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AERIAL SURVEY OF GAME WINTER RANGES

BANFF AND JASPER NATIONAL PARKS

1953

A.W.F. Banfield

CANADIAN WILDLIFE SERVICE

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FEB 7 1955

Dept. of Northern Affairs
& National ResourcesAERIAL SURVEY OF GAME WINTER RANGES,
BANFF AND JASPER NATIONAL PARKS, 1953

By A. W. F. Banfield

Introduction. An aerial survey of the winter distribution of bighorn sheep, mountain goats, and elk in Banff and Jasper Parks, was undertaken in February, 1953, as authorized in your memorandum of January 14, 1953. The survey was not completed because of the untimely death of the pilot Alvin Gaetz. A similar survey was made in Banff Park in 1952 and a report submitted on March 29, 1952.

Objectives.

1. To determine if there were important unknown winter bighorn sheep ranges in southern Jasper Park.
2. To obtain big game population counts that would serve as useful annual indices.
3. To map the winter distribution of big game in the Parks.

Itinerary. The routes of the four flights are shown in Figures 1 and 2. The technique was the same as in 1952. The flight data was as follows:

<u>Flight No.</u>	<u>Destination</u>	<u>Date</u>	<u>Times</u>	<u>Duration</u>
1.	Banff to Jasper	Feb. 19	1245-1645	4 hours
2.	Jasper to Blue Lake ret.	" 20	0900-1230	3½ "
3.	Jasper to Banff	" 20	1330-1630	3 "
4.	Banff to Sask. Crossing ret.	" 23	1000-1230	2½ "

It was planned to make another flight in the southern portion of Banff Park in early March. An account has not yet been received for the survey.

Banff Observations. The locations and numbers of bighorn sheep, mountain goat, and elk are shown in Figure 1. Too few of the other species were observed to permit generalizations being drawn. These observations are listed by species below;

Wolf.	1 at Kootenay Plains (Saskatchewan River).
Coyote.	1 at Banff.
Mule Deer.	3 at Clearwater River, 8 at Cline River.
Moose.	1 at Vermilion Lakes, 2 at Wignore Pass, 3 at Clearwater River, 1 at Malloch Creek, and 4 at Saskatchewan Crossing.

Summary. It was found that most of the bighorn sheep and goat winter ranges, known from trail-side observation and the 1952 aerial survey, were again occupied. The Baker Creek sheep band discovered in 1952 was again observed. Two bands of goats on Dolomite Creek and the Siffleur River were discovered. The general distribution pattern of the sheep ranges on the eastern mountain slopes and the goat ranges nearer the crest of the Rockies is well illustrated in Figure 1.

Jasper Observations. The locations and numbers of bighorn sheep, mountain goat, and elk observed are shown in Figure 2. The observations on other species are listed below:

Coyote. 2 at Isaac Creek.
Mule Deer. 5 at Lake Annette, 4 at Talbot Lake, 3 at Willow Creek.
Moose. 1 at Brazeau River, 1 at Job Creek, 3 at Rocky River, 1 at Willow Creek.

Summary. The Isaac Creek and Rocky River bighorn sheep bands, mentioned by Cowan (1943 and 1944) were rediscovered. Another small band was observed on the lower Cairn River. Other bands were observed on the western slopes of the De Smet Range which could not be seen from the Snake Indian trail. Small herds of elk were observed on the open mountain slopes along the Rocky, Brazeau, and Isaac Creek Valleys.

From the air Jasper Park did not appear to contain as much big horn sheep winter range as Banff Park. The mountain slopes were more rugged and there were fewer rounded slopes. The known sheep populations are approximately the same in both Parks at present. This situation seems reasonable considering the comparable areas of good sheep range. No large bands of sheep were discovered in remote areas.

The full measure of the decline in the bighorn sheep population in Jasper National Park is now known. In 1943 Cowan estimated a population of 3000. The present sheep population does not exceed 600 animals. In the same period the Banff Park sheep population has risen from an estimated 500 to more than 600. The Jasper Park decline has been greatest among the Cairn Pass and Mowitch Creek bands. It is significant that these bands were reported by Cowan as wintering outside the Park.

The conclusion that the decline is due to wolf predation is without basis. Since the Province has supported

wolf control and the Park has not; during the critical winter period, the sheep should have suffered lighter predation on their winter ranges. The absence of carcasses on the summer range suggests that the population decline occurred on the winter range. Severe winter conditions during the winters of 1948 and 1949 may have been important factors but disease and hunting pressure should not be excluded from consideration.

I am not convinced that there were 3000 bighorn sheep in the Park during the period 1943-1946. Certainly Cowan and I saw no such evidence in 1946. I suspect that some of Cowan's estimates were based upon reports about 15 years old. However, the great decline since 1943 is a fact.

A. W. F. Banfield
A. W. F. Banfield,
Chief Mammalogist.
April 15, 1953.

Flight Routes.



Bighorn Sheep Ranges.



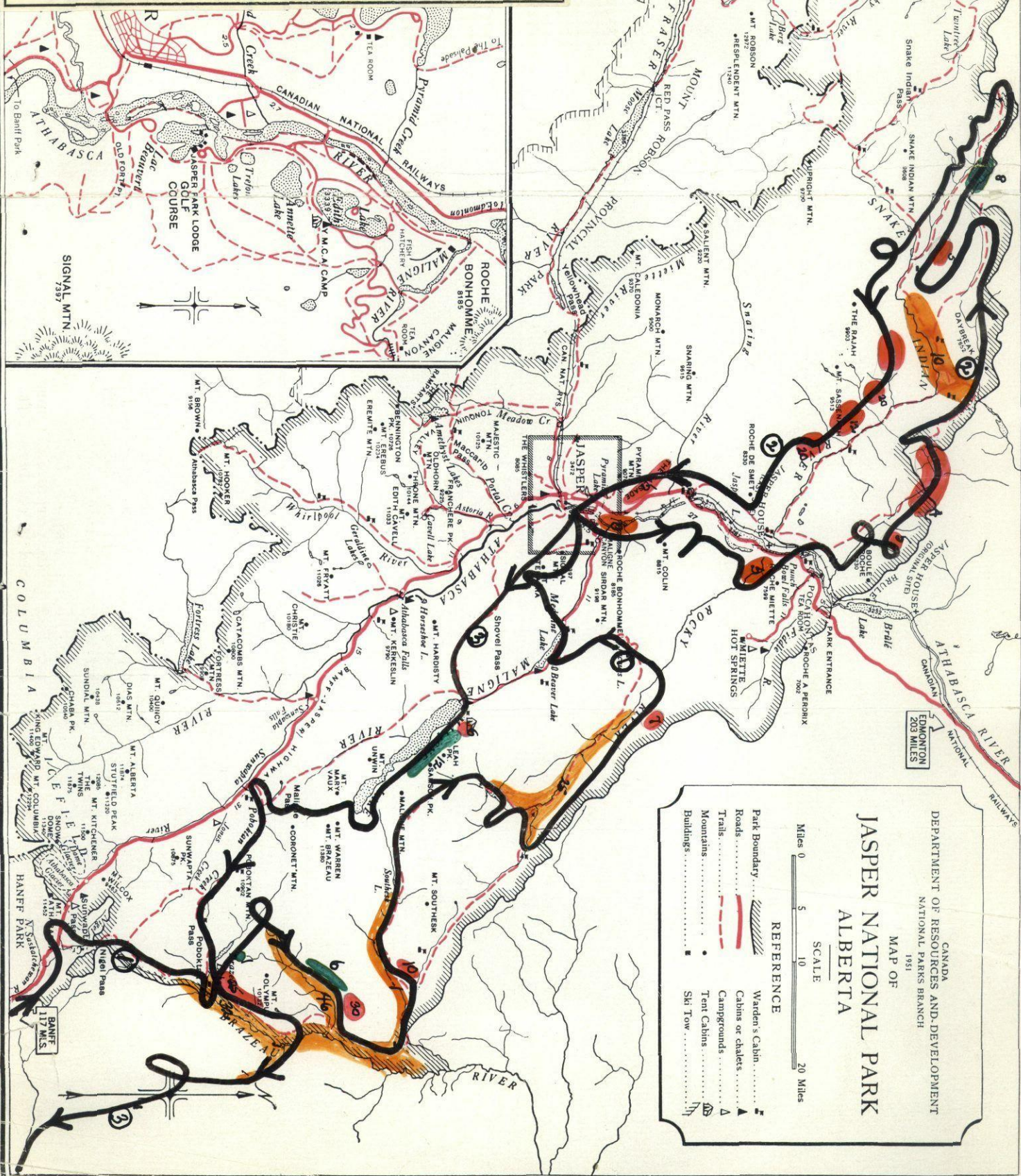
Mountain Goat Ranges.



Elk Ranges.



Figure 2.

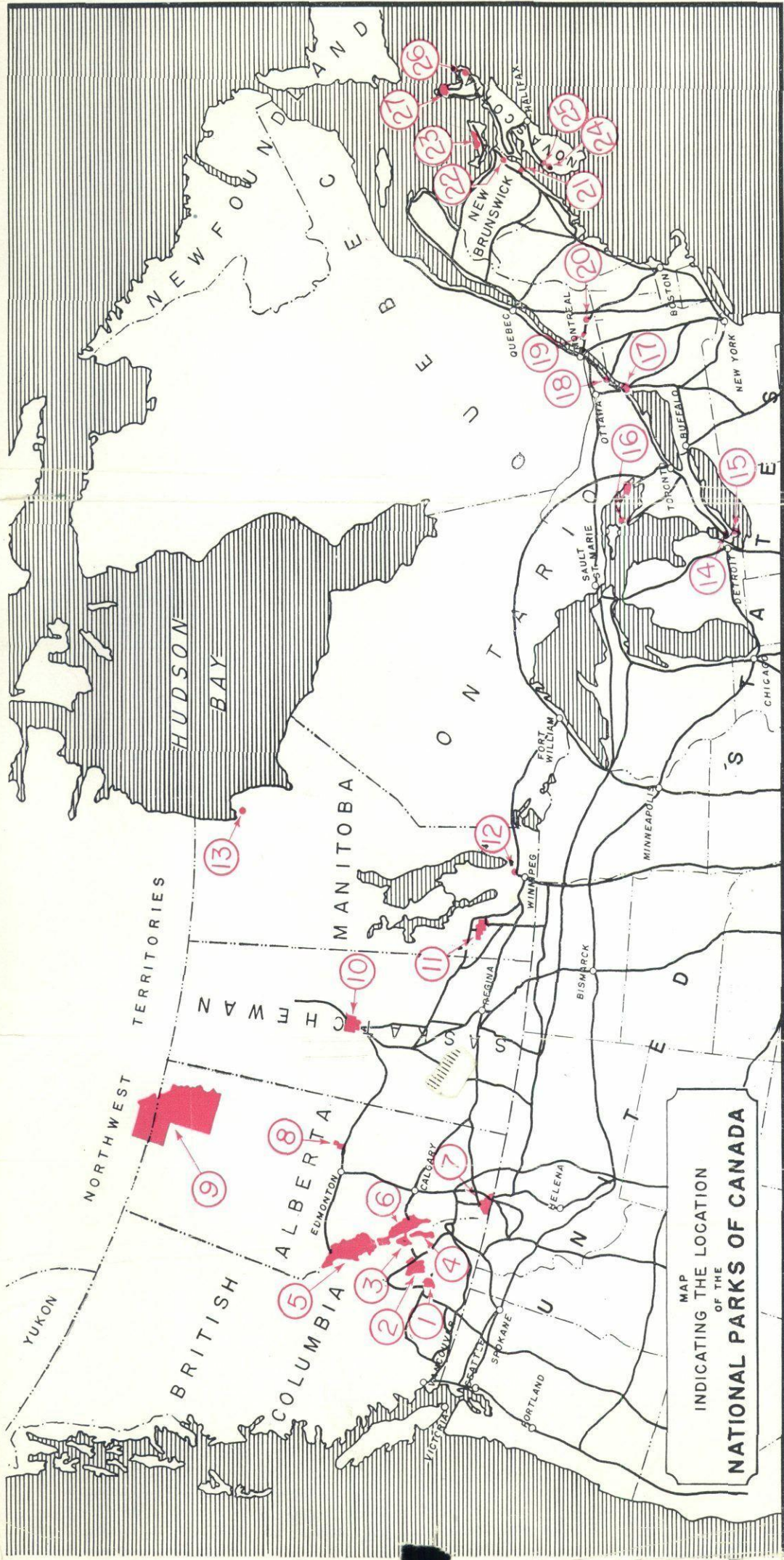


DEPARTMENT OF RESOURCES AND DEVELOPMENT
 CANADA
 NATIONAL PARKS BRANCH
 1951
 MAP OF
JASPER NATIONAL PARK
 ALBERTA

Scale: 0, 5, 10, 20 Miles

- REFERENCE
- Part Boundary
 - Roads
 - Trails
 - Mountains
 - Buildings
 - Warden's Cabin
 - Cabins or chalets
 - Campgrounds
 - Tent Cabins
 - Ski Tow

PREPARED AT THE SURVEYS AND MAPPING BRANCH, OTTAWA



DRAWN AT THE NATIONAL PARKS BRANCH, OTTAWA, 1951

KEY OF MAP SHOWING LOCATION OF CANADA'S NATIONAL PARKS

- | | | | |
|---------------------|--------------------------|--------------------------|----------------------------|
| 1. Mount Revelstoke | 8. Elk Island | 15. Point Pelee | 22. Fort Beausejour |
| 2. Glacier | 9. Wood Buffalo | 16. Georgian Bay Islands | 23. Prince Edward Island |
| 3. Yoho | 10. Prince Albert | 17. St. Lawrence Islands | 24. Port Royal |
| 4. Kootenay | 11. Riding Mountain | 18. Fort Wellington | 25. Fort Anne |
| 5. Jasper | 12. Lower Fort Garry | 19. Fort Chambly | 26. Fortress of Louisbourg |
| 6. Banff | 13. Fort Prince of Wales | 20. Fort Lennox | 27. Cape Breton Highlands |
| 7. Waterton Lakes | 14. Fort Malden | 21. Fundy | |

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