

The Peregrine Falcons of Rattlesnake Mountain in Rumney
by **Bill Taffe**
Photographs by John Hession

The Peregrine Falcon

The Peregrine Falcon (scientific name *Falco peregrinus*) was most likely in the northeast when the colonists arrived in New Hampshire. For many years it was called a "Duck Hawk", renowned for its blazing speed, aerial acrobatics and hunting prowess. Although never an abundant species, the eastern US was estimated to have a few hundred breeding pairs in the 1940s. However, following the Second World War, the use of DDT for insect control in agriculture increased greatly and eliminated the peregrine from the east. The potent pesticide entered the falcon's food chain and affected its egg development process making falcon egg shells too thin to successfully survive the hatching process. By the late 1960s the Peregrine Falcon was gone from New Hampshire and from the entire eastern US. Public outcry over the many dangers of DDT led the Environmental Protection Agency to ban its use effective December 31, 1972. At the same time that the nation was eliminating the use of DDT, Dr. Tom Cade, an ornithologist at Cornell University, established the Peregrine Fund and spearheaded an effort to reintroduce the Peregrine Falcon to the eastern US. Team members of the recovery effort captured a few wild falcons, learned how to raise and breed them in captivity, and by the late 1970s were able to begin releasing new hatchlings at suitable sites in the eastern US, a process called "hacking".

NH Peregrine Reintroduction History

Reintroduction in NH first bore results in 1981 when a pair of released falcons successfully fledged a chick on cliffs in Franconia Notch. Since then, released falcons or their offspring have occupied 18 different sites in NH. The most recent new site is a cliff on Sugarloaf Mountain in Benton on which falcons were observed for the first time this year. Rattlesnake Mountain in Rumney has been occupied for 11 years, which is about average for NH sites.

Through 2003 (the 2004 data is not yet final since the breeding season is in "full swing.") there have been 255 young peregrines fledged in the State. Holts Ledge in Lyme and the Franconia Cliffs have produced the most chicks with 32 and 30 young birds respectively. Peregrine Falcon nests in NH generally hatch and fledge 1-2 birds per year but Rattlesnake Mtn. in Rumney and the New Hampshire Tower in Manchester have had the best success, each producing an average of about 3 fledged birds per year.

Preliminary results for 2004 (based on data of Chris Martin, Senior Biologist at the Audubon Society of New Hampshire) indicate that there are 15 sites with falcons, a new high since "the DDT era". However, so far only 10 have been confirmed to be incubating eggs, down from 14 incubating pairs in 2003.

Rattlesnake Mountain Peregrine Falcons

Ornithological surveys conducted before the extensive use of DDT indicated that peregrines historically nested on Rattlesnake Mtn. According to Mr. Martin, when first observed in 1994 they had "returned to reclaim Rattlesnake Mtn ... (after) about a 45-year absence." The peregrine pair was first observed on April 15 of that year, but didn't lay eggs. However, the following year (1995) and every year since, peregrines have successfully hatched eggs and fledged young at Rattlesnake Mountain.

The Rattlesnake Mtn. peregrines don't overwinter at the cliffs but where they go is not known. Many peregrines do migrate, spending the winter in "warmer climes" such as the southeastern coast of the US, Mexico, or even South America. However, some NH peregrines spend nearly the entire year at their nest sites. Others may be wintering locally; a falcon banded as a chick in Dixville Notch overwintered in Manchester during two years in the 1990s. Winter Peregrine Falcon populations need much more study.

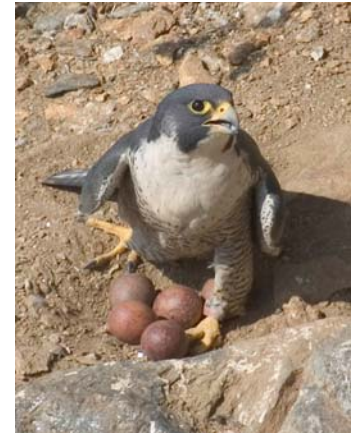
Typically the Rattlesnake peregrines are seen back at the cliffs in late February or early March. During March and early April they mate and select a nest site. By mid-April they lay 3-4 eggs in a "scrape" on one of the ledges on the Rattlesnake cliffs and begin incubation. For the next month one of the falcons, generally the female, is always on the nest keeping the eggs warm through wind, cold, rain, snow or sleet. The chicks commonly hatch in mid-May and in late June the young fledge, making their first flights out into the Baker Valley in front of the cliffs. The youngsters stay close to the nest ledge for a few weeks and are fed by the parents until they learn to hunt on

their own. By late August or early September, they are ranging throughout the lower Baker Valley. In October they migrate south for the winter, but not as a family. By this point the kids are "on their own".

The earliest observed hatch occurred on April 30, 2000, and the latest was May 28, 2001, except for one exceptional situation in 1996. That year falcons returned early (January 18) and began incubation on April 12. However, a week later there was a 36-hour period of cold (40 degrees) and rain and sleet which dumped 2 inches of water, all accompanied by strong winds. The ledge became soaked and the nest failed. But the plucky birds remated, began incubation anew on May 7 and hatched 3 chicks on June 6.

This year

In 2004 the falcon pair was first observed at Rattlesnake Mtn. on February 29. Incubation began around April 13, and chicks hatched about May 19. There were 5 eggs laid in the nest and 4 hatched. Three of the chicks were strong but one was rather underdeveloped. When the raptor biologist rappelled down to the ledge site on June 8 to band the chicks, the underdeveloped hatchling was not in the nest. It was later found dead at the base of the cliff, where it had fallen (or been pushed by siblings jostling for food) a couple of days previously. But two females and one male chick were banded and currently continue to grow to produce the next generation of falcons. Photographer and rock climber John Hession of Dorchester rappelled down with the banding team and took the accompanying photographs. Video footage of the banding by the NH Fish & Game Department will be shown later this year on Wildlife Journal on NH Public Television.



Banding

In order to study the ecology of the Peregrine Falcons in the Northeast, raptor biologists attempt to band the young falcons. Over the 24 years since the reintroduction of falcons into NH, about 85% of the chicks fledged have been banded. Band numbers are entered into a federal registry so the information is available to all researchers. Observers are sometimes able to read band numbers of returning birds using high power telescopes, and other birds are re-captured or found injured or dead. Knowing the origin of the birds helps determine migration routes and dispersal patterns.



Banding is accomplished with the help of local climbers who either "rope" the biologists onto the nest ledge (as was done at Rattlesnake on June 8) or climb to the ledge and lower the chicks to where the banding can be done safely (as was done on Sugarloaf Mtn. in Benton on June 7). Local climbers Jim Shimberg of the Rock Barn in West Plymouth and Bob Bruemmer of Plymouth have often been the lead climbers on Rattlesnake, aiding the biologists with the technical climbing needed to reach the ledge.

How to observe Peregrine Falcons

The easiest way to see Peregrine Falcons in NH is to view the web cam which monitors the falcon nest box on the New Hampshire Tower in Manchester. It can be seen at <http://www.nh.oudubon.org/research/pcam.htm>

The peregrines at Rattlesnake Mountain in Rumney can be heard more easily than seen. If you park in the lot for rock climbers on Buffalo Road about 1 mile north of Rumney Village and walk approximately 200 yards further along Buffalo Road, there is a second small parking area with trails leading up to the cliffs. Standing on the road here one can hear the adult falcons calling to each other and the young screaming for food. Often falcons will be

seen flying around and in front of the cliffs. In late June/early July the year's young will fledge and begin to fly. The youngsters put on a great show as they learn to fly and practice aerial acrobatics in front of the cliffs.

From the time nesting is first observed until the young have successfully fledged, the main cliff where the falcons nest is closed to climbers and hikers so breeding won't be disturbed. The rock climbing community has been wonderfully supportive of this temporary closure, understanding the importance of the reintroduction program and knowing that it will give them the pleasure of encountering and observing Peregrine Falcons on the other climbing locations along the mountain and on the main cliff before and after breeding season.



Staff and Volunteers

Peregrine Falcon monitoring and management in New Hampshire is coordinated and carried out by the Audubon Society of New Hampshire (ASNH) under the direction of Senior Biologist Chris Martin. The NH Fish & Game Department and the US Fish & Wildlife Service fund and offer professional guidance. The Rattlesnake Mtn. nest site is managed as a multi-use area by the US Forest Service. Volunteers assist by monitoring the cliffs on a regular basis and by aiding the biologists during banding work. The author has had the pleasure of monitoring the Rattlesnake peregrines during 2004 and for several years in the late 1990s.

Bill Taffe and John Hession are both members of the Pemigewasset Chapter of the Audubon Society of New Hampshire. John is the current Chapter President and Bill is a Past President.