

RESOURCE MANAGEMENT RAPTOR SURVEY
BACKCOUNTRY TRIP REPORT
KILLIK RIVER

REPORT #:91-24

TRIP MEMBERS: Ken Faber, Resource Management Specialist
Katharine Swift, Biological Technician

STUDY AREA: Lake Tulilik to Easter Creek to the Killik River to
Lake Udrivik

LOGISTICS:

Departure: 7/22/91 - 3:30pm - Ken leaves Bettles for Lake
Tulilik on GAAR NPS Cessna 185 #N725; Buster Points - pilot.
5:30pm - Kate leaves for Lake Tulilik on N725 with same pilot

Pick-up: 7/31/91 - 1:15pm Buster arrives in N725 to take Ken
and I out from Lake Udrivik

Aircraft: Departure: Cessna 185 #N725 Pick-up: Cessna 185
#N725

Route Description: Put in at Lake Tulilik; portage 1/4 mile
to Easter Creek; follow Easter Creek 2 1/2 miles to Killik
River; follow Killik River 27 1/2 miles to Lake Udrivik, the
take out; 300 yard portage to Lake Udrivik.

Method of Travel: Metezeler Canoe

Estimated Mileage: 30 miles of river travel; 30 miles of day
hiking doing raptor surveys

Maps: Killik River A-2, A-3, & B-2

CABINS SURVEYED: Crisler cabin on mesa 2 miles southeast of Easter
Creek and Killik River confluence (see NEED FOR OR OPPORTUNITY FOR
FOLLOWUP)

IMPACT SITES SURVEYED: none

SIGNIFICANT FINDINGS:

1. The primary intent of this trip was raptor surveys. Summary of
results (a 3 page Raptor Survey Report is attached to the end
of this report):

OBSERVATIONS:

Golden Eagle: 10 total; 8 subadult/adults & 2 young in nests.
4 adults were sighted in previously located

Northern Harrier: 3 females were sighted all flying low and slow hunting.

Merlin: 1 female was sighted at close range actively defending it's territory from us.

NESTS:

Golden Eagle: 17 Total; 2 Active & 15 Inactive.

Gyr Falcon: 1 Active this season but birds already fledged and dispersed; no gyrfalcons sighted.

2. Very light aircraft use however a helicopter was observed numerous times with a couple of times flying below the 500' altitude requirement for no apparent reason.

3. Several places with blue 5 gallon AV gas containers were observed.

4. Very light visitor use right now; observed 2 people camped at the Enekalikruak Creek confluence boating the river in a folding kayak; no contact made. No other people seen on in and out flights and only one plane observed that would have been flying people in & out.

TRAVEL PROBLEMS ENCOUNTERED AND SUGGESTIONS FOR FUTURE TRIPS:

At this time of year, late July, water was already very low below the Enekalikruak Creek confluence with the Killik; the goal was to avoid those low lying sand bars. With constant winds from the north, this is a challenge. With 2 people, a canoe is a must but if you keep your gear low, a klepper would be best for speedier and more efficient travel. Easter Creek was rocky at this level and required maneuvering; would suggest one experienced canoeist in the boat for this 2 1/2 mile stretch.

HUMAN IMPACTS AND ARCHEOLOGICAL SITES

7/22 - Rusty cans and bone pieces observed on bench in between Easter Creek and Lake Tulilik north of HISI #65; from conversations with Grant Spearman, the archeologist in Anaktuvuk Pass, these are old campsites the eskimos used in the 1940s. It was unclear to me if these sites had been catalogued or not.

7/22 - A 50 gallon red oil or gas barrel was observed on the shoreline at the east end of Lake Tulilik possibly on or near HISI #66.

7/23 - On the mesa 1 mile northeast of Lake Tulilik, there exists a cabin ruin with a pile of used 2 x 4s with nails, a roll of chicken wire, old rusty cans and fencing pieces (these apparently had been used as wolf pup pens). From a conversation with Dave

Schmitz, this was Herb & Lois Crislers cabin site, photographers contracted to Walt Disney who had wolves penned there as late as the early 50s. Some debris such as an old rusty oil stove and other wood pieces have fallen off the southeast side of the mesa and rest on a small bench. A 50 gallon oil or gas drum rests near this debris also. I don't know if this site has been catalogued or not. If not, it needs to be, it deserves mention in the historical data of the park.

7/25 - Stones turned upright to guide caribou in three places 20 feet apart in a line running approximately west-east were observed at the base of the ridge of the drainage for GAAR Raptor database Nest Site #009 (see trip map), north of Sugakuik Creek and south of Lake Kaniksarak. As per conversations with Grant Spearman, these were used by eskimo hunters to guide caribou. I would hope these would be catalogued at some point also, if not already done.

7/29 - 3 empty blue 5 gallon AV gas containers & 1 1 gallon empty white gas container was observed at the north end of the Akmalik Creek confluence just west of islands indicated on map, which were mainland at low water levels in late July. We do not have room for these in an overloaded boat.

7/30 - 1 blue 5 gallon AV gas container was observed on the east side of the river 1 mile south of Imiaknikpak Lake. No room for this in boat.

VISITOR CONTACTS

Date	Time	Location	Names	Address	Remarks
7/25	2230	Enekalikruak Creek	2 people camped		no contact
7/26	0930	1/2 mile downstream of Enekalikruak Creek	2 people pass in folding kayak		choice - no contact by their choice

AIRCRAFT/WATERCRAFT OBSERVATIONS

Date	Time	Location	Type	N#	Direction/Comments
7/22	1630	Lake Tulilik	Cessna 185	725	dropped Ken off
7/22	1830	" "	" "	" "	dropped Kate off
7/24	0945	Killik/Easter confl.	white plane	(206 or smaller)	on floats - heading south, 2000 ft.
7/25	1400	Killik/Easter confl.	2 engine silver freight plane		heading north, 2,000 ft.
7/26	1300	Killik/Irvik confl.	1 engine helicopter		white trim - #N810EH - heading south, 700 ft.

7/26 1520 Killik/Irivik confl. - helicopter - #N810EH - returns
up Irivik Crk. only 300' above our heads
7/26 1618 Killik/Irivik confl. - " " - comes
out of Irivik and heads north
7/27 1500 Killik/Irivik confl. - " " - heading
northwest, 500'
7/28 1030 Killik/Irivik confl. - " " - hear
plane above clouds w/ cloudcover at 2000' - plane
heading north, turns up valley to the west towards
Imniatchiak Creek & Kurupa Lake
7/28 1140 Killik/Irivik confl. - white 185 on floats - heading
south, 2000 ft.
7/29 1315 Killik/Akmalik Creek confl. (out of GAAR) - helicopter
probably #N810EH - heading south, 2500 ft.
7/29 1330 Killik/Akmalik Creek confl. (out of GAAR) - white 185
w/dark trim on floats - heading north, 2,000 ft.
7/31 1135 Killik/Lake Udrivik - helicopter, probably #N810EH -
located 5-10 km. south heading NE, 1,500 ft.
7/31 1315 Killik/Lake Udrivik - GAAR Cessna 185 #N725 - landed
on Lake Udrivik - made 2 trips in & out for Ken & I

NATURAL RESOURCES SURVEY

100% arctic

MAMMALS:

Red Fox - 3 total observed:

7/24 - 1 located in area south of Sugakuik Creek - very light colored, observed crouching low watching us cross a wet meadow area, leaped up and split quickly when I yelled Ken's name to observe him also

7/29 - 1 observed near lake in trim, fit form trotting from us and stopping to watch us, eventually he trots off stopping to sniff and scratch occasionally; observed for 15 minutes.

7/30 - 1 trots behind us within 2 feet as we eat lunch; carries on taking a few good sniffs as he trots by.

Bull Moose -

7/24 - 1 young bull moose observed near mouth of Sugakuik Creek; very curious of us, ran a bit than would watch us, ran a bit more and watched us etc. eventually disappearing.

Wolves - 7/25 - 2 are heard howling, one approximately 1/4 mile below and one 1/4 mile above as we hike up unnamed creekbed on the west side of the Killik River in between Sugakuik Creek and Lake Kaniksarak. Assume a den site is in the area.

Caribou - 7/26 - Observe 10,000 - 20,000 caribou in migration form moving south on rises, low benches and flats just below hillsides;

some spread up on to the Enekalikruak Creek low benches and feed; others march on - they can be seen 5 miles in the distance either direction moving or munching. Later, as we hike up for our raptor surveys, we observe all the fresh caribou trails formed. Some caribou start heading back north then east and across the river; others are following the river back to the south and come within 25 yards of my tent perched on the edge of a sand bluff.

Dall Sheep - 7/27 - Observe 4 including 1 ram only 400 meters vertically off the valley floor feeding and resting.

BIRDS except raptors:

long tailed jaeger - pair observed flying high heading west up Easter Creek & 1 observed heading north above the Killik at Iviksak Creek; uncommon

american robin - observed all along the Killik; common

american tree sparrow - observed all along the Killik in low shrub;
common

white crowned sparrow - observed occasionally along the river;
common

savannah sparrow - 1 observed in willows along Tululik Lake;
uncommon

northern wheatear - willow shrub; common

lincoln's sparrow - shrub; uncommon

willow ptarmigan - grass\moss tundra; common

redpoll - flitting about everywhere in groups; common

common raven - 3 (2 mature & 1 immature); these 3 only observed;
uncommon

glaucous-winged gull - along creeks & river; uncommon

arctic tern - along river; common

mew gull - along river; uncommon

lesser yellowlegs - along river; uncommon

bank swallow - far fewer than the Noatak; uncommon

red breasted merganser - 1 pr. observed in eddy on river & 4 more
observed on Killik near Iviksak Creek;

uncommon

white winged scoter - observed flying; uncommon

spotted sandpiper - observed in pebble/gravel along river; uncommon

grey jay - 1 observed near small, long lake; uncommon

say's phoebe - observed 1 adult & nest below gyrfalcon nest
southwest of Kaikshak Hill

FISH: see Ken Faber's report

FLORA:

Shrubs:

Salix spp. - willow; in abundance

Betula nana - dwarf birch; in abundance

Ledum palustris - labrador tea

Vaccinium spp. - blueberry & cranberry

Primary Vegetation:

Cassiope spp. - heathers

Eriophorum spp. - cottongrass

Carex spp. - other sedges

Dryas spp. - avens

Other Identifications:

Artemisia frigida - prairie sagebrush; wormwood

Equisetum spp. - horsetail

Potentilla fruticosa - tundra rose; bush cinquefoil

Rubus chamaemorus - cloudberry

Acitonus delphinifolium - monkshood

Arctostaphylos rubra & alpina - bearberry

Papaver spp. - poppy

Phlox sibirica - phlox

Myosotis alpestris - forget-me-not

Campanula lasiocarpa - mountain harebell

Polygonum bistorta - pink plumes

Rhododendron lapponicum - lapland rosebay

Epilobium latifolium - river beauty

Zygadenus elegans - death camas

Delphinium glaucum - larkspur

DAILY ROUTE DESCRIPTIONS AND CONDITIONS

This section is valuable information for the Killik Raptor Survey Report and for other information for the Resource Dept., however it may not be helpful as a ranger trip report log.

7/22/91 - Ken and I arrive at different times on Lake Tulilik with the last load arriving at 7:30 pm. This country is wide and vast; I like it! Already feeling the frustration with the ever present winds. Set up camp in lower wet area below bench with some shelter from the winds. HISI #65 has some slightly compacted vegetation and a recently used fire pit. Settle in for the night watching two jaegers dancing in the setting sun, their white bellies aflame heading down Easter Creek.

7/23/91 - Wake up to a very still morning. Temp. 60s, high cloud ceiling with breaking cumulus clouds. Day hike northeast towards high ridgeline behind mesa with old cabinsite on it to do our first raptor nest search on the trip. Cross Easter Creek running clear, cold and beautiful. By 2:30 pm, winds have kicked up out of the north. Explore cabin site on mesa (see NEED FOR OR OPPORTUNITY FOR FOLLOW-UP) and scan cliff side to the north with spotting scope. With the naked eye, I observe 2 whitewash 'flags' that look promising as nest or well used roost sites approximately 1 mile north-northeast. After climbing high towards cliffside, I spot an eagle flying high over the ridge. In the next 4 hours, we find all but 1 previously located nest site. With no signs of movement (we couldn't get in position to see into the nests), it appears none of the nests are active however, I feel confident the territory is active due to the sighting. I skirt the ridge to the northwest and observe an area above this ridge at elevation 950m+ that has many roosts and possibilities for nest sites, however would be too consuming to try to reach now. At 8 pm, we decide to head back to camp.

7/24/91 - Wake up to an extremely windy but sunny day with winds out of the north. Portage the 1/4 mile to Easter Creek finding the route over the bench easier going than the game trail around the bench. Canoe the 2 1/2 miles down the creek to the confluence with the Killik; this required maneuvering and backpaddling to negotiate around rocks and vegetation just underwater at this low level. Set up camp on the Killik just upstream from the confluence with Easter Creek on a gravel bar on the west side. Setting up the tents was a challenge in these winds. Set out on a 10 mile hike to check GAAR Raptor Database Map #s 5,6,7 & 8. This was our only day of raptor surveys where no eagles were sighted, so the question arises if this territory is active. Considering the vastness of this area, we could have easily missed seeing them. After taking an incorrect drainage up, we spent quite a bit of time finding the correct area. During our travels, we observed a female merlin actively defending it's territory. In the creek area just west of our camp, we find fresh bear scat filled with blueberries. In this

same area, we observe a young bull moose. On our return late in the evening, I observe a light colored red fox curiously watching us cross a wet meadow; it leaps high into the air and splits quickly when I yell for Ken to see it, too.

7/25/91 - A calm sunny morning, but winds start at 9:15am. Spent an hour scanning the cliffsides on the west side of the river from Sugakuik Creek to Enekalikruak Creek. Observe 2 areas with whitewash flags that can be seen with the naked eye also. Canoe 2 miles down river than day hike up drainage on the west side towards obvious whitewash flag area. Arrive at site which is GAAR Raptor Database Nest #9; two nests on cliff face with 10 roosts; also in the upper western portion of this cliff face there appears to be a potential falcon eyrie site, perhaps from years before. These two nests are inactive this year. Observe adult GOEA 2 miles to the north above a ridge at approximately 1200m elevation. Head up and over small saddle to creek drainage to the north. Spend some time carefully checking the high ridge cliff face west of Lake Kanisrak with a spotting scope; face is in the shade at this time but I see several roost sites; looks like potential for nest sites out of my view (either back off outcrop tops or my position is too low to see nests). Observe dall sheep ewe and lamb dancing on this cliff face. Find GAAR Raptor Database Nest #10; very inconspicuous nest above a creek fork also inactive. On our hike out, observe NOHA flying low and slow heading south. When we reach the boat, we head down the river with a goal of Enekalikruak-Irivik Creek mouths for camping that evening. Observe NOHA flying low and slow heading south just east of the river. Observe red fox lying on the shore 100 yards upstream of two people in a folding kayak camped at the Enekalikruak-Killik confluence. Camp 1/2 mile downriver of the low sand bluffs around the Enekalikruak Creek confluence. I set up my tent on the bluff facing west; Ken sets up his on the gravel bar below.

7/26/91 - Awoke to a spectacular sight; 10,000+ caribou migrating south just below the steep mountainsides on the low rises just 1 1/4 miles west of the river. Caribou are heading south but spread up high on some benches and up Enekalikruak to feed. Weather is in the 60s with breaking up cumulus grey clouds; some blue patches. Head up Irivik Creek for raptor surveys. Heard helicopter being used all morning over the ridge up Irivik Creek; finally see it at 1:00 pm heading south at 700' altitude directly above the caribou. Notice that caribou seem to be unaffected by the helicopter, however some are now headed north and are breaking up into smaller groups. Irivik forks just below the climb up the canyon to the nest sites; above and below these forks are low waterfalls and pools; seems like a paradise even with no sun. Observe GOEA circling above the ridge as we hike up. Observe two nests that are GAAR Raptor Nest Map #14; these are both inactive. One is a long cone shaped nest and the other is on a ledge in a small amphitheater; one of the most spectacular nests I've seen. Moss and some fresh willow have been flown into the amphitheater nest,

but sticks are falling down; it is in a state of disrepair. As we hike higher on the ridge above the canyon, observe a GOEA (most likely male) flying just at the altitude of the second location of 2 nests; GOEA disappears after 30 seconds; then the same or different GOEA appears 3 minutes later flying above a higher ridge. Observe 2nd location of 2 nests upstream with views of a spectacular waterfall. Upper nest, which is a walk-in has a single GOEA nestling in it; bird appears to be about 45-60 days old. Left nest area with plans to walk around to Enekalikruak Creek and look for the one gyrfalcon and 2 merlin nest sites; the clouds came down and it started raining. With visibility minimal at best, we decide to call it a day. This was probably one of our easiest days of hiking.

7/27/91 - Break camp and paddle 4 miles to day hike up to a different nest site. This site, GAAR Raptor Nest Map #23, is also marked easily from the river by whitewash flags. As we hike up, observe GOEA soaring for approximately a minute near possible nest site; heads north; lost sight of eagle one ravine north of nest site. Observe 4 dall sheep on cliff faces just above the talus; with the low ceiling it's not surprising. Observe chopper again flying at 500' altitude heading northwest. Climb the talus and reach the nest, flushing a large ram dall sheep up the cliffside. Nest is in disrepair; probably has not been used for one season possibly last couple. Whitewash flags are located north and south of nest; none are directly on nest site. I believe the active nest site is in the next ravine to the north, but with dropping clouds again we lost ability to go look. Bands of caribou are passing below on the rises in the valley heading south in numbers of 14-110 with a total of 450, but observe many more feeding in wet grassy areas far to the north. Return to boat and head down river. One immature (female) GOEA was observed perched on low sandhills just north of the mouth of the Aniaktvik Creek being harassed by terns; flies to the next low dune 50 yards north continuing to be harassed; flies 1-5 meters off ground heading northwest followed closely by the terns. Due to time constraints, we did not have time to do a survey of the Aniaktvik-Nigaktoviaktvik Creek areas; whitewash areas are visible from the river and this looks like a prime area for raptor use. Hour and a half later, observe one GOEA flying at 20m altitude; round bend to observe that eagle and another larger GOEA soaring together 50m above the river and heading northeast; disappear after 15 minutes behind a ridge. This appeared to be an immature (female) and mature (male). Arrived at planned campsite of 3/4 mile north of Ivisak Creek on the west side of the Killik.

7/28/91 - Awake to another low cloud day. Winds push clouds and provide some patchy viewing, but otherwise difficult viewing conditions. Decide to head for the nest sites anyways with the hope of clouds lifting or blowing off. Hike up the north end of the valley on the west side of the Killik south of the last limestone mountain within the park boundary. Hike to a small west-

east running ridge from which I could glass the cliffside for nests. Observe GAAR Raptor Nest Map #31; very inconspicuous nest below very dark section of cliff; no obvious whitewash; nest in disrepair; hasn't been used for at least one season possibly more. Observed Ivisak Creek area from this point two miles off for potential sites; cliff area in canyon looks promising and sites were located there also by Garber in '88. Hiked around ridge to the next drainage to the north staying high; observed an adult GOEA (female) flying low above the ridge running east within 25 yards of me; seemed to have flown over just to check us out. Head up the drainage staying high, but ran into slipping talus and low clouds; a magnificent drainage with spires and small cliff faces high and low. Observe many roost spots including one that is heavily whitewashed; convinced that a raptor(s) are actively hunting if not nesting up here. We don't have the weather or the time for a more active search. Nest sites #32 & 33 are too far north to reach from this point. Return to camp for the night.

7/29/91 - Up to a beautiful sunny clear day with winds light but gusty out of the south. Break camp and head down river 100 yards or so to day hike and survey the opposite valley. Solo outcrop 2 miles east is marked with orange lichen and whitewash flags that can be seen from as far as 5 miles to the west. Locate nest site; 2 nests directly on top of each other; one only a remnant the other sticks in a nest shape in good shape but no fresh sticks or greenery in sight. Nest area appears inactive. The lower nest is an easy walk-in so I climb up to it; find a beautiful GOEA feather that I leave there and start taking photos of the 2 nests. A GOEA nestling suddenly lurches at me from the upper nest; all I see are gigantic eyes and wings, it settles back down and quietly wheezes at me. This nestling looks very closely in age (45-60 days) to the single nestling observed in the active Irivik Creek nest (#15). Observed this nest area sporadically for 5 hours with no sign of adults. Observe nest #35 across valley with spotting scope for a half hour with no sign of movement and no greenery or fresh sticks observed although nest looks in good shape; another spectacular nest - a cone shape on an open cliffside with an overhang above it. This nest area also is an obvious orange lichen area seen from as far as 5 miles to the west. Walk up creek 3/4 miles to find lone conical peak on the south side of creek just above the fork. Observe now vacant possible gyrfalcon nest; this site has fresh whitewash and fresh looking kill parts below the nest; looks like ptarmigan and squirrel parts. Nest is small and built up with what appears to be mud; nest is tucked in a crack on a cliffside with a very low overhang and excellent protection from the elements. Observe nest #35 for another 1/2 hour on the way out with no change in conclusion. Hike back to the boat and head downriver with plans to camp part way to Lake Udrivik. Camp just north of the mouth of Akmalik Creek. Rain starts as soon as we set up camp.

7/30/91 - Canoe the last 10 miles to Lake Udrivik portage. Buck

headwinds and unsuccessfully avoid sandbars the whole way. Eat lunch on a sandbar out of the wind; a red fox marches by right behind us sniffing for treats for his lunch. Portage 400 yards to Lake Udrivik and set up camp in the southwest corner of the lake. Observe NOHA flying 1-5 meters off ground heading north along Lake Udrivik. Spectacular clouds and pink lighting late that night south towards the last limestone hills on the west and east sides.

7/31/91 - Wake up to clouds on the deck. By 11am, it's cleared off and breezy; looks like perfect weather for Buster. Buster arrives at 1:15pm and decides that 2 loads is necessary even though take off conditions are perfect. Buster falls in the lake walking off the float, soaking his pants and filling his waders; he says in 20 years that's the first time he's gone in the drink. He says it's all the worst because I'm laughing at him and I'm bigger than him so he can't throw me in. He sits down and carefully dumps his waders out and turns down my offer of dry socks. Then he stands up and marches into the water with his waders turned 1/2 way down and fills them up again. At this point, I'm wondering if I want to fly with this person! Even with all this, we take off successfully for Bettles. The local town turns out with camera in tow to film Buster's wet pants. Buster returns for our gear on the second load.

KILLIK RIVER RAPTOR SURVEY

Goal

To determine the distribution, abundance and productivity of cliff nesting raptors along the Killik River from the confluence of Easter Creek north to Lake Udrivik.

Procedure

Information from previous raptor surveys was reviewed and past observations were transferred to a field set of maps. The USGS 1:63,360 were most useful for exact site locations. We carried with us copies of the Park raptor database nestcards, nest site locations and a copy of the 1988 report, 'A Survey For Cliff Nesting Birds of Prey - Killik River/Chandler Lake Areas' written by Chris Garber and Craig Flatten. This report was the most helpful to carry along as each nest site observation notes were typed, therefore easy to read. The nest cards were handwritten therefore difficult to read especially in wet soggy conditions. We also carried the locations of the nest sites on the Killik as entered in the Park raptor database. All of these sites, though numbered differently than Garber's report, were from Garber's survey.

Travel to the study area was accomplished by flying in and out of lakes via float plane at the top and bottom end of the study area on the Killik River. We used a Metezeler canoe as our mode of travel down the river. Surveys were accomplished by day hiking to areas of previously located nest sites. I spent a portion of my time scanning cliffsides with binoculars and spotting scope from our campsites or elevated benches with good vantage points. Once in the area of a nest, we would observe the nest for activity for 1/2 to 4 hours, keeping at a reasonable distance to incur minimal disturbance. Observations were noted in field notes and later transferred to raptor observation nest cards. In addition, photos were taken of the nest site.

Once on the trip, we decide to focus on areas of concentrated nest sites and/or solo nest sites that were easy to reach and within a couple of miles of the river; with the time constraints of our trip of 9 days compared to the 21 days of Garber's trip, there was no possibility we could cover as much territory. We eliminate the sites upstream near April Creek and concentrate on the sites downstream of the Easter Creek confluence to the park boundary.

Results and Discussion

Observations:

Golden Eagle: 10 total; 8 subadult/adults & 2 young in nests.
4 adults were sighted in previously

located territories where active nests were located in '88, but not this time.

Northern Harrier: 3 females were sighted all flying low and slow hunting.

Merlin: 1 female was sighted at close range actively defending it's territory from us.

Nests:

Golden Eagle: 17 Total; 2 Active & 15 Inactive.

Gyr Falcon: 1 Active this season but birds already fledged and dispersed; no gyrfalcons sighted.

All of the nest sightings except one were nests previously located on Garber's study. Some of the nests that were active in 1988 were not active this year. One of the two active nests that we observed with one nestling was not active in 1988; the other one (Irvik Creek) was active in 1988 also.

Adult or juvenile Golden Eagles were sighted in 6 of the 7 areas, or what Garber stated as territories, that we surveyed. Two active nests with 1 nestling each were sighted in 2 of the 7 territories. This indicates the area was being actively hunted and/or there was an active nest located in the territory. Due to time constraints and poor weather, we were not able to look thoroughly for other nest sites in each of the territories.

No falcons were sighted however a nest previously located by Garber as an active Gyr Falcon nest was located and appeared to have been active this season; fresh kill parts and ptarmigan breast bones were found under the nest. It's likely this nest was an active Gyr Falcon nest with the young already fledged; Gyr Falcon's nest and fledge earlier than Golden Eagles.

Female Northern Harriers were all observed hunting flying low and slow; no males were observed. One was observed twice near an area Garber had noted as a Northern Harrier ground nest site.

One female Merlin was observed actively defending its territory as we passed through her territory; the nest structure was not observed. This nest was previously located by Garber in 1988.

Problems

There was not enough time to adequately survey this river corridor. Our river trip was 9 days compared to Garber's 21 days. Considering the cost of these surveys, perhaps 14 days would be an adequate compromise. Poor weather in the form of rain and a low cloud ceiling hampered our survey by not

allowing prime viewing conditions. The survey should be conducted at least 2 weeks earlier if not a whole month; falcons are early nesters and therefore fledge earlier. They had fledged and dispersed by late July. Several areas were not adequately surveyed or not surveyed at all; these areas are as follows:

1. Area upstream of Sinuk Creek where active nests were located in 1988; time prevented surveying this area.
2. Togoyuk Creek where active nests were located in 1988 including Gyrfalcon and Golden Eagle; time prevented this survey.
3. Enekalikruak Creek where active Merlin and Gyrfalcon nests were located; weather prevented this survey.
4. Aniakvik and Nigaktoviakvik Creeks where an active Golden Eagle nest was sighted in 1988; heavily lichened area on cliff was sighted from the river while boating by; time prevented this survey.
5. Ivisak Creek; cliffs suitable for nesting were observed while surveying the hill to the north; inactive Golden Eagle nests were observed in 1988; time prevented this survey.

Future Recommendations

Plan the survey for earlier in the season and a longer trip, at least 14 days. I highly recommend this river be used for future raptor surveys; there are a large number of cliff nesting raptors utilizing the area and the nest sites are easily to moderately accessible.