SURVEY SUMMARY

Selwyn Mountain Raptor Survey --2008

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Survey date: June 20-21, 2008

Narrative:

This survey was conducted at the request of Selwyn Resources Ltd. Our objective was to complete survey of cliff nesting birds of prey in a study area within the area of influence of the Selwyn Resources exploration activity near Howard's pass on the Yukon – NWT border. Earlier survey of a portion of the area was conducted in 1980. Methods were identical to Mossop (1994 and earlier). -- A helicopter is used to fly contour across the face of all acceptable nesting cliffs at approximately the 5,000 ft (1,600 m) level. Coverage usually involves slow multiple passes across larger cliffs from valley bottom to about 6,000 ft. -- The area involved was roughly 500 sq. km. Complete coverage of acceptable cliff habitat was the objective.

Conditions: The survey was conducted mostly in clear conditions, light to moderate winds with some morning fog and minor low cloud in the far eastern portions of the survey area. The aircraft was a :Bell 206b of Helidynamics, Whitehorse (Approximately 8.5 hours).

Survey was conducted mostly in the afternoons: 13:30-15:00 and 20:00-21:00 June 20 and 10:30-17:00 June 21. We surveyed the area in three sections, the mountain blocks basically north of the Don Creek valley on the 20th and the mountain blocks to the east and south on the 21st. The survey did not cover the smaller mountain blocks to the west and south east of the upper Don Creek area, -- habitat which had been surveyed in the past. (See map 1.) We were accompanied by Natasha Essar Environmental Assessment Mgr of Selwyn Resources. With three observers plus the pilot on board, it is unlikely we missed any actively occupied nest cliff sites or historic stick nests.

Findings:

Golden Eagles *(Aquila chrysaetos)* were by far the dominant nesting raptor in the area. Unfortunately none of the sites identified were raising young in the current year. Only one unproductive Gyrfalcon *(Falco rusticolus)* aerie was observed and one lone adult Bald eagle was encountered with no nest site apparent.

Summary:

Nest sites recorded:

Golden eagle	9
Gyrfalcon	1

Figure 1.

Golden Eagle sites identified within Selwyn Study area

Location	Checked		Occupied*		Productive		yn		
	1980	2008	1980	2008	1980	2008		1980	2008
VV6540	1		1		0				
VV6234	1		1		1		1		
VV7835	1	1	1	0	0				
VV8729	1	1	1	1	0	0			
VV8632	1	1	1	0	1	0	1		
VV9135		1		1	0	0			
VV9134		1		0		0			
Vv9440		1		1	0	0			
VV8025		1		0		0			

(n): 9

Gyrfalcon

VV8128	Occupied (fresh wash)	Unproductive

* Adults present or fresh sign of adult attendance that year – fresh ‘wash’ or new nest material

Field notes:

GE VV 6540:	An unproductive nest site identified in 1980, noted to be in "good shape" and probably occupied; not visited 2008
GE VV 6234:	An unproductive nest site identified in 1980: not visited in 2008
GE VV 7835:	Located in 1980, productive that year (1 yn); nest site in 2008 found to be unoccupied. An east facing site with two good stick nests, no overhang and at approximately 5,000 ft elevation. A little wash at the site suggests site was used last year to raise young. Two adult and 1 yearling golden eagle were seen on this mountain block about 5 km north.
GE VV 8729	First identified in 1980; unoccupied that year. In 2008 nest had newly added nest material suggesting site is occupied this year; no evidence of young being raised here last year. SE exposure; one adult golden eagle was encountered nearby this site.
GE VV 8632	First identified in 1980; unoccupied that year. In 2008 nest was unoccupied and not in good shape. Site is at 5,600 ft. SE exposure
GE VV 9134	Newly identified in 2008: An unoccupied site with west exposure in a side valley. Nest site is in good shape but doesn't appear to have raised young in the previous year. (The site is very close to the next nest site; the two are undoubtedly the same nest site). One adult golden eagle and two yearlings were encountered near the site.
GE VV 9135	Newly identified in 2008: undoubtedly the same nest site as above.
GE VV 9440	Newly identified in 2008: Two good stick nests on a good west facing cliff on the east side of a side valley. One nest is in very good condition suggesting it is occupied this year. Elevation is about 4,500 ft.
GE VV 8025	First identified in 1980: occupied and productive (1 yn); In 2008 site is apparently abandoned; the nest is in very poor condition.
GYR VV 8128	Newly identified in 2008 (site was located earlier by Selwyn Res staff in 2007, occupied by an unidentified 'falcon'). The site is a typical gyrfalcon aerie, lots of fresh wash suggesting the site is still occupied and consistent with having raised young in the year past. The cliff is west facing, a cliff block in the center of a side valley well below the valley sides. Site is at about 4,000 ft. Overhang at the two obvious ledges is apparently100%.

Other related observations:

Canada goose:	3 adults
Trumpeter Swan:	1 pair with nest (adult incubating) at Wi lake
Mallard	1
Ring-necked duck	3
Long-tailed duck	1
Willow ptarmigan	Several territorial males and one pair (apparently non-breeding) were observed during ground survey at Howard's pass
Rock ptarmigan:	Two adults (both males) were encountered in the high tundra on the block of mountains NE of the Don valley.
Bald eagle:	1 Ad.
Semipalmated plover	3
Lesser yellowlegs	5
Least sanpiper	1
Wilson's snipe	common
Mew gull	2
Bonapart's gull	15
Alder flycatcher	1
Say's phoebe	7
Gray jay	1
Common raven	3
Horned lark	1
Tree swallow	5
Bank swallow	10
Cliff swallow	common
Barn swallow	3
American robin	common
Yellow warbler	1
Yellow-rumped warbler	1
Northern water thrush	1
Wilson's warbler	common

American tree sparrow	common
Chipping sparrow	1
Savannah sparrow	common
Fox sparrow	3
Lincoln's sparrow	1
White-crowned sparrow	common
Golden-crowned sparrow	5
Dark-eyed junco	1

Caribou: cows: 2, 6 Calves: 2 Bulls: 2
Grizzly: 1 adult

Synthesis:

Generally the study area on its western portions is dominated by wide apparently heavily glaciated valleys with very little mountain cliff development. In this section the best nesting habitat seems to be associated with smaller riparian cliffs, (for example along the creek on the north side of the block of mountains immediately north of "Wi lake".) To the east, mountain cliff development was far more impressive and most raptor sign was found there.

Forest cover is black spruce; the sub-alpine tundra habitat is dominated by dwarf birch -- willow tundra is relatively rare in the area. By far the most productive habitat for prey species we encountered was the expansive flats of Howard's Pass itself. An impressive population of hoary marmots *(Marmota caligata)* occupies the area and it was the only place during the survey where willow ptarmigan (*Lagopus lagopus)* were observed. Rock ptarmigan *(L. mutus)* were encountered only once in the higher tundra of the NE mountain block.

Comparing the raptor populations of the study area to other ecoregions of the Yukon where raptor surveys have been conducted, this area is apparently supporting a very sparce number. Nest site density (maximum 9 pairs, 500 sq. km): 1 site per 55 sq km. is only slightly lower than other populations but judging from the condition of nest sites and the adults observed there is really no evidence of a population much over 2-3 breeding pairs in the area (1 pair per 266-250 sq. km).

Literally none of the sites occupied were producing young and we saw sign that young had been raised in the previous year at only one Golden Eagle site. However, adult and sub adult golden eagles were observed. The one apparent gyrfalcon aerie did show fresh sign which suggested young had been raised there in the past year.

Interestingly, our other monitoring surveys in the Yukon both in the current year and the previous, found Golden Eagles breeding in relatively high numbers. On the Yukon north slope, of ten breeding pairs monitored, nine pairs were raising young

(Av 2 young per site); young were estimated between 10 and 25 days in early July. Five were occupying sites normally used by gyrfalcons.) Gyrfalcon populations being monitored meanwhile showed depressed productivity both years. (In the Coast Range ecoregion 18% of Gyrfalcon pairs were breeding this year; 29% were breeding on the North Slope.)

Cited:

Mossop, D.H. 1994. Long term trends in the breeding density and productivity of Gyrfalcon *Falco rusticolus* in the Yukon Territory, Canada. Raptor Conservation Today, WWGBP, Pica Press 403-414.