



RAC:lh

Att.

Rob Cannings
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Yours sincerely,

As you requested, this report is derived from material in both Parks Branch and Fish and Wildlife Branch files, information gained through conversations with people familiar with the area and data gathered during my fieldwork. As instructed, I have emphasized bird and large mammal use in the cutback areas.

I flew to Kamloops on June 3 and met with Ken Baker and Dennis Podmore of the Parks Branch and Ralph Ritcey of the Fish and Wildlife Branch. At that time I also extracted as much information as was available in their files. On June 4 I drove to Blue River and from June 5-10 examined the study area. I returned to Kamloops on June 11. Information from your files was compiled at a later date.

Attached is the report of my investigations into the wildlife values of the Blue River headwaters area. I hope you find it satisfactory.

Dear Grant:

Mr. W. G. Hazelwood
Parks Biologist
Parks Branch
Ministry of Recreation and Conservation
1019 Wharf Street
Victoria, B. C.
V8W 2Y9

3 - 725 Vancouver Street
Victoria, B. C.
V8V 3V4
September 3, 1977

that of the Mountain Caribou that evidently use this very area as a

The major problem raised by the proposed logging operation is

the data gathered during this study.

also in examining his diaries, I gleaned much information to supplement

detailed information on the area. In conversation with Miller, and

studies for the Parks Branch in the region, has provided the most

who in the years 1952-56 operated a trapline and carried out wildlife

observations in the past several years. Bob Miller of Clearwater,

Branch Ranger stationed at Murtle Lake, has made a number of wildlife

1977, during an investigation of park wildlife. Harry Melts, Parks

scanty. W. G. Hazelwood flew briefly over the area on March 29-30,

Up-to-date knowledge of the wildlife of the immediate area is

were to be logged.

the wildlife values that might be adversely affected if the blocks

Branch requires a documented case involving, among other things,

any expenditure involved in a recommendation of purchase, the Parks

these lands would have to be acquired by the Crown. To justify

in 1939. In order to retain the area in its natural condition,

Gray Park. These timber licences pre-date the park's establishment

of timber totalling 180 acres within the eastern boundary of Wells

a subsidiary of Rayonier of Canada, propose to log three blocks

In the near future, Interior Lumber and Shingle Co. Ltd.,

I. INTRODUCTION

Robert A. Cannings, June, 1977

HEADWATERS AREA, WELLS GRAY PARK

BIOLOGICAL INVESTIGATION OF THE BLUE RIVER

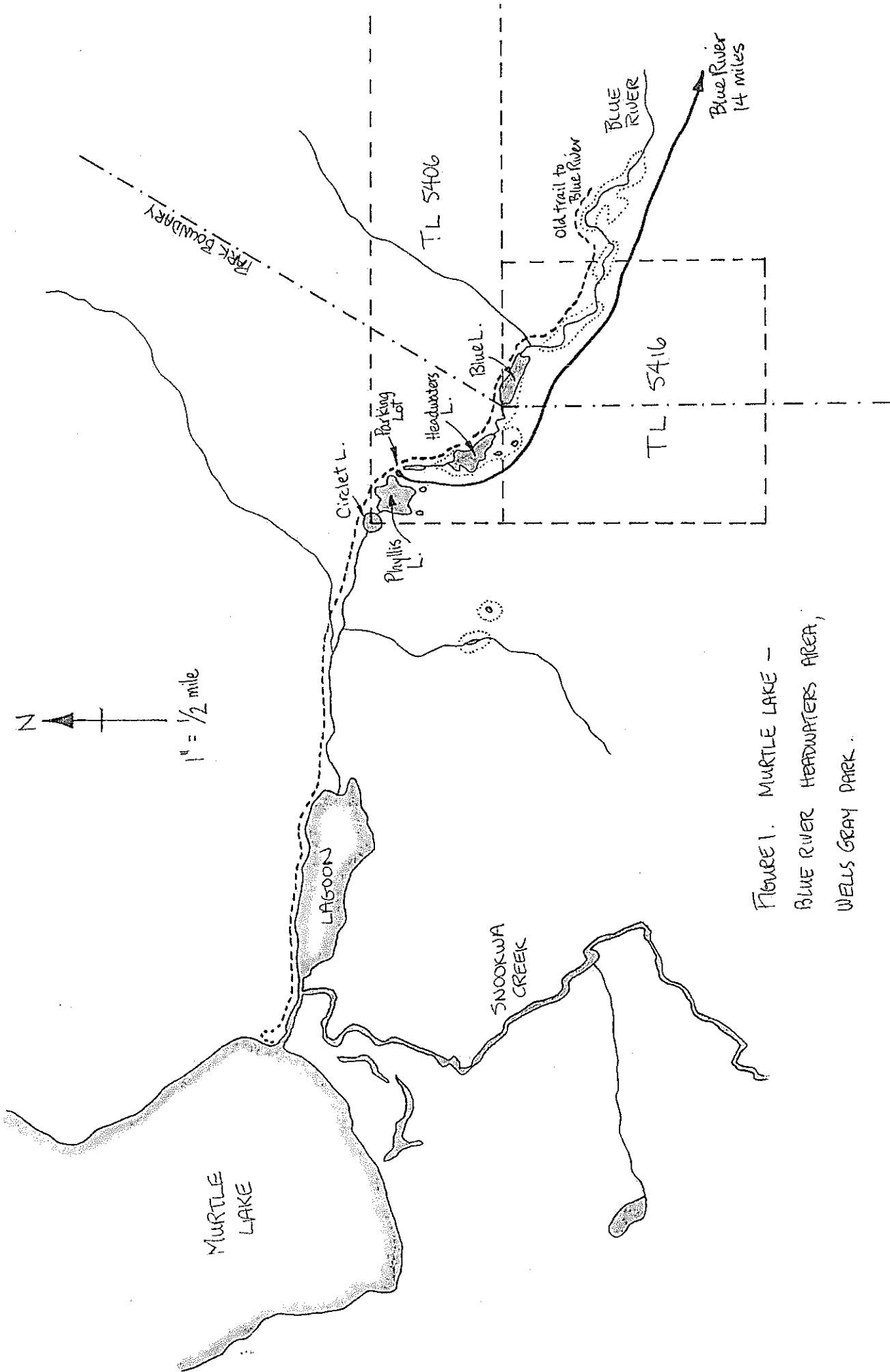


FIGURE 1. MURTLE LAKE -
 BLUE RIVER HEADWATERS AREA,
 WELLS GRAY PARK.

Lowland migration corridor. Both the Parks Branch and the Fish and Wildlife Branch have voiced their concern over the detrimental effects the logging of the Blue River headwaters would have on the caribou of Wells Gray Park. There is little definite documentation of this migration route in the files of the Fish and Wildlife Branch and knowledge of its existence is based on two factors, (a) the area lies directly between the winter ranges in the upper Kafi River region and the summer ranges to the west and east of Murtle Lake, and (b) the regular caribou sightings in the area from fall to early spring made by Miller in the 1950's.

This report attempts to identify the wildlife values of the general area (Figure 1) and specifically those of the timber licences within and adjacent to the park boundary. Special emphasis has been placed on the populations of birds and large mammals. Because of the concern for the future of the caribou in Wells Gray Park, an attempt was made to gather all pertinent records for the immediate area of the cutblocks in order to document the existence and timing of this migration.

On June 3 I met with Mr. K. Baker (Regional Planner, Parks Branch) and Mr. D. Podmore (Regional Manager, Parks Branch) and Mr. R. Ritcey (Regional Biologist, Fish and Wildlife Branch) to discuss the planned fieldwork and to examine relevant information in their files. From June 5 to 10 I explored the study area thoroughly, concentrating on the timber licences straddling the park boundary, but also I examined the trail corridor leading to Murtle Lake. Murtle Lagoon, the mouth of Snookwa Creek and the east end of Murtle Lake were examined by boat in the company of Harry Melts, Parks Branch Ranger. All routes examined are shown in Figure 2. On June 4

The whole area lies in the Engelmann Spruce - Subalpine Fir Biogeoclimatic Zone, characterized by dense forests of Engelmann Spruce (*Picea engelmannii*) and Subalpine Fir (*Abies lasiocarpa*) with smaller amounts of Western Red Cedar (*Thuja plicata*), Western Hemlock (*Tsuga heterophylla*), Western White Pine (*Pinus monticola*) and

B. Vegetation

River drops into a steep-sided canyon. Two miles or so downstream from the study area the Blue of about 3600 feet. The ridges on either side rise to about 5500 south of the shallow valley in question, which lies at an elevation streams pour off the relatively low-lying ridges to the north and Murtle Lake and forms the outlet of Murtle Lagoon. Other smaller Snookwa Creek flows north from Stevens Lakes to empty into out of the study area. Blue Lake and thence meanders east through open marshy ground and Lake to the west. Blue River rises in Headwaters Lake, flows into Blue River drainage and that of the stream that flows into Murtle in a parking area placed exactly on the height of land between the road up the Blue River Valley (Figure 1). The access road terminates at the headwaters of Blue River itself, and access is by forestry lies about 15.5 miles west of the community of Blue River. The area Wells Gray Park boundary, which cuts through the study area,

A. Physiography

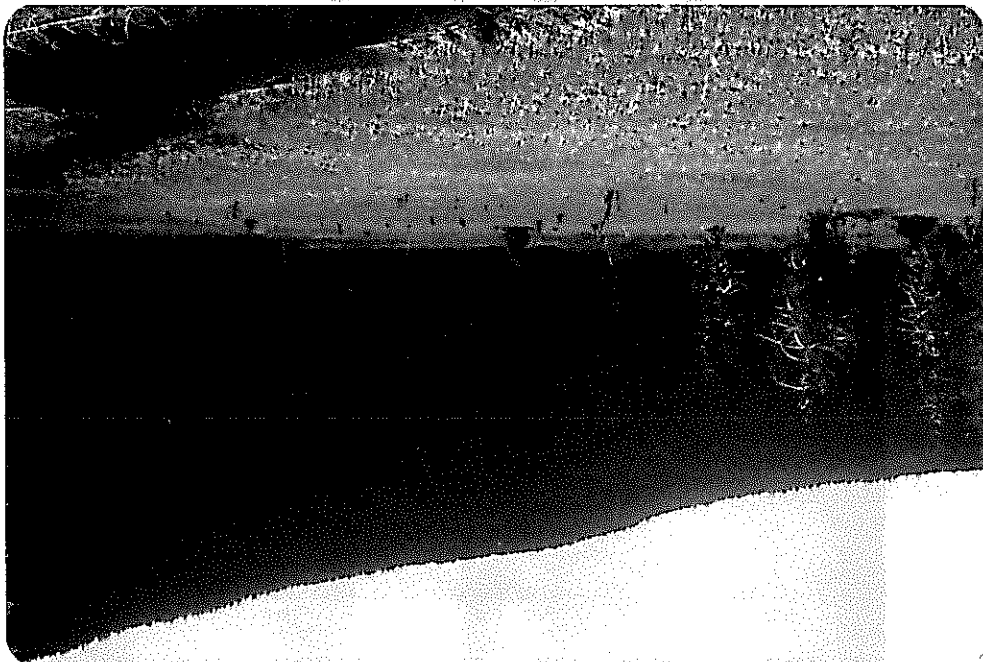
II DESCRIPTION OF THE AREA

and recollections of wildlife in the study area. and I talked with Bob Miller in Clearwater about his experiences

Headwaters Lake - source of Blue River within the Wells Gray
Park Boundary.



Open marsh at headwaters of Blue River.



Mixed coniferous common to the Timber License areas near the
Park boundary.



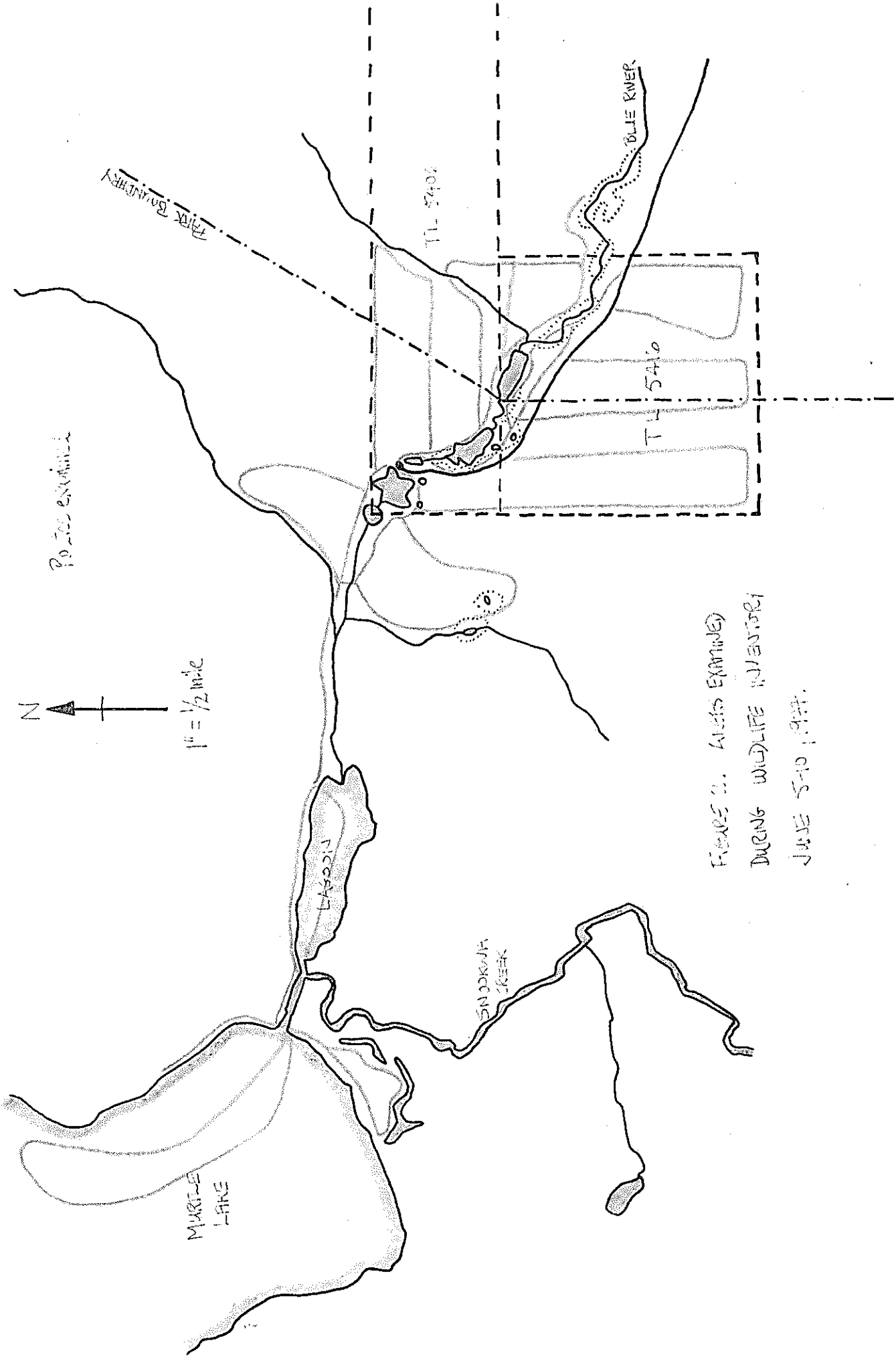


FIGURE 2. ALDIS EXAMINED
 DURING WILDLIFE INVENTORY
 JUNE 5-10, 1977.

Lodgepole Pine (*Pinus contorta*). The latter species occurs mainly in drier locations within the area. Many of these trees have growths of *Alectoria* lichens. Undergrowth is predominantly False Box (*Pachistima myrsinites*), False Azalea (*Menziesia ferruginea*), Thin-leaved Blueberry (*Vaccinium membranaceum*), Twinflower (*Linnaea borealis*), Black Twinberry (*Lonicera involucrata*), Sitka alder (*Alnus sitchensis*), White Rhododendron (*Rhododendron albiflorum*), Mountain Ash (*Sorbus scopulina*) and Bunchberry (*Cornus canadensis*). Being in an area of relatively high annual precipitation, the Murtle Lake area supports rather dense forests. This is especially true of the shaded north-facing slopes on the southern side of the valley under study. Here there is considerable climax Western Hemlock forest. On the more exposed south-facing slopes the forest is of a slightly drier type, particularly in areas above Blue Lake where apparently fire and blowdowns have opened up the forest canopy. In the valley bottom dense forests give way in many places to water-oriented vegetation. Along the stream from Circle Lake to Murtle Lagoon Sitka Alder (*Alnus sitchensis*), Red-osier Dogwood (*Cornus stolonifera*) and various willows (*Salix*) are dominant. Around the lagoon itself and on the extensive marshy area formed by the Snookwa Creek delta large beds of these plants flourish. Around the chain of small lakes adjacent to the road terminus and eastward the same vegetation type occurs except in many places it is replaced by one of two kinds of more open communities. Wetland vegetation reaches its climax at Headwaters Lake where *Sphagnum* moss forms bogs on the north and west sides, complete with Sundew (*Drosera rotundifolia*), Buckbean (*Menyanthes trifoliata*), Kalmia (*Kalmia polifolia*), Bog Cranberry (*Vaccinium oxycoccos*) and other acid bog

boundary were crisscrossed on foot as shown in Figure 2. The results

These proposed cut block areas within and adjacent to the park

east of Snipe Marsh.

extensively along the northern edge of the river meadows to the

Other proposed blocks not examined lie to the east, one spreading

access road. Block 6 extends into TL 5416 in the southeast corner.

Cut block 5 is near the boundary and abuts the southern flank of the

of Blue Lake and extends into TL 5406 along the park boundary.

block 3 is in its southwest corner and block 4 is on the north shore

itself. Part of cut block 2 is in the northwest corner while cut

valley bottom and includes Blue Lake, Snipe Marsh and Blue River

north and south by the park boundary. The northern third is in the

TL 5416 is a square block 1 mile on each side and bisected

road.

the southwest corner just south of Phyllis Lake and adjacent to the

east of the parking area. The northern half of cut block 2 is in

the above two lakes. Cut block 1 lies on the slope immediately

1/4 lies within the park and contains the road terminus as well as

Lakes east in a swath 1/2 mile wide and two miles long. Its western

Figure 3 shows that TL 5406 extends from Phyllis and Headwaters

C. The Timber Licenses and Cut Blocks

prevalent on both the slopes and in the valley.

peaty river course, the soil is rather thin. Rock outcrops are

Throughout the whole area, with the exception of the very

sedge meadows.

reaches of Blue River, the valley bottom is filled with grass and

plants. Further east past Blue Lake, along the meandering upper

(Thamnophis sirtalis) on June 6 at Phyllis Lake.

The only reptile observed was a single Striped Garter Snake

C. Reptiles

(regilla) was seen in Snipe Marsh.

and one in the bog near Headwaters Lake. One Tree-frog (Hyla

seen, one at Phyllis Lake, one at Blue Lake, one at Snookwa Creek

appeared to be the Northern Wood Frog (Rana sylvestris); four were

was observed at Headwaters Lake on June 10. The commonest frog

each of cut block 3 and 4. One Western Spotted Frog (Rana pretiosa)

Murtle Lagoon, one at Headwaters Lake, one at Snipe Marsh, one in

amphibian. Seven sightings were noted, three along the trail to

The Northwestern Toad (Bufo boreas) was the most often-observed

B. Amphibians

Lagoon, and Murtle Lake itself is well known for its trout.

that good-sized Rainbow Trout (Salmo gairdneri) are found in Murtle

evidence of fish in these lakes was observed. Harry Melts states

Lake during my study, it appeared no fish were caught. No other

Although several visitors fished Headwaters Lake and Phyllis

A. Fish

III SPECIES INVENTORY

in the species inventories.

birds, are shown in Figure 3. More detailed observations are found

of this examination, with regard to ungulate presence and nesting

D. Birds

In the six days of observation, 59 species of birds were

noted and 10 nests of eight species were found. Most of the other

species listed are suspected to breed in the area. The list

includes only those seen in the present study; several species

expected to be present were not seen, and probably the additional

species that migrate through the area would double the total.

"The Birds of Wells Gray Park" (Edwards and Ritcey, 1967) should be

consulted for further information. It is, however, with the breeding

species that this report is most concerned.

Each species is listed with all sightings recorded. The

observations are noted by date, and after each locality the number

of birds seen is placed in brackets. The total number of individual

birds observed is in square brackets.

1. Common Loon: 5 VI 77: Lagoon - Murtle Lake (1); 6 VI 77:

Lagoon - Murtle Lake (2) [3] Seen only on Murtle Lagoon and

Murtle Lake. Summer resident; breeding.

2. Horned Grebe: 6 VI 77: Lagoon (1) [1] Scarce breeder on small

lakes at low elevations in park; summer resident.

3. Canada Goose: 5 VI 77: Phyllis L. (2) [2] One pair only seen,

no evidence of nesting. Miller notes geese nesting at Lagoon

and at Blue L. Summer resident.

4. Mallard: 5 VI 77: Lagoon - Murtle Lake (5♂); 7 VI 77:

Phyllis L. (2♂), Headwaters L. (2♂); 8 VI 77: Phyllis L.

(2♂); 9 VI 77: Headwaters L. (2♂); 10 VI 77: Headwaters L.

(2♂) [7♂] Two males most of time on Headwaters L., probably

same ones at Phyllis L., and part of group of 5 on Lagoon

- earlier. Summer resident; breeding.
5. Barrow's Goldeneye: 5 VI 77: Phyllis L. (1 pr.), Headwaters L. (1 pr.); 6 VI 77: Phyllis L. (1 pr.), Circle L. (1♀); 7 VI 77: Phyllis L. (1 pr.), Headwaters L. (2 pr.); 8 VI 77: Phyllis L. (1 pr.); 9 VI 77: Headwaters L. (1♂ 2♀); 10 VI 77: Phyllis L. (1 pr.), Headwaters L. (1♂ 2♀) [3 pr. and 1♀] At least 3 pairs nesting, 1 at Phyllis Lake, 2 in the Headwaters L. - Blue L. area; most common waterfowl species. Summer resident.
 6. Bufflehead: 5 VI 77: Headwaters L. (1 pr.) [2] This is the only sighting, no evidence of breeding here. Summer resident.
 7. Common Merganser: 6 VI 77: Murtle Lagoon (1) [1] Probably breeding. Summer resident.
 8. Red-tail Hawk: 5 VI 77: Murtle Lake (1) [1] One observed soaring over lake near mouth of Snookwa Creek. This is the only buteo of regular occurrence in the area. Summer resident.
 9. Swainson's Hawk: 9 VI 77: Snipe Marsh (1 pr.) [2]; 10 VI 77: Headwaters L. (1) [2] One pair apparently breeding in forest to north of Blue L. Both of the very dark race; seen at close range. This is an unusual record for this area, this hawk being mainly a grassland bird. The only other record for the park is at Hemp Creek, May, 1953.
 10. Osprey: 5 VI 77: Murtle Lake (1) [1] There is apparently a nest up the main arm in the vicinity of the ranger's cabin. Summer resident.

11. Spruce Grouse: 5 VI 77: Lagoon - Murtle L. (1); 7 VI 77: West 1/2 TL 5406 (1 pr. with nest of 5 eggs), Blue L. (1♂); 8 VI 77: West 1/2 TL 5416 (1♂); 10 VI 77: Phyllis L. (1♂) with nest of 6 eggs) [6] The only grouse observed; common resident.

12. Solitary Sandpiper: 10 VI 77: Headwaters L. (2) [2] Probably breeding.

13. Spotted Sandpiper: 6 VI 77: Lagoon - Murtle L. (1); 7 VI 77: Headwaters L. (1), Snipe Marsh (1); 9 VI 77: Headwaters L. - Snipe Marsh, N. side (1) [4] Common summer resident, probably breeding.

14. Common Snipe: 9 VI 77: Snipe Marsh (1♂) On nest with 4 eggs. Summer resident.

15. Rufous Hummingbird: 5 VI 77: Lagoon - Murtle L. (1); 6 VI 77: Lagoon - Murtle L. (1); 7 VI 77: Blue L. (3); 8 VI 77: Headwaters L. - Blue L., S. side (1) [6] The only

hummer expected; common summer resident, found at forest edges and openings.

16. Yellow-breasted Sapsucker: 6 VI 77: Parking area - Murtle L. (2); 7 VI 77: West 1/2 TL 5406 (1), Blue L. (3 with 2 nests, both being incubated); 8 VI 77: West 1/2 TL 5416 (1); 10 VI 77: Phyllis L., to S. and W. (3), Headwaters L. - Snipe Marsh, N. side (1) [11] Summer resident.

17. Northern three-toed Woodpecker: 5 VI 77: Parking area -

Murtle L. (1); 6 VI 77: Phyllis L. (2 mating); 7 VI 77: West 1/2 TL 5406 (3); 8 VI 77: West 1/2 TL 5416 (1); 10 VI 77: Headwaters L. - Snipe Marsh, N. side (2) [9] Conspicuous resident; breeding.

- 18. Willow Flycatcher: 5 VI 77: Lagoon - Murtle L. (1) [1] One seen and heard in willows at edge of lagoon, mouth of Snookwa Creek. Summer resident.
- 19. Hammond's Flycatcher: 5 VI 77: Phyllis L. (2), Lagoon - Murtle L. (3); 6 VI 77: Parking area - Murtle L. (12, including one on nest by footbridge), Phyllis L. (4); 7 VI 77: west 1/2 TL 5406 (3), Blue L. (1), Snipe Marsh (1); 8 VI 77: west 1/2 TL 5416 (2), Headwaters L. - Blue L., S. side (3); 9 VI 77: Headwaters L. - Snipe Marsh, N. side (5); 10 VI 77: Phyllis L., to S. and W. (6), Headwaters L. - Blue L., N. side (4) [46] The common flycatcher of mature coniferous forests; its call is a familiar sound of forest edge and openings. Summer resident.
- 20. Dusky Flycatcher: 6 VI 77: Lagoon (1) [1] A bird observed in deciduous growth at lagoon sounded like this species though no good nesting habitat nearby. Probably migrating (?)
- 21. Olive-sided Flycatcher: 5 VI 77: Parking area - Lagoon (1); 8 VI 77: Headwaters L. (1), Blue L. (1); 9 VI 77: east 1/2 TL 5416 (1); 10 VI 77: Headwaters L. - Snipe Marsh, N. side (3) [7] Conspicuous but not abundant; summer resident, breeding.
- 22. Tree Swallow: 5 VI 77: Lagoon - Murtle L. (3); 6 VI 77: Murtle L. (2), Lagoon (1) [6] The only swallow seen; all over Lagoon or Murtle L. Summer resident.
- 23. Stellar's Jay: 9 VI 77: Headwaters L. - Snipe Marsh - N. side (2) [2] Resident.

- 24. Gray Jay: 5 VI 77: Parking area - lagoon (1); 6 VI 77: Parking area - Murtle L. (4); 7 VI 77: west 1/2 TL 5406 (3, including 1 young), Headwaters L. (2); 8 VI 77: west 1/2 TL 5416 (1); 10 VI 77: Phyllis L., to S. and W. (2), Headwaters L. - Snipe Marsh, N. side (3) [16] Common resident.
- 25. Common Raven: 5 VI 77: lagoon - Murtle L. (2); 6 VI 77: lagoon - Murtle L. (1); 10 VI 77: Headwaters L. - Snipe Marsh, N. side (1) [4] Resident.
- 26. Common Crow: 5 VI 77: lagoon - Murtle L. (1); 6 VI 77: Murtle L. (3) [4] Seen only at Murtle L. Summer resident, mainly at lower elevations.
- 27. Black-capped Chickadee: 9 VI 77: Headwaters L. - Snipe Marsh, N. side (2) [2] Resident; mainly deciduous growth.
- 28. Mountain Chickadee: 7 VI 77: Blue L. (4) [4] Resident.
- 29. Boreal Chickadee: 10 VI 77: Phyllis L., to S. and W. (2) [2] Resident; a little low for this species.
- 30. Chestnut-backed Chickadee: 5 VI 77: Parking area - lagoon (1), lagoon (2); 7 VI 77: west 1/2 TL 5406 (6); 8 VI 77: west 1/2 TL 5416 (15); 9 VI 77: east 1/2 TL 5416 (13); 10 VI 77: Headwaters L. - Snipe Marsh, N. side (5) [42] Common, especially in heavy spruce - hemlock woods on south slopes of valley.
- 31. Red-breasted Nuthatch: 5 VI 77: Parking area - lagoon (1); 6 VI 77: Phyllis L. (2); 7 VI 77: west 1/2 TL 5406 (1), Headwaters L. (1), Blue L. (1); 8 VI 77: west 1/2 TL 5416 (3), Headwaters L. - Blue L., S. side (1); 9 VI 77: east 1/2 TL 5416 (1), Headwaters L. - Snipe Marsh, S. side (2); 10 VI 77:

Phyllis L., to S. and W. (1), Headwaters L. - Snipe Marsh, N. side (3) [17] Regularly heard throughout; resident.

32. Winter Wren: 5 VI 77: Parking area - Lagoon (2); 6 VI 77: Parking area - Murtle L. (6, including 1 pr. nesting by foot-bridge); 7 VI 77: west 1/2 TL 5406 (2); 8 VI 77: west 1/2 TL 5416 (6); 9 VI 77: east 1/2 TL 5406 (4); 10 VI 77: Headwaters L. - Snipe Marsh, N. side (1) [21] Common in deep hemlock and spruce forest, less so elsewhere; resident.

33. American Robin: 5 VI 77: Lagoon - Murtle L. (1); 6 VI 77: Phyllis L. (1); 9 VI 77: east 1/2 TL 5416 (1), Headwaters L. - Snipe Marsh, N. side (2) [5] Least common of the four thrushes of the area; summer resident.

34. Varied Thrush: 5 VI 77: Phyllis L. (2); 6 VI 77: Lagoon - Murtle L. (1); 7 VI 77: west 1/2 TL 5406 (2 flying young); 8 VI 77: west 1/2 TL 5416 (13, including 2 flying young), Headwaters L. - Blue L., S. side (1); 9 VI 77: east 1/2 TL 5416 (7, including 4 flying young); 10 VI 77: Phyllis L. to S. and W. (1), Blue L. - Snipe Marsh, N. side (2) [29] Common resident; favours damp sites.

35. Hermit Thrush: 5 VI 77: Parking area - Lagoon (2); 6 VI 77: Parking area - Murtle L. (4); 7 VI 77: west 1/2 TL 5406 (2, nest with 4 eggs); 8 VI 77: west 1/2 TL 5416 (1); 9 VI 77: Headwaters L. - Blue L., N. side (1) [10] Frequently heard in spruce/fir forest, especially at higher elevations; summer resident.

36. Swainson's Thrush: 6 VI 77: Parking area - Murtle L. (10); 7 VI 77: west 1/2 TL 5406 (4), Headwaters L. (1); 8 VI 77: west 1/2 TL 5416 (5); 9 VI 77: east 1/2 TL 5416 (1); 10 VI 77: Phyllis L., to S. and W. (1), Headwaters L. - Snipe Marsh, N. side (2) [25] The second most common thrush (after the varied in the area; found at forest edge and in lodgepole pines. Summer resident.
37. Golden-crowned Kinglet: 5 VI 77: Parking area - Lagoon (2), Lagoon - Murtle L. (3); 6 VI 77: Parking Area - Murtle L. (7); 7 VI 77: west 1/2 TL 5406 (2); 8 VI 77: west 1/2 TL 5416 (7); 9 VI 77: east 1/2 TL 5416 (6); 10 VI 77: Phyllis L., to S. and W. (1), Headwaters L. - Snipe Marsh, N. side (3) [31] Regular in small flocks throughout the area. Resident.
38. Solitary Vireo: 7 VI 77: west 1/2 TL 5406 (1), Headwaters L. (1), Blue L. (1) [3] Seen only on the north side of the lakes in open forest; summer resident.
39. Warbling Vireo: 10 VI 77: Blue L. (1) [1] Summer resident.
40. Orange-crowned Warbler: 5 VI 77: Parking area - Lagoon (1); 10 VI 77: Headwaters L. - Snipe Marsh, N. side (2) [3]. Uncommon, found in deciduous brush. Summer resident.
41. Yellow Warbler: 6 VI 77: Lagoon (1) [1] Surprisingly uncommon, usually found near water. Summer resident.
42. Magnolia Warbler: 10 VI 77: Phyllis L., to S. and W. (1) [1] Surprisingly scarce in spruce/fir forest. Summer resident.

43. Yellow-rumped Warbler (Audubon's): 5 VI 77: Parking area - Lagoon (1), Murtle L. (1); 6 VI 77: Parking area - Murtle L. (7), Lagoon - Murtle L. (2); 7 VI 77: west 1/2 TL 5406 (1); 8 VI 77: west 1/2 TL 5416 (1), Headwaters L. - Blue L., S. side (1); 10 VI 77: Phyllis L., to S. and W. (2), Headwaters L. - Snipe Marsh, N. side (1) [17]. Frequently seen and heard in open woods. Summer resident.
44. Townsend's Warbler: 5 VI 77: Parking area - Lagoon (3); 6 VI 77: Parking area - Murtle L. (8); 7 VI 77: west 1/2 TL 5406 (7), Headwaters L. (1), Snipe Marsh (1); 8 VI 77: west 1/2 TL 5416 (6), Headwaters L. - Blue L., S. side (1); 9 VI 77: east 1/2 TL 5416 (6); 10 VI 77: Phyllis L., to S. and W. (2), Headwaters L. - Snipe Marsh, N. side (1) [36]. The second-most abundant warbler in the area (after Wilson's). Its song is heard in coniferous forests of all types. Summer resident.
45. Blackpoll Warbler: 5 VI 77: Parking area - Lagoon (2); 6 VI 77: Parking area - Murtle L. (6); 7 VI 77: Headwaters L. (2), Blue L. (1), Snipe Marsh (1); 8 VI 77: Phyllis L. (1), Headwaters L. - Blue L., S. side (2), Headwaters L. - Snipe Marsh, N. side (4); 10 VI 77: Phyllis L. (1), Blue L. - Snipe Marsh, N. side (3) [23]. Common in valley bottom in spruces near bogs and lakes; absent from side slopes. Summer resident.
46. Northern Waterthrush: 7 VI 77: Snipe Marsh (1) [1] Surprisingly scarce. Always near water; summer resident.
47. Common Yellowthroat. 5 VI 77: Lagoon - Murtle L. (2); 10 VI 77: Blue L. (1) [3] Uncommon (surprisingly) in low willows near water. Summer resident.

48. Macgillivray's Warbler: 5 VI 77: Parking area - Lagoon (1);
8 VI 77: Headwaters L. - Blue L., S. side (1); 9 VI 77:
east 1/2 TL 5416 (1) [3]. Uncommon in shrubs, mainly alder,
near water. Summer resident.

49. Wilson's Warbler: 5 VI 77: Parking area - Lagoon (2), Lagoon -
Murtle L. (4); 6 VI 77: Parking area - Murtle L. (14), Lagoon -
Murtle L. (4); 7 VI 77: west 1/2 TL 5406 (4), Blue L. (3),
Snipe Marsh (1); 8 VI 77: west 1/2 TL 5416 (9), Headwaters L. -
Blue L., S. side (3); 9 VI 77: east 1/2 TL 5416 (3), Headwaters
L. - Snipe Marsh, N. side (6); 10 VI 77: Phyllis L., to S. and
W. (8), Headwaters L. - Snipe Marsh, N. side (8) [69]. The most
abundant warbler in the area, its song is heard everywhere.

50. Brewer's Blackbird: 7 VI 77: Headwaters L. (1♂) [1].
Summer resident.

51. Western Tanager: 7 VI 77: west 1/2 TL 5406 (1); 8 VI 77:
west 1/2 TL 5416 (1); 10 VI 77: Phyllis L., to S. and W.
(1) [3]. Uncommon in spruce and fir. Summer resident.

52. Evening Grosbeak: 7 VI 77: west 1/2 TL 5406 (2) [2]. Resident.
53. Purple Finch: 10 VI 77: Parking area (1♂) [2]. Summer
resident.

54. Pine Grosbeak: 8 VI 77: west 1/2 TL 5416 (1♂); 9 VI 77:
east 1/2 TL 5406 (1 pair, nesting) [3] Resident.

55. Pine Siskin: 5 VI 77: Phyllis L. (10), Lagoon - Murtle L.
(19); 6 VI 77: Parking area - Lagoon (24), Murtle L. (6);
7 VI 77: west 1/2 TL 5406 (15), Headwaters L. (9), Blue L.

56. Red Crossbill: 5 VI 77: Phyllis L. (3), lagoon - Murtle L. (15); 7 VI 77: west 1/2 TL 5406 (2); 8 VI 77: west 1/2 TL 5416 (36), Headwaters L. - Blue L., s. side (5); 9 VI 77: east 1/2 TL 5416 (10), Headwaters L. - Snipe Marsh, N. side (7), Headwaters L. - Snipe Marsh, N. side (32) [170]. Common summer resident; probably the most abundant bird in the area.

57. Dark-eyed Junco: 5 VI 77: Parking area - lagoon (2); 6 VI 77: Phyllis L. (5); 7 VI 77: west 1/2 TL 5406 (2), Headwaters L. (1); 8 VI 77: west 1/2 TL 5416 (2); 9 VI 77: east 1/2 TL 5416 (2), Headwaters L. - Snipe Marsh, N. side (1); 10 VI 77: Phyllis L., to s. and w. (2), Headwaters L. - Snipe Marsh, N. side (3); 10 VI 77: Phyllis L., to s. and w. (4), Headwaters L. - Snipe Marsh, N. side (25) [103]. Common resident.

58. Chipping Sparrow: 5 VI 77: Parking area - lagoon (3), lagoon (1); 6 VI 77: Parking area - Murtle L. (10); 7 VI 77: west 1/2 TL 5406 (4), Headwaters L. (1), Blue L. (7), Snipe Marsh (3); 8 VI 77: west 1/2 TL 5416 (1), Headwaters L. - Blue L., s. side (2); 9 VI 77: east 1/2 TL 5416 (4); 10 VI 77: Phyllis L., to s. and w. (5), Headwaters L. - Snipe Marsh, N. side (8) [38]. Common in open woods and clearings, especially in drier areas. Summer resident.

59. Song Sparrow: 5 VI 77: lagoon - Murtle L. (1); 6 VI 77: Parking area - Murtle L. (1), lagoon (1) [2]. Observed only in low willow and alder growth near Murtle Lagoon. Resident.

Caribou are of major concern in this report since evidence exists of a migration route through the very area proposed to be logged. Caribou are a species greatly threatened by man's activities since unlike deer or moose they require climax vegetation and do not thrive in altered environments. The yearly habitat requirements of caribou in the Wells Gray Park region have been lucidly summarized by Edwards and Ritcey (1959). Their statements are paraphrased below.

Caribou do not frequent burns or logged areas but confine their lowland lives to mature coniferous forest, meadows associated with this forest and the shorelines of lakes. From June to October caribou inhabit alpine meadows and nearby subalpine forests. In October they begin to appear in lowland forests about Murtle Lake and by November they have appeared in numbers. Here they graze on nearly bare ground where the dense foliage of trees has held the falling snow aloft. When the heavy, soft and deep snows of mid-winter come the caribou are more or less trapped in the valley and turn to tree lichens as food almost exclusively. They remain here until late January when the snow is deep but settled and easily travelled upon, and by late February they return to timberline. Until April the caribou remain high on the mountains where deep, firm snow enables them to reach arboreal lichens, their major food. In April with the onset of spring thaws, but while the snow at timberline is still firm, the caribou again journey to lowland forests. This journey is timed to reach the valley floor when the

E. Mammals

1. Mountain Caribou

of his sightings.

feels some cows in spring may linger here to calve. Below is a list

(possibly up to 40) animals summering east of Murtle Lake. Miller

favorably with the estimate of Ritcey (1955) of probably 25

through this funnel here each fall and spring. This agrees

Bob Miller, 1952-56. Miller today estimates 20 to 30 caribou pass

Most records of caribou in this area are from the diaries of

travel easily and feed sufficiently when snow is on the ground.

River. As noted previously, this heavy timber allows caribou to

the animals in the mature forest at the headwaters of the Blue

autumn. The funnel narrows at the park entrance and concentrates

caribou coming down the shorelines heading east and south in the

The east end of Murtle Lake acts as a funnel to migrating

70 animals.

Ritcey estimates that the total wintering population here may reach

Murtle Lake and probably also from the Battle Mountain area.

head of Raft River. Evidently caribou move there from east of

Gray Park caribou is outside the park in the plateau area at the

It is established that one of the main wintering areas of Wells

No other part of the park is known to have similar concentrations."

various points near Murtle Lake at elevations from 3000 to 5000 feet.

uniform throughout. Late fall concentrations of caribou occur at

equally attractive as summering areas so distribution is by no means

routes when leaving their summering grounds. All mountains are not

Ritcey (1955) notes, "Caribou apparently follow traditional

country to feed on the lush herbaceous summer vegetation there.

June, when most snow is gone, caribou again return to the alpine

first ground vegetation is appearing through the melting snow. In

- 30: 2 caribou at lagoon.
- 20: 2 caribou at lagoon headed south; caribou at east end of lagoon.
- 9: Band of caribou in meadows at Snookwa Creek; also a band of 8 at east end of lagoon, going south.
- November 7: Cow caribou at lagoon.
- 16: 2 caribou on beach at mouth of Snookwa Creek going south.
- October 3: Caribou sign heading west at lagoon.
- 1955.
- December 5: 3-4 caribou went south just below park boundary.
- band at mile 12.6
- 29: 1 caribou at mile 15.2 (Park boundary) and a small
- 20: 6 caribou on trail at mile 13.
- one more at mile 12.6.
- 15: 3-4 caribou crossed trail heading south at Circle T.
- November 3: 2 caribou going south at lagoon.
- 1954.
- (Phyllis Lake).
- 30: 3-4 caribou crossed the trail between mile 13 and 16
- 21: Old caribou sign at mile 11.7, heading south.
- park boundary.
- November 20: Caribou crossed trail heading south, 1/2 mile below
- 1952.

within a month.

probably would be heading towards the lowlands around Murtle Lake and 8 (7 cows, 1 bull) near the head of Raft River. These animals of the study area - 3 on the ridge to the west of North Blue River 29-30, 1977, G. Hazelwood saw 11 caribou on the ridges in the region According to flight maps of his reconnaissance flight of March

block 3.

found, this just inside the park boundary 200 yards north of cut surprising I saw no caribou. Only one winter pellet group was supporting the caribou migration had disappeared, and it is not By June in 1977 when the present inventory took place, all the snow clearly that there is a traditional migration route through the area. concentrate in the study area from November to April, and show As would be expected, these data show that the caribou

mile 13.

- 14: 2 caribou at mile 11.5, 5 at mile 13, 12 more at
- 13: Caribou on ridge 2 miles south of mile 13.9.
- April
- lots of caribou tracks.
- February 3: Climbed hill to south of mile 13.5 (to 5500 feet);
- 10: 8-10 caribou heading south at mile 14.
- January 1: Caribou at Snookwa Creek.
- 1956.
- Lake.
- 3: 3 caribou (1 ♀, 1 ♂, 1 calf) at east end of Murtle
- December 2: Band of 3 adults and 1 calf at Snookwa Creek.

2. Moose

More evidence of use of the area by moose was gathered than

for any other large mammal. A cow moose was observed browsing on willow at the south end of Snipe Marsh on June 10 and a spike-

antlered bull was seen on the road at mile 12. Fresh tracks

indicating at least three separate animals were very abundant along the shores of Headwaters and Blue Lakes and along the trail

bordering the north bank of Blue River. Winter pellets were common along this trail and were scattered throughout the forested slopes.

A skull was found at the southeast corner of Blue Lake. Moose

tracks and winter pellets were also observed at Murtle Lagoon,

Murtle Lake beach and Snookwa Creek mouth.

Winter browse did not appear to be extensive in the area.

Along the northern boundary of TL 5406, Red-osier Dogwood, Squash-

berry, Black twinberry and Mountain Ash were browsed about 25 percent

while similar species were heavily browsed around a waterhole near

the southern edge of cut block 1. Browse along the trail running

along the northern edge of the bottomland was moderate to heavy

in spots, especially on False Azalea, Mountain Ash and Blueberries.

Bob Miller feels there are more moose now than previously

spending the winter in this bottomland. In 1952 he made 28 moose

sightings and 27 in 1954. He thinks there may be as many as 50

animals coming through this valley throughout the year. In addition

to the above sightings, he noted moose sign plentiful on the trail

at dates indicating year-round use: May 28, June 16, July 9,

October 18, November 3, November 20, and December 8.

3. Mule Deer

This species does not appear to be common here in June. One group of fresh tracks was found at the south end of cut block 1. Harry Melts had recently seen a deer on the road about 2 miles downhill from the parking area. Miller mentions fresh tracks at Murtle Lake on June 19, 1952; deer were plentiful on the Blue River trail July 9, 1952.

4. Black Bear

I recorded Black bear tracks on the Murtle Lake beach June 6. Harry Melts says bears are seen frequently at the parking area. Miller's diaries record bear tracks on the trail July 2, 1952, a bear at Snookwa Creek on October 18 and November 19, 1952, a bear on the Blue River trail November 20, 1952, and one at Headwaters Lake on May 28, 1954.

5. Grizzly Bear

Miller records a track at Snookwa Creek on May 20, 1955 and sign around the lagoon on May 21, 1955.

6. Wolf

On June 5, I found wolf scats on the trail one quarter mile west of Circuit Lake. They consisted entirely of ungulate hair. Miller reported wolves several times at the east end of Murtle Lake and at the lagoon - February 10, 1954 and 7 wolves, September 8,

1954.

7. Wolverine

Miller recorded frequent sightings of wolverines and sign -
December 8, 1954 at mile 14.2; February 10, 1955, 2 at Lagoon;
November 14-15, 1955 at east end of Murtle Lake; January 2, 1956
at Lagoon; February 2 at Blue L.; April 26, 1956 at east end of
Murtle Lake.

8. Fisher

One seen by Miller on December 2, 1952.

9. Marten

Probably the most abundant fur-bearer in the area, appearing
here from the higher subalpine forests in late October and remaining
until spring. Many entries in Miller's diaries.

10. Mink

Common resident. Miller observed this species mainly in the
winter, especially from November 10 to February 13.

11. Long-tailed Weasel

I observed an adult on June 10 between Phyllis and Circlelet
Lakes. Harry Melts recorded one a few days earlier a mile east
of the Lagoon. Miller observed "weasels" throughout the winter.

12. Otter

Miller recorded one at the Lagoon on February 20, 1954.

13. Cougar

In the early 1950's Miller made several notes of cougar sign in the area - July 9, 1952 (tracks just inside park); November 9, 1952 at Snookwa Creek; November 20, 1952 at Snookwa Creek and November 21, 1952 at mile 12.

14. Lynx

One seen by Miller at Snookwa Creek on June 11, 1954 and another on April 26, 1956 at the east end of Murtle Lake.

15. Beaver

I observed old sign, including cuttings and lodges in the lagoon and on Snookwa Creek. Old cuttings also at the south end of Headwaters Lake. There was no fresh sign observed. Miller observed beaver frequently making caches at the mouth of Snookwa Creek and on Blue Lake.

16. Muskrat

Miller observed muskrats on their work at the lagoon on May 20, 1955 and on April 26, 1956 he counted five houses or caches on lagoon.

17. Snowshoe Hare

Two were observed on Sphagnum hummocks near the north end of Headwaters Lake on June 7. Miller noted frequent observations in winter, for example, December 10, 1955 at the east end of Murtle Lake and on December 6, 1952 one was killed by a goshawk at the lagoon.

them considerably. these lakes and marshes and the extraction of timber would damage are of botanical interest. Some of the cut blocks actually about feeding mammals. The small sphagnum bogs and sedge meadows serve to concentrate a wide variety of nesting birds and wet meadows that create variety of habitat in the area and to Wells Gray Park. It contains a series of small lakes and environment in the area that serves as the eastern entrance 2. The small valley of the headwaters of Blue River is an unusual

in the area, via logging roads. the natural habitat and by allowing increased human access c) affect the patterns of wildlife use in the area by changing nature conservancy;

b) complicate the control of access to Murtle Lake and the a) seriously decrease the aesthetics of the park entrance;

and inside the park itself would: 1. It is clear that logging in the vicinity of the park boundary

IV CONCLUSIONS

from the mouth of Snookwa Creek. A small colony was discovered along the trail across the lagoon

20. Columbia Groundsquirrel

Seen several times especially along trail and roadides.

19. Northwestern Chipmunk

Common everywhere.

18. Red Squirrel

- the most vulnerable part of the caribou migration "funnel" as the timber licences. This would preserve the mature forest in western half of TL 5406 be prevented through acquisition of reasons, at least, the proposed logging in TL 5416 and the It is recommended that for strong aesthetic and biological
5. eastern boundary of Wells Gray Park is of paramount importance.
migration routes. Protection of the migration route on the
cut' policy in the designated wintering areas and in the known
[in unit 3-44] can be saved with strict adherence to a 'no
or this range will be of little use...The remaining caribou
the border of the park in unit 3-44 must also be protected
summer in Wells Gray Park. The major migration route lying at
of prime importance to the well-being of the caribou that
the most consistently used of the known wintering areas and is
caribou wintering ground at the head of Peddle Creek is probably
of the best capability to support caribou in the region. The
between the headwaters of the Mad and Raft Rivers have some
should be vigorously protected. The extensive sub-alpine flats
"The remaining winter range in this management unit [unit 3-40]
that:
the caribou migration documented here. Ritcey (1976) notes
4. The major concern is the maintenance of mature timber to support
 in this report.
3. While the forested slopes themselves hold little vegetation that
 is unusual, they are habitat for migrating caribou and moose.
 The latter mammals also remain here in some numbers throughout
 the year. Other animals utilizing these forests are documented

Rob Cannings
WILDLIFE Management
Environmental Management Div.



well as maintaining the integrity of the most important
biological unit in the immediate area, the watercourse of the
Blue River.

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