

**The Peregrine Falcon
The Story of Success
by Dan Brauning**

(A summary of our March 2006 meeting, contributed by Publicity Chair Dennis Beaver)

Dan Brauning was the Project Coordinator for the (first) Breeding Bird Atlas of Pennsylvania, editor of the *Atlas of Breeding Birds in Pennsylvania*, and is Project Director for the Second Breeding Bird Atlas. He is currently the Section Supervisor of the Pennsylvania Game Commission's Wildlife Diversity Section. He has been involved in Peregrine Falcon research in Pennsylvania for twenty years, since the beginning of reintroduction.

Natural History

The Peregrine Falcon is the fastest flying bird. We really don't know exactly how fast, but we do know it is greater than terminal velocity, and somewhere in the neighborhood of 200 mph.

It is a bird that is designed for speed, and kills its prey in the open air.

The Peregrine is a very adaptable predator that catches only birds in the air.

The arctic peregrine is a long-distance migrant that moves from the arctic circle to South America and back, seasonally. The Pennsylvania birds historically probably did not migrate.

The Peregrine was originally called the "duck hawk", because many hunters have seen peregrines kill ducks, which are probably the largest of the peregrine's prey. The Peregrine is not a scavenger, but caching of migratory birds has been observed in urban areas.

Historically, the peregrine was a cliff nesting species. It does not build a nest, but rather scrapes a depression in the gravel on a cliff face and lays its eggs in the gravel. During reintroduction the adaptability of the Peregrine is shown when it occupies human structures, such as urban high rise buildings, and large bridges.

A search of the literature reveals that there were 44 historical nest sites in Pennsylvania, mostly in the eastern part of the state.

The pesticide DDT was the major contributor to the decline and extirpation of the Peregrine from Pennsylvania. Hunting contributed to the decline, but only to a small degree. The Peregrine disappeared from the eastern United States, and became extirpated as a nesting bird in Pennsylvania.

Preparation for Recovery

DDT was banned from use in the United States

The Endangered Species Act was passed

 This provided protection

 Funding was another important aspect of the Act

 New attitudes emerged about protection

A captive breeding program was developed through the Peregrine Fund at Cornell University.

 In the Hawk Barn, 5,000 birds were produced

 Although the young is helpless following hatch, these birds were kept “wild” birds, with no imprinting on humans

 Foster parents were utilized to rear the young

 Young Peregrines have voracious appetites, and in only about 40 days grow to adult size, which is about the size of an American crow.

 The adults are loyal parents, and both sexes contribute to feeding and rearing the young. The young fly in 40 – 45 days.

The earliest attempt at re-introduction was in 1976-77 in Towanda and Dauphin. Immature birds were hacked, but predation from Great Horned Owls greatly impacted the survival because there were no adults to protect the juveniles. The re-introduction program was in jeopardy.

 The recovery effort was moved to urban areas, which greatly reduced the predation problem. This is when bridges and skyscrapers became nest sites, since there were no cliffs for nesting. Nest trays were put on bridges and buildings to facilitate nesting.

 In the 1990's there were supplemental releases. The Peregrine can nest at about 2 years of age, and the life span in the wild is about 12 years.

There has been some recovery success in Pennsylvania.

 There are 15 nesting pairs.

 Pittsburgh sites:

 Gulf Tower

 Cathedral of Learning tower at the University of Pittsburgh.

 There are two pairs that have nested on cliffs in Pennsylvania

Peregrine Falcons were removed from the Federal Endangered Species List in 1999. There has been dramatic recovery nationwide. The U.S. Fish & Wildlife Service now considers the Peregrine secure.

There is ongoing monitoring of the Peregrine Falcons, as well as additional research, to identify future threats to this falcon.

Nestling are banded at 30 days for the purpose of:

Population monitoring

Dispersal data

Identification of threats to the population

There have been 29 recoveries of bands from a population of 143 birds that have been banded in Pennsylvania. These are birds that are either nesting, injured or dead.

Many of the banded birds went west. However, in 2003 the first nesting pair was reported on a cliff near Montgomery, PA. These represent two birds which are back in their natural environment.

Community participation is extremely important as volunteers monitor and report their finds about the peregrines.

Satellite Telemetry

This new technology is providing a new look at dispersal, survival and habitat. A telemetry device is attached to nestling by a harness, so when they learn to fly they learn with the telemetry device in place. Via satellite the technology provides a constant location of these birds, and sends that information via e-mail to the researcher.

Four falcons in Pennsylvania were fitted with these devices – 2 birds which were released in Pittsburgh, and 2 birds which were released in Harrisburg. It is interesting that none of the four birds in this study left the mid-Atlantic region. The survival rate of young peregrines is 50 percent in the first year. All four of the subject birds survived into the second year. The birds used both urban and rural areas, and all four birds visited north Jersey. More complete information about the Telemetry Project can be found on the Game Commission web site.

Recovery

In Pennsylvania, recovery of the Peregrine Falcon is still in progress. There are currently 15 nesting pairs in the state. There were 44 pairs historically nesting in Pennsylvania. All of the current pairs are different from the historical pairs, for

which there is no genetic stock. Dan calls the current peregrines “mongrels”, because they are a composite of Spanish, Arctic, European and other stock which were available for the Peregrine Fund breeding program at Cornell.

- Dennis Beaver