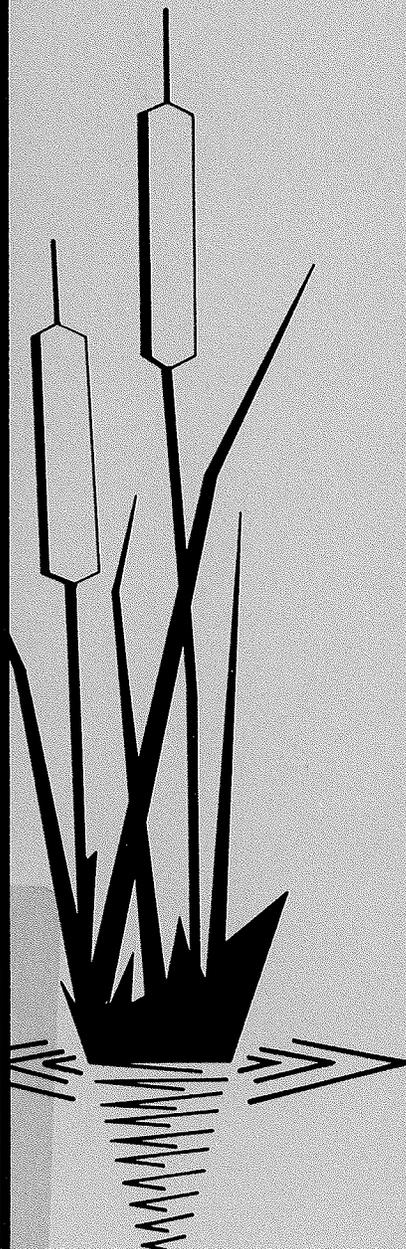


# Annotated Wildlife References for Banff and Jasper National Parks

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March, 1985



prepared for Parks Canada  
by

**CANADIAN WILDLIFE SERVICE**

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ANNOTATED WILDLIFE REFERENCES FOR  
BANFF AND JASPER NATIONAL PARKS

by

Keith A. McDougall

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Canadian Wildlife Service

Edmonton

MARCH 1985

## ABSTRACT

This compilation lists 315 annotated references to reports on the wildlife of Banff and Jasper National Parks. The references are listed by author alphabetically and the citation includes an annotation and list of keywords. The index identifies the reports that have each keyword. We recommend a more complete document be prepared when manpower and funding permit.

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## INTRODUCTION

During the course of the ecological (biophysical) wildlife inventories of these two national parks, many references to wildlife reports were reviewed in various libraries and archives. Some references were used in the final report of the inventory, (Holroyd, G.L. and K. J. Van Tighem. 1983. Ecological [Biophysical] Land Classification of Banff and Jasper National Parks. Volume III: The Wildlife Inventory produced for Parks Canada by Canadian Wildlife Service, Edmonton. 691 pp.), and some were not. The references presented here, therefore, duplicate some from the Volume III report and include all those references that were reviewed and annotated but not used in the report. However, there are other references in the report which are not presented here.

We recommend that these references be annotated and combined with this report to form a complete wildlife bibliography which can be compiled and distributed both electronically in an existing library catalogue and on paper.

## FORMAT OF THE REPORT

The references are presented by author and are ordered alphabetically. After the standard library references, a brief annotation describes the scope and content of the reference. The source of the copy that we reviewed is then listed using the following abbreviations:

ACR	Archives of the Canadian Rockies, Banff
AF-BNP	Banff administration files
LBNP	Banff Park Library

WSF-BNP	Banff warden service files
CWS	Canadian Wildlife Service Library, Edmonton
AF-JNP	Jasper administration files
NL-JNP	Naturalist Library, Jasper National Park
WSF-JNP	Jasper warden service files
LJNP	Jasper Park Library
KPNL	Kootenay Park Library
NAO	National Archives, Ottawa
UOCL	University of Calgary Library
WROL	Parks Canada, Western Region Library, Calgary

This doesn't mean that the reference is not available in other libraries but rather represents the source where we first encountered it. A brief list of keywords is then shown to represent the reference's content. Finally, each reference is numbered sequentially.

Following the references is a subject index. This index was prepared from the keywords and for each keyword the reference numbers, which include that topic, are shown in numerical order.

No attempt to create a hierarchy of keywords was made. Thus if the reader is interested in elk in Banff, keywords: Banff National Park, Elk and Ungulates should be checked. Reference numbers that are common to the Banff list and either of the elk or ungulate lists will identify relevant reports.

Our thanks to Lube Strembitsky for typing the report.

BANFF-JASPER WILDLIFE BIBLIOGRAPHY

- Anderson, A.S. 1966 1  
    Untitled. Unpublished typescript report in Parks Canada files,  
    Banff, Alberta.

    Annotation: Report on seasonal elk slaughter. Notes quota of 100  
    elk with 78 being killed. For various reasons the elk trap is said to  
    have not been successful in the past three years. All animals checked for  
    parasites and blood sent to Ottawa. 83% of cows were pregnant. WSF-BNP.

    Keywords: Elk/slaughter/parasites/Banff

- Anderson, R.M. 1918 2  
    Some notes on the mammals of Jasper Park, Alberta. Canadian Alpine  
    Journal 9:70-75.

    Annotation: Annotated species list based on a collection of 59  
    specimens (16 species) collected by W. Spreadborough in 1917. ACR.

    Keywords: Mammals/Jasper

- Anderson, R.M. 1919 3  
    Addition to list of mammals of Jasper Park, Alberta. Canadian Alpine  
    Journal 10:69.

    Annotation: An account of a least weasel taken on July 11, 1898 near  
    the Miette River by W. Spreadborough during his trip with the Geological  
    Survey of Canada, McEvoy party. ACR.

    Keywords: Weasel/Jasper

- Anderson, R.M. 1938 4  
    Investigation into wildlife conditions in national parks (Waterton  
    Lakes, Banff and Jasper) in the province of Alberta, 1938. Unpublished  
    report, Canadian Wildlife Service, 17 pp.

    Annotation: Annotated lists of species generally felt to be of  
    management concern, and some comments on management policy. Interesting  
    notes include: Banff - cougar, eagles and swans; Jasper - cougar, sharp-  
    tailed grouse, and Hungarian partridge. CWS.

    Keywords: Cougar/birds/Banff/Jasper/Waterton Lakes

Anderson, R.M. 1940 5  
Predators in Jasper National Park. Unpublished report, National  
Museum of Canada. 6 pp.

Annotation: Discusses the status of predators and generally suggests  
they are not a problem and in many cases need extra protection: i.e. "In  
the opinion of the writer, cougar control has gone entirely too far."  
AF-JNP.

Keywords: Carnivores/wildlife/management/Jasper

Anon., (Sibbald, H.E.?) 1916 6  
Report on game conditions. Unpublished report, Warden Service, Parks  
Canada, Banff. 2 pp.

Annotation: Addressed to J. Harkin and notes that as regards elk it  
is "felt they will reintroduce themselves given time" as a few are moving  
over from B.C. Other interesting accounts: 100 prairie chickens wintered  
in park in 1913, 30-40 goats in Spray Valley, 85 sheep between Massive and  
Banff ("a good increase since 1909"), moose - few in summer, "100 coyotes  
killed last winter." NAO.

Keywords: Banff/wildlife/grouse

Archibald, Pia L. (Nielson) 1976 7  
A progress report on the small mammal inventory of Banff National  
Park, a part of the biophysical inventory of Banff and Jasper National  
Parks. Unpublished report, Canadian Wildlife Service, Edmonton. 43 pp.

Annotation: During the period July 13 - September 23, 1975, 40  
trap-lines were run in various map units in the Bow Valley. Data were  
analyzed and trapping success, species diversity, niche breadth, niche  
overlap and the evenness with which individuals were divided among the  
species calculated. 14 different species were caught, all within their  
known distributional range. NL-JNP, CWS.

Keywords: Small mammals/biophysical/Banff/trapping

Baker, K. and S. Herrero. 1977 8  
Bear management Project proposal, Western Region, Parks Canada &  
Faculty of Environmental Design, University of Calgary. 38 pp.

Annotation: Outlines needs and justifications for grizzly studies in national parks. Lists five projects that should be carried out:

1. Human safety.
2. Visitor attitude, perception and values.
3. Deterrent repellent, attractants and aversive conditioning - used in national parks.
4. Develop. of audio-visual and written material for public.
5. Ecological baseline information. AF-JNP (9810-133).

Keywords: Grizzly/Banff/Waterton/Glacier/Revelstoke/Jasper

Banfield, A.W.F. 1946 9  
Field notes on ranges and wildlife, Athabasca Valley, Jasper National Park. Unpublished field notes, Canadian Wildlife Service. 33 pp.

Annotation: Observations and general information gleaned from I McTaggart-Cowan during June 1 to June 17, 1946. Gives details on Lewis Woodpecker nest, conditions of Athabasca valley ungulate ranges, and big game populations. CWS.

Keywords: Jasper/ungulates/birds-woodpeckers

Banfield, A.W.F. 1946 10  
Report on wildlife conditions in the mountain national parks, 1946. Unpublished report, Canadian Wildlife Service. 12 pp.

Annotation: Lists itinerary and observations of the author's first survey of Jasper, Banff, Kootenay and Yoho. Interesting notes include caribou winter range on Signal Mountain, a summer population of 30 moose in the lower Bow valley and 12 at Graveyard Flats, and high porcupine abundance in the Bow valley. CWS.

Keywords: Jasper/Banff/Kootenay/Yoho/ungulates/wildlife

Banfield, A.W.F. 1953 11  
Aerial survey of game winter ranges, Banff and Jasper National Parks, 1953. Unpublished report, Canadian Wildlife Service.

Annotation: This report documents the numbers and locations of large mammals observed in 13 hours of surveys by fixed wing aircraft. Sheep have declined in Jasper from 3,000 in 1943 to 600 in 1953. CWS.

Keywords: Banff/Jasper/surveys-aerial/ungulates

Barker, R.C. and L.H. Harbidge. 1972 12  
Field trip through the Brazeau District. Unpublished report, Warden  
Service, Parks Canada, Jasper. 4 pp.

Annotation: Contains observations on sheep, elk, deer and wolves in  
area. Eight wolves were observed at a fresh moose kill. AF-JNP.

Keywords: Wildlife/sheep/elk/deer/wolves/Jasper

Bent, D.H. 1968 13  
Possible applications of operations research to wildlife ecology.  
Unpublished talk by University of Alberta, Faculty of Business  
Administration and Commerce, made to Canadian Wildlife Service. 22 pp.

Annotation: Talk outlined statistical methods and computer analysis  
that can be applied to wildlife research. Stressed need to be cost  
efficient in the collection of data. NL-JNP.

Keywords: Resource manage/computer/statistics

Beswick, B. 1977 14  
Observations of the Harlequin Duck (Histrionicus histrionicus L.) on  
Maligne Lake, Jasper National Park, summer 1977. Unpublished report,  
Warden Service, Parks Canada, Jasper. 8 pp.

Annotation: Observations suggest that the harlequin duck freely  
inhabits the calmer waters of the lake until incubation begins. At that  
time males group together and leave the area. The females are not seen on  
the lake after this having moved to areas of fast flowing rivers.  
NL-JNP.

Keywords: Harlequin ducks/birds/Jasper

Bibaud, A. and B. Hall. 1979 15  
Region 4, summer goat survey (Willmore area) July 5-9, 1979.  
Unpublished report, Fish and Wildlife Division of Alberta Energy and  
Natural Resources. 39 pp.

Annotation: Herds were surveyed for record herd size, adult numbers,  
kid production and yearling survival. All drainages in the region were  
flown. Possible interest to Jasper as parts of survey were within the  
park. NL-JNP.

Keywords: Goat/survey/Jasper

Blood, D.A. 1966 16  
Progress report on bighorn sheep investigations in the Rocky Mountain national parks. Unpublished report, Canadian Wildlife Service, Edmonton. 41 pp.

Annotation: Sheep study data from Jasper, Waterton, Banff and Kootenay are synthesized and analyzed. Age/sex ratios, body measurements, herd dispersion and contagious ecthyma are discussed. CWS.

Keywords: Jasper/Waterton/Banff/Kootenay/sheep

Blood, D.A. 1972 17  
Removal of surplus ungulates, western national parks. Unpublished report, Canadian Wildlife Service, Edmonton. 4 pp.

Annotation: A general discussion on ungulate herd reductions. Does not recommend the removal of any sheep or elk from Jasper. CWS.

Keywords: Ungulate reductions/Jasper/Elk Island/Waterton

Bobek, B., R. Kunelius, and J. Weiner. 1979 18  
Energy balance and population structure of elk (Cervus canadensis) in Banff National Park. Unpublished report, Faculty of Environmental Design, University of Calgary and Parks Canada. 23 pp.

Annotation: A model energy budget for elk was developed which allowed for a comparison of energy requirements versus potential energy consumption depending on the quality of food available throughout the year. Total yearly energy requirements were 3089 and 3568 M Cal for male and female respectively. A computer model showed elk were unable to survive on a wholly browse diet. WSL-JNP.

Keywords: Elk/energy/population/Banff

Brady, K.S. and J. Wackerle. 1971 19  
Wolf activity in the Clearwater Valley. Unpublished report, Warden Service, Parks Canada, Banff. 2 pp.

Annotation: Wolf activity centred on Mallock Flats involving a pack estimated at nine wolves was observed. The pack ranged as far as Trident Lake and out of the park. Three moose kills were observed. Concludes restrictions on wolf hunting on provincial lands are required for protection of this pack. WSF-BNP.

Keywords: Banff/wolf

Brown, Belmore. 1938 20

Game animals seen in two week long trip on headwaters of Forty Mile Creek, August, 1938. Report by private citizen, for Warden Service. 1 pp.

Annotation: Brown was a painter who made backcountry trips in Banff Park. Saw few sheep or deer and concluded they were being slaughtered by cougars and coyotes. Attributes two elk kills found to cougars. WROL.

Keywords: Ungulate/carnivore/Banff

Burstrom, A.F. 1972 21

Report on elk and wolf activity, Yellowhead District, November and December 1972. Unpublished report, Warden Service, Parks Canada, Jasper. 3 pp.

Annotation: An account of two wolves killing an elk. One wolf "worried" a herd until a lone elk broke off, at which time the second wolf appeared and after a 150 yard chase grabbed the elk high in the hip, damaging one leg. Though the elk broke away several times the wolves had her down within about 10 minutes. WSF-JNP.

Keywords: Wolf/elk/Jasper

Byrne, A.R. 1968 22

Man and landscape change in the Banff National Park area before 1911. Parks Canada, National Park Series No. 1. 173 pp.

Annotation: This report discusses, a classification of the historical changes in dominant species in the areas of subalpine grassland within the park, the suggestion that during the period ca. 1840-1911 forest fires increased in frequency and extent due to a combination of climate and the arrival of white men, a partial reconstruction of early park landscape and a survey of early park policy and its influence on the landscape. LBNP.

Keywords: Fire/Banff

Carbyn, L.N. 1971 23

Identification and classification of small mammals. Unpublished report, Canadian Wildlife Service, Edmonton. 37 pp.

Annotation: The outline manual used during a regional warden training session at the Palisades. Includes a guide to the mammalian skulls and a key to the mammals of Alberta. NL-JNP.

Keywords: Mammals/key/identification

Carbyn, L. N. 1972 24  
Natural features of the Willow Creek area, Jasper National Park.  
Unpublished report, Canadian Wildlife Service, Edmonton. 35 pp.

Annotation: During a one-year period an assessment of the area was made and 38 mammal species, 92 bird species, 167 vascular and 43 nonvascular plants were identified. Brief references to geology and prehistoric humans are made. Area is considered to be of high interpretive value. CWS.

Keywords: Wildlife/Jasper/plants

Carbyn, L.N. 1974 25  
Wolf predation and behavioural interactions with elk and other ungulates in an area of high prey diversity. Unpublished report, Canadian Wildlife Service, Edmonton. 233 pp.

Annotation: A comprehensive and intensive study of predator/prey relationships in a 512 square kilometer area with 7 different potential species of ungulates and 28 different species of small mammals as prey. Wolf/elk interactions were emphasized as elk are the most abundant ungulate. Pack size varied from 10-14 wolves. Elk were the least successfully adapted in terms of antipredator behavior mechanisms. Male deer comprised 43% of the wolf diet and elk 30%. NL-JNP.

Keywords: Wolf/elk/carnivores/ungulates/Jasper/small mammals

Carbyn, L.N. 1974 26  
Wolf population fluctuations in Jasper National Park, Alberta, Canada. Biological Conservation 6(2):94-101.

Annotation: Historical changes of wolf populations in Jasper National Park and a brief analysis of the present situation. Current population is considered high and relatively stable. CWS.

Keywords: Wolf/Jasper/population/management

Carbyn, L. 1975 27  
Factors influencing activity patterns of ungulates at mineral licks. Can. J. Zool. 53:378-384.

Annotation: Mule deer and elk were observed at licks with emphasis on diurnal activity. Presence at lick sites was analyzed in relation to time of day, temperature and humidity. Results showed a high negative correlation between humidity and the number of visits. No evidence that predation pressures influenced the activity patterns even though wolves were common in the area. CWS.

Keywords: Wolf/mule deer/elk/licks/Jasper

Carbyn, L. 1979 28  
Life tables of elk under different wolf predation pressures.  
Unpublished report, Canadian Wildlife Service, Edmonton. 24 pp.

Annotation: Cohort life tables were generated from data obtained during the elk reduction programs conducted in Jasper and Banff National Parks. WSL-JNP.

Keywords: Elk/wolf/Jasper/Banff

Carbyn, L. and E.A. DeBock. 1972 29  
Progress report on studies of wolves within a specific study area, Jasper National Park, during winter 1971/72. Unpublished report, Canadian Wildlife Service, Edmonton. 10 pp.

Annotation: Wolves were tracked and kills recorded. Within a three-day period a pack of 14 wolves killed 1 elk calf, 1 adult moose and uncovered and checked old kills of an elk, moose and a male deer. During those three days the wolves passed at least three moose and nine elk. WSL-JNP.

Keywords: Wolves/Jasper/moose/elk/mule deer

Cauble, C. 1977 30  
The great grizzly grapple. Natural History Aug./Sept. p. 75-81.

Annotation: Discusses the problems of grizzly bears and people, the ramifications of lawsuits arising from bear attacks in parks and attitudes of the public about bears. Although the article talks about U.S. experiments, there are worthwhile applications to Canadian parks. AF-JNP.

Keywords: Grizzly/law/public attitude

Clarke, C.H.D. 1939 31  
Wildlife investigation in Banff National Park. Unpublished report, Canadian Wildlife Service. 26 pp.

Annotation: Contains an annotated list of species generally considered to be of management concern in Banff, and a discussion on the roles of predation and predator control in national parks. There is a predator control policy statement by the National Parks Bureau appended. Interesting notes include golden eagle and Cooper's hawk. CWS.

Keywords: Wildlife/Banff

Clarke, C.H.D. 1941 32  
Wildlife in national parks. Unpublished typescript report in Parks  
Canada files, Banff, Alberta. 4 pp.

Annotation: Replies to allegations by Mr. C.W. Fisher of the Alberta  
Fish and Game Association that parks were overstocked with predators and,  
as a result, game was severely depleted. All claims are refuted by Clarke.  
AF-BNP.

Keywords: Carnivores/wildlife/Banff/Jasper

Clarke, C.H.D. 1942 33  
Wildlife investigations in Banff and Jasper National Parks in 1941.  
Unpublished report, Canadian Wildlife Service, Edmonton. 38 pp.

Annotation: Annotated lists of wildlife habitats and species in  
Banff and Jasper. Interesting notes include Banff - 26 moose in the Bow  
valley, lynx; Jasper - white-tailed deer, elk, golden eagle, cougar,  
thirteen-lined ground squirrel, osprey, sharp-tailed grouse. CWS.

Keywords: Wildlife/Banff/Jasper

Clarke, C.H.D. and I. McT. Cowan. 1945 34  
Birds of Banff National Park, Alberta. Canadian Field-Naturalist.  
59(3):83-103.

Annotation: Contains a discussion of the history of bird work in  
Banff, vegetation and life zones followed by an annotated species list.  
Species of note are, gray-cheeked thrush, veery and dowitcher. CWS.

Keywords: Birds/Banff

Coggins, V.C. 1975 35  
Special report - Rocky Mountain bighorn sheep - present status in  
Wallowa County. 11 pp.

Annotation: In 1971 two groups of 20 sheep were taken from JNP for  
restocking in the Snake River Canyon and Wallowa Mountains of the United  
States. The Wallowa Mountain introduction was successful while the Snake  
Indian band disappeared. At time of report the Wallowa band numbered 50  
animals. The lack of success of the one group is credited to extensive  
dispersal, differences of capture and release sites plus lack of wariness  
(hunting?). WSF-JNP.

Keywords: Sheep/transplant/Jasper/United States.

Courtney, J. 1974

36

A report on caribou ecology in the Snowbowl area of Jasper National Park, July 15 to 23, 1974. Unpublished report, Canadian Wildlife Service, Edmonton. 22 pp.

Annotation: Due to a late melt the majority of summer alpine range was still under snow thus the primary objective of the study, to observe human-caribou reactions, calving areas and ranges was not met. AL-JNP, NL-JNP.

Keywords: Caribou/Jasper

Cowan, I. McTaggart 1943

37

Report on game conditions in Banff, Jasper and Kootenay Parks - 1943. Unpublished report prepared for National Parks Bureau. University of British Columbia, Vancouver. 144 pp.

Annotation: Determines the distribution and seasonal movement, numerical status, condition of game birds, relationships of carnivores and ruminants and the condition of game ranges. Contains first attempts to account for dramatic reduction in sheep in Banff from 1915 to 1943. CWS.

Keywords: Banff/Jasper/Kootenay/wildlife

Cowan, I. McTaggart. 1944

38

Report of wildlife studies Jasper, Banff, Yoho National Parks in 1944 and parasites, diseases and injuries of game animals in the Rocky Mountain national parks, 1942-44. Unpublished report prepared for National Parks Bureau. University of British Columbia, Vancouver. 84 pp.

Annotation: Two parts for second part see Cowan 1944, (Number 39). Report deals primarily with Jasper and includes investigations of predator/prey relationships with particular reference to wolf and coyote, status of Cairn Pass sheep and winter game ranges in Jasper are discussed. A brief discussion of Yoho game conditions is made. Under recommendations it is stated that the elk reduction program must be increased. NL-JNP.

Keywords: Carnivores/ungulates/slaughters/Jasper/Banff/Yoho/parasites/disease/elk.

Cowan, I. McTaggart 1944 39  
Parasites, disease and injuries of game animals in Banff, Jasper and Kootenay national parks, 1944. Unpublished National Parks Bureau report. University of British Columbia, Vancouver. 42 pp.

Annotation: Discusses the presence, effects, life histories, and abundance of various parasites for bighorn sheep, mountain goat, mule deer, elk, moose and caribou. WSL-JNP.

Keywords: Parasites/ungulates/Banff/Jasper/Kootenay.

Cowan, I. McTaggart 1945 40  
Report of wildlife studies in the Rocky Mountain national parks in 1945. Unpublished report, prepared for National Parks Bureau by University of British Columbia. 34 pp.

Annotation: Deals primarily with wolves. Notes wolves present all seasons along the Miette River from Yellowhead Pass eastward, along the Athabasca from Sunwapta to the confluence of Moosehorn and Athabasca. They occur up Whirlpool River, along the Brazeau, the Lower Snaring and the Snake Indian River below Willow Creek. Summer range includes upper Snake Indian, Topaz Creek, Moose River and the Smokey River. In Banff small resident populations are found along the Saskatchewan River and lower Howse and Mistaya, Ya-Ha-Tinda and Scotch Camp and the Panther River. One wolf seen in Yoho - killed. Report contains information, many management recommendations included on denning sites and food preferences. NL-JNP.

Keywords: Wolves/Jasper/Banff/Yoho/Kootenay/Waterton/ungulate

Cowan, I. McTaggart. 1946 41  
Report of wildlife studies in the Rocky Mountain Parks in 1945. Unpublished report, Canadian Wildlife Service. 63 pp.

Annotation: Wolves occurred over most of Jasper National Park, but were virtually absent from Banff, Kootenay and Yoho. In Banff and Jasper National Parks wolves killed game in percentage of, elk 41%, deer 29%, moose 16%, bighorn 10%, caribou 3%, goat 1%. Estimated relative game abundance of bighorn 54%, elk 21%, deer 14%, goat 6%, moose 5%, caribou 1%. Recommends extensive elk reductions in BNP (300), JNP (700) and boundary changes. CWS.

Keywords: Banff/Jasper/wolves/elk/moose/deer/sheep/goat/boundary

Cowan, I. McTaggart. 1946 42

General report upon wildlife studies in the Rocky Mountain Parks. Unpublished report prepared for National Parks Bureau. University of British Columbia, Vancouver. 79 pp.

Annotation: June visit to Elysium Pass: 19 elk, 12 caribou, very dense microtine population, many coyotes and golden eagles. Nine coyotes trapped and tagged and 16 dens visited in Jasper. Cow-calf ratios of ungulates low this year. Range surveys indicate overgrazing by elk and horses. Also recommends cutting of young spruce that are invading winter ranges in the Athabasca Valley. CWS.

Keywords: Jasper/Banff/coyote/microtine/moose/elk/sheep/mule deer/  
range surveys/exclosures

Cowan, I. McTaggart. 1946 43

The timber wolf in the Rocky Mountain national parks of Canada. Unpublished report prepared for National Parks Bureau, University of British Columbia, Vancouver. 57 pp.

Annotation: Study estimates a density in JNP of one wolf per 87-111 sq. miles of potential range. Number of wolves entering Banff is said to not exceed 12 to 13 for 1943-45 and a maximum of 18 for 1946. Notes wolves establishing in Bow Valley 12 miles west of Banff winter of 1946-47 (7-9 wolves). Found that in BNP and JNP big game comprised 80% of diet with elk representing 47%. Concludes that "under existing circumstances wolves not detrimental to park game herds." CWS.

Keywords: Banff/Jasper/wolf/prey

Cowan, I. McTaggart. 1977 44

Natural resource research in Canada's national parks: An evaluation. Unpublished report, Parks Canada. 196 pp.

Annotation: Discusses and evaluates research carried out in national parks. Identifies research requirements and suggests means by which known research expertise can best be used for the natural history needs of parks. WSL-JNP.

Keywords: Resource manage/inventory

Davidson, T. and D. Norcross. 1978 45  
Bison reintroduction, Jasper National Park, interim report, 1978.  
Unpublished report, Warden Service, Parks Canada, Jasper. 25 pp.

Annotation: Wood Bison (Bison bison athabasca) were reintroduced into Jasper National Park 9 June 1978. This was a joint venture between the Canadian Wildlife Service and Parks Canada.

Of the 28 bison transplanted, 21 left the park shortly after release and went to the Grand Prairie area. Of these, 18 were recaptured and 14 of these were taken back to Elk Island National Park. There are five mortalities that we know of to date. Three bison are known to still be within the park and three others are unaccounted for (these could be within the park also).

One three-year-old bull travelled down the Snake Indian River to the main Athabasca valley and is presently 15 kilometres east of the townsite. The other two of known location are in the Willow Creek area (cow and calf). WSL-JNP.

Keywords: Bison

Day, D., C. Zinkan, and G. Wickware. 1975 46  
A multi-disciplinary approach to resource inventory in national parks. Unpublished report, Parks Canada. 200 pp.

Annotation: This document outlines the team approach and methods and goals to be utilized in the Banff/Jasper biophysical inventory. WSL-JNP.

Keywords: Resource manage/inventory

Drummond, T. 1830 47  
Sketch of a journey to the Rocky Mountains and to the Columbia River in North America. Hooker's Botanical Miscellany. 1:178-219.

Annotation: Drummond was a botanist attached to the second Sir John Franklin expedition who travelled in the Rockies and western Canada in 1825-1826. Collected plant and mammal specimens at Jasper House and Athabasca Pass vicinity. ACR.

Keywords: Jasper/plants/mammals/birds/history

Dumpleton, D.A. 1979 48  
Untitled. Unpublished report, Warden Service, Parks Canada, Jasper.  
10 pp.

Annotation: Listing of railway and highway kills and warden and predator kills for the years 1973-1978. Contains only numbers killed plus a column headed: % mortalities of total population. Total populations are "estimated populations." In the years 1973-1975, four foxes were killed. WSF-JNP

Keywords: Jasper/highway/railway/mortality/wildlife

Edwards, R.Y. 1956 49  
Snow depths and ungulate abundance in the mountains of western Canada. Journal of Wildlife Management 20:159-168.

Annotation: Notes ungulate population declines occur in periods of deep snow conditions. The seriousness of decline depends on range conditions. Sufficient low elevation range is necessary to ensure ungulate abundance in severe winters. UOCL.

Keywords: Ungulates/mortality

Farris, D.C. Undated - 1954 50  
Untitled, beaver location listing, plus few other species. Warden Service notebook. 2 maps.

Annotation: Contains a description of 36 beaver locations for the Bow valley. WSF-BNP.

Keywords: Banff/beaver

Fisher, H.D. 1948 51  
Report on 1948 wildlife investigations, Banff National Park. Unpublished report, Dominion Wildlife Service. 8 pp.

Annotation: Notes elk ranges in Bow valley showing considerable improvement over other years. Recommends an elk reduction of 20% of the annual increment. Thirteen moose in Vermilion Lakes area. Also recommends 50 cyanide guns be shipped to Banff National Park for wolf control and that a quota of 20 wolves be established for the park. NAO.

Keywords: Banff/elk/wolf

Fitzmartyn, G. 1973 52  
Report on the small mammals of the Vermilion Pass burn. Unpublished report, Parks Canada, Banff. 25 pp.

Annotation: A total of 20,210 trap nights with 475 captures and 246 individuals are noted. Clethrionomys was dominant while Peromyscus was also quite abundant. Comments that a minimum of 7 moose, 5 coyotes, 13 mule deer, and 15 elk were in area. Two wolves were sighted. CWS.

Keywords: Banff/Vermilion/burn/small mammals/trapping

Flook, D.R. 1955 53  
An appraisal of the elk situation in the Athabasca Valley of Jasper Park. Unpublished report, Canadian Wildlife Service, Edmonton. 9 pp.

A qualitative assessment of range condition trends was conducted in the Athabasca Valley east of Jasper. Range was considered fair but it was recommended 200 elk be slaughtered to keep stocking rates low. Some sheep age/sex data were presented. CWS.

Jasper/elk/sheep/range

Flook, D.R. 1957 54  
Elk-horse grazing situation Ya-Ha-Tinda ranch, 1957. Unpublished report, Canadian Wildlife Service, Edmonton. 4 pp.

Annotation: Documents overgrazing by 1000 elk on hay fields. Recommends a late season hunt for elk. CWS.

Keywords: Elk/horse/Banff

Flook, D.R. 1958 55  
Analysis of range exclosure plots. Bow Valley, Banff Park, 1958. CWS, 1958. Unpublished report, Canadian Wildlife Service, Edmonton. 13 pp.

Annotation: In 1944, four plots established. In 1952 a fifth added. Plot one too influenced by 1953 construction of Timberline Hotel. Plot two destroyed by Trans-Canada Highway. Recommends controlling elk at a low level in area 10 miles west of Banff and not allowing wintering elk populations to increase beyond 1953 level. CWS.

Keywords: Banff/elk/exclosure

Flook, D.R. 1958 56  
Preliminary report on studies of growth and reproduction in elk in the mountain parks, 1957-58. Unpublished report, Canadian Wildlife Service, Edmonton. 19 pp.

Annotation: Using data gathered from elk slaughters, growth, reproduction and general health are examined. AF-JNP.

Keywords: Elk/slaughters/Elk Island/Jasper/Banff/ Waterton

Flook, D.R. 1959 57  
Untitled report. Unpublished memo, Canadian Wildlife Service, Edmonton. 8 pp.

Annotation: This item is a report on game and carnivore conditions for several western and midwest national parks. Suggests predator control not justified in national parks and that there is a need for a statement of policy regarding predator control from the parks department. AF-JNP.

Keywords: Carnivores/ungulates/wildlife/policy/Riding Mountain/Prince Albert/Elk Island/Waterton/Banff/Glacier/Yoho/Kootenay/Revelstoke

Flook, D.R. 1962 58  
Appraisal of the elk situation, Banff Park, 1962. Based on park warden's elk census. Unpublished report, Canadian Wildlife Service, Edmonton. 3 pp.

Annotation: Recommends the removal of 125 elk from Bow valley and 300 from Cascade. Expresses opinion that even very low elk populations will serve to suppress aspens in the Bow valley. CWS.

Keywords: Banff/elk/slaughter

Flook, D.R. 1962 59  
Range relationships of some ungulates native to Banff and Jasper national parks. Paper presented at Ecological Society Symposium, Bangor, North Wales, 1962. 13 pp.

Annotation: Notes important effect that the "vigorous" competitor elk, has on sheep, deer and moose. The pyric ranges produced in the period 1880-1920 are now diminishing under fire control and natural selection. This will result in reduced elk, deer, sheep and moose populations. CWS.

Keywords: Banff/Jasper/elk/sheep/goat/deer/moose/range/ecology

Flook, D.R. 1963 60

Some factors to be considered in ungulate management in Canadian national parks. Paper presented at meeting of the Northwest Section of the Wildlife Society, Cranbrook, B.C. April 27, 1963. Unpublished report, Canadian Wildlife Service, Edmonton. 8 pp.

Annotation: Argues that control of ungulate numbers within certain national parks will continue to be needed in the future and that such control should take place through traditional methods. Recreational hunting should be prohibited due to high levels of harassment, and to precedence that would lead to greater demand for carnivore control. Stresses importance of national parks to carnivore preservation. Notes that an overabundance of ungulates will alter biotic communities, damage watersheds and impinge on bordering farms and ranches. CWS.

Keywords: Range/carnivore/ungulate

Flook, D.R. 1966 61

Some biological aspects of grazing and the problem of grazing in the national parks. Unpublished lecture given to regional warden school. 9 pp.

Annotation: The paper mentions the published National Parks Policy and notes that it states, "Grazing of domestic stock is detrimental to natural history values." Notes that the modern horse in North America must be considered as domestic not native stock. Comments that controlling populations of native herbivores to maintain range is a recognized need. LBNP.

Keywords: National parks/grazing/biology

Flook, D.R. 1967 62

A study of the apparent unequal sex ratio of wapiti. Ph.D. Thesis, University of Alberta. 213 pp.

Annotation: In the mountain parks the sex ratio of wapiti older than calves was 37 males:100 females as per counts in October and November, in Elk Island Park the ratio was 85 males:100 females. The mountain ratio is believed biased to females by differential distribution of males and females. Sex ratio of fetuses was 113 males:100 females from all parks in winter. Unbalanced ratio is due firstly to a sex difference in distribution related to the dispersal of males and secondly, the natural mortality of males at a younger age than females. NL-JNP.

Keywords: Elk/Jasper/Banff/Elk Island

- Flook, D.R. and J. Rimmer. 1963 63  
Cannibalism in starving wolverines and sex identification from skulls. Typed manuscript, Canadian Wildlife Service and Warden Service, Parks Canada. 3 pp.

Annotation: Comments upon the carcass of a female wolverine found intact in a dry wooden water tank at Lake Louise along with pieces of bone of four others wolverine and two marten. Identifies the other wolverines as three females and one male from cranial measurements. AF-BNP.

Keywords: Wolverine/Banff

- Flook, D.R. and J.E. Stenton. 1969 64  
Incidence and abundance of certain parasites in wapiti in the national parks of the Canadian Rockies. Canadian Journal of Zoology 45(5)759-803. 1969.

Annotation: At various seasons in different parks elk collected were examined for helminth and arthropod parasites. In addition the lungs and livers of an additional 1380 elk slaughtered in park reduction programs were examined. Seasonal and spatial distributions of parasites are discussed. NL-JNP.

Keywords: Parasites/elk/Jasper/Banff/Kootenay/Waterton/slaughters

- Flygare, H. 1977 65  
Wildlife mortality statistics, highway and railroad, Banff National Park, 1964-1976. Unpublished report, Warden Service, Parks Canada, Banff. 70 pp.

Annotation: Extensive listing of mortality by species, sex, month, type of vehicle and speed, location and highway, and railroad. Also lists prime elk feeding locations along Trans-Canada. Elk and mule deer are most commonly killed. Two badgers are listed as highway kills - no location. WSF-BNP.

Keywords: Banff/highway/railroad/wildlife/mortality

- Flygare, H. and Banff Park Warden Service. 1979 66  
Ungulate mortality and mitigated measures, Trans-Canada Highway, Banff National Park, east gate to Sunshine turnoff. Parks Canada, Banff Warden Service Report. 74 pp.

Annotation: During the past 15 years 970 wildlife accidents have occurred. The east gate to traffic circle accounts for 44.6% of these. Elk and mule deer are the prime victims. Should highway be twinned; report recommends fencing and underpasses. LBNP.

Keywords: Highway/mortality/ungulate/management

Francis, G.R. 1957 67  
Analysis of wardens' wildlife observation cards, Banff National Park.  
1957. Unpublished report, Canadian Wildlife Service.

Annotation: For 1086 wildlife cards the report notes all observations of the less common species and for others, selected observations regarding behavior and records of disease and fatalities. AF-JNP.

Keywords: Wildlife/warden cards/Banff

Francis, G.R. 1958 68  
Observations by park wardens of some carnivores in the mountain national parks of Canada. 31 pp.

Annotation: Wildlife observation cards for the years 1951-1957 from seven mountain parks are discussed. Species and number of cards examined were: grizzly 352, cougar 105, lynx 96, bobcat 1 (Waterton), timber wolf 181, wolverine 111, marten 169, fisher 4 (Banff, Glacier, Jasper), mink 21, otter 2 (Jasper). CWS.

Keywords: Banff/Glacier/Jasper/Kootenay/Revelstoke/Waterton/Yoho/  
grizzly/cougar/lynx/bobcat/wolf/wolverine/marten/fisher  
/mink/otter

Fuhrer, H. 1972 69  
Report on wolf kill (cow moose). Unpublished report, Jasper Warden Service report. 2 pp.

Annotation: Account of five wolves bringing down moose in the Sunwapta River with the suggestion that a wildlife photographer, by attempting to get too close, made the wolves abandon their effort thus sentencing the moose to a slow 24-hour death. WSF-JNP.

Keywords: Wolf/moose/kill/Jasper

Geist, V. 1965 70  
Ethological observations on some North American cervids. Zoologische Beiträge 12(2):219-249.

Annotation: Studied moose, mule deer and Wapiti in Banff National Park (1963-1965) as a by-product of a bighorn sheep study. Says the behavioral study supports the old division of deer into Tele and Plesio-metacarpulia. CWS, WSF-BNP.

Keywords: Banff/ungulates/behavior.

Geist, V. 1966 71  
The evolutionary significance of mountain sheep horns. *Evolution*  
20(4):558-566.

Annotation: Tests the hypothesis that horns of male mountain sheep evolved as display organs. Seven predictions were made from this hypothesis and six investigated and verified. The horns of rams are not only important as shields and weapons in combat, but also as the major dominance-rank determinance, and as visual dominance-rank symbols.  
NL-JNP.

Keywords: Sheep/mountain parks/Banff/evolution/behaviour

Geist, V. 1972 72  
On the management of large mammals in national parks. *Park News*,  
8:4-14 and 5:16-24.

Annotation: UOCL. CWS.

Keywords: Ungulates/large mammals/management/national parks

Geist, V. 1974 73  
On the management of mountain sheep: Theoretical considerations workshop on the management biology of North American wild sheep, University of Missoula, June 18-24, 1974. Boone and Crockett Club, Audubon Society and Wildlife Management Institute. 25 pp.

Annotation: Discusses the ramifications of the knowledge that sheep are a species whose exploitation of their home range is a function of their social system and their home range knowledge and an alteration of either the social system or the knowledge of the population leads to an alteration of sheep ecology. Suggests sheep reeducation programs.  
AF-JNP.

Keywords: Sheep/management

Germain, A. 1969 74  
Rutting behavior in the elk. Unpublished report, Parks Canada, Jasper. 14 pp.

Annotation: Reviews literature on rutting and discusses physiological changes, causes, role of antlers, establishment of harems, dominant and subordinate roles and place of the rut in evolution and survival of the species. NL-JNP

Keywords: Elk/behaviour/rutting

Gimbarzevsky, P. 1978

75

Integrated survey of biophysical resources in national parks. Pamphlet published by Forest Management Institute, Canadian Forestry Service, for the Canadian national parks today and tomorrow, conference II. Ten years after, Banff, Alberta, October 8-13 . 21 pp.

Annotation: Describes the biophysical surveys conducted by the Forest Management Institute that involves the mapping of land, vegetation and water. The working procedures and classification methods used in the acquisition, presentation, and interpretation of resource information are described. No description, inclusion or integration of the wildlife component is discussed. NL-JNP.

Keywords: Biophysical/national parks

Green, H.U. 1944

76

Wildlife report of the Banff warden district, summer and fall, 1944. Unpublished report in National Archives, Ottawa. 9 pp.

Annotation: Estimates 30 moose in the area. Is against hikers in Forty Mile Creek area due to grizzlies. NAO.

Keywords: Banff/wildlife

Green, H.U. 1944

77

A preliminary investigation of the beaver of the Banff district, Banff National Park. Unpublished report, Warden Service, Parks Canada, Banff. 24 pp.

Annotation: A brief history of beaver in the district. Notes that beavers were virtually unknown in Banff around 1900 but old lodges and dams existed before that date. Beaver first observed in vicinity of Healy Creek about 1919. Cites fires and post-fire aspen growth as reason for beavers return to the park. Estimates 267 beaver in district but suggests this will decline due to dwindling aspen habitat. National Archives of Canada, Ottawa. NAO.

Keywords: Banff/beaver

Green, H.U. 1944

78

Untitled. Unpublished typescript report in Parks Canada files, Banff, Alberta. 4 pp.

Annotation: Report on an investigation of range conditions in Bow Valley from Hillsdale to east gate. Notes range degeneration has been bought about and undoubtedly persists with recovery a matter of chance. Elk density has exceeded range capacity. WSF-BNP.

Keywords: Elk/range/management/Banff

Green, H.U. 1944-1949 79  
Range studies - Banff National Park. Unpublished report, Warden Service, Parks Canada, Banff. 50 pp.

Annotation: Contains "growth index" plot data on four plots in Bow valley. Statistics on such things as, percentage of utilization, "grass growth index", "plot growth index", etc. Possibly of use to those studying range management principles - old and new. WSF-JNP.

Keywords: Banff/range/management

Green, H.U. 1945 80  
Report on coyotes in Banff district. Unpublished report, Warden Service, Parks Canada, Banff. 2 pp.

Annotation: Suggests some control be exercised over coyotes and notes local residents are making numerous complaints. Reports a bus driver saw coyotes tear a deer "to pieces" in minutes. WSF-BNP.

Keywords: Banff/coyotes/management/carnivores

Green, H.U. 1945 81  
Live beavers for Dept. of Indian Affairs. Unpublished report, Warden Service, Parks Canada, Banff. 2 pp.

Annotation: 28 beaver live-trapped for shipment to Lac la Biche for transplant on Indian reserves. Suggests that for future trapping a two year lay-over of previously trapped areas be adopted to allow restocking. WSF-BNP.

Keywords: Banff/beaver

Green, H.U. 1945-1952 82  
Notes on wolves. Handwritten notes, unpublished report, Warden Service, Parks Canada, Banff. 21 pp.

Annotation: A listing, with no analysis or comments, of wolf sightings in Bow valley from 1945 to 1952. WSF-BNP.

Keywords: Wolves/Banff

Green, H.U. 1946 83  
Beaver - Bow Valley. Unpublished report, Warden Service, Parks  
Canada, Banff. 2 pp.

Annotation: Survey made to determine live-trapping prospects. Notes  
that results disappointing due to destruction of many dams for mosquito  
control. Notes a conflict between conservation of beavers and the  
mosquito control program and suggests cooperation in this area. WSF-BNP.

Keywords: Banff/beaver

Green, H.U. 1946 84  
Beaver trapping - Banff National Park - season - 1946. Unpublished  
report, Warden service, Parks Canada, Banff. 3 pp.

Annotation: In order to supply certain northern Indian reserves with  
beaver for restocking; 34 beaver were trapped and shipped. Used Bailey  
underwater traps. Notes that the beaver population of the Bow Valley is  
ebbing due to food exhaustion. Criticizes the destruction of dams and  
lodges by mosquito control workers. AF-BNP.

Keywords: Beaver/Banff

Green, H.U. 1946 85  
The elk of Banff National Park. Department of Northern Affairs and  
National Resources. 32 pp.

Annotation: Report doubts existence of elk in Banff National Park  
previous to 1900 due to climax forest being unsuitable habitat. Describes  
elk introductions starting in 1917 - total 57 animals (total of 251  
introduced from 1917-1920). By 1945 Green estimates 2000 elk in park  
(1500 Bow valley, 225 Cascade, 100 Spray and misc.). Notes that 626 elk  
slaughtered 1943-1946. ACR.

Keywords: Banff/elk/history/ecology

Green, H.U. 1946-1956 (not inclusive) 86  
Elk ranges census reports. Unpublished report, Warden Service, Parks  
Canada, Banff. 32 pp.

Annotation: Series of reports giving "highest counts", estimates and  
recommendations for herd reductions for elk populations of various  
districts. WSF-JNP.

Keywords: Banff/elk

Green, H.U. 1948 87  
Anatomy of mammals. Unpublished report, Warden Service, Parks  
Canada, Banff. 24 pp.

Annotation: Compiled for purpose of instructing and advising warden  
personnel. One part of a proposed wildlife manual. ACR.

Keywords: Wildlife/mammals/anatomy

Green, H.U. 1948 88  
Occurrence of game and other mammals. Unpublished report, Warden  
Service, Parks Canada, Banff. 18 pp.

Annotation: A listing of data derived from the observations of  
members of the Warden Service for the year 1948. Listed by district,  
species, observer, locality and numbers. WSF-BNP.

Keywords: Banff/mammals

Green, H.U. 1948 89  
Notes on the occurrence of wolves in Banff National Park.  
Unpublished report, Warden Service, Parks Canada. Banff. 4 pp.

Annotation: Says that Banff is not typically wolf habitat; terrain  
too rugged and valleys not open enough. Takes contention with the park  
critic's view that wolves and other predators occurring in the foothills,  
are park-bred and have left having destroyed most of the game. Notes game  
plentiful in park. WSF-BNP.

Keywords: Banff/wolves/carnivores

Green, H.U. 1949(a) 90  
The bighorn of Banff National Park. Unpublished report, Warden  
Service, Parks Canada, Banff. 72 pp.

Annotation: Probably the earliest attempt at an ecological report on  
bighorn sheep in Banff includes range estimates and population figures.  
ACR.

Keywords: Banff/sheep/population/range

Green, H.U. 1949(b) 91  
The bighorn sheep of Banff National Park. National Parks and  
Historic Sites Service. 53 pp.

Annotation: Published version of Green 1949(a). ACR.

Keywords: Banff/sheep/ecology

Green, H.U. 1951 92  
Occurrence, distribution and population of mammals, Banff National  
Park. Unpublished report, Warden Service, Parks Canada, Banff. 23 pp.

Annotation: Includes maps which give range estimated from occurrence  
of animals. Moose are noted to be well distributed about the park with  
sizable populations, i.e. 25 lower Bow valley, even though, at times, the  
rest of Alberta is experiencing "all time" lows. Other "estimates": 1100  
elk, 289 mule deer and 435 sheep. Other interesting items include an  
estimate of 13 wolves in the lower Bow valley and area map of cougar  
sightings. ACR.

Keywords: Banff/mammals/range/population

Green, H.U. 1951 93  
The wolves of Banff National Park. Ottawa Ministry of Resources and  
Development, National Parks Branch, Banff Warden Service. 50 pp.

Annotation: For the period 1944-1950 notes the presence of wolves in  
the valleys of the Howse, North Saskatchewan, Red Deer, Panther, Cascade,  
Bow, Spray and Pipestone rivers. Lists minimum area populations for -  
same time period - high 48 (1947) low 2 (1944). Population more or less  
stable - 47-50. ACR.

Keywords: Banff/wolf

Green, H.U. 1953 94  
Elk census and range report. Unpublished report, Warden Service,  
Parks Canada, Banff.

Annotation: States that since 1944 the elk range management policy  
has been one of "maintaining area populations at whatever number is not  
greatly in excess of estimated carrying capacity." Green worries that  
excess elk reductions will lead to loss of open ranges by aspen  
encroachment. Reports range carryover as excellent. An attached letter  
from F. Banfield recommends a reduction of 75 elk. A letter from Chief  
Warden Ashley agrees with Green but sees no problems with Banfield's  
recommendations. WSF-BNP.

Keywords: Banff/elk/range/management/

Green, H.U. 1954-1957 95  
Wildlife notes. Unpublished mimeographed notes in naturalist library, Jasper, Alberta.

Annotation: Series of short articles on a wide variety of natural history and conservation topics. ACR (some), WSF-BNP (some 3-35), NL-JNP (1-36).

Keywords: Banff/wildlife

Green, H.U. 1955 96  
The moose of Banff National Park, Alberta. Unpublished report, Warden Service, Parks Canada, Banff. 44 pp.

Annotation: The report outlines the ecology and biology of moose. Ten years of observations (1945-1954) are reported. Report concludes "it is entirely probable... that moose will decline in number... as much of present habitat reverts to an unfavourable succession". ACR.

Keywords: Banff/moose/ecology/succession

Green, H.U. 1955 97  
Range report - Banff National Park - spring 1955. Unpublished report, Warden Service, Parks Canada, Banff. 2 pp.

Annotation: Results expressed as a "graze percentage and the degree of browse utilization." Notes survey is conducted visually, but no actual method given. WSF-BNP.

Keywords: Banff/elk/management/range

Green, H.U. 1957 98  
Notes on the Elk of Banff National Park. National Park Service, Ottawa. 47 pp.

Annotation: Contains information as per Green, H.U. 1946 plus additional data. Lists inventory data from 1944-1953, plus age and sex composition. From 1270 elk slaughtered from 1914-1954; lists productivity, sex ratios and parasite information. ACR.

Keywords: Banff/elk/history/ecology

Green, H.U. 1955 99  
The wolves of Banff National Park, supplementary notes. Unpublished report, Warden Service, Parks Canada, Banff.

Annotation: Notes a downward trend in park wolf populations since the early 1950s. Comments on wolf poisoning program, rabies control in park and intensive poisoning in provincial forest reserve bounding park where 30 wolves were taken in 1951-1952. Five wolves were taken in Banff, none in the Bow valley. Mange was observed in Bow valley wolves. Shows a high of 48 wolves in park in 1948, low of 11 in 1954. WSF-BNP.

Keywords: Banff/wolves

Green, H.U. 1956 100  
Buffalo enclosure, Banff. Unpublished report, Warden Service, Parks Canada, Banff. 3 pp.

Annotation: Notes progressive deterioration of paddock from, encroachment by aspen, loss of area to TCH, airport and gravel pits and continual overgrazing. Feels removal of buffalo only means for recovery of area. WSF-BNP.

Keywords: Banff/bison/paddock

Green, H.U. 1956 101  
Annual elk range report to chief warden. Unpublished report, Warden Service, Parks Canada, Banff.

Annotation: Says, "reduction slaughter not anticipated" and notes graze cover is excellent and carryover unusually high. Estimates 800 elk in park. Largest concentrations in lower Bow Valley and Ya-Ha-Tinda areas. WSF-BNP.

Keywords: Banff/elk/range/wardens/management

Green, H.U. 1956 102  
Notes on the trapping, biology and behaviour of the wolverine. Unpublished report, Warden Service, Parks Canada, Banff. 14 pp.

Annotation: Report is based on observations made on four wolverine live-trapped by Warden Service for loan to Walt Disney Productions for purposes of natural history movies. Notes that wolverine were easy to trap. An additional 12 wolverines are reported to have been trapped for shipment to zoos. Wolverines noted to be good climbers. Also notes that the wolverines tamed in two to five weeks so as to be hand-fed. ACR.

Keywords: Banff/wolverine

Green, H.U. 1956 103  
Elk inventory, Banff National Park, fall 1956. Unpublished report,  
Warden Service, Parks Canada, Banff. 3 pp.

Annotation: Estimates some 1400 elk in areas 1-8, and 10 in park.  
Reports carrying capacity of area 1 (Banff to park gate) is being exceeded  
and recommends some reduction if elk don't move out of park by January.  
Reports an excessive ratio of males 1 year plus to females 1 year plus,  
65:143 compared to "normal" of 1:4. WSF-BNP.

Keywords: Banff/elk/inventory/management

Green, H.U. and K.B. Mitchell. 1946 104  
Beaver, Forty Mile Creek. Unpublished report, Warden Service, Parks  
Canada, Banff. 3 pp.

Annotation: Notes that Dr. Cowan assumed the beaver were numerous in  
the area but investigations have shown very few beaver there. No aspen  
available on Forty Mile. Reports are response to suggestion that beavers  
be removed from area and fear of water supply becoming infected with  
tularemia. AF-BNP.

Keywords: Beaver/Banff

Gresham, B. 1938 105  
Happy Valley. Canadian Alpine Journal 26:70-78.

Annotation: An account and annotated list of birds and mammals seen  
in the Lake O'Hara area. ACR.

Keywords: Birds/mammals/Yoho

Hall, W.K. 1977 106  
Status and management of the rocky mountain goat, (Oreamnos  
americanus), in the province of Alberta. Proceedings of the First  
International Mountain Goat Symposium, Kalispell, Montana,  
February 19, 1977. Pp. 8-14.

Annotation: Though the report deals primarily with goats on  
provincial lands it may be of interest to those seeking historical  
distributions of goats. WSL-JNP.

Keywords: Goats

Hamilton, E. and G.H. LaRoi. 1978 107

The Alpine vegetation of Marmot Basin and the impact of ski activities. Unpublished report, University of Alberta, Edmonton. 163 pp.

Annotation: Results indicate that in years of low spring snowfall skiers and to a lesser extent "packers" may shear the snow off thinly covered sites. This accelerates snowmelt and exposes the terrain and vegetation to damage. WSL-JNP.

Keywords: Jasper/ski impact

Hamer, D., S. Herrero, and R.T. Ogilvie. 1978 108

Ecological studies of the Banff National Park grizzly bear - Cuthead/Wigmore region 1977 (Year 2). Unpublished progress report prepared for Parks Canada, Faculty of Environmental Science, University of Calgary, Calgary.

Annotation: One-hundred and fifteen fecal samples of known or reliably estimated age were analyzed for food content. Important foods included hedsarum roots; aerial parts of horsetails, grasses, sedges, cow parsnip and mountain sorrel; fruits of buffalo-berry, Vaccinium, and bearberry, elk calves and possibly other ungulate kills and ants. CWS.

Keywords: Grizzly/ecology/Banff

Hand, R. 1957 109

Elk disease and pregnancy observations, 1957. Unpublished typescript report in Parks Canada files, Banff, Alberta. 2 pp.

Annotation: Examination of 15 elk from January slaughter and some animals killed by trains. Contains table of percentage hydatid cyst infection for 1944-1948, 1953-1957. For 1957, elk are noted to be in good condition. WSF-BNP.

Keywords: Elk/slaughters/parasites/Banff

Haney, R.J. 1978 110

Free roaming wood bison - Jasper project. Unpublished report, Warden Service, Parks Canada, Jasper. 4 pp.

Annotation: Discussion of a meeting between Parks Canada, Canadian Wildlife Service and Alberta Fish and Wildlife regarding the transplant of bison to Jasper and the bison activities and problems arising therein. AF-JNP (9810-113-1).

Keywords: Bison/Jasper

Harthoorn, A.M. 1965 111  
Application of pharmacological and physiological principles in restraint of wild animals. Wildlife Monograph No. 14:7-76.

Annotation: Information of use to those who are using drugs to immobilize animals. WSL-JNP, CWS.

Keywords: Immobilization

Hatter, J. 1945 112  
Field notes of Dr. Hatter's 1944, 1945 wildlife studies. Photocopy of original field notes. 150 pp.

Annotation: Handwritten extensive accounts of wildlife observations in Banff and Jasper. Observations are arranged first by species, i.e. Alces americanus, then by date with commentary on location and behaviour. There is also a journal section with accounts of days activities; i.e. "Frank Wells took Cowan and me over to the wolf den...". CWS.

Keywords: History/wildlife/ungulates/carnivores/Banff/Jasper

Hatter, J. 1945 113  
A preliminary predator-prey study with respect to the coyote (Canis latrans) in Jasper National Park. Unpublished report, Department of Zoology, University of British Columbia, Vancouver. 41 pp.

Annotation: The contents of 553 coyote scats were analyzed. Game animals, in the form of carrion, were the bulk of food for the 1943-44 winter. Much game was eaten in the summer of 1944, but again this was mostly carrion. The bulk of noncarrion food consisted of mice and varying hares. Coyotes are not a menace to any game animal in Jasper. WSL-JNP.

Keywords: Coyote/carnivores/Jasper

Hebert, D.M. and R.J. McFetridge. 1979 114  
Chemical immobilization of North American game animals. Fish and Wildlife Division, Alberta Energy and Natural Resources, Edmonton, Alberta. 250 pp.

Annotation: Of use to those using drugs to handle animals, contains extensive listings of types, dosages, usages. Also comments on legal aspects of drug usage. WL-BNP.

Keywords: Immobilization/drugs

Heggie, T. 1976 115  
Wildlife cougars and dogs. Unpublished internal report, March 14,  
1976. Banff National Park. 2 pp.

Annotation: Account of two cougars that developed a taste for dogs  
in Banff townsite. Due to concerns over cougar possibly attacking  
children, the animal was immobilized and transported. AF-JNP.

Keywords: Cougar/dogs/Banff

Hermanrude, O., W. McPhee and G.H.W. Ashley. 1954 116  
Report of live-trapping of marten for shipment to Prince Albert  
National Park. Unpublished report, Warden Service, Parks Canada, Banff.  
6 pp.

Annotation: Twenty-two marten were captured using live-box traps. A  
yearling elk was slaughtered for use as bait and food supplemented by  
chicken eggs. Five females and five males were shipped. WSF-BNP.

Keywords: Marten/live trap/restock/Banff/Prince Albert

Heron, R.D. 1966 117  
Artificial salt lick - Miette hot springs bath house and Rocky  
Mountain sheep. Unpublished report, Naturalist Service, Parks Canada,  
Jasper. 3 pp.

Annotation: Outlines the history of salt block use at the springs,  
problems of too many sheep hanging around the area and the presence of  
sore mouth (Contagious ecthyma) among the sheep. Recommends that salt  
blocks be removed and that salt blocks should only have a game management  
function. NL-JNP.

Keywords: Sheep/Jasper/disease

Hertinger, L.R. 1971 118  
A comparative synecological and distributional study of the montane,  
subalpine and alpine plant communities in the Vine Creek Basin, Jasper  
National Park. Unpublished progress report, Dept. of Botany, University  
of Alberta, Edmonton. 8 pp.

Annotation: Though the report is botanical the author has included a  
faunal list of sightings dated from May 17, 1970 to January 16, 1971.  
Includes observation of a hawk owl. NL-JNP.

Keywords: Ungulates/birds/carnivores/Jasper

Holland, W.D. 1976 119  
Biophysical land classification of Banff and Jasper National Parks.  
Unpublished report, Canadian Forestry Service, Edmonton. 20 pp.

Annotation: At the request of Parks Canada in 1973 a biophysical land classification was planned and initiated in 1974 in Banff. The report describes modifications to existing biophysical inventory methodology, discusses problems of classification and outlines problem areas. Results to date, user contact and anticipated applications are discussed. Brief mention of the wildlife component is made and no methods are discussed. NL-JNP.

Keywords: Biophysical/inventory/Banff/Jasper

Hollister, N. 1912 120  
Mammals of the Alpine Club expedition to Mount Robson region. Alpine Club of Canada. Canadian Alpine Journal, Special Number: 1-46. 46 pp.

Annotation: Annotated list of mammals of Mount Robson region Jasper National Park, 1911. Elk - extinct for at least 17 years prior to 1911. Mule deer formerly common, greatly reduced numbers in 1911. Moose - none - at Henry House in 17 years; absent from most of the country. Caribou - formerly common, not common in 1911. Buffalo - extinct for many years. Mountain sheep - formerly abundant; 1911 confined to few limited ranges. Mountain goat - common. CWS.

Keywords: Jasper/mammals

Holmes, J.C., J.L. Mahrt and W.M. Samuel. 1972 121  
Surveillance study of the parasites of bighorn sheep in the mountain national parks. Progress report, December 1972. Dept. of Zoology, University of Alberta, Edmonton. 5 pp.

Annotation: Mt. Stornoway herd cited as showing a dangerously high lungworm output while the Columbia icefield herd (and possibly Mt. Bourgeau and Mt. Galway herds) approach dangerous levels. WSL-JNP.

Keywords: Sheep/parasites/Jasper/Banff/Kootenay/Waterton

Holmes, J.C. and W.M. Samuel. 1974. 122  
Surveillance study of the parasites of bighorn sheep in the mountain national parks. Unpublished report, Dept. of Zoology, University of Alberta, Edmonton. 22 pp.

Annotation: Of 13 herds studied only the Mt. Stornoway herd showed "dangerously high" lungworm output. The Kootenay and Disaster herds show a trend to higher outputs while the Chocolate Mountain, Columbia Icefields and two Waterton herds have very low lungworm output. Recommends continued surveillance. AF-JNP.

Keywords: Sheep/lungworm/disease/mountain parks

Holroyd, G.L. 1979a 123  
The impact of highway and railroad mortality on the ungulate populations in the Bow Valley, Banff National Park. Unpublished report, Canadian Wildlife Service, Edmonton. 11 pp.

Annotation: Using data obtained from road surveys, aerial surveys and Warden Service reports the populations of elk and moose were assessed, and the effect of highway mortality discussed. A trend towards a severe reduction in elk and moose populations even with the presently existing two-lane road is predicted. CWS.

Keywords: Mortality/highway/elk/moose/deer/Banff/railway

Holroyd, G.L. 1979b 124  
Inventorying wildlife in Banff and Jasper National Parks and possible applications in the Yukon. Proceedings: Resource inventory workshop, Yukon Territory, Whitehorse, October 16-18, 1979. Pp. 187-193.

Annotation: Notes that the study has integrated its methodology and reports with a biophysical land classification and that the approach is to directly sample distribution and relative abundance of wildlife on selected map units and then to rank the results to identify map units with the highest densities of each wildlife species. CWS.

Keywords: Biophysical/inventory/wildlife/Banff/Jasper

Holroyd, G.L. and D. Karasiuk. 1977 125  
Interim report on the bird inventory of Banff and Jasper National  
Parks: II Lower Athabasca Valley, 1976. Unpublished report, Canadian  
Wildlife Service, Edmonton. 96 pp.

Annotation: The report describes bird migration and breeding bird  
populations in various map units and discusses terminology of the final  
biophysical report of which this is a part. Contains species lists for  
various map units. NL-JNP.

Keywords: Birds/migration/inventory/biophysical/Jasper

Holroyd, G.L. and M.E. Gartshore. 1978 126  
The wildlife inventory of Banff National Park - interim report 1978.  
Canadian Wildlife Service, Edmonton. 199 pp.

Annotation: Gives basic information regarding the relative seasonal  
abundance, distributions and habitat requirements of mammals, birds,  
amphibians and reptiles. Relates these factors and species to map units.  
CWS.

Keywords: Banff/wildlife/inventory

Holroyd, J.C. 1965 127  
Golden eagle, Bighorn Valley, Banff National Park, 1965. Unpublished  
report in Parks Canada files, Banff, Alberta. 1 p.

Annotation: Observations on eagle nest and raising of one chick.  
Following chronology listed:

May 29 - 2 eggs  
June 12 - 1 hatched  
June 26 - trebled in size  
July 27 - completely feathered  
August 11 - flying

AF-BNP.

Keywords: Golden eagle/nest/birds/Banff

Holroyd, J.C. 1970 128  
The McBee keysort system. Unpublished report, Parks Canada, Calgary.  
15 pp.

Annotation: Discussion of how to use the McBee keysort system, now discontinued in favour of a computer system. AF-JNP, WROL.

Keywords: Wildlife/McBee keysort

Jacobson, P. 1977 129  
Status of goats in Banff National Park. Unpublished report, Warden Service, Parks Canada, Banff. 8 pp.

Annotation: Notes caution should be used when approaching goats by aircraft as they react with panic. States some concern over goats along Wilson, Coleman, Cirrus and Parkers Ridge due to helicopter avalanche bombing. Believes goat population to be very stable in numbers and distribution. WSF-BNP.

Keywords: Banff/goat

Jacobson, P. 1977 130  
Aerial census of ungulates in Banff National Park. Unpublished report, Warden Service, Parks Canada, Banff. 67 pp.

Annotation: Three years of data over four routes are summarized (1975-1977). Totals of 1412 sheep, 1039 elk, 320 goat, 546 moose were counted. In 1975 and 1976 caribou seen in Siffleur area (1159) and history of species in BNP discussed in appendix (probably resident for many years in Siffleur). WL-BNF.

Keywords: Banff/survey/aerial/sheep/elk/goat/moose/caribou

Jacobson, P., D. Loewan and G. Holroyd. 1978 131  
Interim Report - Goat survey of the Slate range in the Lake Louise ski area - 1978. Unpublished report, Warden Service, Parks Canada, Banff. 9 pp.

Annotation: Notes a population decline since 1959 even though the adult:young ratio has doubled from what it was during the period of stable population. Suggests increased mortality due to decreasing range that is free of disturbance as cause of decline. Notes presence of important lick in Wolverine Bowl. AL-BNP.

Keywords: Banff/goats/range

- Jarvinen, O. 1976 132  
Estimating relative densities of breeding birds by the line transect method. II. Comparison between two methods. *Ornio Scand.* 7:43-48.

Annotation: Compares 50 metre belt transects with transects utilizing a coefficient of detectability. Concludes that the latter are generally superior. UOCL.

Keywords: Birds/transects/methods

- Jennings, P. 1939 133  
Wildlife, Banff National Park. Unpublished paper presented at annual Alberta Fish and Game Association Meeting. 5 pp.

Annotation: Paper comments on serious effects predator destruction can have. Decries irresponsible writers who publish unfounded accusations about predators swarming in BNP. AF-BNP.

Keywords: Wildlife/carnivores

- Joint Committee on National Parks. 1970 134  
Bears in the national parks - Canada, United States. 40 pp.

Annotation: Reviews some of the causative factors of the bear problems in the national parks of the United States and Canada, and discusses the status of current bear management practices. Some possible refinements in bear management techniques are considered and a number of areas that could benefit from comprehensive studies are identified. NL-JNP.

Keywords: Bears/management/national parks/United States

- Junz B. and D. Storr. 1977 135  
The climate of the contiguous mountain parks - Banff, Jasper, Kootenay and Yoho. Environment Canada, Atmospheric Environment Service. 324 pp.

Annotation: These areas have continental climate with brief cool summers and long winters. They undergo tremendous season to season, even hour to hour changes. Areas are relatively dry. Chapter II deals with wildlife and climate. Winter period most critical for animals and the most important factor is snow, its depth, distribution and character.

Keywords: Climate/Banff/Jasper/Yoho/Kootenay

Karasiuk, D. 1975 136  
Helicopter survey of large mammals above 6000 feet in Jasper, Banff and Yoho National parks. Unpublished report, Canadian Wildlife Service, Edmonton. 5 pp.

Annotation: Lists and brief discussion of wildlife noted during two long-distance linear helicopter flights. CWS.

Keywords: Survey/ungulates/Banff/Jasper

Karasiuk, D. 1976 137  
Interim report on the bird inventory of Banff National Park. Unpublished report, Canadian Wildlife Service, Edmonton. 87 pp.

Annotation: One of the progress reports of the biophysical inventory of Banff and Jasper due for 1981 report completion. Outlines method of collecting data using spring migration index, informal waterfowl surveys, bird population grids and bird transect surveys. Report is said to be "obsolete in five years", a true statement as compared to data collected up to 1980. The results are the merest beginnings. CWS.

Keywords: Birds/inventory/Banff/biophysical

Karasiuk, D.J., R.G. Kaye and G.L. Holroyd. 1977 138  
A small mammal inventory of Banff and Jasper National Parks, II Athabasca Valley. Unpublished report, Canadian Wildlife Service, Edmonton. 34 pp.

Annotation: Due to the changing of concepts as the biophysical progressed from year to year, discussion of results, in this interim report were kept to a minimum. The report discusses 20 snap-traplines with some comments on habitat selection, rarity and niche overlaps and breadths. CWS.

Keywords: Small mammals/trapping/Jasper

Karasiuk, D.J. and D.M. McIlveen. 1977 139  
An ungulate inventory of Banff and Jasper National Parks, IV  
Athabasca Valley. Unpublished report, Canadian Wildlife Service,  
Edmonton. 54 pp.

Notes use of pellet count method to assess ungulate use of map units.  
Says that density of pellet groups is in direct proportion to the amount  
of time ungulates spend in an area. WSF-JNP.

Keywords: Jasper/ungulates/biophysical/pellet counts

Kelsall, J.P. 1949 140  
Wolf control, Jasper National Park. Unpublished report, Dominion  
Wildlife Service. 2 pp.

Annotation: Recommends quota of 20 wolves be removed using cyanide  
guns in the Buffalo Prairie, Dominion Prairie and Devona area. Doesn't  
think wardens should be allowed to shoot wolves. No reasons for killing  
wolves given. AF-JNP.

Keywords: Wolves/Jasper

Kelsall, J.P. and E.S. Telfer. 1971 141  
Studies of the physical adaptation of big game for snow. Unpublished  
report, Canadian Wildlife Service, Edmonton. 9 pp.

Annotation: Compares chest height and foot-load of several age-sex  
classes of bison, moose, elk and white-tailed deer. Measurements were  
obtained from animals slaughtered in Jasper and Elk Island. CWS.

Keywords: Snow/habitat/ungulates/Jasper

Kelsall, J.P. and E.S. Telfer. 1973 142  
Biogeography of moose with particular reference to western Canada.  
Presented at international symposium on moose ecology, Quebec City,  
Canada, March 1973. 22 pp.

Annotation: Post-pleistocene distribution of moose is discussed and  
limitations on present range are cited thus:

In north - by absence of woody wood plants on tundra.  
Western Cordillera - lack of woody plants and excessive snow depths.  
Prairies and arid valleys of south and west - excessive heat and  
absence of shade, water and suitable food.  
Southeast - neurologic disease. AF-JNP (65/7A2-1/13).

Keywords: Moose/ecology/biogeography

Kuchar, P. 1970 143  
Dryas hookeriana and tundra ecosystems in the Bald Hills, Maligne  
Range, Jasper National Park. Unpublished progress report, Dept. of  
Botany, University of Alberta, Edmonton. 2 pp.

Annotation: Notes that caribou summered in the area. On June 27,  
1970, two herds of 18 and 8 animals plus 15 goats were seen 4 miles south  
from the fire lookout. Notes that 6 "additional" bird species were seen  
but does not name them. NL-JNP.

Keywords: Ungulates/caribou/goat/Jasper

Kuchar, P. 1972 144  
Ecological impact study of the Maligne Lake area, Jasper National  
Park. Unpublished report, Parks Canada. 204 pp.

Annotation: Report covers history, vegetation, wildlife,  
recreational quality and fragility of the area. Much of the material,  
particularly the wildlife portion is scanty and nonquantitative in nature.  
Report employs a fragility scale as a guide to future planning for the  
area. Contains a series of recommendations such as well constructed, well  
marked trails. AF-JNP.

Keywords: Jasper/wildlife/resource manage

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Kuchar, P. 1972 145  
Ecological impact study of the Mt. Edith Cavell area, Jasper National Park. Unpublished Report, Parks Canada. 127 pp.

Annotation: Report says that using correct management procedures the impact of people on this area can be kept to a minimum, i.e. good trails, backed up by signs, brochures and other means. Area is noted as being botanically exceptional and scientifically valuable. WSL-JNP.

Keywords: Impact/resource manage/Jasper

Kuchar, P. 1972 146  
Ecological impact study of the Pochahontas area, Jasper National Park. Unpublished report, Parks Canada. 76 pp.

Annotation: An investigation of potential impact of a planned campground. Is noted that the campground would not be important as a jumping-off spot for hikes and wilderness travel. Discusses the flora and fauna of the area and past human activity. Recommends that no campsite be established in the area. NL-JNP.

Keywords: Resource manage/wildlife/Jasper

Kunelius, R. 1973 147  
Comment on wildlife mortality and summary of winter 1972-1973. Regional planning field research. Unpublished report, Parks Canada. 16 pp.

Annotation: Report notes that, "to date" no consistent reporting of highway and railroad mortalities. Railway checked by speeder for 1971-72 and 1972-73. Driver of speeder important - may deny known kills. Report says "map forms" drawn up and in use for recording kills. Recommends kills not be dumped outside landfill site. States dimming of train lights when game sighted could reduce kills. WSF-BNP.

Keywords: Banff/highway/railroad/mortality

Kutzer, P. 1971 148  
Summary of the bear control program April 1. Unpublished report,  
Warden Service. Parks Canada, Banff. 11 pp.

Annotation: Contains the history of some 30 relocations. Of the 30, six were repeats and were destroyed. Two wandered out of the park and were shot by hunters. Notes "present garbage facilities in all campgrounds and within the townsite" invite bears to rummage at will. Contains five recommendations for better bear management. WSF-BNP.

Keywords: Banff/bears/management

Langford, R.W. 1935 149  
Caribou and their habits, as I have noted them in the North Fork  
country. 3 pp.

Annotation: Gives the authors 1st, 2nd and 3rd best country "adapted to caribou" and spends some time telling how to approach caribou - "carefully and downwind". AF-JNP.

Keywords: Caribou/Jasper

LaCasse, U.U. 1947 150  
Wolf survey. Unpublished report, Warden Service, Parks Canada,  
Banff. 3 pp.

Annotation: Author conducted a survey in the Massive area and concluded that two groups of wolves were in the area, one pack of four, probably healthy wolves and a pair of wolves with mange. Shot one mangy wolf and found another mangy wolf dead. Six wolves estimated to be in the area. WSF-BNP. Warden Service files, Banff.

Keywords: Banff/wolves

- Landals, A.G. and L.J. Knapik. 1972 151  
Great Divide Trail an ecological study of the proposed route, Jasper National Park and vicinity. Unpublished report, Canadian Wildlife Service. 251 pp.

Annotation: An environmental inventory was conducted along the proposed trail route and geological, pedological, botanical and zoological aspects interpreted to evaluate trail impact. A system of susceptibility to damage of various biophysical units was developed. Recommendations for major rerouting of existing trails, maintenance, construction and management standards of the new trails were made. Campsite locations are suggested and trail use data for 1963-1971 summarized for management purposes. NL-JNP.

Keywords: Resource manage/Great Divide/Jasper/trail

- Lloyd, H. 1927 152  
Transfer of elk for restocking. Canadian Field-Naturalist 5:36.

Annotation: Notes that in 1916 there were two elk in captivity in Banff and that they were of Manitoba origin. Reports 50 sheep as being shipped to Spences Bridge, B.C. CWS.

Keywords: Elk/restocking/sheep/Banff

- LaRoi, G.H., T.D. Lee and G.F. Tande. 1975 153  
A study of vegetation in relation to elevation and fire history in the Athabasca River valley near Jasper townsite, Jasper National Park. Unpublished report, Dept. of Biology, University of Alberta, Edmonton. 291 pp.

Annotation: Notes that all of the study area has been burned over one to several times and evidence suggests fires at 1 to 16 year intervals from 1749 to 1967. The most extensive burns occurred between 1886 and 1900. Fires have decreased in size and increased in frequency since the area became a national park. Notes fire is important as a determinant of wildlife habitat patterns and populations. Includes a major description and delineation of the major plant community types along Signal Mountain environmental transect and the ecology and distribution of bryophytes with regard to altitude and moisture on Signal Mountain. Report contains recommendations. NL-JNP.

Keywords: Fire/ecology/vegetation/history/Jasper

Loewen, A. 1967 154  
Report on the use of salt to control sheep in the Miette area.  
Unpublished report, Warden Service, Parks Canada, Jasper. 1 pp.

Annotation: Cites the Warden Service as using salt blocks, apparently successfully, to move sheep away from the hot springs area. AF-JNP (65/7A2-2).

Keywords: Sheep/Jasper

Loewen, A. 1970 155  
People feeding animals. Unpublished report, Warden Service, Parks Canada, Jasper. 3 pp.

Annotation: Report notes problems associated with feeding wildlife and recommends that it be made a violation of the National Parks Act. WSF-JNP.

Keywords: Wildlife feeding/Jasper

Loewen, A.C. 1970a 156  
Waterfowl study, Pocahontas district. Unpublished report, Warden Service, Parks Canada, Jasper. 13 pp.

Annotation: Data on waterfowl obtained from eight roadside transects surveyed once a week from March to December. Contains information on species, first and last sighting, and relative abundance. WSF-JNP.

Keywords: Waterfowl/Jasper

Loewen, A.C. 1970b 157  
Waterfowl study, Pocahontas district. 1970 supplement. Unpublished report, Warden Service, Parks Canada, Jasper. 12 pp.

Annotation: As per Loewen 1970a with the addition of one more year of data plus an additional transect. WSF-JNP.

Keywords: Waterfowl/Jasper

Loewen, A. 1971 158  
Bighorn sheep study, Disaster Point range, Jasper National Park,  
1969-1971. Unpublished report, Warden Service, Parks Canada, Jasper.  
27 pp.

Annotation: Report gives data on monthly population, herd  
composition and weather. WSL-JNP.

Keywords: Sheep/Jasper/ungulates

Loewen, A. 1972 159  
Wildlife distribution, Miette study area. Unpublished report,  
Warden Service, Parks Canada. 8 pp.

Annotation: Primarily a listing, without reference to date or season  
of wildlife seen in the Miette area. Discusses problems of salt blocks  
and people feeding animals. WSL-JNP.

Keywords: Wildlife/Jasper

Lynch, G.M. 1972-1973 160  
Red Cap sheep, their movements and migrations (1972 Progress) (1973  
Progress). Unpublished report, Fish and Wildlife, Alberta Energy and  
Natural Resources. 18 pp.; 24 pp.

Annotation: Two reports summarizing first two years of work on three  
year project. Results appear to indicate that rams raised on provincial  
lands of Alberta are being lost to the national park due to being lured  
into the park by large dominant rams which exit the park temporarily  
during the breeding season. WSL-JNP.

Keywords: Sheep/Jasper/movements

Macoun, J. 1941 161  
Birds of Banff National Park, edited from catalogue of Canadian  
Birds. Unpublished edited report prepared from Macoun's catalogue of  
Canadian Birds, 1891. 18 pp.

Annotation: Listing of species with some comments as to breeding  
occurrence and collections made. NAO.

Keywords: Birds/Banff

Mair, W.W. 1949 162  
Elk reduction Banff National Park. Unpublished report, Dominion  
Wildlife Service. 3 pp.

Annotation: Examines areas 1,2,3,8,6, and 7 for range condition.  
Recommends considerable reduction in area 7 (Cascade), some slaughter for  
2 and 3, perhaps area 1. CWS.

Keywords: Banff/elk/slaughter

Mair, W.W. 1952 163  
The impact of an introduced population of elk upon the biota of Banff  
National Park. Unpublished M. Sc. thesis. University of British  
Columbia, Vancouver. 98 pp.

Annotation: An excellent reference on the history of dispersals and  
interactions among major ungulate and carnivore species in Banff National  
Park. Considerable data on population dynamics, foraging habits and  
seasonal ranges. CWS.

Keywords: Population dynamics/ungulates/carnivores/interactions

Martin, D.J. 1974 164  
Wildlife mortality statistics, highway and railway causes, Jasper  
National Park 1966-1973. Unpublished report, Warden Service, Parks  
Canada, Jasper. 29 pp.

Annotation: Contains statistics for highway #16 both east and west  
of townsite and highway #93 south. Suggests adding 20% to yearly totals  
would give realistic number of kills. Statistics are compiled by year,  
species and whether road or railway kill. Species are divided into age  
class, sex and unclassified animals. WSF-JNP.

Keywords: Jasper/highway/railway/mortality/ungulate/carnivore/  
wildlife

McCrorry, W.P. 1965

165

Preliminary report on study of natural licks used by mountain goats and bighorn sheep in Jasper National Park. Unpublished report, Canadian Wildlife Service, Edmonton. 5 pp.

Annotation: Objective of study was to determine the seasonal trend and daily use of the natural licks by the different sex and age classes. Results show greatest use is by female groups during midsummer. Chemical composition of lick material, food habits, transmission of disease and parasites, social behaviour at licks, and weather effects were to be dealt with in the study. NL-JNP.

Keywords: Licks/goat/sheep/Jasper

McEvoy. 1900

166

Geological Survey of Canada, Annual Report. Volume II:1900; p. 44a.

Annotation: Geological Survey of Canada, Annual Report. Reference from Clarke, 1942 lists general wildlife conditions around Jasper.

Keywords: Wildlife/Jasper

McFarlane, K. and R. Edwards. 1979

167

Residual environmental impacts of Transmountain Pipeline Company oil pipeline in Jasper National Park, Alberta. Unpublished report, Environmental Protection Service, Environment Canada. 38 pp.

Annotation: Notes that as a general statement "no residual environmental impacts of a serious adverse or detrimental nature were observed." Undesirable lasting effects include the unvegetated and exposed ridge of boulders following the pipe path in some areas, unstable cut banks unrehabilitated section at Windy Point and, minor drainage changes. In 1973, a small oil spill at Pochahontas caused local but short-term damage. Suggests the cleared corridor has been a benefit to wildlife with regards to range and travelling. NL-JNP.

Keywords: Resource manage/wildlife/pipeline/impact/Jasper

McGillis, J. 1966 168  
Tabulated data from 1966 elk slaughter. Unpublished typescript,  
Parks Canada, Banff. 7 pp.

Annotation: Grouped information on sex, age, incidence of liver  
flukes, hydatid cysts, pregnancy, location, kidney fat ratios. AF-BNP.

Keywords: Elk/slaughter/Banff

McGillis, J. 1974 169  
Aerial survey, Jasper, Banff and Yoho national parks, October 30 and  
31, 1974. Unpublished report, Canadian Wildlife Service. 7 pp.

Annotation: Contains tables that could be of use for mapping,  
seasonal occurrence, watershed usage, etc. CWS. (126-74).

Keywords: Jasper/Banff/Yoho/ungulate/survey/aerial

McGillis, J.R. 1975 170  
Summer helicopter survey of large mammals above 6000 feet in Jasper,  
Banff and Yoho National Parks. Unpublished report, Canadian Wildlife  
Service, Edmonton. 2 pp.

Annotation: Banff, Jasper, all observed sheep were above the 6000  
foot level. In Banff the sheep were evenly distributed between east and  
west-facing slopes. In Jasper, 46.7% SW, 37.1% S and 14.1 NE-facing  
slopes. In Banff all observed elk and goats were above 6000 feet. CWS.

Keywords: Banff/Jasper/Yoho/survey/aerial

McGillis, J.R., S. Ward and J.G. Stelfox. 1976 171  
Summer use of land systems by large mammals; Bow Valley, Banff  
National Park. Phase II: Eastgate to Bow Summit, 1975. Unpublished  
report, Canadian Wildlife Service. 43 pp.

Annotation: The report examines the use by large mammals  
particularly ungulates, of different land systems with emphasis on  
seasonal forage utilization. WSL-JNP.

Keywords: Ungulates/land systems/Banff

McIvor, M. and D. McIvor. 1980 172  
Bird records in Banff National Park 1975-1979. Unpublished report,  
Canadian Wildlife Service. 150 pp.

Annotation: Contains a summarized listing by species, location  
behaviour, number and date of field note observations. CWS.

Keywords: Birds/Banff

Meredith, D.H. 1974 173  
The distributions of the chipmunks of Jasper and Banff national  
parks. Report, Zoology Dept., University of Alberta, Edmonton. 20 pp.

Annotation: For Eutamias amoenus and E. minimus the subspecies north  
of the Bow River are geographically parapatric while south of the Bow  
River the subspecies are altitudinally parapatric.

North of Bow = E.m. borealis/boreal forest and E.m. indibundus/  
western mountain ranges.

South of Bow = E.m. oreocetes - alpine and E. amoenus luteiventris -  
forest.

Keywords: Chipmunks/biogeography/Jasper/Banff

Meredith, D.H. 1975 174  
Habitat selection and interspecific agonism in two parapatric species  
of chipmunks (Eutamias). Ph.D. thesis, University of Alberta, Edmonton.  
95 pp.

Annotation: In the southern Alberta Rockies Eutamias minimus and E.  
amoenus are altitudinally parapatric, while north of the Bow River they  
are geographically parapatric. Concludes that minimus has innate  
preference for talus while amoenus does not. Amoenus dominant over  
minimus in laboratory agonistic tests. University of Alberta.

Keywords: Chipmunks/Banff/Jasper/range/habitat

Merlin, Paul P. 1970 175  
Termination report: wolf studies in Jasper National Park.  
Unpublished report, Canadian Wildlife Service, Edmonton. 7 pp.

Annotation: Discussion of field and laboratory techniques used in  
wolf study. CWS.

Keywords: Wolves/Jasper/survey

Millar, W.N. 1915 176  
The big game of the Canadian Rockies. Conservation of fish, birds and game. Proceedings of committee meeting, November 1-2, 1915. The Methodist Book and Publishing House, Toronto.

Annotation: Important as first major wildlife census information in the Rockies. Contains information relevant to Rocky Mountain parks. ACR.

Keywords: Wildlife/census/Banff/history

Miller, G. 1978 177  
Canadian Wildlife Service studies in Canada's national parks, a bibliography. Unpublished report, Canadian Wildlife Service, Edmonton, Alberta. 179 pp.

Annotation: Includes unpublished reports prepared by Canadian Wildlife Service staff, dealing with their activities in national parks, all published reports and papers authored or co-authored by CWS personnel utilizing data collected in national parks and all unpublished reports prepared by CWS contractors working on projects in national parks. Includes unpublished theses for which CWS provided support and a number of published and unpublished reports by CWS staff dealing with potential national park sites.

Keywords: Bibliography/national parks.

Mitchell, K.B. 1944 178  
Wildlife conditions calendar year 1944, Banff National Park. Unpublished typescript report in Parks Canada files, Banff, Alberta. 3 pp.

Annotation: Notes a gradual decline in mule deer from year to year with no cause known and in spite of elk reduction. Visitors are showing more interest in wildlife, says the report perhaps due to war-time gas rationing that prevents people from travelling far. WSF-BNP.

Keywords: Wildlife/Banff/mule deer

Mitchell, K.B. 1944 179  
Winter game report. Unpublished typescript report in Parks Canada files, Banff, Alberta. 3 pp.

Annotation: Slight increase in moose since last year, but substantial since five years ago. Elk still increasing. Mule deer declining. Wolves main population around Ya-Ha-Tinda, two wolves west of Banff. Coyotes increasing and being destroyed on sight. WSF-BNF.

Keywords: Wildlife/Banff

Mitchell, K.B. 1946 180  
Marten trapping project. Unpublished report, Warden Service, Parks Canada, Banff. 30 pp.

Annotation: Twenty-four marten were successfully live-trapped and shipped to northern Alberta Indian reserves. For restocking program box traps were used unsuccessfully and marten finally secured by using padded leg-hold traps. NAO.

Keywords: Marten/live-trap/restock/Banff

Mitchell, K.B. 1947 181  
Wolves, Banff National Park. Unpublished report, Warden Service, Parks Canada, Banff. 6 pp.

Annotation: Approximate numbers, distribution, and other data regarding wolves. Gathered from wardens on regular and special patrols. Estimates 25 wolves as maximum population in park. Resident population = 15. Evidence is that they are killing mainly elk. Wolves reported in Bow, Cascade, Spray, Saskatchewan, Clearwater and Red Deer River areas. AF-BNP.

Keywords: Wolves/Banff

Mundy, K.R.D. and D.R. Flook. 1973 182  
Background for managing grizzly bears in the national parks of Canada. Canadian Wildlife Service report series No. 22. 35 pp.

Annotation: Contains recommendations for management among which are better and more secure garbage handling methods, careful location of campgrounds, monitoring bear locations for hikers and educating park users. NL-JNP.

Keywords: Grizzly/management/garbage

Munro, J.A. 1922 183  
Methods of increasing bird life in Rocky Mountain parks. Unpublished report of federal migratory bird officer, western provinces. 4 pp.

Annotation: Suggests erection of bird houses, protection from natural enemies, providing of food in winter; states pine squirrels should be controlled and that the smaller hawks be destroyed. Notes that within townsites cats can be a problem. Recommends house sparrow be controlled by trapping and shooting. AF-BNP.

Keywords: Birds/Banff

Munro, J.A. 1963 184  
Birds of Canada's mountain parks. National Parks Branch. 75 pp.

Annotation: A general and somewhat dated account but still containing useful natural history information. AF-JNP.

Keywords: Birds/mountain parks

Munro, J.A. and I. McTaggart Cowan. 1944 185  
Preliminary report on the birds and mammals of Kootenay National Park British Columbia. Canadian Field-Naturalist 58(2):34-51.

Annotation: Descriptions of habitat types, history of vegetation change and annotated lists of species. KPNL.

Keywords: Kootenay/birds/mammals/habitats

Neave, D. and A. Paulsen. 1971 186  
An evaluation of the late winter elk season in 1971 in relation to the 1969 and 1970 season and snowmobile regulations. Unpublished report, Alberta Dept. of Lands and Forests, Fish and Wildlife Div. 15 pp.

Annotation: Suggests that by careful manipulation, i.e. hunting, that elk can be shifted eastward to use historic ranges during winter and the Ya-Ha-Tinda-Corners area during summers thus reducing range pressures in Banff. WSF-JNP. WF-BNP.

Keywords: Banff/elk/range/management

Oertli, E.F., and J.G. Stelfox. 1975 187  
Large mammal use of land systems and land types, Bow Valley, Banff National Park, winter 1974-75. Unpublished report, Canadian Wildlife Service. 72 pp. WSL-JNP.

Annotation: Report discusses the importance of various land systems and land types to ungulates and carnivores during each of the winter months.

Keywords: Ungulates/carnivores/Banff

Ogilvie, R.T. 1965 188  
Ecology of vegetation in Banff National Park. Unpublished report, Dept. of Biology, University of Calgary. 17 pp.

Annotation: Contains some interesting commentary that could and should be noted by those engaged in biophysical work. For example, one section deals with temperature inversions (which occur as often as 30 days a month in Banff) from valley bottom (e.g. temp. = 34°F) to valley sides (side station = 52°F) - how does this affect wildlife? Notes that most spruce stands in Banff are hybrid Picea engelmannii - Picea glauca stands. Also includes a section on fire history. NL-JNP.

Keywords: Vegetation/climate/ecology/Banff/fire

Parks Canada, Warden Service. 1965-1968 189  
Yearly wildlife census, 1965-1968. Unpublished data compilation, Warden Service, Jasper. 100 tables.

Annotation: Listing by species, district, sex, age and number. WSL-JNP.

Keywords: Wildlife/census/Jasper

Parks Canada, Warden Service, 1967-1970 190  
Untitled. Unpublished data compilation, Warden Service, Jasper. 200 tables.

Annotation: Listings in various formats of species, district, sex, age and number for a seven year period. WSL-JNP.

Keywords: Wildlife/census/Jasper

Parks Canada, Planning Division. 1973 191  
Environmental analysis - A review of selected techniques.  
Unpublished report, Park Canada. 144 pp.

Annotation: Presents a digest of objectives, guiding values and procedures employed for each of several environmental analysis techniques. The advantages, disadvantages and flexibility of the various approaches are noted. NL-JNP.

Keywords: Resource manage/biophysical/impact assessment

Parks Canada, Draft. 1973 192  
Parks - The control and disposal of surplus animals in national parks. Unpublished draft report, Parks Canada. 8 pp.

Annotation: Discussion of policy and guidelines to be established for the control and disposal of "surplus" or "over-abundant" animals in national parks. Suggest artificial control should only be considered as a last resort. AF-JNP.

Keywords: Wildlife/slaughter/national parks

Parks Canada, Warden Service. 1975-1977 193  
Wildlife mortalities, rail and road. Unpublished data sheets, Warden Service, Jasper. 26 pp.

Annotation: A probably incomplete collection (only 26 reports) of mortality reports from 1975-1977. WSL-JNP.

Keywords: Mortality/Jasper/ungulates/carnivores

Parks Canada, Warden Service. 1975-1977 194  
Untitled. Unpublished data collection, Warden Service, Jasper. 100 tables.

Annotation: Listings in various formats of species, districts, age, sex and number. WSL-JNP.

Keywords: Wildlife/census/Jasper

Parks Canada. 1977 195  
Bear management policy - western region national parks. Parks  
Canada, Policy Directive. 4 pp.

Annotation: Outlines policies and guidelines for bear management.  
Policy - to ensure viable populations of grizzly and black bears under  
natural conditions.

- to maintain and protect the natural habitat of bears in the park  
ecosystem.
- to regulate human use so as to minimize bear encounters.
- to ensure management procedures which attract bears.
- to educate park users to accept bears as one of the natural  
hazards inherent in a wilderness experience. AF-JNP.

Keywords: Bear/policy/management

Parks Canada, Warden Service: 1978 196  
Jasper National Park wildlife aerial census report, 1977-1978.  
Unpublished report, Warden Service, Parks Canada, Jasper. 42 pp.

Annotation: Stresses the need to establish baseline data as regards  
seasonal ranges, populations and age/sex compositions of ungulate species  
and to monitor data on a regular basis. Outlines historical data and  
projects done to date. Contains data from surveys flown in 1977 and 1978.  
NL-JNP.

Keywords: Ungulates/census/Jasper

Parks Canada, Natural Resources Division. 1980 197  
The natural resource management process manual. Unpublished draft,  
Parks Canada. 180 pp.

Annotation: Provides a generalized model of the resource management  
process in the broader context of overall park planning and management.  
WSL-JNP.

Keywords: Resource/manage

Pearson, A.M. and J. Nolan. 1976 198  
The ecology of the grizzly bear (Ursus arctos L.) in Jasper National  
Park - report for 1975. Unpublished report, Canadian Wildlife Service,  
8 pp.

Annotation: Field study techniques are described, eight grizzly  
bears and one black bear were captured in 464 trap nights. Preliminary  
home range, denning and morphometric data are presented. Three den sites  
are described, with photographs. CWS.

Keywords: Grizzly/Jasper

Peyto, E.W. 1924 199  
Relating to increase and decrease of game. Unpublished report,  
Warden Service, Parks Canada, Banff. 3 pp.

Annotation: A strictly subjective assessment of wildlife conditions  
in the park. Notes 25-30 white-tailed deer come into Alberta from B.C.  
for the summer. AF-BNP.

Keywords: Wildlife/Banff

Pruitt, W.O. 1960 200  
Snow as a factor in the winter ecology of the barren-ground caribou.  
Unpublished report, Canadian Wildlife Service.

Annotation: Snow depth, hardness and density, and wind strength are  
related to winter distribution and ecology of caribou in Manitoba. WROL.

Keywords: Caribou/snow/ecology/habitats/Manitoba

Rand, A.L. 1948 201  
Mammals of the eastern rockies and western plains of Canada.  
National Museum of Canada, Ottawa, Bulletin No. 108, Biological Series No.  
35. 237 pp.

Annotation: A volume written to "supply a guide to the mammals,  
their identification and something about their way of life" for visitors  
to the national parks. NL-JNP.

Keywords: Mammals/identification/Jasper/Banff/Waterton/Nemiskan/  
Elk Island

Retfalvi, L. 1969. 202  
Sexual dimorphism in fetuses of wapiti (Cervus canadensis). Canadian  
Journal of Zoology 47(6):1418-1419.

Annotation: Abstract - Standard measurements of 133 wapiti fetuses from Jasper and Banff were analyzed. Neck girths of male specimens significantly differed from neck girths of female specimens. The larger neck girth measurements of males was interpreted as evidence of sexual dimorphism and was attributed to faster growth rates of male fetuses. NL-JNP.

Keywords: Elk/Jasper/Banff

Retfalvi, L. 1970 203  
Guidelines for wildlife inventories in the western national parks.  
Unpublished report, Canadian Wildlife Service, Edmonton. 10 pp.

Annotation: Suggests the establishment of a uniform system of inventory. Says data can be obtained through random observations and regular counts that should be standardized. Does not cover or suggest any particular methods. CWS.

Keywords: Wildlife/inventory

Retfalvi, L. 1972 204  
Bear handling guidelines for the western national parks. Unpublished  
report, Canadian Wildlife Service, Edmonton. 5 pp.

Annotation: Discusses collection of data from bears captured in national parks and the importance of careful handling during the transport and release of these animals. CWS.

Keywords: Parks/bears

Retfalvi, L. 1972 205  
Bear use of waste disposal sites and related problems in the  
management of some national parks. Unpublished report, Canadian Wildlife  
Service, Edmonton. 62 pp.

Annotation: Notes that a solution to "bear-problems" involves removal of one of three of the contributing factors: the bear, garbage, or the people. Comments that the establishment of bears in the "garbage niche" eventually leads to problem bears and the bears lose out. CWS.

Keywords: Banff/Jasper/bears/garbage

Refalvi, L.I. 1975

206

Food of grizzly bears in Banff National Park. Unpublished report, Canadian Wildlife Service, Edmonton. 11 pp.

Annotation: One-hundred and nine scats were analyzed and found to contain predominantly plant matter of which the most abundant were dwarf birch, horsetail, grasses and sedges and berry-producing plants. Occurrence of horsetail and grasses decreased toward the end of season and that of birch and berry-producing plants increased. Only one-sixth of diet was of animal origin. Interesting to compare with (Hamer et al. 1978) as this report does not mention hedysarum and it is most significant in Hamer, while dwarf birch is not significant in Hamer. In this report scats are not necessarily fresh and are assumed to be grizzly. WSL-JNP.

Keywords: Grizzly/diet/Banff

Reynolds, D. and J. Feick. 1979.

207

Resource inventory and management studies, progress and planning report II. Unpublished report, Parks Canada, Western Region, resource conservation. 100 pp.

Annotation: Outlines the status of the resource inventory program for Western Region to March 1979. Summarizes progress to date through the use of charts and lists. WROL.

Keywords: Biophysical/resource inventory/resource/manage

Riegelhuth, R. 1966

208

Grizzly bears and human visitation. M. Sc. Thesis, Colorado State University, Fort Collins, Colorado. 79 pp.

Annotation: At time of the thesis, author proposed that back country visitation was not an important factor with regard to grizzly survival and well being. Reports no increased use by grizzlies of visitor concentration sites as human visitation increased. Results are said to be derived from questionnaires, allowing in many cases ambiguous subjective responses. AF-JNP.

Keywords: Grizzly/United States

Riley, J.H. 1912 209  
Birds collected or observed on the expedition of the Alpine Club of Canada to Jasper Park, Yellowhead Pass and Mount Robson region. Canadian Alpine Journal - Special: 47-46.

Annotation: Annotated species list - Riley worked for the United States National Museum. ACR.

Keywords: Birds/Jasper

Rimmer, J. 1969 210  
Notes on Goat (Oreamnos americanus). Unpublished report, Warden Service, Parks Canada, Banff.

Annotation: Contains the author's observation over the period 1964-1968. A map shows known bands within area No. 3 with a group of 87 in the Dormer area being the largest. A table contains the measurements of eight goats trapped by author. Notes that in 1924 six goats transplanted to Custer State Park, South Dakota, escaped their pen and numbered 200 animals in 1969. WSF-BNP, Warden files, Banff.

Keywords: Banff/goat

Rimmer, J., and J. Stelfox. 1967 211  
Mountain goat study. Unpublished report, Warden Service and Canadian Wildlife Service, Banff. 3 pp.

Annotation: Contains two pages of data obtained from a 15 minute, feeding study of band of goats moving across an open slope. Lists species used under heavy, moderate, light and none headings. Buffalo berry, hairy wildrye, pussytoes, thistle, hedysarum, and strawberry listed as heavily used. Also contains one page of goat measurements. AF-BNP.

Keywords: Goat/Banff

Robertson, J.R. 1970 212  
Elk reduction program report. Unpublished report, Warden Service, Parks Canada, Banff. 2 pp.

Annotation: Notes that 197 elk were slaughtered in Banff for a total cost of \$13,095.38. AF-JNP.

Keywords: Elk/slaughter/Banff

213

Russell, R.H., J.W. Nolan, N.G. Woody, G.H. Anderson and A.M. Pearson.  
1978.

A study of the grizzly bear (Ursus arctos) in Jasper National Park -  
A progress report 1976-1977. Canadian Wildlife Service. 95 pp.

Annotation: Twelve different grizzly bears captured 20 times on a  
1625 km<sup>2</sup> study area. Estimate of one bear per 101.6 km<sup>2</sup> for study  
area and one bear per 71.9 km<sup>2</sup> of the core trap area. Adult male  
grizzlies had substantially larger home ranges and movements than females  
or subadults. Roots of Hedysarum spp. most important long term food.  
CWS.

Keywords: Jasper/grizzly

Russell, R.H., J.W. Nolan, N.G. Woody and G.H. Anderson. 1979 214

A Study of the Grizzly Bear in Jasper National Park, 1975 to 1978.  
Unpublished report, Canadian Wildlife Service. 136 pp. WSL-JNP.

Annotation: During the period 1975 to 1978, 18 different grizzly  
bears were captured and radio collared in south-east Jasper National Park.  
Data were gathered on annual home ranges, seasonal movements, seasonal  
food habits, population densities, productivity mortality and denning.

Keyword: Grizzly/Jasper

Samuel, W.M. 1978 215

Parasite research in national parks of western Canada, II.  
Muscleworm of mule deer. Unpublished report, Dept. of Zoology, University  
of Alberta. 85-142 pp.

Annotation: Study shows that most of the mule deer of Jasper are  
infected with muscleworm (Parelaphostrongylus odocoilei), 90% of faecal  
pellets examined were infected. WSL-JNP.

Keywords: Mule deer/parasites/Jasper/disease

Sanson, N.B. 1919 216

Snow in the Rocky Mountain parks. Canadian Alpine Journal 10:38-50.

Annotation: References to varying snow conditions for many years and  
some discussion of insects and small mammals. ACR.

Keywords: Snow/small mammals/Banff/history

Scrimshaw, L. 1978

217

Fiddle River planning unit - resource inventory and analysis synopsis. Unpublished report, Planning Division, Parks Canada, Banff. 52 pp.

Annotation: The report incorporates, geological/gcomorphological information, vegetation community mapping, wildlife observations and limnological information. Due to imminent relocation of the pool, campground and bungalow and deterioration of the Miette road the information had to be gathered prior to biophysical assessment of the area in 1979. Thus the wildlife data are based on warden records and do not contain any information gathered by the Canadian Wildlife Service.

Keywords: Resource manage/inventory/Jasper

Scrimshaw, L. and C. Zinkan. 1975

218

Western Region resource inventory program progress and planning report, Parks Canada. 69 pp.

Annotation: Discusses, to date, the history of inventory in the western parks and gives an explanation of the shift from a "component" to a "biophysical" inventory. Report outlines status of the resource inventory program for each national park. NL-JNP.

Keywords: Resource manage/biophysical/inventory

Shackleton, D.M. and D.A. Hutton. 1971

219

An analysis of the mechanisms of brooming of mountain sheep horns. Sonderdrucke aus Z.f. Säugetierkunde Bd. 36 (1971) H. 6, S. 342-350. 9 pp.

Annotation: Examines various hypotheses used to account for "brooming", rejects most of them and concludes one can account for the phenomenon through the interspecific head clashing during rutting. AF-JNP.

Keywords: Sheep/Banff

- Shank, C.C. 1976 220  
Communal defense by bighorn sheep. Journal of Mammalogy  
58(2):243-244.

Annotation: Tells of a cooperative defense effort, with four big horn rams standing "rear to rear in a muskox-like defense formation" against three coyotes. WSF-JNP.

Keywords: Sheep/carnivores/coyote/ungulate/Banff

- Sibbold, H.E. 1909 221  
Report on game conditions. Unpublished report, typescript.

Annotation: One-hundred prairie chickens wintered in park. Notes that a few elk working over from B.C. in the summer, returning in the fall. Feels, given time, they will reintroduce themselves. Goat 30-40, in Spray valley, sheep, 85 between Massive and Banff. Deer said to be plentiful along lower valleys. Wolverine, lynx and coyote to be treated as noxious. AF-BNP.

Keywords: Ungulate/elk/sheep/goat/deer/carnivores/Banff

- Sibbald. 1917 222  
Inspection report - new addition to park, Kananaskis Basin.  
Unpublished report, Warden Service, Parks Canada.

Annotation: Saw no game in area, tracks of deer and moose present. Camp of Indians in valley, told last year - they could hunt there. Notes large numbers of elk down the Elk and Bull rivers in B.C. and notes they will "work over" as soon as Indians kept out. AF-BNP.

Keywords: Wildlife/Banff/history

- Skeel, M.A. and L.N. Carbyn. 1977 223  
The morphological relationship of gray wolves (Canis lupus) in  
national parks of central Canada. Can. J. Zool. 55:737-747.

Annotation: Multivariate analysis of cranial features of wolves from Jasper and other regions of central Canada is used to indicate taxonomic relationship to recognized subspecies of wolf. UOCL.

Keywords: Wolves/Jasper/taxonomy

Skjonsberg, T., and A. Westhaver. 1978 224  
A study in the chemical immobilization of animals with suggestions  
for application in Canada's national parks. Unpublished report,  
University of Manitoba, Winnipeg. 83 pp.

Annotation: Report written to aid the wardens of Banff in selecting  
the best available immobilizing procedures. Report recommends a Ketaset  
and Rompun mixture (2:1) for immobilization. WSL-JNP.

Keywords: Immobilization/carnivores/ungulates/Banff

Solman, V.E.F. 1950 225  
Ecological survey of the national parks of Canada. Unpublished  
report, Canadian Wildlife Service. 17 pp.

Report reviews meetings held with representatives from the Lands and  
Development Services Branch, the National Parks Service, the National  
Museum and the Dominion Wildlife Service to discuss the need for complete  
long term, factual data in order to deal adequately with the problems of  
wildlife management in the national parks. Interesting as first attempts  
at organized resource management and biophysical inventory. NL-JNP.

Keywords: Resource manage/national parks

Soper, J.D. 1941 226  
Bird and mammal notes from Rocky Pass and vicinity, Rocky Mountains  
Forest Reserve, adjacent to Jasper National Park. Unpublished report,  
Canadian Wildlife Service. 11 pp.

Annotation: Annotated list of species observed during September and  
October. CWS.

Keywords: Forest reserve/birds/mammals/Jasper

Soper, J.D. 1947 227  
Observations on mammals and birds in the Rocky Mountains of Alberta.  
Canadian Field-Naturalist 61(5):143:173.

Annotation: Compilation of personal field notes dating back to 1913.  
Annotated species lists. CWS.

Keywords: Birds/mammals/Banff/Jasper/Waterton

Soper, J.D. 1960 228  
An account of the mammals and birds collected and otherwise observed in Jasper National Park, Alberta, during the season of 1960. Unpublished report, Canadian Wildlife Service, Edmonton. 29 pp.

Annotation: Annotated lists of wildlife found during field work in the Athabasca and Whirlpool drainages and at Deer Creek. Interesting notes include calliope hummingbird. CWS.

Keywords: Annotated list/birds/Jasper

Soper, J.D. 1961 229  
An account of mammals and birds collected and otherwise observed in Jasper National Park, Alberta, June-July, 1961. Unpublished report, Canadian Wildlife Service, Edmonton. 25 pp.

Annotation: Annotated lists of wildlife found during field work in the Snake Indian Valley, at Signal Mountain and at Sunwapta Pass. CWS, Edmonton.

Keywords: Annotated list/birds/mammals/Jasper

Soper, J.D. 1962 230  
An account of the mammals and birds recorded in Jasper National Park, Alberta, August-September, 1962. Unpublished report, Canadian Wildlife Service, Edmonton. 24 pp.

Annotation: An annotated list of observations made during field work at Fiddle Creek at the Athabasca River, near forks of Astoria and Athabasca rivers, and Celestine Lake and vicinity. Myotis lucifugus observed at Fiddle Creek. NL-JNP.

Keywords: Birds/mammals/Jasper/annotated list

Soper, J.D. 1963 231  
An account of the mammals and birds recorded in Jasper National Park, Alberta, May, June and July 1963. Unpublished report, Canadian Wildlife Service, Edmonton. 24 pp.

Annotation: Contains an annotated list of observations made during field work at Miette Creek, the Palisades, Medicine Lake, Maligne Lake and Bald Hills. Interesting notes include water shrew, mink, striped skunk, mew gull, common raven. CWS.

Keywords: Annotated list/birds/mammals/Jasper

Spreadborough, W. 1919. 232  
Notes on some of the more common animals and birds of the Canadian Rockies. Canadian Alpine Journal 10:51-68.

Annotation: Annotated species list compiled from work done in the field in 1917 for the Geological Survey of Canada. ACR.

Keywords: Birds/mammals/Jasper/Banff

Steele, J. 1975 233  
Report on the question of reintroducing bison to Jasper National Park. Unpublished report, Warden Service Report, Parks Canada, Jasper. 35 pp.

Annotation: Considers the historical presence of bison in the park area; what bison, in what numbers, where and what became of them. Considers available habitat, possible range conflicts and management implications. Concludes with recommendations that 20-25 bison be reintroduced to Upper Snake Indian valley in a free-roaming condition with fencing at some exits for a period of 10 years. AF-JNP, WSF-JNP.

Keywords: Bison/restock/Jasper

Steele, John. 1975 234  
Report on cougar at the fish hatchery on March 27, 1975. Unpublished report, Naturalist Service, Parks Canada, Jasper. 2 pp.

Annotation: At approximately 1830 hours a cougar was observed outside a fence, apparently trying to get at a dog in a pen. The dog was brought into the house. The cougar showed no fear of humans. At 2110 hours the cougar was observed looking in a dining room window and breaking the outer pane of glass. A chair was held against the window and the cougar went away. Wardens shot the cougar. Cougar was a 78-lb. female in poor condition (warden memo). WSF-JNP.

Keywords: Cougar/Jasper

Stelfox, J.G. 1966 235

Detailed data on diseased bighorns immobilized, treated and necropsied from the Radium Hot Springs and Jasper herds, September 25 - November 15, 1966. Unpublished report, Canadian Wildlife Service, Edmonton. 15 pp.

Annotation: Report details mortalities, number of animals captured and treated with antibiotic, Anectine dosages used, preliminary pathological findings and general health of the animals of the Radium herd infected with lungworm and the Jasper herd with contagious ecthyma. WSL-JNP.

Keywords: Sheep/lungworm/disease/Jasper/Kootenay

Stelfox, J.G. 1966 236

An investigation of the current status of bighorn sheep (Ovis canadensis canadensis) in the Radium Hot Springs area, B.C. Unpublished report, Canadian Wildlife Service, Edmonton. 30 pp.

Annotation: Discusses a sheep die-off due to the lungworm-pneumonia complex. WLIB JNP WSL-JNP.

Keywords: Sheep/lungworm/Kootenay

Stelfox, J.G. 1967 237

Bighorn artificial lick problem at Miette Hot Springs, Jasper National Park. Unpublished report, Canadian Wildlife Service, Edmonton. 11 pp.

Annotation: Documents occurrence of contagious ecthyma in sheep using salt blocks at Miette Hot Springs and recommends that blocks no longer be made available. CWS.

Keywords: Sheep/management/Jasper

Stelfox, J.G. 1968 238  
Annual job progress report 1967-68. Population dynamics and range ecology of bighorn sheep in Rocky Mountain national parks. Unpublished report, Canadian Wildlife Service, Edmonton. 50 pp.

Annotation: Discusses the history of sheep populations in the mountains from 1800 to 1967. The influence and arrival of white men, severe winters, and disease are outlined with an extensive and useful historical bibliography. CWS.

Keywords: Sheep/history/mountain parks

Stelfox, J.G. 1969 239  
Status of bighorn sheep at Vermilion Lakes, Banff National Park, May 1969. Unpublished report, Canadian Wildlife Service, Edmonton. 9 pp.

Annotation: Comments that the herd of 90-100 sheep was existing on a deteriorating range and that numbers should be reduced to 40-50 and then kept at that level by removing 8-12 animals annually. NL-JNP.

Keywords: Banff/sheep/management

Stelfox, J.G. 1969 240  
Ungulates as primary consumers. Unpublished lecture presented to 8th Annual Regional Warden School, May 27, 1969, Jasper National Park. 101 pp.

Annotation: Discusses the relationship of wild ungulates to plant associations, their specific requirements for food shelter and escape cover. Outlines principles such as carrying capacity, limiting factors and population factors. Considers the adaption of ungulates to climate. Notes that fire control is limiting and changing the type of available ungulate range and recommends fires be allowed to burn in remote areas. NL-JNP.

Keywords: Ungulates/ecology/management

Stelfox, J.G. 1969 241  
Bighorn sheep in the Canadian Rockies: A history 1800 to 1967.  
Unpublished report, Canadian Wildlife Service, Edmonton. 42 pp.

Annotation: An account of the historic conditions of not only sheep but other big game. The bibliography is useful as a source of historic information. CWS. (CWS 43-69).

Keywords: Sheep/history

Stelfox, J.G. 1970 242  
Population dynamics and range ecology of bighorn sheep in the Rocky Mountain national parks (annual job progress report 1967-69). Unpublished report, Canadian Wildlife Service, Edmonton. 105 pp.

Annotation: Reviews historical population fluctuations, present abundance and distribution, winter ranges and slopes and altitudes utilized, seasonal weights and body measurements, reproduction, disease and parasitism and includes a section on an ecological study of winter ranges. WSE-JNP.

Keywords: Sheep/Banff/Jasper/Kootenay/Waterton

Stelfox, J.G. 1971a 243  
Bighorn sheep in the Canadian Rockies: A history from 1800 to 1967. Canadian Field-Naturalist 85(2):101-122.

Annotation: An account of the historic conditions of not only sheep but other big game. The bibliography is useful as a source of historic information. CWS. (CWS 43-69).

Keywords: Sheep/history/mountain parks

Stelfox, J.G. 1974 244  
Wildlife management concepts in Canadian national parks. Unpublished report, Canadian Wildlife Service, Edmonton. 4 pp.

Annotation: Argues that ungulate and predator control are essential where pristine conditions cannot be restored to parks. CWS.

Keywords: Wildlife/management/parks

Stelfox, J.G. 1971b 245  
Caribou-wapiti research project No. 382-5203. Unpublished report,  
Canadian Wildlife Service, Edmonton. 8 pp.

Annotation: Outlines the objectives and methods for a five year  
study of caribou and elk in Jasper National Park. WSF-JNP.

Keywords: Caribou/elk/Jasper

Stelfox, J.G. 1971c 246  
The husbandry and conditions of bighorn sheep at the B.C. Wildlife  
Park at Kamloops, B.C., October 17, 1971. Unpublished report, Canadian  
Wildlife Service, Edmonton. 2 pp.

Annotation: In January 1971, three bighorn sheep (2 adult ewes and 1  
yearling ram) were immobilized and sent to the game park. As there were  
reports of possible mistreatment, an investigation of their condition was  
carried out. They were found to be in excellent health though some  
concern was expressed about declining quality of their enclosure.  
AF-JNP.

Keywords: Sheep/Jasper/relocation

Stelfox, J.G. 1972a 247  
Wildlife management within the Canadian national parks. Unpublished  
paper presented at the Northern Wild Sheep Council meeting, Hinton,  
Alberta, April 13, 1972. 6 pp.

Annotation: Suggests need for the development of a sound wildlife  
management policy for each park.

Keywords: Wildlife/management/national parks/sheep

Stelfox, J. 1972 248  
Helicopter wildlife census of Bow corridor east of Banff.  
Unpublished report, Canadian Wildlife Service, Edmonton. 3 pp.

Annotation: Greatest ungulate use at the time of survey was of south  
and southwest-facing slopes north of the TCH. Total of 41 elk in three  
herds observed. Ungulate crossings of TCH are mapped. WSF-JNP, WSF-BNP.

Keywords: Banff/wildlife/survey/aerial

Stelfox, J.G. 1973 249  
A case for predators. Fish and Game Sportsman 5(1):100-103.

Annotation: Articles outlines belief in "laissez faire" - hands off policy towards predators and game animals. As an example the big game predator-habitat relationship is discussed with reference to Jasper with emphasis on wolves, elk and sheep. NL-JNP.

Keywords: Ungulates/carnivores/wildlife/manage/Jasper/Banff

Stelfox, J.G. 1973 250  
Predator-prey relationships in Canadian national parks. Unpublished report, Canadian Wildlife Service, Edmonton. 10 pp.

Annotation: Recommends a "laissez faire" attitude to game management in national parks with Elk Island being an exception due to its fenced and thus special nature. Notes that fluctuations of wildlife populations will occur and that they can be quite dramatic, with heavy die-offs, but that is just part of the natural scheme of things. CWS.

Keywords: National parks/carnivores/prey/policy/management

Stelfox, J.G. 1974a 251  
Caribou-elk-human interrelationship study, Skyline Trail, Maligne Mountains, Jasper National Park. Unpublished report, Canadian Wildlife Service, Edmonton. 5 pp.

Annotation: Report on three days field work along Skyline Trail. Four caribou were observed. CWS.

Keywords: Jasper/caribou/distribution

Stelfox, J.G. 1974b 252  
Range ecology of Rocky Mountain bighorn sheep in Canadian national parks. Unpublished report, Canadian Wildlife Service, 234 pp.

Annotation: Discusses a study of six winter grassland ranges in three national parks. Notes that bighorn sheep populations have followed irruptive fluctuation patterns and have displayed no intrinsic self-regulating mechanism. Excess populations often decline from a pneumonia-lungworm disease complex initiated by malnutrition and severe winter weather. WSL-JNP.

Keywords: Sheep/range/ecology/Jasper/Banff/Waterton

Stelfox, J.G. 1974c 253  
Chemical and mechanical methods of controlling big game reproduction in national parks. Unpublished report, Canadian Wildlife Service, Edmonton. 7 pp.

Annotation: Reviews work on birth control for white-tailed and black-tailed deer conducted by U.S. Bureau of Sport Fisheries and Wildlife and the National Park Service at Mammoth Cave National Park, Colorado. WPNP.

Keywords: Ungulates/management/national parks

Stelfox, J.G. 1976a 254  
Disease and parasites of bighorn sheep in Canadian national parks 1966 to 1972. Unpublished report, Canadian Wildlife Service, Edmonton. 132 pp.

Annotation: Fifteen herds totalling 1000 sheep were studied to determine health status, cause of Kootenay Park 1966-68 die-off, and likelihood of die-offs in other herds. Notes relationship of disease and parasite burdens to winter range condition, ungulate stocking rates, winter weather and duration of stay on heavily parasitized ranges. CWS.

Keywords: Disease/parasites/sheep/Kootenay/Banff/Jasper/Waterton

Stelfox, J.G. 1976b 255  
Wildlife census meetings, Jasper, Banff, Yoho, Glacier-Revelstoke, May 4-7 1976. Unpublished report, Canadian Wildlife Service, Edmonton. 33 pp.

Annotation: Deals with the wildlife computer cards and presents preliminary computer readout results.

Keywords: Census/inventory/biophysical/Jasper/Banff/Yoho/  
Glacier/Revelstoke

Stelfox, J.G. 1976c 256  
Range ecology of Rocky Mountain bighorn sheep. Canadian Wildlife Service, Edmonton. 50 pp.

Annotation: Discusses a study of six winter grassland ranges in three national parks. Notes that bighorn sheep populations have followed irruptive fluctuation patterns and have displayed no intrinsic self-regulating mechanism. Excess populations often decline from a pneumonia-lungworm disease complex initiated by malnutrition and severe winter weather. WSL-JNP.

Keywords: Sheep/range/ecology/Banff/Jasper/Waterton

Stelfox, J.G. 1978 257  
Seasonal distribution of Rocky Mountain bighorn sheep in Canadian national parks, 1966-1972. Unpublished report, Canadian Wildlife Service, Edmonton. 149 pp.

Annotation: In summer most sheep ranged on alpine grasslands above 2100 m using south and east exposures early in summer with progressively more use of west and north exposures during late summer and fall. Lists two critical and widely separated winter ranges: the subalpine and alpine grasslands above 1800 m, where two-thirds of the sheep wintered and the transitional prairie grasslands below 1375 m where about 14% of the animals wintered. During winter all suitable grasslands were utilized indicating maximum distribution throughout the parks. WSL-JNP.

Keywords: Sheep/distribution/Jasper/Banff/Waterton/Kootenay

Stelfox, J.G. and N. Woody. 1967 258  
Calculated bighorn populations, Jasper National Park 1966-67 data sheet. CWS compilation of Warden Service data and CWS helicopter surveys.

Annotation: Population calculated to be 2000. AF-JNP.

Keywords: Sheep/Jasper

Stelfox, J.G. and J. McGillis. 1970 259  
Seasonal growth patterns of bighorns correlated with range conditions and endoparasite loads. Unpublished report, Canadian Wildlife Service. Prepared for presentation at Third Northern Wild Sheep Council, Williams Lake, B.C. May 26, 28, 1970. 6 pp.

Annotation: Compares data from sheep ranges in four mountain national parks to show a direct relationship among forage production, stocking rates, endoparasite loads and overwinter weight losses. CWS.

Keywords: Jasper/Banff/sheep/range/disease

Stelfox, J.G., P. Kuchar and J.A. Bindernagel. 1978 260  
Range ecology of mountain caribou (Rangifer tarandus) in Jasper National Park, 1971-1974. Unpublished report, Canadian Wildlife Service, Edmonton. 121 pp.

Annotation: During the years 1971-1974 the study was carried out due to concern that caribou were declining and elk increasing. A dominance-avoidance relationship between elk and caribou, with elk being dominant and displacing caribou on common ranges was observed. Caribou distributions were correlated to spruce-fir forests and alpine tundra ranges with broad valleys, traversable passes and a scattering of summer snowfields. Of the caribou 81.1% were observed in alpine-tundra, delta shoreline, wet grassland, barren ridges, snowfield and heather krummholtz, while most elk were in man-made grasslands, pine, mixed forest and natural grasslands. Snowfields appeared vital for relief from summer heat and insects. WSL-JNP, NL-JNP.

Keywords: Caribou/range/ecology/Jasper

Stelfox, J.G. and R. Barlow. 1974 261  
Caribou helicopter survey, Maligne mountains (Skyline Trail) Jasper National Park, July 15, 1974. Unpublished report, Canadian Wildlife Service, Edmonton. 10 pp.

Annotation: Notes caribou activity was limited to 5000-6500' level at time of survey and that caribou reacted strongly to helicopter, even though a 200 m distance set. Caribou activity cited as less than normal in Skyline Trail area, due to late snow and unseasonal weather. One osprey nest reported. AF-JNP.

Keywords: Caribou/osprey/Jasper

Stelfox, J.G. and Jasper Warden Service. 1974 262  
The abundance and distribution of caribou and elk in Jasper National  
Park, 1971 and 1973. Unpublished report, Canadian Wildlife Service,  
Edmonton. 84 pp.

Annotation: Relates historical abundance of caribou and elk to  
present status. Compares habitat preferences of caribou and elk on a  
seasonal basis, especially in regard to elevation, exposure, snow depth,  
wind speed and landscape type. NL-JNP.

Keywords: Elk/caribou/habitats/ranges/competition/Jasper

Stelfox, J.G., J. McGillis and G. McClain. 1974 263  
Helicopter Survey - Athabasca and Miette valleys, March 12, 1974.  
Unpublished report, Canadian Wildlife Service, Edmonton. 12 pp.

Annotation: Much of the report is a listing of game sightings that  
appear to be transcribed from a tape recording. The sightings would have  
to be arranged in some systematic order for use. Notes "virtually no" elk  
and few moose along the Whirlpool River, the Astoria River or Portal  
Creek. Some moose, no elk, notes killing of 140 ungulates along railway  
tracks, Dec. 1, to 12 March 1974. CWS.

Keywords: Jasper/ungulates/survey/aerial

Stelfox, J.G., T. Wood and R. Keith. 1974 264  
Helicopter survey of caribou, elk and other wild ungulates in Maligne  
Mountains and Athabasca Valley, Jasper. Unpublished report, Canadian  
Wildlife Service, Edmonton. 7 pp.

Annotation: Results of helicopter survey; lists and brief  
discussion. CWS.

Keywords: Survey/ungulates/Jasper

Stelfox, J.G., J. Courtney and J.R. McGillis. 1975 265  
Summer use of land systems by large mammals, Bow Valley, Banff  
National Park. Canadian Wildlife Service, published report for Parks  
Canada. 41 pp.

Annotation: Report on the relative abundance of habitat use within  
12 land systems between Hillsdale Meadows and Lake Louise. Use by moose,  
deer and elk in decreasing order of importance - AF (especially valley  
east side), BC4, BV, CV and BC1, 2, 3 and 5. CWS, Banff.

Keywords: Ungulate/Banff/habitat/land systems

Stelfox, J.G., B. Kloosterman and M.C.S. Kingsley. 1977 266  
Wildlife census and survey project in national parks of western  
Canada, Phase I: Computerized program for recording and analyzing wildlife  
data in the national parks of western Canada. Unpublished report, Parks  
Canada, prepared by Canadian Wildlife Service. 91 pp.

Annotation: In 1972 a computer-acceptable program recording and  
analyzing wildlife data was established to handle extensive information.  
Report outlines type of field data cards used and types of programs the  
system has generated. WSL-JNP.

Keywords: Wildlife/census/computer

Stelfox, J.G. and J.R. McGillis. 1977 267  
Ungulate surveys manual for prairie and western Canadian national  
parks. Unpublished report, Canadian Wildlife Service, Edmonton. 87 pp.

Annotation: Examines various survey techniques in relation to past  
and present park survey programs and provides advice on the development,  
implementation, analysis and interpretation of ungulate survey programs.  
Methods of aerial and ground surveys are discussed in detail. WSL-JNP.

Keywords: Ungulate/census/survey

Stelfox, J.G. and J.A. Bindernagel. 1978 268

Caribou behaviour in relation to human-elk-wolf influences, Jasper National Park, 1971-1974. Unpublished report, Canadian Wildlife Service, Edmonton. 59 pp.

Annotation: Caribou declines in Jasper National Park have been attributed to competition with elk, disturbance by humans and, possibly, increased predation by wolves. Studies indicate that caribou are subordinate to elk although both species coexist peaceably. Caribou are highly vulnerable to human disturbance during hot weather, females with young being most vulnerable. Wolf predation appears insignificant. Long-term climatic change may be reducing suitability of southerly ranges to caribou. CWS. NL-JNP.

Jasper/caribou/competition

Stelfox, J.G. and D.M. Poll. 1978 269

Weights, measurements and tooth replacement of Rocky Mountain bighorn sheep in Canadian national parks, 1967-1971. Unpublished report, Canadian Wildlife Service, Edmonton. 61 pp.

Annotation: Provides information on live weights and body measurements plus tooth replacement of wild sheep. The measurements support the principle that with increasing latitude there is a decrease in the mass-to-surface area ratio. CWS.

Keywords: Sheep/Jasper/Banff/Waterton/Kootenay

Stendie, A.N. 1977 270

Horse management plan and backcountry carrying capacity for Jasper National Park. Unpublished report, Warden Service, Parks Canada, Jasper. 13 pp.

Annotation: Outlines the policy, procedures and regulations regarding horses and grazing. Notes that the most horse damaged area of the park is the Tonquin valley, but hopes controls over numbers of horses in the area will lessen the impact. States that most areas in the park can handle "present" volume with no impairment of ecosystems and that the trend is to a decline of horse traffic. Says use of horses is a well established tradition. WSF-JNP.

Keywords: Horse/grazing/policy/Jasper

Stenton, J.E. 1955 271  
Bighorn sheep (Ovis canadensis) at Aylmer Lookout. Unpublished  
report, Warden Service, Parks Canada. 6 pp.

Annotation: Contains statistics on sheep population for 1950 through  
1955. Figures show a population increase 1950-1954 and a decline for the  
year 1955. Largest percentage of animals is noted to be adult ewes.  
Notes 52% of the potential increase is lost in first year of life.  
WSF-BNP.

Keywords: Banff/sheep

Stenton, J.E. 1960-1965 272  
Series of master tables for elk slaughters, Banff National Park.  
Unpublished report, Warden Service, Parks Canada, Banff. 6 pp.

Annotation: Charts contain detailed statistics, i.e. weight, sex,  
breeding status, parasites, from the elk killed in BNP over six years.  
ACR.

Keywords: Banff/elk/slaughter

Stinson, D. and T. Davidson. 1976 273  
Bear treatments with lithium chloride. Unpublished report, Warden  
Service, Parks Canada, Banff. 5 pp.

Annotation: Comments on some attempts to use aversive conditioning  
on bears; insufficient data for any conclusions. WSL-JNP.

Keywords: Bears/aversion/Jasper/lithium chloride

Stringer, P.W. 1968 274  
A preliminary report on the description, classification and ecology  
of low-elevation grasslands in Banff, Jasper and Waterton Lakes National  
Parks. Unpublished report, Canadian Wildlife Service, Edmonton. 116 pp.

Annotation: Coverage, sociability and frequency were calculated for  
51 stands of grassland in addition to soil analyses and pellet group  
counts. Data were analyzed by three dimensional ordination and six  
broad grassland types identified. Only two of these are of sufficient  
extent and homogeneity to be considered valid vegetation units. CWS.

Keywords: Banff/Jasper/Waterton/grasslands/pellet counts

Struhsaker. T.T. 1967 275  
Behavior of elk (Cervus canadensis) during the rut Z. Tierpsychol  
24:80-114.

Annotation: Suggests that whistling, thrashing, digging, and wallowing are means used whereby bulls attract one another and thus facilitate sexual selection. Detailed descriptions of certain behaviour patterns are given. Includes sonagrams of whistling and barking. Older bulls spar more frequently than younger bulls. WSF-BNP.

Keywords: Banff/elk/behavior

Struhsaker, T.T. and A. Parsekian. 1965 276  
The relation of age, sex and time of day to activity in free-ranging elk (Cervus canadensis). Unpublished report, Canadian Wildlife Service, 13 pp.

Annotation: Elk activity varies according to age-sex classes and time of day. Adult males are most predictable as to time of day when activities occur; cows are least. There is an inverse relationship between stability of social group of elk, and depending on its activity, to time of day - cow/calf groups are most stable. Observations and data were collected in Banff. CWS.

Keywords: Banff/elk/behavior

Sullivan, J.P. and J.G. Stelfox. 1974 277  
Wildlife food habits and seasonal ranges in the Jasper townsite area summer, 1974. Unpublished report, Canadian Wildlife Service, 74 pp.

Annotation: Deer use is noted as five times greater and elk use 10% less in townsite compared to Moberly Flats. Area between Whistler Mountain and the Miette River important spring habitat for moose, elk and deer and also an important large mammal migration corridor. Suggest that a 200 m buffer strip be left adjacent to rivers and lakes and that townsite expansion to the south and west will have least impact. AF-JNP.

Keywords: Diet/Jasper/ungulates/bears

Tande, G.F. 1977

278

Forest fire history around Jasper townsite, Jasper National Park, Alberta. Unpublished M.Sc. thesis, University of Alberta, Dept. of Botany, Edmonton. 169 pp.

Annotation: Climate is noted as the major environmental factor controlling the frequency and extent of past forest fires. Author suggests European man should not be blamed for the extensive fires of the nineteenth century since he arrived at a time when conditions were more favourable for fire. A fire chronology for the period 1665-1975 was established. NL-JNP.

Keywords: Fire/history/ecology/Jasper

Tanner, H.C. 1950

279

An investigation into the competition between elk and bighorn sheep in the Cascade valley, Banff National Park, Alberta, Map 27, September 7, 1950. Unpublished report, Canadian Wildlife Service. 32 pp.

Annotation: Range surveys and ungulate censuses were conducted during one summer. Poorly documented, and discussions and conclusions of dubious validity. CWS.

Keywords: Elk/sheep/competition/Banff

Taverner, P.A. 1918

280

Addenda to the birds of Jasper Park, Alberta.

Annotation: Annotated species list based on the work of W. Spreadborough of the Geological Survey of Canada in 1917. ACR.

Keywords: Birds/Jasper

Telfer, E.S. 1968 281  
Experiences with the twig-count method of browse survey. Unpublished report, Canadian Wildlife Service, Edmonton. 13 pp.

Annotation: Discusses analysis of browse use and availability based on oven-dry weights of twigs of same diameters as those used by ungulates. Paper prepared for presentation at the fifth annual North American Moose Meeting, Kenai Alaska, August 6 and 7, 1968. CWS.

Keywords: Ungulate/browse survey

Tempany, I.R. 1972 282  
Wolf-elk, predator-prey relationship. Unpublished report, Warden Service, Parks Canada, Jasper. 2 pp.

Annotation: Discussion of an unwitnessed wolf kill of a prime male elk. WSF-JNP.

Keywords: Wolf/elk/kill/Jasper

Tener, J.S. 1954 283  
Analysis of the Wardens wildlife cards, Jasper National Park, 1953. Unpublished report, Canadian Wildlife Service, 6 pp.

Annotation: Notes decline in wolf observations by 25%, probably due to destruction of at least 10 in previous year under rabies control. Both mule deer and white-tailed deer noted to be on the increase. Includes tables on sheep and goat bands. AF-JNP.

Keywords: Wildlife/warden cards/Jasper

Thordarson. 1975 284  
Bear management in Jasper - 1975 season. Unpublished report, Warden Service, Parks Canada, Jasper. 13 pp.

Annotation: Details cost, history, problems and law enforcement and notes 53 individual bears were handled. AF-JNP.

Keywords: Bear/Jasper

Thordarson, W.G. 1976 285  
Wildlife census, Jasper National Park, 1976. Unpublished report,  
Warden Service, Parks Canada. Jasper. 23 pp.

Annotation: Contains data from helicopter surveys flown over the  
north boundary and the main Athabasca valley on 10 November 1975 and  
5 and 6 January 1976. Includes maps and tables showing species, age, sex,  
numbers and locations. WSL-JNP.

Keywords: Jasper/wildlife/ungulates/carnivores

Thordarson, W.G. 1977 286  
Wildlife report, Jasper National Park - April 1976 - March 1977.  
Unpublished report, Warden Service, Parks Canada, Jasper. 19 pp.

Annotation: Contains population graphs plotted from monthly wildlife  
summaries giving minimum populations. Contains two tables of wildlife  
mortality statistics. WSF-JNP.

Keywords: Jasper/wildlife/ungulates/carnivores

Trottier, G. 1975 287  
An assessment of horse grazing impact in Brewster Creek valley, Banff  
National Park 1975. Unpublished report, Canadian Wildlife Service,  
Edmonton. 6 pp.

Annotation: States that observed grazing impact in Brewster Halway  
valley area does not reflect sound range management. CWS.

Keywords: Banff/horse/grazing

Trottier, G.C. 1976 288  
Big game range exclosures in the national parks of western Canada.  
Unpublished report, Canadian Wildlife Service, Edmonton. 171 pp.

Annotation: Summarizes the history of range management problems and  
documents establishment of the existing exclosure system. Recommends that  
the exclosures are useful tools and does not think they should be removed.  
WSL-JNP.

Keywords: Range/exclosures/ungulates/national parks

Trottier, G.C., L. Rankin and N. Murray. 1976 289  
Backcountry management studies, south Banff block, Banff National  
Park. Unpublished report, Canadian Wildlife Service, Edmonton. 72 pp.

Annotation: Outlines a study concerning the degree and type of  
visitor use in a particular area of Banff. Report is one of a series and  
the results are synthesized in Trottier 1977. WSL-JNP.

Keywords: Banff/impact/resource manage

Trottier, G.C. 1977 290  
Some aspects of backcountry use in Banff National Park. Unpublished  
report, Canadian Wildlife Service, 77 pp.

Annotation: For the period 1972-1976 documents use patterns, visitor  
demography, explaining expectations preferences and environmental impact.  
Recommends "sound" selection of trail sites and primitive campground sites.  
No reference to wildlife - people experiences, encounters or impacts.  
CWS.

Keywords: Banff/visitor use/resource manage

Trottier, G.C. 1979 291  
Analysis of range enclosures, Jasper National Park. Unpublished  
report, Canadian Wildlife Service. 60 pp.

Keywords: Range/exclosures/elk/ungulates

Turnbull, J.L. 1975 292  
Disaster range study - Jasper National Park 1972-1975. Unpublished  
Warden Service Reports (5). Total = 24 pages, 5 reports, 2 maps, 3  
graphs.

Annotation: Study done as part of J. Stelfox's (CWS) sheep work and  
includes information on range utilization, range production, weekly min.-  
max. temperatures, precipitation, snow depth and hardness, wind, plus  
sheep abundance and classification done twice yearly. No discussions just  
data. WSF-JNP.

Keywords: Sheep/ungulates/Jasper/range

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Van Zyll deJong. 1979

293

Progress report on the morphometric analysis of extant forms of Bison with emphasis on the systematic status of surviving wood bison. Unpublished progress report, National Museum. 2 pp.

Annotation: Notes that results to date show that athabascae differ from bison and that rediscovered athabascae resembles historical athabascae but also shows some evidence of bison, indicating some gene flow. AF-JNP.

Keywords: Bison/taxonomy

Venables, R.L. and J.G. Stelfox. 1974

294

Past, current and potential wildlife census techniques in western and prairie Canadian national parks. Unpublished report, Canadian Wildlife Service, Edmonton. 91 pp.

Annotation: Synthesis of past, present and potential wildlife census techniques for the following wildlife groups, ungulates, carnivores, freshwater and aquatic mammals, small mammals, birds of prey, aquatic birds and gallinaceous birds. WSL-JNP.

Keywords: Wildlife/census/methods

Wackerle, J. 1970

295

Report on Spray Valley traffic. Unpublished report, Warden Service, Parks Canada, Banff. 1 p.

Annotation: Notes heavy to moderate use of lower 16 miles of Spray valley and recommends that situation be given high priority if department intends to protect wildlife. Recommends CWS assess damage and that snowmobiles be rerouted to less sensitive areas. States that snowmobile use is detrimental to the backcountry. WSF-JNP, WSF-BNP.

Keywords: Banff/snowmobiles/wildlife

Wackerle, J. 1971 296  
Report on trapping operation in the golf course. Unpublished report,  
Warden Service, Parks Canada, Banff. 11 p.

Annotation: Trapped elk using 1/16" netting, doubled for strength. Sixteen elk caught on first attempt of which five escaped by breaking netting, one died. In other attempts elk broke out. Concludes netting was not strong enough. WSF-BNP.

Keywords: Banff/elk/trapping

Walker, D.S. and Associates. 1980 297  
Assesment of the Ya-Ha-Tinda ranch elk winter range improvement by reseedling study. Unpublished report, Fish and Wildlife Division of Alberta, Energy and Natural Resources. 43 pp.

A John Deer power-till seed drill (a type of zero tillage drill) was used to seed six species of native range forage grasses, a licenced native grass variety from Saskatchewan, a licenced vigorous variety and a reclamation variety. Five species failed completely and four established very low numbers of seedlings. Authors indicate other users of the John Deer power-till report large numbers of seedling failures. AF-BNP.

Keywords: Elk/re-seed/Banff/Ya-Ha-Tinda

Walker, D. and Associates and D. Smith. 1980 298  
The Athabasca Ranch elk winter range improvement study. Unpublished report, Fish and Wildlife Division, Alberta Energy and Natural Resources. 59 pp.

Annotation: Test plots were established on the steep south-facing slopes of the Athabasca River and 12 licenced varieties of native and agronomic grasses plus eight species of native grasses from the University of Alberta collection were planted. Wheat grasses were said to be outstanding in rapid establishment and those of the University of Alberta collection are as good as or better than the best agronomic varieties. A vegetation survey of the river slope was compared to a 1974 survey and indicated the Arctostaphylos uva-ursi was increasing in distribution. WSL-JNP.

Keywords: Elk/re-seed/Jasper

Wallach, J.D., R. Frueh and M. Lentz. 1967 299  
The use of M.99 as an immobilizing and analgesic agent in captive  
wild animals. Journal American Veterinary Medical Association  
151(7):870-876.

Annotation: Information of use to resource managers undertaking  
immobilization. Paper deals with use on wild ruminants, bears, primates  
and an African lion. AF-JNP.

Keywords: Immobilization

Warden Service. 1945 300  
Wolves, Banff National Park - winter 1944-45. Unpublished report,  
Warden Service, Parks Canada, Banff. 4 pp.

Annotation: Presence of wolves reported from three, of 11 districts,  
Castle Mountain, Minnewanka, and Saskatchewan River. Estimates 15 wolves  
in park. WSF-BNP, Warden Service files, Banff.

Keywords: Banff/wolves

Warden Service. 1970 301  
Elk reduction program - Jasper National Park. Unpublished report,  
Canadian Wildlife Service, Edmonton. 16 pp.

Annotation: Statistics on elk slaughtered (300) for range management  
includes: age (actual and estimate) kidney fat, kidney weight, kidney fat  
index, rump fat femur bone, pregnancy, fetus size, lung cysts, liver  
flukes. AF-JNP.

Keywords: Elk/slaughter/Jasper

Warden Service. 1971-1972 302  
Caribou-elk observations - monthly reports file #9810-114.  
Unpublished reports, Warden Service, Parks Canada, Jasper.

Annotation: Contains monthly tabulated summaries of elk and caribou  
sightings for various districts. There are also, for some months, maps  
showing locations of the sightings. WSF-JNP.

Keywords: Caribou/elk/Jasper

Watt, R.A. 1975 303  
Cougar activity - Jasper townsite May 21, 31, 1975. Unpublished report, Warden Service, Parks Canada, Jasper.

Annotation: An account of problems caused by and action used in dealing with two cougar kittens and an adult female cougar. Cougars were killing and eating domestic cats and dogs. Attempts to immobilize failed and the adult cougar was destroyed, kittens not seen again. WSF-JNP.

Keywords: Cougar/Jasper

Webb, R. 1961 304  
Management suggestions for the Ya-Ha-Tinda and "Corners" elk winter ranges. Unpublished report, Canadian Wildlife Service, Edmonton. 13 pp.

Annotation: Discusses the "serious" range problem that exists caused by elk and horses. Recommends sustained kills of at least 400 and 200 elk for Ya-Ha-Tinda and Corners respectively. Report reflects upon the wisdom of continuing horse use at Ya-Ha-Tinda. CWS.

Keywords: Banff/range/elk/Ya-Ha-Tinda

Whitcher, W.F. 1886 305  
Mr. Whitcher's report to Hon. T. White, Minister of the Interior, Dept. of Interior reports, 1886.

Annotation: Reports upon wildlife conditions in Rocky Mountain parks and makes recommendations to protect and cultivate game and fish. Report sets the precedent for management of wildlife in the park as game and predators. Contains lengthy list of predators (mammals and birds) to be destroyed and some comments are curious, such as reference to pronghorn antelope. ACR.

Keywords: Wildlife/management/fish/Banff

Winkler, M. 1971 306  
Wildlife management in Jasper National Park. Unpublished report,  
Warden Service, Parks Canada, Jasper. 3 pp.

Annotation: Notes that management is carried out by the Warden Service with scientific advice from the Canadian Wildlife Service. Suggests buffer zones be established along park boundaries. Discusses the problem of bear management and lack of knowledge on outdoors etiquette by most of the general public. NL-JNP.

Keywords: Wildlife/manage/bears/Jasper

Wolford, J.W. 1972 307  
Sabine's gulls in Alberta. Canadian Field-Naturalist 86:388-389.

Annotation: Three sightings of sabine's gull in Jasper are listed:  
1) Lake Mildred  
2) Lake Edith  
3) Athabasca River

CWS.

Keywords: Birds/Jasper

Wolf, A. 1970 308  
Immobilization of captive and free-ranging white-tailed deer (*Odocoileus virginianus*) with etorphine hydrochloride. Journal American Veterinary Medical Association 157(5):(636-640).

Annotation: M.99 used successfully on white-tailed deer. Doses ranged from 1.5 to 11.0 mg with best results in the 3.0-6.0 mg. range. AF-JNP.

Keywords: Immobilization/white-tailed deer

Woody, N.G. 1976 309  
Status of the goat population - Jasper National Park. Unpublished  
report, Warden Service, Parks Canada, Jasper. 4 pp.

Annotation: Notes that the seasonal ground census is the basic technique used in JNP. Aerial surveys are discussed and said to be the best way to access goat populations as their habitat is in extreme wilderness zones most of the year. Recommends that accurate and efficient methods of obtaining wildlife data be established. Goat populations said to have dramatically decreased from the highs of the 1940s to 1960-1965 (1200-1500) to present populations of 500-600. WSF-JNP.

Keywords: Goat/Jasper/census

Woody, N.G. 1978a 310  
Bear management plan for Jasper National Park. Unpublished report,  
Warden Service, Parks Canada, Jasper. 15 pp.

Annotation: Discusses in depth the problem of nuisance bears in Jasper National Park. Makes recommendations about "effective garbage management" and effective education of the public as to their part in bear problems. The causes, problems and recommendations are applicable to all parks with "nuisance bears". Appendix contains information on handling bears, garbage containers, fences for dumps, etc. WSF-JNP.

Keywords: Bear/management/Jasper

Woody, N.G. 1978b 311  
Evaluation of bear management in Jasper National Park, 1978.  
Unpublished report, Warden Service, Parks Canada, Jasper. 9 pp.

Annotation: Includes appendices on numbers of human injuries caused by black bears, numbers of bears handled and destroyed from 1960 to 1977. Report shows that over past 30 years artificial food has altered the natural habits and behaviour of black bears (and to a lesser extent, grizzlies). Notes that in a three year period 115 black bears were relocated and 70% of these returned to site of capture. Outlines bear management program with first and foremost a recommendation of removing all trash and garbage from access by bears. Intensive education of public also cited as an important part of good management. WSF-JNP.

Keywords: Bears/management/Jasper

Woody, N.G. 1978c 312  
Bear management, Jasper National Park, 1978 season. Unpublished  
report, Warden Service, Parks Canada, Jasper. 7 pp.

Annotation: A total of 31 black bears and 2 grizzlies were handled.  
Some blacks were handled twice for a total of 40 actions. Mr. Woody  
states that with his lifetime of experience he is of the opinion there is  
"no way of transplanting bears for management purposes other than caging  
them". WSF-JNP.

Keywords: Bear/management/Jasper

Woody, N. and J.G. Stelfox. 1967 313  
Wildlife records 1961-1965. Warden Service data compiled by Canadian  
Wildlife Service, Edmonton. 24 pp.

Annotation: Summarized wildlife observations of sheep, elk, goat,  
moose, deer and other wildlife. AF-JNP.

Keywords: Wildlife/Jasper

Wray, D.D. 1976 314  
The chemical immobilization of bears. Western College of Veterinary  
Medicine, Saskatoon. 12 pp.

Annotation: Discussion of various drugs and suggested dosages. WSF-  
JNP.

Keywords: Bears/immobilization

Young, N.A. 1970 315  
Report on 1969-70 elk reduction program. Unpublished report, Warden  
Service, Parks Canada, Jasper. 6 pp.

Annotation: Three-hundred elk were slaughtered over a 36 day period  
for an average of 8 1/3 elk/day. Previous to the slaughter it was  
estimated there were 1646 elk in the lower Athabasca valley and a total of  
2516 elk in the park. Total cost of the program was \$11,887.50. Meat was  
distributed to various Indian and Metis bands. AF-JNP.

Keywords: Elk/slaughter/Jasper

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