



# The Peregrine Falcon in New Jersey Report for 2006



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

## Summary:

In 2006 the New Jersey peregrine falcon population declined slightly to 18 pairs. Amazingly, the natural cliff population grew to four pairs, as they are quickly filling their old niche in the natural world. Three of the four pairs successfully raised young. In the rest of the state, 11 pairs nested on towers and buildings and three on bridges. Of 11 pairs on towers and buildings, all nested successfully, producing 27 young for a rate of 2.45 young per active nest. This is above the average of 1.70 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, five young fledged from two of three known-outcome nests, with the help of diligent bridge managers. Two pairs discovered last year were not known to nest (one pair was territorial in Elizabeth while the other may have nested undetected in Newark). We banded 32 young at 12 nests, applying both the federal band and a bicolor band with an alpha-numeric code. One nestling died at Jersey City of unknown causes. A fledgling off the Walt Whitman Bridge was recovered on the ground, and it was transferred to West Virginia where it was hacked into the wild. We collected two addled eggs from two sites, and a full clutch of three eggs from the Whitman Bridge to avoid construction disturbance to the nest.

In 2006 we employed a remote, motion-activated camera to photograph peregrine legs as the adults entered their 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 two additional birds by reading their color bands using optics. The data were not complete for 2006, but origin information on-hand suggested an increase in number of nesting females that originated from out of state.

**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, the 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 and expansion into *historic* and well-protected nest sites to achieve full recovery. Further, we are still concerned about the effects of persistent organochlorine contaminants on the population. We 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 at the cliffs in 2003 was a huge milestone, and an amazing sight for peregrine fans. In 2005 there were three nesting pairs that raised young, and in 2006 there were four nesting pairs, of which three raised young. The location of these pairs indicates they are quickly refilling their historic niche. The most-watched nesting pair resided atop 101 Hudson Street in Jersey City, where a webcam continued to monitor nesting and three of the four young successfully fledged. The events were interpreted by Linn Pierson and followed by peregrine fans in the website's Nestbox News.

Productivity was well above average at tower and building nest sites. All 11 tower/building sites fledged young this year. Only one site (Swan Bay) fledged four, while Brigantine, Heislerville, Stone Harbor and Jersey City fledged three. Sedge Island, Ocean Gate, Barnegat, Sea Isle, Tuckahoe and cliff site C-3 fledged two young each, and the Hilton and two cliff sites fledged one each.

On the Delaware River bridges, all four young fledged successfully at the Betsy Ross Bridge, but one of two young at the Walt Whitman fledged; the second was recovered and later hacked in West Virginia. A pair may have nested unsuccessfully at the Commodore Barry Bridge, but three young fledged from the NJ-PA Turnpike Bridge on the Pennsylvania side. A single bird was observed at the Tacony-Palmyra Bridge. As far as we know, no young fledged from either the NJ Turnpike-Vince Lombardi site or the Newark Bay Bridge in northern NJ.

- The statewide population leveled back to 18 nesting pairs (from 20 in 2005) (Figure 1, Table 1). Productivity was above average at 2.07 young per active nest for all 18 known-outcome nests.
- Productivity was very good at 11 tower and building (non-bridge sites), averaging 2.45 young per active nest; all 11 nests were successful in producing 27 young. Productivity at four bridge nests was above average at 1.50 young per nest. The 1.50 rate does not include the loss of one young post-fledging.
- In 2006 the natural cliff habitat in northern NJ hosted four nesting pairs that fledged two, one, one and no young, respectively. These pairs have shifted nest ledges slightly between years, while remaining within their territories. There seem to be multiple suitable nest sites available.
- Biologists banded a total of 32 nestlings at 12 nest sites.
- In response to two new urban pairs discovered in 2005 (one on a window ledge of a Newark building undergoing demolition, the other territorial on the court house building in Elizabeth), we placed a nest box in both cities. We could not confirm they used either nest box, although the pair in Elizabeth was observed in the area.
- Last year we built a smaller nest tower to replace the tower on Egg Island WMA and reduce conflicts with a major shorebird roost. While the site was used successfully in 2005, it was not occupied in 2006. We expect it to be reoccupied in 2007.
- 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 funds from the Tax Checkoff for Wildlife.

**Recoveries:**

Three peregrines were recaptured in the autumn 2005, presumably as they migrated south: notably, a Sedge Island fledgling was recaptured on September 27, 2005 at South Assateague Island, VA, and its sibling was recaptured the following day at the same site. An Ocean Gate young was recaptured on October 6, 2006 in Maryland. These recaptures confirm other encounters that indicate most New Jersey fledglings fly south in the fall, although most adults remain in the state year round.

An adult male peregrine was recovered dead in Marmora, Cape May County, in February 2006 after it had struck a wire. The bird had been banded as a fledgling at Sedge Island in 2000, and it was not known to be nesting at any of our monitored sites. An adult female peregrine was recovered dead in Sea Isle City in February 2006, of unknown causes. It had been banded as a nestling at Ship Shoal Island in VA in 1998.

Also qualifying as recoveries are the peregrines re-sighted using both optics and the remote camera. We identified 18 breeding adults at 11 nest sites. Three females and two males were new to our database, while the rest had been observed and reported in 2005. With new adults entering the population from out of state, there was a shift toward more females originating out of state: in 2005 62% of females originated in NJ; in 2006 that dropped to 40% of known females. These females originated in Maryland (up to four) and Virginia (two). The number of known males from out of state remained at 1 NY bird nesting at Jersey City. We are awaiting a report from the USGS Bird Banding Lab for complete origin information on our resighted birds, but this is a curious development. With above-average nest success in New Jersey, it is unusual that so many nesting birds have come from the Chesapeake Bay area.

**Conclusions:** Peregrines had excellent nest success in 2006, their 27<sup>th</sup> year of nesting in New Jersey. Nest success was good at 75%, and 18 active pairs fledged 36 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. The success of peregrines nesting in historic, natural habitat made 2005 a new landmark year for the peregrine's recovery in New Jersey.

**Our Thanks To:** Volunteers who protect and watch over peregrine falcons in New Jersey, including Linn Pierson, Pete McLain, McDuffy Barrow, 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, Hans Toft, Bob Barth, Atlantic City Hilton staff (Mel Thompson, Pete Aiuto, Nancy Ross and others), Forsythe NWR staff and volunteers, Delaware River Port Authority staff, Palisades Interstate Park Commission and the Palisades Interstate Parkway Police, Burlington County Bridge Commission, The Port Authority of NY/NJ, The Raptor Trust, Mack-Cali managers and engineers, Essex County Court House staff, AT&T staff, and PSE&G staff. Thanks to Shawn Padgett of VA for assistance with remote cameras.

**This project was funded by people** who support the NJ Tax Check-Off for Wildlife, purchase Conserve Wildlife license plates, and donate to the Conserve Wildlife Foundation of NJ. Funds were also provided by the U.S. Fish and Wildlife Service's Federal Aid to Endangered Species.

**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 webcam's Nestbox News is written by Linn Pierson of the Wildlife Conservation Corps and NJ Palisades Interstate Park Commission.

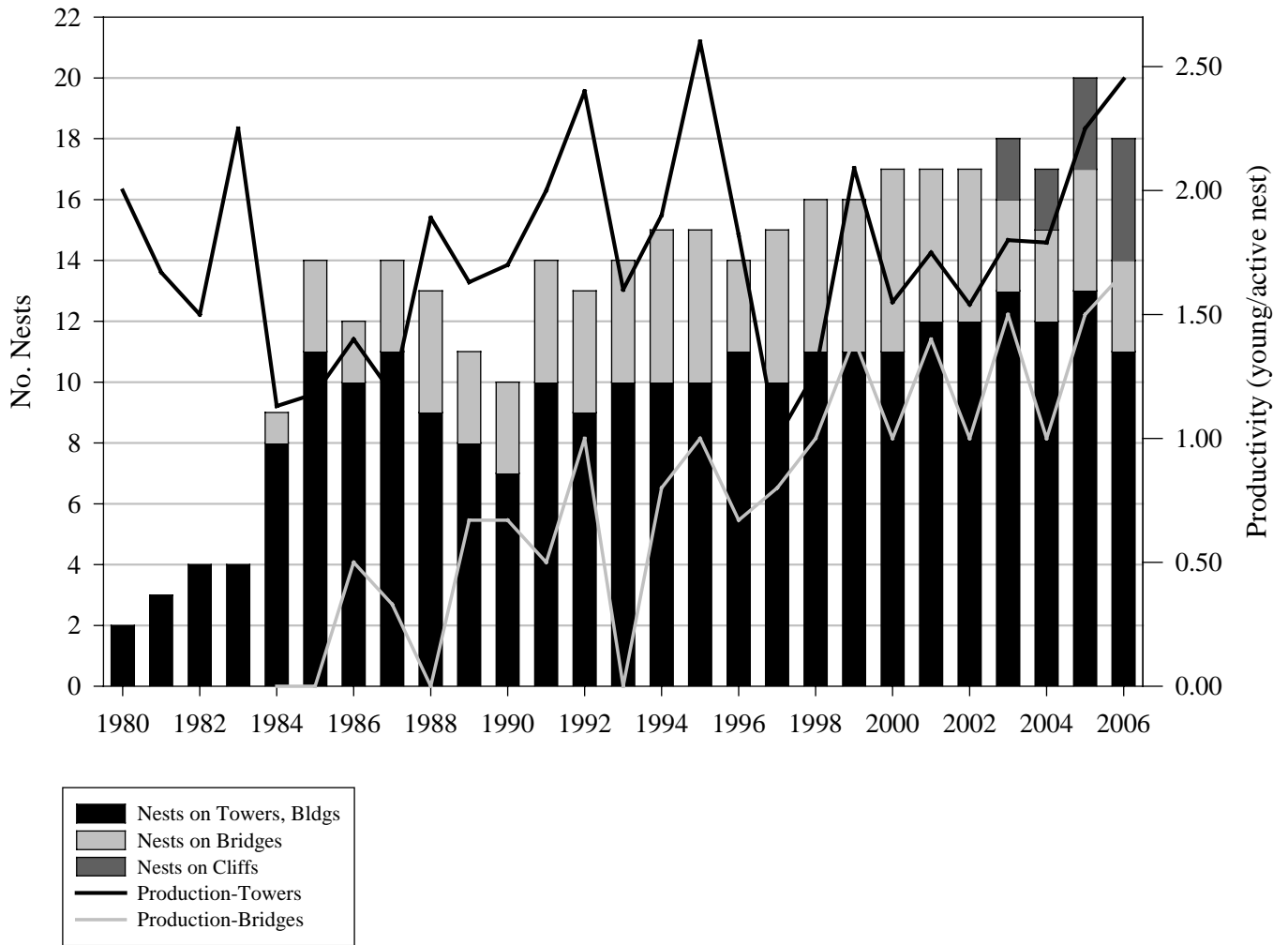


Figure 1. Nesting and productivity of peregrine falcons in New Jersey, with comparisons between towers/buildings, cliffs, and bridges.