

ACADIA NATIONAL PARK
RESOURCE MANAGEMENT DIVISION

PEREGRINE FALCON MONITORING 1989 - STATUS REPORT

Division of Natural Resources, Acadia National Park

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INTRODUCTION

Recovery of the Peregrine falcon (Falco peregrinus) in Acadia National Park continued in 1989. For the second consecutive year an adult male falcon appeared in the area of an historical eyrie at Precipice Cliff on Champlain Mountain. Although a probable immature female falcon was observed late in the breeding season, no nesting was observed. This report summarizes the observations of peregrine falcon activity and management actions taken in 1989, and discusses future long term management considerations.

MONITORING/OBSERVATIONS

Observations of peregrine falcons in Acadia National Park in 1989 were similar to those in 1988. The Precipice cliff on Champlain Mountain was again the focal point for activity. One adult male (identified by leg band) returned and vigorously defended the same section of cliff as it did the previous year. This tiercel was first observed in mid-March in the Precipice Cliff area, after having been intermittently observed throughout the late summer and fall of 1988. Although the male bird was observed almost daily throughout the spring, observations of a second peregrine (female or possible mate) were very sporadic. The first sighting of a probable second peregrine occurred on April 11. This second bird was seen circling above the cliff area for a minute or two, was then joined by the tiercel and both flew off. Throughout the rest of April and into early May there continued to be infrequent sightings of a possible second peregrine but they were always brief, usually soaring, and at a distance which made positive identification difficult. It was not until May 15 that a second peregrine falcon was positively observed on the cliff with the male bird also present. This second bird was definitely an immature falcon, and probably a female since it appeared larger than the male. Although both falcons were seen at the same time intermittently over the next few days there was no evidence of breeding or nesting behavior displayed, e.g., food exchanges, mating vocalization. After several days of observations of the male bird only, and again no indication of nesting or breeding, the decision was made to reopen the Precipice trail on May 26. Periodic observations throughout the summer have reported one and occasionally two falcons in the Precipice area.

Because a second bird was so infrequently seen there was much speculation as to a possible pairing of falcons in the Precipice Cliff area. One explanation is that the second bird was an immature falcon that had been on Petite Manan Island the previous year. It was suggested that both the Precipice Cliff and Petite Manan served as hunting areas this year (Drury, pers. comm.). It is not known, however, to what extent peregrine falcon activity occurred at Petit Manan Island in 1989. It is also possible that

second bird sightings were of immature birds, or other adult males that came into the area looking for a home cliff. Whatever the case, it is apparent that there was not a clearly mated pair of adult peregrines at the Precipice Cliff area of Champlain Mountain in the spring of 1989.

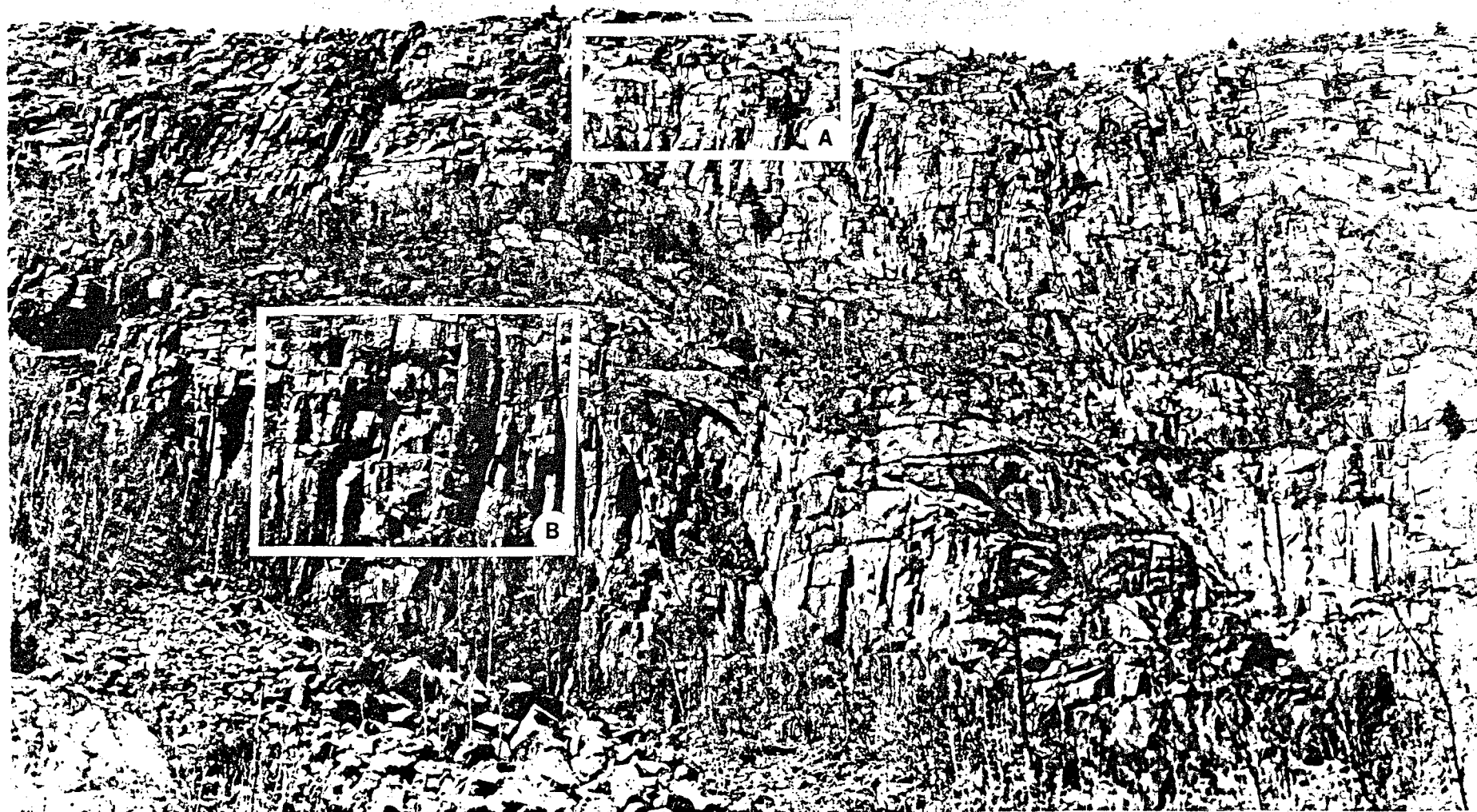
For the second consecutive year ravens established a nest on the lower section of Precipice Cliff (Fig. 1). Throughout the spring the male peregrine constantly harassed these ravens vocally and by repeatedly stooping on them, frequently driving them to the ground. However, there were no observations of the peregrine killing or even making hard contact. The ravens continued nest building and apparent egg incubation into early May. There were, however, no observations of raven fledglings. It was a very wet and cold spring in 1989. Snow and freezing temperatures occurred intermittently through the end of April, and more than six inches of rain fell in the first two weeks of May. This weather pattern may have affected peregrine mating and breeding as well.

Other cliff sites in Acadia that were monitored included Jordan Cliffs, Beech Cliff, and Valley Cove (historical eyrie). Observations were very infrequent at these sites due to limited staff. One watch day occurred on May 5, in which all the above sites were monitored simultaneously. A single peregrine was observed at both the Precipice and Beech Cliff sites, but at different times and therefore could have been the same bird. Although these other cliff areas were occasionally monitored throughout the spring by park staff and other knowledgeable observers, (e.g., College of the Atlantic ornithology class), there are insufficient data to suggest the presence or absence of other territorial peregrines. It is important to note, however, that peregrine activity at Acadia received a good deal of attention by local newspapers and television as well as by park staff (see Management Actions). Coupled with the fact that Acadia attracts large numbers of visitors it seems likely that any obvious peregrine sightings, especially of nesting or fledgling activity at other locations, would have been reported. No consistent peregrine use or activity was reported at any other locations.

MONITORING ACTIVITY

Initial monitoring at the Precipice Cliff site was accomplished by a local volunteer. This individual made almost daily observations from early April through May from the base of the Precipice Cliffs. Park Natural Resource staff also frequently monitored the Precipice site (minimum of 3 to 4 times per week) and occasionally other cliff sites as well. In addition there were periodic communications with Dr. William Drury (College of the Atlantic) who made weekly field trips into the Park with his

Figure 1. View of Precipice Cliff showing raven nesting area on the lower cliff face (B), and area of preferred peregrine use on upper cliff face (A).



ornithology class. Dr. Drury's observations were consistent with those stated above.

MANAGEMENT ACTIONS

Consistent with recommendations in the Eastern Peregrine Falcon Recovery Plan (USFWS, 1979), the Precipice Hiking trail was closed and a news release issued on April 12. No statistics are available, but trail use before the closure was probably very light due to snow and ice conditions on the trail itself, and the closure of the park loop road which limited trail use to those willing to walk in from Schooner Head road (approximately 3/4 mile to the Precipice Trailhead, Fig.2.). The park loop road was not opened until April 15. It should be noted that park rangers frequently patrolled the Precipice trail area and that the volunteer was issued a park radio enabling him to contact rangers in the event of encroachment of the closed area by visitors. There were very few instances of trail closure violations. Some trail use probably occurred before and after the trail closure but it is difficult to assess what impact this use had on peregrine activity.

In addition to the actions cited above the park's Division of Interpretation included peregrine information in several interpretive programs as well as in preseason training activities. There was also a prominent section on the peregrine falcon in the park's interpretive newspaper in 1989.

RECOMMENDATIONS FOR FUTURE MONITORING

There is always a tendency to recommend changes whenever a program does not immediately succeed as expected. The early success of the peregrine hacking program (in which 22 of 23 birds were hacked from Acadia in 1984-86) has not been duplicated by what is considered the ultimate goal, successful nesting and fledging of young. However, the return and territorial behavior of the same tiercel for two successive springs is a positive occurrence and holds promise for the future. Suggestions on future actions include:

1. Earlier, more intensive monitoring in the spring. Monitoring for courtship behavior should begin in March, and as many potential nesting cliffs should be observed as staff and time allow. At a minimum this should include several 4 - 6 hour visits to possible peregrine cliff sites within the park. This should also include one or two parkwide watch days if activity is observed at more than a single location. Courtship behavior, in contrast to nesting/egg incubation, is readily observable and is a key element in triggering management decisions involving trail

closure and public notification. However, during early spring many of the potential Peregrine cliffs may not be readily accessible because roads can be snow or ice covered. Therefore, it is recommended seasonal staff be brought on early so that as many of these sites as possible can be surveyed. Although volunteers can be a valuable supplement to a monitoring program, qualified volunteers can be hard to find especially in the early spring. Such was the case this year, and consequently observations were limited during a critical phase in the courtship and nesting cycle to the Precipice Cliff. Although there was little evidence to suggest peregrine nesting anywhere in the park this year, that may change in the future and the park should be prepared to respond to increased activity.

2. Should nesting activity be observed at some point in the future it would be important to document certain information. At a minimum this documentation should include: nest site location, date of egg laying and hatching, fledging success and date, and, if possible, leg band identification. This information will allow for breeding cycle determination in this area, recruitment sources of nesting adults, as well as aid in the scheduling of monitoring in future years. It will also allow for the later collection of egg shell fragments and prey remains which are important in determining environmental conditions and habitat utilization.

3. Vigorous harassment by the adult male peregrine the past two years has not been successful in driving ravens from the Precipice Cliff area. Constant and proximate interaction with the ravens may be a factor in the tiercel's inability to attract a mate. However, contacts with personnel knowledgeable of other peregrine reintroduction programs (Nickerson, pers. comm.) and a review of the literature indicates that peregrines and ravens can successfully occupy the same cliff area. In the Black Forest in Germany ravens and peregrines have nested successfully within 20 meters on the same cliff (Hepp, 1988).

4. Consider enhancing a potential nesting ledge. Although the tiercel has used several different ledges to perch and roost on, one particular ledge seems to be preferred. This ledge appears to be wide enough and has sand and moss for a scrape, but does not have a protective overhanging ledge. It may be possible to secure some type of artificial protective shelter on the ledge which may increase the chance of attracting an adult female to the site. There are several references in the literature documenting nest site enhancement in Europe as well as other locations in the United States (Cade, 1988). However, there are also numerous instances where peregrines have nested successfully on very exposed sites (Cade, 1988). Also, historical peregrine falcon nesting in Acadia National Park presumably occurred in unaltered locations and those sites are still available for use. Thus, it seems prudent to wait until nesting and egg laying are

attempted before considering enhancement of a potential nest site. This also allows a possible future pair of birds the opportunity to select a nest site farther from the hiking trail which would reduce the impact of human intrusion on nesting. If, however, future nesting efforts were to fail for reasons that could be attributed to environmental factors then nest site enhancement could be reconsidered.

LITERATURE CITED

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