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DOCUMENTATION OF PEREGRINE FALCON NEST SITES
IN RELATION TO STATE LAND USE PROPOSALS

By

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Final Report
Project SE-2-1

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FINAL REPORT (RESEARCH)

State: Alaska

Cooperator: USDI Fish and Wildlife Service

Project No.: SE-2-1 Project Title: Documentation of
Peregrine Falcon Nest
Sites in Relation to
State Land Use
Proposals

Job Title: Documentation of
Active Peregrine Nest
Sites

Period Covered: 18 June 1985-15 August 1986

SUMMARY

The Wulik, Kivalina, Ipewik, and Kukpuk Rivers in northwestern Alaska were surveyed to document active peregrine falcon nest sites. Three rivers on the North Slope, the Kavik, Kadleroshilik, and Shaviovik drainages were also surveyed for active peregrine eyries. No peregrines or active peregrine nest sites were observed during the surveys. Several active nests of other raptors and common ravens were observed near the rivers surveyed on the North Slope and in northwestern Alaska.

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BACKGROUND

Three subspecies of peregrine falcon (Falco peregrinus) occur in Alaska. The American peregrine falcon (F. p. anatum) inhabits the boreal forest region of interior Alaska, and is currently classified as endangered on both the federal and state endangered species lists. The Arctic peregrine falcon (F. p. tundrius) occurs in the tundra region of arctic Alaska. This subspecies of peregrine is currently on the state endangered species list, although the federal government reclassified the Arctic peregrine from endangered to threatened status in early 1984. These peregrines nest in Alaska, arriving on their breeding grounds as early as mid-April. In interior Alaska, nearly all nests are situated on cliffs. On the North Slope, peregrines use cliffs, bluffs, and low hills for nesting. They begin leaving Alaska for their wintering grounds in South America from mid- to late August, with a majority departing in September. The 3rd subspecies of peregrine falcon, commonly known as Peale's, (F. p. pealei) is not classified as threatened or endangered.

In the mid-1970's, the U. S. Fish and Wildlife Service (USFWS) appointed the Alaska Peregrine Falcon Recovery Team, which began developing a recovery plan and initiating some recovery actions for F. p. anatum and F. p. tundrius. The goal of the plan is to "restore occupancy and reproduction of peregrine falcons in Alaska up to nonendangered levels." To promote recovery and reach the ultimate goal of establishing healthy and viable populations, it is essential that we continue to identify and protect peregrine falcon nesting habitat and minimize disturbance to breeding pairs.

While most of the potential peregrine habitat in Alaska may have been identified, current information is frequently not available for many areas of the state. Additional research efforts designed to document the presence or absence of breeding pairs are warranted in areas of the state where proposed land-use activities may impact falcons (e.g., oil and gas lease sales, roads, land disposals, mining operations). This information is also needed to fill data gaps in locations where

areawide state plans that will guide future land development patterns (e.g., Kuskokwim and Northwest area plans) are being developed. This information is essential if nesting peregrines are to be adequately protected through mitigation measures, reserves, and land-use classification.

OBJECTIVES

1. To identify where upcoming state land-use activities that could adversely affect peregrines are proposed or may occur.
2. To synthesize existing data on potential peregrine falcon nesting habitat, historical nesting areas, and recently, active nesting sites.
3. To prioritize areas for field surveys, based on the information obtained in objectives #1 and #2.
4. To conduct field surveys to document active peregrine nesting sites.
5. To band peregrine falcon eyases in northwestern Alaska.

The Alaska Department of Fish and Game (ADF&G), Habitat Division, and the USFWS reviewed plans for potential oil, gas, and coal lease sales, proposed land disposal, and areas scheduled for land-use planning. This review resulted in the identification of 4 expansive areas in need of peregrine falcon surveys. The areas, listed in order of priority, included:

1. Coastal bluffs, particularly in the vicinity of seabird colonies, from Cape Lisburne south to Norton Sound.
2. North Slope rivers between, but excluding, the Canning and Sagavanirktok Rivers.
3. Rivers in the Delong Mountains region of northwestern Alaska including the Utukok, Kukpowruk, Kokolik, and Pitmegea Rivers flowing northerly into the Arctic Ocean; and the Kukpuk-Ipewik, Kivalina, and Wulik Rivers flowing southward into the Chukchi Sea.
4. The Copper River, from Glennallen downstream to the mouth of the river near Cordova.

R. E. Ambrose¹ of the USFWS reviewed the work schedule for extensive nest surveys and suggested some changes. He recommended intensive surveys, including trapping and banding adults, in fewer, selected areas of the state. Field survey plans were amended to reflect these suggestions.

SURVEY AREAS AND METHODS

The Wulik, Kivalina, Ipewik, and Kukpuk Rivers were surveyed in northwestern Alaska. The Wulik and Kivalina Rivers are relatively fast-flowing with a calculated drop of 1.6 and 1.3 m per km, respectively, with numerous, generally braided channels. The riparian and adjacent upland areas associated with the Wulik and Kivalina Rivers appear to contain adequate prey and cliff-nesting habitat suitable for use by peregrine falcons. The Kukpuk River is generally slow-moving and meandering with a calculated drop of less than 0.8 m per km, while the Ipewik River has a gradient of just over 1.1 m per km. Cliffs suitable for raptor nesting were numerous throughout the Kukpuk-Ipewik drainages and bird and mammalian prey were abundant.

Survey crews were able to make a preliminary aerial reconnaissance of cliffs adjacent to rivers while being ferried into the respective areas via helicopter to begin ground surveys. A ground survey of each river was conducted by 2 observers in a nonmotorized Avon raft. The Wulik and Kivalina Rivers were surveyed during 16-19 June, and the Kukpuk and Ipewik Rivers were floated during 20-28 June. Adjacent cliffs and suitable bluffs facing the river, including steep river banks, were closely examined with binoculars as survey crews drifted past in the raft. Areas requiring more time or closer observation, including potential nesting sites at a distance from the river, were checked with spotting scopes from vantage points onshore.

The survey of the Wulik River began in Section 7, T31N, R19W, Kateel River Meridian (KRM), at the Old Cominco Camp, and terminated in Section 22, T28N, R24W, KRM (an estimated 72 river km). The Kivalina River survey began in Section 24, T31N, R25W, KRM, and ended in Section 23, T28N, R26W, KRM (50 river km). The Ipewik River survey began in Section 36, T10S, R57W, Umiat Meridian (UM), and terminated in Section 2, T12S, R61W, UM (52 river km). The Kukpuk River survey began in Section 32, T33N, R26W, KRM, and ended at the confluence of the Kukpuk and Ipewik Rivers (161 river km).

¹ R. E. Ambrose, Project Leader, Endangered Species, USFWS, Fairbanks, Alaska, in correspondence dated 30 April 1986.

Active raptor and raven nests were visited when accessible, or observed from above if possible, to determine the presence of eggs and young. During nest visits, any prey remains were documented or collected, and, if conditions permitted, nestlings were banded with USFWS lock-on aluminum leg bands. Chicks were not banded if they were too small to retain leg bands. Active raptor and raven nests were plotted on U. S. Geological Survey (USGS) (scale 1:63,360) topographic maps. Accessible inactive nests were often visited.

Three rivers on the North Slope, the Kavik, Kadleroshilik, and Shaviovik drainages were surveyed between 15-17 June. An aerial survey of potential nesting habitat along the main fork of the Kavik River, beginning from a point west of Shublik Island on the Canning River and proceeding north, was completed in July. These areas were surveyed on foot and by aerial reconnaissance. A Piper Super Cub (PA-18) aircraft, flown at slow speeds approximately 50-100 m from cliffs, was used for surveys. One observer was present in addition to the pilot, and a minimum of 2 passes were made over each potential nest site. If no peregrines or nests were observed but a site looked active (whitewash obvious and good ledges), the cliff was approached on foot to within 600 m and observed with a spotting scope. Active raptor nests were plotted on USGS topographic maps (scale 1:250,000).

RESULTS AND DISCUSSION

Approximately 335 km of the Wulik, Kivalina, Ipewik, and Kukpuk Rivers were surveyed for raptor nesting activity. We located 44 active raptor and raven nests on cliffs and bluffs adjacent to the 4 rivers. The active nest total was composed of 15 rough-legged hawk (Buteo lagopus) nests, 10 gyrfalcon (Falco r sticolus) sites, 10 golden eagle (Aquila chrysaetos) eyries, and 9 common raven (Corvus corax) nests. We did not observe any peregrine falcons nor did we locate any active nest sites of this falcon during surveys of the Wulik, Kivalina, Ipewik, and Kukpuk Rivers. The survey results for northwestern Alaska are summarized, by river, in Table 1.

Table 1. Raptor nests located on 4 rivers in northwestern Alaska, 1986.

River	Km surveyed	Number of active nests			
		Rough-legged hawk	Gyr-falcon	Golden eagle	Common raven
Kivalina	50	6	1	0	1
Wulik	72	3	0	2	0
Ipewik	52	1	2	3	2
Kukpuk	161	5	7	5	6
Total	335	15	10	10	9

Merlins (Falco columbarius), a rare nesting species in northwestern Alaska, were observed twice during our surveys; on both occasions these small falcons appeared to be defending a nest site. The initial sighting was near a south-facing cliff on the Wulik River (Section 7, T31N, R19W, KRM), and again on the Kukpuk River (Section 30, T12S, R59W, UM) at a cliff just upstream from the confluence with the Ipewik River. We were unable to locate a merlin nest at either site however.

No peregrines or active peregrine nest sites were observed during North Slope surveys. Cliff habitat in the foothill regions of these rivers is limited to steep soil and shale banks, usually not over 25 m in height. Exceptions occur in the upper reaches of small tributaries of the Kavik River (Pagopuk Creek), Fin, and Kemik Creeks--generally between 69°15' and 69°30'. Few cliffs contained ledges and the area probably would not support more than an occasional nesting pair. However, dirt banks similar to those used by peregrines on the Ikpikpuk, Sagavanirktok, and Anaktuvuk are present.

Gryfalcons were observed at these cliffs, but only 1 pair had young. Three golden eagle nests, in disrepair, were located and immature golden eagles were observed on 6 occasions. Rough-legged hawks were the most common raptor and 10 active nests were located. In addition, active raven nests were located at 3 cliff sites. The survey results for North Slope areas are summarized in Table 2.

Table 2. Results of raptor nest surveys of river drainages in northern Alaska, 1986.

Drainage	Number of active nests		
	Rough-legged hawk	Gyr Falcon	Common raven
Kavik	6	0	1
Shaviovik	2	0	0
Juniper Creek	0	0	2
Fin Creek	1	1	0
Kemik Creek	1	0	0
Total	10	1	3

RECOMMENDATIONS

The USFWS has acquired a substantial amount of information on peregrine falcons through systematic searches of major breeding areas in Alaska (Springer et al. 1979, Ambrose 1980, Mindell and Craighead 1981, Ambrose and Riddle 1982, Ritchie 1983, Roseneau et al. 1984, and Ritchie 1984). However, current information on the status of peregrines is not available for several known or potential breeding areas throughout the state. Coastal bluffs and rivers flowing northerly from the Delong Mountains are high-priority survey areas identified during this project. Peregrine nesting surveys should be completed in these 2 areas.

The USFWS has inventoried 18 seabird colonies on coastal bluffs from the Noatak River (Kotzebue) north to Cape Lisburne. Breeding peregrines have previously been observed at these sites along the coast. North of Cape Lisburne, habitat for cliff-nesting seabirds is lacking; however, 2 potential sites exist, one at Sapumik Ridge and the other at Corwin Creek. There are 14 inventoried seabird colonies, from Kotzebue south and west to Cape Espenburg (Kotzebue Sound). Breeding peregrines are also known to have previously occupied cliffs in this area.

Current information on peregrine falcons is still needed for 4 rivers in the Delong Mountains region of northwestern Alaska. These drainages include the Utukok, Kukpowruk, Kokolik, and Pitmegea Rivers. These rivers should be resurveyed as peregrines are known to have occupied breeding territories along these rivers in the past.

ACKNOWLEDGMENTS

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[Note: Although the following references are designated "unpublished," copies of the reports are available and are felt to be necessary for inclusion.]

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