



# The Peregrine Falcon in New Jersey Report for 2007



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*Project Objective: To maintain, monitor and protect the Peregrine Falcon (Falco peregrinus anatum) population in New Jersey.*

## Summary:

In 2007 the New Jersey peregrine falcon population returned to what has been the normal level of 20 pairs. One pair in southern New Jersey was again active, and a new pair nested in downtown Elizabeth. While the peregrines on the natural cliff habitat remained at four pairs (since 2006), they had a difficult season due to harsh weather at a sensitive time: three of the four pairs apparently failed with an April 15-16 storm, and the fourth pair lost chicks shortly afterward. One pair successfully re-nested and fledged two young. In the rest of the state, 13 pairs nested on towers and buildings and three on bridges. Of 13 pairs on towers and buildings, 11 nested successfully, producing 35 young for a rate of 2.69 young per active nest. This is well above the average of 1.81 recorded since 1986 (when the population stabilized). New Jersey monitored three pairs on bridges spanning the NJ-PA border. Other bridges entirely in New Jersey were not monitored to the extent that we could report results. Two bridge sites are consistent while the rest fluctuate annually in occupancy and success; all are fairly difficult to track. Even so, eight young hatched from two of three known-outcome nests, thanks to conscientious bridge managers who watch over the nest sites.

With good nest success in recent years, New Jersey is in a good position to help the peregrine's recovery in other areas. Three nestlings from one bridge, three from a building, and three from a saltmarsh nest were transferred to a hack site in West Virginia, to promote the recovery throughout the historic Appalachian Mountain range. Two other falcons, one recent fledgling found in Perth Amboy, and a year-old falcon recovered in 2006 in Perth Amboy and rehabbed, were also transferred to a hack site, this one in Virginia. One of the Jersey City fledglings was rehabbed after having fledging difficulties, and was sent to Virginia with the other two, all having learned how to fly already.

We banded 44 young at 13 nests, using both the federal band and a bicolor band with an alphanumeric code. We collected two addled eggs from two sites. In a late season reconnaissance to the only successful cliff nest ledge, we recovered the shells of two unhatched eggs.

In 2007 we continue to employ remote, motion-activated cameras to photograph peregrines at the nests. We were able to read the legbands on 16 breeding adults at 9 nest sites. This is a tool valuable for identifying nesting adults and recording their origin, age and site fidelity, information useful to judge the stability and viability of the population. We identified three additional birds by reading their color bands

using optics. Over recent years, we have identified 17 females and 18 males. Most are of NJ origin: 55% of females and 80% of males hatched at NJ nests. Nesting females from elsewhere represented Maryland (4), Virginia (2), Delaware (1), and Massachusetts (1), while 2 males were from nearby NY and 1 from Connecticut. These data show that NJ peregrines are mostly local, but part of a mid-Atlantic region population dynamic.

**Background:** The decline of the peregrine falcon in the eastern U.S. has been linked to persistent organochlorine pesticide contamination. The eastern population plunged from an estimated 350 active sites in the 1930's and 1940's to no active breeding birds in 1964 or 1975. Recovery efforts began in 1975 after DDT was banned in the U.S. The NJ Division of Fish and Wildlife and the Peregrine Fund first hacked falcons in 1975 at Sedge Islands Wildlife Management Area in Barnegat Bay. Hacking continued at several sites until pairs established territories. Wild nesting began at Forsythe National Wildlife Refuge in 1980, and expanded slowly until 1993, when the population reached its present level. In New Jersey, a recovery goal is *consistent, successful nesting by eight to ten pairs*. While there have been 8-10 pairs successful since 1999 (disregarding the variable bridges), we seek longer-term success that includes a stable population in historic and protected nest sites to achieve full recovery. The reestablishment of peregrines in the historic Palisades cliffs in 2003 was the beginning of that more complete recovery. However, we remain concerned about the effects of persistent organochlorine contaminants on the population. NJ took part in a recent study of contaminants in eggs of mid-Atlantic peregrines, and found that New Jersey coastal peregrines had some of the heaviest loads of DDE and mercury. Population management focuses on monitoring nests, banding young, and improving conditions at nest sites in order to enhance productivity.

### **Highlights:**

The spotlight of peregrine recovery remains on the successful nesting in natural cliff habitat of northern NJ, formerly devoid of peregrines since about 1950. The successful fledging of a young peregrine at the cliffs in 2003 was a huge milestone, and an amazing sight for peregrine fans. In 2005 there were three pairs that raised young, in 2006 four pairs (of which three raised young). In 2007, four pairs nested, but three nests were destroyed by the April 15-16 nor'easter storm, and the fourth nest failed a week later. This was a stark reminder of the vulnerability of these natural habitats, particularly because the cliffs all have the same eastern exposure. One of the cliff pairs re-nested and fledged two young in late June. Still, we are inspired and encouraged at their persistence in their re-found niche, and have hope for recolonization of other historic sites along New Jersey's Delaware River.

The most-watched nesting pair continued their reign at 101 Hudson Street in Jersey City. They raised three young in 2007 under the watchful eyes of thousands who tuned in by internet. We were extremely saddened, however, by the springtime loss of long-time peregrine friend and Nestbox News author Linn Pierson. The Jersey City peregrine season was dedicated to Linn's memory.

Productivity was above average at tower and building nest sites. Eleven of 13 tower and building sites fledged 35 young this year. Three sites (Forsythe-Brigantine, Marmora, Atlantic City) fledged four each, while Sedge Island, Forsythe-Barnegat, Heislerville, Ocean Gate, Stone Harbor, Jersey City and Elizabeth fledged three each. Tuckahoe and cliff site C-1 fledged two young each. Egg Island failed, and Swan Bay failed for the first time since 1998. This was the first successful nest at Elizabeth (on the county court house), where the female originated from Jersey City.

On the Delaware River bridges, both the Betsy Ross and the Walt Whitman produced four chicks each. All fledged successfully at Whitman, while three from the Betsy Ross Bridge were transported to a southern Virginia hack site where they all flew successfully. A pair fledged two at the Ben Franklin Bridge in PA, and three young fledged from the NJ-PA Turnpike Bridge on the Pennsylvania side. A pair attempted to nest in a box on the Tacony-Palmyra Bridge, but failed during incubation; we are still waiting for this pair to gain success. We did not have enough information to judge the outcome at the NJ Turnpike-Vince Lombardi site or the Newark Bay Bridge in northern NJ.

- The statewide population returned to 20 nesting pairs (from 18 in 2006) (Figure 1). Productivity was above average at 2.25 young per active nest for all 20 known-outcome nests.
- Productivity was very good at 13 tower and building (non-bridge sites), averaging 2.69 young per active nest; 11 of 13 nests were successful in producing 35 young. Productivity at three bridge nests was above average at 2.7 young per nest, due to good stewardship by site managers.
- In 2007 the natural cliff habitat in northern NJ hosted four nesting pairs, but weather caused 3 sites to fail, while predators may have caused a fourth failure. One pair renested and fledged two young. These pairs have shifted nest ledges slightly between years, while remaining within territories.
- Biologists banded a total of 45 nestlings at 13 nest sites.
- One pair nested successfully in Elizabeth, a new site where we placed a nest box in 2005. The behavior of this pair suggests they will be resident for many years to come.
- The Egg Island nest was occupied in 2007, but unsuccessful. In 2005 this site was relocated to avoid conflicts with a major shorebird roost. It was used successfully in 2005, but went unoccupied in 2006.
- For the sixth year, a camera watched the nest on a Jersey City rooftop, and the image was available for viewing on the Division of Fish and Wildlife's website ([www.njfishandwildlife.com/peregrinecam](http://www.njfishandwildlife.com/peregrinecam)). The camera and website were maintained by private funding through the Conserve Wildlife Foundation of New Jersey, as well as donations from the NJ Tax Check-off for Wildlife.

### ***Recoveries:***

In 2007, two peregrines were reported found dead, and both had been hatched in Jersey City: a tiercel that fledged in 2006 was found dead in Jersey City in February 2007. Another male that fledged in 2004 was found dead in June, 2006 (reported in 2007) in Steinway, New York (near Queens).

In better news, color bands were read on two females that gave us good information. Using a scope, we read the band on a falcon nesting on the Palisades cliffs, and learned she fledged from a building ledge nest in Springfield, Massachusetts, in 2001! We had not been able to read bands at that site before, so we don't know if she has resided at the cliffs prior to this year, but that is likely. A NJ falcon was spotted nesting on Philadelphia's Girard Point Bridge, where she raised 3 young. She had been banded as a nestling in 2003 at Ocean Gate.

Also qualifying as recoveries are the peregrines re-sighted using both optics and the remote camera at nest sites. We identified 18 breeding adults at 10 nest sites (two remain unbanded and therefore unidentifiable). Three females and two males were new to our database, while the rest had been observed and reported in previous years. As of 2007, over four years of identifying banded birds, about 82% of NJ nesting males originated in NJ, while only about 55% of females originated in NJ. Females come into NJ from mainly the Chesapeake Bay area. These recoveries show the importance of New Jersey as part of a mid-Atlantic regional population of peregrine falcons.

**Conclusions:** Peregrines had excellent nest success in 2007, their 28<sup>th</sup> year of nesting in New Jersey. Nest success was average at 70%, and 20 active pairs fledged 47 young. We plan to continue the investigation of contaminants in unhatched, salvaged eggs, as well as the close monitoring of nesting pairs to detect problems. 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 management and the cooperation of bridge and building personnel, these sites can contribute to population viability and stability. The continued occupancy, though reduced success, of peregrines in historic, natural habitat made the reestablishment a place to monitor for the future.

**Our Thanks To:** Volunteers who protect and watch over peregrine falcons in New Jersey, including Pete McLain, McDuffy Barrow, Beth Balbierz, Sue and Mark Canale, Tim Jankowski, Larry Walton, Steve James, Chuck Wadding, Keith and Jackie Parker, Bob Kozinsky, Don and Karen Bonica at Toms River Avian Care, Dr. Stephen Wurst at Barnegat Animal Hospital, The Raptor Trust, Hans Toft, Atlantic City Hilton staff (Mel Thompson, Pete Aiuto, Nancy Bowen and others), Forsythe NWR staff and volunteers, Delaware River Port Authority staff, Palisades Interstate Park Commission and the Palisades Interstate Parkway Police, Betty Ann Kelly and John Salerno at the Essex County Court House, Burlington County Bridge Commission, The Port Authority of NY/NJ, Mack-Cali managers and engineers. Thanks to Shawn Padgett of VA for assistance with remote cameras. Special thanks to John and Mitzi Gumbs at the cliffs.

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**The Jersey City WebCam** ([www.njfishandwildlife.com/peregrinecam](http://www.njfishandwildlife.com/peregrinecam)) was funded by the Conserve Wildlife Foundation of NJ and Verizon, and maintained by Division staff Jeff Smith and Paul Tarlowe.

**The 2007 Jersey City Peregrine Falcon nesting season was dedicated to the memory of Linn Pierson**, who authored the website's Nestbox News, and was a dedicated volunteer for the Endangered and Nongame Species Program and the Conserve Wildlife Foundation of New Jersey. Linn gave of her time for the cause of understanding peregrines and all raptors, and shared her enthusiasm with new birders and teachers, especially in northern NJ and especially at the Palisades. She touched many lives and is well remembered.



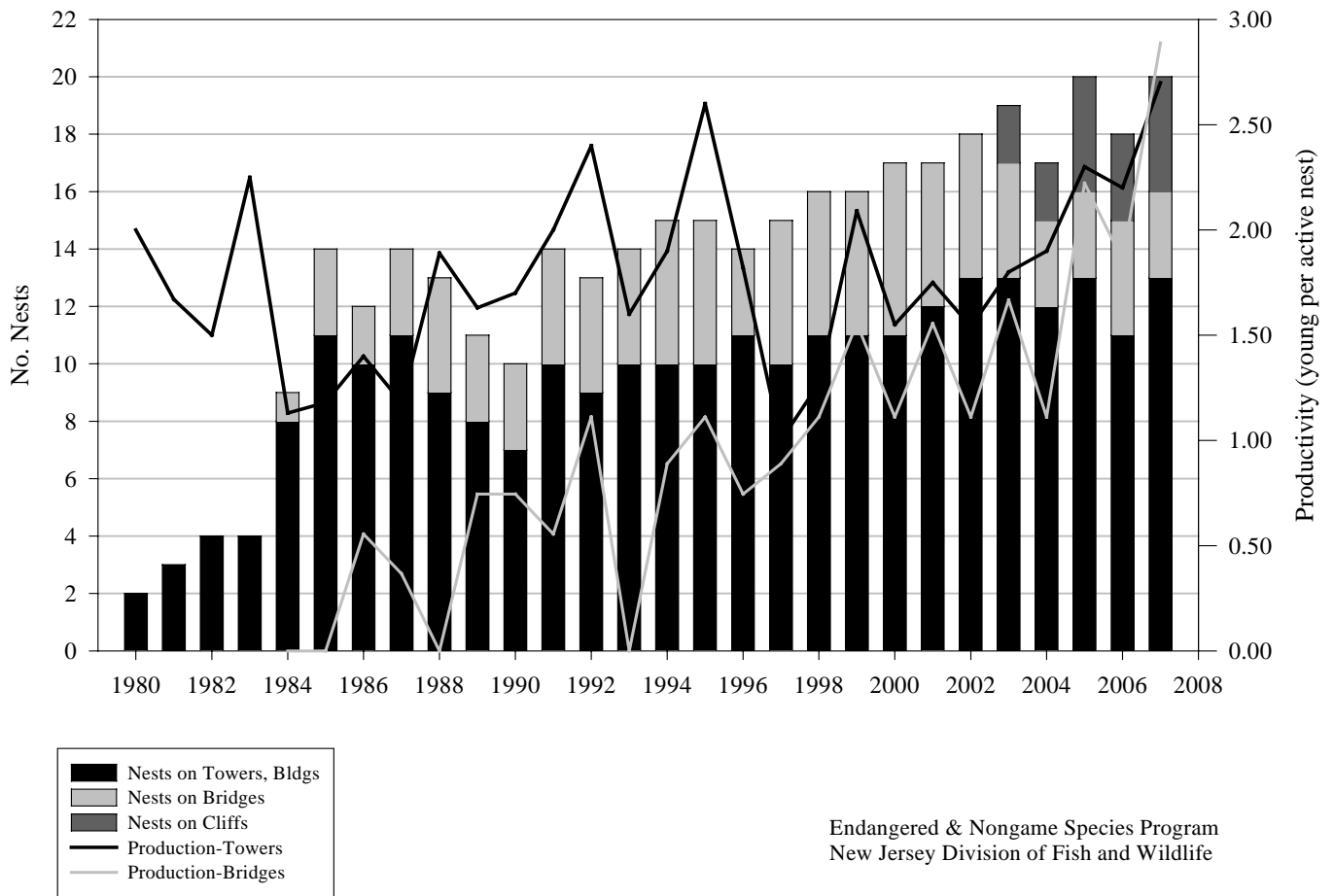


Figure 1. Nesting and productivity of peregrine falcons in New Jersey, with comparisons between towers/buildings, cliffs, and bridges.

