2	2	
Natural Site C-2	Y	Y	4	4	4	4	
Natural Site C-3	N	N					
Natural Site C-4	N	N					
Natural Site C-5	Y	Y	?	?		0	
Natural Site C-6	Y	Y	?	?	?	?	
Natural Site C-7	N	N					
Natural Site C-8	Y	Y	?	?	?	?	
Natural Site C-9	Y	Y	?	?	0	0	
Natural Site C-10	Y	Y	?	?	2	2	
SUBTOTAL: NATURAL SITES	7	7			8	8	Young/Active=1.14
Ben Franklin Br. (Del R)	PA					1	
Betsy Ross Bridge (Del R)	Y	Y	3	2	1	0	Killed on roadway 6/22
Brigantine Bridge (A.C.)	U	U					
Burlington-Bristol (Del R)	Y	Y	4	3	3	3	In NJ tower
Commodore Barry (Del R)	PA					3	
G. Washington Br (Hudson R)	NY						
Newark Bay Br. (NJTP or Conrail)	U	U					
NJ-PA Turnpike Br. (Del R)	PA					2	
Ocean City-Longport Bridge	U	U					
Pulaski Skyway Bridge	Y	U					Pair obs mating in March.
Route 1/Raritan-New Brunswick	Y	Y	?	?	?	3	1 fledgling to TRT 6/7, 2 obs fledged 6/19.
Route 3/Hackensack NJDOT	Y	Y	?	3	3	3	
Route 35 Bridge-Belmar	Y	Y	?	0	0	0	Failed 4/21.
Route 46 Br./Little Ferry-Ridgefield	N	N					
Route 72 Br (2015 old, 2016 new)	Y	Y	?	2	2	0	2 died @fledging
Scudders Falls Bridge	PA						
Secaucus-Kearny NJTP Bridge	U	U					
Tacony-Palmyra Br. (Del R)	Y	Y	4	3	3	2	Nest cam. 1 fledgling DOR 6/7.
Trenton RR Br	U	U					
Vince Lombardi – NJTP Bridge	U	U					
Walt Whitman Bridge	PA					3	
SUBTOTAL: NJ BRIDGES	8	7				11	Young/Active=1.57
TOTALS (NJ Only)	35	31				47	All Young/Active=1.57

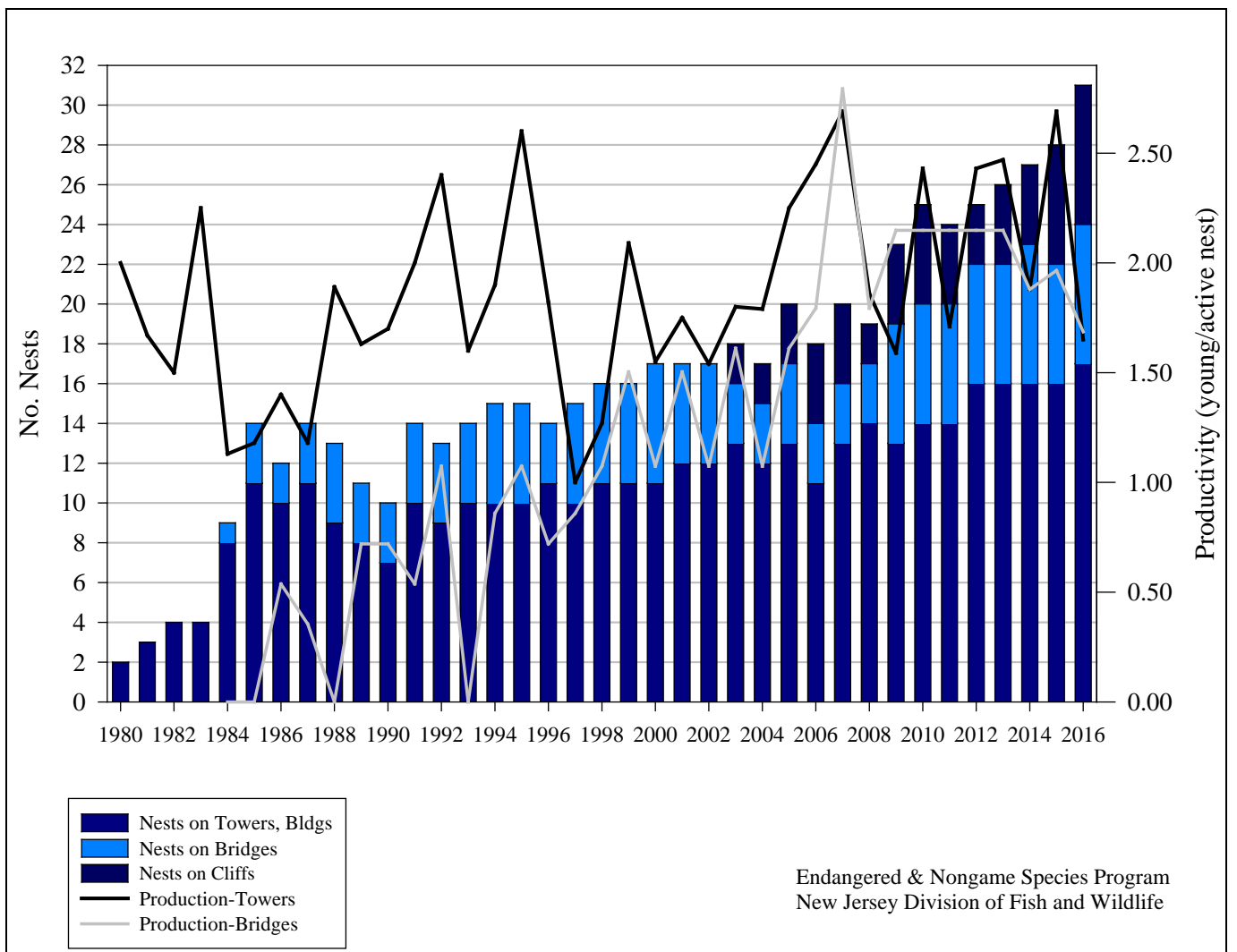


Figure 1. Nesting and productivity of peregrine falcons in New Jersey, with comparisons between towers/buildings, cliffs, and bridges.

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