

Bringing the Duck Hawk Home

“The Peregrine falcon, an immense stirrer up of passions.” – Author Unknown

In the late 1940s, biologists began noticing precipitous declines in the populations of many predatory birds. The cause of these declines was not identified until the mid-1960s, at which point several raptor species, including the Peregrine falcon, were facing extinction. DDT, a widespread, extensively-used pesticide, was interfering in eggshell formation. Seemingly healthy birds were laying eggs so thin that they were literally crushed to death by the weight of the incubating adult. How drastic were the effects of DDT? In the early 1940s Joseph Hickey, a Wisconsin biologist, determined that there were more than 200 pairs of Peregrines east of the Mississippi River. But by 1968 there were no Peregrines east of the Mississippi river at all. By the mid-1970s, the population had dwindled to 19 pairs in the western United States.

The Peregrine's return to American began with the formation of the prestigious Peregrine Fund at Cornell University. Led by Dr. Cade, the Fund pioneered techniques of captive breeding to produce young peregrines for release. Although many opposed the idea, Dr. Cade persevered and by the mid-1970s began releasing captively-produced peregrines using a falconry technique known as *hacking*. Following the lead of Dr. Cade, other groups in the United States and around the world began to breed and reintroduce peregrines.

In 1982, the Minnesota DNR Nongame Division, in cooperation with the University of Minnesota, began releasing peregrines from a hack tower at Weaver Dunes. Unfortunately, this initial attempt suffered tremendous losses from Great Horned Owls. The towers made wonderful perches for the owls, which quickly discovered the young, vulnerable peregrines. Some young survived and attempted to nest on cliffs; however, these attempts invariably failed. It would be many years before Peregrine falcons again returned to the Mississippi river valley.

In 1985, the decision was made to begin releasing Peregrines in the city, where predators would present less of a threat to the fledgling birds. The first releases began in Minneapolis and quickly spread to other cities, including Chicago, Indianapolis, and Milwaukee. In 1987 MF-1, a falcon produced by the Raptor Resource Project for the Minnesota Falconers Association, became the first returned Peregrine to breed in the wild in the Midwest. She fledged 25 young falcons from her nest atop the MultiFoods Tower in Minneapolis.

At the time, it was fully anticipated that urban peregrines would return to the same cliffs that the historic population had nested on. Much to everyone's surprise, the city falcons almost invariably went on to nest at urban sites. By 1994, only three of Minnesota's thirteen pairs were on cliffs along the north shore of Lake Superior. The rest were nesting on manmade structures. Other midwest and eastern states followed the same pattern – falcons released or fledged from manmade structures generally chose to nest on manmade structures as adults.

When the falcons did not immediately return to the cliffs, many assumed that Peregrines would eventually crossover once the urban population reached a carrying capacity. Falcons instead fought deadly territorial battles within sight of suitable cliff-nesting habitat, confounding the recovery experts. What had happened to the expected crossover?

In 1996, we came to the conclusion that nest-site imprinting might be inhibiting the peregrine's return to the cliffs of the Mississippi and its tributaries. In his book, *Understanding The Bird of Prey*, Dr. Nick Fox writes: "There is a strong correlation between the type of nest in which chicks grow up and the type they will subsequently choose as adults. It is even possible for two

populations of a species to exist in one area in a state of virtual genetic isolation." To us, this statement seemed to be borne out by the success of cliff-directed releases in Vermont and New Hampshire, which resulted in cliff-breeding populations, and canopy-directed releases in Germany, which resulted in a tree-breeding population. We no longer believed that crossover would occur spontaneously.

When peregrines were released at Weaver Dunes, the population was extremely small. Any loss by predators was a large loss. Sixteen years later, the peregrine was being proposed for delisting. The Project decided to risk a few losses and return to cliff releases. We built a special chamber designed to look like a cliff ledge, in which eighteen young peregrines were raised in 1998 and 1999. It was our belief – a belief borne out with the return of peregrines to Queen’s Bluff – that this chamber would imprint peregrines to rock face rather than man-made objects. The chamber faced a field with no man-made objects in site, although we did install a screen to prevent losses to marauding raccoons. When the peregrines were old enough, they were released from hack boxes located on Hanging Rock in Effigy Mounds National Monument. All together, we released 22 peregrines from cliffs – 18 from Effigy Mounds and four from the Bluffton escarpment.

Meanwhile, even though falcons were not returning to the cliffs of the Mississippi, they were once more returning to the river valley. In 1989 the Raptor Resource Project offered to install a nest box at the NSP King plant after Paul Simonet, a Stillwater falconer, identified a peregrine falcon at the plant. In 1990 Mae, a daughter of MF-1, became the first falcon to nest at a power plant. Mae is presently in her eleventh year at the NSP King Plant, located on the lower St. Croix just upstream from the Mississippi. From that point on, utility falcons began their march both up and down the river, as follows:

- 1992: NSP Sherco, Becker, Minnesota.
- 1993: NSP Blackdog, Eagan, Minnesota.
MPL Power and Light, Cohasset, Minnesota.
- 1995: NSP Monticello, Monticello, Minnesota.
- 1997: Dairyland Power, Alma, Wisconsin.
NSP Prairie Island, Minnesota.
- 1998: Dairyland Power, Genoa, Wisconsin.
NSP Riverside, Minneapolis, Minnesota.
- 1999: Alliant Power, Lansing, Iowa.
- 2000: Alliant Power, Cassville, Wisconsin.
NSP High Bridge, St. Paul, Minnesota.
NSP Minnesota Valley, Granite Falls, Minnesota.
Cargill, Red Wing, Minnesota.
Cargill, Lake City, Minnesota.

Although the utility-peregrine program has its detractors, the program works! With the help of the electric utility industry, the peregrine was returned to the Mississippi River valley. In 1999, 34 falcons fledged from utilities, the Iowa DNR released another 15, and 9 fledged from Hanging Rock, bringing the total number of falcons produced along the river that year to 58.

In March of the year 2000, Detric Benz reported a peregrine on Queen’s Bluff in Winona, Minnesota. Project director Bob Anderson confirmed the report the same day, identifying the tiercel as a 1998 Effigy Mounds cliff-released bird. The female was also produced by us and released outside Mason City, Iowa, in 1998. We believe that the male sought the cliffs he had been imprinted to by the special rocky chamber and the cliff release.

Queen's Bluff is a historic peregrine eyrie and the male – the first peregrine reported to have returned to the cliffs – was one of our cliff-imprinted birds. Since that first report, we have also verified peregrines at a nest box on a cliff near Lansing, Iowa, and at a nest box in a pothole at John Latsch State park. We are absolutely thrilled by this turn of events, but some important questions remain unanswered.

Great Horned Owls or Racoons?

Great Horned Owls have been cited as one of the reasons that peregrines failed to return to the cliffs. However, after observing miles of Mississippi cliffs, we believe that racoons may present a more serious threat. In all of the climbing we've done, we've found very few ledges where racoon sign can't be found. It may be necessary to place nest boxes or improve the site to prevent predation by racoons and/or opossums. We believe that if racoons did not impact the original population, they clearly do now.

How can urban-nesting peregrines be redirected toward the cliffs?

With Peregrine young set to fledge from up to fourteen man-made river valley locations this spring, our challenge at this point is not to release more falcons, but rather to direct wild-hatched falcons toward the cliffs. Early this year, the Project hung a nest box on a cliff near the pair nesting at the Alliant Power stack in Lansing, Iowa. When the adults returned in the spring, they wavered between the cliff and the utility stack, finally choosing the cliff. After two years of successful fledging, the box will be removed and a ledge prepared for falcon occupancy.

Similar methods have been successfully used to develop a tree-nesting population in Germany. We plan to adopt this technique up and down the river valley in the belief that it will eventually move urban peregrines to the cliffs.

Will urban-nesting and cliff-nesting populations remain genetically isolated?

It has been theorized that German cliff and tree-nesting populations remained genetically isolated. Crossover may not occur spontaneously but might be influenced by the presence of other birds in any given location. We are anxious to monitor the population and determine what, if any, crossover occurs.

The original goal of peregrine recovery in the Midwest was to return the Peregrine to the cliffs of the Mississippi River and its tributaries. Although the peregrine was delisted in 1999, the Raptor Resource Project did not and does not feel it can be considered recovered until it has returned its rightful place on the cliffs overlooking the Mississippi and its tributaries. As of this writing, we do not yet know whether any of the new cliff nests will be successful. But we do know that these three peregrine pairs represent a small but very significant step on the road to bringing the Peregrine home.

For more information, please visit our website at www.salamander.com/~rrp