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PEREGRINE FALCON REINTRODUCTION AT ACADIA NATIONAL PARK: A MULTI-AGENCY COOPERATIVE EFFORT

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SUMMARY

This paper reviews the peregrine falcon reintroduction program at Acadia National Park, and shows the value of interagency cooperation on complex projects such as endangered species reintroduction.

1. SITE SELECTION

The decline and subsequent reintroduction of the peregrine falcon (*Falco peregrinus*) in the eastern United States has been well documented (1,2,3). Success with reintroducing captive bred falcons in other eastern states during the 1970's led to interest in extending the program to Maine, which had not been included in the original Eastern Peregrine Falcon Recovery Plan (EPFRP) (4).

In the spring of 1983, the National Park Service (NPS) entered into a Cooperative Agreement with researchers from College of the Atlantic (COA) to determine the feasibility of hacking peregrine falcons in Acadia National Park (ANP). ANP resource managers, aware that peregrines had nested in the park as recently as the 1950's, were hoping that the study would encourage the Peregrine Fund (TPF) to include ANP as a release site. All potential cliff sites in the park including two historical eyries, were evaluated (5) based on criteria set forth by TPF (6).

Siting criteria of particular concern included the presence of predators (avian & mammalian) at potential hack sites; the type and frequency of human disturbance; accessibility; and suitable habitat, including the presence of cliffs, open expanses and an adequate food supply. Since young peregrines being hacked into the wild are especially vulnerable to predation by great horned owls (*Bubo virginianus*), special emphasis was placed on determining the presence of owls near prospective sites.

In August of 1983, representatives from TPF, ANP, COA, and the Maine Department of Inland Fisheries and Wildlife (MDIFW) met to discuss a statewide strategy for participating in the EPFRP. Despite some concern about potential peregrine predation on the declining American black duck (*Anas rubripes*), State officials decided to participate. MDIFW contracted with the Cooperative Wildlife Research Unit of the University of Maine to conduct a statewide assessment of potential hack sites for peregrine falcons (7), incorporating information gathered by the ANP/COA study. Funding for the study was provided through the Endangered Species Program of the U.S. Fish and Wildlife Service (USFWS).

In October of 1983, representatives from all participating agencies met to discuss and prioritize sites statewide. ANP, with the highest mountains on the eastern seaboard, steep

glacier-carved cliffs and at least two historical peregrine falcon eyries was selected as the highest priority site in Maine.

The goal of the hacking program was to release as many birds into the wild as possible. Because it was felt that returning peregrines seeking to establish a territory would most likely select one of the historical eyries (Champlain and St. Sauveur Mts.), Penobscot Mountain, equidistant from the historical eyries, was chosen.

2. HACKING PROGRAM 1984-86

ANP and COA agreed to cooperate in the park's hacking effort, with MDIFW to coordinate the statewide reintroduction program. Park personnel built four hack boxes that were used at Acadia (and other sites) from materials provided by the State. Two COA students served as hack site attendants with funding and supervision provided by the NPS. The U.S. Coast Guard donated the use of a helicopter to transport gear, greatly reducing the time needed to set up the hack site. In May 1984, the first eyases were delivered by TPF biologists who provided training to the hack site attendants and monitored the project during those first critical days. By the end of July all seven young peregrines had fledged. The same cooperative effort in 1985 and 1986 resulted in a total hacking success of ninety-five percent (22 of 23 birds fledged) (Table 1).

Because adult peregrines often harass hacked fledglings, the hacking phase of the project was suspended in 1987 when a subadult peregrine was seen in the vicinity of the hack site. Since 1986, four birds released at ANP have been reidentified by their band number—one dead and three alive—all in the New England area.

TABLE 1 Acadia National Park Hacking Summary 1984-86

Year	No. Falcons Released	No. Lost	Cause	No. Falcons Dispersed
1984	7	0	---	7
1985	6	0	---	6
1986	10	1	disappeared prematurely	9
TOTAL	23	1	---	22

3. REOCCUPATION OF AN HISTORICAL EYRIE

The hope of seeing a peregrine falcon reoccupy a historical eyrie in ANP was fulfilled in the spring of 1988 when a peregrine falcon hacked from ANP in 1986 took up residence on Champlain Mountain. Park managers closed the popular Precipice Trail to minimize disturbance by visitors while the young tiercel defended the site from northern ravens (*Corvus corax*) and other birds. An unidentified immature female was attracted to the site for several weeks that spring and some courtship behavior was observed, but no nesting occurred.

In 1989 and 1990, the same male falcon and an immature female returned to the site and traditional courtship and nesting behavior were observed, but again no nesting occurred. Fearing that continued failure to rear young would cause the peregrines to abandon the nest

site in future years, an unsuccessful attempt was made in June 1990 to foster a broad-winged hawk (*Buteo platypterus*) chick.

Continued competition between ravens and peregrines for the same section of cliff since 1988 created some concern for park managers. However, it is known that ravens and peregrines can co-exist, occasionally nesting within 20 meters of each other, although it may take several years before the two species work out a compatible arrangement (8).

In 1991, both the peregrines and ravens returned to the cliff on Champlain Mountain and successfully fledged young.

4. DISCUSSION

In contrast to many remote and unprotected areas, ANP attracts several million visitors each year which has provided an excellent opportunity to present the EPFRP to the public. Also, because of the site's accessibility and the park's large staff, ANP has been able to provide a higher level of nest monitoring, protection and interpretation than could be provided at unprotected sites. Resource managers monitor nest activity and park rangers patrol the area daily. Park naturalists have highlighted the program on bird walks and a brochure has been produced to give to interested visitors. There has also been extensive coverage in local and regional newspapers, magazines, and television. Future study will be enhanced by the accessibility of the site and the various park resources available.

Wildlife recovery programs are complex and expensive, requiring specialized knowledge and experience, and a long-term commitment to be successful. The cooperative spirit of the individuals and agencies involved has been the key to the success of restoring breeding peregrine falcons to Acadia National Park.

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