A History of Canada's National Parks

W. F. LOTHIAN

VOLUME IV
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Swiss guide Rudolph Aemmer stands on a ridge-pole of the continent. The west peak of Mount Victoria in the Canadian Rockies forms part of the continental divide which serves as the boundary between Banff and Yoho National Parks.
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Preface

When the vast reaches of western Canada were being opened to settlement and development, few Canadians gave thought to the conservation of its forests, its wildlife, and its bountiful natural resources. The settlement of agricultural lands was a major objective of both government and railways, and the utilization of forest and mineral wealth was believed to be advantageous to national economy. Rights to mineral and forest lands obtained by early entrepreneurs would however, later be in conflict with the objects and purposes of significant areas reserved for the use and benefit of Canadians. Native big game animals including the bison and pronghorn antelope — once believed to be inexhaustible in numbers — almost disappeared as a result of intensive hunting and other causes. Waters supporting game fish were denuded by illegal fishing methods. Fortunately, before most endangered species of game and fish became extinct and irreplaceable examples of the country's primitive landscape impaired, conservation measures were instigated by a few far-sighted individuals.

The reservation for public use in 1885 of mineral hot springs at Banff in the Canadian Rockies led to the creation of our national parks system. Eventually, thousands of square miles of spectacular grandeur were preserved in perpetuity for public use. Numerous species and forms of wildlife were given sanctuary, and their numbers restored within preserves selected to perpetuate endangered species in their natural habitat. The restoration of the bison or buffalo on the plains of Alberta during the early part of the 20th century afforded a remarkable example of timely conservation. The pronghorn antelope — once almost as prolific as the bison, but later verging on extinction — was also restored to viable numbers by the establishment of suitable sanctuaries. Eventually, through the medium of an international treaty with the United States, migratory birds in Canada including waterfowl, also received long-overdue protection.

Early in 1907, the Government of Canada entered into an agreement with a Montana rancher, Michel Pablo, to buy the largest existing herd of wild bison or buffalo in North America. The creation of a fenced reserve in which to maintain the herd, and the transfer to Canada of 716 bison, provided the North American press with one of the most absorbing topics to arise in years. In the new reserve, later called Buffalo National Park, the herd grew phenomenally and at one time, contained more than 8,000 head. Reduction measures including both annual slaughters and transfers to other parts of Canada became necessary. Owing to the incidence of disease, the Buffalo Park herd was destroyed in 1940, and the park abolished in 1947. Fortunately, other herds of bison, most of them developed from the original Montana stock, remain today in the sanctuary of national parks.

Reserves for the protection of pronghorn antelope were created in 1916, and established as national parks in 1922. This action ensured the survival of one of the fleetest of all the mammals native to Canada's western plains. This protection gradually extended to the species outside the parks, so when antelope populations outside the parks exceeded those within, the antelope parks were abolished.

In 1917, the National Parks Branch of the Department of the Interior was entrusted with the administration of the Migratory Birds Convention Act, which was passed pursuant to the provisions of the Migratory Birds Treaty completed in 1916 between Canada and the United States. A new division, later called the Canadian Wildlife Service, was formed to carry out the work entailed by the legislation. Later, its functions were expanded, and over the years it has provided valuable assistance in the administration of wildlife not only in the national parks but elsewhere throughout Canada. Although no longer a part of Parks Canada, it maintained its identity in another ministry, that of Environment Canada, of which Parks Canada became a component in June, 1979.

The National Park Warden Service, formed as a small group at Banff in 1909, has been expanded to perform an important function in resource management throughout the national park system. The responsibilities of the park warden service include fire and game protection, public safety, law enforcement and fostering good public relations with park visitors. The wardens are called upon to fight and suppress fires; apprehend poachers and others charged with breaches of the law; rescue visitors from predicaments sustained by accident or failure to observe park regulations; and to counsel others planning excursions beyond the main avenues of travel. They also assist in management of game, fish and other park resources.

The administration of national parks has been facilitated in recent years by the acquisition of rights and title to lands within the parks that were alienated many years ago. Rights to cut timber in several parks in western Canada were retained by holders for periods exceeding 80 years, and mining lands containing coal and other minerals remained in private ownership from the early days of the present century. Although some of these holdings were not exploited, they remained a threat to preservation of the park environment. Through negotiation, nearly all
such holdings in the form of licences or freehold, have been eliminated by purchase, thus ensuring that industries incompatible with park concepts will not be operated in future.

For many years, Parks Canada and its predecessors have endeavoured to direct the attention of Canadians and others to the pleasures of spending a holiday in the national parks. The great beauty of the landscape, the interesting and varied forms of wildlife, and the health-giving benefits of living out of doors have long been emphasized. Since 1959, other means of acquainting Canadians with the attractions of national parks have been adopted by the establishment of an interpretation and park activities division. Park visitors are encouraged to participate in a program involving the use of nature trails, take part in outings supervised by professional naturalists, and attend fire-side talks supplemented by audio-visual presentations. Interpretation centres and on-site exhibits explaining natural phenomena and indigenous forms of wildlife also help visitors enjoy their stay in the national parks. The involvement of park concessionnaires and their employees, through the medium of training sessions, is expected to extend the scope and usefulness of the park interpretation program.

The following pages give more details on the preservation of endangered wildlife in Canada; the agencies concerned with its protection and conservation; and the restoration to public ownership of alienated natural resources within national parks. The efforts undertaken to acquaint Canadians with the value and advantages of their national parks also are reviewed. The events chronicled, unless otherwise indicated, conclude with those of 1972 and refer to parks established prior to 1969.
“Sir Donald” probably the last of Canada’s wild plains bison or buffalo, was captured as a calf on the western plains near Prince Albert, N.W.T. in 1873. He was reared at Stoney Mountain in Manitoba, later sold to Sir Donald Smith, (Lord Strathcona), and eventually donated by the latter with other bison in 1898 to form the nucleus of the buffalo herd at Banff, Alberta. He died in 1909, having attained the age of 37 years.

Michel Pablo, Mexican-born rancher of Ronan, Montana, from whom the Minister of the Interior for Canada purchased 716 plains bison between 1907 and 1912. This herd -- the largest in North America - was later given sanctuary in Buffalo National Park near Wainwright, Alberta.
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Michel Pablo and his cowboys who herded and corralled 716 buffalo for shipment to Canada. *circa 1907*

Some of Pablo's buffalo on the Flathead Reservation.

Jasper Park fish hatchery superintendent Bill Cable with visitors at a rearing pond.
Chapter 7
Preserving Canada's Wildlife
Introduction
Although Canada’s first national park reservation was made in 1885 to ensure public ownership of the mineral hot springs which had been discovered near Banff Station, steps to preserve other features of the natural environment in the Canadian cordillera had already been taken. In 1883, the Dominion Lands Act had been incorporated in the Statutes of Canada in order to permit orderly and competent administration of the vast expanse of public land lying between the Ontario-Manitoba boundary and the Canadian Rockies. One year later, the Government of Canada made provision, by an amendment to the act, for the creation of “forest parks.” The object of this legislation was “the preservation of forest trees on the crests and slopes of the Rocky Mountains, and for the proper maintenance throughout the year of the volume of water in the rivers and streams which have their sources in the mountains and traverse the Northwest Territories.”

Although the areas affected were then remote and practically inaccessible to the average Canadian, the legislators of the day undoubtedly were giving thought to the future, when the existing stretches of wilderness would be traversed first by railways, and later by highways. Improved access in turn would attract settlement and the development of natural resources, with consequent impairment of the landscape and unavoidable depletion of the water resources which today are so carefully guarded. A few years later, this clause of the Dominion Lands Act was employed to reserve as forest or mountain parks, areas which now are included within the boundaries of Glacier, Yoho, Jasper and Waterton Lakes National Parks.

Following the creation of the Hot Springs Reservation at Banff in 1885 under another section of the Dominion Lands Act, conservation measures were limited to preservation of the springs and the surrounding forests. However, by May, 1886, the Minister of the Interior, Thomas White, had approved a recommendation of George A. Stewart, Dominion Lands Surveyor, that the reservation be expanded west, north and east of the hot springs, and that the enlarged area be established as a national park. Stewart was instructed to extend his survey, and on completion, his plan incorporated an area of 260 square miles. As outlined in the first chapter of this history, Rocky Mountains Park came into being on June 23, 1887.

Early Conservation Measures
Anticipating the establishment of an enlarged park, the Minister in 1886 had engaged the services of W.F. Whitcher, formerly Commissioner of Fisheries at Ottawa, to undertake an examination of the proposed area and submit recommendations for the protection of the wild game, birds and fish found there. Whitcher’s report, dated December 1, 1886, was received in time to be included in the annual report of the department for that year. It reviewed the status of the game animals, fish and migratory birds in the proposed park, and included recommendations for increasing the numbers of species which had been depleted by uncontrolled hunting during the period of railway construction. The report also called for the strict control of hunting, shooting, trapping and fishing, and proposed means of restocking lakes and streams with suitable varieties of fish. Whitcher commented on the wasteful destruction of game fish by netting, dynamiting and improper fishing in the immediate past.

Among the projects undertaken later by Superintendent Stewart was the planting of wild rice in the creeks, ponds and sloughs of the Banff area, including the Vermilion Lakes. A small tree nursery was established at the foot of Cascade Mountain, using a reservoir fed by the cascading waterfall for watering the nursery stock. The project however, failed miserably on the site selected, and a large number of young trees which had been purchased in the northwestern United States were replanted in the vicinity of the Spray River.

Whitcher had expressed concern over the need for fire protection in the vicinity of Banff. The Bow River Valley to the west had been ravaged by frequent fires, and many of them had burned unchecked during the period of railway construction. After the rail service was inaugurated, there still remained a constant danger from sparks thrown out of the locomotives. Whitcher’s report proposed firebreaks, and the construction of dams and weirs along the Bow River which would flood adjoining marshes and sloughs and provide effective fire-breaks west of Banff Station.

Remedial Action Taken
In drafting the Rocky Mountains Park Act, the legal adviser of the department incorporated a number of the recommendations made by Whitcher. Provision was made for the enactment of regulations which would permit “the care, preservation and management of the park and of the water-courses, lakes, trees and shrubbery, minerals, curiosities and other matters therein contained”. Also provided for was “the preservation and protection of game and fish, or of wild birds generally...” These sections of the Rocky Mountains Park Act were translated into park regulations in November, 1889. They required park residents and visitors to exercise care in the lighting and extinguishing of campfires; prohibited the defacement of natural rock formations or curiosities; outlawed the wounding, capturing or killing of wild animals and birds; and limited fishing to that possible by rod and line. The use of firearms within the park, except under permit from the park superintendent, also was prohibited.

Although statutory authority for forest and wildlife protection now existed, a limited budget and a shortage of manpower hampered the efforts of the park superintendent and his staff. Fire breaks were cut through the woods near Banff in 1889, and in 1891, the road serving the Cave and Basin Springs was extended to Sun Dance Canyon, chiefly for its value as a fire break. The park superintendent had on his staff one officer designated “fire ranger” in the person of John Connor, who resided in Banff. Occasionally Connor had to double as an office assistant. He died in November, 1890, and no record of his replacement as forest ranger has been found. Firefighting became an emergent duty for all park employees and any one else who was available. In his report for 1891, the superintendent stated that a fire bearing down on the villa lot
section of the embryo townsite was arrested only after all government staff turned out to repel it.

Game Protection Difficulties
The enlargement of the park area in 1902 from 260 square miles to about 4,400 square miles by an amendment to the Rocky Mountains Park Act, culminated an aggressive campaign carried on by Superintendent Howard Douglas for several years. The park extension, however, added substantially to his administrative problems. It also revealed that much of the wildlife it should have supported had been decimated. In his annual report for 1903, Douglas complained bitterly about the scarcity of game along the eastern slope of the Rocky Mountains. This situation he attributed to hunting carried on by the Stoney Indians. His views on the matter were set out as follows:

“Twenty years ago, the eastern slope of the Rocky Mountains from the Kicking Horse Pass to the boundary line (international), was filled with game. Moose were frequently seen, elk and black tail deer, white tail deer, bighorns and goats were plentiful; now some of these have totally disappeared and the remainder have been so thinned out as to make this hunting ground practically valueless.”

“The Stoney Indians are primarily responsible for this condition of affairs. They are very keen hunters, and always have been, and they are the only Indians that hunt in this section of the mountains. For years, from their reserve, south to Chief Mountain, they have systematically driven the valleys and hills and slaughtered the game... In season and out, winter and summer, in lambing and fawning time, in fact as long as any game is in sight, they shoot. There is no stop, no rest for the hunted beasts. The old haunts are deserted and sheep runs are falling into disuse, and the greatest game country the sun ever shone on is fast becoming a thing of the past.”

The enlarged Rocky Mountains Park now incorporated much of the eastern slope of the Rockies. It took the form of a huge triangle having a northern boundary 90 miles in length, and tapered southerly to a point where Range 8, west of the 5th meridian, intersects the continental divide. It included a substantial portion of the game-denuded area for which Douglas had expressed concern. Effective control of the wildlife, including its protection, appears to have been impossible until 1909, when the first year-round park warden service was established. This development is described later in this volume.

A Park Museum
During the early days of Rocky Mountains Park, the Department of the Interior employed various means of attracting visitors to the park and fostering interest in wildlife conservation. In 1895, a small museum was attracting visitors to the park and fostering interest in wildlife conservation. In 1895, a small museum was opened on a site south of the Bow River bridge and east of the Sanitarium Hotel. The building originally had been planned as a residence for the park superintendent, but during a visit to the park in 1890, the Minister of the Interior, Edgar Dewdney, indicated his interest in having it converted to the purposes of a park museum. Completion of the building was delayed for a few years, but in 1894 it was removed from its original location near the Banff Springs Hotel and re-sited on Villa Lot 1 in Block 2. It was opened for public use in July, 1895, and the exhibits, carefully assembled by the curator, Norman Sanson, gradually attracted an increasing number of visitors.

In 1903, the museum was moved to a new building on Banff Avenue which also provided accommodation for the park superintendent and his staff. The museum occupied space on the second storey, and its exhibits included well-mounted specimens of larger mammals found in the park, together with mounted birds and waterfowl, and examples of rocks and minerals. Among the most striking exhibits were specimens of mountain sheep and mountain goat, elk, deer and buffalo.

The building, now a landmark in Banff, continues to provide a home for the museum. After a new park administration building was constructed and occupied in 1936, some of the space vacated by the park superintendent and his staff was made available to permit a more advantageous display of the museum’s exhibits. Over the years, these have undergone periodical review and rearrangement during which outworn or superfluous items have been discarded or donated to other institutions, thus effecting a more selective and representative display.

Park Buffalo Herd
The role of Canada’s national parks as sanctuaries for endangered species of wild life took form in 1897. In October of that year, the department received as a gift from a public-spirited citizen of Toronto, T.G. Blackstock, Q.C., three buffalo for display at Banff. This donation, which arrived from Texas, seems to have been unexpected. Superintendent Douglas had to provide make-shift accommodation for the bull and two cow buffalo in the former grounds of the Royal North West Mounted Police, which he enclosed with a strong fence. Some of the former police buildings, of log construction, were used for shelter, and a supply of hay was purchased for forage.

In June, 1898, this gift was supplemented by 13 head of buffalo from a small private herd maintained near Winnipeg by Lord Strathcona, one of the founders of the Canadian Pacific Railway. These animals had an interesting pedigree. In 1873, C.V. Alloway of Winnipeg and Hon. James MacKay, speaker of the Manitoba Legislature, joined a brigade of half-breed buffalo hunters and captured three buffalo calves southwest of Battleford, N.W.T. Two more calves were captured in 1874, near the International Boundary, and the five young buffalo were raised to maturity with the assistance of a domestic cow. By 1878, the small herd numbered 13 pure-bred and three cross-bred buffalo. MacKay died that year and Alloway sold the herd to Col. S.L. Bedson, warden of Stony Mountain penitentiary, for $1,000.

Lord Strathcona is believed to have financed the deal, and nine years later received 27 buffalo in payment. Bedson sold the balance of his herd, 100 head, to C.J. “Buffalo” Jones of Garden City, Kansas.
Lord Strathcona's buffalo were maintained on an estate at Silver Heights near Winnipeg. In 1898, he disposed of the greater part of his small herd. Five head were donated to the City of Winnipeg, and 13 to the Government of Canada for its national park at Banff. Superintendent Douglas had been notified in November, 1897 of the proposed donation, and on their arrival at Banff, the buffalo were installed in a paddock located about a mile and a half east of the station. The paddock, consisting of about 500 acres, had been fenced earlier in the year, and contained adequate summer pasture and water. Winter shelter was provided by the construction of semi-enclosed sheds, and hay was purchased to supplement available forage. In 1904, Superintendent Douglas negotiated an exchange of two buffalo bulls from the herd at Banff for two from a herd owned by Austin Corbin of Newport, New Hampshire. Corbin's small herd had been developed from buffalo obtained from "Buffalo" Jones.

Under careful supervision, the buffalo at Banff gradually increased in numbers until it consisted of 107 head in March, 1909. In 1900, Douglas had placed five elk and 12 antelope in the buffalo paddock. The elk, later augmented by a few deer and moose, increased slowly, but the antelope experiment was a failure. The pronghorn antelope is a fleet creature of the western plains, and rarely thrives in any state of confinement.

**Demise of Sir Donald**

In his annual report for 1909, Parks Commissioner Douglas reported the death early in March of Sir Donald, the patriarch of the Banff buffalo herd. Apparently, he had been attacked by younger bulls, knocked off his feet, and gored and trampled almost beyond recognition. A large handsome bull, Sir Donald was believed to be one of the last specimens of the buffalo that had roamed the Canadian prairies in a wild state. He was one of the calves captured in 1873 by C.V. Alloway and James McKay, and later sold to S.L. Bedson. When Lord Strathcona started his small herd at Silver Heights, Manitoba, Sir Donald was one of 27 buffalo obtained from Bedson. In 1898, he was among those shipped from Silver Heights to Banff.

In reporting the incident, Commissioner Douglas explained that it had been the intention to extend special care to Sir Donald and preserve his life as long as possible as a matter of scientific interest, with a view of determining the longevity of the species. However, Sir Donald had probably by reason of age, been relegated to the status of an "outcast" bull, and his presence in the limited area of the paddock had inspired an attack from his younger rivals which he was unable to repel. Although the carcass was disfigured to an extent that forbade mounting, his head was preserved and mounted for posterity. The old bull buffalo was believed to have attained the age of 37 prior to his death. As Douglas concluded his report of the incident, "... His history during his 37 years of captivity had been one of romantic interest to thousands of people as the sole survivor of a noble type of animal, that in its wild state has become only a memory to the Indians, buffalo-hunters and oldtime white pioneers".

When Howard Douglas made arrangements for the mounting of Sir Donald's head, he probably hoped that it would be preserved in perpetuity. The first destination of the mounted head was Government House, Ottawa, where it was on display for many years. In October, 1926, the Commissioner of National Parks wrote to the Controller, Government House, offering a newly-mounted buffalo head in exchange for "one with a broken horn but of considerable historic interest" which was in his custody. The offer was accepted, the exchange made, and records indicate that Lord Willingdon, the Governor General, was "delighted".

On its return in December, 1926, Sir Donald's damaged head was held in the commissioner's office for several months, and then was presented to the National Museum of Canada. There it remained until February, 1942, when, owing to its fragile condition, it was dismounted. The entire skull, however was retained and, now more than 100 years old, it forms an interesting link with early days on the Canadian prairie.

**The Banff Zoo**

Another development undertaken by Superintendent Douglas at Banff during the early part of the 20th century was the creation of a zoo. Although this project could hardly be termed a conservation measure — since many of the early exhibits constituted exotic rather than native wildlife — it proved to be an outstanding visitor attraction throughout the years of its existence. In 1901, Douglas began to supplement species in the animal paddock east of the town with other animal and bird specimens. By 1904, these included several Persian sheep, three coyotes, a timber wolf, two cougars, a badger and two golden eagles. Funds were made available in 1905 for the construction of a large rustic structure or aviary on the grounds at the rear of the Banff museum for the accommodation of birds.

Into this building, which contained nine cages or compartments, Douglas introduced two pairs of Japanese pheasants, the gift of William Whyte, a vice-president of the Canadian Pacific Railway Company. To these were added seven pairs of other varieties of pheasant, a very handsome gamebird. In 1906, a new cage for two golden eagles was added, and that year all birds in the animal paddock were relocated in the aviary.

During 1907, the construction of additional cages for the accommodation of the smaller mammals in the paddock was undertaken, and by March 31, 1908, their transfer to the combined aviary and zoo on the museum grounds had been completed. The cages were modern and sanitary in design, having been constructed of iron, concrete and limestone rock. Each cage was supplied with water and sewer connections which permitted a constant flow of water through each unit.

On its inception, the new zoo contained, in addition to a number of birds, three specimens of the black bear family — black, brown and cinnamon; two mountain lions or cougars; three timber wolves; two coyotes; kit and red foxes; and specimens of lynx, raccoon, badger, marmot and porcupine. In 1911, Superintendent MacDonald obtained two grizzly bear cubs for the zoo, and in 1912, a polar bear cub in exchange for two moose from the paddock. A special cage, equipped with a plunge pool, was built for the polar bear, which remained an outstanding favourite with visitors for the next 25 years.
The zoo population varied throughout succeeding years, and probably reached its zenith in 1914 when it contained 50 mammals and 36 birds. Although losses in some species were replaced when possible, a decline in the number of caged birds was noticeable by 1935. Of the 24 birds in pens or cages, 12 were Canada geese. In 1937, the National Park administration at Ottawa decided the Banff zoo was no longer a desirable park feature. A number of animals in cages such as bear, Rocky Mountain sheep and mountain goat normally could be seen along many park highways and trails. Moreover, the spectacle of native wild mammal and bird species being maintained in captivity within a national park — itself a museum of nature — appeared both inconsistent and anomalous.

Consequently, the zoo was discontinued at the close of the 1937 visitor season, and the mammals and birds were either liberated or donated to other zoos. The Calgary zoo was the recipient of one of the prized exhibits — the polar bear, together with the four-horned sheep, yak, timber wolves, coyotes and several other species. Donations were also made to zoological gardens at Quebec City, Toronto, Winnipeg and Rome, Italy. The cages, ponds and stone animal dens were dismantled and the site cleared. The former attraction was replaced in 1939 by a picnic area and playground for day visitors. A large parking area for automobiles also was constructed adjoining Buffalo Street.

The disappearance of the zoo brought some protests from the citizens of Banff, particularly from “old-timers” who had witnessed its development. In general, however, both residents and visitors accepted the concept that Banff National Park, containing an area of more than 2,500 square miles, offered adequate opportunity for viewing numerous wildlife species in their natural surroundings.

**Game Fish Propagation**

Of the numerous recommendations contained in the 1886 report of W.F. Whitcher for the development of Banff National Park, probably the last to be implemented was the construction of a fish hatchery at Banff. This action, long overdue, had been urged consistently by former Superintendent Howard Douglas. Little stocking of streams in the park had been done, and most of what was accomplished had been carried on by the Canadian Pacific Railway Company. One notable distribution was the deposit in 1904 of 800 adult Nipigon brook trout in the Bow River west of Banff Townsite.

**The Banff Hatchery**

The Banff fish hatchery was erected in 1913 by the Department of Marine and Fisheries, which also carried on its operation for the next 18 years. Located in a small park between Glen and River avenues near Bow Falls, the two-storey building was fitted out with 30 hatching troughs in clusters of five. During its first year of operation, one million lake (salmon) trout fry were produced and most of these were distributed in Lake Minnewanka.

Two large outdoor ponds constructed on the hatchery grounds in 1914 functioned as rearing pools during the summer season. The establishment was complemented by a dwelling occupied by the hatchery superintendent. The hatchery and pools formed an outstanding visitor attraction for many years, until it was found necessary to discontinue their operation.

In 1931, the management of the Banff hatchery was turned over to the Department of the Interior, and the hatchery staff subsequently carried on their duties under the park superintendent. An extensive program of restocking waters in the mountain national parks was carried on, using rainbow, cutthroat, brook trout and lake trout. Although 154,000 Atlantic salmon fry were introduced to Lake Minnewanka in 1919, lake trout continued to provide the principal catch in this popular lake. The Cascade River system, however, was stocked in 1959 and 1960 with eyed eggs of Atlantic salmon imported from eastern Canada.

Normal operation of the Banff hatchery was disrupted in 1947, following the chlorination of the town’s water supply. The chemically-treated water had a disastrous effect on the fish fry, and after unsuccessful attempts had been made to carry on fish culture by using sulphur water from the Banff mineral springs, and filtered water from Bow River, the original hatchery was closed in 1956. Fish culture operations then were transferred to a small building at Duthill east of the townsite, and some auxiliary hatchery troughs were set up below Johnston Lake at Anthracite. Later, in 1960, when the fish culture activity of rearing rainbow, brook and lake trout in the mountain national parks was consolidated at the Maligne River hatchery in Jasper National Park, the Duthill hatchery operation in Banff Park was reduced to an annual three-month operation for rearing cutthroat trout only. Operations at this site were continued on a seasonal basis until 1969, when the facility was closed permanently.

**Development of Splake**

Despite the difficulties experienced by the fish hatchery staff at Banff with the water supply, an experiment undertaken by Park Warden J.E. “Ernie” Stenton of the Minnewanka Warden District resulted in the development of a hybrid trout. Warden Stenton’s artificial cross was first attempted in 1946, utilizing lake trout and eastern brook trout. Although exposure to chlorinated water resulted in the death of the eggs before complete development, the cross was successfully completed by Warden Stenton during the following year. Later, crosses made by members of both the Banff and Jasper park hatchery staffs were successful, and offspring obtained. The cross between female lake trout and male brook trout was successful with low mortality during incubation. Strangely, a reverse cross between female brook trout and male lake trout resulted in heavy losses and deformed fish. The hybrid fish resulting from the successful crosses was designated as ‘splake’ trout by the biologists of the Ontario Department of Lands and Forests, and as ‘moulac’ by those of the Quebec Department of Fish and Game. Later, a third name, ‘Wendigo’, was given to the hybrid following publication of a photo of the hybrid in the magazine *Forest and Outdoors*.

A shipment of the hybrid trout eggs was made to the Ontario Fisheries Research Laboratory at Maple, Ontario in 1950. Later crosses of trout were carried on by
biologists of both the Ontario and Quebec Governments, and by the Wyoming Fish and Game Commission. Plantings of hybrid trout were made in a number of lakes in Banff and Jasper National Parks and after planting, the growth of the hybrid fish was reported to be most satisfactory.

In general appearance, the adult hybrid is midway between the lake and brook trout. The body is not as slender as the lake trout, the tail is forked, and the profile of the head is that of the lake trout. Colouration is variable. The back is usually vermiculated like the brook trout, fins sometimes are banded with white, and the belly is white.

Eventually the planting of splake in park waters was discontinued, particularly after water supply problems prompted the temporary termination of hatchery propagation of fish stocks and the purchase of fry from sources outside the parks.

**Operations at Waterton Lakes**

Sport fishing in Waterton Lakes National Park was vastly improved and extended following the decision of the Department of Marine and Fisheries in 1927 to erect and operate a fish hatchery there. Since the days of Kootenai Brown, the first settler on land now contained in the park, Upper Waterton Lake had yielded good catches of lake trout. The potential for sport fishing in other park waters, however, had not been exploited. Prior to the advent of the hatchery, the park superintendent relied on the Banff hatchery for most of the fry introduced to the lakes and streams of the park. Donations also were received for several years from a hatchery operated by the United States National Park Service in Glacier National Park, Montana.

The Waterton Lakes fish hatchery was built on a site adjoining the Pincher Creek entrance road about six miles north of Waterton Park townsite. It was served by a good supply of spring water. Completed in 1927, the hatchery was complemented by a dwelling built for the use of the hatchery superintendent, and a combined garage and workshop. According to park records, the total outlay for the hatchery and accessory buildings was $8,500. Fry and adult fish reared at the hatchery were distributed not only within the park but also in provincial waters throughout southern Alberta, which received the major share.

In 1931, the operation of the hatchery was transferred by the Department of Marine and Fisheries to the Department of the Interior, and subsequently the rearing facilities were enlarged. In 1937, construction of a group of rearing ponds was undertaken by the park superintendent on a site in Block 35 of the townsite, just south of Cameron Falls. The ponds, together with a supervisor’s cabin, were completed and opened for use in the summer of 1938.

The Waterton Lakes hatchery was used until 1960, when the consolidation of fish hatchery operations with those at Jasper Park was effected. Although the hatchery buildings were converted to other uses, the rearing ponds were retained for a few years for holding parent fish stocks which were captured for egg collection purposes. After the fish were spawned, they were returned to the lakes from which they were taken. The townsite ponds also were retained, although in later years they functioned mainly for display purposes and as retention areas for fish intended for planting.

A program of stocking or restocking streams and lakes in the park which was carried on after the opening of the hatchery, provided visitors with excellent opportunities for angling. The most widely distributed varieties of fish were rainbow, cutthroat and brook trout. A number of small lakes at high altitude such as Crypt, Lone and Lost Lakes, Lineham Lakes and Rowe Lakes, were stocked primarily with rainbow and cutthroat trout. Although difficult of access, they usually rewarded the angler for his effort. The main Waterton Lakes, one of which has a maximum depth of 405 feet, for many years offered exceptional trolling for lake trout. The largest game fish recorded by an angler in the park was taken from Upper Waterton Lake in July, 1920, by Mrs. C. Hunter of Lethbridge. It was a lake trout weighing 51 pounds.

**Fish Culture at Jasper**

Although Jasper was the largest of the Rocky Mountain national parks, opportunities for sport fishing in its waters during the early 1920’s were poor. Many of its lakes and streams were barren of fish, and a growing tourist industry, stimulated by the construction of Jasper Park Lodge, indicated the need for an extensive fish-stocking program. With the assistance of the Department of Marine and Fisheries, the Commissioner of Parks arranged for an investigation of park waters by the Biological Board of Canada. Studies were carried out by a group of scientists from the University of Manitoba in 1925 and 1926 to determine the volume and variety of natural food available for the propagation of fish, as well as the most suitable species that various waters would sustain. Areas investigated included the Maligne-Medicine lake system, and also lakes and streams in the vicinity of Jasper Townsite, in the Yellowhead Pass area, and in the upper Athabasca River Valley.

The recommendations of the investigators, who included Dr. A. Bajkov, Ferris Neave, A. Mozley and Miss R. Bere, later were implemented. Small aquatic plants were placed in several lakes in the vicinity of Jasper Park Lodge in 1927. Brown trout fry also were distributed in Mildred, Edith, Annette and Big Trefoil lakes, by officers of the Banff hatchery. These lakes then were closed to fishing for two years to facilitate the growth of fish.

The stocking of Maligne and Medicine lakes, and the connecting Maligne River, had been strongly recommended by the Biological Board of Canada. However, the task of transporting fry from the Banff hatchery to Jasper, and from there to Maligne Lake over a rough mountain trail presented a formidable obstacle to the proposed program. After an on-the-ground review of the problem by the park superintendent and the dominion inspector of fisheries of Alberta, it was decided to convert a vacant construction cabin in the vicinity of the townsite water reservoir near Cabin Lake into a temporary hatchery. This temporary facility at the townsite reservoir was closed down sometime in the early 1930’s. Concurrently, the hatchery operation was moved to the basement of the park administration building, and continued at this site.
until a new hatchery at Maligne River was brought into service.

Another decision made was the selection of eastern brook trout — an exotic species — for introduction in the Maligne River system. During the winter of 1927-28, 250,000 brook trout eggs were obtained from a commercial hatchery at Stroudsburg, Pennsylvania. In July, 1928, 190,000 fry were transported by pack-horse to Maligne Lake. Of these, 178,000 were placed in Maligne Lake, and the balance in a creek linking Beaver Lake with Medicine Lake. A second planting of 208,000 fry was made in 1929 and a final planting of 179,000 fry in 1931.

Spectacular Success

The stocking of the previously-barren Maligne River system with brook trout was very successful. The fish grew rapidly. In September, 1929, 16 months after planting, some trout specimens taken for observation were reported to measure from 14 to 18 inches in length and to weigh from one and one-half to two pounds. In September, 1931, fish four pounds in weight were taken and in December that year, one of six pounds was captured. Maligne Lake and tributary waters were opened for fishing on June 1, 1932, and many anglers had little difficulty in obtaining their daily limit — then 15 fish — in Maligne and Beaver lakes. In 1932, catches continued to be heavy, and consequently the daily limit was reduced in 1933 to 10 fish per day with a season limit of 200 pounds.

Maligne Lake, 14 miles in length, not only was the largest glacial-fed lake in the Canadian Rockies, but also one of the most scenically spectacular areas in Jasper Park. Published reports of the successful introduction of trout in a previously-barren lake induced very heavy fishing, and during the seasons of 1933, 1934 and 1935, 5,616 trout having an average weight of 23 ounces were taken by anglers. From 1936 to 1940, both the numbers of fish caught and the average weight declined. Although the average weight levelled off to between one and two pounds, Dean Tweedle of Jasper caught a 10 1/2 pound trout in Beaver lake in 1943. The disparity of early and late catches was explained by the Director of Fish Culture, Department of Fisheries as follows:

"The system has apparently gone through the usual phases that occur when barren lakes are stocked and it would seem reasonable to assume that the system is now producing its normal weight of fish in relation to the crops of natural fish food that it produces annually. In other words, the annual crops of fish have reached a normal level".

Other Waters Stocked

Following the completion of additional biological studies of lakes and streams in Jasper Park, the program of stocking various waters with suitable species of fish was accelerated. By 1940, the limitations of the park fish-rearing facilities were realized, and in 1941, construction of a hatchery was commenced on the Maligne River about half a mile above its junction with the Athabasca River. The new building was completed in 1942, and placed in charge of a hatchery superintendent, William Cable. In 1947, a residence for the use of the hatchery superintendent was erected, and in 1948 a utility building incorporating staff quarters was added to the hatchery complex. The original development included a group of 10 outdoor circular rearing ponds and four rectangular ponds. In the early 1950's, an auxiliary facility was established at the townsite water reservoir near Cabin Lake. The building was used as a sub-hatchery each year from June to September until 1962, when it was dismantled and re-erected at the Maligne River hatchery site.

In 1959, a new source of water supply for the hatchery was brought into use. It came from springs located on the east side of Maligne River, and the water was conveyed to the hatchery by pipe. The use of water from the river was continued, except during brief periods when it was heavily laden with silt. Other improvements made at the hatchery were the installation of concrete raceways, and the construction of a brood pond.

Parks Fisheries Investigations

Before 1940, when the first limnologist was appointed to the Wildlife Division of National Parks Branch, scientific advice on fisheries management was provided by officers of the Biological Board of Canada, the Department of Fisheries, or by private consultants. Mainly, they were concerned with having park waters stocked with suitable varieties of game fish, or alternatively, the removal from park lakes and streams of coarse or objectionable species of non-game fish. Prominent among the early consultants was Dr. Donald Rawson of the Department of Biology, University of Saskatchewan, Saskatoon. Dr. Rawson pioneered game fish studies in Prince Albert and Riding Mountain national parks, and over a period of nearly 15 years, also carried on consultant duties in the Rocky Mountain national parks.

The first national park limnologist, Dr. Harold Rogers, served for a little over a year before he enlisted in Canada's armed forces, and lost his life in war service overseas. He was succeeded in 1945 as limnologist by Dr. V.E.F. Solman. The promotion of Dr. Solman in 1949 to chief biologist in the Wildlife Division led to the appointment as limnologist of Jean-Paul Cuerrier, formerly associate professor of biology at the University of Montreal. Cuerrier subsequently provided consultant services for the national park limnological program for the ensuing 25 years, as chief limnologist in the Wildlife Division and later in the Canadian Wildlife Service. In 1951, J. Clifford Ward, limnologist of the Canadian Wildlife Service was appointed district fishery biologist for the western national parks, with headquarters at Banff, Alberta. When eastern and western regions of the Canadian Wildlife Service were created in 1962, Ward's headquarters were transferred to Edmonton. During his term of office, Ward was called upon for technical advice on many problems associated with game fish management including those at park fish hatcheries.

Angling Pressures Develop

Prior to and following Great War II, the federal and provincial governments, as well as the two Canadian Railway companies, gave considerable prominence in their promotional advertising to game fishing opportuni-
ties in Canada. The success attending the stocking of the Maligne-Medicine Lake system in Jasper park had helped focus attention on the national parks game fish possibilities, and gradually park authorities were under pressure to increase the fish population in national park waters. Fish and game associations also became active in calling attention to what they believed to be deficiencies in programs that would satisfy the ever increasing numbers of anglers.

Superintendents of the national parks in western Canada relied mainly on the production of the three hatcheries at Banff, Jasper and Waterton Lakes parks for fry and fingerlings utilized in the annual stocking operations. These supplies were supplemented by donations from provincial sources, mainly on an exchange basis. The lack of a suitable supply of water forced the closure of the main Banff hatchery in 1956, and the Waterton hatchery had a limited capacity. In 1954, Jean-Paul Cuerrier, chief limnologist of the Canadian Wildlife Service, was requested to undertake a review of all hatchery operations in the mountain parks in order to assess their productive capacity. Following his investigation, Cuerrier recommended that the Waterton Park hatchery be abandoned for fish culture purposes, and that the townsite ponds be retained during the summer months for display purposes and for holding fish intended for distribution in local waters. He also recommended that the Banff hatchery be reduced to a six-month operation each year using existing facilities for display and rearing purposes under supervision of the district fisheries biologist.14 His most drastic recommendation involved the recognition of the Jasper Park hatchery as the main establishment supplying the mountain parks with fish. An expansion of the existing Jasper hatchery was urged, together with the provision of an additional water supply during the annual run of silt in the Maligne River. An additional study completed by Cuerrier in 1955 reviewed the costs of operation of the three park hatcheries involved, and the estimated cost of operating a single hatchery at which all fish culture operations might be concentrated.

Central Hatchery Designated

Action on these reports was deferred while the various recommendations were exhaustively discussed both at Ottawa and in the field. Eventually, a consensus favoured a solution that would solve fish rearing problems and reduce staff and expenditures by concentrating all future activities at the Jasper Park hatchery. In February, 1960, chief limnologist Jean-Paul Cuerrier recommended by memorandum to the Chief, National Park Service, that (1) the Waterton Lakes Park hatchery be closed, although retaining the display ponds at Cameron Falls; (2) that the Banff Park operations be confined to retention of the limited troughs at Duthill for the part-time rearing of trout; and (3) that the main hatchery operations be concentrated at the Jasper Park hatchery. A few days later, these recommendations were forwarded to the deputy minister for consideration and approval, with the advice that water supply was a main factor and that only at Jasper could a satisfactory flow be obtained.17 Departmental approval for the new plan of operation was granted, effective May 1, 1960.

Consolidated Program Begun

Following the consolidation of national park fish rearing operations in the summer of 1960, the Jasper Park hatchery embarked on the task of supplying trout fry and fingerlings for all national parks in Alberta, British Columbia, and Riding Mountain National Park in Manitoba. A.C. Colbeck, officer in charge of the Waterton Lakes Park hatchery, was transferred to Jasper to supervise the consolidated fish culture operations at the hatchery there. Assistance was received from the park warden service in collecting fish eggs from various park waters for incubation. The balance of requirements was obtained from sources outside the parks, including hatcheries operated by provincial and federal governments and by private enterprise. During the year 1962, more than 66,000 fingerlings were distributed in Jasper National Park and approximately 400,000 more in five other western national parks.18

Losses from Diseases

The rearing of fish from eggs to fingerlings or even to adults is a delicate operation. The temperature and clarity of available water are important factors in hatchery operations as are diet and the risk or presence of viral or bacterial infection. Contamination of water resulting from the use of insect or pest controls such as DDT is also possible. Mortality in hatcheries is also known to have been caused by dissolved copper and zinc from pipes and valves. Losses in national park hatcheries also have occurred from ailments such as “cold-water”, “gill”, and “kidney” diseases, and from infectious pancreatic necrosis, better known as IPN.

In November, 1955, the officer in charge of the Waterton Lake Park hatchery reported to the park superintendent that heavy mortality had been experienced in the rearing of rainbow and cutthroat trout.19 Early symptoms had included loss of appetite, extended gill covers and twirling, before ending belly up on the bottom of the trough. Specimens were submitted to the microbiological laboratory of the United States Fish and Wildlife Service at Kearneysville, Virginia, for examination. In December, 1955, the park superintendent received a report from the microbiologist, Dr. K.E. Wolf, that the fish were suspected of having died from acute pancreatic necrosis, a new description for a disease previously described as acute catarhal enteritis. Both the cause and control of the disease were then reported to be unknown.20 Later in October, 1964, Dr. Wolf confirmed the diagnosis of 1955, and stated that the infection then known by its earlier name had been reported in 1940 from the “Maritime provinces of Canada”.21

Rearing Problems at Jasper

By the early 1960's, large quantities of fish eggs were being obtained from federal government fish hatcheries in eastern Canada, to supplement supplies available locally. Concurrently, fish hatchery personnel at Jasper were experiencing severe losses in newly-hatched trout fry and fingerlings. By 1970, losses in brook trout fingerlings were
causing concern. After bacteriological and virological examinations of some of the affected hatchery-reared trout were made, the losses were attributed to a viral disease, *infectious pancreatic necrosis* (IPN). That year, the Department of Indian Affairs and Northern Development entered into a contract with a consultant in Seattle, Washington — Kramer, Chin and Mayo — for a study of the Maligne River trout hatchery, which it was hoped would determine deficiencies in its operation and develop a long range plan for its improvement. The consultant's report, submitted later that year, found the hatchery water supply inadequate in quality and the hatchery obsolete. The report also recommended that a new hatchery be constructed and that the existing hatchery, after improvement, be used as a visitor facility.22

In April, 1972, further study of fish diseases at the Jasper Park hatchery was undertaken by Dr. T. Yamamoto of the Department of Microbiology, University of Alberta, Edmonton, in association with A.H. Kooyman, limnologist of the Canadian Wildlife Service and D. Valin, superintendent of the hatchery. Dr. Yamamoto's report, completed in November, 1972, also confirmed that a high incidence of IPN existed in all adult, two-year-old, and yearling brook trout stocks. It also confirmed the presence of other diseases, including gill and kidney maladies. The report recommended the development of a new hatchery, dependent on the availability of a sufficient and sanitary supply of underground well water. Also disclosed was the fact that if an adequate supply of pure water could not be obtained, a continuation of disease problems at the Jasper hatchery could be expected.23

Also in 1972, a bacteriological examination of fish at the Jasper hatchery was undertaken by members of the Pacific Biological Station of the Fisheries Research Board of Canada, located at Nanaimo, British Columbia. The examination also confirmed the presence of bacteriological kidney disease and IPN at the hatchery. The examining officers, G.R. Bell, T.P.T. Evelyn and G.E. Hoskins, recommended that the hatchery be placed under quarantine until a firm policy respecting its future operation was reached. They also suggested that consideration be given to the elimination of the hatchery and the purchase of certified stocks of fish eggs from other sources.24

Early action followed the receipt of this report. The hatchery was placed under quarantine in September, 1972, and a large number of diseased fish were destroyed. The hatchery grounds also were closed to visitors. During the autumn of 1972 and spring of 1973, the hatchery and grounds were disinfected in an effort to eradicate IPN. However, in May, 1973, the presence of IPN again was detected in a group of 5,600 two-year-old rainbow trout which had been free of disease in 1972. These fish also were destroyed. The remaining stock of rainbow trout found free of disease were utilized in stocking park waters.25

**Hatchery is Closed**

Following consideration of various factors disclosed by investigational reports, and bearing in mind the cost of replacing the existing hatchery establishment, the permanent closing of the Jasper Park hatchery, effective June 30, 1973, was announced by the Director, Western Region of Parks Canada at Calgary, Alberta. The press release confirming the decision stated that discontinuation of the hatchery was due to the obsolescence of the existing plant and the presence of fish diseases. It also was disclosed that other sources for continuing the stocking of park waters at a desirable level were available.

The decision to close the park hatchery was followed by protests from anglers and other groups. A formal protest by the Jasper Park Chamber of Commerce and the local fish and game association resulted in a meeting of representatives of these groups with senior officers of the Western Region, Parks Canada, and limnologists of the Canadian Wildlife Service. The problems experienced by the park hatchery staffs in trying to provide adequate fish stocks over a ten-year period were reviewed, and future park policy respecting the stocking of park waters with game fish was explained. It was revealed that the incidence of disease in the hatchery could be attributed to the purchase of trout eggs from eastern Canada and the northeastern United States. These purchases had been made to produce fish for stocking purposes, in the light of an ever-increasing demand for better sport-fishing in the national parks.

Public concern and that of national park administrators about impairment of the aquatic environment necessitated a change in management procedures and guide lines respecting sport fishing in the national parks. To correct these conditions, sport fishing has been maintained and managed since 1973 in waters designated for fishing by (a) reliance on wild self-sustaining populations of fish through natural reproduction at the individual lake productivity level, and (b) by stocking waters where game fish already existed and such waters would support a fishery without seriously disturbing the natural balance or causing undue impairment of park values.26

The decision to discontinue the propagation of game fish in national park hatcheries probably was logical. However, it evoked feelings of regret not only among the perennial anglers, but also among park officers and technicians who, over the years, had produced millions of fish fry and fingerlings. Many had been retired, and those remaining had been assigned to other duties. They will no doubt recall with nostalgia, the unfailing services of their associates, including hatchery superintendents Jack Martin, Gerry Bailey, Art Colbeck and Bill Cable. Also to be remembered were the technicians, among whom were Ken Goble, Bob Capel, Jim Stringer and Joe Kilistoff. Not forgotten either, were members of the park warden service who transported live fish stocks up the valleys, over the hills, and across the lakes to their final destinations.

Meanwhile, resource conservation policy will continue to be reviewed with the object of ensuring that sport fishing may continue to be part of a “park experience” for visitors in years to come.

**Preserving the Buffalo**

One of the most ambitious experiments in wildlife conservation ever undertaken in Canada involved the purchase by the Department of the Interior, of the largest herd of buffalo remaining in private ownership on the North American continent. The object of this investment was to ensure the perpetuation of a species which had once
ranged over much of western Canada and the United States in millions, only to be reduced by hunting almost to the point of extinction.

The American bison, better known as the buffalo, had the distinction of being the largest and most abundant big game animal on the continent. Its amazing size, enormous head, and splendid chest and shoulders covered with a magnificent coat of shaggy brown hair, combined to provide a description by a well known naturalist as “the grandest ruminant that ever trod the earth”. During the period in which exploration of the North American continent began, no other large game species exceeded it in numbers, and few had equalled it in value to mankind. It provided the native Indian tribes and early settlers with food, clothing and materials for shelter. Its meat was nutritious and well-flavoured; its thick robe was valued for protection against bitter cold; its hide was used for tepees and boats; and even its hair, horns and hoofs were used for various articles of personal use and adornment.

When exploration and settlement of the great central plains of North America began, the buffalo population was incredibly large. It roamed in great herds, some of which were recorded as moving forward on a front of not less than two miles in width and 25 miles in depth. The range, according to Dr. W.T. Hornaday, an authority on the species, extended from tidewater on the Atlantic coast westward across the Allegheny Mountains to the prairies along the Mississippi River and southward to the delta of that great stream. The buffalo also were found west of the Rocky Mountains in New Mexico, Utah and Idaho, and northeast of the Rockies to Great Slave Lake in the Northwest Territories.

*Slaughter followed Settlement*

The buffalo provided the Indian tribes of the great western plains of America with much of their subsistence, and although these aborigines showed little inclination to abstain from killing more animals than actually were needed, their destruction had, for many years, little effect on the annual increase of the herds. However, following the opening up of the American west by railway construction and the arrival of settlers and others who brought more efficient weapons, a disastrous inroad on the species began. By 1820, systematic slaughter of the buffalo was under way. A commercial demand for buffalo robes made the hunting of buffalo a lucrative undertaking, and many adopted it as a means of livelihood. Organized expeditions numbering hundreds of hunters accounted for an increasing number of animals killed. By 1840, buffalo were very scarce in the vicinity of the Red River settlement, where settlers and Indians had virtually extinguished the formerly numerous buffalo. The construction of the Union Pacific Railway between 1865 and 1869 divided the buffalo in the United States into two great herds — northern and southern. Easier access to the great plains area brought additional hunters, and the slaughter of the buffalo reached its peak in 1873. By the end of the following year, the extinction of the southern herd had virtually been completed. Hornaday estimated that 3,158,730 buffalo were killed by hunters in the three-year period of 1872-1874. Concurrently, the slaughter of the northern herd, whose range extended northerly from the Platte River into Canada, was hastened by the construction of the Northern Pacific Railway. The rails of this line were laid to Bismarck, Dakota, in 1876, and from that date onward it received for transportation to eastern markets, all the buffalo robes and hides that came down the Missouri and Yellowstone rivers. Most of the wild herds, other than scattered bands had disappeared from western Canada by 1879, and consequently, the construction of the Canadian Pacific Railway across the prairies during 1882 and 1883 had no effect on the buffalo population. The Metis or half-breeds of Manitoba, the Plains Crees of Qu’Appelle, and the Blackfeet of the South Saskatchewan country had swept bare of buffalo, the great belt stretching from Manitoba to the Rocky Mountains. By the end of the 19th century, the only wild buffalo remaining in any quantity in Canada comprised the small herd of “wood bison”, a sub-species of the plains bison, which occupied a range in the Northwest Territories bounded by the Slave, Peace and Hay rivers, and the southern shores of Great Slave Lake. These animals enjoyed police protection under Canadian law after 1890, and in 1922 much of their range was incorporated in a national park.

The eventual disappearance of such a large grazing animal dependent on vast grazing areas was inevitable. History has confirmed that the indigenous game of any country must disappear or suffer drastic reductions with the advance of settlement. In western North America, the feeding grounds of the buffalo were supplanted by farms, ranches, towns and even cities. To later generations, made more sensitive to the loss of native wildlife by modern conservation practices and education, the rapid and reckless destruction of such a magnificent mammal seemed lamentable. No doubt the public conscience, in the closing years of the 19th century, influenced the development of small exhibition herds of buffalo from surviving specimens, including that established at Banff in 1897.

*Privately-owned Herds*

By 1900, the buffalo population in North America had reached its lowest ebb. Two existing wild herds, one located northwest of Lake Athabasca in the Northwest Territories of Canada, and the other in Yellowstone National Park, Montana, had quasi-legal protection.

A number of privately-owned herds maintained in captivity or semi-captivity had been developed by ranchers and others, and these in future would form a nucleus for the preservation of the species. Mention has been made earlier in this chapter of the herd developed at Stony Mountain, Manitoba, by S.L. Bedson. Other privately-owned herds of the period were those owned by the Canadian Department of the Interior at Banff in Rocky Mountains Park; by Colonel Charles Goodnight in Texas; by C.J. “Buffalo” Jones at Garden City, Kansas; and by Arthur Corbin of the Blue Mountain Forest Park near Newport, New Hampshire. Other small herds included the W.C. Whitney herd near Lenox, Massachusetts, and the Trexler herd near Allentown, Pennsylvania.
**The Pablo-Allard Herd**

The largest privately-owned buffalo herd in the United States — believed to contain 300 head — was owned by Michel Pablo of Ronan, Montana. The origin of this herd provides an interesting story. In 1873, a Pend d’Oreille Indian known as Walking Coyote, was fortunate in capturing four buffalo calves — two bulls and two heifers. Accompanied by his squaw and his stepson, the Indian had been wintering on the Milk River near the present site of Buffalo, Montana. During a hunting expedition, of which Walking Coyote was a member, the four calves were cut out of a large herd, and in accordance with a characteristic peculiar to the buffalo, the calves followed the horses of the hunters who had killed or separated them from their mothers.1

The following spring, Walking Coyote took his four buffalo calves to the St. Ignatius Mission, located in the centre of the Flathead Indian Reservation. Here the calves, by now tame, became pets and objects of interest at the mission. As the calves matured, they began to breed, and by 1884 the group had increased to 13 head. Walking Coyote found the cost of their maintenance beyond his means and he decided to dispose of them. Charles A. Allard, who was carrying on ranching operations on the reservation, learned of the proposed sale. Impressed with the possibility of developing a profitable venture in this group of almost extinct animals, Allard managed to interest a fellow rancher, Michel Pablo, in their purchase. The two formed a partnership and bought 10 of the buffalo for $2,500. Under careful supervision their herd increased, particularly after the infusion of 26 more pure-bred buffalo which were purchased from the “Buffalo” Jones herd in 1893 together with 18 hybrids. These buffalo were part of the group obtained by Jones from S.L. Bedson of Stony Mountain, Manitoba — also the source of the buffalo donated by Lord Strathcona to the Canadian Government for the exhibition herd at Banff.

The partnership was dissolved following the death of Allard in 1896. The buffalo herd, then numbering about 300 head, was divided equally between Michel Pablo and Allard’s estate. The heirs sold their individual shares of the herd, and that of Mrs. Allard was purchased by Charles Conrad of Kalispell, Montana. Other buyers included Howard Eaton of Wolf, Wyoming, a noted hunter, who acquired the shares of the Misses Allard and their brother Charles, Jr. Later, Eaton’s small herd was bought by Buffalo Jones for inclusion in a new herd established at Yellowstone National Park in 1902. Buffalo owned by Joseph Allard, the remaining heir, were purchased by Judge Woodrow of Missoula, Montana, and later were turned over to the 101 Ranch.

**Pablo’s Herd Threatened**

Now the sole owner of a pure-bred herd of buffalo, Michel Pablo disposed of a number of his stock in small consignments shipped to various destinations. Many of his choicest specimens later were found in zoological gardens and private preserves in the eastern United States. Under ideal range conditions prevailing along the banks of the Pend d’Oreille River, his buffalo gradually increased. His hopes for a very large herd, however, were dashed when he learned in 1905 that his grazing privileges in the Flathead Reservation would be terminated shortly, when the land would be opened up for settlement.

Faced with the loss of his range, and with it the possibility of retaining his buffalo herd intact, Pablo sought help in disposing of his prized possessions. Howard Eaton tried unsuccessfully to influence the United States government in their purchase, and the recently formed American Bison Society was unable to help. Pablo visited Washington and aroused the interest of President “Teddy” Roosevelt, who recommended to the 60th Congress that the animals be purchased for a national herd, but failed to win support and an appropriation. Pablo is reported to have received an offer of $75 per head for his buffalo from a local speculator, but it was rejected.

**Canadian Aid Sought**

After his return from Washington late in 1905, Pablo was visited by Alexander Ayotte, an assistant immigration agent for Canada who was stationed at Great Falls, Montana. A native of St. Boniface, Manitoba, Ayotte had, on his appointment to a post south of the border, mastered Spanish and Indian dialects, and had become friendly with Pablo, a half-breed of Mexican descent. Pablo explained his predicament to Ayotte. On his return to Great Falls, Ayotte brought the matter to the attention of J. Obed Smith, then Commissioner of Immigration at Winnipeg. On November 20, 1905, Smith wrote to W.D. Scott, Superintendent of Immigration at Ottawa as follows:

“I have been advised by Mr. Ayotte that during his travel in Montana in the interests of emigration, he met Michel Papleau (Pablo), whose post office address is Missoula, Montana, and he was told by Mr. Papleau that he was anxious to move his herd of buffalo, consisting of 360 head, from Montana to Western Canada. It occurred to me, however, that perhaps some of the Departments of Government are desirous of acquiring some of these animals for the Banff National Park, and as this appears to be a valuable herd and has been brought up in a district very similar to what we have in our own West, it affords an opportunity to secure a desirable bunch of these animals from the one owner.”2

Scott sent a copy of Smith’s letter to the Secretary of the Interior, P.D. Keyes, who in turn referred the matter to the Deputy Minister, W.W. Cory. Keyes’ memorandum added the information that “the herd of buffalo now at Banff is as large as the Park can comfortably accommodate”. The file indicates that the proposal was referred to the Minister, Frank Oliver, and on its return it bore a single word, “No”! On January 8, 1906, Cory advised Keyes that he had brought the matter to the Minister’s attention and it had been decided that the government could not entertain the proposal. Smith was notified accordingly.

Pablo’s need for assistance, however, was not allowed to remain unnoticed. On March 6, 1906, Benjamin Davies, the Canadian Emigration Agent at Great Falls, Montana, wrote directly to W.D. Scott, Superintendent of Immigra-
tion at Ottawa, stating that his assistant, Alex Ayotte, had been approached for assistance by Michel Pablo of Ronan, Montana. Pablo had explained that he was being forced to find a new pasture for his buffalo, as the Flathead Indian Reservation was being opened for settlement. Pablo wanted to know if the Canadian Government would grant him a grazing lease in southern Alberta and permit him to drive his herd across the international border, duty free. Davies concluded his letter with the information that "If the Government prefer to purchase the 300 head, he is open to sell at a reasonable figure." 33

This communication was referred in turn to the Timber and Grazing Branch, the Forestry Branch, and the Deputy Minister of the Interior. Mr. Cory advised Mr. Scott on March 24 that

"I would be glad if you would find out from Mr. Davies at what figure Mr. Pablo would be willing to dispose of his buffalo to us."

Available records indicate a gap in the correspondence, but apparently on May 22, 1906, Howard Douglas, superintendent of Rocky Mountains (Banff) Park was instructed to proceed to Great Falls, contact Davies, and then inspect and report on Pablo's herd. Although not recorded in official reports to Ottawa, Howard Douglas consulted Norman Luxton, a Banff newspaper publisher, on the purchase of the Pablo buffalo herd. Luxton later accompanied Douglas to Montana where he witnessed the early round-up and shipment of part of the herd. In 1908, Luxton published a brief history of the Pablo buffalo, its purchase and shipment to Canada, in the illustrated booklet The Last of the Buffalo.

Douglas Reports on the Herd

On June 15, Douglas submitted a long report to Deputy Minister Cory from Banff. After leaving Great Falls, he proceeded to Missoula where he picked up Ayotte. They hired a team and drove 80 miles to the Flathead Reservation where he met Pablo and saw part of the buffalo herd, believed by the owner to contain 300 head. Douglas stated that his own estimate was 350. The negotiations, carried on with the help of Ayotte as interpreter, revealed that Pablo wanted to sell all his buffalo. Douglas obtained an option, valid to July 17, 1906, for the entire herd at $200 per head, subject to a down payment of $10,000 and the balance on delivery. Douglas strongly recommended the purchase as the animals were pure-bred, and stressed the importance of closing a deal before the United States Government learned of the proposed departure of the animals from Montana. In closing, Douglas commented:

"In my opinion the scheme is quite feasible and could be carried out successfully. It would certainly be a great advertisement for Canada, as, with the wild herd in the North and this bunch, Canada would own 8/10 of all the buffalo living, and including the herd here, there should be a thousand head in five years with ordinary luck."34

Existing departmental files covering the period from late June, 1906 to January, 1907, are devoid of any correspondence on the proposed purchase of buffalo. However, undoubtedly there was some unrecorded activity, for it developed later that an item of $100,000 was included in the department's estimates for 1906-07. In passing, it might be recalled that the fiscal year for departmental business then commenced on July 1, and any delay in negotiations probably was due to budget uncertainty.

This assumption is given credence by the contents of a memorandum forwarded many years later by Commissioner Harkin of the National Parks Branch to the Deputy Minister of the Interior on April 20, 1929. This communication dealt with the early history of the buffalo purchase and included the information that "The matter appears to have stood pending the passage of a vote by the House of Commons of $100,000 for the purchase of the herd". 35

The inclusion of funds in the estimates for any fiscal year usually required the approval not only of the Minister of the department concerned but also that of the Cabinet. The writer was informed years later in August, 1969 by Mabel B. Williams that "We owe the Pablo herd to the Honourable Frank Oliver, who persuaded Sir Wilfred (Laurier) to buy it". Laurier was Prime Minister from 1896 to 1911. Miss Williams had served with J.B. Harkin on the Minister's secretariat from 1901 to 1911, and on the formation of the National Parks Branch in 1911, became one of the original members of Commissioner Harkin's staff.

There seems no doubt that Howard Douglas, while superintendent of Rocky Mountains Park, strongly advocated the purchase of Pablo's herd of buffalo and urged his Minister, Frank Oliver to obtain the concurrence of the Prime Minister and his cabinet. An article which appeared in the Edmonton Journal following Douglas' demise in 1929 strengthened this supposition, and stated that W.S. Fielding, then Minister of Finance, and Arthur Sifton, Chief Justice of Alberta, had extended their support. 36

Buffalo Purchase Approved

By early 1907, Ayotte's repeated representations, Davies's letters and Douglas's persistence, all had paid off. On January 9, Deputy Minister Cory advised Douglas by letter that it had been decided to buy the Pablo herd at $200 per head, provided the buffalo were pure bred. Cory asked Douglas to obtain more information on the quality of the herd, and if satisfied, to make the necessary arrangements for the transaction, based on delivery at Elk Island Park. This request was passed on to Alex Ayotte through Ben Davies. Negotiations, however, were accelerated after Cory received a letter from Douglas dated January 17, with a clipping from an unidentified newspaper, which stated that the American Bison Society at Washington had undertaken to buy all buffalo herds in the United States. Douglas suggested that if the department was at all anxious to buy the Pablo herd, a deal must be arranged at once and a deposit made.

This letter brought immediate results. The Deputy Minister referred the letter to Frank Oliver, the Minister, and recommended that a telegram be sent to Douglas "to close a bargain for the herd". Oliver concurred, and after
being notified, Douglas arranged to meet Ayotte at Great Falls and proceed with him to Missoula. On February 4, Douglas was able to report to Cory that he had obtained a new option expiring on March 1, 1907, covering the purchase of the buffalo at a cost of $200 each, together with the sum of $18,000 for the delivery of the animals in sound condition at Edmonton, Alberta. A deposit of $10,000 in Pablo's bank at Missoula would be required.

Alternative Agreements Drawn
An Ottawa legal firm, McGivern and Haydon, was engaged to draft a suitable form of agreement with Pablo. This was reviewed by the department's legal adviser, T.G. Rothwell, who recorded his misgivings over the desirability of paying over to Pablo, prior to the delivery of any buffalo, a deposit of $10,000. Accordingly, duplicate copies of two separate agreements, signed under the seal of the department by W.W. Cory, the Deputy Minister and, witnessed by J.A. Cote, his assistant, were forwarded to Howard Douglas for completion by Pablo. Agreement 'A' provided for payment of $10,000 to Pablo on delivery of the buffalo at Edmonton, whereas Agreement 'B' entitled Pablo to receive $10,000 on execution of the document. Both forms of agreement called for the delivery of not less than 300 and not more than 400 head of buffalo; guaranteed the animals to be pure bred; and provided for payment of $200 per head in addition to the sum of $18,000 for delivery to Edmonton. The latter amount was subject to a deduction pro rata for each buffalo that was found on inspection to lack pure bred qualities. Under either agreement, the deposit of $10,000 was to be applied to the overall cost of the buffalo delivered.37

New Agreement Completed
On arrival at Pablo's ranch with the agreements — already completed on behalf of the department — Douglas found himself dealing with a shrewd but honest vendor. Pablo had two main objections to the terms of the agreements, and refused to sign either of them. First of all, he did not want to undertake delivery of his buffalo beyond the nearest rail shipping point at Ravalli, Montana. He also would not commit himself to the delivery of more than 150 head. As Douglas explained, Pablo agreed that he had admitted ownership of 350 buffalo the previous autumn, but had not seen them since. Consequently, a number of them might have died during the current winter, a very hard one on wildlife, and he thought the Canadian government might insist on the delivery of 300 head whether or not he had them.

Douglas solved his problem by taking Pablo back to Missoula where the latter had a trusted adviser in the local bank manager. With the aid of this official and Alex Ayotte, who sat in as interpreter, a new agreement was drawn, signed by Pablo, and witnessed by the bank manager on February 25, 1907. Patterned after original Agreement 'B', it called for the delivery at Edmonton of 150 buffalo, subject to the provision that the sale covered the entire herd, with the exception of 10 heifer calves and two bulls which Pablo wished to retain. Other changes included a clause providing for the examination of the buffalo for quality of breed before shipment, and finally, if less than 300 head were delivered by the vendor, a deduction of $60 for each animal under that number would be made from the shipping allowance of $18,000.

The agreement in duplicate, after approval by the department's legal adviser, was completed by the Deputy Minister. One copy, together with a draft for $10,000 in gold, was forwarded to the manager of the First National Bank in Missoula for delivery to Pablo. The department's copy of the agreement was turned over to the chief accountant of the Department of the Interior for safekeeping. Its eventual fate is unknown, for it cannot be found on the files dealing with the buffalo purchase. One copy of the uncompleted Agreement 'A' and two copies of the uncompleted Agreement 'B' were returned to the department by Douglas. Although the return of the second copy of Agreement 'A' was requested by the Deputy Minister, it is not on file.39 It must have been retained by Douglas as a souvenir. Its possession by Thomas Douglas, a son of Howard, was disclosed in an article which appeared in the Edmonton Journal on September 1, 1955.

Temporary Destination Selected
Meanwhile, consideration had been given to the selection of a suitable area for establishment as a buffalo park. Howard Douglas had suggested a site in either of the Sarcee or the Stoney Indian Reserves east of Banff, but another plan was adopted. An examination of Dominion Lands records at Ottawa revealed that a large area of relatively vacant land was available east of Battle River in Alberta, between the Wetaskiwin branch of the Canadian Pacific Railway and the main line of the Grand Trunk Pacific railway then under construction. This area was examined by J.A. Bannerman of the Dominion Lands office at Edmonton and pronounced suitable for buffalo range. On August 6, 1907, Frank Oliver, Minister of the Interior, signed a memorandum to the Commissioner of Dominion Lands ordering the reservation from settlement of about 160 square miles of public land.39 A few sections within the proposed reserve had been granted to the Hudson's Bay Company and to the Canadian Pacific Railway and arrangements were made for the surrender of these holdings in return for vacant land to be selected elsewhere.

As some time would be required to adjust land titles, fence the new park, and erect administrative quarters and housing for the park staff, plans were made to deliver the 1907 shipments of buffalo to Elk Island Park east of Edmonton. This area of 16 square miles had been reserved in 1904 for the preservation of elk, and a contract had been awarded in 1906 for its enclosure by a strong wire fence. One of the group which had been instrumental in having the elk park established was F.A. Walker of Fort Saskatchewan, who, in 1905, was elected a member of the Legislative Assembly of Alberta. Walker was requested by Deputy Minister Cory to use his influence in having the fence completed by the contractor not later than the end of May, 1907.

In March, 1907, Howard Douglas had informed the Deputy Minister that he had undertaken to make the necessary shipping arrangements for Pablo, which would
involve the use of the Northern Pacific, Great Northern, and Canadian Pacific Railway lines. The buffalo would be loaded in cars at Ravalli, Montana, south of Pablo's ranch, and it was hoped to make the run to Edmonton in not over 36 hours. On arrival at Edmonton, it was planned to switch the cars to the Canadian Northern line, which would permit unloading at Lamont, a short distance from the north boundary of Elk Island Park.

The Buffalo Roundup
The roundup and shipment of the herd began in May, 1907. Pablo's buffalo had never been herded, and were as wild as the original animals of the plains. Although Pablo secured the services of the most experienced cowboys he could assemble, and bought the fastest horses obtainable, the task of rounding up and loading his buffalo took more than four years. During the first year, some 75 riders, including Charles Allard, Jr., a son of his former partner, took part. Norman Luxton, described the roundup as follows:

"Day after day these untiring men and horses surrounded the wild herds of buffalo in the Flathead Reservation, and three times in only six weeks of daily drives were they successful in getting any of the buffalo to the corrals. The buffalo, when they found themselves being urged from their native pastures, would turn on the riders and in the wildest fury, charge for the line, scattering to all parts of this cactus-grown country the daredevil cowboys."

On reaching the corral at Pablo's ranch, the buffalo lost some of their spirit. The drive down the Mission Valley to the railway was accomplished without too much difficulty, and not until they reached the loading corrals was any serious trouble encountered. This is how the Daily Missoulian described the loading in its May 29, 1907 issue:

"But at the sight of these loading pens the big beasts attempted to back away. Their speed, however has been checked, and they cannot run over the line of horsemens as is drawn close around them. Gradually they are worked into the big pens as they are wanted for loading, and when they are once in the corrals the real trouble of loading begins. The pens are built as strongly as they can be made. . . Once in the pen, the animals are cut out, one by one, and run into the loading pen. They are wild and by this time angry. A few pawings at the earth, a toss of the mighty head, and the imprisoned bull looks around him. A narrow gate is open and it seems to him to lead to liberty. Through the opening he dashes, the gate swings behind him, and he is in the chute that leads to the car."

"Perched on a running board along the chute is a big Indian with his lariat loop swung wide open. As the buffalo lunges forward below him, he drops the noose over the angry head. A turn around a snubbing post and the noose is tightened and the animal is held fast. Bars are thrust behind his back so he cannot back out; then he is under control and is eased into the car. . ."

"The loading has been accomplished with but one serious accident. One bull so injured himself that it was necessary to kill him. In an incredibly short time the carcass was skinned, the meat distributed among the Indians, and the head and robe packed away for presentation."

On hand for the loading of the first shipment were Howard Douglas, Norman Luxton, Alexander Ayotte, Dr. David Warnock, a Canadian veterinary surgeon, a Mr. McMullen, freight agent of the Canadian Pacific Railway, and of course Pablo, the vendor. On June 11, Howard Douglas reported to the Deputy minister that 199 head of buffalo had arrived at Lamont, Alberta, over the four railway lines already mentioned. The cars arrived at Strathcona (now South Edmonton) on May 31, and were unloaded at Lamont the following day. All animals were inspected before shipment by Dr. Warnock. Altogether, 204 buffalo were driven from the ranch near Ronan to Ravalli, but Pablo lost five head in loading and three died after delivery at Lamont. Douglas stated that nearly half of the load had to be drawn into the railway cars with block and tackle. Once inside, each buffalo was roped by the neck and a two-inch plank gate installed between it and the next occupant.

Pablo accompanied the first shipment to Lamont, and inspected the range in Elk Island Park. This he considered unsuitable — too much bush and the available grass quite different to that prevailing on the range in Montana. Although he recommended that another location be found before the next shipment was made, later events proved that the buffalo would thrive on the Elk Island range.

Before the arrival of the railway cars at Lamont Station, the fencing of Elk Island Park had been completed. In addition, F.A. Walker had supervised the construction of a lane fenced with strong wire from the station to the north boundary of the park, a distance of two and three-quarter miles. An unloading chute and corral also had been constructed at Lamont, and the buffalo were herded along this temporary lane to what was intended as a temporary home.

Appropriation Increased
By mid-July, 1907, it had become evident that Pablo had under-estimated the number of buffalo in his herd. In a letter which he sent to Alex Ayotte on July 19, he complained about the clause in his contract covering the cost of shipping the animals to Canada. He enclosed a statement alleging an expenditure of $10,216 for the 199 head already delivered, which averaged out at $51 per head. As Pablo now believed the herd actually contained 500 buffalo, it was evident that the $18,000 allowance would not cover the cost of shipping more than 400 head.

Ayotte passed on this information to Douglas. He, in turn wrote to the Minister, Frank Oliver at Edmonton, advising that on the assumption that 350 more buffalo were available, an additional appropriation would be required. Douglas also wrote Deputy Minister Cory at
dt to both the Deputy Minister at Ottawa and Howard cover shipping costs from Ravalli to Edmonton, Pablo already shipped, and the fact that the Minister of the experience gained during the assembly of the animals giving thought in October 1907 to the problems involved New Contract Prepared Douglas at Banff, requesting a new contract to cover their Montana range to a new one in Alberta, Pablo was with more than half his buffalo safely transferred from the buffalo that Pablo was expected to provide. A second shipment of buffalo made in 1907 from Ravalli, Montana arrived at Lamont on October 11. This shipment of 211 head contained a great many more cows and heifers than the first one, and their assembly apparently gave Pablo and his cowboys less trouble. Pablo had hoped to deliver more than the number loaded, but that summer the Montana range had experienced a grasshopper invasion, and many of the buffalo had crossed the Pend d’Oreille River to the Bitter Root Mountains in search of better pasture. In reporting the shipment, Douglas volunteered the information that at least 200 more animals would be available in 1908, and recommended their delivery to the new park in the Battle River area. The shipment in October, 1907, which brought the total delivered to 410, suffered only one casualty in transit. This was an injured bull which had to be destroyed on arrival. A freak accident, however, caused the loss of 10 buffalo already in the park. On October 13, Ellsworth Simmons, the resident caretaker, reported that after the buffalo had arrived in the park, an attempt was made to drive them farther south to an area of open hills. Eleven animals were discovered in one of the many patches of muskeg that existed in the northeastern part of the park, and after they were dragged out with the aid of horses, only one was alive. Simmons concluded that the buffalo either had become mired while attempting to obtain water, or were crowded into the muskeg by animals which had arrived in June, the greater proportion of which were bulls. The animals lost included three mature cows, three heifers and four calves. New Contract Prepared With more than half his buffalo safely transferred from their Montana range to a new one in Alberta, Pablo was giving thought in October 1907 to the problems involved in rounding up an expected 200 more. In the light of experience gained during the assembly of the animals already shipped, and the fact that the Minister of the Interior had agreed to a new flat rate of $45 per head to cover shipping costs from Ravalli to Edmonton, Pablo wrote to both the Deputy Minister at Ottawa and Howard Douglas at Banff, requesting a new contract to cover future sales. Douglas undertook the preparation of this document, a copy of which remains on file. Dated the 21st November, 1907, it followed closely the agreement completed by Pablo and the Deputy Minister earlier in the year. Amendments, however, set out clearly the new rate of $245 for each buffalo loaded at Ravalli, shipped, and delivered to Edmonton. It also stipulated that inspection of the animals prior to shipment would be made by the Minister or his representative at Ravalli Station or at the ranch of the vendor. Pablo’s signature on the agreement was obtained by Alex Ayotte, and after completion at Ottawa, Pablo’s copy was forwarded to his banker at Missoula. An Unproductive Year High hopes for the completion of the roundup of the remaining buffalo and their safe transfer in 1908 to either Elk Island or Buffalo National Park were dashed by a series of misfortunes. Owing to sickness in his family and personal ill-health, Pablo was unable to commence the work until late in the season. Douglas reported that only after a second visit to the ranch were operations commenced. Pablo had constructed a wing fence eight miles in length at a cost of several thousand dollars to assist in the drive, and had purchased the best saddle horses available. After several weeks of hard riding, his cowboys had enclosed 120 buffalo in the ranch corral preparatory to driving them 36 miles to Ravalli. However, on the night after the last buffalo was corralled, the animals stampeded, climbed an almost perpendicular clay cut-bank at the rear of the enclosure, and escaped! As early snow was falling in the adjoining mountains, the possibility of recapturing the frightened buffalo was unlikely. Douglas recommended to the Deputy Minister that an extension to May, 1908, be given Pablo in which to fulfil his contract. This reprieve was granted, after Pablo had agreed that the department would be required to pay for only one-half of the calf crop included in subsequent shipments. First Shipments to Wainwright The fencing of the new park reserve east of Battle River, to be known later as Buffalo National Park, was completed by September, 1908. It involved the erection of 73 miles of exterior and interior fencing, including the enclosure of a paddock of 2,800 acres for the display of a number of buffalo, and a few moose, elk and antelope. The initial cost of the fence was $60,000. Additional land outside that originally reserved was acquired at the northeast corner of the park from the Grand Trunk Pacific Railway Company for the erection of a superintendent’s residence. By May, 1909, the new park was in a position to receive its buffalo population and during the month of June 325 head were shipped from Elk Island Park. The 1907 operation at Elk Island was reversed when the buffalo were driven up a fenced lane to Lamont Station, loaded on 26 railway cars, and unloaded by chutes into a corral at Wainwright Station, located about a mile from the northeastern corner of Buffalo Park. The transfer, the largest single movement of buffalo since the herd was purchased, was accomplished with the loss of only three head, — a young bull, a two-year-old heifer, and a calf. The shipment included most of the buffalo that could
be rounded up. Unlike the Montana range and that of the new park at Wainwright, Elk Island Park had a substantial forest cover, mostly popular. Prior to the roundup, Caretaker Simmons had estimated the number of buffalo in the park at 403, but after the drive had been completed, it was believed that the number was closer to 375. The buffalo remaining in the park, later estimated at 48, formed the nucleus of a herd that eventually contained 2,000 head. In reporting to the Deputy Minister, Howard Douglas recommended that all buffalo be removed from Elk Island Park. However, this suggestion was not implemented, probably because of the difficulty that would be experienced in locating the survivors, and also because by 1909, the buffalo had become the stellar attraction at that park.

An unusual incident attended the unloading of the buffalo from the railway cars at Wainwright when Howard Douglas, who supervised the operation, sustained the loss of personal funds and a government cheque drawn in his favour for $20,000. As Douglas later explained the mishap, he had the cheque and $200 in cash in a purse tucked in the inside pocket of his suit coat. Clad in a heavy oilskin, Douglas had worked hard in the unloading operations, and after a day spent in climbing in and out of cattle cars, missed his purse at six o’clock in the afternoon. An intensive search, including the raking of the emptied cars, failed to disclose the missing article, and Douglas promptly wired the Department to have payment on the cheque stopped, in case it was presented. It represented an advance to cover the estimated cost of shipping the train-load of buffalo, and had not been endorsed. As Douglas commented in his report on the loss, it probably was lost in the mud and manure generated by an all-day rain. The cheque was subsequently replaced.

Later Shipments of Buffalo
Early in July, 1909, Pablo completed the successful shipment of 190 head of buffalo directly to Wainwright. More than half of the animals were female, and 13 of the 26 calves included were exempt from payment under the terms of the latest agreement. Many of the loading difficulties and losses previously experienced in Montana were avoided by a new method of shipment. Pablo had 50 heavy crates or cages constructed of planks, and instead of driving the animals from the ranch corral to Ravalli, each buffalo was driven into a chute which led into a cage. The cages were then drawn by wagons to railhead for shipment. At Ravalli, the animals were driven from their temporary cages into cars in which separate compartments for each animal had been installed. Another shipment of 28 buffalo received on October 19 at Wainwright brought the total number delivered in 1909 to 218. Later, on October 31, Howard Douglas transferred 77 head of buffalo from the exhibition herd at Banff to the herd in Buffalo National Park.

After three seasons which involved much hard riding and resulted in some disappointment, Pablo had not yet exhausted his supply of buffalo. On November 4, 1909, he recounted his latest misfortune in a letter sent to W.W. Cory at Ottawa. Evidently a group of Indians engaged in chasing and rounding up wild horses on the range in the Flathead Reservation had destroyed parts of his wing fence so essential to the success of his buffalo drives. He had hoped to ship 100 more buffalo, but the damage sustained had prevented further deliveries that year. Consequently, Pablo requested and obtained permission to defer additional shipments until the year following. During 1910, 46 buffalo were received at Wainwright on June 12, and an additional 28 on October 18.

Corbin Herd Acquisition
Although he lacked veterinary or biological training, Howard Douglas apparently believed that an introduction of buffalo from other sources would improve the strain at Buffalo National Park. Early in 1910, he learned that Mrs. Alicia Conrad had a number of buffalo surplus to her requirements in a herd developed by her late husband, C.E. Conrad, at Kalispell, Montana. The nucleus of this small herd had been purchased from the estate of Charles Allard, who had been Michel Pablo’s partner in the buffalo venture. Douglas brought the matter to the attention of Frank Oliver, who authorized him to make inquiries and if buffalo could be obtained at $250 per head, to arrange for their purchase. Later in the year, Douglas was successful in negotiating the acquisition of 30 head at $250 each. By mutual agreement, delivery was taken over a six-month period. The first shipment of 15 head was received at Wainwright on November 23, and the remaining 15 on April 20, 1911.

Pablo’s Final Shipments
Meanwhile, Pablo was making a final effort to complete the terms of his agreement with the Department of the Interior. Douglas reported on June 16, 1911, that Pablo had let a contract to Charles Allard Jr. to corral the balance of the Pablo herd still running wild. Under the contract, Pablo would pay Allard $100 a head for each buffalo he could deliver to Ravalli Station. On May 30, a shipment of seven buffalo and seven elk was received at Wainwright, for which Pablo received $2,100. It was evident that Allard was having little success in his drive, for no additional animals were shipped that year. The year following, 1912, Pablo made his final shipment of seven buffalo which were received on June 6. This small delivery brought to 716, the number of buffalo for which he received payment. Nearly two years later, on March 31, 1914, Douglas added 10 more buffalo from the exhibition herd at Banff to the expanding herd in Buffalo National Park.

Michel Pablo’s contract had been extended on the recommendation of Parks Commissioner Harkin to March 31, 1913. In a final letter to the department, Pablo in August of that year reported that no more buffalo could be expected, as the scattered few remaining could be corralled only during the winter. This information, however, was not disturbing, for Canada now had in Buffalo National Park what was believed to be the largest single herd of buffalo in the world. A census taken by the park superintendent on March 31, 1913, had disclosed a total of 1,188 head. Elsewhere there were 71 buffalo in Elk Island Park, 28 at Banff, and an unknown number of the northern wood bison in a remote area of the Northwest Territories. The plains buffalo, once practically extinct in Canada, had been restored in numbers, and offspring of
the former Pablo herd would in future, be distributed as exhibition animals to zoological gardens all over the world.

**Buffalo National Park**

A new home for the buffalo herd purchased from Michel Pablo was created in the form of a national buffalo park by federal Order in Council of March 7, 1908. The new park contained about 160 square miles of rolling prairie located southwest of Wainwright, Alberta. Set with numerous small lakes and supporting stands of aspen and extensive wild hay meadows, it contained unmistakable evidence of former occupation by buffalo. Skulls, bones, dried walls and partly obliterated trails identified it as part of the vast range traversed by the great migratory herds of years gone by.

Later, the original area was subjected to adjustment in the settlement of land claims, and by the purchase of additional land. New legislation passed in 1911 — the Dominion Forest Reserves and Parks Act — permitted the formal establishment of Buffalo National Park on March 27, 1913, with an area of 159 square miles. In March 1925, an addition of 36 square miles comprising an area capable of producing large crops of hay and grain was incorporated in the park. Subsequent land purchases brought the park area to 200 square miles.

**Park Administration**

Concurrently, with the movement of 325 head of buffalo from Elk Island to Buffalo National Park in 1909, Howard Douglas, the Commissioner of Parks at Edmonton, had arranged for the transfer of Edward Ellis, caretaker of the wild animal enclosure at Banff, to the new park at Wainwright. Later Ellis was confirmed as the park's first superintendent. He was replaced in June, 1912, by W.E.D. McTaggart, who occupied the position until 1916. That year, Alfred G. Smith of Edmonton was appointed superintendent of Buffalo Park, and continued in charge until his retirement in 1940.

Buildings for administrative and staff purposes gradually were constructed at various locations in the park as appropriations permitted. Extensive farming operations in the southeastern part of the park were undertaken to provide food for the buffalo and other wildlife species during the periods in which grazing was poor or impossible. Following an increase in the buffalo population, a centre for these operations was developed at Gat lake in the southern part of the park. Interior cross-fencing permitted the creation of a winter range of about 12 000 acres for the buffalo, and the segregation of the southeastern portion of the park for agricultural activities.

Measures to control grass fires and to prevent them from entering the park included the ploughing of fireguards 20 feet in width along each side of the exterior park fence, and along much of the interior cross-fencing. For the purposes of game protection, the care of animals, and general range supervision, the park was divided later into two areas or districts, each in charge of a park warden. The warden stations were erected at strategic locations, where gates controlled the entry of vehicles to park roads which were accessible from the provincial highway system. Much of the routine work in the opera-

**Cattalo Experiment**

In 1916, an area of 2,800 acres in the park south of Jamieson Lake was made available to the federal Department of Agriculture for experimental work involving the cross-breeding of buffalo with domestic cattle, and later with yak. The area was separated from the main buffalo range by a strong wire fence. Experimental cross-breeding of buffalo in Canada was pioneered by Mossom Boyd of Bobcaygeon, Ontario, who began this work in 1894 by crossing a buffalo bull with domestic cows. Following the death of Boyd in 1915, his herd of hybrid buffalo was sold. Twenty of these animals were purchased by the federal Department of Agriculture and shipped to its experimental farm at Scott, Alberta.

In 1916, by agreement between the Director of the federal Experimental Farms Service and the Commissioner of National Parks, the hybrid buffalo experiment was relocated in Buffalo National Park. The area made available was fenced and then divided into enclosures where cross-breeding was carried on by utilizing male and female buffalo from the park, and domestic cattle purchased by the Experimental Farms Service. A small herd of 19 yak — a species native to Tibet — was transferred from the wild animal enclosure at Banff to Buffalo Park in 1921, for use in the project.

The purpose of the cross-breeding was to develop an animal that would have the rugged health and the foraging qualities of the buffalo, and thus decrease the cost of winter feeding. The buffalo hybrids also tended to carry a higher percentage of flesh along the back than do domestic cattle, and accordingly promised to provide a carcase that would compete successfully with that of cattle in the fresh meat trade.

Problems that involved the production of cross-breeds included mortality of calves at birth, particularly when...
domestic cows served as mothers. Lack of fertility in the first cross-breeds also was pronounced. Over the years, however, the Department of Agriculture enjoyed considerable success in cross-breeding buffalo, and the resulting hybrids were a source of great interest to park visitors. After the operation of Buffalo National Park was suspended in 1940, the experimental work was carried on by Department of Agriculture officials in the cattalo enclosure for several years. In 1949, the calves born that year were transferred to a federal experimental farm at Manyberries, Alberta, and the following year the balance of the breeding stock was relocated there. The cattalo experiment at Manyberries was closed down permanently in 1964.

**Growth of the Buffalo Herd**

Before the final delivery of seven buffalo had been made in 1912 by Michel Pablo, the national herd at Buffalo National Park had begun to expand. On March 31, 1912, it numbered 994 head, a net increase of 263 over the 731 buffalo received to that date from various sources. In March, 1915, the count was 1,640, and a year later, the buffalo herd contained 2,077 animals. From 1917 onwards, the herd increased steadily, and requirements for winter feeding necessitated the harvesting of more hay and grain. By March, 1921, the proportion of male and female buffalo was estimated to be even, and with 5,152 head in the park, consideration was being given to a reduction in the number of buffalo bulls which was by then double the normal requirement.

In the summer of 1922, the first steps preparatory to the reduction of the herd by slaughter was undertaken. The first unit of an abattoir, together with a bunkhouse and barn, were constructed in the northern part of the winter range. Later in the early winter of 1923, 264 buffalo were shot and butchered under the supervision of a dominion veterinary inspector, Dr. I. Christian. As the Department of the Interior was interested in the general health of the herd, Dr. A.E. Cameron, later the Veterinary Inspector General of the Department of Agriculture, and Dr. Seymour Hadwen of the Ontario Research Foundation, also were present. The inspectors found that 75 percent of the animals slaughtered had some form of tuberculosis lesion. Dr. Hadwen recommended the elimination of the herd to avoid the spread of the infection, but the proposal was not acceptable to park authorities. Dr. Hadwen then offered suggestions to the Department of the Interior for reducing the percentage of disease in the herd. These proposals included improved methods of feeding the buffalo in winter, and the slaughter of the older animals whenever possible.

**Herd Reduction Measures**

The initial slaughter of buffalo undertaken in 1923 as a means of reducing the herd was regarded as an experiment by the Commissioner of National Parks. As only older males were killed, it was decided that most of the meat could best be utilized as pemmican. The department arranged for the manufacture of this product — once a staple food of pioneers — according to the original Indian recipe. In essence, it was a mixture of dried buffalo meat and melted buffalo fat. Substantial orders for pemmican later were received from northern Canada.

During the summer of 1923, plans were completed for a very substantial reduction of the buffalo herd. This was carried out during the following winter, when 1,847 animals were shot and slaughtered in the park abattoir, which had been enlarged. The fresh meat resulting from the kill was marketed through packing houses in various parts of Canada, and the hides disposed of by sale. The presence of disease was withheld from public knowledge as a matter of departmental policy. Every care, however, was taken to protect public health as all carcasses from the slaughter were rigidly inspected by a qualified veterinary inspector, and any meat unfit for food was destroyed. Consequently, it was believed that no more hazard existed than would be the case in the normal slaughter of cattle. The sale of buffalo meat was stimulated by the printing and distribution of small brochures by the National Parks Service. These pamphlets contained recipes for the preparation and cooking of buffalo meat, and also of pemmican.

**Filming “The Last Frontier”**

An interesting episode in the history of Buffalo National Park was the roundup and use of the buffalo herd in the filming of a silent “Western” motion picture film in October, 1923. Earlier that year, the Commissioner of National Parks had entered into an arrangement with the Thomas H. Ince Studios of Culver City, California, to provide buffalo and the services of some of the park staff in completing scenes in a scenario based on The Last Frontier, a novel by Courtney Ryley Cooper. The arrangement had two purposes in mind — revenues and extensive free advertising.

By March 31, 1923, the buffalo herd in the park numbered 6,780 head. After adding the expected calf crop, it was believed that by autumn the buffalo herd would exceed 8,000. This number greatly exceeded the grazing capacity of the park, which had been impaired by successive dry seasons from 1917 to 1922. Consequently, a substantial slaughter of older animals during the coming winter had been decided upon. Coping with surplus buffalo on a commercial basis involved the disposal of heads, hides and meat. Buffalo products had been off the market for upwards of 40 years, and a strong demand for buffalo robes, steaks and mounted heads was anticipated. To obtain the most rewarding returns on the slaughter required the public interest, and one of the ideas proposed for the education of the public was the making of a movie.

The scenario approved by the commissioner called for the roundup and stampeding of about 100 buffalo through a fenced funnel to provide the effect of a “thundering herd”, and the shooting, during a simulated buffalo hunt, of a limited number of aged bulls. The script involved the participation of a band of 150 Indians from the Cree Reservation at Hobbema, Alberta, who were provided with a campsite in the southern part of the park. The arrangements also called for the donation to the department by the film company of surplus cuttings from the thousands of feet of film it was expected would be exposed. In consideration of its assistance, the Depart-
The numerical loss was insignificant. The Ince company exceeded the quota of animals to be shot, for in addition to originally contemplated. The riflemen also greatly included the value of all buffalo destroyed in their in the course of a reduction program a few weeks later, killed. However, as 2,000 buffalo were to be slaughtered use of about 4,000 buffalo rather than the 100 head park superintendent Smith resulted in the roundup and the buffalo herd. Some misunderstanding on the part of able Buffalo National Park for scenes requiring the use of operation of the Canadian government in making avail­

ment was to receive a fee of $2,500, together with $250 for each buffalo killed.

Rehearsing and filming in the park occupied six days from October 17 to 22, 1923. The major buffalo hunt scene was staged on the third day, when a herd of almost 4,000 buffalo was driven by mounted horsemen between two heavy woven wire fences erected in the shape of a huge funnel. Cameras were placed on a camouflaged stage at the narrow end of the funnel, and other camera­men were concealed behind brush on adjoining hillsides. oncoming herd of buffalo.

Expert riflemen, also in hidden pits, opened fire as the buffalo came within range of the cameras, and 34, mostly bulls, were shot. Some dropped immediately, but others, although wounded, ran for some distance. Later they were located by armed riders and dispatched. A report filed by an officer of the Royal Canadian Mounted Police who attended the filming, commented on the fact that although the stampede was a hazardous undertaking, it was carried out successfully without injury or loss of human life. The balance of the filming operation occupied the final three days of the camp, and included scenes depicting a battle between Indians and the American cavalry, Indians chasing buffalo, and a pow-wow staged at the Indian camp around an evening campfire.

The use of Buffalo National Park and the killing of a few buffalo aroused considerable public criticism, particu­larly after the Edmonton Journal published a story, quite unfounded, that the Indians would be “shooting feathered barbs into vital spots from bows.” As Commissioner Harkin explained in a prepared statement:

“Newspaper stories teeming with misrepresentation and exaggeration have appeared all over America. Overlooking for the moment the criticism of govern­ment officials, the outstanding fact is that the Wainwright buffalo herd has had the most wonder­ful advertising which can be capitalized not only in regard to our forthcoming sale of buffalo products but also in regard to tourist business next year for Buffalo Park. Years of ordinary publicity work would not have served to educate the public of this continent on Buffalo Park and buffalo products as this has done in a few weeks; and the educational work will be increased when the film is put into circulation and all the advertising of the film by the Ince people carried out”.

The arrangements agreed upon called for a credit in the main title of the completed film, acknowledging the co­operation of the Canadian government in making avail­able Buffalo National Park for scenes requiring the use of the buffalo herd. Some misunderstanding on the part of park superintendent Smith resulted in the roundup and use of about 4,000 buffalo rather than the 100 head originally contemplated. The riflemen also greatly exceeded the quota of animals to be shot, for in addition to 10 buffalo bulls, 19 buffalo cows and five calves were killed. However, as 2,000 buffalo were to be slaughtered in the course of a reduction program a few weeks later, the numerical loss was insignificant. The Ince company included the value of all buffalo destroyed in their

financial settlement with the department, and also spent about $46,000 in wages and miscellaneous disbursements while on location in Canada.

Park Film Produced
The advertising value of the Ince Company’s activity is difficult to gauge, but the annual visitor attendance at Buffalo National Park showed substantial increases during the next 10 years, particularly in 1928 and 1929 when attendance totals of 18,000 persons were recorded. The national parks publicity division moreover, received a permanent visual record of the buffalo roundup and stampede in the form of film cuttings from the editing of the original film exposed by Ince photographers. This material, augmented by footage added later to the Na­tions Branch film library, permitted the production in 1933 of a new film subject, Return of the Buffalo, which incorporated a number of spectacular scenes of the buffalo in motion. The film, with accompanying sound narrative, was made with the assistance of Associated Screen News Limited of Montreal, and later was made available for showing by theatrical exhibitors in Canada and the United States. The theme of the film was the part played by the government of Canada in restoring the numbers of the American bison — once so numerous — but later reduced by indiscriminate killing almost to the point of extinction.

A highlight of this motion picture was a stampede scene which portrayed a veritable stream of brown-robed bodies flowing in undulating waves across the screen. It also depicted from ground level, the onrush of hundreds of buffalo, whose pounding hooves swept over a pit in which the cameraman was installed. This scene was filmed by William J. Oliver of Calgary, Alberta. For many years, Oliver had been the official photographer engaged by the national parks publicity division in the production of scenic and wildlife films, and was the only cameraman known to have entered a pit on a buffalo range and permitted a buffalo herd to be driven over him.

Several of the park wardens assisted in the filming of the Ince motion picture, as their services were essential in organizing the stampede scenes. One of them, E.J. (Bud) Cotton, was interviewed at Calgary by the writer in October, 1978. Although 88 years of age, Cotton remem­bered vividly the stirring days of 1923 on the buffalo range, and also those of later years when the park wardens assisted Bill Oliver in obtaining additional motion picture footage and still photos for park publicity purposes. Riding herd on buffalo was dangerous work, Cotton recalled, especially during annual round-up time when the herd was counted and animals selected for herd reduction by slaughter. Riders occasionally were thrown, rolled on by fallen horses or crushed in the corrals. During Cotton’s terms of service, two of his assistant wardens were accidently killed on duty. A third, D.W. Davison, finished his later years of service minus one arm.

Shipments to Northern Canada
Press publicity given to an announcement by the Depart­ment of the Interior in 1923 of its intention to reduce the buffalo herd in Buffalo National Park by phased slaughters brought considerable criticism. No doubt the
public attitude had been influenced in part by irresponsi-
ble stories concerning the filming of the herd in October,
1923. Letters addressed to the department, to the Com-
misisoner of Parks and to Canadian newspapers sug-
gested as an alternative, the shipment of buffalo to other
areas including northern Canada. A proposal of this
nature had been made to the commissioner in 1919 by
Maxwell Graham, a member of his staff, whose duties
involved the care and administration of wild animals
in the national parks. At that time, however, the grazing
capacity of the park had not yet been impaired, and the
suggestion was not acted on.

In 1924, the proposal was revived, after consultation
between the director of the Northwest Territories and
Yukon Branch of the Department, O.S. Finnie, and Parks
Commissioner Harkin. Finnie and his staff favoured the
southern part of Wood Buffalo Park — established in
1922 — as a logical destination. Commissioner Harkin
and his officers were aware of the hazards involved in
shipping buffalo from Wainwright to the northern park,
where the wood buffalo or bison, a distinctive species,
would be liable not only to hybridization, but also to
tubercular infection. As proposed in early discussions, any
buffalo shipped north would be restricted to young ani-
mals, which had been subjected to a tuberculin test.

Eventually, with the concurrence of the Deputy Minis-
ter, a decision was reached to make successive shipments
of buffalo, equivalent to the annual calf crop, from
Buffalo Park at Wainwright to Wood Buffalo Park in the
Northwest Territories. These shipments, phased over
several years, were forecast in an article prepared by
Maxwell Graham, then on the staff of Mr. Finnie's
Branch, and published in the December, 1924, issue of
The Canadian Field Naturalist. The article, which ap-
ppeared under the authority of the director, Northwest
Territories and Yukon Branch, quoted an opinion ex-
pressed in a report of Charles Camsell, who had investi-
gated the wood buffalo range in 1916, that there was no
contact between separate herds of wood bison occupying
northern and southern ranges. Although the article con-
formed that integration of the buffalo from Wainwright
with the southern herd of wood bison in Wood Buffalo
Park was probable, the writer believed that "the northern
herd of wood buffalo would remain inviolate so far as
admixture with the introduced buffalo is concerned."

Publication of the article brought protests from zoolo-
gists and naturalists who deplored the introduction of
plains bison in the wood bison area. Prominent among
these communications was a letter addressed to the editor
of the magazine by Francis Harper, a zoologist on the
staff of Cornell University, Ithaca, New York, who had
visited the range of the wood bison in 1920. Harper
prophesied inbreeding and the spread of disease in the
wood bison herds, and concluded with the rhetorical
question "Must the huge and vigorous wood buffalo be
doomed to deterioration through unnatural inbreeding
with its smaller cousin of the Plains?"

The reproduction of this letter in the February, 1925
issue of The Canadian Field Naturalist apparently
aroused the ire of senior officials of the department, which
was directed against the president of the Ottawa Field
Naturalist Club, Hoyes Lloyd, and the editor of the club's
magazine, Dr. Harrison F. Lewis. Both were officers of
the National Parks Branch, and as the letter criticized
departmental policy, both men were required to vacate
their positions on the club executive, under threat of
discharge from the department. Years later, the writer
asked Dr. Lewis if the ultimatum which he and Lloyd
received was conveyed by letter or memorandum. "No",
he replied, "it just came down from the Deputy Minister's
office by the grapevine."

Preparations for Shipment
The reduction of the buffalo herd at Wainwright by
slaughter was suspended pending the selection and ship-
ment of young animals to Wood Buffalo Park. During the
autumn of 1924, 1,200 calves born that year and in 1923
were segregated for shipment the following spring. Col.
J.K. Cornwall, an officer of Northern Trading Company
of Edmonton, solicited and obtained an exclusive contract
for transferring the buffalo from Waterways, Alberta, the
railway terminus, to Labutte Landing in Wood buffalo
Park. The first shipment of buffalo by rail from Wain-
wright to Waterways, via Edmonton, was made on June
15, 1925, and weekly consignments followed until 1,634
head had been sent forward. They were loaded from the
railway cars to specially designed barges, and pushed
down the Athabasca and Slave Rivers to the park by the
sternwheeler Northland Echo with little loss.

Long before the first shipments were made, the early
plan to have the buffalo tested for tuberculosis was
discarded. After a meeting held in the Deputy Minister's
office on April 9, 1924, Superintendent Smith of Buffalo
Park was notified by letter that the original proposal for a
tuberculin test had been dropped. One officer of the
National Parks Branch at Ottawa, however, recorded his
disapproval. In a memorandum to the Commissioner,
Hoyes Lloyd, Supervisor of Wildlife Protection described
as "very bad epidemiology", the decision to ship buffalo
from a herd known to be diseased and place them in
contact with the buffalo at Wood Buffalo which, so far as
known, were not diseased. Lloyd commented that "It is
thought that the biologically correct way of dealing with
the excess buffalo is to slaughter the excess, thus realizing
on the surplus stock."

The departmental file discloses no particular reason for
the decision, but it is assumed that it not only reduced the
cost of preparing the animals for shipment, but also
reflected the current belief that disease was confined to
the older animals and that the selection of one and two-
year-old buffalo would result in little infection. This
theory is given support by the contents of a memorandum
from Commissioner Harkin to the Deputy Minister dated
June 1, 1925, which read in part as follows:

"There is less danger of the young animals, even
though infected slightly, succumbing to disease on the
more open pasture of the northern range, where
there would be little danger of their infection from
other buffalo and where they would have the max-
imum chance of recovery in consequence."
Additional Buffalo Transferred
In spite of the 1925 shipment of young animals, the main herd at Buffalo National Park continued to grow. During that year, the natural increase was 2,000, and further reduction was imperative. During the summer of 1926, 2,011 young buffalo were cut out of the main herd and shipped north at two-week intervals to Waterways for their journey down river to Wood Buffalo Park. Similar procedures were followed in 1927, when 1,940 one-, two-, and three-year-old animals were rounded up and transported. The last shipment of young buffalo to Wood Buffalo Park was undertaken in June, 1928, when 1,088 yearlings were sent north. All but two of this group were delivered safely to their destination. Over the four-year period from 1925 to 1928, these shipments accounted for 6,673 buffalo.

Surprisingly, the export of buffalo to new pastures failed to halt the annual increase at Wainwright and during the winters of 1926-27 and 1927-28, it was found necessary to slaughter 2,000 and 1,000 buffalo respectively. The resulting buffalo meat was placed on the market through national packing-houses. A surplus of buffalo robes induced the National Parks Branch to promote a market for this product of the slaughters. Several well-known Canadian furriers were persuaded to make a few sample fur coats as an experiment. Modern tanning methods had resulted in lighter and more pliable hides, and samples of coats and robes exhibited at the Canadian National Exhibition, Toronto, and other places in Canada, helped stimulate a demand for a product which, for many years, had not been available.

Park Problems Develop
The early 1930's ushered in a period of administrative difficulty for Buffalo National Park. Drought conditions in western Canada in 1929 had impaired the grazing on the park range, and placed more emphasis on the production and harvesting of hay and grain crops for animal food during the winters. In 1932, the superintendent's annual report contained the statement that "It is becoming increasingly apparent that overcrowding and incessant close cropping have contributed to the present difficulty of maintaining grazing facilities in the park on a level with requirements." A study of range conditions was undertaken by a federal government agrologist, S.E. Clarke, in 1931. He reported the intrusion of prairie sage, a virulent weed, on the range, and expressed the opinion that the maximum grazing capacity of the park was 5,000 buffalo. He recommended that the buffalo herd be reduced to 4,500, and that unfenced portions of the park on the eastern side be enclosed and added to the grazing range.

Disease problems in the buffalo herd were increased by the discovery that many animals were infected with an internal parasite known as the liver-fluke. An investigation undertaken by a representative of the Health of Animals Branch of the federal Department of Agriculture revealed that most of the numerous shallow lakes and ponds in the park contained a species of snail, which served as an intermediate host in the life cycle of the liver-fluke. Studies carried on in 1933 and 1934 led to the recommendation and initiation of measures to combat the infection.

Slaughters Resumed
Following the final shipment of surplus young buffalo to Wood Buffalo Park in 1928, park authorities reverted to regular annual slaughters during the early winter as a means of keeping the buffalo at Wainwright within the grazing capacity of the park. From December 1929, to December, 1934, more than 6,300 buffalo were killed. Until 1933, tenders were solicited from a selected list of packing firms, and the meat sold to the highest bidder. In 1933, during the height of the economic depression, beef and cattle prices were extremely low. The highest offer received for buffalo meat that year was so ridiculously low that the Commissioner of Parks decided to ship meat to various camps which had been established in a number of national parks to provide useful work for the unemployed. The same procedure was followed in 1934, but the annual slaughter planned for 1935 had to be abandoned after the park abbatoir was destroyed by fire on November 19 of that year.

During 1936, a new abattoir was constructed and the annual slaughter was resumed in December and carried over into January, 1937. The number of buffalo disposed of was 1,522. Similar operations carried out in 1937 and in 1938 accounted for an additional 3,246 buffalo. Over the years, the herd of elk in the park had greatly increased, and at the end of March, 1938, was estimated to contain 1,781 head. Consequently, when the buffalo herd was reduced in December that year, 485 elk also were slaughtered. The carcasses of these animals were donated to various Indian agencies, for distribution to needy bands in the provinces of Manitoba, Saskatchewan and Alberta.

End of the Road
By 1939, officers of the Lands, Parks and Forest Branch of the Department of Mines and Resources had serious misgivings over the continued operation of Buffalo National Park. The grazing range was seriously impaired by periodic drought and over-grazing by the buffalo herd and to a lesser extent by elk and deer. To supplement the natural food on the range, the park superintendent was forced to carry on an extensive farm operation, which involved the cultivation of 400 acres, and the harvesting of upwards of 10,000 bushels of oats and 2,000 tons of hay annually. The oats were fed to the park horses, and any surplus was sent to Banff National Park. Yearly slaughters of buffalo, averaging over 1,300 head between 1931 and 1938, were required to preserve the existing inadequate range. In short, the park had, through various circumstances, taken on many aspects of a commercial stock farm.

Overshadowing these undesirable conditions was the spectre of disease, not only among the buffalo but also in the large herd of elk. Reports of veterinarians who provided meat inspection services at all general slaughters, continued to record a declining yet high incidence of bovine tuberculosis in the buffalo carcasses. The presence of disease in the elk, deer and moose occupying the park range also was suspected. Accordingly, arrangements were made in May, 1939, for an examination of park animals on the ground by Seymour Hadwen, a doctor of Veterinary Science and a member of
the Ontario Research Foundation at Toronto. Dr. Hadwen was familiar with conditions at Buffalo Park, having attended the first general slaughter of buffalo in 1923.

Dr. Hadwen's report, received in September, 1939, covered his examination of wild animals in both Elk Island and Buffalo national parks. Dr. Hadwen confirmed a decline in the productivity of the summer grazing range in Buffalo Park, where many of the palatable grasses had been replaced by inedible weeds. Elk and deer were found to be infected with liver fluke, and the continued presence of tuberculosis was confirmed. Dr. Hadwen believed that the disease was being spread through mating, and expressed doubt that it could be eliminated from the herd by testing and other means.

Having regard for the fact that the department possessed a large clean herd at Elk Island National Park, and smaller disease-free herds at other parks, Hadwen recommended the slaughter of the entire buffalo herd at Wainwright, together with the elk, deer and moose there. As he commented in his report 'There should be no hesitation, in my opinion, in carrying out this action, because of the danger of dissemination of the disease to other districts through shipment of animals, and also because we have plenty of clean healthy buffalo to breed from in other parks.'

Hadwen then went on to say:

"In fairness to the Departmental staff who have taken care of the Wainwright herd, I should like to add that the herd has been guarded and every precaution taken to keep it healthy. Where did the disease originate?"

"Superintendent Smith informs me that the original animals which came from Montana were divided and some went to the Elk Island Park and some came to Wainwright. Why did the herd at Elk Island remain clean and those at Wainwright become infected? It appears from the records that two other shipments came to Wainwright which had no contact with the Elk Island buffalo. One of these shipments came from the Conrad herd in Montana and the other from Banff, which consisted of small herds gathered up in other places. The latter shipment is the most probable source of the trouble."

It may be recalled that the source of the exhibition herd at Banff was explained earlier in this chapter. Most of the animals were descendants of buffalo donated by Lord Strathcona, which in turn had been bought by Governor Sam Bedson of Stony Mountain Penitentiary from Alloway and McKay. Some of the calves captured by the latter back in 1873 and 1874 had been reared with the assistance of a domestic cow of dubious origin. Dr. Hadwen recited these facts and concluded his report with the statement that the progeny of the McKay-Bedson-Strathcona herd were the probable source of the infection:

"Eighty-seven buffalo in all came from Banff to Wainwright. They were derived from various sources. The incident of the calf quoted above is simply to show that it may not have been the only case of the kind, and it is just this sort of contact with cattle which may have introduced tuberculosis into the herd."

Hadwen's Report Reviewed

The recommendations contained in Dr. Hadwen's report, while not unexpected, posed some problems for the parks administration at Ottawa. Although it was agreed that the buffalo, elk, deer and moose should be destroyed, the release of this information to the public would require careful handling. On completion of the slaughter of the park animals, retention of the park for future re-stocking with disease-free buffalo had to be decided on. A series of consultations followed, after which Dr. C.H.D. Clarke, the branch biologist, recommended that the park be retained as part of the national system. In a memorandum to the controller, National Parks Bureau, Clarke stated "This park alone can provide the spectacle of a buffalo herd in entirely natural surroundings with adequate range for summer and for winter." Dr. W.A. Allen of the Health of Animals Branch, Department of Agriculture, had estimated that a period of up to five years would be required to restore the unoccupied range to a state in which sources of infection would no longer be found.

Fortunately, an alternative use for the land comprising the park materialized. During the summer of 1939, the threat of another world war loomed, and the Department of National Defence had made inquiries concerning the possible use of the Cooking Lake Forest Reserve adjoining Elk Island Park, or a portion of Buffalo National Park, as a military training area. During negotiations leading to the transfer of natural resources in Alberta from Canada to the provincial government, agreement had been reached in 1926 that the Cooking Lake Reserve would remain under federal control for forestry purposes and as a reserve for military purposes. This arrangement, however, was not incorporated in the Alberta Natural Resources Act in 1930. The province, however, had developed community pastures in the reserve, and consequently was reluctant to part with any of it.

After war was declared in September, 1939, the Department of National Defence made formal application for the use of the entire area of Buffalo National Park. Apparently the comparatively unwooded character of the park admirably suited it for military manoeuvres. It also was large enough to permit artillery practice. After considerable deliberation, the director, Lands, Parks and Forests Branch, passed on to the Deputy Minister, the recommendations of the National Parks Bureau. These included the slaughter of the entire animal population of the park, exclusive of those involved in the cattalo experiment; completion of arrangements that would permit occupation of the most of the park for military training purposes; and the opening of negotiations with the province of Alberta for the acquisition of part of the Cooking Lake Reserve as an extension to Elk Island Park. As the director observed in his covering memorandum, "The outstanding feature of the whole matter from our standpoint is that the present is the first opportunity we have had to wind up affairs at Wainwright without admitting publicly that the herd is in bad condition."
recommendations were approved by the Minister after discussion with members of the Cabinet Council.

Slaughters Completed
The slaughter of the park buffalo was carried on in November and December, 1939. The animals were shot by the park marksman, Sam Purchel, and hauled to the park abattoir where the carcasses were skinned and dressed under contract by a Canadian meat-packing company which had purchased the meat by tender. Later in the new year, the elk, deer and moose were disposed of, the operation having been conducted by park staff. Several hundred buffalo hides were reserved for the use of the Royal Canadian Mounted Police, and the meat and hides of the other game animals were shipped to agents of the Indian Affairs Branch at various places in the prairie provinces. Altogether, 2,918 buffalo, 1,806 elk, 113 moose and 242 deer were killed. All carcasses were inspected by veterinarians of the federal Department of Agriculture. Later, A.W. Allen, V.S., reported that the incidence of tuberculosis in the buffalo killed in 1939 was lower than that recorded in previous years. This decline was attributed to the fact that the average age of the animals, including cows and calves, was less than that prevailing at previous slaughters. Approximately six percent of the moose and elk examined showed evidence of tuberculosis, while only two of the 242 deer killed were found to be infected.

Protests Received
The public learned of the proposed slaughter through a news item released by the Canadian Press early in November, 1939. It not only forecast the slaughter of the entire buffalo herd but also stated the park would be closed. The news resulted in a deluge of letters and telegrams to the department, protesting the action. A statement prepared by park officials explained that the decision to kill off the park animals was brought about by the inadequate grazing range, which required an extensive farming operation to raise winter feed for the buffalo. It also called attention to the existence of an adequate number of buffalo in Elk Island and other parks to guarantee perpetuation of the species. Correspondents also were informed that a national park could not be abolished until the necessary legislation had been approved by parliament.

Information concerning the prevalence of disease in the herd was released on a confidential basis only to the Prime Minister, and to Ministers of the Crown. In January, 1940, the Winnipeg Free Press carried a story written by its parliamentary press correspondent, Grant Dexter, which stated that the animals in Buffalo National Park were infected with tuberculosis, and for that reason were being killed. The story went on to inform readers that meat produced by the operation was carefully inspected, and any infected carcasses were condemned.

Eventually, public acknowledgment of disease in the national buffalo herd was made in the House of Commons by the Minister of Mines and Resources on June 24, 1940. In replying to a question placed on the order paper by the Member for Yukon, Mr. Crerar stated that the destruction of the buffalo was necessary as they were badly infected by tuberculosis. By that time, all products of the slaughter had been disposed of, with a resulting revenue of $60,000.

Military Takeover
In February, 1940, the Assistant Deputy Minister informed the Deputy Minister of National Defence that the lands comprising Buffalo National Park, exclusive of 2,800 acres being used by the Department of Agriculture, could be made available for military training purposes. As the park had been established for a particular purpose, it would be necessary to sanction the proposed occupation by Order in Council. The document required was approved by the Privy Council under authority of the War Measures Act, and authorized the Department of National Defence to occupy most of Buffalo Park during the continuance of the war.

Arrangements subsequently were made for the disposition of surplus improvements, equipment and staff. The superintendent of Elk Island Park was offered farm equipment which he required in his own operation, and the balance was distributed among other national parks. The Department of Agriculture, which had hoped to continue its cattalo experiment for a few years, was presented with a team of horses, harness, a haymower, wagon, and a plough. Considerable inside fencing was dismantled and stored for future use at Elk Island National Park.

A formal takeover of the park by the military authorities was accomplished on September 30, 1940. The park superintendent, A.G. Smith, was assigned to special duties, but later decided to retire. One park warden, Ray Sharp, and the farm superintendent, D.H. Folkins, were transferred to Elk Island National Park and two members of the office staff went to Jasper Park. Park Warden E.J. Cotton, who had been a staff member since April 1913, was retained as park caretaker by the Department of National Defence until August, 1944. He was then transferred to Elk Island National Park where he served as park warden until his retirement in November, 1947.

New Uses of Park
Military use of 150 square miles of Buffalo National Park began in 1943, after a Brigade Group Camp was constructed at a cost of $1,600,000. Units of two Canadian infantry divisions, together with some units engaged in coastal defence, took part in training exercises in 1943. During the year following, training was carried on at brigade level. Each brigade was given artillery support in manoeuvres, and were joined by a company of tanks from the United States army. Military authorities considered the area to be an excellent one for various types of training, including the use of tanks and medium-range artillery. In December, 1944, the premises were converted to a prisoner-of-war camp, with accommodation for 2,000 of all ranks, and essential services for a total of 6,000 persons.

Park Future Discussed
By May, 1941, national park administrators at Ottawa had formed the opinion that the use of Buffalo National Park after the war ended was not desirable, and that
future buffalo conservation should be carried on at Elk Island National Park. Discussions had been held with representatives of the Alberta government with a view to obtaining a portion of the Cooking Lake Forest Reserve for extending the Elk Island Park buffalo range. Provincial authorities expressed the opinion that any concession of this nature should be matched by the surrender of some other federal land as compensation.

Further discussions about an exchange of land were deferred during the war years, but were revived in 1945 when the possibility of transferring to the province, the portion of Buffalo Park not in use for military purposes, was suggested. In April, 1946, the Minister of National Defence informed the Minister of Mines and Resources that, following the closing of the prisoner of war camp in Buffalo National Park on July 1, the continuing use of the park area as a permanent military training area was desired. Negotiations at the top government level then began in earnest. The Alberta authorities signified their willingness to surrender land in the Cooking Lake Reserve, if Canada would relinquish Buffalo National Park. Eventually agreement was reached whereby Canada would, by an amendment to the National Parks Act, declare that Buffalo National Park, Nemiskam National Park, and the eastern portion of Waterton Lakes National Park, were no longer required for national park purposes. In return, Alberta would convey to Canada a portion of the Cooking Lake Reserve for incorporation in Elk Island National Park. Lands withdrawn from national parks in western Canada automatically reverted to the province concerned under the provisions of the 1930 Transfer of Natural Resources Acts. Consequently, the proposed exchange was brought to the attention of the Department of National Defence, so that it might arrange with the province for the right to continue occupation of part of Buffalo Park.

Later, the Minister of National Defence negotiated with the Minister of Lands and Mines for Alberta, the terms of an agreement which were approved by the Governor General in Council on May 16, 1947. Execution of the agreement was contingent on the abolition of Buffalo and Nemiskam National parks, which would vest title to the park lands in the province of Alberta. The agreement also provided that Alberta would transfer to Canada, for the use of the Department of National Defence, the administration and control of 150 square miles of the former Buffalo National Park, including the cottalo area. The occupation of this area would initially be for a term of 10 years, and later for such period as might be required, subject to the payment of an annual rental. The agreement also protected the use of the cottalo area by the Department of Agriculture. Finally, the terms of the Agreement confirmed the obligation of the Province to transfer to Canada for national park use, title to an area of 24 square miles of the Cooking Lake Forest Reserve.

Parks Are Abolished
Legislation abolishing Buffalo and Nemiskam national parks, and withdrawing from Waterton Lakes National Park an area of 16 square miles, was passed in July, 1947.28 The amendment to the National Parks Act also added to Elk Island National Park, an area of 24 square miles, title to which was transferred from Alberta to Canada. The agreement covering future use of the former park lands by the Departments of National Defence and Agriculture, was completed on behalf of Alberta and Canada by representatives of the departments concerned in January, 1948.

Conclusion
So, with little fanfare, nearly 200 square miles of the vast range that once supported millions of buffalo passed from Canada's national park system. In spite of the troubles that beset the national herd in the later years of its existence, Buffalo Park contributed to the perpetuation of one of the largest and most spectacular mammals ever to inhabit North America. From the original 748 animals that formed the nucleus of the Buffalo Park herd, the total increase was estimated to be approximately 27,000. Choice specimens of the herd were donated to zoological gardens around the world. Buffalo robes and coats, relics of a previous century, again made an appearance on the Canadian market. Descendants of the Pablo herd remained in hundreds in Elk Island National Park, and in lesser numbers at Banff, Waterton Lakes, Prince Albert and Riding Mountain national parks. The Pablo buffalo purchase was indeed a timely and worthy effort in wildlife conservation.

For the purposes of record, the appended schedules of buffalo acquisitions and deliveries may be of interest.
Statistics Relating to the Purchase of the Pablo Buffalo Herd and Other Buffalo Purchases

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Pronghorn antelope at Buffalo National Park, Alberta.
The Antelope Parks
The pronghorn antelope once shared with the bison, the vast plains region of North America. The range of the antelope extended westerly from southern Manitoba across southern Saskatchewan to northeastern Alberta, and southerly to Mexico. The most graceful and fleetest of the four-footed animals on the continent, it existed in almost uncountable herds. Ernest Thompson Seton, an internationally known naturalist, author and authority on big game, estimated that the antelope population of North America in 1868-69 was about 45,000,000. Yet, like those of its companion species on the prairies — the bison — its numbers declined early in the 20th century to a figure that verged on extinction.

Drastic Losses
Undoubtedly, the advance of settlement across western Canada and the United States with attendant hunting and loss of range had contributed to its destruction. The antelope was very susceptible to blizzards and severe weather. The winter of 1906-07, long remembered as a “hard” winter in southern Saskatchewan and Alberta, was a disastrous one for the antelope in Canada. Thousands are believed to have perished from exposure and starvation. During the same period, many ranchers in western Canada lost from one-third to one-half of their cattle. One observer, V.W. Heydlauff, of Wildhorse, Alberta, informed Dr. A.L. Rand of the National Museum of Canada that, during the summer of 1907, he recalled seeing only seven antelope in an area in southern Alberta where herds of from 500 to 1,000 were common in previous years. Another observer, J. Linder, of Govenlock, Saskatchewan, recalled that of 600 antelope that frequented a ranch just south of the Cypress Hills, not one, he believed, had survived the severe winter.

The recovery of the antelope in point of numbers was very slow. G.R. Sexsmith of Regina, Saskatchewan, whose occupation required him to travel extensively in southern Saskatchewan and Alberta, recalled details of the antelope population encountered in 1913. Bands numbering from five to 30 were observed along the South Saskatchewan River. In the Great Sand Hills area east of Maple Creek, Saskatchewan, and in the vicinity of Val Marie, the total number observed did not exceed 60. Sexsmith also recalled that until 1920, he had considered the species practically extinct. Elsewhere, small bands of antelope survived and provided the nucleus of breeding herds that eventually permitted survival of the species.

Physical Characteristics
The pronghorn antelope has several unique characteristics. It constitutes the sole member of a special family found nowhere outside of North America. For that reason alone its extinction would be a calamity. Its chief claim to scientific distinction lies in the fact that, like the cattle tribe, it has hollow horns but unlike them, it sheds the outer sheath each year as members of the deer family shed their antlers. Moreover, while the entire horn of the deer family is dropped, in this antelope only the outer sheath is shed. The inner core remains, and gives rise to a new horn which in this species is pronged. This phenomenon non gave it the name “pronghorn”, by which the species is correctly known, for it is not a true antelope.

The pronghorn is not a large animal. It is tan and white with black areas on the head. An adult male has a length of about 52 inches, stands about 36 inches high, and is distinguished by its peculiar horn structure described above. Another peculiarity is a white patch of hair on the rump, which is erectile at will, and serves as an excellent signalling device to other members of the herd. Observers have commented on the value of this natural semaphore to the species, especially when frightened or when danger is sensed.

Antelope at Banff
Early efforts by the administrators of Canada’s national park system to conserve antelope met with little success. In May, 1900, the Deputy Minister of the Interior, J.A. Smart, authorized the issue of a permit for the capture of several antelope for display at Banff. Altogether, 12 head, all fawns, were obtained and placed in the wild animal enclosure there in July, but all died during the following winter. In his annual report for 1905-06, Superintendent Douglas acknowledged the acquisition of a male antelope for the paddock, but this solitary specimen was killed by a mule deer in 1908.

In 1909, Douglas, now Commissioner of Parks, made another attempt to breed antelope at Banff. He entered into a contract with Charles Blazier of Brooks, Alberta, to capture and deliver 10 antelope at a cost of $40 each. Blazier, who had enjoyed considerable success in live-trapping antelope, delivered seven which were installed in the Banff paddock. They survived the winter of 1909-10, but during 1911, three died. By that time, Park Superintendent MacDonald had concluded that the climate and available forage at Banff were unsuitable for antelope, and the remaining specimens there were shipped to Buffalo National Park at Wainwright, where a much larger range promised some hope of survival.

Limited Success at Wainwright
After the erection of the fence surrounding Buffalo National Park had been completed, it was found that in addition to several elk and deer, a few antelope also had been enclosed. Parks Commissioner Douglas decided to continue his efforts to propagate the species, and succeeded in having nine head delivered in 1910 by Charles Blazier from the vicinity of Brooks to Wainwright. Unfortunately, six of the antelope died that year and two more expired the year following. The loss was partially offset by the receipt of four antelope from Banff in 1911. That year, eight more were obtained from Blazier, and by March 31, 1912, the Park Superintendent was able to report the presence of 14 antelope in Buffalo National Park. Superintendent McTaggart, however, had little success with the imported animals, and on March 31, 1913, he was able to account for only four antelope in the park — all of them males. These animals gradually dwindled in number, until the sole survivor died in 1933.

First Antelope Reserves
The first move to set aside reserves where the antelope could enjoy protection from hunting and other distur-
bance was made in 1910. The Director of Forestry, R.H. Campbell, who also had supervision of the national parks and reserves at the time, received a letter dated May 11 from T.N. Willing, chief game guardian for Saskatchewan, calling attention to the decline in the antelope population in an area about 70 miles south of Saskatoon. He suggested the creation of reserves on Dominion lands situated east and west of the “elbow” of the South Saskatchewan River which were frequented by antelope. Campbell submitted the letter to his Deputy Minister, W.W. Cory, suggesting that temporary reserves be created until the lands could be examined as prospective forests reserves. No action was taken on the submission, and Campbell resubmitted his recommendation in March, 1912. Cory then approved the suggestion and a temporary reservation was placed on the vacant lands in Townships 23 and 24 in Ranges 2, 3, and 4, together with those in Townships 24 and 25 in ranges 5 and 6, all west of the Third Meridian. The reservation included a portion of the Qu’Appelle River Valley in what is now known as the Sandhills district southeast of Elbow, Saskatchewan, together with the land within the elbow of the South Saskatchewan River.

Early Park Studies
The administration of national parks had been transferred to a new branch of the Department of the Interior in 1911, and by 1913, the new Commissioner, J.B. Harkin, was giving serious attention to the plight of Canada’s diminishing pronghorn antelope. Early in 1914, he received departmental authority to have vacant Dominion lands in southern Saskatchewan and southeastern Alberta examined in the hope of having permanent antelope reservations made which might later be established as parks. The services of Ernest Thompson Seton, naturalist to the Government of Manitoba, were obtained to undertake the survey. He was to be accompanied by Maxwell Graham, Supervisor of Park Animals in the Dominion Parks Branch, on a tour of the antelope ranges.

Graham left Ottawa on May 8, 1914, picked up Seton at Winnipeg, and arrived with his distinguished associate at Medicine Hat, Alberta, on May 13. Here the investigators hired an automobile and visited areas frequented by antelope north of Medicine Hat, Alberta, and south of Moose Jaw and Maple Creek, Saskatchewan. The land examinations occupied about ten days, during which telegrams were sent to the Commissioner of Parks recommending the immediate reservation of certain lands to protect them from homestead entry or inclusion in grazing leases.

On their return to Ottawa, both of the investigators filed reports, which were carefully examined. Subsequently, three separate areas were reserved on their recommendation, in the records of the Land Patents Branch of the Department of the Interior, for the protection of the pronghorn antelope.

Canyon Antelope Reserve
One of the areas especially recommended by Thompson Seton lay north and west of a bend of the South Saskatchewan River called the Rapid Narrows. This area, which included portions of three townships, totalled 54 square miles, and was designated the Canyon Antelope Reserve. The southern boundary of the reserve was about 28 miles north of Medicine Hat, Alberta and about 32 miles northeast of Suffield, Alberta. The reserve occupied a plateau located above the South Saskatchewan River having a general elevation of 2,200 feet above sea level. Along the river, the land fell precipitately into a gorge, while elsewhere, it was broken by ravines and gullies.

The investigators found the grass on the Canyon Reserve was better than that on other ranges examined, and several natural springs also were observed in the area. The largest water supply was found at the bottom of a coulee. Seton also identified on the area, various shrubs and plants known to be favoured by the antelope as food. It was estimated that, should the area be enclosed in future, about 35 miles of wire fence would be required.

Reserves in Saskatchewan
Of the two reserves set aside in Saskatchewan, the larger was situated about six miles southeast of Maple Creek. It formed a rectangular block about four miles wide and three and a half miles deep, incorporating an area of nearly 20 square miles. The land reserved included 12 sections in Township 10, Range 26; four sections in Township 10, Range 25; and four sections in Township 9, Range 26, all west of the third meridian.

The other reserve was situated east of Old Wives Lake, about 15 miles southwest of Moose Jaw, Saskatchewan. It included sections 11, 12, 13, 14, 23 and 24 in Township 14, Range 28, and sections 7, 18 and 19 in Township 14, Range — all west of the second meridian. The manner in which these sections were selected resulted in a square block of land having an area of nine square miles.

Early Reservations Cancelled
A temporary reservation that had been made of lands located east of Big Stick Lake, Saskatchewan, was cancelled. It had consisted of vacant lands in Townships 14, 15 and 16, Range 24 west of the third meridian, in the Maple Creek land district. Presumably, the reservations made in 1912 on the recommendation of R.H. Campbell of the Forestry Branch also were cancelled, as no further mention of them appears in the correspondence files of the National Parks Branch dealing with the pronghorn antelope.

Reservation near Foremost
An additional reserve for the protection of the antelope was confirmed during the next year, 1915, following the location of a herd of antelope that frequented an area in the vicinity of Foremost, Alberta. An examination of the latest area to be set aside for the protection of antelope followed the receipt of information in February, 1915, by the Secretary, Department of the Interior at Ottawa from the Royal North West Mounted Police detachment at Foremost, that about 200 antelope in the vicinity were in danger of death by starvation. The reserves already established north of Medicine Hat and south of Maple Creek were too far distant to accommodate this particular herd of antelope and the Commissioner of Dominion Parks, to whom the matter had been referred, decided that steps should be taken to feed the animals on the
ground. Consequently, Maxwell Graham, who had accompanied Thompson Seton in 1914 during the examination of other antelope ranges, was instructed to proceed to Foremost and investigate the problem.

On arrival at Medicine Hat, Alberta, Graham, by prior arrangement, was met by Ben Lawton, Chief Game Guardian for Alberta, Chief Park Warden Howard Sibbald of Banff National Park, and by H.H. Fauquier, Chief Forest Ranger in the Cypress Hills Forest Reserve. After consultation with the Mounted Police, Lawton and Sibbald were assigned to investigate territory in the vicinity of Carlstadt and Suffield, Alberta, while Graham and Fauquier undertook to reconnoitre the Foremost area. Sibbald and Lawton found no antelope, but Graham and Fauquier located two bands of the animals on benches above the Chin and Fortymile coulees, about three miles due north of Nemiskam, Alberta.

During the interval between the receipt of the police report about the precarious condition of the antelope, and Graham's arrival on the scene, a chinook wind had melted much of the snow on the ridges and sides of the coulees, and the antelope had been able to obtain a limited supply of natural fodder. Graham and Fauquier then decided to feed the animals on the ground and a supply of hay was purchased in Foremost and scattered in areas frequented by the animals. Provided the antelope could be induced to accept feed at one place, it was planned to attempt to enclose them in a corral.

Part of the area on which the antelope were grazing comprised public land occupied under grazing leases issued by the Department of the Interior to Edgar McHugh and Murdo Mackenzie. Maxwell Graham wired the Commissioner of Parks at Ottawa requesting permission to purchase materials which would enable the construction of wing fences and a corral in which it was hoped to impound the antelope. Permission was granted and Graham completed a corral, wing fences and swing gates on the Mackenzie leasehold, but a chinook wind melted most of the snow remaining on the ground and the antelope dispersed.

Later, Graham learned that about 50 antelope frequented a summer range in the Chin Coulee on land included in the McHugh grazing lease. Graham concluded that the area might be completely fenced and after consultation with the Commissioner at Ottawa obtained permission to make the attempt. McHugh, who ran cattle on his leasehold, was an ardent advocate of preserving the antelope and volunteered to assist in the operation. The Minister of the Interior had sanctioned the proposal and Graham began the construction of the fence in May, 1915. Further observations of the antelope habitat induced Graham to expand the proposed enclosure, after agreement was reached with owners or lessees of the lands affected, whereby they would accept title or rights to land elsewhere in exchange for their present holdings. The fencing job was completed in November, 1915, with the exception of two gaps, in which wing trap gates were installed. These gates were designed to admit additional antelope to the fenced area.

On December 18, 1915, Dr. W.J. Roche, Minister of the Interior, approved the formal reservation of more than seven square miles as an antelope preserve, as well as an exchange of land with homesteaders who had acquired title to lands or rights to lands within the reserve. On January 13, 1916, the Commissioner of Dominion Parks was able to inform the Deputy Minister that a count of animals in the recently completed enclosure had revealed the presence of 42 antelope. It also was disclosed that the fencing operation, which incorporated part of McHugh's ranch, had been completed at a cost of approximately $2,500. Land exchanges which involved a total of 1,400 acres held by seven individuals were completed in 1916 under authority of the Governor General in Council.69

Departmental authorities, from the Minister down, seemed to have appreciated the successful outcome of the efforts of Maxwell Graham, assisted by Edgar McHugh and H.H. Fauquier. As Commissioner Harkin observed in a memorandum to the Deputy Minister, "The wisdom of Mr. Graham's proposal to enclose wild antelope in their natural habitat, which proposal was favourably recommended in my memorandum to you of March 31 last, appears to be fully vindicated. The fact that the Dominion today possesses a herd of antelope, living under natural conditions, and yet safely enclosed, and with every prospect of securing in the near future further antelope, is most gratifying, more particularly perhaps to this Branch, because the practical work successfully carried out on the ground culminated in the securing for the Dominion of these antelope." With these sentiments, Minister Roche and Deputy Minister Cory expressed their concurrence.70

Grazing Privileges Granted
Most of the land within the antelope reservations was unsuitable for agriculture, but satisfactory for the grazing of live stock. Two years after the Canyon Antelope Reserve was created, an application was received in the Department of the Interior for the privilege of grazing cattle there. The area was unfenced; it contained some privately-owned land; and the possibility of obtaining funds for its development was uncertain. Consequently, the Commissioner of Parks recommended to the Deputy Minister that grazing under permit be allowed in the reserve until such time as the Department was in a position financially to fence the area and develop it as a national antelope park. The privilege of obtaining permits was to be restricted to settlers living in the vicinity. In 1921, a resident of Cavendish, Alberta, complained to the department that a large number of horses was being illegally grazed on the reserve. This complaint led to the appointment of W.J. Little of Medicine Hat, Alberta, as honorary caretaker of the reserve. Little had volunteered to undertake supervision of the reserve without remuneration, and later he also was appointed as a game guardian under the authority of provincial legislation.71

Nemiskam Land Agreement
Little information is available concerning the antelope reserve situated south of Maple Creek, Saskatchewan, as the departmental files relating to the area were destroyed after 1930. The reserve north of Nemiskam, Alberta, however, had been fenced, and it became the focal point for antelope conservation. Much of this reserve was located within portions of two deep depressions or gullies known as the Chin and Fortymile Coulees. One quarter-
section within the reserve was privately-owned by Edgar McHugh, and other portions were under lease to him. Prior to the reservation of the land, Maxwell Graham had entered into an agreement with McHugh whereby the latter would be permitted to pasture live stock in the reserve during the winter, provided their number did not exceed 250 head. In return, McHugh agreed that some 5,000 acres of land which he held under grazing lease, as well as the 160-acre homestead for which he held title, might be enclosed within the fence surrounding the proposed antelope reserve. This arrangement had been predicated on the assumption that the Nemiskam reserve would be a temporary one, pending the transfer of antelope to one or more of the other reserves which had been selected by Thompson Seton and Graham in 1914.

Antelope Parks Established
By early 1922, the Commissioner of Parks, J.B. Harkin, had decided to establish formally as national parks, three of the areas reserved for the protection of antelope. On May 22, 1922, Harkin informed the Deputy Minister by memorandum that with one exception, land exchanges involved in the assembly of the Nemiskam and Maple Creek areas had been completed. In the case of the Canyon Reserve, to be known in future as Wawaskesy Park, there had been very few settlers involved, and no steps had been taken to arrange for an exchange of holdings. Consequently, Harkin submitted for the consideration of the Minister, a draft Memorandum to Council which, if approved, would establish three new parks under the provisions of the Dominion Forest Reserves and Parks Act.

The recommendation was accepted and on May 31, 1922, Order in Council P.C. 1134 authorized the proclamation of the following 'Dominion' parks:

1. Menissawok Park, comprising land totalling 17 square miles, located south of Maple Creek, Saskatchewan
2. Nemiskam Park, comprising 8.5 square miles in the Chin and Fortymile Coulees, located about three miles north of Nemiskam, Alberta.
3. Wawaskesy Park, comprising 54 square miles previously known as the Canyon Reserve, situated north and west of the South Saskatchewan River, and north of Medicine Hat, Alberta.

A press release issued by the Department of the Interior explained the origin of the names of two of the parks. "Wawaskesy" was the Cree Indian for antelope. Conversely, the name "Menissawok" meant "common or national property", the nearest Indian expression for "national park." Apparently, another reservation which had been made in November, 1914, for the protection of antelope in the vicinity of Moose Jaw, Saskatchewan, was cancelled, for no further reference to it appears on the relevant files.

Menissawok Park Abolished
In the years following the establishment of the antelope parks, the species had increased under sanctuary conditions. By 1927, the number within the fenced park near Nemiskam was reported by the honorary caretaker to be about 400. Figures for Menissawok and Wawaskesy Parks for the earlier years of their existence are not available, but later estimates placed the number of antelope in Wawaskesy Park as high as 500. When the National Parks Act came into force on May 30, 1930, several small areas which had been designated Dominion Parks were abolished. Among these were Menissawok Park, situated south of Maple Creek, Saskatchewan, which had functioned as an antelope reserve since 1914. A general increase in the numbers of this animal throughout southern Saskatchewan and Alberta supported the belief that the two remaining parks, Nemiskam and Wawaskesy, would provide adequate range for a species no longer in danger of extinction. The land comprising Menissawok Park reverted to provincial administration and control.

Changes at Wawaskesy Park
For 12 years after the establishment of Wawaskesy Park, its open pastures were shared by the antelope with the horses and cattle of several settlers in the vicinity. Of the 54 square miles that made up the park area, 720 acres were privately-owned, and about 7,680 acres or 12 square miles were held under long term grazing leases. The latter expired in 1933, and were not renewed. In 1932, an inspection of the park was made by A.G. Smith, Superintendent of Buffalo National Park, and the original caretaker, W.J. Little, was replaced the following year by a younger man, W.J. McLennan.

Meanwhile the antelope population of western Canada was on the rise, and eventually the abolition of Wawaskesy Park was given consideration by departmental officers. Nemiskam Park now contained a satisfactory number of antelope, and it was believed that one fenced park would be sufficient to ensure preservation of the species. During its 1935 session, the Legislative Assembly of Alberta passed a resolution calling on the federal government of Canada to take steps necessary to fence Wawaskesy Park, or alternatively to vest title to the park lands in the province. The resolution alleged that the grazing of cattle and horses within the park had driven the antelope from the range, and as a consequence, farmers living outside the park were sustaining damage to crops of hay and grain.

The representations contained in the Assembly's resolution were not entirely justified, as the Commissioner of National Parks had arranged in 1934 for an investigation of range and grazing conditions in Wawaskesy Park by an officer of the Soldier Settlement Board at Calgary, Alberta. A report prepared by H. Allam, Chief Field Inspector, was received in June, 1935. It disclosed that although from 1,000 to 1,200 cattle and from 200 to 300 horses had been grazing within the park in 1933 and 1934, this number had been reduced to a total of 350 in 1935.

Five settlers, resident either in or near the park, had enjoyed grazing privileges, which, according to Inspector Allam, had been fairly distributed. Allam also stated that the park caretaker, McLennan, had experienced difficulty in collecting the grazing fees payable by one rancher, whom he described as "70 years of age, cranky, evasive and difficult to talk to." Inspector Allam recommended that grazing permits issued in future cover not more than
800 head of livestock, and of these, not more than 300 head should be permitted to remain in the park during the winter season.¹⁴

Allam included in his report, an interesting observation on the antelope population. Although he estimated that the park contained from 500 to 600 head during the period of his inspection, residents of the area advised him that very few antelope wintered in and around the park. Apparently, during the autumn of 1934, the animals had drifted to the south, and large bands wintered on the Saskatchewan River near Medicine Hat, and in the Tilley East area south of the river. In conclusion, Allam stated that he did not recommend fencing the park unless three-strand cattle fence was erected. This type would permit freer movement of the antelope and enable them to migrate, if desired, to a natural wintering ground south of the park.

Abolition of Park Proposed
In the light of the information contained in the report submitted by the Soldier Settlement Board, and the resolution passed at the latest session of the Provincial Legislative Assembly, Commissioner Harkin believed that Wawaskesy National Park had outlived its usefulness. Consequently, in June, 1935, he recommended to the Deputy Minister that the province be advised that the department was prepared to transfer the administration of the lands comprising the park to the province for continuation as a wildlife sanctuary or for other use as desired. Harkin also observed that formal transfer of title to the land was not possible except by an Act of Parliament.⁷⁵ The memorandum was referred to the department's legal adviser who ruled that the Alberta Transfer of Resources Agreement would prevent the acceptance of Mr. Harkin's proposal unless title was transferred.⁶⁸

In December, 1936, the Department of the Interior was absorbed by a new Department of Mines and Resources, and Commissioner Harkin retired. On December 21, 1937, the Minister, Hon. T.A. Crerar, made a formal offer to Hon. N.E. Tanner, Minister of Lands and Mines for Alberta, to abolish Wawaskesy Park and vest title to the lands in the province, on the understanding that other lands in the Cooking Lake Forest Reserve would be made available as an addition to Elk Island National Park. This offer was accepted by Mr. Tanner in the course of a meeting with Mr. Crerar at Ottawa on January 17, 1938. In June, 1938, Mr. Crerar introduced a bill in Parliament to amend the National Parks Act. It provided, among other items, for the abolition of Wawaskesy National Park. The amendments received royal assent on June 24, 1938, and title to lands in Wawaskesy National Park automatically reverted to Alberta, in accordance with provisions of the Alberta Natural Resources Act of 1930.⁷⁷

Private Lands Acquired
Of the three national parks established in 1922 for the protection and conservation of antelope, that near Nemiskam, Alberta, would have the longest period of existence. Title to the existing freehold of 160 acres formerly owned by Edgar McHugh was eventually extinguished, and the grazing leases which included land within the park were terminated on expiry of their latest terms.

In October, 1920, Commissioner Harkin had advised Edgar McHugh that although the Nemiskam antelope reserve originally had been created as a temporary one, it was now proposed to have the area established as a permanent park. It also was explained that it would be necessary to obtain title to McHugh's homestead land consisting of 160 acres located within the reserve. Rather than compensate the owner, it was proposed to offer other land outside the reserve in exchange.

In reply to Harkin's letter, McHugh informed the Commissioner that he had sold his quarter section and improvements in 1918 to the Pick Two Stock Company and also had assigned his grazing leases to them. After McHugh was informed that the department would hold him responsible for carrying out the terms of the agreement he had made with Maxwell Graham on behalf of the department, McHugh interviewed the president of the stock company, W.E. Bullock. The latter indicated his willingness to exchange title for the homestead land within the reserve for another quarter section outside the reserve, but within the limits of one of the grazing leases. Authority was obtained from the Governor in Council for the exchange, but Bullock later refused to carry out his commitment to complete the transfer. The department then obtained authority from the Privy Council to expropriate the former McHugh property in the reserve, which, in 1922, had become Nemiskam National Park.⁷⁸

An agent of the Minister of Justice attempted to register the expropriation in the provincial Land Titles Office, but was informed that title had reverted to the province of Alberta under tax forfeiture proceedings. At the request of the Commissioner of Parks, the Department of Justice successfully undertook to obtain title to the land from the province. Later Commissioner Harkin received from the province, without charge, a certificate of title to the property.⁷⁹

Meanwhile, McHugh, who held an overdue mortgage from Pick Two Stock Company on the grazing leases and his former homestead, had regained rights in 1923 to the mortgaged property. Under the Public Lands Act of Alberta, persons whose lands had been sold for non-payment of taxes had the right to regain possession on payment of tax arrears. Commissioner Harkin offered by letter to obtain a grant of land for McHugh, if the latter would pay the tax arrears. Unfortunately, McHugh's letter of acceptance, which he claimed to have mailed, never was received in the National Parks Branch at Ottawa. Nearly six years later, McHugh endeavoured to revive the proposed exchange, but by that time, title to all vacant public lands had passed to the province, under the Transfer of Resources Agreement. It was then impossible to effect the proposed exchange.

McHugh had served as honorary caretaker of the reserve since its inception, and had undertaken patrol and maintenance work without remuneration. In 1919, he received a temporary appointment as caretaker at a small salary and in 1925 was appointed as a full time warden. By 1935, he had reached his maximum salary for the position, $1,740. Early that year, the Commissioner received, through the local member of parliament for
Medicine Hat, a resolution passed by the Municipal District of Forty mile No. 64, Alberta, on December 15, 1934, alleging that only a small number of antelope were confined in the park, and that a greater number roaming at large were destroying crops of farmers in the vicinity. The resolution also charged that the salary paid to the park warden was excessive and recommended that the park be closed to save increasing expenditures.

**Park Inspection**

The department requested the director of the Soldier Settlement Board of Canada to have an inspection of the park carried out by one of its officers to ascertain if the allegations contained in the resolution had substance. The inspection was made by H. Allam, who observed in his report of June 14, 1935, that the park was being well administered by Warden McHugh. He also reported that the fences were in good repair, the water supply adequate, and the pasturage good. The opinion also was expressed that any damage sustained by farmers in the vicinity was caused by antelope outside the park. ²⁰

Allam’s report disclosed that the antelope population in the Nemiskam region had increased considerably during the past five years. Warden McHugh informed him that the park had contained about 320 antelope during the autumn of 1934. A discussion between Allam and members of the municipal council revealed that the chief grievance was the salary being paid to McHugh. The latter, they claimed, was a well-to-do rancher who, in addition to receiving a salary, was permitted to graze cattle in the park during the winter season. Probably the animosity was engendered by the fact that in many areas of Canada, including southern Alberta, the existing economic depression had lowered the general level of incomes. Following a careful review of Allam’s report, officers of the department, with the Deputy Minister’s approval, decided to take no action on the resolution.

**Soper’s Wildlife Study**

Nemiskam National Park had few physical attractions, other than those of interest to a rancher or a naturalist. J. Dewey Soper, chief federal migratory bird officer for the prairie provinces, conducted a study of wildlife in the park in June, 1940. His report described it as part of the semiarid Great Plains region, characterized by short-grass vegetation and the absence of trees. Sagebrush and greasewood, however, were familiar features of the landscape, especially at the lower levels.

Soper described the upper plains as gently rolling in character, in which the well-spaced undulations seldom rose from a common level to more than 10 to 20 feet. The outstanding characteristic of the area, however, comprised the giant coulees that traversed the plains. The park contained portions of two of these great depressions, the Chin and Fortymile Coulees, which provided ideal rough country for deer and antelope. Chin Coulee formed the principal depression in the park, and was bordered by a small creek which, after leaving the park, flowed on to Seven Persons Coulee, where it was joined by the run off waters from Fortymile Coulee.

During his studies, Soper found varied vegetation typical of the region, which in addition to sagebrush and greasewood already mentioned, included a little cushion and prickly pear cactus. Also observed were snowberry, chokecherry, saskatoon, silverberry, wild rose and dogwood. The park also supported a number of mammals, including the plains coyote, great plains wolf, weasel, badger, kit fox, jack rabbit, ground squirrel and of course, pronghorn antelope and mule deer. Bird life was plentiful, and altogether 48 species were noted. ²¹

**Increase in Antelope**

The increase in the number of antelope in Nemiskam Park was slow but steady. Annual reports of the Department contain population figures which reflected the warden’s count or estimate. By March 31, 1917, the original herd of 42 antelope had increased to 70. On April 1, 1920, the number was estimated to be 100. Five years later, the number of antelope in the park was believed to be 235, and in 1926 the figure given in the annual report was in excess of 300. The high point in the park’s antelope population was reached during the latter part of 1927, when Warden McHugh estimated the number to be 405. However, he reported that on December 27 of that year, the antelope drifted in such numbers against the park fence during a storm that their weight broke the wire of the eight-foot enclosure. All but 19 animals drifted away during the storm, and later only 152 were recaptured. ²²

From 1931 to 1938, the antelope population of the park as reported, averaged slightly more than 300, but from 1937 onwards, the number declined. For the two years prior to June, 1944, when the antelope were released from confinement, it contained about 110 head.

**Park Existence Criticized**

After 1940, pressure from farmers and ranchers to have the park abolished became evident. Ranchers of the
region evidently wished to extend available pastures for stock by having the park revert to public land available for grazing. Some members attending the annual meeting of the Alberta Fish and Game Association held in 1942 at Calgary, voiced the opinion that as the antelope population had increased greatly, the existence of the small park was no longer necessary, since it contained less than 150 of the species. The matter of the park’s continued existence was referred to the Advisory Board on Wild Life Protection at its January, 1943, meeting in Ottawa. The board adopted a resolution recommending that the park and protection of the antelope be maintained until equal protection was assured in some more suitable area.83

In April 1944, a group of 30 farmers in the vicinity of Nemiskam Park made representations to the Minister of Mines and Resources that the range in the park was urgently required for cattle grazing and, if not made available, valuable breeding stock would be sacrificed. The Minister of Lands and Mines for Alberta was consulted, and in reply he advised that he had no objection to the granting of grazing privileges in the park. In May, 1944, the department decided, as a temporary measure, to release the antelope and permit grazing in the park.

The park warden was advised of the decision and requested to consult the secretary-treasurer of the municipality of Fortymile in reaching a decision concerning the number of cattle that might be grazed in the park without seriously endangering the range. Park Warden Matthews protested the decision by writing to his Member of Parliament, stating that farmers who wanted the park opened had the mistaken idea that they could graze all the cattle desired. The department, however, upheld its decision, and the park warden position, now no longer required, was dispensed with at the end of June, 1944.

Matthews, however, later acted as agent for those grazing cattle, and, under temporary appointment, issued permits for the national parks administration. A total of 36 permits for 210 head of cattle were issued in 1944; 24 permits for 195 head in 1945; 20 permits in 1946 for 211 head; and 17 permits in 1947 for 222 cattle.84

Rand’s Antelope Census
In June, 1945, the director, Lands Parks and Forests Branch, requested the assistance of the director, Mines and Geology Branch of the department, in having a study made of the antelope population in southern Alberta and Saskatchewan. Subsequently, the services of Dr. A.L. Rand, biologist of the National Museum of Canada, were made available. Dr. Rand already had planned to carry on mammalian studies in Waterton Lakes National Park and in the Cypress Hills area to the east, and it was hoped that the supplementary study would assist in determining whether the continuation of Nemiskam was necessary for the survival of the species.

Dr. Rand devoted nearly a month, between September 18 and October 15, 1945, to a study of the antelope population in southern Alberta and Saskatchewan. The government of Alberta co-operated by placing an automobile and one of its game officials, W.E. Wales, at Dr. Rand’s disposal for two periods in October. Rand inspected all the best known ranges for antelope, and in a report submitted in 1946, estimated the antelope population in the southern part of the two provinces to be 29,406.

The areas containing the greatest concentration of antelope were found to be south of the Milk River where the number was estimated to be 4,500; the Manyberries-Wildhorse area which supported approximately 5,000; the Suffield-Brooks-Bassano area which Rand estimated to contain 8,000 antelope; and the Cypress-Hills-Val Marie area which Rand believed had an antelope population of nearly 5,000.85

In April, 1946, the Minister and the Deputy Minister of Lands and Mines for Alberta visited Ottawa to confer with the director of the Lands, Parks and Forests Branch about national park matters. During the discussions, the Alberta officials indicated that they favoured the relinquishment by Canada of the lands occupied by Nemiskam National Park. Details of subsequent discussions relating to the abolition of parks have been reviewed in a previous section of this volume, dealing with Buffalo National Park.

Nemiskam Park Abolished
By early 1947, it was apparent to officers of the Department of Mines and Resources that the retention of Nemiskam National Park as an antelope sanctuary no longer was desirable. Dr. Rand’s report of his study had been published as a bulletin of the National Museum of Canada, and had disclosed that only 30 antelope had been observed within the park in 1945. Dr. Rand also had offered the opinion that the park had outlived its usefulness, for it now lay on the western edge rather in the centre of what was considered to be antelope range. The mammalogist of the National Parks Branch, Dr. A.W.F. Banfield, concurred in this opinion, stating that he “could find nothing in the report that could be quoted against the release of Nemiskam Park.”86

The efforts of the National Parks Service in conserving and restoring the antelope population of western Canada passed into history on July 17, when assent was given to the National Parks Amendment Act of 1947, which abolished Nemiskam and Buffalo National Parks. During the period between 1914-15 when the first antelope reserves were created, and 1945, the numbers of this once almost extinct species had increased from a few hundred to approximately 30,000. An area of some 4,000 square miles lying immediately west of what once constituted Wawaskes National Park now provided a range for an estimated 8,000 antelope. The Maple Creek — Walsh — Cypress Hills area, which formerly had included Meniskam National Park, contained at least 1,000 of the species. In addition, the Seven Persons-Nemiskam-Lucky Strike area, covering about 1,800 square miles, also supported about 1,000 antelope. It seems reasonable to believe that the early park reserves which were situated within these areas and later were established as national parks, had a definite influence in restoring the pronghorn antelope population of western Canada to desirable numbers.

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A migrating herd of barren ground caribou - Northwest Territories.

A group of muskoxen in battle formation. In Canada they are found mainly on the Arctic Islands.
Chapter 8
The Canadian Wildlife Service
**Introduction**

The American bison and the pronghorn antelope were not the only wildlife species singled out by the National Parks Branch for preservation from extinction. The first regulations established in 1889 for the administration of Banff and other national parks forbade the “shooting at, wounding, capturing, or killing any wild animal or bird in the park”. In later years, national park administrators would be called upon to perform a significant role in the protection of North American bird life, particularly in the conservation of species falling within the category of “migratory” birds as defined in the Migratory Birds Convention Act.

In common with the larger game animals native to Canada and the United States, many species of game birds including waterfowl were seriously affected by the advance of settlement. The opening up of previously primitive areas for agricultural development, the construction of railways and roads, and the birth of towns and cities, all brought about a rapid decrease in the numbers of wild birds, and drove them into remote areas, mostly in the north. The almost total absence of legal protection for waterfowl and other game birds from hunting and shooting accentuated the problem. The closing years of the 19th century witnessed the disappearance of several species, one of which had been believed to occur in inexhaustible numbers. These species were the passenger pigeon, the great auk and the Labrador duck. Other species, including the whooping crane, the trumpeter and whistling swans and the Eskimo curlew, barely survived extinction and persist only in small numbers.

**Extinct Bird Species**

The disappearance of the passenger pigeon occurred under circumstances similar to that of the bison or buffalo. A large handsome bird, similar in colour and configuration to the surviving mourning dove, it existed in such numbers that it was one of the wonders of North America. It bred in sections of Canada east of the Rocky Mountains and across the United States. Descriptions of the passenger pigeon flocks left by competent observers almost belie comprehension. Audubon, the famous naturalist, estimated that one flock contained over a billion birds. The species bred in rookeries where their weight often broke the branches of the trees in which they nested. Netting and shooting of the pigeons by professional fowlers for the market resulted in shipments of dead birds by the carload to centres of population. The species declined rapidly after the last great nesting of birds was observed near Petosky, Michigan, in 1878. By the end of the 19th century, the passenger pigeon was rarely seen, and the last surviving specimen died in the Cincinnati zoological gardens in 1914.

The great auk, a member of the sea diver family, existed along the rocky shores of Great Britain, Newfoundland and Labrador. It became so well adapted to an aquatic life that its wings were reduced to mere flippers for swimming like those of the Antarctic penguin. After fleets of hardy fishermen began to invade the northeastern coast of America, the bird became an easy prey for them, and was literally clubbed to death for food. The Labrador duck, also a native to Canada’s eastern coast, was reported extinct by 1875. As related in an earlier volume of this history, the whooping crane, the tallest and one of the most imposing of North American birds, was in danger of extinction by the early 1940s with a total population of barely more than a dozen. Discovery of its nesting site in Wood Buffalo National Park, Northwest Territories, in 1954, permitted cooperative action by scientists of the Canadian Wildlife Service and the United States Fish and Wildlife Service, which should assist in perpetuating the species. By 1979 the total living population was more than 100.

**Early Conservation**

One of the earliest measures to protect bird life was taken during the reign of Henry VIII of England, in 1534, an act was passed to help prevent the destruction of “wilde fowle” by protecting the eggs of herons, spoonbills, cranes, bitterns and bustards. Unfortunately, the act did not protect the birds themselves, even during the mating season. In the 18th and 19th centuries, other countries, including the Netherlands and Germany, passed laws to give protection to certain species of birds and their eggs. In March, 1902, a convention for the protection of birds useful to agriculture was signed at Paris by the representatives of 13 European countries.

In the United States, Massachusetts led the way in providing for a closed season for waterfowl in 1818; Rhode Island took action in 1846 to prohibit the shooting of waterfowl during the spring; and in 1845, the United States Department of Agriculture established a bureau of ornithology and mammalogy from which evolved the present United States Fish and Wildlife Service. The Lacey Act of 1900 instituted the first comprehensive federal law for bird protection in the United States and was followed by the creation of federal and other wildlife refuges. This act prohibited the interstate shipment of game killed in violation of state laws. The National Association of Audubon Societies was formed in 1905, and it became an important agency in calling to public attention the need for bird protection.

**Canadian Conservation Measures**

The establishment of regulations in 1889 and 1890 to provide sanctuary conditions for animal and bird life in Canada’s national parks no doubt helped to influence the enactment of conservation laws in areas outside the parks. The first large waterfowl refuge in Canada was created in June, 1887, when an area of 2,500 acres at the north end of Long Lake, Northwest Territories - now known as Last Mountain Lake in Saskatchewan - was reserved by federal order in council as a breeding ground for migratory waterfowl. Legislation by the provinces to protect wild game and birds was passed progressively after 1893, when Ontario established its Game Protection Act. Similar action was taken by British Columbia in 1895, by Quebec in 1899, and by Manitoba in 1900. The Unorganized Territories Game Act of 1894 extended protection to the wild life of the Northwest Territories, including that portion which now forms the provinces of Alberta and Saskatchewan.
The Commission of Conservation

The history of legislation designed to conserve natural resources in Canada, including its fish, game and bird life, should include mention of the Commission of Conservation, created by the Government of Canada in 1909. This action followed discussions at a North American Conservation Conference held at Washington that year, at which representatives of Canada, Newfoundland and Mexico were present on President Theodore Roosevelt’s invitation. The conference adopted a declaration of principles, including a recommendation that a permanent conservation commission be established by each country represented.

The Conservation Act of Canada, which received royal assent in May, 1909, stipulated that the Commission “should take into consideration all questions brought to its notice relating to the conservation and better utilization of the natural resources of Canada, to make such inventories, collect and disseminate such information, conduct such investigations inside and outside of Canada, and frame such recommendations as seem conducive to the accomplishment of that end.”

The commission, consisting of 18 members appointed by order in council, was headed for 10 of its 12 years of existence by Clifford Sifton, a former Minister of the Interior, as chairman. Its activities were supervised by James White, deputy head and assistant chairman. In function and in status, the commission was purely advisory. It was authorized to study, investigate and advise. Throughout its life, the commission directed its efforts to compiling an inventory of Canada’s natural resources, shaping public opinion and advising administrative authorities on more intelligent management of resources. Various branches of work were carried on under the direction of committees dealing with such diverse subjects as lands, forests, waters and water powers, minerals, fisheries, game and fur-bearing animals, and public health. In 1914, a special branch was organized in connection with town planning work. Reports of most of the studies and investigations undertaken under its auspices appeared in the annual reports of the commission. The Conservation Act was repealed by Parliament in May, 1921, and the commission then passed out of existence.

Migratory Birds Treaty

For years, Canada had provided the chief breeding grounds for numerous species of migratory birds and waterfowl in North America. However, even with the strictest enforcement of protective laws, Canadians were unable to prevent a decrease in the numbers of ducks, geese and other game birds unless sufficient protection was given to them during the period in which they were in United States territory. In some states, the shooting of wild fowl in the spring was permitted, and many birds which usually mated at that time were killed on their way north to their nesting places.

Eventually, as a result of the efforts of sportsmen, game protection associations, and other bodies interested in migratory bird protection, the United States government in 1913 passed the Federal Migratory Bird Law. This legislation, also termed the Weeks-McLean Law, promised more adequate protection for birds which, because of their migratory habits, could not be protected by some states while other states were derelict in the matter. The principal objects of the legislation were to reduce open seasons, to secure a uniform open season, and to prevent shooting of migratory birds in the spring.

The majority of the states amended their laws to conform with the federal regulations, and the results served to emphasize the need for cooperation between Canada and the United States in the protection of species which migrated from one country to the other. On July 7, 1913, the United States Senate adopted a resolution requesting the president to propose to the governments of other countries, the negotiation of a convention for the protection of all migratory birds.

Organizations in Canada and the United States then took action to advance the proposal for international action. On December 13, 1913, H.R. Charlton of Montreal sponsored a resolution at the annual meeting of the North American Fish and Game Protective Association in Ottawa, recommending that the executive committee seek the assistance of provincial governments in having the Dominion government negotiate a convention or treaty between Great Britain and the United States for the more efficient protection of migratory birds in Canada and the States.

From its inception, the Commission of Conservation had provided strong support for measures to improve wildlife protection, including cooperation with the United States. At the fifth annual meeting of the commission held in Ottawa in January, 1914, members and others present were addressed by W.S. Haskell, counsel for the American Game Protection and Propagation Association. Mr. Haskell attended the meeting on the invitation of the chairman, Clifford Sifton, to explain the benefits that would result from the new United States migratory bird law, and, if possible, to help create an interest among Canadians in procuring a migratory birds treaty between Canada and the United States. The new federal law, Mr. Haskell observed, would increase the number of birds migrating northwards to Canada, and after the breeding season more birds also would be returning to the south.

The appeal was successful, for before the meeting ended, a resolution was adopted providing “that the provincial governments of Canada be urged to solicit the good offices of the Dominion government in obtaining the negotiation of a convention for a treaty between Great Britain and the United States for the purpose of securing more effective protection for the birds which pass from one country to the other.” At the time, treaties made on behalf of Canada were signed by Great Britain.

Draft Treaty Submitted

Advice respecting the resolutions must have been conveyed promptly to Washington, for in February, 1914, the United States Government submitted to the Department of External Affairs in Ottawa the draft of a convention between Great Britain and the United States for the protection of migratory birds in the United States and Canada. The Department of Agriculture was selected to undertake the necessary liaison and administrative work in Canada, and this fell largely on Dr. C. Gordon Hewitt,
the Dominion Entomologist. Dr. Hewitt already had been active in promoting the proposed treaty, and in January, 1914, had informally discussed international cooperation with a member of the United States Biological Survey.

The draft of the proposed convention was forwarded to the various provincial governments for review and comment. Objections were raised by two provinces only, British Columbia and Nova Scotia, and these were not considered to be insuperable. The two federal government departments most concerned, Agriculture and Interior, together with the Commission of Conservation, strongly concurred that the protection of migratory birds was most desirable. Consequently, the Secretary of State for External Affairs obtained approval for an Order in Council on May 15, 1915, which recommended that the proposed convention for the purpose of protecting migratory birds should be concluded. Further negotiations were undertaken early in 1916 by Dr. Hewitt with Dr. H.W. Henshaw, chief of the United States Biological Survey in Washington. After agreement had been reached on all matters but one respecting spring shooting, a revised draft convention was prepared and submitted to the Government of Canada in March, 1916. This draft was ratified by order in council of June 29, 1916, which stated that “Canada is prepared to agree to the conclusion of the convention,” subject to certain amendments which had been agreed on by Dr. Hewitt and Dr. Henshaw as a result of informal negotiation. The treaty was signed in Washington on August 16, 1916 by Sir Cecil Spring-Rice, the British ambassador, and Robert Lansing, secretary of state of the United States.

The treaty was ratified by the United States senate on August 29, 1916. In accordance with Article VIII of the convention, a bill to give effect to the convention in Canada was introduced in the House of Commons by Dr. W.J. Roche, Minister of the Interior, on June 21, 1917. Dr. Roche explained that most of the negotiations with United States officials had been carried on by the Canadian Department of Agriculture, and that all the provinces had consented to the legislation being carried out under the provisions of this treaty. He also stated that the administration of the proposed Migratory Birds Convention Act would become a responsibility of the Department of the Interior. The bill received third reading on July 21, 1917, and was given royal assent on August 29, 1917.

Dr. Hewitt later commented: “The conclusion of this convention constitutes the most important and far-reaching measure ever taken in the history of bird protection... This international measure will affect over one thousand species and subspecies of birds from the Gulf of Mexico to the North Pole, and we may confidently look forward not merely to a cessation of the decrease but to an increase of our migratory birds, which are so valuable a national asset.”

The most important provision in the convention, as viewed by Dr. Hewitt, was Article II, which provided for (a) a closed season on migratory game birds from March 1 to September 1, with an exception relating to certain hunting rights of Eskimos and Indians; (b) an open season of three and one-half months; and (c) a closed season throughout the year on insectivorous birds. The open season was to be fixed in any period between September 1 and March 10 following, to suit local conditions.

**Advisory Board on Wildlife Protection**

The need for advice in the administration of the proposed treaty, as well as in formulating policy on the protection and use of wild life in the Northwest Territories, was anticipated by the Minister of the Interior. Consequently, in December, 1916, he recommended to the Privy Council the appointment of an advisory board on wildlife protection. As conceived, the board would form an interdepartmental committee to which matters of vital importance could be referred. The recommendation, which was approved by the governor in Council on December 28, 1916, also named the members of the board. They included James White, Assistant Chairman of the Commission of Conservation; Duncan C. Scott, Deputy Superintendent of Indian Affairs; Dr. C. Gordon Hewitt, Dominion Entomologist; Dr. Rudolph M. Anderson of the National Museum, then part of the Geological Survey of Canada; and J.B. Harkin, Commissioner of Dominion Parks.

One of the first assignments the board undertook was drafting legislation to make effective Canada’s participation in the Migratory Birds Convention Treaty. As already mentioned, the Migratory Birds Convention Act became law in August, 1917. In turn, approval of the new act called for the enactment of regulations necessary for the proper enforcement of the Act. The first migratory bird regulations, drafted by the advisory board, were approved by order in council of April 23, 1918. They established hunting seasons for each of the provinces, which varied according to the migratory habits of the birds concerned. As bag limits were not stipulated, this important requirement was provided for in an amendment to the regulations which was approved on May 16, 1920. Subsequent amendments to the regulations were made periodically to meet changing conditions or emergency situations.

**Northwest Game Act**

At the annual meeting of the Commission of Conservation held in Ottawa on January 16 and 17, 1917, a resolution was passed providing for the revision of the Northwest Game Act of 1906, and the administration of such legislation by the Commissioner of Dominion Parks. Early in 1917, the Advisory Board on Wildlife Protection undertook a complete revision of this act which related to the protection of the game and fur-bearing animals of the Northwest Territories. A bill introduced in Parliament by the Minister of the Interior on June 1 was passed with minor amendments. It received royal assent on September 20, 1917. As forecast, administration of the act was vested in the Commissioner of Dominion Parks, and regulations made under the new legislation were established on May 1, 1918. The Northwest Game Act and the regulations made thereunder were administered by the Commissioner of Parks until 1922, when the responsibility was transferred to the Commissioner of the Northwest Territories. This action followed the establishment of a new Branch of the Department of the Interior - the Northwest Territories Branch - to administer the vast northern area.
Wildlife Division Formed
The completion in April, 1918, of legislation required to protect migratory birds in Canada set the stage for new activity in the National Parks Branch. Commissioner Harkin instituted a program to acquaint the public with the implications of the new regulations and to solicit its assistance in their enforcement. Articles and pamphlets were prepared and distributed to the press, to schools, and to conservation groups throughout Canada. Lecture notes and slides were made available to volunteer lecturers, and a special lecture program was undertaken at the Central Canada Exhibition held in September at Ottawa.

During the late summer of 1918, a public competition was advertised in the Canadian press for an officer to head the administration of the Migratory Birds Convention Act and the Northwest Game Act. The successful applicant was Hoyes Lloyd of Toronto, Ontario. Although born in Hamilton, Lloyd had spent most of his life in Toronto, where he attended high school and the University of Toronto. He obtained a bachelor of arts degree in 1910 and master’s degree in 1911, specializing in chemistry. From 1912 to 1918, he was employed as a chemist in the public health laboratories of the City of Toronto, where he was in charge of the control and testing of milk.

From early manhood, Hoyes Lloyd had become interested in ornithology and had served in 1909 as a forest ranger and deputy game warden in Temagami Forest Reserve, Ontario. Later that year he won a gold medal at the Canadian National Exhibition in Toronto for the best collection of bird skins. Seven years later he was elected an associate member of the American Ornithologists Union.15

Lloyd reported for duty in Ottawa on December 11, 1918, and later was given the title of Supervisor of Wildlife Protection. With the assistance of a small staff, incorporating some members of the branch with experience in wildlife matters, he undertook the development of what later became a very important component of the National Parks Branch - the Canadian Wildlife Service.

Wildlife Officers Recruited
An urgent requirement was the organization of a federal warden service to enforce the Migratory Bird Regulations in the various regions of Canada. The Maritime or Atlantic provinces were selected for the inauguration of this service. A temporary staff of bird wardens, drawn largely from returned military personnel, was appointed in April, 1919. Nine were full time and two were part time employees. During the autumn of 1919, competitive examinations were held by the Civil Service Commission and permanent appointments were made.16 Following a public competition, Robie W. Tufts of Wolfville, Nova Scotia, was appointed chief migratory bird officer for the region in November, 1919. Tufts had become interested in bird life while a youngster, and under parental tuition during outdoor excursions had gained a knowledge of bird and plant life. Later he attended Acadia University for a year before entering a career in financial institutions.

During the following year, two additional supervisory appointments were made to the federal migratory bird service. Harrison F. Lewis, a native of Sag Harbor, Long Island, New York, was selected following a competition for the post of chief federal migratory bird officer for Ontario and Quebec. Lewis' parents were Canadians, and later returned to Yarmouth County, Nova Scotia. Harrison Lewis became interested in birds when a boy, and vacations spent in the vicinity of Yarmouth brought him into contact with a high school principal having a wide knowledge of bird and plant life. Later Lewis taught school in Wolfville, and in 1914 entered Acadia University as a sophomore, where he obtained a bachelor of arts degree. Service in the Canadian armed forces during World War I interrupted his formal education, and following his discharge from the army in July, 1918, he accepted civilian employment as an auditor with the Department of National Defence at Quebec City. While a resident of Bergerville, a suburb of Quebec, Harrison Lewis began a study of ornithology under the guidance of one of Quebec's leading ornithologists, C.E. Dionne of Laval University. To this study Lewis later attributed his success in obtaining the appointment of federal migratory bird officer for Quebec and Ontario.16

J.A. Munro of Okanagan Landing, British Columbia, was the successful candidate for the position of chief migratory birds officer for the provinces west of Ontario. Munro had been born in Kildonan, Manitoba, but had moved with his family to Toronto in 1898. He became interested in ornithology as a hobby and eventually gained sufficient knowledge to have articles published in newspapers and scientific magazines. He moved to British Columbia in 1911, and while operating a modest orchard developed his knowledge of birds and other wildlife. He joined the American Ornithologists Union and eventually gained the status of a fellow in that body.17

Educational Work
The task of educating the public in bird protection was given priority by the new supervisor of wildlife protection. In 1919, Hoyes Lloyd produced several pamphlets which were given wide distribution. They included Canada's Feathered Friends, No Spring Shooting Means More Migratory Game, The German Badge of Cruelty, and Protection of Bird Neighbours. Contributions made by the National Museum of Canada staff were Vanished and Vanishing Birds by P.A. Taverner, and The Brant of the Atlantic Coast by R.M. Anderson. J.H. Fleming added a paper entitled Why Canada and the United States Combined to Stop Spring Shooting.18

In 1920, P.A. Taverner, ornithologist of the National Museum, also prepared the text of the illustrated pamphlet Bird Houses and Their Occupants, one of the most popular ever produced by the National Parks Branch. Lessons in Bird Protection was compiled in 1921 from articles written by the chief migratory bird officers, R.W. Tufts, H.F. Lewis and J.A. Munro. Another popular pamphlet, Attracting Birds with Food and Water by R.O. Merriam was issued in 1923 by the National Parks Branch. In 1921, the Branch purchased a supply of the publication, The Conservation of the Wild Life of Canada by Dr. C. Gordon Hewitt, which was published posthumously by his widow that year. Copies were given selected distribution to field officers, honorary game wardens and others.
**Assistance in Enforcement**

In 1919, the supervisor of wildlife protection arranged for the appointment of honorary game officers throughout Canada to assist in the enforcement of migratory bird regulations. They were given authority under the act of game officers with the powers of a police constable. Although such appointments were honorary, the officers were entitled under law to retain one-half of fines levied by the courts on persons convicted of infractions of the Migratory Bird Regulations. During 1920 and 1921, a total of 190 honorary officers were appointed. In addition, all forestry officers of the Department of the Interior and fishery officers of the Department of Marine and Fisheries were appointed game officers under the Migratory Birds Convention Act. Members of the Royal Canadian Mounted Police also were game officers under the act. In his annual report for the year ending March 31, 1925, the Commissioner of National Parks reported the number of persons serving as honorary staff to be 1,522.

Administration of the Act during the early years of its enforcement resulted in frequent convictions. During the fiscal year 1920-21, officers of the National Parks Branch brought to court 55 cases involving infractions of the regulations. Convictions were obtained in 46 cases, of which four were suspended. Leniency on the part of magistrates sometimes was challenged. Two years after the Migratory Bird Regulations came into force, the Supreme Court of Prince Edward Island, on appeal by the federal Crown, reversed the decision of a provincial magistrate who had dismissed a charge brought under the Migratory Birds Convention Act.  

**Bird Sanctuaries**

An important measure undertaken by the Minister of the Interior following the establishment of the Migratory Birds Division was the creation of bird sanctuaries throughout Canada. The first of these areas to be set aside under the provisions of the act were portions of Bonaventure Island, all of Percé Rock and Great Bird Rocks off the coast of the Gaspe Peninsula in the Gulf of St. Lawrence. All three areas had long been breeding and nesting sites of numerous birds native to the coastal areas. The order in council had the approval of the Province of Quebec.

During 1916 and 1917, Dr. R.M. Anderson of the National Museum performed a valuable service in examining a number of areas in western Canada which had been suggested as potential sanctuaries. On June 15, 1920, seven bird sanctuaries were established on lakes in Alberta, including Lac la Biche and Pakowki Lake. The following year, the sanctuary created in 1887 at Last Mountain Lake in Saskatchewan was enlarged by order in council under authority of the act, and the entire lake area declared a sanctuary.

In 1925, Dr. Anderson's recommendations began to take form, when 25 bird sanctuaries were established in western Canada. Of these, seven were situated in Alberta, 12 in Saskatchewan and six in Manitoba. The same year, 10 areas including several islands and rocks in the Gulf of St. Lawrence were created sanctuaries. A site in the vicinity of Lethbridge known as Henderson Park, containing 69 acres, also became a bird sanctuary. Between 1929 and 1932, additional sanctuaries established included Inglewood and Lost Lakes near Calgary, Salt Lagoon near Esquimalt, British Columbia and the grounds surrounding Manoir Richelieu at Murray Bay, Quebec.

**Public Shooting Grounds**

In 1921, Commissioner Harkin forecast the reservation of suitable areas as public shooting grounds, where the public might have reasonable access to game within seasons established by provincial law. The proposal found favour in the prairie provinces, and during 1925 seven areas in Manitoba, 12 in Saskatchewan and 32 in Alberta were reserved by federal order in council as public shooting grounds. All areas set aside either faced on or included lakes frequented by waterfowl. As time went on, additional areas were added to the long list of bird sanctuaries. By March 31, 1955, the number had increased to 86, and the areas involved totalled 1,800 square miles.

**Bird Banding Registry**

In 1927, the Supervisor of Wild Life Protection established a registry of all birds banded in Canada. Up to that time, records of birds captured or shot which carried bands were maintained at the United States Biological Survey in Washington. Under a new system, persons banding birds in Canada under licence would submit their records to the National Parks Branch at Ottawa, where copies would be made and the original records then sent on to Washington. This arrangement permitted a single numbering register for the continent, and until 1968, the bands supplied to the holders of permits were issued by the United States Biological Survey. They have since been issued at Ottawa, Canada.

All bird banding operations were carried on by voluntary effort. Holders of permits issued by the National Parks Wildlife Division furnished their own equipment other than bands, and paid incidental expenses. The information supplied by banding records has permitted the collection of invaluable information on bird migration. One of the first bird banders in Canada was Jack Miner of Kingsville, Ontario, who developed and maintained a bird sanctuary on his own property. Miner's banding activities were commenced in 1909, and in 1926 he transferred to the National Parks Branch letters which he had received reporting returns on his banded birds over a period of 18 years. During the first 10 years of its existence, the Migratory Birds Division received a record of approximately 120,000 birds which had been banded. By 1944 the number of bandings recorded had totalled 452,532. Almost 30 years later, in 1972, the number of birds for which records had been received from licensed banders totalled 3,523,253.

In addition to maintaining a bird banding register, the division was called on to issue a variety of permits and licences. These covered various phases of bird conservation and protection. Included were permits issued to collectors for scientific and propagation purposes, and to others for the destruction of birds damaging agricultural or fishery interests. Permits also were issued for the practice of taxidermy, and for the taking of birds for banding purposes.
Division Activities Expanded
By 1921, the work of the Wildlife Division was increasing. Both Commissioner Harkin and Hoyes Lloyd took an active part in the activities of the Advisory Board on Wildlife Protection, of which Lloyd became secretary in 1921. The commissioner used conferences on conservation as a medium for publicizing the role of national parks in wildlife preservation, and in calling to public attention the duties and responsibilities imposed by the Migratory Birds Convention Act. In 1922, Harkin instituted the federal-provincial game conferences that were held in Ottawa for years, usually biennially. At the first one held on December 6-8, 1922, all provinces but two were represented. A full representation was obtained at later sessions. Commissioner Harkin facilitated the attendance of delegates at the first conference by having the Department of the Interior pay travelling expenses and a per diem allowance for each representative. The conference took the form of a round table discussion, which gave rise to a series of resolutions. These recommended greater protection for several species of birds, better control of illegal game and fur shipments, uniform adjustment of bag limits for Canada and the United States, and the protection of marine animals. The commissioner also encouraged the attendance of the Supervisor of Wildlife Protection at other wildlife conferences.

Buffalo Park Reductions
In 1923 the National Parks Branch became involved in measures to control the growth of the national herd of buffalo in Buffalo National Park at Wainwright, Alberta. A small slaughter carried out in the park in 1923 revealed that a high percentage of the animals killed were infected with bovine tuberculosis. Although this development was kept from public knowledge, publicity attending plans for future herd reductions by slaughter resulted in public protests against this practice. Interdepartmental discussions involving the heads of the Northwest Territories and the National Parks branches led to a recommendation that surplus buffalo be shipped north to Wood Buffalo Park on the Slave River. The Canadian Field Naturalist, a small magazine published by the Ottawa Field Naturalist Club, carried in its columns for December, 1924, an article prepared by Maxwell Graham, chief of the Wild Animal Division of the Northwest Territories Branch. Before 1921, Graham had been a member of Commissioner Harkin’s branch staff in charge of park animals. The article forecast the shipment of surplus buffalo from Wainwright to Wood Buffalo Park, a proposal that raised serious misgivings in the minds of wildlife specialists.

In a memorandum to the Commissioner of Parks, Hoyes Lloyd registered a formal protest against the move which he felt would subject the purebred wood buffalo of the northern region to infection from the plains bison it was proposed to introduce in Wood Buffalo Park. Conservationists in Canada and in the United States also made known to the department their objection to a mingling of the subspecies. However, as recounted in an earlier chapter of this volume, the transfer of 6,673 plains buffalo was made. A resulting infection of the wood buffalo was discovered by a mammalogist of the Mackenzie District

Conservation Commission Abolished
The early 1920s also saw the abolition of the Commission of Conservation. At the opening of Parliament on February 14, 1921, the government gave notice in the speech from the throne of its intention to repeal the Conservation Act, and thus end the activities of the commission. Bill 187 was introduced in the Senate, and later in the House of Commons. During the debate, Prime Minister Arthur Meighen explained that the best work of the commission had been accomplished and that it had “invaded the province of one department after another.” He also stated that its efforts were duplicating those of other government departments and that it was unduly and increasingly expensive.

The work of the commission was defended by Dr. H.S. Beland, M.P. for Beauce, who voiced the opinion that the commission had come into conflict with existing government agencies that claimed they should be doing the work. Apparently studies carried out on water power and other matters within the orbit of the Department of the Interior, of which the Prime Minister previously had been the minister, helped to influence the government’s decision. The bill received third reading on May 26, 1921, and subsequently the commission was disbanded. Several members of its staff, including those of its town planning division, were absorbed by the National Parks Branch, forming the nucleus of an architectural and town planning division.

Throughout its existence, the Commission of Conservation strongly supported the “National Park idea”, and was a positive force in the completion of the Migratory Bird Treaty between Canada and the United States. The last large assembly which it sponsored was a national conference on the conservation of game, fur-bearing animals, and other wildlife held at Ottawa in February, 1919. This gathering was formally opened by Arthur Meighen as Minister of the Interior. Delegates who read papers included leading conservationists of Canada and the United States. Among them was Commissioner Harkin, who dealt with the role of Canada’s national parks as wildlife sanctuaries. E.W. Nelson, chief of the United States Biological Survey, outlined the benefits of the recently concluded Migratory Birds Treaty with Canada; he observed that one of the most notable results was the prohibition of the sale of migratory birds throughout his country. Among other delegates submitting papers were Dr. W.T. Hornaday, director of the New York Zoological Park; Jack Miner, Canadian bird conservationist, and Dr. C.G. Hewitt, consulting zoologist of the Canadian Department of Agriculture.

Drought on the Prairies
During 1929 severe drought conditions, which were to continue for several years, were experienced in the prairie provinces. In Saskatchewan it was believed that the wild duck population was reduced by 90 percent. In 1930 the seriousness of the situation was made public in Canada, and brought to the attention of the United States authorities. Seasonal bag limits for ducks in Manitoba and
Saskatchewan were reduced. In 1931, conditions were personally investigated by the chief migratory birds officer for the western provinces, in association with an officer of the United States Biological Survey. They found many lakes frequented by waterfowl to be almost, if not entirely, dry.

By presidential proclamation, the shooting season for migratory waterfowl in the United States was reduced that year from three and a half months to one month. In Alberta, Saskatchewan and Manitoba, also, the shooting season was curtailed. By 1935 the situation had improved slightly, but in 1936 duck hunting regulations in Canada were made more restrictive, as duck and goose shooting seasons were reduced to two months. Conditions improved in the 1940s, and gradually restrictions and seasons were relaxed.

Administrative Changes
With the enactment of the Transfer of Natural Resources Acts by Parliament in 1930, the ownership of all public lands in Manitoba, Saskatchewan, Alberta and the railway belt of British Columbia passed to the respective provinces. Exceptions were the national parks listed in a schedule to the acts, and also lands which remained under federal jurisdiction by special agreement. Among the lands and waters transferred to the provinces were all the public shooting grounds which had been under federal jurisdiction, together with all federal bird sanctuaries situated on Crown lands. Relevant files and other records of these lands were transferred to the appropriate provincial departments.

Another administrative change occurred in October, 1932, when the general responsibility for police work connected with the enforcement of the Migratory Birds Convention Act and Regulations was transferred to the Royal Canadian Mounted Police.22 All other responsibilities originally entrusted to the migratory bird officers were retained. Under the new arrangement, the chief migratory bird officers would serve as liaison officers between the district offices of the RCMP and the Department of the Interior; they were available to furnish technical advice, expert evidence in court, and other assistance to the police officers. On December 17, 1932, five assistant migratory bird wardens in the Maritime provinces were transferred to the RCMP. Funds sufficient to pay their salaries for the balance of the fiscal year also were transferred to the police account. The change was not popular with the migratory bird wardens, particularly in the Maritime provinces where the chief migratory bird officer deplored the loss of five highly trained assistants.

Additional Staff
In 1934, a major change was made in the organization of the Wildlife Division. The western district, comprising the four provinces west of Ontario, was divided. British Columbia became a separate district, with J.A. Muaro remaining as chief federal migratory bird officer. The remaining three provinces of Manitoba, Saskatchewan and Alberta were reconstituted as a new district, to which J. Dewey Soper was appointed as chief migratory bird officer.

Although Soper had been born in Guelph, Ontario, he had studied at the University of Alberta in Edmonton from 1921 to 1923. He had taken a keen interest in mammals and birds while in his teens, and at university had studied zoology, geology and literature. He was a member of the Canadian Arctic expedition of 1923, and also conducted investigations for the National Museum of Canada in the Arctic Islands from 1924 to 1926. From 1928 to 1931, he was engaged by the Northwest Territories administration to undertake game studies on Baffin Island. With the cooperation of the National Parks Branch, Soper in 1928 began a search for the nesting grounds of the blue goose. The search was ended in June, 1929, when Soper discovered the breeding grounds of this interesting species on the tundra east of Bowman’s Bay, Foxe Basin, in the Northwest Territories. Following his appointment as chief migratory bird officer, Soper made his headquarters at Winnipeg.

Scientific Staff Engaged
Before 1928, practically all scientific research in the national parks was undertaken either by the chief migratory bird officers or by scientific personnel engaged under contract from outside the department. One of the earliest of these contractors was Dr. Donald Rawson of the University of Saskatchewan, who, for several years from 1928, conducted game fish studies in Prince Albert and other parks.

In 1938, the Wildlife Division staff was augmented by the employment of Dr. C.H.D. Clarke as park mammalogist. Dr. Clarke had undertaken research in the Thelon Game Sanctuary in the Northwest Territories, and later had been employed at the National Museum of Canada. One of his first assignments was an investigation of the wildlife of Banff National Park in 1939, followed by similar studies in Jasper, Cape Breton Highlands and Point Pelee National Parks. He also contributed to the solution of disease problems in Buffalo National Park, Wainwright, which led to the abolition of the buffalo herd, and the disposal of numerous elk, moose, deer and hybrid buffalo which also inhabited that park.

Another addition to the scientific personnel of the Wildlife Division resulted from the appointment of Dr. Harold M. Rogers on July 2, 1940, as limnologist. Dr. Rogers resumed the work of investigating the fish resources of the national parks that had been instituted by Dr. Rawson. By the end of the 1940 season, Rogers had visited a number of the western parks and later submitted reports on each area. Dr. Rogers enlisted in the RCAF in 1941, and lost his life in air operations in England on April 3, 1943.23

In 1943 Dr. Ian McTaggart Cowan, a zoologist with the University of British Columbia, Vancouver, was engaged on contract to study game conditions in a number of the western parks. Dr. Cowan remained in the employ of the department for several years on a seasonal basis, and his studies were of great assistance to the Wildlife Division in formulating policy on wildlife management.

Retirement of Hoyes Lloyd
In November, 1943, Hoyes Lloyd resigned as supervisor of wildlife protection in the national parks, effective
January 1, 1944. Lloyd had given 25 years of service in the National Parks Branch, and had the satisfaction of watching it grow from a one-man operation to a nationwide service that covered a wide scope of federal wildlife conservation activity. Although under retirement age, he wished to enjoy the later years of his life in private endeavor, related in particular to ornithological and other forms of wildlife conservation. During his career he had headed membership in numerous societies, groups and organizations promoting wildlife conservation. He had headed a number of them, and had served as chairman of numerous conferences held in Canada and the United States. Hoyes Lloyd died January 28, 1978.

Dr. Lewis Promoted
Following the retirement of Hoyes Lloyd, Dr. Harrison Lewis served as acting superintendent of wildlife protection. On May 15, 1944, he was promoted to superintendent. Almost five years after his appointment as chief federal migratory bird officer for Ontario and Quebec, Harrison Lewis had applied for and obtained educational leave to attend the University of Toronto. There he obtained his MA in 1926. Three years later he completed graduate studies at Cornell University at Ithaca, New York, from which he obtained his doctorate. Between obtaining his MA and his doctorate he had performed his official duties in the federal government service with skill and authority, and had prepared for publication a number of papers on bird and other wildlife conservation. His promotion to the position vacated by Hoyes Lloyd was a logical development.

The vacancy created by the promotion of Dr. Lewis was filled by the appointment of Dr. Oliver H. Hewitt in May, 1944, as chief federal migratory bird officer for Ontario and Quebec. In August, 1944, Dr. C.H.D. Clarke left the employ of the Department of Mines and Resources to enter that of the Ontario Department of Lands and Forests. His successor as mammologist was A.W.F. Banfield, who was engaged in May, 1946. Meanwhile, on August 15, 1945, Dr. Victor E. Solman had been appointed to the long unfilled post of limnologist, formerly held by Dr. Rogers. Dr. Solman initiated studies of game fish in a number of the western parks in 1945, that led to detailed investigations in the years following.

Dominion Wildlife Service
A major reorganization of the Department of Mines and Resources effective November 1, 1947, served to emphasize the importance of the conservation and management of Canada’s wildlife resources. The former Lands, Parks and Forests Branch was renamed the Lands and Development Services Branch; the National Parks Bureau became the National Parks Service, and its former Wildlife Division formed the nucleus of a new Dominion Wildlife Service. The function of this new service was to administer the Migratory Birds Convention Act and the Northwest Territories Game and Fur Regulations. It also was to be responsible for providing the Northwest Territories Branch and the National Parks Service with advice and assistance in wildlife management.

In 1945, a new Forest and Wildlife Management Service headed by E.G. Oldham had been established at Fort Smith for the Mackenzie District of the Northwest Territories. Later this organization had been strengthened by the appointment of a forest engineer, J.S. Prescott, and two mammalogists, W.A. Fuller and W.E. Stevens. Following the departmental reorganization, these two mammalogists were included in the establishment of the Dominion Wildlife Service, but continued their investigations in the territories.

Additional changes in personnel had occurred in 1946 and 1947. In July, 1946, the former chief federal migratory bird officers were redesignated Dominion wildlife officers. In May, 1947, R.W. Tufts, who had held such a position for the Maritime provinces since November, 1919, retired from the public service. He was succeeded by George F. Boyer. Also in May, 1947, the responsibilities of Dr. O.H. Hewitt, Dominion wildlife officer for Ontario and Quebec, were divided. Dr. Hewitt was assigned the responsibility for activities in Ontario only, and Dr. A.U. Rajotte received a short-term appointment as Dominion wildlife officer for Quebec. On June 1, 1948, Dr. Hewitt was recalled to the headquarters staff at Ottawa to become a wildlife management officer in charge of migratory bird research. He was replaced by Dr. George M. Stirrett as Dominion wildlife officer for Ontario.

Service is Expanded
With increased responsibilities, the new Dominion Wildlife Service began to expand both its activities and its staff. In September, 1948, the Dominion wildlife officer for the prairies provinces was assigned to duties in Alberta and the Northwest Territories. Consequently J. Dewey Soper moved his headquarters from Winnipeg to Edmonton. Later that month, D.G. Colls was appointed Dominion wildlife officer for Manitoba and Saskatchewan. Colonel J.P. Richards of the headquarters staff of the Northwest Territories Branch was transferred to the Dominion Wildlife Service and became assistant to the chief, Dr. Lewis. Col. Richards had been responsible for the administration of the Northwest Game Act and regulations for many years, and was thoroughly conversant with many aspects of wildlife conservation in the Territories.

Following the transfer of mammalogists Fuller and Stevens to the Dominion Wildlife Service, A.W.F. Banfield became chief mammalogist. Four additional staff positions, designated wildlife management officers, were added to the establishment. They were filled by Dr. Hewitt, D.A. Munro, G.F. Boyer and J.S. Tener, some of whom had served as student assistants in field work. Investigations in the national parks and in the territories were expanded in 1948 and some studies were undertaken under contract by staff from Canadian universities with special qualifications.

During 1949, further appointments and promotions were made. Dr. V.E.F. Solman, limnologist since 1945, was appointed chief biologist in June. Later in the month, J.P. Cuerrier, associate professor of biology in the University of Montreal, received the appointment of limnologist in the Wildlife Service. In November, 1949, J.A. Munro, Dominion wildlife officer for British Columbia, retired from the public service. He had served in that capacity for
29 years, had conducted many wildlife investigations, and had made many valuable contributions to the growing list of reports and papers on the wildlife of Canada. He was succeeded by R.H. MacKay.

Newfoundland entered the Canadian Confederation in March, 1949, and Dr. Lewis took steps to have a Dominion wildlife officer appointed for that province. In the course of a visit to Newfoundland that year, Dr. Lewis interviewed Premier J.R. Smallwood, who endorsed the proposed program for the preservation of Newfoundland's bird population. Later, Dr. Lewis interviewed Leslie M. Tuck, a qualified applicant for the position of Dominion wildlife officer for the province. Tuck's appointment was recommended, and was confirmed on October 1.

Further Reorganization
The former Department of Mines and Resources went out of existence on January 18, 1950, and the responsibility for conservation activities was allocated to the Department of Resources and Development. It included five divisions, National Parks and Historic Sites; Canadian Wildlife; National Museum of Canada; Water Resources, and Lands. A further realignment of responsibilities effective December 1, 1950, incorporated the Wildlife Division, the National Parks and Historic Sites Division and the National Museum within the National Parks Branch. The retirement of R.A. Gibson, Director of the former Development Services Branch, permitted the promotion of James Smart to the position of director, National Parks Branch.

In April, 1950, Dr. Lewis had succeeded in having the name “Canadian Wildlife Division” changed to “Canadian Wildlife Service” on the suggestion of Dr. George Stirrett, his wildlife officer for Ontario. However, owing to later organizational changes, the new name was not used in the annual report of the department until that for 1954-55 was published.

On December 9, 1950, an order in council transferred responsibility for the conservation and management of wildlife resources in the Northwest Territories to the Northern Administration and Land Branch. Concurrently four members of Dr. Lewis’ clerical staff were transferred to that branch.

Noteworthy among staff changes made in this period were the appointment of Harry R. Webster as a Dominion wildlife officer for the Maritime region in 1949, and Louis Lemieux to a similar position in the province of Quebec in 1950. At the close of the fiscal year 1950-51, the Canadian Wildlife Division of the National Parks Branch included a chief; seven Dominion wildlife officers representing 10 provinces and the territories; a chief mammalogist at Ottawa and five mammalogists with field responsibilities; four wildlife management officers; a chief biologist; a chief limnologist, and supporting staff. Senior scientific staff was assisted in field studies and operations by the engagement of summer student assistants with a knowledge of biology.

Investigation and Research
With a substantial increase in scientific personnel, the Canadian Wildlife Service in 1950 was broadening its activities in many fields of endeavour. An investigation into the declining population of the barren-ground caribou in the Northwest Territories had been under way since 1948. The chief mammalogist, A.W.F. Banfield, completed a report in 1950 on his caribou investigations; these had been made with the aid of aircraft from bases at Yellowknife and Reliance, Northwest Territories. The caribou study was carried on farther east and north by J.P. Kelsall in the Great Bear Lake and Coppermine regions.

Studies of beaver and wood bison were undertaken in Wood Buffalo Park by W.A. Fuller, including an examination of animals slaughtered as part of the herd reduction program. Mammalogist W.E. Stevens continued investigations of the muskrat population in the Mackenzie River delta. The feasibility of placing bison and elk in southwestern Yukon Territory was investigated by J.D. Soper.

Jean-Paul Cuerrier, a limnologist, carried on the study of game fish in Riding Mountain, Prince Albert, Jasper, Yoho, Banff and Waterton Lakes parks, assisted by W.M. Gilmour. Park limnologists assisted in the revision of the parks anglers guides and the national parks fishing regulations. A shipment of yearling lake trout was made from the Jasper hatchery for release in Clear Lake, Riding Mountain National Park. Poisoning operations were undertaken to eliminate suckers and other coarse fish in two lakes in Waterton Lakes Park and in Herbert Lake in Banff Park.

Dr. V.E.F. Solman, chief biologist, supervised counts of two interesting bird species, woodcock and Wilson’s snipe, conducted waterfowl studies, and participated in a study for the control of mergansers on salmon waters. He also engaged in discussions with United States wildlife officers concerning joint studies of waterfowl in Canada.

Waterfowl studies also were made by Dominion wildlife officers and by wildlife management officers in their respective districts. These studies included population trends of birds in various waters; crop damage attributed to cranes in Manitoba; the effects on bird life of insect sprays used in orchards in the Okanagan district of British Columbia; and the results of oil pollution on waterfowl along the coasts of New Brunswick and Nova Scotia. Wildlife officers also kept a close watch in their regions for infractions of the Migratory Birds Convention Act and Regulations.

Dr. Lewis Retires
In September, 1951, Dr. Harrison Lewis gave official notice of his intention to retire as chief of the Canadian Wildlife Service, effective March 31, 1952. Dr. Lewis had not reached the obligatory age of retirement, and his decision to leave the public service was quite voluntary. As he explained in his letter of resignation, he had long cherished plans to devote some time to independent conservation activity in the public interest, including wildlife research and the publication of papers and articles on various wildlife subjects.

On his retirement, Dr. Lewis had to his credit more than 31 years in the Department of the Interior and succeeding departments, including nearly eight as chief of the Canadian Wildlife Service. He had taken a very
active role in the expansion of the service, and the growth of its responsibilities from that of administering the Migratory Birds Convention Act to the provision of an investigational and advisory service covering a wide range of matters in the national parks and much of Canada north of the provinces. One of his post-retirement assignments was the compilation, under contract, of a history of the Canadian Wildlife Service.

New Wildlife Chief

Dr. Lewis' successor as chief of the Canadian Wildlife Service was W. Winston Mair. A native of North Battleford, Saskatchewan, Mair had received his primary and secondary education there, before enlisting in the Canadian Armed Forces in 1940. He served in several theatres of World War II in Europe, returning to Canada in 1946 when he was discharged with the rank of lieutenant-colonel. In 1949 he graduated from the University of British Columbia, with a bachelor of arts degree. Postgraduate work brought him a master's degree in zoology in 1952. Meanwhile he had obtained field experience with the Dominion Wildlife Service in 1949, and with the British Columbia Game Commission from 1949 to 1952. Before his appointment to the Canadian Wildlife Service, he had been a research officer at Fort Churchill with the Defence Research Board.

Other staff changes in the early fifties included the promotion of D.A. Munro to the position of chief ornithologist. J.P. Richards, assistant chief, retired from the public service in 1956, and was succeeded by Dr. V.E.F. Solman. In September, 1957, Dr. A.W.F. Banfield left the Canadian Wildlife Service to join the National Museum of Canada as chief zoologist.

Service Evaluated

Late in 1956, Winston Mair requested by memorandum to the director, J.R. B. Coleman, that a committee be appointed by the National Research Council to review the operations of the Canadian Wildlife Service. As proposed, the review would consider the position the Wildlife Service should occupy in the field of wildlife research and make recommendations for future objectives. The committee also would be called on to review the operations of the Wildlife Service in the arctic and subarctic regions of Canada and make recommendations for research objectives in these regions. Mair also recommended that the committee review past and present operations of the Canadian Wildlife Service with the object of providing a critical report on its scientific achievement, and make recommendations for the further development of high scientific standards.

The request was approved, and in March, 1957, the review committee was appointed. It was headed by Dr. Ian MacTaggart Cowan, of the University of British Columbia, a man thoroughly conversant through past association with the activities of the Canadian Wildlife Service. Associated with him were Dr. T.W.M. Cameron of Macdonald College; Dr. W.H. Cook of the National Research Council; Dr. R. Miller of the University of Alberta and Dr. K.W. Neatby of the Department of Agriculture at Ottawa.

The report of the review committee was received in October 1957. It found the Canadian Wildlife Service to be well staffed and, within its operative framework, to be performing an important function. The report also recommended the enactment of a Canadian Wildlife Act, the establishment of the service as a branch of the department, and the continuation of its normal growth. It commented on the responsibilities of the service for research in both the national parks and in the Northwest Territories, and recommended the coordination of wildlife investigations and research in the Canadian arctic. The establishment of research sections in five separate sections of Canada, including the eastern and western arctic, also was suggested. A supplementary report, supplied on request, explained the reasons for a number of the committee's recommendations. Some, but not all of the proposals made were eventually adopted.

Advisory Board Abolished

The year 1957 saw the abolition of the Advisory Board on Wildlife Protection, an interdepartmental group that had been established by order in council in 1916. The board, of which from its inception had included an officer of the National Parks Branch, had a long record of useful service. It had been concerned with the drafting of the Migratory Birds Convention Act and Regulations; had helped to influence the creation of Point Pelee National Park; and had furnished advice in many fields of conservation for which the Department of the Interior and successive departments had been responsible. Almost throughout its life, the board had the services of the Chief of the Wildlife Division, and later of the Wildlife Service, as its secretary. Dr. H.F. Lewis observed in his history of the Canadian Wildlife Service: "It can be said that the Board did its work so well that it worked itself out of a job." When the board began to function in 1917, the Canadian public service contained very few persons having a thorough knowledge of the place of wildlife in the country. Consequently, the grouping of a small number of experts in their field had provided a readily accessible pool of knowledge and wisdom. By the 1950s, the task of conserving wildlife was divided among a number of Canadian government departments and agencies, and the advice of the board was no longer essential. Its work was brought to a close by Order in Council P.C. 1957-1199 of September 3, 1957.

Further Administrative Changes

In April, 1962, steps were taken to place under regional administration a number of the functions of the Canadian Wildlife Service. Eastern and western regions were created, with Dr. V.E.F. Solman appointed regional superintendent, eastern region, with headquarters in Ottawa. The western region was headed by Dr. W.E. Stevens, with an office at Edmonton. In 1963 the new setup became operational, and a number of the scientific staff were allocated to research and investigational work. Other supervisory personnel were retained on the head office establishment as staff specialists.

On November 3, 1963, W.W. Mair transferred to the National Parks Service as chief, replacing B.I.M. Strong who had been appointed regional director for western parks. Mair's successor in the Canadian Wildlife Service
was David A. Munro, previously chief ornithologist. He was a son of James Munro, for many years Dominion wildlife officer for western Canada and later for British Columbia. David Munro had spent most of his career in the National Parks Wildlife Division and in the Dominion Wildlife Service, commencing in 1947 as a student assistant. He held a bachelor of arts degree from the University of British Columbia, and a master’s degree and a doctorate in zoology from the University of Toronto. His scholastic career had been interrupted by service in the Royal Canadian Air Force. Later, he was among the first persons to be appointed a Dominion wildlife management officer in 1948.

Branch Status for Wildlife
Dr. Munro was chief of the Canadian Wildlife Service for a little more than two years when his division was elevated to the status of a branch of the Department of Northern Affairs and National Resources. This action arose from discussions at a meeting of the Canadian Council of Resource Ministers, the Federal-Provincial Wildlife Conference, and the Conference of Premiers in July, 1965. National concern for wildlife was expressed and a national policy and program were developed. These were tabled by the acting minister, Roger Teillet, in the House of Commons on April 6, 1966. At the same time the minister, Arthur Laing, announced that in recognition of the importance of the wildlife resources, the Canadian Wildlife Service would function in future as a branch.

The new national program provided for cooperative research and management with the provinces on common problems. It established guidelines and goals for federal research programs; and it emphasized the management of migratory birds and wildlife in Canada’s national parks, in the Yukon Territory, and in the Northwest Territories. Adoption of the new policy not only broadened the responsibilities of the Canadian Wildlife Service, but set the stage for important new programs including the acquisition and preservation of large areas of public lands which comprised the habitat of migratory birds.

The new status of the Canadian Wildlife Service led to a reorganization and extension of its personnel. Dr. D.A. Munro became its Director, and Dr. John S. Tener its Deputy Director. The head office establishment at Ottawa provided for staff specialists in five divisions - Migratory Bird Habitat - Dr. V.E.F. Solman; Mammalogy, Dr. N.S. Novakowski; Limnology, J.P. Cuerrier; Migratory Bird Populations, Dr. F.G. Cooch; and ARDA, N.G. Perret. The regional offices continued to function under superintendents. That for western Canada was in charge of Dr. W.E. Stevens and that for eastern Canada was headed by Alan G. Loughrey.

New Director Appointed
In September, 1968, Dr. Munro left the Canadian Wildlife Service, with which he had been associated for 20 years. He accepted an appointment as director of community affairs in the Indian Affairs Program of the Department of Indian Affairs and Northern Development. In August, 1969, Dr. Munro was appointed assistant deputy minister responsible for a new Indian Consultation and Negotiations Group of the department. Dr. John Tener succeeded Dr. Munro as director of the Canadian Wildlife Service in December, 1968. A graduate of the University of British Columbia, from which he held degrees of bachelor and master of arts, Dr. Tener subsequently attended Oxford University. He received his doctorate from the University of British Columbia in 1960. His service in the Canadian Wildlife Service had extended over 19 years, during which he had served successively as a wildlife management officer, mammalogist for the Districts of Franklin and Keewatin, Northwest Territories, and as staff mammalogist at Ottawa.

Under New Ministry
A reorganization of Canadian Government departments in 1970 included the transfer of the Canadian Wildlife Service in November of that year to the Department of Fisheries and Forestry. In turn that department formed the nucleus of a new Department of the Environment which came into being on June 11, 1971, in accordance with the Government Organization Act of 1970. The Canadian Wildlife Service now formed a branch of the Lands, Forests and Wildlife Service of the new department. In January, 1973, additional reorganization brought the Canadian Wildlife Service within the Environmental Management Service. A.T. Davidson, the assistant deputy minister of that service, was transferred to a similar position in charge of the Parks Canada program in the Department of Northern Affairs and Northern Development; and thereupon Dr. J.S. Tener, then director general of the Canadian Wildlife Service, was appointed assistant deputy minister, Environmental Management Service.

Alan G. Loughrey followed John Tener as director general of the Canadian Wildlife Service. Loughrey was graduate of the University of Western Ontario from which he held degrees of bachelor and master of science in biology. He had joined the Canadian Wildlife Service in 1951 as biologist for the Canadian eastern arctic. Loughrey was involved in wildlife research over a six-year period with the walrus in the eastern arctic, barren-ground caribou in the Mackenzie and Keewatin Districts of the Northwest Territories, and various wildlife studies in the Arctic Islands. He served from 1957 to 1959 as predator control officer for the territories and later as head of the Northwest Territories Game Management Service in the Northern Administration Branch at Ottawa. In 1962, he returned to the Canadian Wildlife Service as supervisor of research for the eastern region. He became director of the eastern region in 1964, and in 1969 was appointed deputy director, Canadian Wildlife Service. He served as director of planning and coordination in 1973, and in 1974 was promoted to director general, Canadian Wildlife Service.

Wildlife Research and Development
The scope of this history does not permit a detailed account of the many biological research and management projects undertaken by the Canadian Wildlife Service following its establishment as a branch of the Department of Northern Affairs and National Resources. It is proposed, however, to provide brief descriptions of some of the more outstanding studies that were undertaken, as
well as some of the more recent undertakings which were under way in 1972.

**Barren-Ground Caribou**

Following the disappearance of the buffalo or bison from Canada's western prairies, the barren-ground caribou constituted, in the opinion of many observers, the most abundant of the larger land mammals in Canada. As the buffalo once populated the North American west in millions, the caribou population at its peak has been estimated by competent zoologists to have numbered from 1,700,000 (Banfield) through 2,500,000 (Anderson) to 3,840,000 (Clarke). These figures were based on a winter range of 350,000 square miles. To the native population of the Yukon and the Northwest Territories, the caribou were an almost inexhaustible source of food and clothing. Like the buffalo, they suffered greatly in numbers following the introduction of modern firearms among the native population.

The caribou migrated in great herds to open barren ground and seacoast in the spring, and in the autumn they returned southward to winter in regions that provided food and shelter in wooded terrain. A change in the choice of food by Eskimos may have contributed to the decline in the caribou population, as the natives switched from seal to caribou during the migration period in April and May. Spring killing accounted for many female animals about to give birth to offspring in June.

Federal government concern for the species reached a climax in February, 1947, when a resolution passed at the 11th Federal-Provincial Wildlife Conference recommended that a thorough investigation be made of the status and use of the barren-ground caribou between Hudson Bay and the Mackenzie River valley. Field work began in 1948 under the leadership of A.W.F. Banfield, then chief mammalogist of the Canadian Wildlife Service. His estimates of the caribou population, made after three field studies which covered aircraft flights of 12,000 miles, were so low that they were at first disbelieved. In 1949, John P. Kelsall, mammalogist for the districts of Franklin and Keewatin, took over the investigation. This was carried on intermittently until 1959.

The results of Kelsall's investigations and those of his associates were published in an exhaustive monograph, *The Caribou*, published in 1968 by the Canadian Wildlife Service. The report attributed the decline in numbers to one major factor - human kill. Much of this kill was beyond basic requirements. It was suggested that, with a population level of 200,000, the annual harvest of the caribou should not exceed 15,000. Banfield had estimated the caribou population in 1949 at 668,000. By 1958, however, it was only 200,000. The report closed on the assumption that the caribou numbers were on the increase, and in 1965 were estimated to be about 250,000.

An obstacle to the maintenance and increase of the caribou population is the fact that treaty Indians and Inuit are not subject to restrictive hunting legislation. Moreover, Indian hunters in spring prefer to take pregnant caribou cows, thus increasing the net losses of the species. Further study of the barren-ground caribou was undertaken by the Canadian Wildlife Service in April, 1966, in the Keewatin district of the Northwest Territo-

**Muskoxen in Canada**

Another large mammal native to northern Canada which merited study by the Canadian Wildlife Service was the muskox. Covered with a heavy pelage, except for the legs and saddle, it bears a superficial resemblance to the North American bison. Its native habitat is found solely in arctic Canada and in Greenland, and portions of its range are shared with another large mammal, the caribou. The muskox is usually found in small herds widely scattered on the tundra or treeless plains of both the Canadian arctic mainland and the larger arctic islands, although it intrudes southerly into wooded areas south of the Arctic Circle. Unlike the caribou, however, it seldom migrates, as its abundant coat of thick hair helps it to withstand blizzards and cold. In winter it ekes out an existence on dried grasses, plants and shrubs that the winds lay bare.

Its possession of a large and valuable pelt made the muskox susceptible to hunting by Inuit, Indians and white traders to an extent that threatened its existence. Records maintained by the Hudson's Bay Company indicate that between 1888 and 1891, 5,408 hides were traded at company posts, the majority in the Mackenzie District of the Northwest Territories. After 1891, the number of skins brought to trading posts diminished. Between 1892 and 1900, about 1,800 sales of muskox skins were reported, and from 1901 to 1916, the total for Canada's northland was 2,125.

Eventually the decline in the numbers of the muskox, brought about by native hunters and white sportsmen, prompted strict conservation measures by the federal government. At the annual meeting of the Commission of Conservation held in Ottawa in January, 1916, Dr. C. Gordon Hewitt submitted a paper which strongly recommended legal steps to save the muskox from extermination. He proposed amendments to the Northwest Game Act of 1906 to protect caribou, wood bison and muskoxen, and absolute prohibition of the killing of muskoxen on Victoria, Banks and Melville Islands. In 1917 the Northwest Game Act was reconstituted and Dr. Hewitt's proposals were made law. Not only were those three arctic islands made permanent reserves for muskoxen, but future hunting and killing of the species was restricted to Indians, Inuit and Métis who were bona fide residents of the Northwest Territories, and then only when the meat was required to prevent starvation.

**Extended Study Undertaken**

By 1950 a study of the muskox by the Canadian Wildlife Service had been decided on, and the task was entrusted to Dr. J.S. Tener. He carried out both summer and winter
studies in the Canadian arctic in 1951 and 1952, and from 1955 to 1961. He received assistance from other mammalogists who furnished valuable observations. Dr. Tener's studies resulted in much interesting information about the muskox. At Lake Hazen in northern Ellesmere Island, temperatures below minus 50°F were recorded on 73 days during the winter of 1957-58. The growing season for plants is 40 days or less. The annual precipitation is light, being less than four inches on northern Ellesmere Island. Snowfall is light, and although it may form deep drifts in ravines, much of the snow is blown off extensive areas, leaving them with very light snow cover.

The study also established the Canadian muskox population to be nearly 10,000, of which 1,500 were on the northern mainland of Canada, and 8,390 on 11 of the larger arctic islands. The greatest concentrations were found on Bathurst, Melville, Axel Heiberg and Ellesmere Islands. The most southerly habitat in which the species was observed was that contained in the Thelon Game Sanctuary, about 150 miles south of the Arctic Circle.

Muskoxen mate in August, and calves are born chiefly in the latter part of April and in May. Muskox cows usually have a calf in alternate years. Twins rarely occur. Analysis of muskox milk has revealed it to be more nutritious than that of the bison. Its composition is comparable to that of a sheep's milk.

Dr. Tener's studies were published in a monograph entitled Muskoxen in Canada, published by the Canadian Wildlife Service in 1965. It contains descriptions of the environment of the muskox, the types of vegetation found on its ranges, the feeding habits of the species, its physiological characteristics, and the factors affecting its survival including predation, accidents, parasites, diseases, climate, and range suitable for its sustenance. Dr. Tener's report supports the belief that the numbers of muskoxen are increasing, particularly on the arctic islands. The report also endorsed a continuation of the existing ban on hunting muskoxen.

**Bison Herd Problems**

During his nine-year posting at Fort Smith, Northwest Territories, as resident biologist of the Canadian Wildlife Service, Dr. N.S. Novakowski made an intensive study of the bison in Wood Buffalo National Park from the standpoint of management. Special attention was devoted to the various grasses on which the bison graze, and to the grazing capacity of the ranges which are determined by the annual growth. The study also was extended to diseases and parasites found in bison. By 1960, the bison population of the park was believed to be about 10,000 and in addition, some 2,000 bison lived in the territories outside park boundaries.

The outbreak of anthrax, a highly infectious disease, among bison outside but in the vicinity of Wood Buffalo Park in 1962, resulted in additional problems for the park staff and the biologist, Dr. Novakowski. Public travel into the area was prohibited, and the carcasses of 287 dead bison were limed and buried. In following years, carcasses were incinerated and their ashes then buried. Additional outbreaks of anthrax in 1963 and 1964 farther south infected bison in the park, and vigorous steps were taken to control and eliminate the disease. During 1965 and 1966, more than 6,000 bison were vaccinated against anthrax. During this operation, no incidence of the disease was found; but in 1967 a further outbreak was discovered in the Lake One-Sweetgrass area of the park, which killed 118 animals. A disease-control program aimed at maladies such as tuberculosis and brucellosis was initiated in 1958, and one for anthrax in 1965. As since proved, these programs were very effective.

Historically, wood bison occupied a large area of western Canada, but with the advent of European man, their numbers and range declined. By the end of the 19th century, the wood bison population was estimated to be approximately 250, centred in an area later established as Wood Buffalo National Park. The sanctuary afforded by the park environment permitted an increase in the wood bison population which, by 1922, was believed to range from 1,500 to 2,000. The introduction of 6,673 plains bison from Wainwright, Alberta, between 1925 and 1928 resulted in the hybridization of the wood bison with the new arrivals, and unfortunately, the introduction of brucellosis and tuberculosis. By the 1940s, wood bison were believed to be almost extinct as a distinct subspecies, although some biologists believed that a small population might exist in the remote northern sections of Wood Buffalo Park. In 1958, a group of 200 animals was located in the Nyarling River area, and later identified by Canadian Wildlife Service biologists Novakowski and Banfield as wood bison.

In 1963, steps were taken to perpetuate the distinctive wood bison in areas other than Wood Buffalo Park. That year, 18 animals were removed from the park and introduced into an area northwest of Great Slave Lake now known as the Mackenzie Bison Sanctuary. In 1965, another 23 animals were moved to Elk Island National Park, Alberta, and placed in an area segregated from the main herd of plains bison. Both herds have since increased through careful testing for disease, vaccination, and the culling of animals infected with or suspected of having disease. In 1978, the wood bison population of the Mackenzie Bison Sanctuary was estimated at over 400, and the herd at Elk Island National Park at more than 150.

By 1979 both herds were strong and increasing in numbers. No limiting factors were foreseen other than overcrowding at Elk Island Park. However, that situation was being overcome by the reintroduction of the species into suitable wild areas, and the placement of surplus animals in zoos.

**Pathology**

After the Wildlife Division of the National Parks Bureau became the Dominion Wildlife Service in 1947, an increase in staff permitted more intensive research in biology. During the late 1940s and the early 1950s, various studies involved pathology - for example, those concerning diseases in beaver and muskrat, caribou parasites and the occurrence of brucellosis and tuberculosis in the national bison herds. Although the studies were carried on by biologists in the Wildlife Service, other agencies cooperated in resolving management problems; among them were the Health of Animals Branch of the
Department of Agriculture, and the veterinary services of both the federal and provincial governments.

Some of the parasites collected during these studies were submitted to and identified by Dr. L.P.E. Choquette of the Institute of Parasiology, Macdonald College, Ste. Anne de Bellevue, Quebec. In 1957, the Canadian Wildlife Service recruited as a staff member, Dr. H.C. Gibbs, to assist the 14 field researchers studying mortality in barren-ground caribou. Dr. Gibbs resigned in 1958, but in August, 1959, the department obtained the services of Dr. L.P.E. Choquette. Laboratory space was obtained for him in the department of biology, University of Ottawa.

Assistance for Dr. Choquette was obtained in 1961, when Dr. J.G. Cousineau was engaged, and a full-time technician, J.P. Couillard, was hired. In the five years from 1960 to 1965, the Pathology Section of the Wildlife Service carried on a wide variety of research. Subjects included diseases and parasites of the bison in national parks, parasites afflicting the arctic fox, the health of muskrat and reindeer in the Mackenzie delta area, and disease in game-fish stocks at the Jasper Park hatchery.

Activity in the Pathology Section was intensified in 1962 when bison (buffalo) in the Hook Lake area of the Northwest Territories became infected with the dreaded disease anthrax. Vigorous steps to eliminate the disease, including vaccination, were begun in 1965 by officers of the Canadian Wildlife Service. Vaccination of buffalo was continued into the late 1960s. In 1968, only one death from anthrax was recorded in Wood Buffalo Park.

Postmortem and bacteriological examination of bison slaughtered in herd reduction programs at Wood Buffalo National Park, beginning in the early 1950s and through the 1960s, confirmed the prevalence of tuberculosis. Serological examination of blood samples collected during that period also showed the prevalence of brucellosis. During 1969 and 1970, no death of bison from anthrax was reported, but in 1971 another outbreak occurred at Hook Lake, Northwest Territories. In 1972, 5,538 bison were vaccinated against anthrax. No deaths attributable to that disease were reported for that year. Since then, minor outbreaks have occurred, the latest in 1979. While vaccination is a component of the control program, it had not been carried out on a yearly basis as hitherto.

In 1969, the Pathology Section of the Canadian Wildlife Service moved to new and enlarged quarters on Beechwood Avenue, Ottawa. Here, a laboratory was maintained until 1976, when it was relocated on Gamelin Boulevard, Hull, in quarters formerly occupied by the Animal Pathology Division of the federal Department of Agriculture.

**Ornithological Research**

Problems associated with enforcement of the Migratory Birds Convention Act and Regulations led to a wide variety of ornithological research. Before 1937, J.A. Munro, Dominion wildlife officer for British Columbia, carried on a study of the American merganser, with special attention to food habits. The study, undertaken in collaboration with Dr. W.A. Clemens of the Pacific Biological Station of the Biological Board of Canada, extended over five years on British Columbia waters. The merganser, a predator upon all species of fish that can be captured in shallow water, was known to be fond of fish eggs, particularly those of salmon. During the autumn, American mergansers congregate on the salmon spawning streams and feed almost exclusively on fish eggs. Many of the embryos die, however, when the eggs remain uncovered in gravel beds, and the eggs may therefore be regarded as waste.

Salmonids were found in 74 of 363 merganser stomachs examined. However, freshwater sculpin is the item found most frequently in the food of the merganser. As the sculpin is a predator of young salmon, the merganser thus may assist the production of salmon by controlling the numbers of sculpin.

Later, in 1951, G.F. Boyer, wildlife management officer, studied merganser-salmon relationships on the Miramichi, one of the famous salmon streams of New Brunswick. At the same time, he made a study of merganser broods and summer populations of this bird.

**The Murre Study**

After 1949, when Newfoundland entered Confederation, the application of the Migratory Birds Convention Act and Regulations in the new province revealed evidence of exploitation of some of the large sea-diving birds, notably the murres. The Migratory Bird Treaty permitted the taking of several species of seabirds at any season by Eskimos (Inuit) and Indians for food, provided the birds taken were not sold or offered for sale. Otherwise, the murres, including both the common and thick-billed varieties, were protected as migratory non-game birds.

Leslie M. Tuck, the recently appointed Dominion wildlife officer for Newfoundland, was requested to carry out a study of the murres, extending over several years, and submit a comprehensive report of his findings. At the same time, he was instructed by the chief of the Canadian Wildlife Service that, in applying the provisions of the Migratory Birds regulations, he should practice toleration and understanding in dealing with the population of the new province, who had suddenly been exposed to legislation in whose preparation they had no part.

The problems attending suitable enforcement were discussed by Dr. Lewis with the chief of the United States Fish and Wildlife Service, and assurance was received that no official complaints from the United States would be made during the period of the study.

Mr. Tuck commenced his study in 1950, and for the next several years spent portions of each summer at murre colonies, as well as many days during the winter within sight of murres on their feeding grounds. His report, *The Murres*, was published by the Canadian Wildlife Service, Department of Northern Affairs and National Resources in 1961. The volume, well illustrated, describes the evolution of the murres, their distribution and population, breeding and biology, and the economic and ecological importance of the birds. In 1962, Tuck received the annual award of the Wildlife Society for the best report published in 1961 on original wildlife research.

The murres breed on rocky coasts, usually on cliffs that face the sea. The eastern coast of Newfoundland, Labrador, and islands in the polar basin support murre colonies. The colonies of the western Atlantic are found on the coasts of eastern Canada and western Greenland. Tuck
estimated the population of thick-billed murres to be 10 million and common murres 1.25 million. The birds are also found in the North Pacific area including the Bering Sea. Murres live mainly on small fish, and around Newfoundland their diet in winter is largely capelin.

In his publication, Tuck called attention to the value of murres in fertilizing the surface waters of the sea. Seabird excrement is rich in nitrate and phosphates essential to the phytoplankton, the basic life of the sea. Replenishment of nutrients in the surface layers of the seas is essential to fisheries, and the murres may be considered fertilizer factories of the northern seas - although they are not the sole source of nutrients.

Temporary leniency in the enforcement of the Migratory Bird Regulations in Newfoundland, insofar as they related to murres, ended in January, 1958, when the regulations were amended. The amendment allowed residents of a rural area in the province to take murres in rural areas or in adjacent territorial waters, from September 1 to the following March 1, provided the birds were needed and taken only for human food. The sale or shipment of such birds was prohibited. Elsewhere, murres are protected by a closed season.

**Whooping Cranes**

A previous chapter referred to the discovery of the nesting area of the whooping crane, an exceptionally tall and imposing migratory bird which earlier in the present century was practically extinct. During a forest protection patrol over Wood Buffalo Park in 1954, the supervisor of forestry at Fort Smith, G.M. Wilson, observed from a helicopter two adult white birds and one young bird. The following day, the birds were identified as whooping cranes by Dr. W.A. Fuller, resident mammalogist of the Canadian Wildlife Service at Fort Smith.

From the discovery of the first nesting site until 1956, Dr. Fuller undertook annual aerial surveys of the nesting areas. These surveys were largely concerned with counting the birds and determining breeding success and mortality. In 1957, Dr. N.S. Novakowski succeeded Dr. Fuller as resident mammalogist at Fort Smith, and continued the annual surveys until 1965. The results of these surveys were published in 1966 in a special Canadian Wildlife Service report compiled by Dr. Novakowski. The report revealed that from 1954 to 1965, a total of 40 whooping crane chicks were hatched in the Sass River nesting area, of which 32 survived. During the same period, the number of wild birds arriving each year at the Aransas National Wildlife Refuge in Texas increased from 21 adults in 1954 to 36 adults and 8 young birds in 1965. By December, 1969, a record number of 56 wild birds had arrived at their winter ground in Texas.

In 1967, the Canadian Wildlife Service entered into a cooperative effort with the United States Bureau of Sport Fisheries and Wildlife, to build up the population of the whooping crane. On July 2, 1967, biologist Ernie Kuyt of the Canadian service, accompanied by Dr. Ray Erickson of the United States bureau, flew from Fort Smith by helicopter to the nesting grounds near Sass River and obtained a single egg from one nest. Later, five more eggs were gathered and taken to the Patuxent Wildlife Research Centre in Maryland. Five of the eggs were hatched and four chicks survived. Gradually, a small flock of whooping cranes was built up at Patuxent from additional eggs flown from Wood Buffalo Park to the research centre. In August, 1970, the number of whooping cranes in North America, including captive birds, was estimated at 76. By August, 1979, the whooping crane population was believed to exceed 100.

**Other Studies**

Numerous other studies of migratory birds have been completed during the past two-and-a-half decades. Worthy of mention is that undertaken between 1951 and 1962 by Dr. Graham Cooch on the life history and ecology of the snow goose. He determined that the species included two races, one of which is the greater snow goose. The other race is divided into two colour phases, one known as the lesser snow and the other as the blue goose.

One indication of the population of these species resulted from a bird-banding operation carried out in 1960 under the supervision of Toma, an Inuk at Boas River on Southampton Island in Hudson Bay. Altogether, 5,000 blue and lesser snow geese were banded. In 1961, Toma and another Inuk, Kidlik, directed operations at East Bay and Boas River, Southampton Island, and at Eskimo Point on the mainland west of Hudson Bay. These activities resulted in the banding of nearly 13,000 blue and snow geese, 1,000 Canada geese, 1,000 American brant. The following year, Dr. Louis Lemieux of the Canadian Wildlife Service, banded nearly 12,000 blue and lesser snow goose at Koukdjuak River, Baffin Island.

Other studies completed over the years included those dealing with crop deprivations by migratory birds in the prairie provinces; increased knowledge of certain species such as the bufflehead duck, and distribution and mortality of other species. Periodical surveys of waterfowl populations also were undertaken.

**Limnology**

Details of early management and propagation of game fish in the western national parks have been described in the preceding chapter. Before the appointment in July, 1940 of Dr. H.M. Rogers as limnologist in the Wildlife Division of the National Parks Bureau, park administrators relied on the federal Department of Fisheries, the Biological Board of Canada, and private consultants for technical advice in the management of game fish and the operation of park fish hatcheries. As mentioned, for many years Dr. Donald Rawson of the University of Saskatchewan conducted studies of park waters, recommending suitable species of game fish for stocking purposes.

Dr. Rogers' services were cut off by his death overseas on war service. He was replaced in 1945 by Dr. Victor E.F. Solman, appointed as limnologist. For the next four years, Dr. Solman carried out or supervised studies of game fish populations throughout the national park system, including continuation of the creel census initiated in 1940 by Dr. Rogers. Through the cooperation of anglers, who completed records of their catches on cards made available for the purpose, helpful information on the success or failure in fish-stocking operations was obtained.

In June, 1949, the department obtained the services of
Jean-Paul Cuerrier of Montreal as assistant limnologist. Meanwhile, Dr. V.E.F. Solman, park limnologist since 1945, had been appointed to the position of chief biologist. Consequently, in February, 1950, Cuerrier was promoted to chief limnologist. For the next 22 years he was responsible for the limnological program in Canada’s national park system. Included were the stocking of barren waters with suitable species of game fish, the introduction of new species to national park lakes and streams, the removal of undesirable fish species from park waters, and the control of aquatic plants constituting a nuisance to anglers. Until 1971, when he was appointed to a new position in the Canadian Wildlife Service, Jean-Paul Cuerrier directed a small staff limnologists, undertook special studies and investigations, and provided technical advice on fishery management operations. During this period he published about 25 papers dealing with fishery operations and problems in the national parks.

By 1954 the annual field program included studies of fish hatchery operations and procedures, with special attention to water supply, rearing units and artificial diets for hatchery fish. In 1959 a new source of water for the Jasper Park hatchery was investigated. A suitable supply found near the hatchery made possible an increased production of trout for stocking purposes, and also the expansion of fish-rearing facilities.

The results of several years’ observation of operations at three fish hatcheries in the western parks were incorporated in a final report prepared by chief limnologist Cuerrier, which recommended the concentration of future hatchery operations at the Jasper Park hatchery. The recommendations, which also included the closing of the Banff and Waterton Lakes hatcheries, was approved by the department in February, 1960. Details of subsequent hatchery operations are contained in a previous chapter.

Much of the work carried on by limnologists in the national parks involved fundamental research. For example, shallow fertile lakes in which organic substances break down have a high demand for oxygen. Where dissolved oxygen becomes deficient, winter kill of fish occurs. Success in restoring oxygen has been achieved by various means, including the use of outboard motors to churn up water in shallow areas. High mountain lakes are very cold throughout the year, saturated with oxygen during the open season. Many lakes, however, are deficient in nutrients for plankton which serves as fish food; they have no rooted vegetation, and dip steeply from the shoreline. Reports on various lake conditions enable limnologists to recommend steps which may increase fish populations.

Notable studies on the lakes of prairie parks were carried out by limnologist A.H. Kooyman. In 1960 he began an intensive study of pike and walleye populations in Prince Albert National Park. The program included the tagging of these species in Lake Waskeessu, one of the most popular lakes in the park, and later in the Kingsmere River. He also undertook the planting of walleye in Clear Lake, Riding Mountain National Park. Subsequent investigations supported the hope for good fishing in future for this species.

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Newly-established national parks normally are expected to provide suitable forms of recreation, among which angling holds a prominent position. In 1966 limnologist J.J. Kerekes of the Atlantic region undertook a survey of inland waters in Terra Nova National Park, Newfoundland. This involved a study of the physical and chemical changes of lake waters throughout the year, the species of fish found in the park and the forms of fish food available. Completed in 1970, the study allowed an examination of brook trout, Atlantic salmon and arctic char. A preliminary study of lakes and streams in the vicinity of Bonne Bay, Newfoundland, also was initiated in 1966. The area later became Gros Morne National Park.

Additional surveys of waters and fish populations in the Atlantic national parks included those in Fundy National Park, New Brunswick, where an Atlantic salmon run was reestablished in 1966 after an old logging dam on the Upper Salmon (Alma) River disintegrated and was washed away. Attempts also were made to facilitate the passage of salmon up the Point Wolfe River from the Bay of Fundy.

Birds and Air Travel

The increased use of aircraft focused attention on the hazards created by flights of birds, particularly near airports. With the adoption of jet engines in larger, faster aircraft, bird strikes became more numerous and damage to equipment tended to increase. In 1959, the Canadian Wildlife Service was drawn into discussions with Trans-Canada Air Lines, the Royal Canadian Air Force and the Department of Transport, with the object of alleviating a growing hazard to aviation.

In 1962 the National Research Council undertook at the request of the Department of Transport, the formation of an Associate Committee on Bird Hazards to Aircraft. An engineer of the Research Council, M.S. Kuhring, was named chairman of the committee, and the Canadian Wildlife Service was represented by its chief, Dr. D.A. Munro, and biologist R.D. Harris.

The committee recommended changes in the environment on and near airports that would result in as little attraction as possible for birds. Biologists of the Canadian Wildlife Service were assigned to examine important airports in eastern Canada; consequently recommendations would be made for each of those sites.

Among the solutions or changes recommended were removal of garbage dumps from airports and their vicinity; removal of exposed surface water by the draining or filling of ponds and pools; and reducing plant growth on and around airports, limiting any crops to those unattractive to birds. It also was recommended that berry-bearing plants be removed; that trees and shrubs within 600 feet of runways be dispensed with; and that trees, poles and posts on airports that might serve as perches for birds be removed where possible. These recommendations were well received and were acted upon.

In cases where it was necessary to remove flocks of birds from runways and other areas, noise was employed
to clear the area. This involved the use of small explosive charges in pyrotechnic devices, and the playing, through loudspeakers, of the distress or fright calls of the species involved, as previously recorded on tapes. In 1963 radar was employed for the first time to observe the locations of large flocks of migratory birds, and flying operations were plotted accordingly.

Making Airports less Attractive

Various means were employed to make airports and runways less attractive to birds. The committee found that little could be done in terms of habitat manipulation to make a runway less attractive for loafing gulls. At Heathrow Airport in England, several gull strikes were experienced after extensive rains had brought worms to the ground surface adjoining the tarmac. After invading the runways, the worms not only attracted gulls but also impaired the braking efficiency of aircraft. Recommended solutions included killing worms by treating grass strips adjacent to paved areas with vermicides. Following mass invasions by earthworms, runways were cleaned promptly with sweepers.

Most airports have adjoining grassland strips, which provide an attractive background and prevent dust and dirt from blowing on to runways. Varying degrees of cutting grassed areas to make them less attractive to birds was found necessary. Gulls and plovers normally do not frequent long grass because it obstructs their view and interferes with movement. One the other hand, short grass does not attract ground nesters, nor does it hold large numbers of small animals and insects. It does, however, attract gulls and starlings. Consequently, the decision to keep grass either short or long in certain areas depends mainly on what species of birds are the principal hazard.

Studies revealed that the location of airports had much to do with the degree of bird hazard to aircraft in the vicinity. In the selection of sites for additional airports in the vicinity of Montreal and Toronto, the committee was formally requested to rate the proposed sites for bird hazards. The site recommended for an additional airport to serve Montreal - Mirabel - had a lower bird hazard potential than other sites considered.

The Canadian Wildlife Service was represented on Canada’s Associate Committee on Bird Hazards to Aircraft during the 14 years of the committee’s existence. In 1964 Dr. V.E.F. Solman succeeded Dr. D.A. Munro as senior representative of the Wildlife Service on the committee. He became its chairman in 1973, and served in that capacity until 1976. In 1969 the committee held a world conference on Bird Hazards to Aircraft at Kingston, Ontario, at which 22 countries were represented.

Dr. Solman assisted the government of Sweden in planning the design and construction of a new airport to serve the city of Malmo, and offered advice concerning the training of staff. In 1970 Dr. Solman introduced programs using radar and meteorological data to forecast areas and periods of high bird hazard in France, Denmark, Belgium and the United Kingdom.

The associate committee and its individual members produced more than 100 reports for world use. The information assembled over 14 years was condensed into a text book, *Birds Hazards to Aircraft*. This was prepared by committee member Hans Blokpoel, a wildlife biologist with the Canadian Wildlife Service in Ottawa. The book was published by Clarke, Irwin and Co. Ltd. in 1976, just before the committee voted for its own dissolution, after having completed its work.

Canada Land Inventory

Additional participation by the Canadian Wildlife Service in conservation activity was made possible by the passing of the Agricultural and Rural Development Act by Parliament in June, 1961. Known as ARDA, the act provided for cooperation through agreements between the federal Minister of Agriculture and provincial governments and agencies in developing marginal or submarginal agricultural lands. In effect, the intent was to improve farm income in depressed areas. Means to this end include the consolidation of uneconomical small farms, improved methods of cultivation and the abandonment of submarginal farms. The act also provided for financial contributions by the Minister of Agriculture to provincial governments and agencies.

Studies were made across Canada to locate farm areas with the smallest income levels so that work could be concentrated on them. Although it had been assumed that low-income areas existed in certain provinces, the study revealed that such areas existed right across the country. After the problem areas were located and mapped, it was then considered desirable to learn the causes of the low earnings and to recommend methods of improving the situation. As the data compiled were examined, it was found that low cash returns often resulted from attempts to farm lands not suited to the purpose. This demonstrated the need to look at the settled parts of Canada with regard to the land’s capability to support various kinds of agriculture.

Before the agricultural capability studies were begun, it was decided that if capability was low where an established population was involved in agriculture, then other types of employment should be explored. If a decision was made to terminate agricultural use of land, it would then be possible to determine what other capabilities the land had. Alternative use of land could then include forestry, recreation, and the production of wildlife. Consequently, a multiple resource capability inventory was required.

Program Developed

The resultant program was known as the Canada Land Inventory. It was developed with the cooperation of the Canadian Wildlife Service, provincial agencies responsible for wildlife, and federal agencies concerned with forests, recreation and agriculture. It involved gathering, studying and presenting capability data for an area of about 1 million square miles principally in settled regions of southern Canada. The area is covered by 196 map sheets at a scale of 1:250,000. Techniques for assessing capability were developed at a number of meetings of federal and provincial specialists in the various categories involved. With regard to wildlife it was first assumed that one type of classification could be used. Later, after numerous meetings and discussions involving biologists
from all provinces and the federal service, it was agreed that land capability for waterfowl and big game (chiefly ungulates or hoofed animals) should be analyzed and mapped separately. Those interested in recreation considered that although capability of land for most forms of recreation could be determined, an inventory of game fish capability was required. After much discussion, a technique was developed to evaluate the capability of an area to produce game fish.

The Canada Land Inventory program began in 1964. Up to 40 provincial and 17 federal government biologists and technicians were involved in the inventory of wildlife and game fish capability. Mapping was first done at a scale of 1:50,000 and then consolidated at a scale of 1:250,000. Maps in the agriculture, forestry, recreation, big game and waterfowl series are published in colour for sale to the public.

The data at 1:50,000 were collected primarily for detailed planning. They were inserted into a computer storage facility from which they can be extracted as needed. The computer program permits grouping of any data on present land use, and various kinds of social, political and economic data on the human population. The computer memory bank is of great value to planners engaged in reorganization, rural and urban planning, and socio-economic studies.

The Canadian Wildlife Service carried out the mapping of waterfowl capability in all provinces where that work was completed, with the exception of Prince Edward Island. There, through a special arrangement, the capability mapping was carried out by provincial officials. Because of special agreements with Newfoundland, there was no arrangement for a waterfowl inventory in that province in the Canada Land Inventory style. The Canadian Wildlife Service, in cooperation with provincial officials, carried out assessment of waterfowl production and capability in certain areas; the resulting data were to be available for general use, although not in the Canada Land Inventory style.

Several members of the Canadian Wildlife Service have been involved in the Canada Land Inventory as national and wildlife coordinators. They have included successively W.A. Benson, N.G. Perret and Dr. V.E.F. Solman. Dr. Solman served as national coordinator in wildlife on a part-time basis from 1968 to 1975. He then returned to the Canadian Wildlife Service on a full-time basis as Coordinator, Environmental Impact Assessment. Numerous other members of the Wildlife Service participated in the inventory; they included G.H. Watson who filled the position of regional coordinator in eastern Canada, and R. Jakimchuk and G.W. Staines in a similar capacity in western Canada.

Acquisition of Wetlands

Concern over the gradual diminution of wetlands in the southern areas of Canada, particularly on the western prairies, led the Canadian Wildlife Service to consider ways and means of preserving sufficient lands to maintain adequate populations of migratory waterfowl. About 70 percent of North America's most hunted species of migratory birds nest and raise their young in the ponds and potholes of Manitoba, Saskatchewan and Alberta.

Eventually, in 1963, a four-year pilot program, involving two projects, was embarked on. Through one project, undertaken by Dr. W.D.J. Stephen, wetland conservation contracts were offered to owners of lands containing ponds and potholes, for periods of 10 or 20 years. Under terms of the contract, landowners would receive payment in return for their undertaking not to drain or fill their wetlands, or burn the surrounding marsh vegetation.

During 1963, 11 such contracts were signed, and the requisite payments made. During 1964, additional contracts were negotiated on the basis of quarter sections of 160 acres. On the average, about 75 percent of the landowners approached agreed to enter into contracts. Under another pilot project, instituted in the Atlantic provinces, the intention was to acquire freehold title to important wetlands. During 1966-67, areas around Sand Pond and John Lusby Marsh in Nova Scotia were purchased. In addition, title to 14,620 acres around the northern end of Last Mountain Lake in Saskatchewan was acquired.

By 1967 the pilot study had been completed, and that year a 10-year program was launched to preserve about 4 million acres of wetlands at an estimated annual cost of $5,000,000.

During the fiscal year 1967-68, agreements were concluded with about 3,700 land owners of 27,000 acres of wetlands. It was estimated that payments over a 10-year period would amount to $1,420,000. Early in 1968, a five-year agreement between the department and the Lower Kootenay Indian Band near Creston, British Columbia, ensured the protection of 3,300 acres of wetlands on the reserve. This area, on the Pacific flyway, was considered an important one. In 1968-69, an additional 32,000 acres were brought under the wetlands program, for which an expenditure of $1 million was expected. During 1969-70, an additional 32,000 acres were reserved as wetlands under agreement, bringing the total area thus preserved for migratory waterfowl to more than 70,000 acres.

Meanwhile, substantial amounts were being expended for outright purchase of areas suitable for waterfowl preservation. A total of 18,853 acres of wetlands was acquired in the provinces of Saskatchewan, Quebec, New Brunswick and Nova Scotia in 1967-68 at an average price of $63 per acre. In the fiscal year following, an additional area of 18,000 acres was purchased, while in 1969-70, a further acquisition of wetlands for national wildlife areas brought the total acreage under federal government ownership to 41,450. Used primarily as stopover places for birds during their migration, the areas acquired also were being improved to promote breeding of waterfowl.

During 1970-71, the Canadian Wildlife Service spent $853,000 in the purchase of 4,800 acres; in 1971-72, 3,419 acres were acquired, and in 1972-73 an additional 1,771 acres were obtained. By March 31, 1973, a total of 26 national wildlife areas had been created at a cost of about $6 million.

Wildlife Interpretation

The Canadian Wildlife Service entered the field of conservation interpretation in 1967, to provide the public with information about wildlife in Canada outside na-
ional parks. R. Yorke Edwards, a British Columbia biologist, was recruited to develop a program whereby wildlife interpretation centres might be developed in each biotic region in Canada. In addition, smaller seasonal centres were contemplated to serve the public need at wildlife spectacles of national importance, such as Last Mountain Lake in Saskatchewan, the first large waterfowl refuge created in Canada. Major biotic regions originally involved in the plan included the Atlantic coast, Maritimes forest, hardwood forest, Canadian Shield, prairie wildlife, mountain forest, mountain tundra, Great Basin desert, Fraser delta and Pacific coast. As far as possible, it was planned to locate each centre within reasonable access to the Trans-Canada Highway. In 1976, biotic regions were renamed national regions and reduced in number to nine. Two years later, the concept was reviewed to incorporate seven wildlife regions: the Pacific, mountain, boreal, arctic, prairie, Great Lakes -St. Lawrence and Atlantic regions.

As proposed, each major wildlife centre would contain a building capable of housing exhibits, information centre and workshop, and have equipment for providing audio-visual slide programs. Close by outdoor exhibits, informative signs, nature trails, observation points and other inducements to use and enjoy the outdoors would be provided. An important feature of each centre would be an interpretation staff. The interpreters would develop and offer a daily program such as demonstrations, talks and conducted walks, all of which would permit personal communication.

**Interpretation Centres**

The first wildlife interpretation centre was established in 1969 at the Wye Marsh near Midland, Ontario - about 90 miles north of Toronto. This is in the hardwood region of southern Ontario - a land of sugar maples, white pine, deer and beaver. Here visitors are introduced not only to the landscape, but to marsh life as well. A floating boardwalk extending into the marsh permits a close look at muskrat houses, aquatic plants, and Canada geese. Life below the water line is visible through an underwater window. Activities are directed from a building containing offices, workshops, an exhibit hall and theatre. During the visitor season, films or slides are shown hourly in the theatre. The character and extent of the marsh area can be determined by climbing the steps of an observation tower.

A second wildlife interpretation centre was developed and opened at Percé, Quebec, in 1972. Located on the Gulf of St. Lawrence, it was designed to tell the story of the interaction of land and sea along the Atlantic Coast. Nearby is Percé Rock, long a landmark in the region, which is accessible on foot over the sand at low tide. Bonaventure Island, a short trip by boat from Percé, is known for its seabird colonies. It includes the world's second largest gannet colony and uncountable numbers of puffins, murres and gulls.

Cap Tourmente Wildlife Interpretation Centre was opened in 1973. Situated on the St. Lawrence River about 30 miles east of Quebec City, it is noted for its concentrations of snow geese during their spring and autumn migrations to and from nesting grounds on the islands and mainland north of Hudson Bay. The spectacle of snow geese flocks of 200,000 is unforgettable.

Canada's midwestern wildlife habitat is exemplified on the Prairie Wildlife Interpretation centre near Webb, Saskatchewan, about 17 miles west of Swift Current. Opened in 1977, it lies within the grassland prairie region, replete with growths of sage and cacti, and also contains alkali sloughs. Migratory whistling swans rest on nearby Goose Lake in season.

Farther west in British Columbia is the Creston Wildlife Interpretation Centre, opened in 1974. Located near the town of Creston, the centre is representative of the Columbia biotic region. Forest growths on the mountain sides include the western red cedar, ponderosa pine and alpine fir. Large areas of wetlands in the valley incorporate marshes which draw thousands of migrating geese, ducks and whistling swans. The osprey also is found in large numbers in the area. Set on piles in the middle of a marsh, the interpretation building occupies a unique situation, and provides excellent views of the surrounding landscape.

Yorke Edwards served as chief of the Canadian Wildlife Service Interpretation Division from 1967 until the autumn of 1972, when he accepted an appointment as director of the British Columbia Museum in Victoria. He was succeeded in 1973 by William Barkley, officer in charge of the Wye Marsh Interpretation Centre. Barkley remained chief of the division until June, 1977, when he resigned to become assistant to Edwards in Victoria. Roy Webster, Barkley's assistant carried on as acting chief until James P. Foley of Parks Canada Interpretation Division was appointed chief in January, 1978.

**Conclusion**

Since its modest beginning as the Wildlife Division of the National Parks Branch in 1918, the Canadian Wildlife Service has established a remarkable record in initiating studies and projects for the conservation of numerous species of Canadian wildlife. It has assisted in the repopulation of numerous areas within and outside national parks with native species, has helped to rehabilitate birds and mammals in danger of extinction, and has, through remedial measures, helped eliminate diseases that threatened extirpation of wild animals essential to both the ecological and economic life of the nation. The Canadian Wildlife Service also has provided opportunities for the training of undergraduates and graduates of Canadian universities in various fields of biological science, where their research activities have provided very important contributions to existing knowledge of the fauna of Canada.

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An 'accident victim' is lowered to safety in a mine rescue basket at a park warden mountain rescue school in Banff National Park.

Brun, a registered stallion bred national park saddle horses at the Ya-Ha-Tinda Ranch.

Chief Park Warden Howard Sibbald (right) and Park Warden Charles Phillips with new fire truck at Rocky Mountains (Banff) Park in 1915.
Chapter 9
Guardians of the Wild
Introduction
In the preservation and administration of our national park heritage, the Park Warden Service fills an exacting and continuous role. For more than 75 years, these guardians of the wild have functioned as fire rangers, game guardians, fishery inspectors, police officers and members of mountain search and rescue teams. They also have, through long association with park visitors, served with distinction as information and public relations officers. Through changing seasons, in fine weather and foul, they fulfill a most important function in national park administration as conservation officers, counsellors and as friends in times of need.

First Forest Ranger
The first person delegated to perform the duties of forest ranger in Rocky Mountains (Banff) National Park, following its creation in 1887, was John Connor. In its early days the national park suffered greatly from forest fires, many of which occurred along the right of way of the newly completed Canadian Pacific Railway. Connor’s duties consisted mainly of making daily patrols along the railway line in a handcar, and in recruiting fire suppression crews when fire swept down the Bow River valley on the embryo town of Banff. Connor also was called upon by Superintendent Stewart to perform clerical duties as required. The date of Connor’s appointment is not known, but he was one of a large group of Banff citizens recommended by the superintendent in 1887 for a lease on a townsite lot. Connor once held leasehold rights to a lot on Banff Avenue now occupied in part by the Canadian Imperial Bank of Commerce. Connor died in November 1890, and his widow conveyed her interest in the property to another party. No record of Connor’s successor as forest ranger is available from existing departmental files.

Forest and game protection was apparently carried on in a haphazard manner in Banff and other western parks until 1909, when the park warden service was organized. Annual reports of the park superintendents indicate that a fire well under way was very difficult to control, unless providential rains intervened to extinguish it. In May 1903, a fire raged for three days a few miles west of Banff Station. In his annual report for 1906, Superintendent Douglas noted that twice-daily patrols of the railway line had prevented what might have developed into disastrous fires, caused by sparks from passing trains; but it was impossible, he said, to prevent fires from spreading. He recommended a special appropriation to combat, detect and suppress fires, especially if the prevailing dry seasons continued. Two years later he again complained about the difficulty in protecting both forests and game, and recommended the appointment of permanent staff whose duties would combine those of both game and fire warden.

Warden Service Organized
Superintendent Douglas’s hopes for a protective service were realized in 1909. On June 21, 1909, the National Parks general regulations were revised by order in council, enabling the Minister of the Interior to appoint “game guardians” with authority to enforce the laws and regulations within the parks. Each game guardian was given a badge of office, which he was required to display “on every occasion when he is exercising the authority of his office.” The new regulations also authorized better control of travel through the parks by visitors and better control of the lighting of open fires; to prevent railway fires, they required that every locomotive passing through a park be equipped with the most improved device to prevent the escape of fire from the smokestack, furnace or ashpan of the engine.

Better game and fire protection also was anticipated by new clauses in the regulations. Besides the rigid protection of all game, these clauses provided for the sealing of firearms carried by visitors through the parks, the control of dogs, the establishment of a season for sport fishing, and the prohibition of illegal fishing practices such as netting or trapping fish or exploding dynamite in park waters.

A forecast of the proposed organization of the warden service was contained in the report of the Commissioner of Parks for the year ending March 31, 1909. It read as follows:

They (the wardens) will patrol all portions of the parks and regular patrol trails, and small cabins will be constructed in different portions of the parks where the men can remain overnight and avoid the necessity of packing tents, etc. with them. Each will be furnished with a saddle pony and a pack pony carrying supplies, so that they can remain out for several days at a time or as long as their patrol duty in any locality may require.

...The instituting of a systematic patrol and the adoption of more stringent fire regulations in respect to the care of camp-fires by tourists should have the effect of greatly reducing the danger from this source and assist us in the effort to preserve the forests of the parks in the state of primeval nature which is one of their chief charms.

The new warden service for Banff Park, consisting of three permanent officers, was headed by Howard E. Sibbald as chief fire and game warden. Sibbald had rare qualifications, having been raised and educated in the early west. His father, Andrew Sibbald, was a pioneer teacher in the Northwest Territories, who had trekked across the prairie from Winnipeg in 1875 to take charge of the Methodist Mission at Morley, Northwest Territories. Consequently, his son Howard had a background of more than 30 years of living and travelling in the foothill and mountain region of what is now Alberta, assimilating a vast practical knowledge of the area.

In the years following 1909, Sibbald developed, with the encouragement of the Commissioner of Parks, improved practices in game and fire protection, trail construction, forest patrols and other functions of a warden service. Before 1909 a few game guardians and fire rangers had been employed on a seasonal basis, but they were handicapped by a lack of direction and the statutory authority to carry out their duties effectively.

In 1913 Sibbald undertook a forest survey of the Bow River valley within the park. The following year he advocated cutting a fireguard west of the Cave and Basin
Springs at Banff as a protective measure against fires. Although this work had been advocated by the Whitcher report of 1886, it was not completed until 1916. A fire lookout was stationed at the weather observatory on Sulphur Mountain, and the telephone line from that point to Banff was reconditioned. Concurrently, in 1914, a start was made in the construction of a field forest telephone system, which eventually provided communication from all warden districts and main patrol cabins to park headquarters. By March, 1915, a 28-mile line had been constructed from Banff to Canmore, and another line 9 miles long was built from the warden's cabin at the eastern end of Lake Minnewanka to its western end. Later, lines were extended to Stoney Creek up the Cascade River, to Healy Creek where it enters Bow River, and to Castle Mountain.

Fire Pump Developed
From five years of practical experience, Sibbald found that the warden service was handicapped for want of modern fire suppression equipment. For years, fires had been fought with green pine tops, wet gunny sacks, axes, shovels, mattocks and water pails. What was required was a mechanical device whereby water could be taken from a natural source of supply to the scene of a fire in sufficient quantities to make the use of such equipment practicable. Commissioner of Parks J.B. Harkin referred the problem to the Board of Railway Commissioners, where it was turned over to Harry C. Johnson, its fire inspector, for a solution. Johnson studied various types and arrangements of engines and pumps available. Keeping in mind the vital matters of weight, portability and easy manipulation, he decided upon a marine type of two-cylinder gasoline motor of about six horse-power to supply energy. This was coupled to a special rotary pump, and the assembly, with necessary attachments, was mounted on a single base. After testing, in which many factors were considered, a gasoline portable pumping unit designated No. 1 was built. This combination was found to be capable of pumping 20 gallons of water per minute and lifting water to a height of 172 feet. During a capacity test, water was pumped through 1,500 feet of 1½ inch hose to a height of approximately 85 feet. The unit weighed 118 pounds stripped and 143 pounds with an oaken base. Two pumping units could be transported on a single horse, with hose carried by a second animal.

Units of the new pump were tested in two locations in Ottawa, one at the foot of the Rideau Canal locks, and the other in the yards of the Grand Trunk Railway. Tests also were carried out in both Banff and Jasper Parks, as photographs in possession of the National Parks Branch confirm. In field service, it was planned to use pumping units in relays, whereby No. 1 pump would supply water to No. 2 pump, which in turn would supply a third unit, and so on. To permit rapid transport along park roads, a Ford automobile chassis was purchased and equipped with a suitable box body capable of carrying hose and pump units as required. In addition, a specially designed wagon three feet wide and capable of being hauled either by hand or by horse, was built for use on park trails.

In its field tests, the fire engine and pump exceeded expectations. Chief Warden Sibbald reported that “we carried the water in one instance over a steep hill 200 feet high, and along a clearing for 600 feet, the gauge showing a pressure of from 85 to 90 pounds.” Park Warden Charles Phillips reported that the whole apparatus was given a very fair four-day test at the Alien Detention Camp near Castle Mountain, where large piles of brush and small timber were burned in perfect safety. During the season of 1915, in which the new equipment was introduced, the park superintendent purchased a motor launch from a Banff boat operator for use by wardens engaged in fire and game patrols on Lake Minnewanka.

Modifications of the original motor-driven fire pump units were made during subsequent years, although the basic design was retained. In his annual report for 1920-21, the Commissioner of Parks reported that the great success which had attended the use of the portable firefighting equipment developed for the Branch suggested the construction of a larger engine to use in combating fires along motor roads in the parks. Consequently, the branch ordered for use in Banff Park a new ¾ ton Reo chassis, on which was installed a pumping unit capable of delivering 130 gallons of water per minute at a pressure of 120 pounds per inch. The new fire truck also was equipped with 2,000 feet of 2½ inch linen hose.

The original type of fire pump used by the park warden service of the various parks has long since been supplanted by more advanced types. The newer fire pumps presently in use are of a more compact design, are lighter and thus easier to transport. Consequently they are more adaptable for varying situations which must be met. The 1915 fire pump unit, however, was a great step forward in helping to combat and control an ever-present threat to national parks - forest fires. Its creator, Harry Johnson, lived to witness many changes, for he died at Ottawa in January, 1980 - 99 years old.

Forest Conservation Stressed
With practical fire-fighting equipment now assured, Commissioner Harkin next instituted a campaign of public education about the need to prevent forest fires. As he observed in his annual report for 1915-16: “Practically, there are only two kinds of fires, so far as the parks are concerned: those arising from human causes and those caused by lightning. We cannot prevent fires that are caused by lightning but those of human origin are nearly always the result of carelessness or ignorance. It is simply another case of ‘not knowing it was loaded’, because the necessity for care is not realized.”

The commissioner arranged for the printing of suitable fire-warning notices on articles that were commonly used in the woods, so that a warning should constantly be before park visitors when they were liable to start fires. Two leading Canadian manufacturers of matches agreed to print warnings on practically all the match boxes they sold. Eddy’s matches boxes, both large and small, carried the admonition: “Do not throw away burning matches, especially in the woods. Printed at the request of the Dominion Government.” Notices were inserted in rifle and shotgun ammunition boxes; labels affixed to axes by Canadian manufacturers called to attention the need for fire prevention in the forest; and a leading tent manufac-
National Parks. In 1909, Lake O'Hara, one of the most beautiful lakes in Yoho Park, was made accessible to Laggan, was 38 miles.

The Canadian Pacific Railway Company had begun its service in 1885, and in 1909, the small force of game wardens and fire guardians - since termed the park warden service - was established in the Banff National Park. The company was responsible for the maintenance of these trails and fire roads, with a planned itinerary and overnight stops in tents. The annual hike, which has been carried on for years, usually involves a five-day outing with overnight stops at prearranged camps, with a final windup at the Banff Springs Hotel or Chateau Lake Louise.

A companion group who preferred to explore the national park trail system on foot was organized in 1933 by J.M. Gibbon, then general publicity agent of the Canadian Pacific Railway. He had the assistance of others interested in hiking, and the group was named the Skyline Trail Riders. The annual hike is carried out along the lines of the trail rides, with a planned itinerary and overnight stops in tents. These outings are conducted as all-expense tours with everything supplied except clothing and personal effects.

Warden District Organizations
After its organization in 1909, the small force of park wardens - since termed the park warden service - grew slowly. For want of roads and trails, early patrols were concentrated on areas parallel to railway lines, where motorized velocipedes were used. Following the opening of the Banff-Calgary coach road in 1911, and the completion of a road to Castle Mountain and Vermilion Pass, the construction of a system of trails and fire roads began. Patrols were extended and overnight accommodation provided for the warden staff in the form of patrol cabins. Warden districts were laid out, and permanent warden cabins erected at key points where hunting parties planning to enter park territory might be intercepted. Among the earliest cabins constructed in Banff Park were those on the Kananaskis River and on

**Park Trails**

Many of the earliest walking trails developed in the western national parks were constructed and maintained by the Canadian Pacific Railway Company for the benefit of guests at their mountain park hotels. Glacier House in Glacier Park was closed in 1925 and dismantled four years later, but Canadian Pacific trail maintenance crews continued their operations in the vicinity of Chateau Lake Louise, Lake O'Hara, Emerald Lake Lodge and Yoho Valley Camp until the end of the 1952 season. The maintenance of these trails was then taken over by the park superintendents. Saddle pony trails, however, were the responsibility of the national park administration. They not only permitted visitors to enjoy outings on horseback far beyond the confines of park townsites, but also provided routes for patrols and for the transport of fire-fighting equipment by the park warden service as required. In turn, many of the earlier and more important horse trails were widened and improved to the status of fire roads, capable of accommodating motor vehicles engaged in various phases of park administration.

One of the earliest riding trails developed by the superintendent in Banff Park led from the town of Banff to Lake Louise Station, then known as Laggan. It followed the valley of the Bow River along the north side, and was improved by Superintendent Douglas in 1904-05. After the park warden service was organized, trail development got under way in earnest; and at the end of the 1911 season, the superintendent was able to report that 167 miles of horse trails had been constructed. In 1912, trails were cut from Canmore to White Man Pass, a distance of four miles, at a cost of $100; Brewster Creek trail was extended for 3 miles at a cost of $100; and a trail extension from the logging road up Spray River to Spray Lakes was built for $300. At that figure, it was a bargain for a 12 mile stretch. By April 1, 1914, the number of trails either constructed or improved in Banff Park numbered 60, and entailed 759 miles of construction. The shortest trail listed was one mile; the longest, from Banff to Laggan, was 38 miles.

Similar trail development work was undertaken in other national parks. In 1909, Lake O'Hara, one of the most beautiful lakes in Yoho Park, was made accessible by pack trail from the railway line at Hector. Forest ranger "Kootenai" Brown reported in 1911 that a trail had been constructed from Cameron Falls, in Waterton Lakes Park, southerly along the west side of the upper lake to the international boundary, a distance of 5 miles. Jasper National Park, then the largest in the park system, offered almost unlimited opportunities for trail development, and eventually the length of trails in that park exceeded 580 miles. One of the longest led from Jasper southerly to the summit of Sunwapta Pass, a distance of 70 miles. It joined up at the pass with the trail system in Banff Park to the south, and provided a continuous saddle-pony trip through the mountain ranges from Lake Louise to Jasper, a distance of about 142 miles. The route is now followed, with a few deviations, by the inter-park Icefields Highway. By the end of 1955, the total length of the national park trail system, excluding that of Wood Buffalo Park, was 2,300 miles.

**Trail Riding and Hiking**

Although the improvement and development of motor roads in the national parks cut heavily into the horse livery business in the mountain parks, riding was given a decided lift when the Trail Riders of the Canadian Rockies was formed in 1924. This organization was sponsored by the Canadian Pacific Railway Company to encourage travel on horseback through the central Canadian Rockies; to encourage life outdoors; to assist in preserving national parks for public enjoyment; and to conserve the native wildlife. The organization meeting was held in Yoho Valley; Dr. C.D. Walcott, of the Smithsonian Institution at Washington, was named honorary president, and J.M. Wardle, chief parks engineer at Banff, was elected president. At this meeting a plaque was unveiled to commemorate the services of Tom Wilson, one of the best known guides in the Rockies, who was believed to be the first white man to see Lake Louise, Emerald Lake and the Yoho Valley. The annual ride, which has been carried on for years, usually involves a five-day outing with overnight stops at prearranged camps, with a final windup at the Banff Springs Hotel or Chateau Lake Louise.

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Panther River in the northeast section of the park. The original Panther River log cabin with its sign Warden Patrol Cabin - Rocky Mountain Park No. 3, was declared an historic building in 1976, and was moved to grounds of the Archives of the Canadian Rockies in Banff townsite on August 29, 1977. The sign carries the signatures of many of the original wardens who sought shelter within the cabin’s walls.

By April, 1914, warden accommodation on park trails had been increased to nine units, and in 1914-15 five more were added. These were at White Man Pass, Healy Creek, Ghost River, Cuthead Creek and Vermilion Pass. As the commissioner of parks observed in his annual report for that year: “The value of these cabins in the forest service can hardly be overestimated. They enable the men to almost indefinitely prolong their patrols when, in other circumstances, they would be compelled to return to town or some other habitation each night.”

Current policy was not to restrict the use of cabins to the warden force. They were available to all travellers in the vicinity, subject to reasonable care in their use. As explained by Park Superintendent Clarke in his annual report, the house rules were summarized by a notice in each cabin which read:

In his absence, it may be used by campers, but must be left clean. Any person who takes from this cabin any tool or utensil, except for the purpose of fighting a forest fire, is liable to a fine of $100.1

Early Warden Stations
Most of the early warden headquarters or district cabins were peeled log structures. Usually they were complemented by a separate stable and barn and by an equipment building, sometimes attached to the main residence. Water supply was obtained from wells or by tapping a nearby stream. A supply of firewood usually was available nearby. Lighting was supplied by kerosene lanterns and lamps, later replaced by gasoline lights, and eventually by Delco electric lighting units. Most of the early structures have since disappeared. They have been replaced by attractive bungalows finished in wood siding, and designed to include office space, together with modern plumbing, heating and cooking equipment.

A warden’s workday equipment varied according to the location of his station, but items issued from wardens’ stores in each park were bound to include hand pumps, motor-driven fire pumps, axes, shovels, mattocks or grub hoes, crosscut saws, water pails and bags, lanterns and a first aid kit. Small hand tools including files, grinders, a hammer, a handsaw and drills also were supplied. Pumping units might be of either rotary or centrifugal type. Each warden also was issued with a good supply of linen hose for use with fire pumps. Most wardens were provided with one or two riding horses, several packhorses for carrying supplies on patrols, and at least one corral in which to keep their animals from straying. Normal equipment also included a saddle, halters, harness, robes and other equine necessities.

Warden Uniforms
For years, wardens wore no special uniform. Many of the early wardens in the mountain parks were recruited from packers and guides, who favored clothing similar to that worn by men whose duties required the use of horses. Hats invariably were of the cowboy type, although Howard Sibbald and some of his early assistants affected a stiff-brimmed Stetson type hat similar to that used today by boy scouts. Each warden, of course, wore his badge of office.

After long deliberation, the National Parks Bureau in 1938 issued each warden with a formal uniform, designed and tailored by Tip Top Tailors of Toronto, Ontario. The fabric was a dark green wool whipcord topped off by a light brown hat with a semisoft rolled brim. A warden’s issue included tunic, breeches, slacks, Stetson hat, badge, riding boots, ankle boots, shirts, belt, ties, parka, raincoat and overalls. The uniform was issued to wardens at half the actual cost, the other half being absorbed by the department. Wearing the uniform was mandatory while the warden was on duty, except in special cases when permission for non-use was granted by the park superintendent. Former Chief Warden J.C. Holroyd was issued with badge No. 10, believed to be the lowest number issued. Although withdrawn from service in favor of a bilingual issue, this badge number has been perpetuated, and is still in use in the warden service.

Personnel Expansion
Boundary changes affecting Banff and Jasper Parks from 1911 to 1917 influenced the size of these parks, and also affected the organization of warden districts. The last major boundary changes were made in 1930 with the passing of the National Parks Act. At that time several hundred square miles of territory, considered to be of more value for resource development than for national park purposes were withdrawn. From 1930 onwards, a greatly expanded system of roads, trails and telephone lines helped improve communication between warden stations and park headquarters, making possible a more permanent organization of game and forest protective forces.

Some idea of the increase in warden personnel may be gained from a comparison of permanent and temporary staff positions in 1937 with those in 1957. In 1937-38 department estimates provided for 10 supervising or chief park wardens, 49 permanent park wardens and 13 temporary wardens spread over 17 parks. For 1957-58, the number of park warden positions listed in the annual park estimates included 14 supervising wardens, 72 permanent park wardens and 15 temporary park wardens. The average warden districts in the two largest parks, Banff and Jasper, were 230 and 300 square miles respectively.

Ya-Ha-Tinda Ranch
The saddle horse has been an integral part of the national park warden service since its inception. During the formative years of the service, horses provided the principal means of transportation for the wardens, for they were particularly suited for travel on narrow mountain trails where vehicles could not penetrate. As fire roads and improved secondary roads were developed throughout the
national park system, the motor vehicle partially supplanted the saddle horse for the transportation of firefighting equipment, for patrol duties and for personal use, but a substantial number of horses have been maintained in the mountain parks and to a lesser extent in other park regions.

Before 1917 the winter grazing of park horses was carried out at suitable areas either within or outside park boundaries. Since 1917, most horses not retained at various park headquarters have been transferred to an area north of the Red Deer River and just east of the main range of the Canadian Rockies. Known for years as the Ya-Ha-Tinda Ranch, it contains an area of 9,750 acres and embraces a beautiful rolling landscape, partly wooded, and covered with prairie grass over several hundred acres. Its name is believed to be the Stoney-Assiniboine Indian for “Little Prairie in the Mountains”.

**Early Occupation**

In the early days, access to Ya-Ha-Tinda Ranch was from the east by road through the town of Sundre, Alberta, and thence by trail up the valley of the Red Deer River. Later, fire trails and fire roads were constructed north from Lake Minnewanka in Banff National Park up Cascade River, Cuthead Creek, and Wigmore Creek, and over Snow Creek Pass to Red Deer River. The site of the ranch and its amazing possibilities as a horse-grazing area were first brought to the attention of the Department of the Interior in 1904, when Jim and Bill Brewster of Banff applied for a grazing lease in the vicinity; they wished to graze some 300 horses used mainly in Banff and Yoho Parks. The ranch then formed part of Rocky Mountains (Banff) Park, and the application was rejected on the advice of the Departmental legal adviser, as inconsistent with the provisions of the Rocky Mountains Park Act. The Brewsters, however, resubmitted applications for grazing privileges in 1905 and 1907; the third application, in 1907, was approved by the minister, Frank Oliver. A condition of continued operation was a formal survey by the lessee of the land to be covered by a grazing lease.

In March, 1909, the Brewsters had 48 cattle and 150 horses on their ranch, together with a cabin and barns. The ranch, in charge of Frank Sibbald, was used to raise and “break” horses for an extensive guide and outfitting business. Meanwhile, some difficulty had developed in the issue of a grazing lease, although arrears of rental were still occupied as staff quarters in 1977. A ranch repair shop was built in 1918, along with a bunkhouse and a garage and a barn with stabling facilities. The bunkhouse was still occupied as staff quarters in 1977. A ranch house, containing a kitchen, living room and two bedrooms was added in 1920. Constructed of logs, it had few modern features. Water came from an outside well, and sanitary features were primitive, providing little comfort to ranch residents in winter.

**Ranch Withdrawn from Park**

In June, 1911, the area of Rocky Mountains Park was substantially reduced, and Ya-Ha-Tinda Ranch was left outside the new park boundaries as part of the Rocky Mountains Forest Reserve. Consequently the Forestry Branch of the Department of the Interior took over the administration of the reserve. From 1911 to 1915, national park records contained no correspondence concerning the ranch, although its occupation by the Brewster Trading Company was continued. Early in 1915, Superintendent S.J. Clarke of Rocky Mountains Park advised the Commissioner of Parks that the ranch occupied a strategic position in relation to the protection of the park’s wildlife. It was pointed out that the main trail from Banff to Ya-Ha-Tinda Ranch ran through the principal breeding grounds of the Rocky Mountain or bighorn sheep. Some of the ranch employees had been convicted in the past of poaching within the park, and Clarke recommended termination of the Brewster grazing privileges which had been enjoyed by permissive lease, although lacking formal documentation. The recommendation was approved by the minister, and the Superintendent of Forestry was instructed to have the ranch property vacated by the occupants, now incorporated as the Ya-Ha-Tinda Ranching Company Limited. L.S. Crosby, a director of the company, requested time to relocate the business; but meanwhile, the Department of the Interior had instructed the Department of Justice to institute legal proceedings to obtain repossess of the ranch lands.

On September 18, 1917, the boundaries of Rocky Mountains Park were extended under authority of an order in council, and Ya-Ha-Tinda Ranch again became part of the park. Later that year, the Department regained possession and from then onwards, the ranch was used as headquarters of a park warden district, and as a winter grazing area for park horses.

Many years later, the writer discussed with W.A. (Bill) Brewster, his company’s use of the ranch. Brewster conceded there may have been some infractions of the park game regulations, but he believed that employees of the Brewster ranch often were blamed for poaching actually carried on by others who had ready access to the area. Meanwhile, the Brewster organization had relocated its ranching activities elsewhere outside park boundaries.

**Early Buildings Replaced**

Over the years, considerable building construction was carried on in the Ya-Ha-Tinda area by park authorities. A one-room bunkhouse was erected in 1918, along with a garage and a barn with stabling facilities. The bunkhouse was still occupied as staff quarters in 1977. A ranch house, containing a kitchen, living room and two bedrooms was added in 1920. Constructed of logs, it had few modern features. Water came from an outside well, and sanitary features were primitive, providing little comfort to ranch residents in winter.

During World War II, a few buildings were added to the establishment. A one-story log residence for farm laborers was erected in 1942, together with a two-story log barn, incorporating a tack room and stall space for nine horses. The upper story was given over to storage space for oats and hay. A blacksmith shop was built in 1946.

The postwar years witnessed considerably building development in all national parks, and Ya-Ha-Tinda Ranch shared some of the funds provided. A frame storage shed for a tractor and other farm implements was built there in 1951. It was complemented in 1952 by another frame building for the storage of fire-suppression
equipment, along with storage facilities for gasoline and oil.

A new ranch house built in 1960 for the ranch foreman and his wife undoubtedly brought joy to its occupants. Designed as a fully modern building, it contained three bedrooms, a large living room and a substantial kitchen which served as a mess hall for spring and autumn labor crews engaged in seasonal roundups of horses. The old ranch house was demolished in 1961.

Further additions included a small bungalow hauled to the site from Banff, which was made available to the assistant foreman. It had once formed a unit of the Carrot Creek Bungalow Camp on the Trans-Canada Highway east of Banff. A new powerhouse was constructed in 1960 to house a Delco lighting plant, and in 1963 the ranch acquired a new stable. A quonset building, 34 by 92 feet, it provided stall space for 43 horses. The powerhouse was replaced in 1975 by a metal fire-resistant building.

Jurisdictional Difficulties
When the Transfer of Natural Resources Agreement with Alberta was being negotiated, arrangements were made for substantial reductions in the areas of Banff and Jasper National Parks. These reductions were confirmed by enactment of the National Parks Act in May, 1930. The Ya-Ha-Tinda Ranch was included in one of the areas to be withdrawn from Banff Park, but a reservation was made under the Dominion Lands Act on March 14, 1930 by order in council, so that it might be reserved for grazing purposes.

Provincial authorities for many years thereafter were reluctant to recognize the interest of the federal government in the ranch area, believed to contain 18 square miles. They appeared to be particularly concerned with the ownership of mines and minerals, no doubt because of the interest of individuals and companies engaged in oil exploration. The ranch lies some 1 1/2 miles northeast of the park boundary, and unsuccessful efforts were made with the province to negotiate a corridor that would permit incorporation of the ranch in the park. In 1956 a legal survey of the ranch boundaries was made. By following a strict interpretation of the "metes and bounds" description under which the ranch was reserved for park grazing in 1930, a substantial area of choice grazing land was excluded by the new plan of survey.

In May, 1956, it was learned that the Province of Alberta had issued a permit for oil and gas exploration in the ranch area. The Department of Justice was requested to provide an opinion on the ownership of mineral rights beneath ranch lands. On June 19, 1956, the Deputy Minister of Justice advised that the national park administration should take the position that the Ya-Ha-Tinda Ranch area included the mines and minerals when the ranch was retained by Canada, by virtue of Section 18 of the Natural Resources Agreement with Alberta. Subsequently, the Minister of Northern Affairs and National Resources obtained authority from the Governor in Council to enter into an agreement with two Canadian oil companies for the right to explore lands within the ranch for oil and gas.

Agreement with Province
Eventually, a compromise on land jurisdiction was reached with the province. In September, 1957, Alberta’s Deputy Minister of Mines and Minerals, H.H. Sommerville, visited Ottawa and discussed the ownership of mines and minerals beneath the ranch with Assistant Deputy Minister Frank Cunningham of the federal Department of Northern Affairs. They agreed that although the ranch was under reservation when the Transfer of Natural Resources Acts were passed in 1930, there was no real reason for Canada to have retained the mines and minerals. Sommerville suggested that the federal government formally surrender the land comprising the ranch, including mines and minerals, and receive back from the province title to surface rights only.

This proposal was accepted, and, under authority of the Governor General in Council, the administration and control of Ya-Ha-Tinda Ranch as described in the 1930 reservation was transferred to the Province of Alberta on February 7, 1958. In return, a duplicate certificate of title to the surface area of the ranch dated April 29, 1958 as shown on the latest plan of survey confirmed May 8, 1957, was subsequently received from the province by the director of the National Parks Branch. This action effectively terminated the dispute over the ownership of Ya-Ha-Tinda Ranch.

Present Status
Ya-Ha-Tinda Ranch now serves a dual purpose. It provides winter grazing for horses transported from the national parks in the Rocky and Selkirk Mountains, and serves as a site for breeding and raising horses suitable for use by the national park warden service. The range will accommodate upwards of 200 horses, which normally are transported by truck to the ranch. Horses are brought from as far west as Glacier and Mount Revelstoke Parks in British Columbia, and from Jasper Park to the north. They are either fed and watered in corrals near the ranch administrative buildings, or moved as required to various ranges to prevent overgrazing.

Records of the horse-breeding activity began in 1938 with the use of a registered thoroughbred stud called September; they have been faithfully maintained since then. Horse breeding was undertaken to improve the quality of horses required to meet the particular needs of the national park warden service. In 1961 Superintendent D.B. Coombs of Banff National Park, accepted the gift of a registered Percheron stallion to the ranch; it was hoped this would produce an improved strain of packhorses. Later, the breeding stock consisted of quarter-horse stallions, registered stallions and a number of suitable mares. Some of the mares were acquired from the Royal Canadian Mounted Police at Fort Walsh, Saskatchewan, primarily because they were not black, and consequently undesirable for police purposes.

For the six-year period from 1960 to 1966 inclusive, the total number of foals born was 133. In 1968, the RCMP closed its remount station at Fort Walsh and re-established it at Pakenham, Ontario. A number cross-bred mares, together with a registered stallion known as Brun, were donated to the National Parks Branch and were transported to Ya-Ha-Tinda Ranch. Brun had been a
race-horse before being donated to the Police in 1962 by a California sportsman, R.J. McGowan, and prior to his departure from Fort Walsh, had sired 32 foals. After his acquisition by the Superintendent of Banff National Park, Brun assisted in the production of fine offspring, which were trained as riding horses. One of Brun’s progeny was from a mare named Minx. This filly, now a brood mare, is a full sister to Burnese, a horse presented to the Queen and ridden by her at the ceremony of Trooping the Color. The sire, Brun, later was destroyed at Ya-Ha-Tinda Ranch.

In the normal course of events, foals are taken in hand by ranch personnel at foaling. They are handled, gentled and trained until they reach the age of three years. Then they are allocated to one or more warden districts in the western national parks. A unique method of naming horses born at Ya-Ha-Tinda Ranch was adopted in 1964, when all foals born that year were given names commencing with the letter ‘A’. The following year, the names of new horses began with the letter ‘B’, and so on. Hence Isaac was born and named in 1972, and Morgan in 1976. Consequently, their ages can quickly be determined from their names.

The ranch area is shared with the park horses by a large herd of native elk, which has been known to number as many as 1,200 at one time. This intrusion of game animals from Banff National Park and adjacent provincial lands sometimes places considerable pressure on the available forage. In 1962 a special hunting season for elk was opened by the Alberta Fish and Wildlife Service to save the winter pasture. The hunting of elk during the provincial hunting season has since been encouraged, although hunters must confine their use of privately-owned vehicles to the road through the ranch.

Public Use of Ranch
Public use of the ranch for recreation other than hunting has increased consistent with the improvement of the access road from Sundre to the east. In turn, road improvement followed gas and oil exploration by drilling. Three wells drilled between 1951 and 1976 proved unsuccessful. All were in the vicinity but not on the ranch property.

Camping, hiking, riding and fishing are among the recreations enjoyed by visitors in a beautiful setting. A rudimentary campground was established on Bighorn Creek in 1960. Most visitors are drawn from Alberta although residents of the United States and Europe now are finding their way to the ranch. Visitors are not permitted to graze their horses on ranch land, but are free to ride the range at will.

The warden service has maintained a deep interest in Ya-Ha-Tinda Ranch over the years, for it is there that one of a warden’s most faithful helpmates - the horse - is born, trained and wintered. In the mountain parks of western Canada, and in Elk Island Park, horses are still the principal means of transportation for back-country travel. Through close association, a deep and lasting affection exists among wardens for their horses.

Park Warden Training
When Howard Sibbald organized the first group of men to serve as fire patrolmen and game protection officers in 1909, the force was called the Fire and Game Warden Service. Wardens then were gathered from various walks of life, but principally from guides and packers, to perform briefly outlined duties in districts larger than some of our present-day national parks. The work took them along railway lines by motorized velocipede, over roads and trails by horse, on foot or by canoe in summer. In winter, patrols were accomplished on snowshoes. Headquarters or district cabins were widely separated, and patrol cabins sometimes were built by wardens to their personal needs. A notable cabin-builder was E.W. “Bill” Peyto, who served as a warden in Banff National Park from 1918 to 1933. Before his service as a warden, Peyto was one of the best-known guides and packers in the central Rockies; and in the course of his prospecting excursions he discovered a large deposit of talc southwest of Redearth Creek in what is now Kootenay National Park. More about this deposit and its development as a mine will be found in the next chapter.

After World War I, increased travel to the national parks and greater use of roads and trails indicated a need to extend protection to visitors as well as to the creatures of the wild. Recognition of this need expanded the field of park warden activity. It was realized that the duties and functions of park wardens would become more complex, and in turn require the development of special skills and abilities through proper training.

First Warden Schools
The first warden training school was held in Rocky Mountains (Banff) Park in 1925. The early schools gave instruction not only in the use of hand tools and fire hose but also in the use of “newfangled” equipment such as motor-driven fire pumps, automobiles and fire trucks. Qualified instructors, however, were few in number. One superintendent overcame this problem by escorting driver trainees to a local well-fenced race track. The warden in training and his motorized mount were then detained in the enclosure until his driving performance brought no more cheers from the spectators.17

By 1928 a number of parks were holding annual refresher training classes, some of them in alternating sessions of one week’s duration. The scope of the training classes was extended to include field telephone maintenance, trail construction methods, wildlife management, first aid and horse packing. In Banff Park, the schools concluded with a warden’s annual rifle shoot. During the early 1940s general warden training classes covered a wide range of subjects, and guest lecturers were invited to provide instruction in various fields. A few shortwave radios capable of two-way communication had been acquired, and in some parks these were a source of interest and bewilderment. The first regional warden school was held at Banff in 1942, when arrangements were made for attendance by wardens from the four national parks in British Columbia.

Training for wardens involving a broader outlook took form during the following decade. In 1950 and in 1951, composite conservation schools were convened at the
Banff School of Fine Arts in Banff for wardens from the western national parks, the Yukon and Northwest Territories, and for rangers from the Alberta Forest Service. The session continued for almost one month. This training scheme, however, was abandoned when the Alberta Forestry Service withdrew its representation to concentrate on a Forestry Training School at the provincial level.

Snowcraft Schools
The first national parks ski and snowcraft school was held in Yoho National Park, British Columbia, early in 1949, attended by wardens from Banff and Yoho Parks. In 1951, the school was held in Glacier National Park British Columbia. Wardens in attendance were provided with the latest equipment in boots, skis and poles, and were given a rigorous course by qualified instructors. In the years following, the ski school was held in either Banff or Glacier National Park.

In February, 1955, three wardens from the mountain national parks in Canada were sent to Alta, Utah, for an avalanche rescue course. On their return, a winter training school was held at Banff where, in addition to alpine ski training, basic instruction was provided in the causes and results of avalanches, and methods of avalanche rescue work.

During the ensuing years, this form of rescue training has taken on a wider implication. The development of additional ski centres in the national parks of the Canadian Rockies has attracted thousands of winter visitors interested in this sport. However, in spite of an intensive educational program about the dangers in avalanche-prone areas, casualties still occur among skiers who venture into areas designated unsafe. Rescue equipment is maintained in the vicinity of all developed ski areas, and skiers travelling afield are warned to register with park wardens and to ascertain the location of field telephone stations from which to call for assistance.

Mountain Rescue Responsibility
The popularity of mountain climbing with visitors unskilled in the sport became apparent in the early 1950s. This development also added responsibilities to the national park warden service, in rescuing stranded or injured climbers. For many years the superintendents of Banff, Yoho and Glacier parks - which were centres for activities sponsored by the Alpine Club of Canada - relied on the professional guide service maintained by Canadian Pacific Railway Company for assistance in emergencies. Its guides, recruited mainly from Switzerland, had served the needs of guests at the company's mountain hotels since 1899. They were stationed originally at Glacier House hotel in Glacier Park. After this famous hostelry was closed in 1925, the guides were relocated at Chateau Lake Louise. The families of the guides lived in a small colony two miles west of Golden, British Columbia, known as Edelweiss.

Early Swiss Guides
The first Swiss guide to climb in the Selkirk Mountains was Peter Sarbach of Zermatt, Switzerland, who accompanied a few members of the Alpine Club of Great Britain to Glacier and Banff in 1897. Sarbach's visit is commemo-
bodies of the climbers in Abbot Pass, and proceeded up to the alpine hut. Here they found an eighth member of the party, who had not participated in the climb, and who not only was unaware of the accident but spoke no English.

Ernest Feuz, who had an intimate knowledge of the peak, made the final rescue dash, accompanied by Charles Rowland, a summer employee at Chateau Lake Louise. Normally a one-hour climb, it was accomplished in 35 minutes. They reached the three stranded members of the climbing party shortly after 7 p.m. and had them back in the alpine hut at 9.40 p.m. Later all four women were escorted down to the tea house at the foot of the Plain of Six Glaciers, where they were fed and put to bed. Although all of the victims, including the guide, were experienced climbers, apparently their ignorance of changeable conditions on steep snow-covered slopes in the Rockies contributed to the accident.

**Tragedy on Mount Temple**

On July 11, 1955, another regrettable incident occurred on Mount Temple, near Moraine Lake in Banff National Park. A group of 16 boys, members of the Wilderness Club of Philadelphia, were caught high up on the slopes of the mountain by an avalanche, which took the lives of seven of the party. Although the mountain, which rises to a height of 11,636 feet above sea level and 5,400 feet above Moraine Lake, is not rated as a difficult climb, avalanche conditions prevail in early summer, and climbs undertaken without expert guidance can be hazardous.

Accompanied by the camp counselor, William Oeser, the 16 boys made their way up to the 8,500 foot mark, where the counselor and five boys dropped out. The remaining 11, under the leadership of two 16-year-old boys, decided to press on. On reaching an elevation of 9,500 feet, the party sensed danger from the sound of falling avalanches and turned back. Outfitted only in summer clothing, and equipped with only two light manila ropes, the group was engulfed in a small avalanche which buried four boys, injured three and left the others in various states of shock. One boy, Peter Smith, was sent down the mountain for help, and on the way informed the counselor of the accident. About an hour after the accident Smith reached Moraine Lake, where park warden Woodworth began organizing a rescue party of experienced mountaineers. Two wardens, Gilstrof and Schuarte, reached the avalanche site ahead of the main party, and Gilstrof started down the mountain with one boy on his back.

Later, wardens Perren and Pittaway jointed Schuarte, who had made progress in digging out the missing boys. A second rescue party, under chief warden Herb Ashley, joined the search, and by 3 a.m., all seven victims had been accounted for, including one boy who had died from exposure to cold and rain. The rescue mission was completed by 7 a.m. the day after the accident.

A coroner’s inquest revealed that the party was inadequately dressed for the climb, that no prior information on the route of the proposed climb had been obtained, that the ropes carried were below the standard required for mountain climbing, and that the party had failed to register out with the Moraine Lake park warden as required by park regulations. The coroner concluded that the boys were the victims of their own youthful enthusiasm and inexperience.

**Stricter Park Regulations**

The Mount Victoria accident, together with other incidents requiring the assistance of park wardens and others in rescue operations, prompted national park authorities to review existing regulations governing field outings and climbs. For many years, park visitors who proposed excursions in areas of national parks distant from highways were required to register out at places provided by the park superintendent, usually at a park warden station. In December, 1954, the existing regulation was amended to include mountain climbing. As revised, the regulation required any person planning to climb a mountain “before departure to register with the Superintendent or at such place as may be provided by the Superintendent, the names and addresses of the members of the party, the date of departure, the route to be traveled, the proposed duration of their stay in such park...and such other information as may be required by the Superintendent”.

In effect, the district park warden would have prior knowledge of any excursion involving danger and also have some idea of when the return of the person registered might be expected.

**Climbing Expert Engaged**

After the Canadian Pacific Railway Company disbanded its Swiss guide service in 1955, Walter Perren was engaged by the superintendent of Banff Park on May 1 as a member of the park warden service. His first assignment was to initiate a mountain climbing and rescue program for park wardens. The first rescue school was held in June, 1955, at Cuthead in Banff National Park. The second, which was attended by several members of the RCMP, was held the following October. Similar schools were repeated annually under the direction of Chief Warden Perren until his death in 1967.

The schools usually took the form of two-week sessions with about 30 students in attendance. Wardens with little or no climbing experience were first taught the basic skills. In following stages the wardens were advanced, with the use of suitable equipment, to the point where they could participate in a difficult climb, or serve as a member of a climbing party or rescue team. The final stage involved further experience and instruction that would qualify a warden to lead a climbing party or direct a rescue operation.

**Death Takes a Holiday**

By 1961 the wardens who had graduated from the climbing and rescue school had reached a high state of proficiency. While none would claim that the graduates filled the climbing boots of the former Swiss guides, they completed some notable rescues. Their activities also influenced compliance by alpine-oriented visitors with park climbing regulations. During 1961 some 1245 parties registered out under the regulation for climbs in Banff National Park - twice the number recorded in 1955. A spectacular rescue, carried out five years later in August 1966, involved Chief Warden Perren and District Warden Walter McPhee of Banff Park. Two experienced
climbers from Calgary became marooned on Mount Babel, a 10,175-foot peak between Moraine and Consolation Lakes in the Lake Louise District. One climber had slipped, fallen and broken his wrist. Both men by then were trapped on a spike-like ledge. Cries for help reached the ears of another party in the vicinity, and help was summoned through the district warden. A rescue team was then airlifted by helicopter to a landing site on the mountain within access of an anchor area. Warden Bill Vroom was lowered by block and tackle in a Gramminger seat - a form of bosun’s chair - over a 150-foot overhang. Later he was brought up again with the injured man in the seat. A second descent followed, and, with the aid of the tackle and seat, the second climber and his rescuer were winched up the precipice to safety. The formal report of the incident finished with the words: “Although blessed with good weather, unbeatable men and fine equipment, the rescue crew in their ultimate success offered a silent prayer, thankful that death had taken a holiday.”

Warden training and techniques are under constant scrutiny to minimize hazards and improve the rescue service. The highest number of rescues carried out in any single year in the western parks was 134, a record established by the warden service in 1975. At the time of writing Parks Canada was the only organization in North America allowed to belong to the International Commission of Alpine Rescue.

Training in Atlantic Parks

Composite training for national park wardens was extended to staff of the Atlantic parks in the winter of 1954, when the first warden school in that region was held in Fundy National Park, New Brunswick. Frank A. Bryant, superintendent of Kootenay National Park, who for many years had been a park warden and a chief park warden, presided as officer in charge. The course, which extended from February 22 to March 3, covered a wide variety of subjects in addition to practical warden training. Talks, followed by question periods, on park history and administration, wildlife conservation, forestry and fire prevention practices were given by officers of the National Parks Branch from Ottawa. An officer of the Royal Canadian Mounted Police also lectured on the role of a park warden as a police officer. Altogether nine wardens from three Atlantic parks - Cape Breton Highlands, Prince Edward Island and Fundy - were in attendance.

Two years later, in September 1956, the second school for wardens in the Atlantic provinces also was held in Fundy Park, under the direction of D.J. Learmonth, national parks forester at Ottawa. Besides personnel from the Atlantic parks, the school was attended by three wardens from Gatineau Park near Ottawa, which is administered by the National Capital Commission. Later, following the establishment of an Atlantic regional office at Halifax, warden schools were held on an annual basis at various parks within the region.

Annual Warden Gymkhana

The ancient adage, “All work and no play makes Jack a dull boy” applies to park wardens as it does to everyone else. And this was reason enough for an annual horse gymkhana staged by the wardens of the mountain national parks for several years at Hillsdale, in Banff National Park. The gathering was conceived by warden Wally McPhee of the Banff park warden service, during the annual roundup of park horses and their transfer to winter grazing grounds at Ya-Ha-Tinda Ranch northeast of Banff. During overnight stays with wardens along the route to the ranch, McPhee found that conversations usually led to talk on the abilities of their favorite horses. Bragging led to arguments, and arguments to challenges. McPhee entered a few private contests before realizing that a fair comparison of horses could be made only by simultaneous competition under uniform conditions. The basic concept was that the wardens should get together to demonstrate the ability of both men and horses in a spirit of friendly competition. Events staged should demonstrate skills and knowledge related to the duties and activities of a park warden.

A committee of wardens organized the first competition in 1963, held at Ya-Ha-Tinda Ranch. After a second gymkhana on the same site in 1964, interest was so great that a more central location was sought. A large natural clearing known as Hillsdale, 12 miles west of Banff, provided an ideal site for the annual event during the next seven years. The events involved the use of both riding and pack horses. Occasionally, wives or lady friends of the wardens took part in mounted versions of the egg-and-spoon race and other contests. These gatherings not only encouraged the wardens to take more interest in their horses, but also provided an opportunity for all park staff to engage in an annual get-together.

Hazards of Employment

Improved means of communication, better roads and trails, modern accommodation and an increased use of motor vehicles all have changed the day-to-day life of a park warden. Those employed on rescue missions, or detailed to perform one of many other hazardous tasks, run some risk of personal injury or even loss of life. Fortunately, casualties have been rare during the past few decades. Some 40 years ago, however, the hazards of employment encountered by wardens were more pronounced.

In September 1929 Percy Hamilton Goodair, a Jasper Park warden, was killed by a grizzly bear. Stationed in Tonquin Valley, some 16 miles by road and trail from Jasper townsite, Warden Goodair had failed to make his usual report by field telephone to the chief park warden’s office in Jasper. A search party organized by the park superintendent found Goodair lying dead under two feet of fresh snow not far from his district cabin. A detailed examination of the area around his cabin, suggested an unexpected confrontation with a female grizzly bear.

Goodair had maintained a woodpile down a path from his cabin. An inquest at Jasper concluded that on his way for fuel the warden had suddenly met a grizzly. The presence of a sow bear with two cubs in the valley that summer had been known, and it was presumed that during a snowfall, the warden had unknowingly come between the mother bear and its offspring. Apparently the bear had lashed out with deadly claws and severed an artery under Goodair’s arm. The warden had made a vain...
effort to plug the wound with a coloured sash that he habitually wore, but had collapsed on the trail before he could reach the cabin and telephone for help.

Among Goodair's effects was found a note expressing the wish that, should any unforeseen calamity befall him, he might be buried in the wilderness he loved. His wish received the approval of the Commissioner of Parks in Ottawa, and Goodair lies buried on a site near the now-vanished cabin which overlooked the spectacular Ame-thyst Lakes. A commemorative stone, set in a chained-off enclosure, records his name, his life-span (1877-1929) and the epitaph, "We cherish his memory in our hearts."23

Murder at Riding Mountain
Another fatality which occurred in Riding Mountain National Park, Manitoba, on July 13, 1932, has remained an unsolved crime. Park warden Lawrence Lee, stationed at the Russell (now Deep Lake) station, was shot dead through a kitchen window while eating his evening meal. His wife, a bride for only five days, also was gunned down by the unknown assailant but survived the ordeal.

Earlier that day, Lee was visited by a friend, Bob Hand, who later became a park warden. During their discussion they heard the sound of a gunshot in the vicinity of the park boundary to the southwest. Lee left to investigate, while Hand rode north towards Birdtail Valley, where he was checking cattle grazing under permit. After his return, Lee completed a few chores and sat down to dinner in the kitchen. While eating he was shot dead through a window that looked out over a woodpile four feet high.26

Mrs. Lee ran to the telephone connected with park headquarters and managed to complete a call for help before she too was shot in the jaw through another open window. As recalled later by Mrs. Lee, the murderer then entered the room through the window, stepped over the prostrate body of the injured woman, and entered the warden's office. There he tore three pages from the warden's diary and disappeared. Mrs. Lee survived the shooting, and was able to assist Superintendent Smart and officers of the Royal Canadian Mounted Police in the intensive investigation that followed. She was able to describe the intruder as he appeared from the waist down as she lay on the floor, but his identification and apprehension proved impossible. While no clues to a motive for the crime were found, it is quite possible that the assailant was a resident of a settled area south of the park boundary, from which game-poaching activities were frequently launched. After recovery Mrs. Lee moved to Winnipeg, and engaged in newspaper work with the Free Press Prairie Farmer.

Hunting the Hunted
In October 1935 a park warden became a member of a posse organized to hunt for the murderers of two police-men in Banff National Park. Three young Doukhobors named Posnikoff, Voiken and Kalmanoff, suspected of shopbreaking, were picked up by two RCMP officers at Benito, Manitoba, in the early hours of Saturday, October 5. On the way to Pelly, Saskatchewan, for questioning, the suspects disarmed and killed their escorts, Con-

stables Shaw and Wainwright, and drove off in the blood-splattered car after dumping their bodies in a ditch.

By nightfall a description of the missing officers and their car had been broadcast. On Monday the bodies of the missing police officers were discovered. The trail of the fugitives was traced to Exshaw, Alberta, when they had purchased gasoline. Police at Canmore and Banff were advised that men answering the descriptions of those wanted were in the neighborhood. A road block was set up on the main highway between the two towns, and the missing car and men were intercepted. In a shoot-out that followed, an RCMP sergeant was killed and a constable fatally wounded. The ringleader of the group, Posnikoff, also was killed by gunfire, but the other two took to the woods.

The day following, a band of armed citizens from Banff set out in a whirling snowstorm, intent on capturing the murderers alive. Park warden Bill Neish, stationed at Mosquito Creek on the Banff-Jasper Highway, heard of the impending manhunt on the radio and determined to take part. Without obtaining permission from the chief park warden, he left for Banff that night. On the following morning he saw two men crossing a clearing and called on them to stop. Neither paid any heed to the command, and Neish brought one man down with his first shot. The other fugitive opened fire on Neish from the cover of a fallen tree. Neish responded with a shot through the tree that disabled his antagonist. Both wounded men were brought into Banff, where they died in hospital. According to Dan McCowan, a noted author and lecturer who lived at Banff for years, Neish's monthly diary for October, 1935, aroused considerable interest when it reached the National Parks Branch at Ottawa for review. Opposite the date of October 8 was the entry "killed two bandits". Not being familiar with the events of that day in faraway Banff National Park, the officer responsible for a review of the diaries requested additional information. Back came a terse supplement, "Snowing to beat Hell."27

Dangers Still Remain
The foregoing examples of the risks, dangers and misfortunes that may confront park wardens are unusual or extreme. But they demonstrate that the nature of their work entails exposure to hazards of many kinds. In December 1972 wardens Marak and Brink lost their lives in a highway accident while on routine patrol in Banff National Park west of Lake Louise. A coroner's inquest blamed ice on the highway for the accident.

Rescue work for wardens usually begins when some member of the public has failed to exercise, care, judgment or plain common sense. Undue familiarity with wild animals, although forbidden, still occurs with regrettable results. Weather, carelessness or ignorance of park regulations can also contribute to accidents. Misfortune in various forms may visit even a warden, and if negligent, his pride suffers accordingly. Nevertheless the hazards of employment are a challenge that bring individual wardens together as a team.

Combatting Forest Fires
An ever-present threat to our national parks is forest fires which, from the earliest days of exploration, have ravaged
these areas. Conflagrations which marrd the landscape and despoiled the habitat of native wildlife have been attributed to various causes. Some have been caused, perhaps unintentionally, by the hand of man. Untended camp fires, the careless use of matches and tobacco products, and, in earlier days, sparks from locomotives, have touched off untold numbers of blazes. Other fires have been the result of deliberate incendiariism. On the other hand, many of the most hard-fought fires had their origin in lightning strikes, especially in periods of extreme drought and heat, when even a spark might touch off a bonfire. Whatever their origin, all fires in national parks are of particular concern to the warden service.

For years, one of the most conspicuous landmarks at Banff in Banff National Park was a fire burn on the north slope of Sulphur Mountain. It occurred late in the 19th century, and even today the outline of the burned-over area, stretching more than a mile up the wooded slope above the townsite, is visible in a lighter shade of green where newer growth has regenerated the devastated area. The sites of many other fires have also recovered their verdure, but one of the latest, which occurred in the vicinity of Vermilion Pass in 1968, will take years to heal.

Kootenay Park Holocaust
During the half-century since its establishment, Kootenay National Park in British Columbia has experienced two memorable fires. The first, long known as the "great fire", started on July 6, 1926, on the Upper Kootenay River, about four miles northwest of Kootenay Crossing on the Banff-Windermere Highway. This fire was the tenth outbreak to occur in a hot dry summer in that park, and it raged for nearly six weeks during which no rain fell. Early efforts of an emergency crew to control the fire were nullified by a 30-mile an hour wind. After crowning, the fire swept south to the Banff-Windermere Highway, which follows the valleys of the Vermilion and Kootenay Rivers. Fanned by a prevailing wind, the fire then roared north and east into the Vermilion River valley. It also jumped the Kootenay River and burned south along both banks. Before it was checked, the fire had swept up the Vermilion River for several miles, and south along the Kootenay River for another four.

Altogether, a timbered area of approximately 15,000 acres was burned before the fire was brought under control. More than 200 men were recruited from all ranks of the National Park Service as fire-fighters. The Canadian Pacific Railway Company contributed the services of 30 men, together with trucks and hose, who were joined by volunteers from the Columbia River valley and from points as far east as Calgary. Operations were directed by park superintendent Howard Sibbald and chief engineer J.M. Wardle. In the course of the fire, the Banff-Windermere Highway was closed for a short period. Through the efforts of the firefighters, all bridges, park warden stations and other buildings in the area were saved from destruction.

On the seventh day of the fire, July 13, a tragedy occurred. A four-door automobile driven by L.I. Watt of Edmonton, containing his wife, two children and Mr. and Mrs. Clifford Nesbitt, entered the fire zone en route from Vancouver to Edmonton, by way of the Banff-Winder-mere Highway. They had been warned that driving was hazardous, and after crossing the Kootenay River bridge the party encountered heavy smoke. They decided to turn back and eventually pulled up against a cut-bank where heavy windfall bordered the highway. According to a report forwarded to Ottawa by chief engineer Wardle from Banff, the women did not wish to leave the car, but the two men set out to find a small lake or pond that would offer shelter. Later the two men were rescued by members of the fire crew, but the women and children died from burns, shock and suffocation. Subsequent investigation disclosed that, had the party driven on a short distance from where they had turned back, they could have taken shelter in either a highway culvert or a small pond.

Drought and high winds continued for the duration of the fire, which was fought almost exclusively by muscle power, portable fire-fighting units and other equipment developed by the National Parks Service. In his annual report for 1926-27, Commissioner of Parks J.B. Harkin called attention to the devotion to duty by park personnel during the fire, and observed that "the superintendent was in charge of the operation and for six weeks was never in bed." The fireswept area, over a period of 30 years, was completely regenerated by a heavy growth of lodgepole pine. Only the lighter tone of the new forest cover revealed the location and extent of one of the biggest fires in Canada's national parks.

Fire Again Strikes Kootenay
From 1956 to 1965 several fires were kindled by lightning strikes in Kootenay Park, but the only significant one was that which burned over an area of about 22 acres on the slopes of Storm Mountain southeast of the Banff-Windermere Highway in July 1961. It was brought under control after two days of hard work by the park wardens. Seven years later this popular park was visited by a second holocaust which, in intensity and in rapidity of advance, rivalled that of 1926.

On the afternoon of July 9, 1968, thunderheads and lightning, but no rain, were observed at Marble Canyon campground, four miles south of the park boundary at Vermilion Pass. John Royko, a campground attendant, recalled a clap of thunder and a flash of lightning a few minutes before he saw a fire burning up on the lower slope of Mount Whymper northwest of the campground. Almost simultaneously, park warden Ron Morrison spotted the fire from the Marble Canyon warden station. After reporting the fire to Warden Hanley at Kootenay Crossing, Morrison loaded hand tools into his truck, picked up Royko and an assistant, and headed for the fire. Meanwhile park headquarters at Radium Hot Springs had been alerted, and by late afternoon a fire crew of 13 men in charge of Warden Winkler from Sinclair Canyon had arrived at the fire.

Fire Advances Rapidly
By early evening the fire had spread to an area of 600 acres, in spite of the efforts of Morrison, Hanley and three assistants. Prevailing wind and heat precluded any hope of getting in front of the fire, and efforts were made to head off the blaze on northwest and southeast flanks. More fire pumps were brought into action, but with little success in
an area filled with dead timber. Meanwhile Winkler had requested help from Banff National Park in the form of men and tractors. Later about 35 men in charge of Chief Park Warden Corrigal arrived from Banff, and the combined fire crews and equipment were brought into action.

On the morning of the second day of the fire, July 10, a crew of 68 men, three tractors and numerous power pumps and hand tools were used to fight the fire. Additional fire fighters were obtained from Banff and from Cranbrook, British Columbia. The possibility of using water bombers from a temporary base on the Trans-Canada Highway was also investigated. By afternoon, the fire had advanced up Vermilion River Valley and crossed into Banff National Park. By this time three aircraft equipped for water bombing and two observation planes had arrived at a temporary landing strip on the Trans-Canada near Taylor Creek.

Hikers Rescued
That same day a hiker and two children were rescued from an area near Stanley Glacier in the northeast section of Kootenay Park. The presence of the party in what was considered a hazardous area was reported to the fire crew by the man’s wife, who was parked in an automobile beside the highway near the start of a walking trail to the glacier. After the fire jumped the highway to the northeast side, a helicopter was flown in to evacuate the man and his children.

On the fourth day of the fire, July 12, fire crews were augmented by 125 men from Canada’s armed forces, who manned water tankers operating along the Banff-Windermere Highway and the Storm Mountain fire line east of Vermilion Pass. That day, too, all fire control operations were merged under Steve Kun, superintendent of Banff Park, who was a professional forester. Kun assumed control of the allocation of supplies, manpower and equipment between the Banff and Kootenay fronts of the fire, and was responsible for reports to regional headquarters. By this time Nature was lending a helping hand; cloudy and cooler weather combined with falling rain to clear much of the smoke and reduce the overall effort required.

Fire Contained
On Saturday, July 13, the fire was largely in check, although occasional water bombing and helicopter water drops were being made where flare-ups occurred. The Canadian army personnel were released on Monday, July 15, and three days later fire crew personnel had been reduced to 30 men with six held in reserve. By Saturday, July 20, all aircraft had been released and the operation had been shifted from fire-fighting to cleanup. Transient workers were dispersed the following day, and most of the park personnel returned to normal duties. Altogether, the fire had consumed about 6,500 acres of timbered land. Of this area, about 70 percent lay within Kootenay Park and the rest in Banff Park.

At a board of review convened at western regional park headquarters in Calgary from July 23 to 26, problems experienced in fighting the fire were discussed at length. Recommendations involving communication, manpower, organization and equipment were made for combating any conflagration that might occur in future. In the light of personnel involved, equipment used and experience gained, the 1968 Kootenay-Banff fire was one to be remembered.

Fires in Other Parks
Most of the national parks in the Canadian Rockies and the Selkirk mountains have experienced substantial damage from fire. On August 20, 1934, a severe fire occurred in the valley of the Howse River west of Saskatchewan River Crossing in Banff National Park. It burned for 19 days and consumed timber on 300 acres of land before park warden J.W. Gladstone and an assisting force were able to extinguish it. Six years later, in 1940, another spectacular fire spread rapidly down the Howse River valley. It was caused by lightning and burned over nearly 9,800 acres.

Banff Park suffered another extensive blaze known as the Flints Park fire. It occurred up the valley of the Cascade River and burned over an estimated 1,800 acres. Caused by an abandoned campfire which was not properly extinguished, it raged from July 28 well into the month of August.

Yoho National Park, west of Banff Park, has also had numerous fires. The so-called Porcupine fire of August, 1928, consumed some 12,200 acres before being put out. An unusual conflagration devastated part of Timber berth No. 406 in Yoho Park in July, 1960. This berth, which was granted in 1905, was held for years by a succession of owners before timber-cutting began. In 1960, the mill site caught fire through the carelessness of an employee of a subcontractor who was carrying on lumbering operations. Before the blaze could be extinguished, the adjoining forest in Block “A” of the berth was ignited. The fire eventually consumed 2,000 acres of prime timber and was extinguished by national park forces at a cost of $70,000. A second fire started by lightning in August, 1971, burned over 9,900 acres of the already lumbered Block “C” at the upper end of the Amiskwi River valley.

Devastation in the East
The more recently established national parks in the Atlantic provinces, with one exception, have been fortunate in escaping serious forest fires. In 1947 Cape Breton Highlands Park in northern Nova Scotia had two large and destructive blazes. These were attributed to abnormal fire hazard conditions and subnormal precipitation during the early months of the year. The two fires accounted for burned-over areas totalling 4,330 acres, as well as an additional area of 2,000 acres of provincial lands adjoining the park east of the Gulf of St. Lawrence.

The fire on the eastern side of the park was concentrated on high land west of Ingonish settlement between Cameron and Dundas Brooks, and involved about 280 acres. The larger and more serious fire started in the valley of Mackenzie River south of Pleasant Bay, a small fishing village on the Gulf of St. Lawrence at the foot of Mackenzie Mountain. This fire swept through the heavily wooded gorge of the Mackenzie River and over high land to the northeast. Much of the forest cover destroyed was hardwood, including stands of yellow birch. Although the
settlement of Pleasant Bay was saved from destruction by a combined force of park wardens and local residents, the fire jumped the Grande Anse River to the north and ignited forested land between that stream and the Red River. Regeneration of the burned-over lands has been slow, and the fire burn is one of the conspicuous, regrettable sights from the spectacular Cabot Trail, which winds down Mackenzie Mountain by a steep grade.

**Northern Conflagrations**

Abnormal forest fires in national parks have not been confined to those in the Canadian cordillera or in the Atlantic provinces. The record for burned-over park areas in recent years is held by Wood Buffalo National Park, the greater part of which lies in northern Alberta, and the rest in the Northwest Territories. The park's area of 17,300 square miles is largely inaccessible, except by helicopter. It contains only two main roads, both in the northern sector of the park, and fires in other areas are consequently difficult to reach.

In spite of its immense size and remote location, Wood Buffalo Park had an average burned-over area of less than 12 square miles per year up to 1969. In 1970, fires swept over many sections of the park and about 302 square miles of forest were consumed. The following year, the total area affected by fires was about 500 square miles. Funds expended in fire suppression were enormous. One fire which occurred in 1970 burned over 85,000 acres and cost $750,000 to extinguish. The total cost of fire suppression in the park during 1970 was $1.6 million, and in 1971, more than $2.2 million. Major fires occurred in the Birch Mountains in the southern part of the park; in the Caribou Mountain area to the northeast; and along the north bank of the Peace River but outside of the licensed timber berths.

Difficulty in obtaining funds for the leasing of water-bomber aircraft and hiring fire fighters contributed to the cost of extinguishing the 1970 and 1971 fires, which might have been arrested in the early stages. By 1972, however, these problems had been overcome. The park had been divided into fire priority zones and authority obtained for hiring fire fighters and aircraft under contract. With the aid of a squad of fire fighters recruited from the native population, and the use of an air tanker, patrol and command aircraft, and a helicopter used for the transportation of fire crew, fire losses were reduced later on the average of about 1.5 acres per fire.

The fire hazard in the Peace-Athabasca delta caused by a lowered water table was reduced by occasional ice jams which occurred on the Peace River in spring and flooded adjacent areas. Water also was diverted from the Athabasca River to relieve low water conditions.

In May, 1958, wardens and chief park wardens from national parks in the western provinces were sent to Yukon Territory to assist in suppressing major fires devasting that area. Several hundreds of square miles of fire-swept land were involved, and at one time the city of Whitehorse was endangered.

In 1960 the Province of Newfoundland declared a state of emergency owing to the large number of large fires burning in the province. Eight wardens and chief wardens were made available from western national parks to assist the Canadian armed forces in directing fire-fighting operations. Those taking part were commended for their services by Premier Smallwood.

**Summary**

Although forest fires have denuded portions of many national parks of desirable forest cover, they have some redeeming qualities. Intensive fire control in the parks and elsewhere has resulted in a buildup of large quantities of dead fuels including needles, branches, trees and other vegetation. This natural accumulation is ready to flare up at the first opportunity, whether from a lightning strike or a neglected campfire. When outbreaks develop into conflagrations, they require much effort and expense to bring them under control. On the other hand, well controlled fires, under way when the weather indicates a period of low fire hazard, have a beneficial effect. They not only dispose of undesirable fuel accumulations but also areas impaired by forest insect infestation. Consequently these fires, in normal circumstances, prepare the landscape for regeneration by a desirable growth of new forest cover.

**Long Service Achieved**

The attractions of a career involving life in the great outdoors no doubt influenced many young men to join the national park warden service. In the formative years of the service, good health, a rugged constitution and the ability to ride a horse probably were among the primary qualifications. Later, with the gradual introduction of motor vehicles and motorized equipment in the growing phases of warden activity, some mechanical knowledge also proved helpful. Undoubtedly, the service of many wardens who entered the park service in the early 1920s, bridged the period of transition from the days of horses to those of horsepower. Gradually, other qualifications became factors in the selection of staff, as the warden service became a source of recruitment for other park positions. Especially desirable was educational attainment, particularly in various forms of ecological science.

Complete records of service by park wardens are no longer available, although most parks have accurate lists of chief park wardens. Many of these were graduates from the lower rank, and their combined service occasionally exceeded 25 years. Few, however, have equalled that of John Tocher of Yoho National Park who, on retirement in 1962, had completed nearly 41 years in the park warden service.

In the chief warden class, honours among retired personnel were shared by George Davies of Prince Albert National Park, with 28 years of service; R.W. Langford, who had 27 years of combined service in Jasper and Yoho Parks; and J.C. Holroyd, with 27 years of service as warden and chief park warden in Waterton Lakes Park. In 1977, Charles W. Hanscome, chief park warden in Prince Edward Island Park, had completed 29 years of service there and in Fundy National Park. That service was equalled the same year by warden Jim McLaughlin of Fundy Park.

Also in the quarter-century group were R.H. Mann, with 26 years in Glacier and Mount Revelstoke Parks; Robert T. Hand with more than 25 years in Riding Mountain, Waterton Lakes and Banff National Parks;
Warden to Superintendent

The national park warden service has provided numerous opportunities for promotion to administrative positions in what is now Parks Canada. The first chief park warden, Howard Sibbald, was named acting superintendent, and later superintendent, of Kootenay Park following its establishment in 1920. It was a timely and well deserved appointment, and no doubt established a precedent for the later promotion of other talented park wardens. Another chief park warden, Herbert Knight of Waterton Lakes Park, after 11 years in that position at Waterton Lakes Park was appointed acting superintendent in 1930. Two years later he became superintendent, a position he filled until 1939, when he was transferred to Prince Albert Park. His service spanned 27 years.

K. Bruce Mitchell entered the park warden service in 1940, became chief park warden of Banff Park in 1946, and assistant superintendent in 1952. In 1955 he was appointed superintendent of Riding Mountain Park. He also served as superintendent of Kootenay Park from 1960 to 1963, and in a similar capacity at Jasper Park from 1963 to 1967. He ended his service as a division head in western regional headquarters at Calgary.

Another graduate of the Banff Park warden service was G.H.W. Ashley. He occupied in turn the positions of superintendent of Kootenay, Prince Albert and Elk Island National Parks. Everett Doak and Maurice McCarron, both natives of New Brunswick, filled in succession the duties of chief park warden at Point Pelee Park in Ontario. Doak later served as park superintendent at Cape Breton Highlands, Yoho, Terra Nova and Kejimkujik Parks, before accepting administrative posts at regional headquarters in Winnipeg and Halifax. McCarron, who began his service in 1948 as a park warden in Fundy Park, was appointed superintendent in 1958 of the three national parks then existing in Ontario - Point Pelee, Georgian Bay Islands and St. Lawrence Islands. He later served as superintendent in Cape Breton Highlands, Glacier, Mount Revelstoke and Prince Edward Island National Parks.

Other chief park wardens who graduated, to the position of park superintendent included Frank Bryant at Kootenay Park, George A. Balding at St. Lawrence Islands Park, Thomas Ross at Elk Island and Waterton Lakes Parks, John Malfair at Prince Albert and Kejimkujik Parks, Jack Holroyd at Pacific Rim Park and Frank Camp at Point Pelee and Pacific Rim Parks.

With the development and expansion of regional park headquarters, there were more opportunities for park superintendents and chief park wardens to qualify for responsible administrative posts. Consequently, many division heads or officers responsible for training field personnel were drawn from these categories. Among them were James A. Sime, who between 1947 and 1966 served as park warden and later as chief park warden in six national parks, five of them in the Canadian Rockies. From 1967 until he retired late in 1979, he was responsible for park warden training and administration in the

Natural Resources Division at the Western Region office in Calgary.

Free Housing Abolished

For years, park superintendents and members of the park warden service were provided with free living accommodation, a concession reflected in their salaries. After World War II, a review of salaries and job perquisites was undertaken, and park superintendents were required to pay for housing at a rate based on a percentage of their salaries. Practically all dwellings occupied by superintendents were situated within park townsites or subdivisions. Meanwhile, members of the warden service who occupied Crown-owned housing were not required to pay rent until 1956. That year all federal government employees were obliged under the provisions of the Crown-Owned Housing Regulations to pay a rental for dwellings occupied, together with a charge for heat, electrical and other services in cases where such services were provided by a department of government.31

The change in policy, instituted by the federal Treasury Board, followed a study of inconsistencies and anomalies in the remuneration received by civil servants. Some of them enjoyed the privilege of occupying Crown-Owned housing, while others had to supply their own accommodation. An appraisal of some 4,000 government-owned dwellings in Canada was undertaken at the request of Treasury Board by the Central Mortgage and Housing Corporation, aided by assistance of staff of the director, Veterans’ Land Act. Urban units were appraised by CMHC and rural units by VLA. All appraisals were reviewed by officers of CMHC at Ottawa.

A formula for both appraisals and rentals was approved at a meeting of department representatives with the secretary of the Treasury Board on November 30, 1953. Present day value of dwellings was determined by the depreciated reproduction value, with depreciation limited to 60 percent, provided the structure was sound and habitable. Actual rent was set at 8 percent for buildings in urban areas and at 6.5 percent in rural areas. The monthly cost of services was not provided for in rents proposed.

The Crown-Owned Housing Regulations were approved by Treasury Board on March 16, 1956 and became effective November 1, 1956. By a separate minute, the board also approved a schedule which established monthly charges for all Crown-owned housing administered by the Department of Northern Affairs and Natural Resources, including dwellings in the national parks. In a circular issued by the Personnel Division of the National Parks Branch, it was pointed out that in nearly all cases where rents already were being charged, they were based on a percentage of salary - not always the salary actually paid, but the maximum salary for the class. Both flat rates of rental, and those on a percentage basis, had been established some years before. Meanwhile construction costs had risen substantially, along with rents charged by commercial landlords. Since employees living in other than government-owned houses had to pay increased housing costs, it was considered that people living in government houses should not enjoy a preferred position over those who did not.32
Amendments and New Regulations
The Crown-Owned Housing Regulations were amended on May 1, 1959, effective July 1, 1959, to provide for monthly rates covering dormitory accommodation in areas such as work camps and campgrounds. The rates established varied according to the number of persons accommodated in one room, with single occupancy of a room rated at $20 per month. In May, 1964, Treasury Board revoked the regulations which had been established in March, 1956, and replaced them with the Public Service Living Accommodation Regulations, effective July 31, 1964. The new regulations followed closely in content the original Crown-Owned Housing Regulations, but provided that the rents effective from time to time would be those recommended by the Central Mortgage and Housing Corporation.

Compensation Increased
Any monetary loss sustained by members of the park warden service following the enactment of the Crown-Owned Housing Regulations was offset largely by an increase in the salaries of the various grades of that job occupational class. Over the years, park warden salaries, while probably adequate, never provided the recipients with any sense of affluence. Their rates of pay, however, were related closely to those paid to many other classes of the Canadian civil service.

Before and throughout World War II, the maximum annual salary of a park warden Grade I was $1,500; for Grade II, $1,740; and for a supervising warden, $2,160. Most civil servants received substantial increases during the fiscal year 1947-48. Maximum salary ranges for park wardens in Grades I and II and for supervising wardens (now designated chief park wardens in three grades) were increased by amounts varying from 25 to 31 percent. The new maximum salary for the highest grade was $3,000. Later adjustments made between 1951 and 1955 raised warden compensation substantially.

In 1955-56, the year before the Crown-Owned Housing Regulations became effective, the maximum salary for Grade I park wardens was $3,000, and for Grade II $3,360. Chief park wardens could expect a maximum salary of $3,600 in Grade I, $4,020 in Grade II, $4,380 in Grade III. Meanwhile the cost of living was on the upswing, and the warden service, in common with other segments of the Canadian public service, shared in general salary increases which were reflected in the annual department estimates. In 1958 the three prevailing grades of chief park warden were dropped, and the position was redesignated simply as chief park warden. In Banff and Jasper National Parks, the chief park wardens occupying Grade III were reclassified as National Park Officer I.

Periodic salary reviews by the Civil Service Commission and Treasury Board, and the increases subsequently granted, were radically changed in 1967, when the Public Service of Canada came under new legislation. The new legislation involved collective bargaining, through a designated bargaining agent, by occupational groups for changes in salary or wage scales. Salaries and wages were now influenced by the national cost of living index, and designated bargaining agents negotiated new wage scales for periods agreed upon.

The park warden grades were assigned to the General Technical group (GT), which was subdivided into six grades. Seasonal wardens fell within Group GT-1, and permanent wardens within Group GT-2 or higher. Classification was subject to circumstances, such as the size and location of the park concerned and the responsibilities entailed. By 1978 seasonal wardens were paid $13,400 to $14,500 year, park wardens $15,400 to $16,750 and supervising wardens $17,200 to $18,800. The salaries of chief park wardens varied according to location and responsibility, ranging from $19,400 to $26,900 a year. Traditionally, salaries for Banff and Jasper National Parks normally exceeded those of other parks. Warden salaries, in common with those of other public servants, were subject to indexing against the cost of living, and by 1980 substantial increases had been negotiated.

Employment Status Altered
The revocation of the Civil Service Act effective March 23, 1967, and its replacement on the same date by the Public Service Employment Act and the Public Service Staff Regulations Act, resulted in substantial changes in the status and working conditions of the national park warden service. Under the new legislation the park warden service, like other occupational groups in the public service, was required to select as its bargaining agent an employee organization which then was certified by the Public Service Staff Relations Board. In turn, the bargaining agent negotiated a collective agreement on behalf of the occupation group. In effect, the warden service, like other occupational groups in the Public Service, now functions as an organized labor union.

Collective agreements are negotiated by bargaining agents such as the Public Service Alliance of Canada, which is the agent for the park warden service. Such agreements are governed in part by the legislation outlined above, and by the Public Service Terms and Conditions of Employment Regulations promulgated by the Treasury Board of Canada under Section 7 of the Financial Administration Act. These regulations contain authority for prescribing hours of work, statutory hol-
days, various forms of leave, rates of pay and pay for overtime.

**Shorter Work Day**

One of the notable features of the collective agreement negotiated under the new legislation was that which relieved the park warden service of an indefinite work day that, in exceptional or emergency circumstances, might extend to 24 hours. From the inception of the warden service up to the 1960s, wardens were expected to work and did work long hours with no expectation of overtime by either employee or employer. It was a way of life. Recompense for extra time worked during the busy summer season was obtained during winter months when visitor traffic, fires, wild animal problems and other activities slowed down. Currently, the work week stipulated in the collective agreement, is comparable to that enjoyed by staff of other segments of the National Parks Service, such as administrative personnel. Another feature in the collective agreement calls for payment in cash for time worked over and above the hours stipulated in the collective agreement.

Here it seems opportune to recall the contribution made by the wives of park wardens. For years they served - without remuneration - as stenographers, information officers, issuers of licenses and permits during their husbands' absence on duty, as weather recorders and as hosts to casual visitors. Without their cooperation, the services provided to the public at warden stations would have been seriously impaired. As a retired former chief park warden observed to the writer, "the wives of wardens were, in fact, assistant park wardens in every sense of the word."

**Changing Role of the Park Warden**

The foregoing paragraphs provide some idea of the varied functions, activities and accomplishments of the national park warden service. The broadening of the wardens' duties and activities, and the resultant increase in their value of the department and the nation, reflected a gradual transition. A need to improve the overall function of the warden service, to provide for their greater participation in the preservation and management of the national parks and their diverse and valuable resources, had been recognized by senior park administrators by the 1960s. Following the publication in October, 1962, of the Report of the Royal Commission on Government Organization, (better known as the "Glassco Report") the Department of Northern Affairs and National Resources explored the possibility of using more fully the management concepts recommended by the commission.33

A comprehensive study was undertaken in 1963-64 by a firm of management consultants, Peat, Marwick, Mitchell and Company, in cooperation with the department's Management Services Division created in 1963. This study identified weaknesses in certain phases of department management.34 It supported the royal commission's recommendation that there be greater delegation of responsibility and accountability in administering the national parks. Early in 1966 James A. Sime, then chief park warden at Riding Mountain National Park, Manitoba, was transferred to the administrative staff of the National Parks Branch in Ottawa.

During his long public service, Jim Sime had served both as a warden and as chief park warden in several of Canada's national parks, and was fully conversant with warden service problems. Consequently the warden function was the subject of considerable discussion between Sime and J.J.L. Charron, chief of the Operations Division in the National Parks Service. Eventually the department's Management Services Division was requested to examine the warden function in the course of a management study carried out in Prince Albert National Park, Saskatchewan, during 1967. Its report included a recommendation that a full-scale study of the park warden service be undertaken. Subsequently Sime was assigned to the task along with Donald E. Shuler, a recent recruit to the National Parks Service in Ottawa. Shuler has considerable field experience in the United States National Forest Service, and was competent in the preparation of reports.

**Warden Study Undertaken**

Meanwhile, staff attending the chief park wardens' conference held at Jasper in January 1967 had been given advance notice that changes in the duties and functions of the wardens might be expected. Consequently some ground work had been laid for the anticipated study.

In assessing the assignment, the study team reviewed the National Parks Act and the 1964 Statement of National Park Policy to determine the validity of the resources management concept. An analytical approach was then used to determine the various activities involved in managing the natural resources of the parks. Through a process of elimination, a program for natural resources management by wardens was outlined and referred to the directors of the various regions of national park administration for comment. Interviews also were conducted in the Atlantic and Western regions, where field personnel were requested to outline their views on the role of the park warden service and to offer suggestions for improving it. Following these interviews the conclusions of the study team were presented, and further comment and observations were solicited.

The biennial conference of national park superintendents was held in Ottawa from October 16 to 20, 1967. During the conference, Sime presented a preliminary report on the role of the park warden service. A discussion period followed, and copies of the preliminary report were later forwarded to regional directors for detailed consideration and comment by regional staff and park superintendents. The concepts and principles embodied in the preliminary report were given enthusiastic approval, and suggestions for improvements were later included in the final report. This was approved by the director of the National Parks Branch on June 21, 1968.40 Copies of the report, entitled "The Park Warden Function in the National Park Service", were then printed for official distribution.
The Study Recommendations
The recommendations contained in the report of the Sime-Shuler study were predicated on three main conclusions:

1. An accurate resources inventory for each park was needed to facilitate the development of an effective resource management plan. As envisioned, the inventory would contain studies necessary to establish the identity, extent, condition, trend and/or carrying capacity of the resource base of the park.
2. There should be detailed plans for the management of the parks natural resources. Such plans would designate management objectives and provide for continuity in management.
3. As collection and integration of such information would require considerable effort and time, the preparation of an interim resources management plan would be required as an integral part of the provisional master plan for each park. It would also be necessary to establish objectives or goals on completion of a comprehensive resources plan.

The Warden Function
An analysis of the warden functions required to implement a resources management plan established four phases of management:

1. Natural resources management
2. Public relations
3. Public safety
4. Law enforcement.

In resource management, a park warden's duties would include planning and undertaking resources protection activities; carrying out resources programs required by the various management plans, and protecting resources from misuse or over-use; carrying out field studies as required or directed; and observing and analyzing resource conditions.

The report gave prominence to the role of a park warden in public relations. It said a warden should be in a position to supply park visitors with information not only of a general character, but also of an interpretive nature in cooperation with the park naturalist. Consequently, besides answering queries through personal contact, the warden should assist the interpretive programs by providing information on public safety, resource management and natural features or conditions observed in the parks.

Public Safety
The park warden has a vital role in matters of public safety. Park visitors may, unintentionally, be exposed to physical danger while visiting a park, mainly through unfamiliarity with physical surroundings. Consequently, park wardens are expected to render assistance where required when visitors find themselves in difficulty - while skiing, mountain climbing, hiking or horseback riding along park trails, boating or swimming in lakes, streams or ocean. Training in safety and rescue techniques will therefore be a requisite of warden employment.

Law Enforcement
Law enforcement should not be considered a primary function of a park warden. However, to be effective in both resource management and public safety duties, a warden must often enforce laws or park regulations. As a result, laws or regulations designed to protect resources from misuse by visitors, or to protect visitors from the natural hazards in the parks, should be the responsibility of the warden service. On the other hand, laws which protect human beings or their property from other human beings should be the responsibility of police officers. In all cases, wardens are expected to maintain proper liaison and cooperation with the recognized policy authority in the park concerned.

Maintenance and Construction
Sime and Shuler supported a finding of the Management Services Division study, that wardens should no longer be responsible for maintenance and construction. Instead, except in emergencies, these functions should become the responsibility of the park maintenance and construction forces.

Warden Responsibility
The report noted that the wardens' responsibilities in many existing warden districts failed to offer sufficient challenge and satisfaction to well qualified incumbents. In those places the wardens' time and potential were not effectively used. Moreover, broad variations existed in the tasks and responsibilities of wardens in different parks and districts, and these were not reflected in grade structure.

Warden Grade Structure
The existing grade structure - Park Warden and Chief Park Warden, each having two grades - was found unsuitable by the study team. In effect, Park Warden I was only a training level, as the three remaining grades made no allowance for the significant variation in job content and responsibility which existed in both warden and chief warden categories throughout the national park system. Consequently, the report said, a meaningful and satisfying career progression within the existing warden organization was not possible. The investigators therefore recommended a new career structure broad enough to reflect all significant variations in job content and responsibility. Accordingly, they proposed a special assessment of each park and the elaboration of warden responsibilities, from which a logical grade structure might ensue. They also recommended the establishment of three recruitment levels which would provide for different salaries according to educational attainment:

1. With minimum academic qualifications for university entrance.
2. With graduation from a two-year technical school course in resource management, or the equivalent in training and experience.
3. With university graduation.
As envisioned, a service-wide list of wardens qualified for promotion would be established and reviewed regularly. Ranking would be based on objective appraisals of experience, work performance and personal suitability. As vacancies occurred, appointments would be made accordingly.

Organization
Reorganization of the warden service was recommended in the manner suggested by the Ottawa-based Management Services Division. This called for the appointment of an operations manager in each park to supervise the warden function, the interpretive function and the visitor services function. The warden service would be staffed by officers in three grades - chief warden, supervisory warden and park warden. Instead of being left to his own initiative, a park warden would then be responsible for achieving goals established by a planned management program. Accurate observation, reporting, supervision, and application of technical knowledge would comprise the principal factors in his new job.

Proposed Training Program
Difficulties were expected in the transition of the wardens from their earlier role to a newer one, but it was believed that these could be resolved through planning and good personnel management. Factors to be overcome included a lack of formal education, coupled with the prevailing average age of the wardens. On the other hand, many of the wardens had the advantage of technical school and university training. Consequently, the report recommended a diversified training program geared to the special needs of the wardens. Listed among the means possible were departmental training courses, correspondence courses, university courses and technical school courses in resource management.

The report stressed the need for a career development program that would systematically allow wardens to receive the training required to prepare them for advancement. Before assignment to a park, recruits in future would participate in a national parks training program not exceeding six months in duration. After this an assessment would be made to determine whether or not they would be retained.

Implementation of the Study
The reorganization of the park warden service began in 1968. In due course, the wardens were required to accept more responsibility for resource management, search and rescue activities, public relations and park protection. The objectives of the reorganization were explained during a conference of chief park wardens held that year at Carleton Place, Ontario, from March 4 to 7. Training was continued in other parks and centers until 1975, when the Parks Canada National Training Center was established in Jasper National Park. Formerly known as the Palisades Ranch, this complex contains a number of buildings which, after renovation, offered excellent residential training facilities for various categories of Parks Canada employees.

Summary
Changes in the functions and organization of the park warden service have profoundly affected its personnel. From being officers concerned mainly with fire and game protection and search and rescue operations, they now have become skilled resource managers. Each warden will help maintain the national parks - so far as authorized development permits - as examples of the nation’s finest unspoiled natural resources. In the face of growing visitor use, he will assist in maintaining the wildlife population in balance with the available food, restock lakes and streams with game fish, and control and help prevent forest fires. He will also be called on to conduct scientific field studies, protect natural resources from misuse or impairment, and be responsible for the safety of visitors, for rescue work when necessary, and also for public relations. As resource management programs are developed in each park, the park warden service will take on increased responsibilities, undreamed of in 1909, when the original group of fire and game wardens was appointed.

However, regardless of new responsibilities imposed by a changing technology, the main duties of the wardens will remain as originally envisaged. They are essentially those required to function as a “guardian of the wild”.

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The Bankhead coal mine operated near Banff, Alberta, in the early 1920's. Coal was mined from tunnels in Cascade Mountain at right.

Visitors measure a huge western red cedar tree in Mount Revelstoke National Park, British Columbia, near the Giant Cedars nature trail.
Chapter 10
Minerals and Timber
Introduction
When the Canadian West was opened to settlement by the construction of the Canadian Pacific Railway, the vast region between Ontario and the Pacific Ocean attracted not only prospective settlers, but also many other people with the necessary capital who were anxious or willing to participate in its development. Concerned with the promotion of both settlement and private enterprise on what were known as Dominion Lands, the Government of Canada created agencies for the disposal of homesteads and the harvesting of minerals and timber. These lands, then under federal control, were situated in Manitoba, the future provinces of Saskatchewan and Alberta, and the Railway Belt of British Columbia. Years later in 1930, natural resources not disposed of were returned by Canada to the provinces.

Mineral Development
Many newcomers to western Canada were seeking opportunities to harvest the virgin stands of timber found in the valleys of the Canadian Rockies and the Selkirk Mountains, but probably more were interested in minerals. During and after the construction of the Canadian Pacific Railway, prospectors and miners arrived in a veritable stream. Some were interested in gold, silver or base metals, while others preferred coal-bearing land as a source of investment. In Volume III of this history, descriptions of several park townsites and subdivisions called attention to their origin as mining communities. In fact, Canmore, Anthracite, Bankhead and Pocahontas all owed their existence to the discovery and development of coal deposits.

Of the millions of visitors who now enter Banff National Park from the east over the Trans-Canada Highway, few are aware that in the course of their passage from Canmore to Banff they are traveling over one of the major deposits of high-grade coal in western Canada. The Cascade coal basin was estimated in 1914 by the Commission of Conservation to contain 400 million tons of anthracite and 1,200 million tons of softer grades of coal.1 Between 1886 and 1906, the Cascade Coal District, within the boundaries of the park, gave birth to two major mining communities, Anthracite and Bankhead. Both these settlements have long since disappeared. Farther east, the mining of coal provided a means of employment for many residents of Canmore until 1979, when operations were closed down. Canmore was excluded from Banff National Park in 1930, when the park boundaries were changed.

Early Coal Discoveries
Coal was discovered in the vicinity of Canmore, 14 miles east of Banff, before the coming of the railway. A small amount of surface mining occurred in 1879. In 1883, seams of anthracite coal were found in the valley of the Cascade River east and northeast of Banff Station. These discoveries were confirmed by Dr. George M. Dawson of the Geological Survey of Canada who, in 1881, had commenced a geological survey of the Rocky Mountains from the International Boundary northerly to the upper waters of the Red Deer River. Dr. Dawson spent the seasons of 1883 and 1884 in what he called the Cascade coal basin. His report, published in 1886, contained a vast store of information on the geology, topography and mineral resources of this spectacular alpine region, much of which is now contained within the boundaries of Banff National Park.2

Disposal of Coal Lands
Regulations for the disposal of coal lands by way of leases were established by order in council at the request of the Minister of the Interior on December 17, 1881. They authorized the issue of a lease to any one person for a term of 21 years, covering not more than 320 acres at an annual rental of 25 cents an acre.3 Lessees also were required to pay a royalty of 10 cents a ton on coal mined. In 1882 the department established as coal districts several areas known to contain coal which were withdrawn from ordinary sale and settlement. Within these districts leases could be issued. Included were the Souris district, west of the Manitoba boundary, and the Bow River, Belly River, and Saskatchewan River districts, all in the Northwest Territories.4

A change in policy also occurred in December 1882, when the Coal Mining Regulations were amended. The leasing of coal lands was discontinued and instead, provision was made for the sale of coal lands by tender at upset prices per acre established by the minister. Lessees in good standing had the privilege of converting their leased land into freehold, by payment in cash of the established upset price. In March 1884 the Cascade Coal District, containing 23,040 acres, was created.5 The new district included land now occupied by the townsite of Banff, the Anthracite and Bankhead coal fields, the southern slopes of Cascade Mountain and the northern slopes of Sulphur Mountain. Two months later, an upset (minimum) price of $10 per acre was established by order in council for land containing bituminous coal, while that for anthracite coal was set at $20 per acre.6 Complaints made about the higher cost of mining anthracite coal persuaded the department to reduce the price of land for this type of coal to $12.50 per acre in April, 1885. However, improved facilities for the shipment of coal by the Canadian Pacific Railway led to the restoration of the $20 per acre rate in 1888.

By 1892, the department was making available to some individuals, coal lands through the medium of licences authorized by order in council. That year, the Dominion Lands Act was amended to permit again the disposal of coal land by lease. Under regulations established on October 12, 1892, a coal operator could lease not more than 320 acres at a rental of $1.20 per acre per year, and pay a royalty of 10 cents for each ton of coal mined. Leases were disposed of by public competition, and drawn for terms of 20 years, with the right of renewal for further terms of 20 years but in all not exceeding 60 years.7 A further change affecting leases of coal lands in Rocky Mountains (Banff) Park was made on June 12, 1902, when the rental was reduced to 30 cents per acre per year.8 The new regulations restricted to 640 acres the area leased to any one person, but apparently, companies could increase their holdings by assignment of leases with the consent of the Minister of the Interior.
Mining at Anthracite

By the time the Rocky Mountains Park had been established in June 1887, a large coal mining operation within the Cascade Coal District was under way at Anthracite. McLeod Stewart, an Ottawa lawyer, together with his brother and other associates, had acquired between 1885 and 1887 title to about 1,600 acres of land in the heart of the anthracite coal area east of Banff. Their holdings were incorporated as the Canadian Anthracite Coal Company Limited. The mine was located north of the Cascade River and the Canadian Pacific railway line. Immediately south of the tracks, the company laid out the townsite of Anthracite. It was surveyed according to two separate plans, one prepared in 1887 by P.R.A. Belanger, D.L.S. (Plan 573A), and the other in 1888 by J.W. Vaughan, D.L.S. (Plan 761B). The townsite in all comprised 14 blocks containing a total of 337 lots.

During the peak years of its existence, Anthracite undoubtedly was a lively community. It contained three hotels, several stores, a small church, a company boarding-house capable of accommodating 200 miners, and a large number of houses. According to a news story which appeared in the Calgary Herald in 1926, the population at its peak was 1,500. Same aspects of community life at Anthracite were recorded for posterity by Rev. C.W. Gordon, better known as Ralph Connor, in his novel Black Rock. In 1887 the company was authorized by order in council to extend its mining operations for half a mile in all directions beyond the vertical boundaries of its holdings into adjoining park land, in which no further sales were being made. By 1897 the developed coal seams were fairly well worked out, and a great many miners moved eastwards to Canmore. Later, an almost total exodus of the inhabitants occurred in 1904, when a new coal mining community a few miles to the northwest offered better incentives. More about this new coalfield will be related in following paragraphs.

The Bankhead Mine

Exploration of the coal seams discovered on the west bank of Cascade River in 1883 was undertaken by the Canadian Pacific Railway Company early in the 20th century, and a vast deposit of coal was found. Leases covering nearly 5,000 acres were obtained by a Canadian Pacific subsidiary, Pacific Coal Mines Limited, in 1903 and 1904 from the Department of the Interior. The railway company built a spur line from its main line for a distance of two miles to the mine head, and erected a small station at the junction which it named Bankhead. In turn, the Pacific Coal Company laid out a company townsite on its leased land, which rivalled that its older neighbor, Banff, in amenities provided. The residents, mostly miners and administrative staff, were accommodated in company houses, and enjoyed features such as electric lighting, a modern water system and a sewer system. In fact, Banff's first electrical power supply came from the Bankhead power plant over an extension of the company's distribution system.

As mining and associated development was authorized by the Rocky Mountains Park Act, development of natural resources within the park boundaries was accepted as a desirable enterprise. In his annual report for 1903-04, Park Superintendent Howard Douglas presented a glowing account of the improvements which had been carried out by Pacific Coal Company Limited:

"...Every possible provision has been made for the comfort of the men engaged in and about the mine. Already a large area has been cleared of timber, streets have been graded, and a modern water works system has been provided. Handsome and commodious offices have been erected, which are now being used to house a large clerical staff. Rows of comfortable cottages have been built for the use of the miners and their families, and palatial boarding-houses, providing with all modern conveniences, are in the course of erection."

Mining was well under way in 1904 on two seams of coal, which dipped westward at an angle of 45 degrees. The coal, classed as semi-anthracite, had a fixed carbon content of 83.3 percent. In 1907, a briquetting plant was brought into operation, and the product was used extensively by railway locomotives on the Pacific Division. In 1908, the company's name was changed to Bankhead Mines Limited. A report issued by the Commission on Conservation of Canada, published in 1914, reported that the working staff comprised 430 persons. Of these, 275 were engaged in underground operations, and 155, of whom 40 were Chinese, worked above ground. In April, 1911, Park Superintendent MacDonald reported that the combined output of the Bankhead Mine, and that of the McNeill mine at Canmore, which was then within the national park, exceeded 555,000 tons of coal.

Townsite Image Impaired

The flattering word-picture of Bankhead painted by Howard Douglas in his annual report for 1904 became tarnished over the years. Most mining camps of that era experienced outbreaks of rowdiness, usually brought about through excessive consumption of liquor by the inhabitants. Bankhead apparently was no exception. In March, 1915, the General Superintendent of Bankhead Mines sought the assistance of the park superintendent in controlling the unlawful sale of liquor in Bankhead. A local hotel in the townsite was licensed in order to stop the miners of Bankhead from going to Banff and "making themselves obnoxious to the citizens and tourists at Banff". The mining company executive charged that a wholesale liquor house at Banff was peddling liquor at a profit to the miners of Bankhead. The mining company executive charged that a wholesale liquor house at Banff was peddling liquor at a profit to the miners of Bankhead. 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opinion that this was a matter for the mining company and provincial authorities to solve.

Many of the miners at Bankhead were of foreign birth, and a group of Chinese, presumably to save more of their wages, had established a squalid “Chinatown” at the base of a large waste pile of coal in the vicinity of the mine. Following an inspection of Bankhead in the company of the local medical health officer, Chief Superintendent P.C. Barnard-Hervey wrote Commissioner of Parks Harkin at Ottawa on March 20, 1917, complaining about conditions. He stated that Dr. Pointz considered the collection of shacks comprising Chinatown to be a “disgrace to civilization”. The building which served as a kitchen and bath-house was termed most unsanitary, and “a razorback - a pig - with two young porkers, were grubbing around the building looking for what they could eat.”

Late in June, 1917, Park Superintendent Clarke reported that in company with Mine Superintendent Wilson, he had again inspected the townsite of Bankhead and found conditions considerably improved. Evidently half a dozen shacks had been burned, and 12 more were destined for destruction. A sewage connection had been installed from the Chinese camp kitchen, a general cleanup effected, and a quantity of cinders spread around the area to provide a firmer footing.

Mine is Closed
In spite of the enormous reserves of coal available under the company’s leases, the operation of the Bankhead mine presented difficulties. The coal seams within Cascade Mountain were faulted and twisted, and coal was extracted from seven separate seams at different levels on a complicated pattern. On extraction, the coal was brittle, and after exposure to the outside air, it lost moisture and crumbled. Consequently, a large proportion of the mined coal deteriorated into dust. To salvage this product, the company erected briquetting plants, in which the coal was mixed with pitch obtained in Pennsylvania, to form briquettes. Although providing an excellent fuel for domestic use, the briquettes had to be mixed with softer grades of coal obtained elsewhere in Alberta for satisfactory use in locomotives.

The mine also was seriously affected by labour trouble which culminated in strikes which extended over several months in 1909, 1911 and 1919. The final strike in 1922, combined with poor market conditions for coal and difficulties associated with mining operations, led Bankhead Mines Limited to close down mining in June that year. All tunnels were sealed off, the miners and operating staff moved out, and for the next three years, the townsite was deserted. Many of the miners moved to Blairmore in the Crowsnest Pass area, and others went to Canmore and Banff. At the request of the Commissioner of National Parks, the operation of the company’s electrical generating plant was continued to serve the residents of Banff.

Construction of a new hydro-electric plant generating station was commenced by the national park administration in the gorge of the Cascade River below Lake Minnewanka, and brought into operation in 1924.

Disposal of Buildings
Although the Bankhead mine was closed in 1922, Bankhead Mines Limited renewed a number of its leases which expired in 1923 and 1924. Only after the purchasing agent of the Canadian Pacific Railway company at Calgary began selling vacant dwellings and other buildings in Bankhead late in 1925, was it realized that the mine would not be reopened. In December, 1925, Park Superintendent Stronach forwarded to Ottawa for approval, plans of alterations and improvements to a number of buildings which purchasers proposed to move to Banff. Apparently, the superintendent had failed to advise the Commissioner of Parks at Ottawa of the sale and proposed relocation of dwellings from Bankhead, and the reaction was one of surprise. A member of the commissioner’s staff at Ottawa, J.E. Spero, commented in a memorandum that “It was only when Mr. Stronach was here and I was taking up with him the terrible plans received, when he ventured the information that these were the cottages at Bankhead.” In his memorandum, Spero conceded that although a few of the Bankhead houses no doubt could be accepted for relocation in Banff, to permit the removal of the entire village would be a great mistake. Consequently, a stop order on the removal of any buildings from Bankhead to Banff was sent to the park superintendent by telegram.26

Chief Engineer J.M. Wardle of the Parks Branch, who maintained a district office at Banff, commented that the railway planned to dispose of from 20 to 30 of the small four-room houses at $200 each, and that many of them were objectionable from a sanitary standpoint. Some of the purchasers hoped to relocate their buildings on Banff Avenue, a proposal to which Mr. Wardle took strong objection. Commissioner Harkin brought to the attention of Deputy Minister Cory details of the house-moving proposal, and obtained approval of a recommendation that the acceptance of the larger and better types of buildings be permitted.27 The deputy minister also concurred in a recommendation that a few of the small four-roomed "shacks" might be relocated in Banff, provided they were placed in outlying parts of the townsite.

Decision Appealed
The departmental ruling was not well received by the purchasers of the Bankhead buildings. They appealed to their member of Parliament, R.B. Bennett of Calgary, who wrote the minister, Charles Stewart. Bennett pointed out that one purchaser already had excavated a basement on his lot, only to be advised by the park superintendent that he would not be permitted to place the house on the lot. The dilemma was solved by sending the architect of the Parks Branch, W.D. Cromarty, to Banff with full authority to decide on the ground what buildings would be acceptable. Most of the 35 relocations were made in 1926 and 1927. The Bankhead railway station, purchased by W.A. “Bill” Brewster, was moved to lot 24, Block 21, Banff in April, 1926. Unwin’s Bankhead store was relocated on Lot 11, Block 6, facing Banff Avenue. The last Bankhead building destined for Banff was moved early in 1930.
Townsite Cleanup

Although Bankhead Mines Limited surrendered their leases in December, 1926, little was done in the way of cleaning up the former townsite and the mine workings for several years. Most of the buildings used in the mining and briquetting of coal were demolished and the equipment removed in 1928 and 1929. The general office building and a number of the larger houses in what was termed the "upper town" remained. In 1931, P.J. Jennings replaced R.S. Stronach as park superintendent, and in 1932 he began what proved to be a long-term task in having the remaining buildings removed, and the area cleaned up in commensurate with funds made available.

The provisions of the special form of lease held by Bankhead Mines Limited lacked any covenant on the part of the lessees to restore the landscape to the form in which it existed prior to the advent of the mine. As early as 1915, Commissioner Harkin had consulted the controller of the Mining Lands and Yukon Branch of the Department of the Interior about the matter of surface rights of lessees. H.H. Rowatt concurred in Harkin's opinion that the leases not only granted to the lessee the exclusive rights to the coal, but also such surface rights as might be required for the efficient working of the mine. Rowatt also confirmed that Bankhead Mines Limited had obtained a total of 17 leases on the special form, comprising an area of 7 1/2 square miles or 4,800 acres. Specifically, the lease provided that within six months of the termination of the leases, the lessee might remove from the said lands tools and machinery, buildings and erections placed thereon... and in default of removal within such period of six months all such tools and machinery, buildings and erections would be absolutely forfeited, and become the property of His Majesty, his successors and assigns.19

By September, 1932, only a few of larger buildings erected in Bankhead remained on their original sites. In December of that year, the park superintendent was requested by the Commissioner of National Parks to notify those responsible for the removal of structures to have the sites cleared by March 31 in the year following. An inspection of the abandoned townsite undertaken by a park officer in July, 1933, revealed that the former company office building and about five large houses remained on the site. In January, 1935, a solicitor of the railway company advised Park Superintendent Jennings that his company was under no obligation to demolish or remove any remaining buildings, or to clean up the property. Eventually, the remaining buildings were moved or dismantled, but numerous concrete walls and foundations remain to mark the site of the once highly productive coal mining community.

An unusual use was made of a portion of the townsite in 1953, when a large stockade resembling a frontier type of fort was erected with the permission of the department by a motion picture film company to facilitate the filming of scenes in the production *Saskatchewan*. This movie featured in leading roles Alan Ladd and Shelley Winters. Later the "fort" became a nuisance, and was demolished by national parks personnel. The last public use of the site was in 1974 and 1975, when a portion of the lower townsite was utilized for a transient youth camp. At the time of writing, the interpretation service of Banff Na-

tional Park was developing plans to utilize the abandoned site of Bankhead in an exhibit illustrating certain features relating to the development of an industry no longer permitted within park boundaries - the mining of coal.

More About Anthracite

Although coal mining in the vicinity of Anthracite had been discontinued in 1904, many of the old buildings and a few residents remained on the site for years. By 1910, a "coaching" road had been completed from Calgary to Banff, and visitors approaching Banff townsite from the east either by railway or the new road had to pass by the dilapidated remnants of the former mining community. Plans for a cleanup took form that year when officers of the Department of the Interior at Ottawa instituted inquiries about the ownership of buildings still standing. Correspondence between the minister, Frank Oliver and Archibald Stewart, the secretary of Canadian Anthracite Coal Company Limited, revealed that only two of several structures remaining were owned by that company, and they were under lease to the McNeill Coal Company of Canmore.

Attempts to have the townsite cleared were continued in 1913 by P.C. Barnard-Hervey, Chief Superintendent of Dominion Parks at Edmonton. In November that year, he was able to inform the Commissioner of Parks at Ottawa that the former office building of the coal company was in a stage of demolition. Buildings on townsite lots which had been sold by the company to former miners and others presented problems, which were accentuated by the presence of several squatters. In June, 1914, Barnard-Hervey confirmed the demolition and removal of the former church, the school-house, and the company boarding-house. A final report made by Park Superintendent Clarke to Commissioner Harkin in 1915 disclosed that the former coal tipple structure - an outdated eyesore - had been removed, and that only a log store and two dwellings remained.21

Townsite Lots Acquired

Presumably the former townsite of Anthracite created little concern for park administrators during the next decade, as the relevant file contained no correspondence. In 1929, the park superintendent obtained from the Registrar of Land Titles for Southern Alberta a memorandum of search covering all lots contained within the two subdivisions that constituted the townsite. This document disclosed that title to 16 lots in the eastern portion covered by Plan 573A stood in the names of residents of Anthracite, Banff and Calgary, while the remaining lots, including those shown on Plan 761B, were owned by Canadian Anthracite Coal Company Limited.

An opportunity to reclaim, as public land, part of the freehold property originally owned by Canadian Anthracite Coal Company Limited occurred in 1937, when the Department of Mines and Resources obtained approval for a new crossing of the Calgary-Banff highway over the main line of the Canadian Pacific Railway Company at Anthracite. The original crossing involved two very sharp turns, and a new alignment proposed by park engineers would not only provide a gradual curve, but would also encroach on a surveyed portion of the townsite.
Canmore Mines Limited, which on March 21, 1938 had taken over the assets of the original owners, agreed to sell five blocks in the western section of Anthracite to the department at a nominal price of $20 per acre. The company also offered to transfer to the department at no cost, some additional land between the two original subdivisions, together with any lots required in Block 1, Plan 573A. Eventually, the department purchased Blocks A, B, D, E and G, together with a parcel located north of the railway right of way and east of the crossing. In order to acquire an undisputed title, the department in 1939 expropriated 4.33 acres of land donated by the company, together with 18 lots in Block 1. Altogether, some 27 acres of the former mining community were obtained at a cost of less than $500.

**Coal Mining Resumed**

Years after the community of Anthracite had reverted to the status of a ghost town, coal mining in the vicinity was revived. After its mine had been abandoned, Canadian Anthracite Coal Company Limited transferred its operations to Canmore. The mine tunnel and drifts at Anthracite gradually became flooded through seepage, but periodically ambitious prospectors tried to find a new coal seam in the vicinity. In the mid-1920s, Frank Wheatley, a former resident of Bankhead who had moved to Blairmore in the Crows Nest Pass region, returned to Banff and began a search for coal at Anthracite. With his sons and James Reid, Wheatley in August, 1928 located an excellent seam of coal on property owned by Canada Cement Company. Working under a lease, the Wheatleys drove a tunnel into the cliff north of the railway line at a point north of the Anthracite section-house, and east of a market garden operated in the vicinity. The first delivery of coal from the new mine was made in Banff on August 17, 1928, and operation of the mine was continued until 1944. During the winter of 1944-45, the mine was flooded and the site had to be abandoned.

In 1945, Frank Wheatley and Sons negotiated an agreement with Canmore Mines Limited permitting them to prospect and mine coal on lands formerly owned by the former Canadian Anthracite Coal Company Limited. A seam of good coal was located, and after a tunnel had been driven from a point about a mile west of the flooded workings, mining was resumed in 1946. In December, 1947, the Wheatleys completed the purchase of approximately 331 acres of coal-bearing land. During the following eight years, the mine produced 10,540 tons of semi-anthracite coal, which was marketed in Banff and vicinity. In 1951 Banff was provided with a natural gas service, and undoubtedly the sale of this form of fuel seriously affected the sale of coal, for the Wheatley colliery was closed, but not abandoned, on October 1, 1953.

**Right-of-Way Required**

In June, 1953, officers of the National Parks Branch learned that two parcels of land within the Wheatley freehold would be required as right of way for the reconstruction of the Trans-Canada Highway through Banff National Park. Negotiations were then opened with the owners for the purchase of land required for highway construction, or alternatively, the entire land holdings of the Wheatley family at Anthracite. A legal survey had disclosed that 11.65 acres would be required for the highway, and the value placed on the two parcels by the owners was considered by the department to be exorbitant. Consequently, to permit construction of the highway to proceed, the necessary right of way was acquired by expropriation on May 4, 1955. With a view to evaluating both the surface and mineral rights held by the Wheatley family, the director of the National Parks Branch arranged for an examination of the coal mine by a geologist of the Department of Mines and Geology, B.A. Latour. Latour's report was completed in October 1953. It included a plan of survey of the mine workings, and estimated the volume of coal recoverable from two seams to be 3,434,755 tons. The report also disclosed that about 75 percent of the coal recovered to date had been taken from Crown land which lay between opposite ends of the mine tunnel.

Negotiations between the federal Department of Northern Affairs and National Resources, responsible for national park administration, and the Wheatleys were carried on for more than three years. Eventually a settlement in the amount of $70,000 was agreed on as compensation for title to all land and minerals held by the Wheatley family at Anthracite, including that acquired by expropriation. Authority for the purchase was obtained from Treasury Board and the Governor in Council in January 1957. The transaction, involving 331.5 acres, included 57 lots in the former townsite of Anthracite. A portion of the purchase price was withheld, by mutual agreement, until the former mine workings had been cleared and all provisions of the Mining Act of Alberta relating to abandoned mines had been met. This condition of the purchase agreement was complied with by October 31, 1957, and the property acquisition by the Crown reduced substantially the acreage of privately-owned land within Banff National Park.

**More Property Acquired**

Long before the Wheatley coal mine lands and the balance of the lots in western portion of Anthracite townsite were purchased by the Crown for parks purposes, Canmore Mines Limited had started to dispose of its holdings. In 1946, two parcels of land, comprising nearly 116 acres, were acquired by Conrad O'Brien, founder of Vancouver Island. This land was situated north of the Calgary-Banff highway, and lay between the penstock of Calgary Power Limited on the west and the new road from Lake Minnewanka to Anthracite. Later, O'Brien began the development of his property as a site for visitor accommodation.

In January, 1949, Park Superintendent Hutchison called to the attention of Controller James Smart at Ottawa that additional sales of property at Anthracite were being made to residents of Banff. One person, D.M. Soole, was buying lots in numbers and reselling them at a profit. The National Parks Branch included in its estimates for 1949-50, a substantial sum for the acquisition of privately-owned lands in the parks, but the item was deleted from the branch appropriation. During an inspection of the western parks in July 1949, Controller Smart
discussed with officials of Canmore Mines Limited at Calgary the possibility of purchasing, on behalf of the department, title to any land at Anthracite still held by the company. Agreement was reached that further sales to the public would be withheld until the Department of Mines and Resources reached a decision concerning acquisition of some 700 acres remaining in possession of the company.

Further negotiation between Controller Smart and Canmore Mines Limited in September, 1949, resulted in an offer by the company to sell to the Crown the residue of its freehold land at Anthracite for $25,000. Following a search of titles in the provincial land titles office made by the park superintendent to verify the company's land holdings, a submission was made by the Minister of Mines and Resources to the Governor in Council in February 1950, seeking authority to purchase the lands described in the schedule to the submission for the sum of $25,000. Approval was obtained on March 14, 1950, and by July 18, title had been vested in the name of His Majesty the King in right of Canada. The certificates of title obtained included those for the remaining 50 lots in the former townsite of Anthracite which had not been sold. Title to six more lots within Blocks 1, 3, and 5, was obtained through the services of an agent of the Minister of Justice at a tax sale held by the provincial government at Cochrane, Alberta, on August 17, 1951, for the sum of $124, excluding legal fees.

More Expropriations
Two years before the acquisition of the Wheatley property had been completed, the National Parks Branch was informed by the Department of Public Works that additional property at Anthracite would be required for the realignment and construction of the Trans-Canada Highway in the vicinity of Anthracite townsite. The right of way as proposed involved the relocation of a section of the Canadian Pacific railway line near the generating plant of Calgary Power Limited, and consequently an encroachment on lots in Block 2 would be necessary. In order to facilitate early construction, the National Parks Branch obtained the permission of the deputy minister to expropriate 25 of the 26 lots in Block 2. The remaining lot (4), already was owned by the department. The expropriation documents were registered by an agent of the Minister of Justice at a tax sale held by the provincial government at Cochrane, Alberta, on August 17, 1951, for the sum of $124, excluding legal fees.

New Basis for Compensation
As the Exchequer Court Act provided that compensation paid for expropriated land should be based on its actual value at the time of expropriation, the acceptance of a second expropriation by the Registrar of Land Titles on May 17, 1961, necessitated a review of all amounts paid or payable as compensation to former property owners. A new appraisal of lots in Block 2 was undertaken by the Real Estate Branch of the Department of Transport, Ottawa, in March 1971. The report established a market value of lots having a frontage of 25 feet at $425, and for those having a frontage of 40 feet, $600. After titles were restored in the names of those who had accepted compensation, new settlements were reached during 1961 with all persons affected by expropriations in Block 2. Those who had already accepted settlement at the original scale of compensation received additional payments based on the values established by the Department of Transport report. Others were paid amounts of $425 or $600 per lot in return for a release of all claims. The total outlay by the department, exclusive of legal fees, was approximately $13,000.

Anthracite Titles Extinguished
Through the purchase of the Wheatley holdings in 1957, and other acquisitions, the Department of Northern
Affairs and National Resources now held title for park purposes to all lots in Blocks 1, 2, 3 and 4, Plan 573A. There remained as privately-owned land some 38 lots in Blocks 5, 6 and 7, occupied by resident owners. Over the next 10 years the remaining components of the former townsite of Anthracite were purchased by negotiation for $123,000. Summarized by year, these acquisitions were:

1961 - Three lots and a portion of a fourth in Block 5, with improvements, from R.M. and Elsie Burnham for $10,000; nine lots including improvements in Block 6 from C.H. Peyto for $30,000.
1965 - Five lots and improvements in Block 5 from Annie L. Kovacs for $25,000.
1967 - Ten lots and improvements in Block 5 from Hugo and Gay Langas for $25,000.
1970 - Ten lots, a portion of another, and improvements thereon in Block 7 from W.H. and Christina Robertson for $33,000. In 1960 the Department had previously acquired from the Robertsons title to five lots and part of another for purposes of a scenic road. Compensation was accepted in the form of an asphalt roadway constructed by the department from the park road to the Robertson dwelling.30

Underlying the desire of the department to extinguish all private ownership of lands within national parks was the threat that development by owners might involve undesirable types of enterprise, or induce the creation of a satellite community in which park authorities might eventually have to provide municipal services. In fact, applications were received by the park superintendent from lot owners for permission to develop and operate an outdoor motion picture theater, to subdivide existing lots to provide a housing development, and to construct and operate a motel. All requests of this nature were refused. One owner of a group of lots, however, disposed of portions of his freehold, which later were included in the properties bought by the department.

The Fairholme Ranch

Before the unsold lands of Canmore Mines Limited at Anthracite were purchased in May 1950, the National Parks administration at Ottawa knew that several other large freeholds existed in the vicinity. These included the Wheatley mine holdings and the privately-owned portions of Anthracite Townsite, already described; a partly developed resort property containing 116 acres which had been purchased by Conrad O'Brien ffrench from Canmore Lands Limited in 1946; and an additional 350 acres which had been in possession of Canada Cement Company of Canada since 1911. The acquisition of the two last-named properties will be reviewed in subsequent paragraphs.

Captain ffrench's land acquisition, for which he paid $2,895, apparently came as a surprise to the park authorities both at Banff and at Ottawa. That sale, together with the disposal of the lots in Block 2 of Anthracite townsite, eventually led to the purchase by the department of the balance of the Canmore Mines holdings. An artist and sportsman, ffrench had in mind the development of a small resort where guests would be accommodated in superior style, at a cost comparable to that payable by guests at the Banff Springs Hotel. After submitting plans for approval he was granted permits in 1946, 1947 and 1948 for the construction of a log cabin, a log stable and a large house or lodge, all built principally of logs obtained in Kootenay National Park under permit.31

The lodge was exceptionally well constructed. On the main floor were a large living room with open Rundle stone fireplace, dining-room, study, bedroom, bathroom, kitchen and cook's bedroom. The second floor contained three bedrooms, two bathrooms, linen and broom closets. The basement incorporated in addition to a bedroom and bathroom, a fuel room, heating equipment and two-car garage. A considerable portion of the furniture was handcrafted, some of it decorated with western or Indian designs. Although a per diem rate for accommodation was approved by the department in 1948, the lodge later was rented in its entirety by the owner at a monthly rate for several years. Captain ffrench lived in the cabin nearby. The lodge was rented by the federal Department of Public Works for the accommodation of Princess Margaret during her three-day visit to Banff National Park in the summer of 1958.

In May, 1950, Park Superintendent Hutchison advised the controller of the National Parks Service at Ottawa that he had received information that ffrench was disposing of portions of his property, now known as Fairholme Ranch, to others for building sites. While unconfirmed, the rumor brought into focus the possibility of the acquisition of the Fairholme Ranch for park purposes. Two years later, the superintendent reported that he had been informed by Captain ffrench that the sale of the ranch to a group of United States citizens had been under consideration, and that an option to purchase had expired. In the circumstances, ffrench offered to sell his property to the department for the sum of $150,000. The offer, however, was not accepted.

Rumors of a sale of the property to a group of Calgary investors again came to the attention of the park superintendent in June 1958. Although this development proved abortive, Assistant Superintendent H.T. Cooper was interviewed at length in July that year by the representative of a group in Edmonton, which contemplated an extensive development. J. Welykochy expressed interest in the jurisdiction of the department over the development of privately-owned land within the park. This was fully explained, and the sale failed to materialize.

During September 1958 the minister, Alvin Hamilton, accompanied by his executive assistant, the deputy minister and the local member of Parliament, Eldon Woolliams, visited Fairholme Ranch. After receiving advice from Captain ffrench that the latest option granted by him had lapsed, and that an offer from the department would be entertained, the minister made a formal offer of $100,000 for the property. The owner countered by offering to sell his entire interest for $125,000.32

A strongly-worded submission made by the minister to the Governor in Council in November, 1958, recommended acceptance of Captain ffrench's offer. It stressed the undesirable effects of a sale to private interests, including possible subdivision of the land and the development of various types of enterprise not in keeping with National Park concepts. Attention also was drawn to the
fact that construction of the Trans-Canada Highway just south of the ranch boundary had enhanced its value. An appraisal of the land and buildings undertaken in December, 1958, on behalf of the department by an independent valuator, I.C. Robison of Calgary, valued the property at $125,000. After lengthy consideration, Treasury Board recommended acceptance of Hamilton's submission, which received approval on May 5, 1959.  

Acquisition of the ranch, comprising 115.83 acres, was completed later that month. The buildings on the land were used to accommodate Banff Park staff until 1973, when they were removed.

Canada Cement Property

The interest of Canada Cement Company Limited in privately-owned land at Anthracite dated from 1911, when the assets of Western Canada Cement and Coal Company Limited were acquired at a sheriff's sale. The latter company's holdings consisted of three separate parcels, titles for which were first granted by the Minister of the Interior in 1886 as coal land sales. The original owners were W.H. Merritt, who held title to 280 acres; Hugh Fleming, 40 acres; and F. Fleming, 35 acres. In 1904 J.S. Irvin, managing director of International Portland Cement Company Limited of Hull, Quebec, acquired title to these properties, and on November 29, 1905, sold them to Western Canada Cement and Coal Company Limited for $25,000. This company had been formed earlier in 1905 to produce portland cement from an immense deposit of high-calcium limestone located 25 miles east of Banff at Lac des Arcs. Here, on land leased from the Department of the Interior, the new company erected a cement plant and laid out a company townsit named Exshaw. The production of cement began in 1906, and was carried on by the company until 1911, when its plant and other assets were purchased by Canada Cement Company Limited.

A search of titles in the Alberta Land Titles Office at Calgary by officers of Banff National Park in May, 1957, disclosed that Western Canada Cement and Coal Company Limited had been financed by Royal Trust Company. Title to company lands at Anthracite and Exshaw were transferred to the trust company as collateral for the loan. By the close of 1910, Western Canada Cement and Coal Limited was in financial difficulty, and Royal Trust took legal action against their debtor in the Supreme Court of Alberta. A court order dated February 2, 1911, authorized the disposition of land and assets of Western Canadian Cement and Coal Company at a sheriff's sale. Real property, buildings and equipment at Anthracite and Exshaw were purchased by Canada Cement Company Limited, which had been incorporated in 1909. Production of cement at Exshaw has been continued since 1911 by the new owners, now known as Canada Cement Lafarge Limited.

Available records indicate that neither Western Canada Cement and Coal Limited nor Canada Cement Company Limited mined coal at Anthracite, but mining operations were carried on by Frank Wheatley and Sons under a lease from Canada Cement from 1927 to 1944. After Wheatley transferred his operation to a site purchased from Canmore Mines Limited, the Canada Cement holdings presumably were held as an undeveloped asset. In 1940, the Department of Mines and Resources acquired title to two small parcels required for the relocation of Calgary Banff highway by an exchange of land. In 1956, additional Canada Cement Company land was used in the construction of the Trans-Canada Highway, but payment of compensation for the 20 acres involved was deferred.

Interest in Jasper Park Land

In 1956 Canada Cement Company Limited sought permission from the Department of Northern Affairs and Natural Resources to extend quarrying operations from adjoining provincial land held under lease into Jasper National Park just inside the northeastern boundary. As the proposed operation would have involved withdrawal of the lands concerned by act of Parliament, and resource development within the park was undesirable, the application was not entertained. The company, however, renewed its interest in a quarrying operation in Jasper Park in December 1960, when it submitted an exhaustive brief explaining the company's market requirements in the Edmonton and other northern areas of Alberta. In the course of discussions between Vice-President V.C. Hamilton and the minister, Walter Dinsdale, Hamilton offered to exchange his company's property at Anthracite for the area desired in Jasper National Park. After careful consideration, the minister informed Hamilton that the proposed exchange would entail the alienation of land placed by Parliament under the National Parks Act for “safekeeping”, and that it was believed that Parliament would not consider an exchange of land a sufficient reason for withdrawing an area from the national park.

Later Negotiations

The need for a portion of the Canada Cement property at Anthracite to undertake a recreational development at Johnston Lake in Banff National Park prompted the department to reopen negotiations with the company with the object of purchasing a portion or all of the Canada Cement Company land at Anthracite, believed to comprise 347 acres. In the course of a meeting held in Ottawa on June 23, 1964, Deputy Minister E.A. Côté explained to Vice-President Kennedy of Canada Cement the desirability of clearing the existing encroachment by the Trans-Canada Highway, and stated that additional land might be required, should the highway be widened to accommodate four lanes. Mr. Kennedy again expressed interest in obtaining quarrying rights in Jasper National Park, but was advised that the department's position on the exploitation of natural resources within the national parks remained unchanged. It was agreed, however, that a valuation of the Anthracite property should be made for the department.

An appraisal completed by the Real Estate Branch of the department of Transport in January, 1965, placed the value of the surface rights Canada Cement's holdings at $56,000. The value of minerals underlying the company lands was determined by the Resources Management Division of the department to be $12,095. Subsequently, the deputy minister made a formal offer to purchase the Canada Cement Company property for $60,000. At a
meeting between Deputy Minister Côté and senior officers of the company on July 14, 1966, it was established that the company did not wish to sell its property, but was prepared to negotiate a trade for quarrying rights in Jasper National Park.

Further negotiation between Canada Cement Company Limited and the Department was suspended for more than two years. On December 30, 1968, Deputy Minister J.A. MacDonald reopened the subject by letter to President Taylor Kennedy and in February, 1969, he met with Vice-President Howe in Ottawa. At the meeting, it was agreed that the possibility of reaching agreement with the company would be reexamined, and that the appraisal of the company's land undertaken earlier would be reviewed. Eventually, the department took the position that the release of land from Jasper National Park for commercial exploitation would not be in the public interest. On September 30, 1969, Senior Assistant Deputy Minister Gordon informed Howe that it would not be possible to accede to his request for an exchange of land and that, following a review of the appraisal, the previous offer of $60,000 could not be increased. On December 17, 1969, Vice-President Howe advised Gordon that the Canada Cement Company Limited would accept the offer. Authority to complete the purchase was obtained from the Governor in Council on June 2, 1970, and the transaction was completed on behalf of the department by the Department of Justice on October 28, 1970. A certificate of title to the company's lands holdings at Anthracite was issued in the name of Her Majesty the Queen in right of Canada.

**Final Anthracite Acquisition**

The last of the lands originally granted to Canadian Anthracite Coal Company Limited in the 1880s was repossessed by the Department of Indian Affairs and Northern Development for park purposes on June 18, 1971. On that date, the department obtained from Mrs. Winnie Gee a surrender and quit claim of all interest in an area of 10.4 acres on which she and her predecessors had operated a market garden since 1927. Known for years as the Sun Greenhouse, the garden area was one of two occupied by Chinese families under lease from Canmore Mines Limited when the residue of its lands were purchased by the Department in 1950. After administration of the land was assumed by the National Parks Branch in 1951, both leases - one held by Gee Moy and the other by Gee Wah, were replaced by licences of occupation. After Gee Moy's death in April, 1953, his widow and administratrix of his estate, Winnie Gee, continued the operation of the greenhouse under authority of a licence of occupation. The operation of Gee Wah's garden, in the vicinity of Bankhead, was closed out after his licence expired in 1955.

Over the years the establishment deteriorated in appearance. Situated adjoining an ancient slack coal dump, it contained, in addition to primary buildings, a collection of abandoned equipment, decayed lumber and junk. Following an inspection of the property in April, 1960, the licensee agreed to replace the main residence and undertake repairs to other buildings. A new house was erected in 1962, and occupation of the site was continued as a holding tenant. By 1964, termination of the concessionaire's rights of occupancy was being considered by the national park administration. An inspection of the property disclosed that many of the buildings were below standard, some buildings were occupied by persons having no connection with the garden, and others were not in use. The possibility that part of the garden site might be required for the future widening of the Trans-Canada Highway also was established.

In October, 1968, Park Superintendent Kun recommended to the western regional director, that action be taken to terminate the greenhouse operation, which was considered to be a nonconforming and objectionable use of park land. Mrs. Gee was subsequently offered a final licence of occupation for a term of three years from January 1, 1969. This offer was rejected, as it contained no provision for compensation for loss of improvements and a means of livelihood. Eventually, the department negotiated a surrender of all rights formerly held under licence of occupation, including improvements on the land, in return for a cash payment of $25,000. The settlement, authorized by the Governor in Council, represented the sum of $18,600 for the residence, and an *ex gratia* payment of $6,400 for loss of services, buildings and business dislocation. Mrs. Gee was granted a reasonable period in which to wind up her business and vacate the property. Following an extension of the period of occupancy, the former garden site was taken over by the department on June 1, 1973.

**Other Coal Lands**

Although Parks Canada was successful in recovering title to areas in Banff National Park that once comprised active coal mines, there remained in private ownership a large area of coal-bearing land. In later pages of this chapter, mention will be made of an area of 10 square miles granted to the Canadian Pacific Railway Company in the early 1900s as part of its main line subsidy. Located within the valley of the Cascade River, these lands contain, in addition to timber, coal deposits estimated by the company to aggregate 20 million tons. While these coal deposits to date have remained undeveloped, their continued existence under private ownership constitutes a threat to the preservation of the park environment.

**Base Metals Production**

Although mining activity within the national parks in western Canada produced more coal than any other mineral, public interest in the discovery of both precious and base metals also was evident in the earlier days of park administration. Volume I of this history refers to the mining boom that occurred at Silver City in 1883 before the first park reservation was made at Banff two years later. Undoubtedly, some silver and copper was mined, but the deposits lacked volume, and the pioneer mining camp was practically abandoned before the settlement was surveyed as the townsite of Silverton in 1884 and 1885. Elsewhere, claims believed to contain precious metals were staked and later filed, but none proved worthy of actual development.

On the other hand, the Monarch and Kicking Horse
mines in Yoho National Park near Field were kept in operation - albeit spasmodically in their earlier years - from 1884 to 1952. The minerals obtained were lead and zinc, although silver was recovered as a by-product in the course of refining the ore. The Monarch mine, in towering Mount Stephen, and the Kicking Horse mine on the face of Mount Field across the Kicking Horse River, were spectacular operations. The rock was mined at levels high above the valley floor, and was transported by cableways or conveyors to storage areas from which it reached the mill. There it was reduced to concentrated ore for shipment to smelters. The operation of these mines, also described in Volume I, was terminated in 1952.

**Carleton Claim Acquired**

In July, 1976, Parks Canada purchased the title to the Carleton mining claim which adjoined the former Monarch claim on Mount Stephen near the townsite of Field. This claim, which was Crown-granted in 1891 to the Golden Mining and Smelting Company of Canada, included surface rights to about 20 acres, together with all minerals except gold and silver. Title to the property had changed hands several times over the years, and no record of its development existed in departmental records. The latest owner received $1,100 as compensation for its surrender.

**Quartz Mining Regulations**

Like the coal operations in Banff Park, the mining of base metals was sanctioned by early national park legislation, and was carried on until 1916 under authority of regulations for the disposal of quartz mining claims on Dominion lands in the Northwest Territories, Yukon Territory, and in the western provinces. Following establishment of the Dominion Forest Reserves and Parks Act in May, 1911, the regulations governing quartz mining claims were made applicable to the forest reserves and parks established under authority of that act. Eventually, Parks Commissioner J.B. Harkin was able to persuade the Minister of the Interior to have the right of filing mineral claims revoked. On August 15, 1916, the Governor in Council approved an order rescinding the authority to dispose of quartz mining claims in the Dominion Parks. The order in council read in part as follows:

*Whereas, owing to the small area within the parks in comparison with the whole area of Canada, upon which prospecting and quartz mining is at present permitted and as few, if any, large deposits of minerals have been found within the parks, it is considered that it would be advisable to withdraw the parks from the operations of the Quartz Mining Regulations.*

The rights of owners of existing claims for which grants had been made, or which were maintained in good standing by annual representation work, were recognized. Most of the claims registered before 1916 have been cancelled or alternatively, the titles extinguished by purchase or expropriation. In the cases of the Monarch and Kicking Horse mines, the rights held were surrendered by the owners after recoverable mineral deposits were exhausted.

**Kootenay Park Mining Claims**

Before its establishment on April 20, 1920, Kootenay National Park had attracted many prospectors and miners. Some sought lead and zinc, while others were interested in talc, a hydrous silicate of magnesium. Many claims had been staked under the mining laws of British Columbia, and national park administrators were obliged to condone operations until the rights of the owners lapsed through failure to comply with provincial regulations, or were cancelled for other reasons. Under the Banff-Windermere Highway Agreement of 1919, which preceded the establishment of Kootenay National Park, the Minister of the Interior had the authority to reject the recording of quartz and placer claims if the operation of the claim interfered with the scenic beauty of the park or other feature in the area. In addition, all lands within the park boundaries on which mineral rights were extinguished, automatically became vested in the Dominion Government. Later, when the National Parks Act was passed in May 1930, it made no provision for prospecting and the filing of claims to minerals of any description. Brief histories of some of the mining properties in Kootenay Park may be of interest.

**Albion Group of Claims**

In the autumn of 1929, a casual employee of the National Park Service, who had been a member of a crew engaged in improving a trail along Hawk Creek in Kootenay Park, discovered outcroppings of lead-zinc ore during off-duty ramblings. Without the knowledge of Park Superintendent Sibbald, Frank Jowett staked between October 31, 1929, and June, 1930, a group of six claims which were accepted for registration by the provincial mining recorder at Wilmer, British Columbia. Although advised by the superintendent that development of mineral claims in the park staked after the date of the Banff-Windermere Highway agreement, March 12, 1919, was not permitted, Jowett managed to undertake some representation work. He was, however, refused permission to bring explosives into the park to facilitate exploration of the mineral deposit.

Following a written inquiry, Superintendent Sibbald was informed by the mining recorder that the certificates issued by him bore an endorsement that “the record is issued subject to the provisions of the Dominion Forest Reserves and Parks Act.” Commissioner Harkin at Ottawa protested the recording of the claims in a letter to Robert Dunn, Deputy Minister of Mines for British Columbia. Harkin received an acknowledgment of his letter and later was forwarded a copy of a memorandum signed by a legal officer of the provincial attorney general’s department acknowledging that the recording of mineral claims within the lands granted to the federal government for the purposes of the Banff-Windermere Highway was illegal, and also that a record made in contravention of the provisions of the agreement was a nullity. Dunn added the information that mining recorders for areas adjoining the boundaries of Kootenay National Park were being notified accordingly.
After considerable deliberation, the Minister of Mines controller of the Department of Munitions and Supply in to work the claims could be granted only by Parliament. The original claimant, Jowett, had enlisted the assistance of a partner, J.E. Barbour of Wilmer, British Columbia, in obtaining permission of the Minister of the Interior to have their claims restored to good standing. In May 1933 Barbour appealed to Prime Minister R.B. Bennett in an effort to obtain permission to continue assessment work. The correspondence was referred to the Deputy Minister of Justice for an opinion. His reply confirmed that the staking of the Albion claims and the recording of entries by the provincial mining recorder must be considered a nullity. He also advised the Deputy Minister of the Interior that neither that department nor the Governor in Council had any authority to authorize the entries or permit development of the mineralized areas. Although this information was forwarded to Barbour, he maintained his lobby by correspondence, which was climaxxed in 1937 by an appeal to Prime Minister Mackenzie King. This communication was referred to the Minister of Mines and Resources, T.A. Crerar. A reply signed by his private secretary, Ford Pratt, advised Barbour that neither the department or the Governor in Council had the authority to permit the development of areas in the park containing minerals, and that for legal reasons it was impossible to review the decision already conveyed to him.

Wartime Development
During World War II, representations were made by Base Metals Mining Corporation of Toronto, that its lead-zinc deposits in the Monarch and Kicking Horse Mines at Field in Yoho National Park were being worked out, and that permission to work the Albion claims in Kootenay park would assist the war effort. It was ascertained that an employee of Base Metals Mining Corporation had staked eight mineral claims along Hawk Creek in May 1941, and had been successful in having them recorded in June by the provincial mining recorder at Windermere, British Columbia. The president of the Corporation, J.H.C. Waite was informed that authority to work the claims could be granted only by Parliament.

The corporation then enlisted the support of the metals controller of the Department of Munitions and Supply in its effort to obtain mining privileges in Kootenay Park. After considerable deliberation, the Minister of Mines and Resources agreed to have an investigation of the mineral potential of the Albion claims investigated, and this was authorized by an Order-in-Council approved on May 8, 1942, under provisions of the War Measures Act. The investigation, which entailed a drilling program, was entrusted to Base Metals Mining Corporation in accordance with the terms of an agreement completed between the Crown, represented by the Minister of Mines and Resources, and Base Metals Mining Corporation Limited on May 15, 1942. A geologist of the Geological Survey of Canada, Dr. H.M.A. Rice, was appointed to supervise a diamond drilling program. The terms of the agreement stipulated that the cost of the investigation should not exceed $20,000. The drilling was begun early in July, 1942, and concluded on August 10. During this period 17 holes with a combined depth of 1,650 feet were completed to outline the extent of the mineral deposit. On the conclusion of the work, separate reports were submitted by Dr. Rice and by Dr. W.L. Brown of Base Metals Mining Corporation. Dr. Rice reported that the recoverable zinc in shipping ore was estimated to be 1,922,000 pounds or 961 tons. If development of the claims was decided upon, it was estimated that the outlay for mining equipment would be $17,050, less salvage value of $3,050. The cost of extracting the ore and having it transported to Field was estimated to be $45,833, and the value of zinc blocked out for selective mining was believed to be $52,000. Dr. Rice expressed the opinion that it was improbable that sufficient ore existed for the development of a mine.

Dr. Brown's report estimated the ore body contained 7,864 tons of milling grade and 3,677 tons of shipping grade. From the 3,677 tons of higher grade shipping ore, it was considered that about 2,030,000 pounds of zinc could be extracted, assuming a recovery of 85 percent was possible. Dr. Brown also considered that the total zinc recoverable was insufficient to justify the expenditure involved. The conclusions of the geologists that a practical mining operation was improbable were accepted by Base Metals Mining Corporation. The project was terminated later in August 1942, and all equipment withdrawn. No further attempt to exploit the lead-zinc deposit on Hawk Creek has since been made.

Zenith Mines Group
The largest group of base-metal mining claims in Kootenay National Park was held in the name of Zenith Mines Limited for nearly 29 years before the mining rights were cancelled by the British Columbia Department of Mines in 1943. These claims were located on Tokumm Creek about two miles above Marble Canyon, which is accessible from the Banff-Windermere Highway by a bridge over Vermilion River. The claims were recorded in two groups on November 5, 1914, by H.P. Saunders of Calgary. One group included the Phoebe, Olive, Royal, Yale, Moose, Kent, York and Eagle claims. The other group consisted of the Duke, Edith, Bear, Alma, Logan and Alice claims. Both groups of claims were maintained in good standing by assessment work until 1942, and over the years several small buildings and a mine tipple were constructed to facilitate operations.

The mine workings included two adit tunnels or drifts driven into the mountainside about 600 feet above the floor of the valley. One of these extended for about 20 feet and the other for 40 feet. The longest drift ended in a room from which short tunnels were driven for about 10
feet. In 1940 Saunders applied to the park superintendent for permission to transport explosives into the park to assist in minerals exploration. This request prompted an inquiry from the director of the Lands, Parks and Forests Branch at Ottawa about the status of the claims. Arrangements later were made for an inspection of the Zenith group of claims by Dr. H.M.A. Rice of the Geological Survey of Canada, Department of Mines and Resources, Ottawa. His report received in 1942 revealed that no assessment work on the claims had been undertaken for at least 10 years. On July 2, 1942, the Deputy Minister of Mines at Victoria was requested by his counterpart at Ottawa to have a formal inspection made of the Zenith Mines claims. This action was necessary in order to confirm assessment work which Saunders claimed to have made in 1940 to the value of $2,000. It was believed by the park administrators at Ottawa that a thorough inspection would help clear up title to the existing claims, all of which had been recorded before the completion of the Banff-Windermere Highway Agreement in 1919, which placed restrictions on the granting mineral claims within Kootenay National Park.

Later, on November 4, 1942, Saunders obtained from the provincial mining recorder, certificates of work purporting to have incurred an expenditure of $2,941 on representation work since November 5, 1941. If valid, these certificates would have maintained all claims in good standing until November 5, 1944. On December 23, 1942, Saunders was informed by letter from the Deputy Minister of Mines and Resources at Ottawa that a formal protest was being entered with the Deputy Minister of Mines at Victoria, on the ground that the value of the work shown on the certificates did not agree with the work actually carried out on the ground.47

Eventually, on June 2, 1943, the Deputy Minister of Mines for British Columbia informed the deputy minister at Ottawa that the certificates of work obtained by Saunders on November 4, 1942 were improperly obtained, and that his department had canceled the certificates of work for all 14 claims. Later, on September 30, 1943, the Director of Lands, Parks and Forests at Ottawa was informed by the Deputy Minister of Mines at Victoria that the period of appeal from the action of the provincial authorities had expired, and that the 14 claims of Zenith Mines Limited no longer existed in the records of the province.48

Mine Entrances Sealed
A check of all abandoned mines and mining claims in the mountain national parks of western Canada was instituted by chief of the National Parks Service in June, 1962, in order to ensure that any shafts or tunnels that might constitute a public hazard were properly closed or sealed. A report received from the superintendent of Kootenay National Park revealed that a few mine openings, including those at the Zenith Mines claims, still existed. Although none of the openings constituted an extreme hazard, the superintendent recommended that they be sealed by blasting the entrances. Formal permission for such action was granted.49

The Talc Mines
Among the minerals prospected for in the vicinity of what later became Kootenay National Park was talc, also known as soapstone. H.S. Spence of the Mines and Geology Branch, Department of Mines and Resources, Ottawa, described the mineral talc as a hydrous silicate of magnesium, containing 63.5 percent silica, 31.7 percent magnesia, and 4.8 percent water. In the narrower sense, the term “steatite” is generally applied to massive compact cryptocrystalline talc, without visible grain, and usually of a pale yellow or cream color. Steatite may be ground like ordinary talc for the production of powdered talc, but also is used for the production of “lava” articles, including insulators used in electrical and radio industries.50

Several occurrences of steatite talc were known to occur along the Alberta-British Columbia boundary in the vicinity of Mount Whymper in Kootenay National Park, and at the head of Redearth Creek in Banff Park. The deposits in these areas range in color from pale yellowish green to mottled black and white. In the Red Mountain claim south of Redearth Pass, the talc occurs as a bedded deposit consisting of several talc members from one to five feet thick, and in one location, a talc bed 10 feet thick was observed by Spence in 1931.

Red Mountain - Gold Dollar Claims
The claims in the vicinity of Redearth Pass in the northeastern part of Kootenay Park were located by E.W. (Bill) Peyto in 1917, before the national park was established.51 The Red Mountain claim was recorded on July 27, 1917, and Peyto later was granted a certificate of work to mine steatite talc. An adjoining claim called the Black Diamond also was staked and recorded in the name of Walter Peyto. The right to this claim lapsed for lack of representation work, but it was restaked as the Gold Dollar in 1927 in the name of Ethel W. Peyto, and erroneously recorded by the mining recorder for the Windermere district. Overlooked was the fact that the privilege of locating claims in the national park ended in March, 1919, on the completion of the Banff-Windermere Highway agreement between Canada and British Columbia.

Comparatively little work was undertaken on either claim until 1927, when National Talc Limited was formed in Toronto to undertake development of the talc deposits. The new company, headed by Sir Henry Pellatt as president and W.H. Matthews as vice-president and managing director, issued a prospectus offering for sale preferred shares in the company, carrying a bonus of common shares.52 Permission was obtained by the company from the Commissioner of Parks to construct a wagon road from Massive on the Canadian Pacific Railway line up Redearth and Pharaoh Creeks and over Redearth Pass to the claims. The company’s interest in the talc deposits was obtained through an option agreement dated February 9, 1927, with E.W. Peyto and Ethel Peyto. The Department of the Interior agreed to recognize the Red Mountain as a valid claim, but refused to sanction work on the Gold Dollar claim because, when it was restaked in 1927, the privilege of recording mining claims in the park had lapsed.
In July, 1930, the Minister of the Interior, Charles Stewart, was informed by the solicitors for National Talc Limited that although it had spent $18,000 on the construction of a bridge over Bow River, a rough road to the mine, and two buildings, William Peyto had cancelled the option to purchase. Apparently, financial difficulties had limited the amount of work carried out, and thus affected the terms of the agreement. Advice also was received that Peyto had entered into a new agreement with Carl Voelker and E.A. Lange of Calgary, operating as Western Talc Holdings. In 1931, H.S. Spence of the Department of Mines at Ottawa visited the claims and later reported that the Calgary operators had put down five drill-holes on the Red Mountain claim in 1930. Records of what was found were not available.

Operations by National Talc Limited on Red Mountain apparently were concluded in 1929. On October, 1931, its secretary, E.T. Bartlett, advised Commissioner Harkin that “National Talcum is out of business”. The operations of Voelker and Lange apparently were restricted to the drilling carried out in 1930. In 1935 the two buildings erected by National Talc were reported by the park superintendent to be in poor condition. The last certificate of work was issued by the mining recorder at Golden, British Columbia, in 1938, and rights to the claim probably lapsed in 1939. The park superintendent was informed in 1943 by the mining recorder that neither the Red Mountain nor Gold Dollar claim was in good standing.

Wartime Operations

Interest in the talc deposits south of Redearth Pass was revived in 1943, when a shortage of lava talc for wartime use was brought to the attention of the director, Lands, Parks and Forests Branch of the Department of Mines and Resources, by the metals controller, Department of Munitions and Supply. Permission was requested by the metals controller, G.C. Bateman, to mine talc from the Red Mountain and Gold Dollar claims in order to assist the war effort. Authority was granted by the Governor in Council under the War Measures Act on October 22, 1943. The development was undertaken by Wartime Metals Corporation and a special permit was issued by the Minister of Mines and Resources to the corporation, which set out the conditions under which the operations might be carried on.

The corporation erected a base camp at mile 8.3 on the Pharaoh Creek trail in Banff Park and a mine camp consisting of two buildings on the shore of a small unnamed lake south of Redearth Pass at mile 16.3. The park trail up Redearth and Pharaoh Creeks was improved to the status of a tractor road by work crews of Banff National Park on a repayment basis. Mining of talc was carried on from December 1943 to March, 1944, when the camp was closed down. Reports subsequently obtained revealed that about 7½ tons of talc were mined and shipped during the period the camp was in operation. Neither mining claim has been worked since, and no legal authority exists for future development of these talc deposits.

Silver Moon Claim

Another interesting deposit of steatite talc held under Crown grant from the Government of British Columbia is contained in the Silver Moon mining claim on the southeastern slopes of Mount Whymper in Kootenay National Park. This claim, situated less than a mile from the Banff-Windermere Highway on the slope of the mountain, contains an undetermined quantity of talc, which, through unusual circumstances, cannot be worked by the owner, Mountain Minerals Limited, of Lethbridge. The grant to the claim confers title to gold and silver only, and the development of minerals for which title had not been issued is no longer permissible in national parks.

The Silver Moon claim, also known as Lot 11708, Kootenay District, was recorded on February 16, 1915, by Jack Ballard, when the site lay within the boundaries of the federally-controlled Yoho Forest Reserve. Ballard later assigned his interest in the claim to Burton F. Fox of Banff, one of a group having an interest in the Banff Talc Company. Sufficient representation work, including the excavation of a 30-foot tunnel, was carried out by Fox and associates to qualify for a mineral grant. In December, 1920, the Superintendent of Lands for British Columbia requested the agent of Dominion Lands at Revelstoke to transfer the underground rights and base minerals in the claim to the province in order to permit the issue of a certificate of title. The correspondence was referred to the Commissioner of National Parks at Ottawa, who explained to H. Cathcart, provincial superintendent of lands, that it was not the practice to grant underground surface rights and base metals when such claims were situated within the national parks. By that time, the base metals in this claim had been vested in the federal government with the establishment of the national park, and as talc is a base mineral, the claimant had no rights to the deposit. As a consequence, Mr. Cathcart confirmed that the province would be in a position to issue title to gold and silver only, and that Fox would be advised accordingly. On July 8, 1921, Burton Fox received a grant under the provincial Mineral Act for Lot 11708, known as the Silver Moon mineral claim, for all gold and silver found beneath the surface.

In September, 1926, Fox entered into an agreement for sale and option with W.H. Matthews, an officer of National Talc Limited of Toronto to dispose of his rights for $5,000. Fox also assigned to Matthews, his interest in a licence of occupation issued by the commissioner of parks on September 1, 1927 covering an area of 10 acres required to work the claim and remove minerals to which he had held title. On May 13, 1931, E.T. Bartlett, secretary of National Talc Limited, informed Commissioner Harkin that the company was practically out of existence, and that he no longer planned to pay the annual rental due on the licence of occupation. The licence later was formally cancelled by the Deputy Minister of the Interior on July 6, 1932, for non-payment of rental. Presumably, the rights to the Silver Moon claim reverted to B.F. Fox, and in November 1947, it was acquired by a group including R.A. Thrall of Lethbridge, incorporated as Mountain Minerals Limited. Representations made by and on behalf of the company that it be permitted to remove talc from the Silver Moon claim have
been consistently turned down, with the explanation that the development of this natural resource is not permissible under the provisions of the National Parks Act.

Ochre Springs or Paint Pots

An unusual kind of mineral occurring in Kootenay National Park is yellow ochre or iron oxide which, after roasting, produces a red oxide formerly used by North American Indians to decorate their bodies. Known as the Ochre Beds or Paint Pots, the Kootenay deposits are situated about two miles southwest of Marble Canyon, and six miles southwest of Vermilion Pass. Access is readily available by walking trail from a parking lot adjacent to the Banff-Windermere Highway (No. 93), a distance of half a mile. A longer trail following the north side of Vermilion River from Marble Canyon also is available.

The first white man to record the existence of the Paint Pots probably was Dr. James Hector, geologist of the Palliser expedition. In his journal for August 21, 1858, Dr. Hector referred to this unusual mineral occurrence:

...A mile further on we arrived at a sudden bend which the river (Vermilion) makes to the southeast, changing its course at right angles. Here in a corner of the valley on the right side is the Vermilion Plain, which is about a mile in extent, with a small stream flowing through it. Its surface is entirely covered with yellow ochre, washed down from the ferruginous shales in the mountains. The Kootenai Indians come to this place sometimes, and we found the remains of a camp and of a large fire which they had used to convert the ochre into the red oxide which they take away to trade with the Indians of the low country, and also to the Blackfeet as a pigment, calling it vermilion. We found loose horse tracks here, but evidently of a band that had been here the previous summer.48

During spring and early summer, when there is an abundance of ground water, the ochre beds assume the form of oozing yellow bogs. Several springs are distributed individually or in groups in the vicinity, and one group of cold mineral springs known as the Paint Pots is located in three pools about 550 yards from the bridge over Vermilion River. These pools form the principal attraction for the casual visitor. Deposits of iron oxide build a rim around the spring outlets, and as the height of the rim increases, the rate of discharge tends to decrease. Eventually, back pressure will force the imprisoned water to seek an alternative outlet which offers less resistance. The discharge of the pools is carried away by several small streams which find their way to Vermilion River, and in places, the gravels of the river channel are heavily stained with rust.

Mineral Claims Staked

The ochre beds or paint pots were staked as mineral claims by R.W. McDonald of Calgary, and recorded on his behalf by J.W. Fawcett at Wilmer, British Columbia, on December 8, 1917.49 According to a sketch plan submitted by McDonald to Acting Superintendent Stronach of Kootenay National Park in January, 1922, several claims had been staked and named Lillian, Magnet, Vermilion, Mount View, Yellow Creek and Margaret. Of these, the Margaret claim was recorded in the name of R.W. McDonald, the Mount View in the name of Murdoch J. McDonald, and the Vermilion claim in the name of Margaret McDonald. All three claims were recorded on the same day.

On September 15, 1921, R.W. McDonald wrote acting park superintendent R.S. Stronach at Banff, and applied for permission to roast iron oxide on the Margaret claim.50 Stronach evidently had misgivings that such an operation might ignite the surrounding forest, and referred the request to the Commissioner of Parks at Ottawa. The commissioner requested Stronach to obtain from McDonald a plan of the claim and evidence of mineral rights. This information eventually was supplied by McDonald in the form of a sketch indicating the location of the group of claims, accompanied by a certificate of record from the provincial mining recorder at Wilmer for the Margaret claim. The commissioner also appeared skeptical about the results of the proposed operation, for the acting superintendent of the park was requested to obtain particulars of the treatment of iron oxide, plans of the proposed plant, and information concerning gases that might be released in the treatment of the mineral. McDonald complied with this request in a letter dated March 16, 1922, stating that the erection of a building sufficiently large to store a couple of cars of oxide was contemplated. As proposed the building would contain a grinding plant, furnace and other facilities that would permit washing, drying, grinding and roasting the oxide. McDonald also stated that no gas detrimental to the forest cover would result from the operation, which would be carried out on open ground.

About two months later, on May 9, 1922, Superintendent Stronach of Banff Park sent the commissioner a blueprint plan of a building in which the iron oxide would be treated by the Vermilion Oxide and Chemical Company. Also included was a plan outlining the posted boundaries of the Margaret claim, and the boundaries in outline of the adjoining Yellow Creek, Vermilion and Magnet claims. This information, however, did not satisfy the parks authorities at Ottawa. The superintendent was advised that before any action would be taken in connection with the application for permission to roast oxide, additional information must be supplied. These requirements included a plan of the actual area required for the operation of the mine, a detailed explanation of the development with full particulars of the process, and further information on the treatment of the ore.

Subsequent correspondence on head office files at Ottawa is limited, including a report from the acting superintendent in November, 1922, stating that only a few wagon loads of oxide had been removed from the area during each of the past three years. It is doubtful that the mining plant proposed by McDonald in April, 1922, incorporating a 40-foot concrete chimney lined with fireclay pipe, was ever erected. A report on the Paint Pots of Kootenay National Park prepared under contract for the National Parks Service in 1971 by Robert C. Scace of Calgary, Alberta, included information that some oxide had been harvested.51 Scace observed mining debris on the
site, including evidence of ore cars or trolleys and a winch which, by using a ramp, would have assisted in loading wagons. Rows of low mounds on the ochre beds also provided evidence of the last collection of ore assembled but not shipped.

When interviewed by national park officers at Calgary in 1957, McDonald, then 89 years of age, recalled that the ochre beds were worked when orders were received for the oxide in the form of clay. It was dug with the aid of hand tools, sacked and hauled, two tons at a time, to the Canadian Pacific Railway station at Castle Mountain. From there, it was shipped by freight to Calgary where it was used in the manufacture of paint. In September, 1943, the park superintendent was requested by the controller of the National Parks Bureau to furnish a report on existing mining claims in Kootenay Park. His report of September 28 included information that the Margaret and Vermilion claims in the vicinity of Marble Canyon were the only ones in good standing. In November, 1955, the chief of the National Parks Bureau authorized the legal survey of the Margaret and Vermilion claims by a British Columbia land surveyor, B.C. Affleck, on behalf of R.W. McDonald. The report of Robert Seace contains evidence that the Vermilion claim was surveyed on August 9, 1956, but no subsequent development appeared to have been undertaken. By 1947, the rights to the Margaret claim had reverted to the Crown (Canada), and ownership of the Vermilion claim also passed to Canada after it was canceled in the records of the mining recorder for the Windermere Division as of February 11, 1958.

Glacier Park claims

Before the withdrawal in August, 1916, of national park lands from operations authorized by the Dominion Lands Quartz Mining and Placer Mining Regulations, Glacier National Park had attracted the attention of many prospectors and miners. Parks Canada records have disclosed that, before 1916, 30 mining claims had been recorded in the offices of the provincial mining recorders at Golden and Revelstoke. In addition, several Crown grants covering mining properties had been issued by the province.

Many of these claims were situated in the vicinity of the park's western boundary, north of the Illecillewaet River. In the years following, most of the claims had lapsed, presumably for failure on the part of the holders to perform the requisite representation work, or alternatively to pay the fees required in lieu of work performed. By August, 1959, only three claims, all held under Crown grant from the province, remained in good standing in Glacier National Park. These were the Round Hill, on Mount Fidelity; the Elizabeth, on the Fish or Ioncoppleux River south of Flat Creek Pass; and the Florian fraction, which straddled the park boundary and the Illecillewaet River about two miles west of Flat Creek Station.

Round Hill and Donald Claims

The most interesting of the surviving mineral claims was the Donald-Round Hill development on Mount Fidelity in the angle formed by Bostock Creek and the Illecillewaet River. Some 5,500 feet above sea level, the Donald was one of several claims held by the Woolsey family early in the 20th century. It had been relocated on July 1, 1915, recorded on July 7, 1915, and again relocated on May 5, 1926 by Otto A. Woolsey, for many years a resident of Albert Canyon, British Columbia. Over a period of years, Woolsey had carried out considerable representation work on this claim. In a letter to Senator F.R. Green in November 1926 about the status of his property, Woolsey claimed that expenditures made on the Donald claim before restaking in 1915 had amounted to several thousand dollars. The letter, which was forwarded to J.B. Harkin, Commissioner of Dominion Parks, also included the information that a mine tunnel 950 feet in length had been completed on the claim.

About 1925, Woolsey had purchased the Round Hill claim, which previously had been Crown-granted and recorded in the provincial land registry office as Lot 201. The Round Hill grant adjoined the Donald claim along the latter's northern boundary, and in March, 1928, Woolsey applied to the superintendent of Glacier Park for surface rights on the Donald claim in order to extend development on the two properties. Later, on October 1, 1928, the Commissioner of Parks granted Woolsey a licence of occupation covering two parcels for a term of 21 years. One of five acres was intended as a site for a tunnel entrance and ore dump, and the other, comprising 2.5 acres comprised a site for a bunkhouse, a cookhouse and two small storage buildings.

During the next two years, Woolsey continued work on the Donald claim and also undertook active exploration of the Round Hill grant. On the latter property three shafts were sunk, a new tunnel driven for 300 feet, and some open-cut exploration carried out. Woolsey also engaged the services of a consulting engineer, H.L. Batten of Vancouver, whose report dated April 15, 1929, recommended additional underground work entailing the driving of tunnels for 750 feet, and raises totalling 300 feet, at a cost of $35,000. In 1931, concurrent with depressed economic conditions, the market for base metals collapsed, and Woolsey discontinued work on his mining properties.

Mine Is Inspected

In September 1949 the licence of occupation issued to Woolsey in 1928 expired, and he requested a renewal. Before meeting this request, the director of the Lands, Parks and Forests Branch, R.A. Gibson, arranged for an inspection of the mine by K.J. Christie, chief mining inspector of the Northwest Territories administration. Accompanied by park superintendent R.J.J. Steeves, Christie ascended the mountain side by a winding trail from Flat Creek Station, which provided access to the mine portal. Here Christie inspected accessible shafts and drifts, and collected samples of ore. As detailed in his report of September 27, 1950, Christie found that the mine had not been worked since 1929. He had planned to examine underground workings but found them all caved. Consequently he had to be satisfied with grab samples of promising ore taken from six separate locations. Assays of these samples later were made at the Bureau of Mines in Ottawa, and disclosed well-mineralized ore. One sample
taken from the ore dump at Shaft No. 2 indicated occurrences of 11.56 ounces of silver, 32.38 ounces of lead and a trace of zinc per ton. Another sample from an open cut disclosed a content of 10 ounces of silver, 23 ounces of lead and a trace of zinc per ton.49

Christie also reported that three major and several minor quartz veins had been exposed on the property, the most important being located at No. 2 shaft, which unfortunately was caved. Consequently, he found that, lacking information on the underground system, it was impossible to determine the mine’s potential. Christie reported that a logical step for the owner to take was to prospect thoroughly and map the surface occurrences of minerals, and then diamond-drill the large veins to determine the depth of mineralization. He recommended that an extension of the licence of occupation for a term of 10 years be considered, provided the licensee was required to carry on mine operations for a term of two consecutive years. He also suggested the relocation of the larger work site held under licence to provide sufficient ground for future milling operations. On the basis of this recommendation, Woolsey’s licence of occupation was renewed for two years from April 1, 1951.

Donald Claim Lapses

In 1928, O.A. Woolsey had engaged a British Columbia land surveyor, R.L. Horie, to survey the Donald claim in the expectation that he would subsequently apply for a Crown grant. Representation work on this claim was continued annually until 1931, when the claim was allowed to lapse. Under the provisions of the Railway Belt and Peace River Block Act, 1930, Canada obtained the ownership of unvested lands, mines and minerals in the national parks in British Columbia. In February 1952, Woolsey wrote the Deputy Minister of Resources and Development at Ottawa inquiring if it would be possible to have the Donald claim reinstated in good standing. He was informed that the National Parks Act made no provision for restaking claims or granting title to mineralized lands. In December 1956, Woolsey again requested that consideration be given to having his interest renewed in the Donald claim, which he stated had been allowed to lapse through an oversight. In reply, he was informed that it was no longer possible to permit the issue of a Crown grant for his former holding.

In April, 1957, Woolsey informed the chief of the National Park Service at Ottawa that he was considering the transfer of his Round Hill property to the department for park purposes, provided he could have the right to reclaim it. This offer was refused, with the explanation that it would be impossible to permit future development of the claim. Meanwhile, the renewed licence of occupation had expired, and no further correspondence was received from Woolsey until April, 1961, when he inquired if the department would be interested in purchasing his Round Hill property. Woolsey volunteered the information that expenditures made to date on the claim amounted to $60,000. Following receipt of a report on the property from the Park Superintendent, including a plan showing its proximity to the department’s new snow research centre, consideration was given to Woolsey’s offer to sell. Lacking firm information on the value of the minerals contained in the Round Hill mine, the department’s valuation was based on property acquisitions elsewhere in the mountain parks. Departmental approval was obtained for the purchase of Woolsey’s title for the sum of $1,500. Later, in the course of a discussion with Woolsey, the park superintendent learned that Woolsey was not prepared to dispose of his property for less than $12,000, which he stated was 20 percent of the outlay made on the claim.

The assistance of Dr. David Baird, Chairman, Department of Geology, University of Ottawa, was solicited in an attempt to reach a reasonable evaluation of the Round Hill mine. Dr. Baird inspected the property in August, 1962, but later stated that it was not possible to estimate the value of the minerals. Later in 1964, available reports and correspondence were assessed by the Mines Branch of the Department of Mines and Technical Surveys. The director of Mines Branch of the Department of Mines and Technical Surveys, Dr. John Convey, advised the director of the National Parks Branch that the present-day value of the underground development work undertaken on the Donald and Round Hill claims, together with the value of buildings and works constructed, appeared to be $199,600. Converted to the 1929 value of the Canadian dollar, the value as of that date would be approximately $60,000.

On February 11, 1964, the Deputy Minister of Northern Affairs and National Resources approved a recommendation by the director of the National Parks Branch that an attempt be made to purchase title of the Round Hill claim for $12,000. A written acceptance of this offer was subsequently obtained from Woolsey. However, when the necessary submission to the Governor in Council was forwarded to the minister, Arthur Laing, he refused to sign it. Laing believed that insufficient justification for the expenditure required to extinguish the mineral claim had been presented. An appraisal of the proposed expenditure by the department’s economist, H.W. Pfeffer, resulted in an opinion that at least 75 percent of Woolsey’s expenditures had been made on the lapsed Donald claim, and that the owner, Woolsey, should not be compensated for the loss of a mineable ore body when no proof existed that such an ore body existed.

Agreement to Purchase

Failure on the part of the department to proceed with the acquisition of his property resulted in an inquiry from Woolsey, who appeared baffled by the turn of events. He was advised by the park superintendent, on instructions from Ottawa, that it had been decided not to proceed with the transaction at the present time. During the next three years Woolsey kept the matter alive by irregular correspondence, which consisted in part of efforts to have his lapsed Donald claim reinstated.

Eventually, in August 1968, Woolsey informed the department that he had received an offer from a mining organization to purchase his property, the development of which would be coordinated with that of a group of claims known as the Lanark, which were outside and west of the park boundary. Investigation by officers of the Western Region, National Parks Branch, revealed that the site of the Round Hill mine was visible intermittently from points along the Trans-Canada Highway through Glacier Park. It was realized that any significant development of
the claim would create a noticeable scar on the mountain side. A further consideration was the desirability of preventing any mining development in the vicinity of the national park snow research centre on Mount Fidelity, and the use of the park road providing access to it from the Trans-Canada Highway. In effect, while the Round Hill mineral claim had possible value as a future mine, it also possessed a high nuisance value.

Rather than risk a recurrence of mining in the vicinity, and in keeping with the current policy of extinguishing private ownership of property in national parks having undesirable characteristics, the director of the National Parks Branch made a strong recommendation to the deputy minister that action be instituted to purchase all rights and title to the Round Hill mine for not more than $12,000. Following approval of this recommendation, the director of the Western Region, National Parks Branch, made successive offers of $6,000 and $9,000 to Woolsey, which were refused. Eventually, a firm offer of $12,000 was accepted by Woolsey on February 13, 1969. Authority for completion of the purchase was obtained from Treasury Board and the Governor in Council on April 22, 1969. Later, on August 4, 1969, title to the Round Hill mineral grant, including surface rights, was vested in the Crown (Canada) by an agent of the Minister of Justice.

Elizabeth Mining Claim
The Elizabeth was one of a group of seven claims in the valley of the Fish River - now called the Incomappleux River - which were located and recorded about 1892. These claims originally lay south of the first park reserves established in the Selkirk Mountains in 1886. In 1903 the surrounding area was included in an enlarged Glacier Park Reserve which, in 1911, was proclaimed Glacier Dominion Park. A revision of the national park boundary made in 1930 excluded four of the claims, the Annie, Agnes, Heronback and Salmon. Left inside the park were the Edinburgh, Elizabeth and Scotia claims. These three claims were legally surveyed in 1897 by E.B. Hermon, D.L.S., for the Fish River Silver and Copper Mining Company. A Crown grant was issued for the Elizabeth claim in 1898, but by 1959 mineral rights to all other six claims had lapsed.

Title to the Elizabeth claim or crown grant eventually came into the possession of R.C. McCorkell of Vancouver. On October 6, 1958, McCorkell advised the Superintendent of Glacier National Park that he planned to carry out some drilling on his property. He requested a map showing the location of existing trails in the area, and a copy of any regulations governing their use. The map was supplied, together with information that park trails were closed to public travel by vehicles. In July, 1959, another inquiry received from McCorkell asked if underground tunnels constructed in mining operations on the Elizabeth claim could be extended beyond the surface boundaries of the claim, presumably because the privilege of acquiring adjoining mining property no long was available. McCorkell later was informed that any mining operation undertaken must be confined to areas within the boundaries of the grant. He also was advised that in cases where title had been granted for the claim, the department would consider the issue of a licence of occupation for such surface rights that might be required for the development of the claim. As a prospective licensee, however, he would be required to furnish a certificate from the mining recorder for the appropriate district indicating that the claim was in good standing, together with a plan and description of the land required for surface development activities. Apparently McCorkell’s plans for development were dropped because no further correspondence about the Elizabeth claim was received by the National Parks Branch for several years.

Proposal for Development
On July 11, 1963, R.W. Hiebert of Toronto, a Canadian geologist of wide experience, called on E.A. Côté, Deputy Minister of Northern Affairs and National Resources at Ottawa, to discuss the proposed development of the Elizabeth claim. The deputy minister referred Hiebert to the director of the National Parks Branch, J.R.B. Coleman. The writer was invited to participate in a discussion of Hiebert’s proposals. Hiebert said he had visited the mining claim in 1940, and had taken samples of ore from the adit of a tunnel 160 feet long, which had been driven in 1896 by the Fish River Silver and Copper Company. According to Hiebert, the samples, after assay, had indicated a silver content of 43 ounces per ton across a mineralized fracture zone 11 feet wide. From the information disclosed, it appeared that Mr. Hiebert was acting on behalf of a syndicate which had under consideration, the purchase of the claim from R.C. McCorkell.

Hiebert’s plan of development included a preliminary drilling program with a portable drilling outfit, to be transported to the claim from Flat Creek Station over the Flat Creek trail and Flat Creek Pass to the Incomappleux River Valley. The work would require the employment of two men and several horses for about two weeks. Mr. Hiebert evidently hoped to acquire additional mining rights to make the operation viable, either as mining claims or by an exchange with the federal government of property outside but near the park boundary. In the course of the discussion with Mr. Hiebert, it was made quite clear by national park officers that any investigation would have to be confined to land held under mineral grant. Moreover, written authority from the owner of the claim permitting the proposed drilling would have to be furnished in advance.

Hiebert left with the director a report on the Elizabeth and adjoining claims which he had prepared. It contained a brief history of mining operations in that portion of British Columbia now contained in Glacier National Park, described the production of silver from several of the lapsed claims, and outlined in some detail his proposals for development of the Elizabeth grant. The report emphasized the need for acquiring additional property for a successful operation. Although the filing of claims outside the park boundary seemed feasible to national park officers, the possibility of obtaining mining rights to lapsed claims within the park appeared to be remote.

A summary of Hiebert’s proposals was submitted to the deputy minister with a recommendation that, provided Hiebert could supply written permission from the owner, an investigation of the claim and use of the Flat Creek
Later Development Proposals

Nearly two years later, in March, 1965, the owner of the Elizabeth grant, R.C. McCorkell, reopened correspondence with the park superintendent advising that he proposed a diamond-drilling program on his claim. As first planned, access to the property would be made by helicopter from the south. Later, after reconsideration, McCorkell advised the superintendent that he considered access over the Flat Creek trail to be preferable. He queried if the department would share the cost of improving the trail in order to permit its use by a four-wheel drive truck. This proposal was rejected, and McCorkell was informed that the department had no plans to improve the trail to the status of a secondary road. If access was required by McCorkell, it would have to be undertaken over the existing trail or by an alternative route outside the park. McCorkell was also notified that no objection would be raised to the use of a helicopter for transporting supplies to his mineral grant. An offer by McCorkell to enter into negotiations with the department for the purchase of his mineral grant was not considered desirable. Its remote location, its undetermined mineral content and the unlikeness of its development no doubt influenced this decision. McCorkell's proposed drilling program did not materialize, and correspondence relating to the property terminated in September, 1965.

The remaining Crown-granted mineral claim in Glacier National Park, the Florian fraction, has attracted no attention for years. Rights held by the owner are confined to those below the surface, and unless mining operations are proposed in future, it seems unlikely that its status will change.

Wood Buffalo National Park

Wood Buffalo National Park is known mainly for its herds of bison, an intermingling of two subspecies, wood and plains bison. It also contains a valuable mineral resource in the form of very large deposits of gypsum. These deposits are exposed along the banks of the Peace River, almost 64 miles due south of Fort Smith, the park headquarters. The exposed gypsum deposits take the form of sheer bluffs along both sides of the river, extending on the north side for a distance of eight miles from Boyer Rapids downstream to Peace Point. A hydrous calcium sulphate, gypsum is one of the more important non-metallic minerals, mainly because of its wide use in the manufacture of plaster and plaster products for the building construction industry.

An evaluation of the gypsum deposits at Peace Point was undertaken in 1964 by two geologists of the Resources Division, Department of Northern Affairs and National Resources, S.A. Kanik and A.T. Jordan. From personal observation, and using all known geological literature and reports on the area, Kanik and Jordan estimated the tonnage of gypsum that might be obtained by quarrying to be 315 million tons. Examination of a report prepared by T.E. Rowebottom, geologist for Domtar Construction Materials Limited in 1955, revealed that the deposits extended back from the river for a distance of 5,000 feet, and had an average thickness of nearly 33 feet. Much of the deposit is covered by overburden. Samples of ore taken from the river banks were estimated to be from 95 to 98 percent pure gypsum, and compared most favourably with other gypsum deposits in Canada. At the time, Rowebottom estimated the total tonnage of the deposits to be 500 million tons - one of the largest in Canada.

Indian Land Claims

The future status of the Peace Point gypsum deposits and the feasibility of their economic development appear to hinge on the settlement of land claims by the native peoples of the region, as no provision is made for resource development by the National Parks Act. Under the terms of Indian Treaty No. 8 of 1899, the Cree band of Indians at Fort Chipewyan, Northwest Territories, is entitled to have land set aside as reserves for the use and benefit of the band. Negotiations for a reserve in the Peace Point area of Wood Buffalo National Park began in 1963. The right of the Indians to select land in the national park was confirmed by Jean Chretien, Minister of Indian Affairs and Northern Development, in 1973.

A basis of settlement reached that year provided that the total land entitlement based on the band population as of December 31, 1972 would be 97,280 acres (152 square miles), of which 42,000 acres would be in the park and the remainder, 55,280 acres outside the park. Under the provisions of the Alberta Natural Resources Act, 1930, title to any land withdrawn from a national park would forthwith be vested in right of the province. A retransfer of the land to the Crown (Canada) would be required before it could be established as an Indian reserve. The province has taken the position that any land settlement should be based on the population of the Cree-Chipewyan band as of 1899, which would entitle the Indians to a grant of only 24,000 acres. Moreover, although the province is prepared to permit occupation of park land in the vicinity of Peace Point, it has objected to the inclusion of subsurface minerals including gypsum, in any land grant.

In 1978, the Cree-Chipewyan band entered into occupation of some 19,000 acres of land at or near Peace Point within the park. While no formal agreement had been entered into between the Indians and the Government of Canada concerning this land occupancy, the continued presence of the Indians is subject to certain terms and conditions which will permit the maintenance of land integrity until such time as reserve status can be attained. At the time of writing in January, 1980, no formal settlement of land claims had yet been made.
Timber Berths in Glacier and Mt. Revelstoke National Parks
(Repossessed by Parks Canada)
Commercial Timber Operations
The repossession of timbered lands held under license by private enterprise in the national parks of western Canada forms an interesting segment of national park history. With the opening of vacant Dominion lands to settlement and development concurrent with the completion of the nation's first transcontinental railway, large stands of virgin timber - reasonably accessible from the right of way - proved to be an irresistible attraction. Although the forested areas of the eastern slopes of the Rocky Mountains contained very fine timber, those in the railway belt of British Columbia excelled in height and density.

The disposition of timber rights, as well as those to minerals, came under the authority of the Minister of the Interior. The harvesting of timber was controlled by provisions of the Dominion Lands Act, 1883, and subsequent amendments. The act not only enabled settlers to cut timber for fuel and domestic use under a permit system, but also authorized the licensing of tracts of timbered lands, known as berths, not exceeding 50 square miles in area. Berths were made available to prospective lumbermen at public auctions, where successful bids for the logging rights had to equal or exceed a stipulated upset price or bonus.

Licenses containing the terms and conditions under which timber could be cut were issued for terms of one year, with provision for renewal. Licensees paid an annual ground rent for each square mile or fraction occupied, together with a royalty on timber cut and reported in sworn quarterly returns. Later, licensees were required to share the expense for forest fire protection, and still later to pay a fixed annual rate per acre for that protection.

The form of license issued to berth-holders empowered the Minister of the Interior - should he regard such a step expedient or in the public interest - to notify the licensee that he must have in operation, and keep in operation for at least six months of the year, a sawmill capable of cutting, in 24 hours, 1,000 board feet for every 2 ½ square miles of the berth.

This condition, however, was seldom enforced, particularly in timber berths that were included in newly established parks. Although many licensees erected mills and proceeded with timber cutting, others withheld or suspended operations, and kept the berth in good standing by renewal of the annual licence through payment of ground rental and other charges due. Consequently, a number of licensed timber berths became assets of speculative value in the books of some licensees without ever producing milled lumber.

Early Timber Rights
Within 10 years of the completion of the Canadian Pacific Railway from Montreal to Vancouver, timber cutting rights on hundreds of square miles had been disposed of in Manitoba, portions of the Northwest territories now forming Saskatchewan and Alberta, and in the railway belt of British Columbia. During the year 1896, 34,817,909 board feet were cut, from which the Department received $69,646 in dues. Up to January 1, 1897, the total revenue received by the department from timber sales had exceeded $1,422,000. By the end of the fiscal year ending June 30, 1903, total revenue from timber in the areas mentioned above amounted to $2,427,685. During the same year, 458 timber licences were issued covering 6,347 square miles of forested land.

When the first timber berths were licensed by the Department of the Interior, national parks had not yet been established. During the debate in the House of Commons on the Rocky Mountains Park Act, which created Canada's first national park in 1887, the existence of timber berths within the proposed park was acknowledged by the Minister of the Interior, Thomas White. He explained that cutting rights on three areas, containing altogether 99 square miles had been sold by public competition before the Banff Springs reservation had been made in 1885. Similarly, areas believed to contain coal and other minerals had been disposed of, some of which lay within the proposed park area. During the debate, the minister promised "that if we can arrange to exchange these (timber) limits for others, or in some other way release the park altogether from the presence of these leases, that course may hereafter be considered necessary." Although rights to timber within the original hot springs reservation later were cancelled, the Eau Claire Lumber Company operated timber berths up the Spray River in Banff National Park for many years thereafter.

Some of the licensed timber berths consisted of several blocks, usually not more than a few miles apart. When Glacier, Yoho and Mount Revelstoke National Parks were established between 1911 and 1914, the park boundaries enclosed a number of timber berths, or portions of timber berths which extended outside park boundaries. These berths, both outside and inside national parks, were administered by a branch of the Department of the Interior known in later years as the Timber and Grazing Lands Branch. In 1930, when title to all natural resources passed to the western provinces under the Transfer of Natural Resources Acts, the timber berths within national parks remained under federal government jurisdiction. Between June and October of that year, numerous files, documents and other records were transferred to provincial administration. Timber berths situated within national park boundaries were administered by the Dominion Lands Board until 1936, when they came under the jurisdiction of the Lands, Parks and Forests Branch of the Department of Mines and Resources. After the transfer of resources was effected, 17 licensed timber berths still existed in the National Parks - three in Jasper Park, Alberta, two in Riding Mountain Park, Manitoba and the remainder in Yoho, Glacier and Mount Revelstoke Parks, British Columbia.

Parks Branch Takeover
When the National Parks Act became law in 1930, section (9) provided that all national park regulations made by the Governor in Council under the provisions of the Rocky Mountains Park Act and the Dominion Forest Reserves and Parks Act would continue in force until rescinded. The Rocky Mountains Park Act had been repealed in 1910 and those sections of the Dominion Forests Reserves and Parks Act relating to national parks had been repealed in 1930. However, the Dominion Lands Act, under which regulations respecting timber berths
had been made, was not repealed until June 1, 1950. The 1950 legislation permitted a transfer of administration of the timber berths remaining in the national parks. Effective January 31, 1951, the director of the National Parks Branch of the Department of Resources and Development became responsible for their administration. By that time, through cancellations and forfeitures, the number of berths remaining in the national parks was believed to be eight—all in British Columbia. Later in 1951 the existence of part of another berth in Mount Revelstoke Park was discovered. The revenue from all berths for the fiscal year 1950-51 amounted to $531.07.\textsuperscript{78} Their combined area was about 43 square miles.

New Timber Legislation

To provide statutory authority for the administration of timber berths remaining in the national parks, the National Parks Act was amended by Parliament in June, 1950, by the repeal of sections 9 and 10 of the act, and their replacement by new section 9 which read as follows:

9. All timber berths in National Parks that were disposed of prior to the thirtieth day of May, 1930, shall remain subject to the same obligations, terms and conditions as were in force prior to that date and nothing in this Act shall be construed to interfere with, prejudice or take away any rights granted to the holders of such berths but such obligations, terms and conditions shall be subject, at the date of each yearly renewal, to such changes as the Governor in Council may prescribe and shall be subject to all regulations made by the Governor in Council under this Act.\textsuperscript{79}

Later, the annual rental, fireguarding charges and royalties which had been payable under regulations established by authority of the Dominion Lands Act were reviewed and found to be substantially less than those prevailing in areas subject to provincial regulations governing the harvesting of timber. Consequently, the National Parks Timber Regulations were amended on April 22, 1952, to provide for an annual ground rent of $50 for each square mile occupied instead of $10. In addition to an annual license fee of $2 which had been payable, a fireguarding charge of six cents for each acre in the berth was imposed, together with an increase in dues or royalties payable on timber harvested.\textsuperscript{80}

By 1961 the construction of the Trans-Canada Highway through Glacier and Mount Revelstoke National Parks was nearing completion. As the surveyed right of way crossed lands situated within three timber berths, the National Park Timber Regulations were amended on January 26, 1961, to help preserve the aesthetic aspects of the adjoining forests, should timber cutting be resumed or undertaken. The amendment provided that no tree within 200 feet of the right of way of any public road might be cut, except a tree designated by the park superintendent. It also provided for the inclusion of a similar restriction in the annual timber berth licence.\textsuperscript{81} Licensees of timber berths from which lands were deleted for highway construction purposes were later compensated for the timber withdrawn.

Changes in Policy

Logging and the operation of sawmills in national parks have always conflicted with basic national parks policy. A vested interest in licence timber berths had preceded, in most instances, the establishment of the national parks concerned. Fortunately, few of the timber berths or portions of berths within park boundaries were subjected to logging, and the parks were spared the crash of falling trees, the whine of sawmills, and the ensuing slash and debris which accompany the despoliation of magnificent examples of alpine forest species.

The adoption of a firm national park policy in 1964 confirmed the long-held view that only forest operations which are primarily concerned with the management of the forests for the protection and the maintenance of national park values should be permitted. The policy statement also recommended the extinguishing of existing rights of prime forested land. This aspect was summarized as follows:

17. The existence of licensed timber berths is not consistent with the purposes of National Parks and cutting rights presently held should be extinguished. Where it is practicable to do so, timber berths should be acquired by negotiation, but failing this the holders should be notified to complete their operations so that the berths can be extinguished as soon as possible. No further timber cutting rights of this type will be granted in any National Park.

Licensees Ordered to Operate

Four years before the administration of the licensed timber berths was turned over to the National Parks Service, an attempt was made by the director of the Lands, Parks and Forests Branch of the Department of Mines and Resources to end the seemingly perpetual renewal of the annual licences that provided the basis of timber ownership. In the course of an inspection of the national parks in western Canada, the director, R.A. Gibson, in August 1947, discussed the status of the existing berths with the superintendent of Yoho, Glacier and Mount Revelstoke Parks, G.H.L. Dempster, and Chief Park Warden Dick Langford. At that time, one timber berth, No. 73, was held under license in Mount Revelstoke Park; six berths, Nos. 40, 117, 292, 328, 329 and 342, existed in Glacier Park; and one, No. 406, remained in Yoho Park. Only Timber Berth 117 in the Beaver River valley had been logged during and after World War II. The operator, Rogers Lumber Company of Rogers, British Columbia was reported to be considering the acquisition of licences covering other berths in Glacier Park.

In October, 1947, the Lands Division of the branch prepared for the signature of the deputy minister a formal notice to the licensees of berths 40, 73, and 406, requiring them to have in operation, within a period of one year, and keep in operation for six months in each year, a sawmill in each berth capable of cutting 1,000 board feet per day for
managed. The impact of resource extraction, particularly if poorly
selected. Actual logging operations were launched in
Squelch Company, and sites for a mill and campsite were
years. The construction of an access road up the Amiskwi
River valley was begun in the autumn of 1948 by the
controller and acting director, and a decision
was made that the purchase of the berth be declined. The
recommendation of the National Parks Bureau, James Smart, had recom-
tined buying back the rights to cut timber on the berth.
In his report, Holman also offered the opinion that a
timber operation would not be detrimental to the interests
of park administration, and estimated the merchantable timber would not exceed 60 million feet. He also advised that the current
owner was making every effort to sell the berth to an
operator who would commence logging operations within
the time limit set by the department. This berth had been
granted in 1905, had never been logged, and the license
had been assigned eight times in 42 years.

In September 1948, Berpall Lumber Company entered
into an agreement for sale with W.T. Squelch and Son of
Tulameen, British Columbia, to assign the license in
consideration of a payment of $30,000, spread over five
years. The construction of an access road up the Amiskwi
River valley was begun in the autumn of 1948 by the
Squelch Company, and sites for a mill and campsite were
selected. Actual logging operations were launched in
1951, and in later years they provided a classic example of
how the primitive landscape and natural resources of a
national park could be impaired for years to come by the
impact of resource extraction, particularly if poorly
managed.

Timber Rights Sold
Under the terms of the agreement for sale between
Berpall Lumber Company and W.T. Squelch and Son,
the latter were responsible not only for retiring indebted-
extness to Berpall, but also for the entire cost of providing
access to the timber berth, and for developments neces-
sary to carry on logging and milling. Evidently Squelch
and Son were unable to meet their commitments, and in
December 1950 they entered into a sale agreement with
G.C. Elliott of Vancouver. By later agreements concluded
in May, 1951, December 1953 and February 1954, Paul
E. Moseson of Wetaskiwin, Saskatchewan, obtained an
interest in the timber license, reported to be 25 percent.
Later, by separate agreements, dated December 21, 1954,
(a) Moseson relinquished all rights to the timber license
held by Berpall Lumber Company; (b) Squelch and Son
assigned all their interest in the licence to Berpall Lumber
Company; and (c) Berpall Lumber Company assigned the
licence to George C. Elliott of Vancouver.

For the next eight years Elliott held the annual timber
license for Berth 406. He conducted no operations, but
entered into logging agreements with various operators to
carry on the actual harvesting of timber. Logging prac-
tices of the operators, however, fell far below the stan-
dards required by the terms of the license, and before a
license for the year 1955-56 was issued, Elliott was
obliged to post a performance bond in the amount of
$6,000. In October 1956 the assistant deputy minister
notified Elliott by registered letter of the minister's
intention to forfeit rights conferred by the licence, and to
claim the indemnity. Elliott, however, was successful in
obtaining a reprieve. With financial assistance he pro-
vided a new performance bond in the amount of $30,000,
and was given a renewal of the timber license. Commenc-
ing in 1955, the licence had contained additional clauses
requiring the licensee to remove all merchantable timber
from the portion of the timber berth cut over; to pay the
dues owing; and to clear up and dispose of all tops,
branches and debris of logging and milling operations to
the satisfaction of the minister. Operations were subject
to the inspection of the park superintendent and it was
evident that the logging practices of Elliott’s contractors
and subcontractors fell short of requirements.

Fire on Timber Berth
In July 1960 a disastrous fire occurred on Berth 406
through the carelessness of an employee of a subcontractor. The millsite and a large area of timbered land were
burned before the fire was extinguished by national park forces at a cost of $70,000, for which the licensee, Elliott,
was held responsible. At the time outstanding timber dues
and interest were owing to the department by the licensee,
who was unable to pay, and renewal of the timber license
accordingly was withheld for the year 1961-62. Finally, in
June 1962, the department consented to a renewal of the
license and its assignment from Elliott to Lee St. Clair
of Calgary, following a negotiated settlement. It called for
payment over a five-year period of half the cost of
suppressing the fire of 1960, $35,000, together with a
satisfactory cleanup of previously logged-over land. A
performance bond, in the form of a mortgage on property,
buildings and equipment in the town of Cochrane, Alberta, also was furnished by St. Clair.

Later in 1962, it was established by the park superintendent that previous incompetent and wasteful logging procedures were being continued. Included were high-grading (cutting only choice timber), leaving high stumps in winter operations, maintaining a dirty millsite and failure to dispose properly of slash and tops from operations. Logging carried on outside the berth accounted for more than one million board feet before the illegal cutting was discovered. St. Clair's operations were closed down in 1962 and again in 1963, but on promises to improve the operation and pay arrears of timber dues he was permitted to continue logging. Between 1963 and 1967, St. Clair operated the berth through several subcontractors who cut about 18 million board feet of timber. He failed, however, to meet his commitments, including the retirement of the debt due under the mortgage which on April 1, 1967, amounted to $32,700. Before the issue of the license for the year, 1966-67, Block "A" had been withdrawn from the berth.

License is Forfeited
On April 4, 1967, the timber berth license was declared forfeited by the minister, Arthur Laing, because of failure to pay monies owing under the mortgage bond. Any rights formerly held by St. Clair no longer existed, although logging could still be authorized by the minister under permit. With the prospect of obtaining a cleanup of timber from the berth and the payment of arrears, the minister consented in October 1967 to a continuance of operations on the berth by Charles W. Moar, St. Clair's contractor since 1964. This permission was granted on the understanding that operations would be completed and outstanding indebtedness would be paid by April 30, 1968. On compliance with these conditions, Moar would then have the privilege of logging under permit until April 30, 1969. Moar paid off the outstanding mortgage with interest on July 9, 1968, and on August 2 he completed an agreement with the director of the western region of the National and Historic Parks Branch, which set out in detail the terms under which the operation would be conducted.

Later that month, Moar suffered a setback, when a sawmill set up in 1964 burned after catching fire during a welding operation. Moar was insured and claimed a loss of $275,000. The insurance company refused to honor the claim because of an alleged violation of the provincial Welders Act. By early October 1968 it was evident to park authorities that the expected cleanup and the posting of a performance bond by Moar in accordance with his agreement would not be completed. Consequently, on October 16, Moar was notified by the regional director that his privilege of logging the berth under permit had been terminated.

Final Extension Granted
Later, following representations by the member of Parliament for Kamloops-Cariboo, the minister, Jean Chrétien, reviewed the matter and authorized the director of National Parks for the Western Region to give Moar an extension in which to meet his commitments. Under a new agreement dated December 3, 1968, Moar was required to clean up, to the satisfaction of the superintendent, all logs and lumber from operations on Blocks "B" and "C" of the berth by June 30, 1969. Logging under permit might then be continued until October 31, 1969, provided a new performance bond in the amount of $10,000 was posted. The agreement also stipulated that all logging must be terminated on or before October 31, and a complete cleanup of all operations made by November 30, 1969.

By December 1969 it was found that Moar had made a creditable effort to comply with the terms of his agreement. There remained, however, over a dozen loads of logs to be removed, some cleanup work to be completed, and miscellaneous equipment and buildings to be disposed of. By December 30, 1969, most of the conditions of the latest agreement had been complied with, but some fuel tanks and a tractor blade remained on the berth. Moreover, a substantial sum representing dues on timber removed had not been paid. In October 1970 a Vancouver lawyer was appointed receiver and manager of the Wolverine Valley Lumber Company Limited. This company, in which C.W. Moar had a substantial interest, had been engaged in logging operations on Timber Berth 406. The receiver subsequently paid the timber dues outstanding and requested the return of bonds held by the department pending completion of all conditions of the operator's logging agreement. By March 1972 all requirements had been met either by the former operator, C.W. Moar, or the receiver of his bankrupt company, and all performance bonds held by the department were released.

The foregoing outline of logging operations on Timber Berth 406 indicates that the decision made in 1948 to permit a forestry management operation instead of reclaiming the timber licence by purchase turned out to be monumental error. During the 20 years or more in which logging operations were carried on, the three individuals or companies that held the license either lost money or were forced into bankruptcy. Few of the 20 or more persons who obtained cutting rights as contractors or subcontractors benefited financially, and much of the Amiskwi River Valley in Yoho National Park was subjected to forest impairment for years to come. Through carelessness, the timber berth sustained one major fire and two others in which a sawmill, its equipment and an auxiliary building were destroyed. Only half the department's cost of suppressing the 1960 fire - $70,000 - was recovered, and substantial additional expenditures were made in supervising and controlling the logging operation. How much better it would have been for the park, its environment and all operators concerned had the department accepted the offer of Ber pall Lumber Company to sell its interest in the berth for $35,000.

Timber Berth 253
When the administration of timber berths within national parks was transferred to the National Parks Branch early in 1951, it was believed that only eight timber licenses existed in the national parks. However, in April that year, Chief Park Warden Mann of Mount Revelstoke Park brought to the attention of Park Superintendent Steeves the existence of one block of Timber Berth 253 within the
Correspondence with the Department of Forests of British Columbia revealed that when the timber berth, consisting of several blocks, was transferred to British Columbia in 1930, federal and provincial departments both overlooked the fact that Parcel "C" of Block 1 lay almost entirely within the park. Consequently, the British Columbia Forest Service had collected rental and forest protection tax on the area within the park from May 1, 1931 to April 20, 1952. Information obtained also revealed that the timber berth license was held by Toronto General Trusts Corporation in trust for the estates of William Irwin and R.R. Hall of Peterborough, Ontario, and R.B. Whiteside of Duluth, Minnesota.

Later that year, in the course of an inspection of western national parks, the writer visited Victoria and discussed with the chief forester, Dr. C.D. Orchard, the status of the timber berth and the dues payable on timber berths and timbered lands administered by British Columbia. As a consequence, the province remitted to the federal Department of Resources and Development in May, 1952, rental in the amount of $137.50 which had been collected inadvertently by the province for Parcel "C", Block 1, over a period of 22 years.

**Timber License Reinstated**

Steps to reinstate the timber license under federal government jurisdiction were initiated in May, 1952, but several years elapsed before such action was possible. Before issuing a timber license to the Toronto General Trusts Corporation as executor of the estates of the former license holders, the National Parks Branch required, for its records, certified copies of letters probate of the last will and testament of each of the parties concerned, proved in the province of British Columbia. The beneficiaries of one estate were reluctant to meet the charges for resealing letters probate in British Columbia, but by July 1958 the required documentation had been completed. A timber license for the year 1958-59 was then issued to the Toronto General Trusts Corporation as executor of the estate of William Irwin, and to the accredited representatives of the other estates concerned. Completion of the license permitted its assignment to A.O. Woolsey of Albert Canyon, British Columbia. Under the terms of a logging agreement with the executors, Woolsey had assumed for several years, the payment of rental and other charges payable under the terms of the license.

**License is Surrendered**

Meanwhile it had been determined in 1957 that a right of way for the Trans-Canada Highway across the timber berth would be required. Following cruises of the area undertaken by Woolsey and by a national park forest officer, agreement was reached on the value of the timber that would be cut in highway clearing operations. Later, with the approval of Treasury Board, Woolsey was paid $900 for approximately 256,000 board feet of timber.

During its negotiations with Woolsey in 1958 about compensation for timber removed, the department intimated that it would be prepared to purchase the license rights to the timber remaining in the portion of the timber berth within the park. By the end of February 1959 Woolsey had acquired the license, and in November 1960 he offered to dispose of all his interest in return for a payment of $8,775. The offer was accepted, and the surrender of the timber berth license was obtained in May 1961.

**Other Licensees Notified**

In October 1947 the Royal Trust Company, licensee of Timber Berth No. 73 in Mount Revelstoke Park and Timber Berth No. 40 in Glacier Park, also was notified by the Deputy Minister of Mines and Resources that it must, within a period of one year, put into operation on each berth a sawmill capable of cutting 1,000 board feet in one day for every 2 1/2 square miles licensed. As the trust company held the licence as security for a mortgage from the actual owners, the Canadian Western Lumber Company Limited of Vancouver, the communications were passed on to this company.

Later a representative of Canadian Western Lumber Company visited Ottawa, and discussed with the deputy minister and his assistant the proposed operation of Berths 73 and 40. In November 1948 the company's chief forester advised the controller of the National Parks Bureau that arrangements were under way to start operations as soon as physically possible.

On the strength of this assurance, the issue of timber licenses for both berths for the fiscal year 1949-50 was approved. A review of relevant files, however, later disclosed that no operations were undertaken and, for unexplained reasons, the department continued to issue annual timber licenses to the Royal Trust Company. On August 12, 1959, both licenses were assigned, with the consent of the department, back to Canadian Western Lumber Company Limited.

**Highway Rights-of-Way Required**

In November 1956 it was ascertained from surveys made by the Department of Public Works that rights-of-way for the Trans-Canada Highway through Timber Berths 40 and 117 in Glacier Park would be required. The department's legal adviser confirmed that withdrawals of the land required could be made by preparing a new description of the area covered by the timber license. The legal ruling, however, also called attention to the need for providing compensation to the licensee for the value of the timber deleted from existing rights. Following a cruise undertaken by the national parks forest officer, S.F. Kun, it was determined that 100 acres in Timber Berth 40 and 128 acres in Timber Berth 117 would be required for the highway right of way. The land requirements for highway purposes in Timber Berth 253 in Mount Revelstoke Park were reviewed in previous paragraphs.

When the annual licenses for the year 1958-59 were prepared, the lands occupied by the rights-of-way were deleted from the descriptions of the licensed areas. Estimates of the value of the timber affected by the withdrawal of land from Berth 40, compiled separately by the National Parks Branch and by Canadian Western Lumber Company Limited, differed by several thousands of dollars. A compromise, however, was reached by splitting the difference between valuations, and the lumber company was paid approximately $8,500 for the loss.
of timber in Berth 40. Before the actual settlement, Canadian Western Lumber Company Limited had assigned on November 18, 1959, its interest in both Timber Berth 40 and Timber Berth 73 in Mount Revelstoke Park, to Kicking Horse Forest Products Limited of Vancouver.

Other Licensees Exempted
Although the deputy minister had notified the licensees of three timber berths in British Columbia in October, 1947, that the erection of sawmills and the commencement of cutting operations were obligatory, the licensees of five other berths in Glacier National Park escaped such notification. These berths, 117, 328 and 329, all in Beaver River valley, and Berths 292 and 342 in the valley of Mountain Creek, were held in the names of several members of the Leuthold family of Deer Park in the state of Washington, trading under the name of Deer Park Lumber Company. The licenses had been issued in the names of the four partners, W.M. Leuthold, Grace H. Leuthold, John H. Leuthold and Caroline Leuthold Fitzgerald. The last-named partner had died in February 1947, and the issue of the annual licenses was withheld that year pending the submission of legal documents concerning the distribution of her estate. Documentation was cleared in February 1952, and on March 2, 1952, the minister consented to the assignment of the license for Timber Berth 117 to Selkirk Spruce Mills Limited of Donald, British Columbia. Annual licenses for this berth were subsequently issued to this company from 1952-53 onwards.

Further Assignments
Additional assignments submitted by members of the Leuthold family in 1952 and 1954 had the effect of vesting the rights to licenses for Timber Berths 292, 328, 329 and 342 in the name of John H. Leuthold as guardian of a minor, Caroline E. Leuthold. In 1959, John H. Leuthold obtained an order from the Superior Court of Washington empowering him to enter into an option agreement with Cyprus Mines Corporation or with an affiliated or subsidiary corporation, to sell with the consent of the Minister of Northern Affairs and National Resources of Canada the interest of Caroline E. Leuthold in the four timber berth licenses. Assignments dated January 18, 1960, from John Leuthold on behalf of Caroline E. Leuthold, to Kicking Horse Forest Products Limited, a subsidiary of Cyprus Mines Corporation, subsequently were submitted to the department and approved by the deputy minister on March 20, 1960.

On May 1, 1960, nine timber berths remained in Yoho, Glacier and Mount Revelstoke National Parks. Events leading to the purchase in 1961 of the license covering Timber Berth 253 in Mount Revelstoke Park and the forfeiture in 1967 of rights to Timber Berth 406 in Yoho Park already have been described. Of the seven berths remaining, Selkirk Spruce Mills Limited held a license for Timber Berth 117 in Glacier Park and Kicking Horse Forest Products Limited held licenses for Timber Berth 73 in Mount Revelstoke Park and Berths 40, 292, 328, 329 and 342 in Glacier Park. Timber Berth 117 contained an area of 3.17 square miles and the remaining six berths controlled by Kicking Horse Forest Products Limited contained approximately 30 square miles.

Negotiations for Berth 117
The impending completion of the Trans-Canada Highway through Glacier National Park, along the original route followed by the Canadian Pacific Railway up Beaver River Bailey and over Roger Pass, brought into focus the incongruity of lumbering operations being carried on adjacent to a major scenic parkway. At the same time, the construction of the highway enhanced the market value of a virgin timber reserve which previously had been nearly inaccessible. Timber Berth 117, granted in 1893, had been logged for about five years prior to 1948, during which about eight million feet board measure of timber had been removed. The new highway traversed the berth from north to south for five miles, and 128 acres had been withdrawn in 1959 for highway right of way purposes. In October, 1959, the licensee Selkirk Spruce Mills Limited was in serious financial straits, and officers of the National Parks Branch were hopeful that the berth could be purchased for a reasonable sum. The maximum value of the timber remaining on the berth was believed to be $30,000.48

In March 1961 the National Parks Branch opened negotiations with Selkirk Mills with a view to having the rest of the timber harvested, or alternatively purchasing the timber rights. The company had been paid $1,869 for the timber on the high allowance withdrawn from the berth. In the course of negotiations between S.F. Kun, regional forester of western national parks, and Vice-President E.J. Gondek of Selkirk Spruce Mills Limited, the company suggested $25,000 as a satisfactory price for the surrender of its license.49 This offer was conveyed to the director of the National Parks Branch at Ottawa, but acceptance was deferred. Meanwhile, both park authorities and Selkirk Mills officials were considering an appraisal of the merchantable timber remaining on the berth. In June 1964, Vice-President Gondek suggested the engagement of a consultant and offered to pay half the cost of the survey. Before this offer was accepted, Selkirk Mills hired Gormely Forestry Service of Vancouver to undertake a cruise and submit a valuation of Timber Berth 117. This was completed in December 1964, and a value of $115,028 was placed on the timber in the berth, then believed to be 11,581,000 board feet. A separate calculation was made for timber in the buffer zone bordering the highway on which cutting was not permitted. The additional timber was valued at $10,201, bringing the total valuation to $125,431.50 Failure to conclude a settlement with the licensee on this valuation was to be costly for the National Parks Branch, for in 1966 Selkirk Mills engaged Gormely to revaluate the timber on its berth. The revaluation was based on increased logging costs and lumber sale prices, although the timber inventory reported in the 1964 report was retained. The 1966 survey placed a valuation of $255,373 on the timber in the berth, and $23,408 on that in the buffer zones bordering the highway. The new combined total, $278,781, exceeded that of 1964 by more than 100 percent. On December 28, 1966, Selkirk Mills made a formal offer to sell all its rights in Berth 117 for $280,000.
**Berth Valuation Escalated**

During 1967 extensive studies of the timber berth’s value were carried out under the direction of the regional forester of the National Parks Branch, and the possibility of exchanging Berth 117 in Glacier Park for Berth 406 in Yoho Park was considered. By this time the department also was engaged in discussions relating to the extinguishment, by purchase or land exchanges, of other timber rights in Glacier National Park held by Kicking Horse Forest Products Limited. On November 6, 1968, the *Vancouver Province* carried a news item which reported Vice-President Gondek of Selkirk Mills Limited as stating that negotiations had broken off as far as he was concerned. He was quoted as saying, “I want to get my crews in as soon as possible and get as much cleaned up as possible before the spring thaw starts.”

This statement precipitated a decision by the department to acquire all timber berths remaining in the western parks. Steps were initiated to expropriate not only Timber Berth 117, but also other timber berths in Glacier and Mount Revelstoke parks. On being informed of the department’s intention, Gondek advised the director of the National Parks Branch that his company was prepared to withhold logging operations on Berth 117 while negotiations for its purchase by the Crown were continued. Gondek also forwarded to the minister, Jean Chretien on December 3, 1968, a report from its consultant, Gormely Forestry Service, which had reviewed its 1966 valuation of the timber on the berth and increased its former figure to $385,698.

**Purchase Completed**

In April 1969 the Minister of Indian Affairs and Northern Development obtained authority from Treasury Board to negotiate the purchase of timber rights on Berth 117 for an amount not exceeding $300,000. Bargaining then began in earnest. The department engaged a firm of chartered accountants to review the evaluations placed on the merchantable timber remaining on the berth, and received advice that the actual value ranged from $226,656 to $374,478. A specialist in the department’s Economic Development Branch also was consulted, and recommended a maximum purchase price of $290,491. Negotiations reached a climax when E.J. Gondek, vice-president of Selkirk Spruce Mills Limited, accompanied by staff members, met with Assistant Deputy Minister Digby Hunt and officers of the National and Historic Parks Branch at Ottawa on October 8, 1969. After a review of various aspects of the timber berth, including its potential yield, prevailing prices of lumber and other matters, Gondek agreed, on behalf of his company, to surrender all rights to the timber license in consideration of a payment of $193,032. Later the department confirmed acceptance of this offer by letter. Unfortunately, title to the timber rights had been affected by certain transactions made by members of the Leuthold family while they were the licensees, and legal documentation satisfactory to the department was delayed. Eventually, obstacles to the settlement were cleared by the expropriation of all rights to the lands concerned, and a formal surrender of the timber license, including cutting rights, was obtained on April 24, 1970.

**Kicking Horse Forest Products Berths**

Before consent to the transfer of timber licenses from Canadian Western Lumber Company and from the Leuthold family to Kicking Horse Forest Products Limited was granted by the department, damage to the environment was foreseen. Three of the berths - 40, 328 and 329 - lay within the valley of the Beaver River, through which the Trans-Canada Highway was being constructed. During its negotiations for the Leuthold berths, Kicking Horse Forest Products obtained assurance from the National Parks Service at Ottawa that logging would be permitted, provided harvesting of the timber was completed as fast as possible. Later, on December 21, 1959, Deputy Minister R.G. Robertson informed the Ottawa solicitors of Kicking Horse Forest Products that the minister, Alvin Hamilton, was reluctant to approve the transfer of cutting rights before the terms and conditions under which the berths would be worked had been considered.

Of primary concern was Timber Berth 40, which would be traversed throughout much of its length by the new highway. Not only were administrative problems likely to arise, but logging operations and the denuded forest could create an eyesore for park visitors using the highway. As Hamilton remarked to his deputy minister: “I just hate to see an area of this size cut. It would spoil for 25 or 30 years the view coming out of the (Rogers) pass.” The minister later concurred in a suggestion by the director of the National Parks Branch, that the licensee be asked to quote a price for which it would be willing to sell its rights. Eventually, on the understanding that additional restrictions to protect the appearance and character of the park would be imposed, consent to the assignment of the licenses was granted. As already reported, amendments to the National Parks Timber Regulations made in 1961 established protective zones along the highways where timber cutting was prohibited.

**Restrictions Laid Down**

A few months after cutting rights on six berths had been acquired by Kicking Horse Forest Products Limited, the company requested copies of the original survey notes for these areas. This request was met and in a letter confirming their dispatch, B.I.M. Strong, chief of the National Parks Service at Ottawa, wrote to the vice-president, J.D. Sigalet, outlining the department’s policy respecting the operation of licensed timber berths. It was explained that although the existence of the timber berths on national park lands was not consistent with the purposes of the parks, the right of the licensee to operate the berths was recognized. While it was not planned to place unnecessary restrictions on the licensee’s operations, certain requirements in the course of logging operations were obligatory. These included a high standard of fire protection and slash disposal; a minimum disturbance to park land and physical features outside the boundaries of the berth; and a good cleanup of logging and milling debris, old mill sites, camps and other structures as operations progressed.

The company also was informed that plans for any access roads must be approved by the National Parks Service before construction commenced. Reference also
was made to additional restrictions proposed, to protect
the appearance of the lands along the route of the Trans
Canada Highway. These restrictions had been forecast
when the minister’s consent to the assignment of the
cutting rights had been granted. In conclusion, the chief’s
letter suggested that a solution to difficulties which might
arise from park policy and regulations might be the
purchase of the cutting rights by the department; and he
asked if the company would consider disposing of its
interest in the berths.

**Timber Exchange Explored**

Additional correspondence revealed that the company
had no plans for logging during 1960, although prelimi-
nary investigations were planned. In July 1960, Vice-
President Van de Mark of the Kicking Horse Forest
Products Limited head office in Los Angeles advised the
chief of the National Parks Service that his company
wished to maintain a long-lived operation, and would not
willingly sell Timber Berth 40. On the other hand, the
company rejected buy-back discussions, but was prepared
to explore the possibility of an exchange of the berths for
timber outside Glacier Parks if it would provide compar-
able volumes by species, quality and proximity to the
Canadian Pacific Railway. Alternatively, a trade of
Berths 40, 328 and 329 for other timber in the park, as
suggested by the park administration, would be consid-
ered. This letter was acknowledged with the advice that
the company’s proposals would be examined.

In September, 1960, S.F. Kun, regional forester for the
western parks, accompanied by two park wardens, exam-
ined timber stands in Mountain Creek valley as a possible
exchange for those in Beaver River valley. Kun reported
that timber in Berth 342 contained some remarkable
stands, with trees ranging from 130 to 165 feet in height,
and having an age of 230 to 275 years. Compared to that
in Beaver River valley, the timber in the Mountain Creek
berths appeared sound throughout, with little butt rot.95
In March, 1961, the deputy minister approved a proposal
from National Parks Director Coleman that Kicking
Horse Forest Products be informed that the department
would consider an exchange of timbered lands in the
Mountain Creek area adjacent to two berths in that valley
- already held by Kicking Horse - for existing berths in
Beaver River valley.

Later in the month, Park Superintendent Styles dis-
cussed exchange proposals with officers of Kicking Horse
Forests Products. The company officials revealed that
cutting and removal of timber from Berth 40 was not
proposed until 1963. As planned, logs would be trucked to
the company’s mill at Golden, British Columbia, where
they would be processed. The company officials also
expressed an interest in timber adjoining Timber berth
406 in Yoho Park, which they hoped could be exchanged
for that in Berth 40. This proposal was not entertained.

Correspondence and discussions on possible exchanges
of land continued in 1962. In June the company’s general
manager advised Director Coleman that a forestry con-
sultant had been engaged by the company to evaluate
exchange proposals. In July Coleman, Regional Forester
Kun and Regional Supervisor Dempster met with com-
pany officials for discussions.

The park officers were informed that logging on Berth
40 in Glacier Park was not proposed until 1964, and that
the berths acquired by Kicking Horse Forest Products
were expected to support a very large lumber operation at
Golden. It also was learned that the company had timber
holdings in the Columbia River valley on provincial lands,
which later would be flooded by the construction of a dam
on the river at Mica Creek. It was agreed that the services
of federal Department of Forestry officers in assessing
timber values in the Mountain Creek area of the park
would be acceptable to all concerned.

By September 1962 Department of Forestry officers
were able to report that most of the accessible stands of
timber near but outside Berths 292 and 342 were on steep
hillsides, and would be difficult to remove. It was also
disclosed that although the area of merchantable timber
adjoining Berth 342 in Mountain Creek Valley was about
double that in the three Beaver River valley berths,
timber values per acre were less than those along Beaver
River. In July 1963, Kicking Horse agreed to a list of five
professional forest consultants from whom technical ad-
vise might be obtained by the Department of Northern
Affairs under contract. The department subsequently
obtained authority to enter into a contract with Gormely
Forestry Service of Vancouver, but Kicking Horse then
rejected this consultant because it was proposed to issue
the contract without calling for tenders. Arrangements
for the appraisal of timber were then dropped, but were
revived in 1964.

Kicking Horse Forests Products Limited was requested
on April 2, 1964, to provide a list of forestry consultants
who would be acceptable. The company complied with
this request, and among the four consultants they sug-
gested was Gormely.96 On July 24, 1964, Gormely was
engaged under contract by the department to report on
the three berths in Beaver River valley and the two on
Mountain Creek. The field work was completed in Sep-
tember and the report was received by the director at
Ottawa in December, 1964. The report covered the results
of field examination, compilation of field data, timber
valuation and comparison of values, with the aid of
available maps and aerial photographs. Timber values
and volumes in Mountain Creek valley were found ample
to offset those of timber in Beaver River valley. The total
volume of timber in Berths 40, 328 and 329 in Beaver
River valley amounted to 64,753,000 board feet measure
with an estimated conversion return of $299,554. The
volume of timber in Mountain Creek valley outside
existing timber berths was estimated to be 162,490,000
board feet with an estimated conversion return of $427,-
194.97 The consultant received $43,507 for his work under
the contract.

**Negotiations Revived**

Negotiations between National Parks personnel and those
of Kicking Horse Forest Products remained dormant
throughout 1965, but were revived in 1966 after the
lumber company had been forwarded a copy of the
Gormely report. At a meeting held on October 27, 1966,
in Calgary between the regional director of national
parks, D.B. Coombs, and P.R. Walsh, vice-president and
general manager of the parent Cyprus Mines Corpora-
tion, the purchase of the berths by the Crown was discussed. Walsh indicated that the department would be receiving a sale offer by mid-December. However, by August 1, 1967, no offer had been received. Meanwhile the park superintendent had been advised by Kicking Horse Forest Products of Golden that the company was planning to commence operations on Berth 40 in the near future.

On August 30, 1967, the forest manager of Kicking Horse Forest Products requested the regional director of national parks to obtain the department's position on alternatives proposed by the company. These were (a) an exchange of timber in Mountain Creek valley for that in the Beaver River valley berths, or (b) liquidation of the Glacier Park berths as they existed. After consultation with the director of National Parks at Ottawa, the regional director requested Kicking Horse for its opinion on the cash value of all timber berths held by the company in Glacier and Mount Revelstoke National Parks, and also that of the timber berths situated only in Beaver River valley.

In reply, resident manager R.E. Davis at Golden advised that his company valued the Beaver River block at $2,380,664, the Mountain Creek block at $2,188,848, and Timber Berth 73 in Mount Revelstoke Park at $144,900. Altogether the company's price for its timber berths was $4,714,412, which Davis stated represented their replacement value. This communication was acknowledged with the observation that, quite obviously, the company's calculations had not been based on the Gormely report, which had been agreed upon as a basis of negotiation. Early in 1968, Kicking Horse obtained a revaluation of its timber holdings in the parks from Forestal Forestry and Engineering Limited of Vancouver. Following a review of the Gormely report, this company placed the aggregate value of the berths at $4,716,215.

Further consultations were undertaken during 1968 involving Gormely Forestry Service, officers of Cyprus Mines Corporation, the western regional director of National Parks and the National Parks regional forester. Officers of the National Parks Branch reached the conclusion that the figures quoted by Kicking Horse Forest Products Limited for relinquishing all its timber cutting rights in the national parks represented a gross inflation of their actual value. Gormely submitted his revaluation of the Kicking Horse berths, stating that a figure of $3,194,337 should be sufficient to satisfy an arbitration board if this should be required.

On September 16, 1968, the Minister of Indian and Northern Affairs made a submission to Treasury Board requesting approval of a proposal to extinguish timber cutting rights in Glacier and Mount Revelstoke Parks at a cost of $2,500,000, of which $1,500,000 would be made available from the appropriations of the current fiscal year and the balance from those for 1969-70 when available. This submission was returned by the board with the suggestion that approval in principle be sought for the proposal, with proposed expenditures withheld until the following fiscal year, after budgeting priorities were reviewed.

Expropriation Recommended
Before the alternative proposal had been fully considered, the attention of the acting director of the National Parks Branch was drawn to an item which appeared in the November 6, 1968 issue of the Vancouver Province. This said logging crews of both Kicking Horse Forest Products Limited and Selkirk Spruce Mills Limited were preparing to move into Glacier Park timber berths and commence logging operations. This information led the minister to request the return of his submission to Treasury Board. He then forwarded a revised submission requesting approval for the expropriation of all the interest of both Kicking Horse Forest Products Limited and Selkirk Spruce Mills Limited in national park timber berths. This submission received the approval of Treasury Board on December 17, 1968, and the accompanying order-in-council was approved by the Governor General on December 20. The board also directed that in negotiations with the companies concerning remuneration, the top limit must not exceed $2,200,000.

Both Kicking Horse Forest Products and Selkirk Spruce Mills had been advised of the proposal to expropriate their holdings, and both companies had agreed to suspend any timber operation while negotiations continued. At a meeting in Ottawa on January 15, 1969, J.M. Klein, senior vice-president of Cyprus Mines Corporation, engaged in further negotiations with National Parks Director J.I. Nicol and members of his Ottawa staff. Before the meeting ended, Klein had tentatively agreed to accept $2,750,000 for a surrender of all cutting rights held by Kicking Horse Forest Products Limited, subject to the approval of his board of directors.

Financial Consultant Engaged
Later in 1969, following discussions between officers of the National Parks Branch and those of the department's economic development group, it was decided to have relevant reports and records of Kicking Horse Forest Products examined by a financial consultant. It was believed that this action, for which permission had been obtained from Vice-President Klein, would permit the department to have a sound submission made to Treasury Board respecting the outcome of negotiations with the lumber company, and also to recommend the maximum expenditure necessary to complete the purchase of the company's interest in the timber berths. Price Waterhouse and Company of Vancouver was selected to evaluate the cutting rights held by Kicking Horse Forest Products Limited. After interviewing the company's officers and its auditor, and examining the company's records, the consultants reported that a discounted value of $2,750,000 for the lumber in the timber berths was reasonable, having regard to the escalating prices of lumber. After consideration, the minister forwarded to Treasury Board on April 15, 1969, a revised submission, accompanied by supporting data, recommending that authority be granted to negotiate a settlement with Kicking Horse Forest Products for the sum of $2,750,000. The submission received approval on May 8, 1969.

Meanwhile, Vice-President Klein had confirmed that his company would accept this amount for a surrender of all timber rights in the national parks, and action to
complete the transaction was initiated by the appointment of an agent of the Department of Justice. Considerable delay occurred, however, in completing the formal surrender. A search of title by the solicitor of the Department of Justice revealed that Kicking Horse Forest Products had not received a clear title to the four berths it had purchased from the Leuthold family. As noted in previous paragraphs about the surrender of rights to Timber Berth 117 by Selkirk Spruce Mills Limited, the title was affected by an assignment of interest in the timber berths by John H. Leuthold to a minor, Caroline E. Leuthold, under authority of a court order issued in the state of Washington. Consequently, it was decided to register in the British Columbia Land Titles office at Nelson the expropriation of all rights in the timber berths concerned. This action was completed on July 14, 1970. Meanwhile a surrender of all rights to cut timber on five berths in Glacier Park and one in Mount Revelstoke Park effective October 31, 1969, had been obtained from Kicking Horse Forest Products Limited. Payment in full of the agreed upon compensation was completed on April 30, 1970. This transaction, together with that relating to Timber Berth 117, also in Glacier Park, and the cancellation earlier of Timber Berth 406, had the effect of extinguishing all timber cutting rights formerly held under license in the mountain national parks.

Purchase Aftermath

As a postscript to the successful deletion of all timber cutting rights in the British Columbia national parks, it can be added that the Government of British Columbia in 1972 levied a logging tax of $341,798 against Kicking Horse Forest Products Limited. This tax was based on an amount representing the difference between the purchase price of the timber cutting rights - believed to be about $663,000 and the amount received as compensation for their loss, $2,750,000. The province argued that Kicking Horse Forest Products Limited knew, when buying the timber berths, that the Department of Northern Affairs and National Resources would not permit logging to be undertaken. Consequently, the acquisition of the cutting rights was a successful speculation. Although the federal department had in fact agreed to logging operations, before the acquisition was completed, it had later reversed its policy. The company successfully appealed the assessment in the British Columbia Court of appeal, stating that its sale of the berth to the Crown in right of Canada was involuntary under the threat of expropriation, and was finally closed out by expropriation. This judgment was appealed by the province in the Supreme Court of British Columbia; and the defendant, Kicking Horse Forest Products Limited, again had its position sustained by the court in May 1975.

Timber at Waterton Lakes

Within the boundaries of Waterton Lakes National Park there remained in 1977 a timber limit which was different in character from those which had existed in Yoho, Glacier and Mount Revelstoke Parks. Blood Indian Reserve Timber Limit A, containing about 7 1/2 square miles, was held by the Department of Indian Affairs and Northern Development in trust for the Blood Indian Band at Macleod, Alberta. It was one of several land reserves set apart in Manitoba and the Northwest Territories by Order-in-Council of May 17, 1889, pursuant to Indian Treaties 4, 6, 7, and part of Treaty 2.104

Timber Limit A, as originally surveyed by J.C. Nelson, D.L.S., in August, 1888, was on the west bank of the Belly River, about a mile and a half north of the international boundary, and then contained an area of 6.5 square miles. The Order-in-Council described the limit as heavily wooded, containing chiefly dry standing spruce, eight to ten inches in diameter, suitable for house building and fencing. Its creation preceded the establishment of the Kootenay or Waterton Lakes Forest Park in 1895, and when the boundaries of Waterton Lakes National Park were extended in 1914 they enveloped Timber Limit A.

For many years officers of the National Parks Branch considered the timber limit to be a constituent portion of the park, in which members of the Blood Indian band could obtain dry timber for domestic use, but would not have the privilege of hunting or trapping. Under prevailing timber regulations, the cutting of green timber in parks under permit was prohibited, except for park management purposes or making roads. However, in December 1928, at the request of the Department of Indian Affairs, the Commissioner of Parks authorized the cutting by Indians of green timber on the limit, on the understanding that slash and debris from operations would be cleaned up in a manner satisfactory to the park superintendent.

Ownership in Doubt

In January 1934 the status of Timber Limit A came under review following discussions between officers of the Department of Indian Affairs and those of the National Parks Branch, after a park warden laid charges against a Blood Indian for a breach of the National Parks Game Regulations. National Parks officers held the opinion that the timber limit was part of the park and that Indians entering the area with unsealed rifles were in fact violating park regulations. These views later were conveyed by letter to the Assistant Deputy Superintendent of Indian Affairs with the advice that if accepted, the Commissioner of Parks would have the charges against the Indian hunter withdrawn. Alternatively, if the national park position was not accepted, it was suggested that the matter of jurisdiction be referred to the Department of Justice for an interpretation. In reply, the secretary of the department of Indian Affairs advised that after considering the national parks representations it was agreed that the Indians were subject to the park regulations, and that the Indian agent had been so advised. Withdrawal of the charge against the accused also was requested on the understanding that he was acting under a misapprehension of his rights. This request was honored and the park superintendent notified accordingly.

Later, dissatisfaction among the Blood Indians over the National Parks position led to discussions between the local Indian agent and the park superintendent concerning a possible exchange of land. During their talks, the Indian agent indicated that the Indians might seek compensation for the loss of land used by the Department
of the Interior in the construction of the Belly River Road, later known as the Chief Mountain International Highway. This road, which connects Waterton Lakes Park with Glacier National Park in Montana, was built without reference to the Indian administration between 1932 and 1936 as an unemployment relief project, and the right of way traversed the timber limit for a distance of about three miles.

**Legal Opinion Obtained**

Commissioner Harkin's suggestion that the status of Blood Indian Timber Limit A be determined by a reference to the Department of Justice was implemented on February 1, 1936, when the Deputy Superintendent of Indian Affairs made a formal submission to the Deputy Minister of Justice. The submission requested an opinion as to whether or not Blood Indian Timber Limit A and Peigan Indian Timber Limit B - outside Waterton Lakes Park - should be regarded as Indian reserves under the Indian Act. The submission included a detailed history of the timber limits prepared by the chief surveyor of the Department of Indian Affairs, with the information that the lands included in them had been withdrawn from the jurisdiction of the Dominion Lands Act by order in council on May 17, 1889. On February 25, 1936, the Deputy Minister of Justice replied that "the tracts of land described in the attachment to order-in-council of 17th May, 1889, including the so-called Timber Limits A and B, should be held to be Indian Reserves within the meaning of the Indian Act."  

**Land Exchange Sought**

This decision precipitated another attempt to effect an exchange of lands involving those occupied by Timber Limit A, for a portion of Waterton Lakes Park east of the Belly River. F.H.H. Williamson, controller of the National Parks Bureau, discussed the matter of land exchange with M. Christianson, general superintendent of Indian agencies at Ottawa, and on July 3, 1937, forwarded to Christianson plans and background material on Timber Limit A. Later, in a followup communication, Williamson explained that any exchange of land would require the consent of the Province of Alberta, because any land withdrawn from the park would, under the Transfer of Natural Resources Act (Alberta), automatically become vested in the right of the province.  

In reply, Christianson stated that although the Blood Indians had appeared to be receptive to an exchange earlier in the year, a change of attitude had occurred, and they now were opposed to giving up their reserve. A further exchange of letters between the director of the Lands, Parks and Forests Branch and the Director of the Indian Affairs Branch of the department failed to bring about any change in the attitude of the Indians.

From 1938 onwards throughout the duration of World War II, no further negotiations towards effecting a land exchange were undertaken, and in July, 1947, a block of land containing sixteen square miles was withdrawn from Waterton Lakes National Park by an amendment to the National Parks Act. This block contained the land which had been offered to the Blood Indians in exchange for Timber Limit A.

**Compensation for Encroachment**

Late in April, 1949, D.M. Mackay, director of the Indian Affairs Branch, revived the matter of compensation to the Blood Indians for land utilized in the construction of the Chief Mountain Highway. In a memorandum to R.A. Gibson, Mackay suggested the transfer to the Indian Affairs Branch, for incorporation in the timber reserve, of an area of some 700 acres situated between the northern boundary of the timber limit and the northern boundary of the park. As part of the transaction, the area forming the highway right of way would be formally transferred to the National Parks Branch. Acceptance of this proposal, Mackay stated, would obviate the sealing by park wardens of the guns and traps carried by the Indians crossing this narrow section of the park on their way to and from their reserve.

Before recommending acceptance of Mackay's proposal, Gibson requested the Dominion Forester to provide an evaluation of the timber contained in (a) the area north of Timber Limit A which lay within the park; (b) the northern portion of the timber limit crossed by the Chief Mountain Highway; (c) the southern portion of the timber limit, which might be offered as an extension.

The evaluation was delegated to Harry L. Holman, the district forest officer of the department at Calgary. Holman examined the areas under review and provided statistical data on the timber in the various areas. He observed: "The point at issue is not timber or grazing or any other thing, but the right to hunt and trap in this area and the right of access without interference by the park wardens...What they want is a corridor for access, without the silly procedure of sealing guns for the half-mile trip across the park area. They believe that this should be given to them in return for an easement on the highway, certain trails, telephone lines, and one warden cabin, all of which were constructed without proper authority."  

Holman wound up his report by stating that the matter should be settled as soon as possible by giving the Indians the northern strip of park land bordering the reserve, surveying the entire block and marking the boundaries so that they would be unmistakable.

In July 1949 the Forest Service provided a map and a statement of timber volumes in the various areas under review. This statement indicated that the small area north of the timber reserve contained no merchantable timber. On the other hand, the existing timber limit or reserve, both north and south of the highway, contained 25,610 cords of timber, and the area south of the reserve contained 22,260 cords. These figures incorporated timber having a diameter of four inches or more at the butt.

Action leading to settlement of the Blood Indian band's claim for compensation arising from encroachments made by the national park administration was suspended until July, 1952, when the Surveyor General was requested to supply copies of the original field notes of the survey of the reserve made in 1888. These were forwarded to the park superintendent with instructions to have the location of the original survey posts found if possible. Survey work undertaken that summer by the superintendent, his engineer and a surveyor in the employ of the department's engineering service established boundary...
lines but failed to disclose any of the original survey markers.

In August 1953, H.M. Jones, director of the Indian Affairs Branch, by then a component of the Department of Citizenship and Immigration, informed the director of the National Parks Branch that, in an endeavor to settle long-standing problems, his branch had requested the Surveyor General to have the boundaries of the Indian reserve timber limit retraced. In addition, a survey would be made of a right-of-way, 100 feet wide, of the Chief Mountain Highway through the reserve, together with a suitable area to form a permanent site for the existing park warden station in the reserve. On completion of the survey, it was proposed to reopen with the National Parks Branch the matter of compensation due the Indians for the loss of lands occupied by the highway and the warden station.

A survey of the reserve or timber limit was made in December, 1953, by G.E. LeSueur, D. and A.L.S., and a survey of the Chief Mountain Highway and the warden station was completed in June 1954. The plan of survey of the highway included an area, designated Parcel "X", comprising about half an acre surrounding the buildings comprising the warden station. The area of the timber reserve, as shown on the plan, was computed as 4,050 acres or 6.3 square miles, and the area of the highway and warden station site was 41.3 acres. Later, the park superintendent cleared strips 10 feet wide along the northern, western and southern boundaries of the reserve. Its eastern boundary was formed by the Belly River.

**Exchange is Made**

Final steps to implement a settlement of the claims of the Blood Indians were begun in July 1954. On July 26, the Deputy Minister of Northern Affairs and Natural Resources made a formal offer to the Deputy Minister of Citizenship and Immigration to surrender the strip of land north of the Indian reserve in return for title to the highway right-of-way and the warden station site. Alternatively, the Department of Northern Affairs was prepared to offer the strip north of the reserve, together with an area east of Belly River and the Chief Mountain Highway, if the Blood Indians would surrender that portion of the reserve lying south of the highway. After the alternative proposals were brought to the attention of the Indians, the Deputy Minister of Northern Affairs was informed on October 19, 1954, by his counterpart in Citizenship and Immigration, that the Blood Band Council had unanimously approved the offer of the land lying north of and adjoining the reserve.

Negotiations were opened with the Minister of Lands and Forests for Alberta in November 1954, to ensure that any portion of Waterton Lakes National Park withdrawn by act of Parliament would be revested by the province in the name of Her Majesty in right of Canada. As the Blood Indians would be surrendering, in addition to surface rights, all mines and minerals, assurance also was sought from the province that the same interest would accrue to the Indians in respect of the park land so surrendered.

Legislation to effect the land exchange was prepared and passed after Alberta was assured that lands withdrawn from the park, which automatically would become the property of the province, would be revested in right of Canada on behalf of the Blood Indians. By amendment to the National Parks Act, assented to on June 28, 1955, an area of 753 acres was withdrawn from Waterton Lakes Park. By Order in Council of June 19, 1956, the Province of Alberta transferred the administration and control of the lands withdrawn from the park to Her Majesty the Queen in right of Canada. Duplicate certificates of title were subsequently received and deposited with the Indian Affairs Branch. One certificate of title covered the surface rights of the lands described, and the other covered title to all mines and minerals. Subsequently, by Order in Council of January 24, 1957, the surrender by the Minister of Citizenship and Immigration of part of the Indian reserve containing the highway right of way and warden site was accepted, and its administration, management and control transferred to the Department of Northern Affairs and National Resources for national park purposes.

Later, a compiled plan of the Blood Indian Reserve Timber Limit A dated January 17, 1957, which incorporated the addition obtained from Waterton Lakes Park, was prepared by the Surveyor General of Canada. The plan showed the location and area of the lands transferred to national park administration. The area of the timber limit was calculated to be 4,754 acres and that of the road and warden site as 41.4 acres.

The formal exchange of lands not only compensated the Blood Indians for the loss of land through encroachments inadvertently made many years before, but also provided ready access to the Indian reserve Timber Limit A from the north. The exchange also had the effect of restoring goodwill between the Indians and the park administration. Checking of firearms and traps carried into the reserve by members of the band no longer was necessary, and the full use of the reserve was possible, including the development of natural resources by the Blood Indian band council.

**Highway Reconstruction**

Before the reconstruction of the Chief Mountain International Highway, which occurred between 1961 and 1965, an effort was made to obtain a wider right of way through the Indian reserve, to ease some of the curves and improve the gradient. Negotiations carried on with the Blood Indian band through the Indian Affairs Branch of the Department of Citizenship and Immigration proved ineffective, although compensation either in the form of a cash payment or an exchange of land was offered. Eventually, the reconstruction was completed within the existing right of way at additional cost by the judicious use of the bin-wall method of construction. The cost of rebuilding the highway, including the stretch through the Indian reserve, was approximately $1,500,000.

**New Boundary Proposed**

In 1964 legislation that would have had the effect of withdrawing the enlarged Indian Reserve from within the outer boundaries of the park was included in proposed amendments to the National Parks Act. A heavy legislative program, however, prevented the bill from receiving the necessary attention from Parliament. A similar provision was included in national park legislation prepared
for the consideration of Parliament at later sessions, but it suffered the same fate. Although some amendments to the act were passed in 1974, for reasons of policy other amendments which would have altered the boundaries of Waterton Lakes and several other parks were postponed.

C.P.R. Timbered Lands

Although Parks Canada has extinguished all cutting rights on licensed timber berths in the mountain national parks, a substantial area of land supporting stands of timber remains in Banff National Park under private ownership. Title to this area, comprising 10 sections or approximately 6,400 acres, was granted to the Canadian Pacific Railway Company between May 1907 and August 1908 as part of its mainline subsidy from the Government of Canada. The subsidy was related to the terms of the company's contract with the Government of Canada covering the construction of the first transcontinental railway. The land under review is situated in the valley of the Cascade River northwest of Lake Minnewanka, and presumably was acquired to ensure a source of timber for railway ties and other requirements. The patents conveyed to the company the mineral as well as the surface rights, and included title to an immense deposit of coal.

In March 1925 Commissioner Harkin brought to the attention of the deputy minister, W.W. Cory, the existence of land grants to Canadian Pacific which constituted portions of Rocky Mountains (now Banff) Park, under the provisions of the Rocky Mountains Park Act of May 15, 1902. Harkin questioned the validity of these grants, in view of the wording of Section 1 of the 1902 act which read in part:

...so far as the title to the said tract of land, in whole or in part, is now vested in the Crown, (it) is hereby withdrawn from sale, settlement and occupancy under the provisions of the Dominion Lands Act, and any regulations made under the said Act or any other Act with respect to mining or timber licences or any other matter.

The deputy minister referred Harkin's memorandum to the departmental solicitor, K.R. Daly, who offered the opinion that the word "settlement" was sufficient to make the grants null and void from the beginning. He also believed that if title to the land remained with the railway company, the department had the right to cancel the grants and provide other land to make up a subsidy land account.

In April 1927 Commissioner Harkin, with the assistance of the Ordnance, Admiralty and Railway Lands Branch of the Department of the Interior, obtained on an exchange basis, title to a little more than 4,000 acres of land in the vicinity of Canmore and Exshaw, which had been held by the Canadian Pacific Railway Company within Rocky Mountains Park. This, however, was the last large area exchanged voluntarily. In June, 1929, John Harvie, then director of the Ordnance, Admiralty and Public Lands Division of the department, informed the acting Commissioner of Lands at Ottawa that before patents were issued to the railway company, the Department of Justice had been consulted. Apparently it had been ruled that nothing in existing legislation respecting Rocky Mountains Park took away the right of the company to include in its land subsidy the odd-numbered sections in the railway belt within the limits of the park. So far as available records disclose, the national parks administration subsequently accepted the validity of the subsidy land grants in Banff National Park.

Ways of repossessing title to lands held by the railway company in Banff National Park as part of its main line subsidy were discussed from time to time by officers of Parks Canada with railway officials. Some of the railway lands have been purchased, others exchanged, and still others expropriated and payment therefor subsequently negotiated. No firm negotiations respecting the lands in the Cascade River valley have yet developed. During an exchange of correspondence between the director general of Parks Canada and Canadian Pacific Investments Limited in 1974 respecting renewal of townsite leases in Banff, Executive Vice-President W.J. Stenason set out the company's policy: "The Cascade Mountain property contains significant tonnages of bituminous and anthracite coal, which our geologist has established at some 20 million tons. In addition, there is valuable timber on the land. If the federal government has coal and timber lands outside the park, we would be happy to consider it on an exchange basis but if, as seems likely, this is not the case, we would prefer to hold onto this property for subsequent technological development in coal mining and recovery.""15

Volume of Cascade Timber

The park fire road up Cascade River valley crosses some of the timbered sections of land held by Canadian Pacific, and permission to clear the right of way of green and dead timber was obtained from the railway company in January, 1944. In December, 1948, a timber cruise of the Canadian Pacific holdings in the valley was undertaken by the Dominion Forest Service at the request of the director of the Lands, Parks and Forests Branch of the Department of Mines and Resources.

The cruise was carried out by J. Quaitie, a forester on the staff of the District forester at Calgary. His report was received by the controller of the National Parks Bureau in March, 1949, and revealed that the volume of merchantable timber existing on seven of the sections cruised totaled 37,858,532 board feet. Of this timber, comprising spruce, pine and balsam fir, 23,075,031 board feet fell within a measurement of from 6 to 10 inches breast high. Timber measuring 11 inches and over totaled 14,783,000 board feet.

Most of the merchantable timber was concentrated within three sections situated at elevations of from 5,000 to 6,000 feet above sea level. The two most northerly sections in the valley had been burned over and supported only scattered patches of second growth pine and spruce. An area of about 920 acres located above timber line contained only scrub spruce, pine and balsam fir. Second growth timber, ranging in diameter from one to eight inches had a volume of 1,404,026 cubic feet.

During the intervening period of more than 30 years since the 1948 cruise was made, it is probable that both the volume and the quality of the existing timber have

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changed. Consequently, should negotiations for the acquisition of the land be initiated, an up-to-date cruise of the timber would be necessary. The purchase of subsurface mineral rights would also have to be considered.

Wood Buffalo Park Timber

Volume I of this history contained a brief account of resource exploitation in Wood Buffalo National Park, which involved the harvesting of mature and overmature timber in the valleys of the Peace and Athabasca Rivers. Of several operators who originally held cutting right under special agreements authorized by the Governor in Council, only one - Swanson Lumber Company Limited of Edmonton - managed to achieve a practical operation. This company at one time had three sawmills in operation on Peace River, and had enlarged its holdings by acquiring, through assignment, cutting rights granted to others under agreements which, in effect, served as licences.

In 1971, the Swanson Company held the right to cut timber on four berths in Wood Buffalo Park which contained a total area of 289.4 square miles. That year, authority was granted by the Governor in Council to the Minister of Indian Affairs and Northern Development to accept the surrender of two berths, Nos. 378 and 296, together with 24 square miles of a third berth, No. 408, in exchange for a block of timber located along the Athabasca River in the southeast corner of the park, containing an area of 55 square miles. Following the exchange, the Swanson Company entered into a new agreement with the minister effective August 1, 1972, covering operation of the new area known as the Athabasca Block.

During the following year, 1972, the agreement covering Swanson's rights on a fourth timber berth, No. 367, expired and was not renewed. By 1973, the company held an interest in only two berths - that constituting the Athabasca Block, and the remaining portion of berth 408 situated west of Peace Point on Peace River. An amendment to the original agreement covering the operation of berth 408 was authorized by Order in Council on October 12, 1977, which provided for the adjustment of timber dues payable on timber cut on this berth to the rates prescribed and revised from time by the Province of Alberta. The amendment also permitted the scaling of timber cut in the park at a place or places situated outside the park.

In September 1978 the park superintendent was notified by the forester of Swanson Lumber Company Limited that the company had been unable to carry on timber cutting operations in the Athabasca Block during the past two years, owing to the high costs of operation and the difficulty in obtaining skilled labor. Consequently, the sawmill in the block had been dismantled and removed from the area. The letter also indicated that the company wished to relinquish its interest in the Athabasca Block.117

Under the terms of its agreement, the right of Swanson Lumber Company to occupy and remove timber from the Athabasca Block expired on July 3, 1980. Through failure to cut at least one million feet board measure of timber in each of every two consecutive years, the company was in default of its obligations and the agreement subject to cancellation. Officers of the prairie region of Parks Canada, however, decided that it would be preferable to have the company's rights extinguished through the effluxion of time. Consequently, the right to cut and remove timber from Wood Buffalo National Park after July 3, 1980, would be confined to Timber Berth 408. The company's interest in this berth would expire on May 31, 1981. Provision was contained in the agreement, however, for an extension of 21 years, provided all terms and conditions outlined therein had been met. It therefore appeared that complete extinguishment of timber cutting rights in the national park might not be possible until the year 2002.

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23 Banff Crag and Canyon, August 17, 1928
24 National Parks Branch file B. 16-123 (Vol. 1). Letter, May 4, 1955, from German and McLeod, Calgary, to Deputy Minister of Justice
26 Order in Council P.C. 1239, March 14, 1950
27 National Parks Branch file B. 16-123 (vol. 2). Letter, October 15, 1951 from W.R. Jockett to Deputy Minister of Resources and Development
28 Ibid. (Vol. 3). Letter, June 3, 1955, from German and McLeod to Deputy Minister of Justice
Maligne Lake in Jasper National Park is the largest and one of the most beautiful of the glacial-fed bodies of water in the Canadian Rockies. Originally barren of game fish, it was successfully stocked with eastern brook trout between 1928 and 1931. The success of the experiment later attracted anglers from wide-spread points on the North American continent.
Canada's National Parks at the New York World's Fair, 1939. The mounted bison specimen came from Elk Island National Park.

A park naturalist describes some of the natural features in Asulkan Valley, Glacier National Park, B.C. to visitors. Nature hikes are popular in Canada's mountain national parks.
Chapter 11
Park Education
and
Interpretation
Introduction

When Canadian legislators provided the statutory authority for the management of our national parks, they dedicated these areas to the people of Canada for their benefit, education and enjoyment. They also stipulated that the parks should be maintained and made use of so as to leave them unimpaired for the enjoyment of future generations. This, indeed was a difficult assignment - to permit use without impairment. Obviously, some impairment is involved in providing access to, and in encouraging the use of, the spectacular areas which compose this segment of our national heritage. The necessary balance between use and impairment has been achieved by careful management, aided by a program of public relations, education and interpretation.

Freeman Tilden, a well-known American interpretive specialist, has defined interpretation as "an educational activity which aims to reveal meanings and relationships through the use of original objects, by first-hand experience, and by illustrative media, rather than simply to communicate factual information." Alan Helmsley, a Canadian authority on park interpretation, defined it as follows: "Park interpretation, therefore, is the art of stimulating in people an interest in, and an awareness, an understanding and an appreciation of the landscapes and ecological communities of the national parks, with recognition of the historical role of man within these landscapes and his continuing relationship to them." Either version endorses the development in our national parks of a program by which park visitors are made aware of the natural wonders, the unique wildlife, and the opportunities for healthful outdoor life and recreation that exist for their enjoyment.

When Canada's first national park was created in 1887, means of calling public attention to the attractions and benefits of the parks were limited - especially when compared to the innumerable facets of advertising that exist today. The park superintendent did some advertising in a local newspaper; but the park - then known as Rocky Mountains - was also widely publicized by the Canadian Pacific Railway Company. The CPR made every effort possible to increase its passenger traffic over the recently constructed transcontinental line; and the scenic and recreational attractions of Banff, Lake Louise, Emerald Lake and the Yoho valley were prominently featured in the company's widely dispersed advertising media.

Gradually the Department of the Interior, and successive departments charged with the administration of national parks, built up a publicity and information service. Through the judicious use of press articles, printed brochures, lectures, photographs, colored slides and motion picture films, and the establishment of park information bureaus, the role of the national parks in preserving Canadian wildlife and the primitive landscape was made known to Canadians and visitors from abroad. Following World War II, public relations officers appointed in several of the larger parks initiated an educational program involving conducted nature tours complemented by evening film showings. In some parks natural history museums also helped to illustrate the conservation functions of the park system.

A continuing need to provide special information on the national parks, stressing preservation of their fauna, flora and geological features, led to the establishment in 1959 of an Education and Interpretation section within the National Parks Branch. This service was launched under the guidance of a professional biologist and a few assistants with a knowledge of natural history. Since then its growth has been remarkable. To meet public demand, a program of interpretation activities is currently offered in practically all the national parks. This program involves trained specialists along with a supporting staff, which during the summer of 1978 totaled 180.

First Park Museum

The first attempt to provide the public with information about the ecology of Rocky Mountains Park was the establishment of a small museum. In his report to the minister in 1886, W.F. Whitcher had mentioned the possibility of having a museum developed at Banff; but for several years the idea remained dormant. In 1890 a residence for park superintendent George Stewart was under construction at Banff on Villa Lot 25, Block 1, when the park was visited by the minister, Edgar Dewdney. In August that year, Stewart advised the secretary of Department of the Interior that the minister had requested that the building be converted into a park museum. A month later, Stewart was authorized to expend $800 for the necessary alterations. By January 1891 the appropriation was exhausted and the work had not been completed. Additional funds were forthcoming in 1892, and on May 19 Stewart was able to advise Deputy Minister A.M. Burgess that the building had been brought to a state that would permit the acceptance of donations, although the lower floor remained unfinished.

Meanwhile, consideration was being given to the appointment of a museum curator. On February 18, 1892, Deputy Minister Burgess solicited the advice of Professor John Macoun of the Geological Survey of Canada on what qualifications the prospective incumbent should have. Macoun was then one of Canada's best known botanists. He had been a member of Sandford Fleming's exploration party, which in 1872 had crossed western Canada and the Yellowhead Pass in search of the best route for the nation's first trans-continental railway. Later, after the railway was completed, Macoun had been a frequent visitor to the Canadian Rockies, and had personally assembled a remarkable collection of mountain flora.

Professor Macoun's reply was frank and free of verbiage that sometimes afflicted interdepartmental correspondence:

I may state that you should have a man of wide intelligence and who could give information on more subjects than talking of or showing the specimens in the museum. He should be energetic (not a hotel lounging) ... should know the species of fish you have in the park ... ought to be able to skin a bird or a mammal ... have or be intelligent enough to gather some knowledge of minerals. In short, you want an intelligent, educated and energetic young man who could talk natural history, mineralogy, geology and
The Auditor General’s report for 1895 discloses that vice, it was agreed that Macleod would be employed both vice. After exchanges of correspondence between the engagement of a curator. In August, Curator Appointed

Before the museum was completed, consideration was being given to the engagement of a curator. In August, 1892, George Macleod of Banff had applied by letter to the minister for the post. Macleod had worked for the superintendent in the park nursery, and also was employed on a part-time basis by the Department of Marine and Fisheries as an observer in the Meteorological Service. After exchanges of correspondence between the Department of the Interior and the Meteorological Service, it was agreed that Macleod would be employed both as weather observer and museum curator, with the salaries for each job paid by the respective departments. The Auditor General’s report for 1895 discloses that Macleod’s appointment as curator dated from September 1894, and that his emolument for the position was $25 per month.

Macleod’s employment as museum curator was short lived. He died at Banff early in March 1896 after a long illness. His successor was Norman B. Sanson, who also took over the duties of meteorological observer. A native of Toronto, Sanson had arrived in Banff in 1892. Although employed in various jobs, including one at the Sanitarium Hotel, he found time to indulge in his hobby of natural history research. Sanson’s duties of meteorological observer called on his physical resources after

1903, when a small observatory was constructed on the most northerly peak of Sulphur Mountain overlooking Banff townsite. For the next 29 years, Sanson made weekly or fortnightly ascents of the mountain over a trail 3.75 miles long to obtain weather data recorded automatically in the small stone building. Before the completion of the observatory, weather observations had been recorded in a building near the park superintendent’s residence. The new curator of the museum embarked on his duties with enthusiasm. His early efforts were devoted to building up the number and variety of museum specimens. Although some early acquisitions, including two muskoxen were exotic, most were examples of the mammals, birds, plants, insects, fossils and minerals found in the national park. In 1903 the museum was relocated in a new park administration building completed that year on Banff Avenue near the Bow River bridge. With more space in which to display collections, the scope of the museum was expanded, and gradually additional specimens were obtained.

Like many curators, Sanson encouraged the loan to the museum of artifacts, including those pertaining to human history. Sanson had personally assembled quite a number of North American Indian artifacts, which he lent to the museum. He also obtained on loan from Canon H.W. Gibbon-Stocken of Gleichen, Alberta, an impressive collection of 46 Plains Indian curios, including Blackfoot headdress, necklaces, rattles, moccasins, saddle, tomahawk and arrows. In 1923 Cannon Gibbon-Stocken was induced to sell the collection to the Department of the Interior for permanent display in the museum. A payment of $600 was authorized by Order in Council.

Handbook Published

Sanison had the good fortune to obtain the assistance of visiting biologists and other scientists from both Canada and the United States in the identification and classification of his large and varied collections. In 1913 and 1914, Harlan I. Smith, an archaeologist from the National Museum in Ottawa, spent several months in Banff assisting in the collection of specimens and in rearranging the museum exhibits. With Sanson’s assistance, Smith prepared a handbook of the Rocky Mountains Park Museum which was published in 1914.

The handbook not only served as a catalogue of the museum’s contents, but also contained descriptions of the numerous large and small mammals native to the Rocky Mountain region, as well as those of birds, fish, insects, plants, fossils and minerals. It was an excellent natural history guide to Rocky Mountains (Banff) Park.

In 1913 and early 1914, at the request of the Commissioner of Parks, Sanson collected and pressed 5,000 sprigs of mountain heather in Simpson Pass. Later 3,000 sprigs were forwarded to Ottawa for insertion in the cover of a pamphlet, Just a Sprig of Mountain Heather, issued by the Dominion Parks Branch in 1914.

Norman Sanson’s tenure of office extended over 36 years, during which he combined the duties of museum curator and weather observer. In the course of his work, he completed more than 1,000 ascents of the northern peak of Sulphur Mountain, on which the observatory was located, entailing nearly 8,000 miles of travel. In addition,
his excursions through Banff and adjoining national parks by saddle pony and on foot in search of specimens accounted for an additional 20,000 miles. He retired in 1931 but maintained his interest in outdoor activities. He was elected the first president of the Canadian Skyline Trail Hikers in 1933, with which he had a long association. Six months before his death in May 1949, the peak on which the observatory stood was named Sanson Peak by the Canadian Board on Geographical Names. There seems no doubt that he fulfilled most of the qualifications for his position that were recommended by John Macoun in 1892.

Museum Exhibit Reviewed

Following Sanson’s retirement, the Banff Park museum was operated under the supervision of caretakers who had little technical knowledge of the park wildlife. One occupant, Jack Mitchell, was a retired taxidermist and he ensured that vulnerable specimens were protected from moths and other damage. Dr. C.H.D. Clarke, the mammalogist of the National Parks Service at Ottawa, had made several inspections of the museum, and in December 1943 he brought to the attention of R.J.C. Stead, superintendent of parks and resources information, some of the weaknesses in the presentation of the museum’s exhibits.

Dr. Clarke noted that the frame construction of the museum constituted a serious fire hazard, and that some specimens, such as mounted birds and furbearing animals, were susceptible to fading. He also called attention to the considerable extraneous material unrelated to the park, the crowded aspect of the exhibits, and the fact that many were improperly labelled.

Dr. Clarke’s memorandum was passed on to James Smart, controller of the National Parks Bureau, who agreed that improvements to the museum were required and that a new building was desirable. However, considering the numerous postwar requirements in other phases of administration, little hope was held that the required appropriation would be forthcoming. Further consideration by the controller and the director of the Lands, Parks and Forests Branch brought agreement that the museum should be relocated in a large building on Bear Street, then used as the park garage, after funds were provided to construct a new mechanical equipment maintenance depot.

Attempts made by the National Parks Branch from 1948 to 1950 to have funds allocated for the construction of a new museum were unsuccessful. In May 1952 C.E. Johnson, a retired employee of the National Museum at Ottawa, was engaged to examine the Banff museum exhibits, correct or relabel specimens, and improve the arrangement of exhibits. Some work concurrently undertaken by the park superintendent improved the building’s exterior appearance. Five years later, additional steps to upgrade the presentation of the museum exhibits were carried out by John Crosby of the National Museum, with the cooperation of its director, Dr. L.S. Russell. This involved the replacement of numerous labels, the introduction of a number of explanatory drawings, and a thorough housecleaning.

Encroachment on Floor Space

Meanwhile, a new human history museum was opened in Banff by N.K. Luxton, a long time resident of Banff, and E.L. Harvie, a wealthy Calgary lawyer. This raised the question of whether or not the original government museum should be perpetuated. The park superintendent and staff had moved to a modern new administration building in 1936, and space in the old administration building, which still housed the museum, had been made available to two organizations interested in promoting tourism. These were the Alberta Motor Association and the Canadian Rockies Tourist Association. The building also contained the park information bureau. In September 1957 the president of the Alberta Motor Association, Gordon McGachie, visited Ottawa and discussed with the minister, Alvin Hamilton, the provision of additional space for the associations’ operations. McGachie told the minister that he had heard a rumor that the department might discontinue operating the park museum; and, if that were done, the entire ground floor of the building could be made available to the AMA, the CRTA and the park information bureau.

The deputy minister consulted the director of the National Parks Branch on the proposal. Both the director and Park Superintendent Strong advocated retaining the Banff museum, in the expectation that more suitable quarters eventually would be found for it. However, after a review of the matter, the minister decided that the entire ground floor of the museum building should be made available in 1958 for the use of the two tourist associations and the Park Information Bureau, and Mr. McGachie was so informed. The decision meant that operation of the park museum no longer would be possible. A press notice announcing the minister’s decision was prepared, but was withheld from release until the beginning of the new year.

Meanwhile, news of the museum’s impending demise reached Banff and Calgary, and strong opposition to its closing developed. Eric Harvie visited Ottawa and made a strong plea to the deputy minister for the retention of the Banff museum. Mr. Harvie offered to provide technical assistance in rehabilitating the building and its contents, and also, if acceptable, to operate it in conjunction with the Luxton museum.

Later the department relaxed its stand, when the museum situation was reviewed by Assistant Deputy Minister E.A. Côté and senior officers of the department and the National Parks Branch. Meeting in January 1958, they decided that operation of the park museum would be continued with minor interior changes, the culling of exhibits and the acquisition of more suitable display cases. The type of exhibits to be included in the museum in future also was discussed at length; it was agreed that for the present, all presentations should pertain to natural history. Also planned was the eventual transfer of the museum from the existing building to the department’s garage building at Banff, after this was vacated and necessary structural changes made. Another outcome of the meeting was a more equitable sharing of available accommodation in the museum building among the two tourist promotion organizations and the Banff information bureau. The minister later wrote to Gordon
McGachie, president of the Alberta Motor Association, explaining why it had been necessary to withdraw part of the space offered the previous autumn.

**Museum Reorganized**

Eric Harvie's offer of technical assistance in the revamping of the park museum was accepted, and the services of Clifford Wilson of the Luxton Museum were provided. In February 1958 Wilson submitted a report recommending substantial changes in the park museum, including the removal of all material that could not be classed as flora, fauna or minerals found in the park. This meant discarding the Indian relics and artifacts. Under Wilson's supervision duplicate and badly mounted specimens were eliminated, many others were relabelled, and the interiors of display cases were brightened. Numerous extraneous exhibits on loan to the museum were returned to the owners.

On April 16, 1958, Assistant Deputy Minister Côté informed the director of the National Parks Branch that “the Banff Museum should not be stripped of all its human history material in favour of the Luxton Museum, and should not be left exclusively as a natural history museum.” However, this advice was not followed. The Luxton Museum became the repository of most of the Indian artifacts. In July, 1958, Alice Gibbon-Stocken of Victoria asked the park superintendent to turn over to Norman Luxton the Indian exhibits which she stated had been loaned to the park museum by her father. Presumably, neither Miss Gibbon-Stocken nor the park superintendent knew that the department had purchased the Blackfoot Indian artifacts from Canon-Gibbon Stocken in 1923, for they were released to Mr. Luxton in September 1958. Concurrently, Indian articles which had been lent to the museum years before by the late Norman Sanson, its former curator, were claimed by Mrs. A.C. Newton of Calgary, and at her request they also were turned over the Luxton museum. In both cases, the heirs were reimbursed by the Luxton Museum on the basis of valuations made by Norman Luxton.

In 1961 the Bear Street garage was vacated, and operations formerly carried on there were transferred to a large building which had been constructed in a new industrial compound northeast of Banff townsite. But park officers felt that the need for a new fire hall, which for many years had been accommodated in a former schoolhouse, outweighed the requirement for a new museum site. Although architectural plans had been prepared in 1959 for converting the garage into a museum, in 1962 the vacated building was converted instead into a fire hall. At the time of writing the park museum remained on the site it had occupied since 1903, functioning basically as a natural history museum.

**Early Park Publications**

The first illustrated pamphlet describing the national parks in the Canadian Rockies, as far as known, was published in 1909 under the authority of Frank Oliver, Minister of the Interior. Entitled The Prince of Playgrounds, it contained within its 38 pages, descriptions of Banff, Yoho and Glacier National Parks, with special emphasis on the scenic and recreational attractions of Banff townsite and vicinity. The booklet was distributed freely at the Alaska-Yukon-Pacific Exposition held in Seattle that year. The text was compiled by Agnes D. Cameron, vice-president of the Canadian Women’s Press Club.

In 1914 Parks Commissioner J.B. Harkin obtained funds for printing several informative and attractive booklets. One described the Nakimu Caves in Glacier Park; another, written by Professor A.P. Coleman of the University of Toronto, explained the formation and location of some of the larger glaciers in the Rockies and Selkirks. In another attractive booklet, S.C. Vick of the Department of Fisheries at Banff described some of the game fish in the mountain parks. Harlan Smith's Handbook of the Banff Museum - already mentioned - provided much information on flora and fauna of Rocky Mountains Park. The most attractive publication however was that entitled Just a Sprig of Mountain Heather. It began with an account of the discovery by Sir George Simpson in 1841 of mountain heather in Simpson Pass, and briefly outlined the purposes, concepts, and characteristics of the national parks. A sprig of mountain heather was inserted in the cover of each copy.

**Publicity Division Organized**

Restricted appropriations during and following World War I were relaxed in 1921, when Commissioner Harkin established the nucleus of a publicity and information division in the Dominion Parks Branch. That same year reprints of several publications already published were ordered, and a new illustrated publication, Through the Heart of the Rockies and Selkirks, written by staff member Mabel Williams, was produced. It described in detail the parks along the line of the Canadian Pacific Railway in Alberta and British Columbia, and proved to be a very popular publication. By 1929 three more editions had been issued to meet public demand. A Guide to Jasper National Park, containing 180 pages, also written by Miss Williams, was published in 1929. The completion of new motor highways through Banff, Kootenay, and Yoho national parks prompted the publication of two additional illustrated pamphlets, The Banff-Windermere Highway in 1923 and The Kicking Horse Trail in 1927.

The objectives and attractions of national parks were also publicized by a lecturer, who supplemented talks with showings of colored slides. A photograph and lantern slide library was organized, and in subsequent years thousands of prints depicting the scenic grandeur of the parks, their wildlife and recreational attractions, were distributed free of charge. A small staff of writers produced news and feature articles on national parks topics, which were distributed to the press, periodicals and professional lecturers. In 1924 and 1925 the National Parks Branch was represented at the British Empire Exhibition, Wembley, England, by the director of publicity, J.C. Campbell. He supervised a small information bureau and also undertook a modest lecture program in southern England.

Special exhibits comprising mounted game animals, framed photographs, colored transparencies and tanned buffalo hides were arranged at large fairs and exhibitions.
in Canada and the United States. In collaboration with the Canadian Exhibition Commission of the Department of Trade and Commerce, the National Parks Branch maintained an information desk, served by well-informed staff from Ottawa, at the Century of Progress Exposition in Chicago in 1933, and at the New York World's Fair in 1939 and 1940.

Film Library Developed
The National Parks Branch was one of the first federal government agencies to use motion pictures for educational purposes. Commencing in 1921, the publicity division built up a library of films, first in black and white and later in colour, calling attention to the physical, recreational and educational aspects of the parks. Film shot by professional photographers on assignment was purchased and was assembled into film stories at Ottawa. Through special arrangements with the Canadian Government Motion Picture Bureau in Ottawa, and later with Associated Screen News Limited of Montreal, sound versions were developed for release on international theatre film circuits. From 1925 to 1942, much of the motion picture film purchased was obtained from W.J. Oliver of Calgary, an outstanding commercial photographer. The most popular films available from the National Parks Branch library portrayed the national buffalo herds, other large mammals native to the parks, Canadian birds and waterfowl, sport fishing, alpine climbing and excursions through the parks by saddle pony and canoe.

Grey Owl
In 1931, the National Parks Branch obtained the services of a self-taught naturalist, Archibald Belaney - better known as Grey Owl. Belaney had arrived in Canada from his native England as a youth in 1906, and had lived among Indians in northern Ontario for many years, earning a livelihood as a guide, forest ranger and trapper. About 1928, while living in the province of Quebec under his adopted name of Grey Owl, he decided to give up trapping in favour of writing. The quality of his articles, published in an English magazine Country Life and in Canadian Forest and Outdoors, led the commissioner of National Parks to offer Grey Owl employment in helping to conserve the beaver in Canada’s national parks. While in Temiscouata County, Quebec, Grey Owl had adopted two motherless beaver kittens which became his semi-domesticated pets. Their antics provided a source of material for his stories which later formed the basis of several books. In 1930 the director of publicity for national parks, J.C. Campbell, accompanied a film crew to Cabano, Quebec, where sufficient film footage of the beaver was obtained to produce a silent film, The Beaver People.

Grey Owl was first employed in Riding Mountain National Park as “caretaker of park animals.” There, in 1931, a second film, The Beaver Family, was made. By autumn, water conditions in the small lake on which Grey Owl had been established proved unsatisfactory for a winter sojourn. Consequently the beaver, along with Grey Owl and his common-law wife, Anahareo (Gertrude Bernard), were moved to Ajawaan Lake in Prince Albert National Park. Three more films were made there. They were Grey Owl’s Neighbors, Strange Doings in Beaver-land and Pilgrims of the Wild. These films received worldwide distribution and brought fame to both Grey Owl and the national parks of Canada. Through the cooperation of Associated Screen News of Montreal, sound versions of available film negatives were created and distributed on theatre circuits. They were Grey Owl’s Little Brother and Grey Owl’s Strange Guests.

Meanwhile Grey Owl had continued his writing, and over a period of seven years from 1931 to 1937, he produced and published four books: Men of the Last Frontier, Pilgrims of the Wild, The Adventures of Sajo and Her Beaver People, and Tales of an Empty Cabin. In 1935 Grey Owl embarked on a lecture tour of Great Britain under the sponsorship of his English publisher, Lovat Dickson. This tour, repeated in 1937, and extended in 1938 to eastern North America, coupled with hard living, seriously impaired his health. On returning to Canada in the spring of 1938, he went back to his cabin on Ajawaan Lake, contracted pneumonia and died on April 13 in a hospital in Prince Albert, Saskatchewan.

Throughout his literary and lecture career, Grey Owl espoused the conservation of wildlife, with emphasis on beaver, which in some areas of eastern Canada had been wiped out by trapping. He also defended the life pattern of the Indian people with whom he had lived and intermarried, and expressed deep concern for the protection of remaining portions of original Canada. The revelation by the press following his death in 1938 that he was not an Indian received wide publicity and undoubtedly affected future sales of his books. Nevertheless, during his brief career as a writer and lecturer, he not only brought invaluable publicity to Canada’s national parks, but publicized the need for conserving Canada’s wildlife and preserving its endangered natural environment.

Division Reorganized
Following the creation of the Department of Mines and Resources in December 1936, national park publicity and information services were reorganized. Robert J.C. Stead, a well-known writer and publicist, who had headed the information services of the former Department of Immigration, succeeded J.C. Campbell as supervisor of parks and resources information. Emphasis was placed on the distribution of publications describing individual national parks, and a series of information folders on most of the national parks was compiled and published. These folders, which incorporated a small map of the park concerned, were produced by W.F. Lothian, and were continued in amended form as a basic publicity and information medium for the ensuing 40 years. They were supplemented over varying periods by other publications, including three separate promotional pamphlets, well illustrated and printed on coated stock, known as the Playgrounds series. Brochures describing natural phenomena, special events, and services, including guides for anglers, also were compiled and printed as required.

Over the years interdepartmental reorganization resulted in changes affecting publicity and information activity. In November 1947 all national park motion picture films, negatives and projection equipment were transferred to the National Film Board. The section head,
J.A. Rigby, also accepted a transfer to the board. At that time the National Parks Branch film library contained some 85 films, of which several prints were available on loan. During the year before the transfer of the film library, 5,700 prints had been lent to individuals, conservation groups and other organizations.

Reallocation of departmental functions in 1947 also included the transfer to the Canadian Government Exhibition Commission of all mounted wildlife specimens and other equipment used in exhibition displays, which had been carried on for some years. The Exhibition Commission retained the services of T.S. Heaslip, the parks exhibit officer.

The reorganization merged the rest of the Publicity Division with the newly-created Editorial and Information Division of the Department headed by a chief editor, A.J. Baxter.17 The new division was responsible for the preparation and distribution of park publications, photographs and slides, as well as the lecture program. Promotional and educational activity was continued with the assistance of the National Film Board, the Exhibition Commission and the Canadian Government Travel Bureau. Funds for the production of printed material, photographs and films were included in national park appropriations and made available as required.

Merger with Travel Bureau
In January 1950 the Canadian Government Travel Bureau became a component of the new Department of Resources and Development, and in January 1951 some publicity activities relating to national parks were transferred from the Editorial and Information Division to the Bureau. This merger also involved the transfer of staff responsible for production of park publications and park films. Funds included in National Parks Branch appropriations for these forms of publicity were transferred to the Travel Bureau as required. In 1952 the Travel Bureau launched a series of broadcasts on the National Parks of Canada over the network of the Canadian Broadcasting Corporation. It also distributed more than 900,000 publications relating to the national parks. In subsequent years, the national parks received widespread publicity through direct advertising, the distribution of literature and photographs, and the use of films in television broadcasts.

Education and Interpretation
From the inception of Canada's National Park system in 1887 until after the close of World War II, most of the publicity work undertaken by the National Parks Branch was designed to attract visitors to the parks. Communication with visitors concerning the concepts, ideals and conservation aspects of these national areas, other than that provided by publications, was largely feature-oriented. Emphasis was placed on the scenic and recreational attractions of the parks; their natural phenomena; specimens of native wildlife displayed within fenced enclosures; and on museum displays of botanical, geological and mounted wildlife specimens. Lecture work outside the parks also was undertaken on a small scale, but little of what is now termed "park interpretation" was attempted. In short, few of the thousands of visitors entering the larger parks realized that in addition to providing unique recreational advantages, the parks actually constituted vast museums of living nature preserved, as far as possible, in its original state.

Pioneer Efforts
The earliest attempt to provide a park interpretation service was made in 1929, when the services of a naturalist, J. Hamilton Laing, were obtained for the summer season in some of the mountain parks. In 1930, while engaged in reorganizing exhibits in the Banff Museum, Harlan I. Smith of the National Museum at Ottawa also prepared and posted several hundred labels identifying various species of trees, shrubs and plants along paths and trails in the vicinity of Banff townsite. Labels also were posted on the cages of birds and animals in the then existing zoo, and at the wild animal paddock east of the townsite. Details of the establishment and partial disappearance of these developments may be found in an earlier chapter of this volume.

During his stay in the park in 1930, Smith found an identification label on a tree which had been placed there in 1915, and was still in a good state of preservation. The label, originally placed either by Smith or Norman Sanson, indicated that interpretation in the parks had been undertaken in a small degree at least 15 years earlier.

Another pioneer in national park interpretation work was R.W. Sutton, an employee of the Manitoba Museum at Winnipeg. During the summer of 1938, Sutton teamed with A.H. Shortt in collecting field specimens of birds and small mammals for the National Museum at Ottawa. Sutton's work attracted the interest of park superintendent Otto Heaslip, who engaged Sutton during the summers of 1939 and 1940 to undertake similar work on behalf of the Riding Mountain Park museum. Sutton's duties were expanded to include nature talks in the museum, and to conduct visitors on guided walks over established park trails. The success of the program led the superintendent to discuss the establishment of a naturalist position with Controller Smart of the National Parks Bureau. However, curtailment of funds due to wartime economies probably ruled out the proposal. Sutton also assisted P.A. Taverner, ornithologist of the National Museum, in the compilation of an annotated list of the birds of Riding Mountain National Park. Years later, in 1973, "Dick" Sutton rejoined Parks Canada as chief of interpretation for the prairie region at Winnipeg.

Public Relations Officers
For several years before 1948, a recreation and nature information service had been provided in Prince Albert and Riding Mountain National Parks during the summer months. In 1948 these services were extended to Banff, Jasper, Yoho, Kootenay and Waterton Lakes Parks, where seasonal positions were created and filled by young men with university training.18 They organized and carried on short field excursions for park visitors in areas easily accessible from park headquarters. During the outings they drew attention to the geology, botany, natural phenomena and wildlife of the region. These officers, termed public relations officers, also organized
outdoor sports and delivered campfire talks in the evenings, usually at park campgrounds. When possible the talks were supplemented by the screening of park and other educational films. The popularity of the programs led to the construction of small outdoor amphitheaters equipped for film showings. In some parks the nature talks and film showings were extended to larger hotels, using films made available by the National Film Board through regional depots.

Although the classified positions of public relations officers were abolished in 1951 because of budget restraints, most of the park superintendents managed to continue the entertainment features including film showings, organized sports and, in some parks, short field excursions. This was done with the assistance of seasonal help, termed park recreational officers. These employees, paid at hourly rates for a limited period during the summer visitor season, were drawn mainly from members of the teaching profession. Some became quite skilled in this type of program, and continuity in their seasonal employment was possible.

**Interpretation Service Proposed**

Nature interpretation programs had been inaugurated in the United States national parks in the 1920s and later, about 1954, in the Ontario provincial park system. As already mentioned, programs had been undertaken in some of the western national parks in Canada to create among visitors an interest in the natural features of the region; but definite steps to establish an interpretation service were postponed until 1958. During a visit that year to Glacier National Park, Montana, Gordon Robertson, Deputy Minister of Northern Affairs and Natural Resources, was impressed by the interpretation program provided there. After his return to Ottawa, he discussed with national parks director J.R.B. Coleman, the desirability of establishing a similar program in some of Canada's national parks. Support for such action was found in an editorial in the *Toronto Daily Star*, which lamented the lack of a public natural history program in the national parks similar to that carried on in the larger provincial parks of Ontario.

By September 1958, with the approval of the minister, it was decided to establish an education and interpretation service. As envisioned, a tentative interpretation program would be developed before the beginning of the 1959 visitor season by Homer S. Robinson, a former department publicity officer. Robinson had been appointed superintendent of parks and resources information in 1946, following the retirement of R.J.C. Stead. The position was abolished in the 1947 reorganization of the department's publicity and information activities, and Robinson subsequently had served as an information officer in the newly-created Editorial and Information Division.

In 1951 he and six other officers of the division had gone to the Canadian Government Travel Bureau to assist in national park publicity work. Robinson had expected that the transferred employees would operate as a unit, but most were absorbed in the Travel Bureau establishment. Robinson was given the responsibility for film and audiovisual services; another transferred employee, J.G. Perdue, continued as a publicity officer in the production of national park publications.

**New Section Takes Form**

Late in 1957 Homer Robinson obtained a transfer back to the National Parks Branch. Subsequently his services were made available to the United Nations Organization to advise the government of Jordan on the development of the tourist industry. He returned to Canada in the autumn of 1958, and undertook the task of establishing an education and natural history interpretation section in the National Parks Branch. In October director J.R.B. Coleman made arrangements for Robinson to visit Washington and interview the head of the United States National Park Service interpretation service. There Robinson met officers responsible for interpretation activities, visited a nature center in the city of Washington, and examined the museum laboratory of the interpretation service. Following Robinson's return to Ottawa, a working group of departmental officers, including one from the Geological Survey of Canada, was organized as an interpretation committee, to recommend various activities that might be undertaken in 1959.

It had been anticipated that funds for the employment of at least three permanent qualified interpretative officers would be provided in 1959. The expected positions, however, did not materialize, and consequently much of the year's activity was confined to planning. In April 1959 Dr. George M. Stirrett, regional biologist of the Canadian Wildlife Service for Ontario, was appointed to the position of chief park naturalist. This appointment permitted Robinson to improve the information aspects of the proposed program, while Dr. Stirrett devoted his efforts to interpretation.

Dr. Stirrett's choice as chief park naturalist was most appropriate. He had travelled extensively through Ontario on wildlife research, and was well acquainted with the unique flora and bird life of Point Pelee National Park. About 1954 he began special studies in the park which he hoped would lead to the establishment of a natural history program. One of his achievements was development of the first nature trail in the southern part of the park, later known as the Woodland Nature Trail.

**Development of Programs**

An opportunity to acquaint field officers with the proposed education and interpretation program was afforded during a conference of park superintendents in Ottawa in February, 1959, when Homer Robinson gave a talk. Later in May, Robinson attended the annual park warden training school in Banff National Park. He also visited Algonquin Provincial Park in Ontario, where interpretation activities and methods were discussed with the chief park naturalist, Grant Tayler. Pending the establishment of permanent positions, programs combining natural history with the showing of park films at national park campgrounds, large hotels and elsewhere were carried on by seasonal employees. Many of these had been employed in that category for several years, and had become quite proficient in their duties.

Field trips to a number of western parks were made later in the year by both Robinson and Dr. Stirrett. Their
Publications for Interpretation

Meanwhile, work on publications for use by interpretation staff and park visitors had progressed, and by March 30, 1960, two comprehensive booklets written by Dr. Stirrett had been published. These were *The Spring Birds of Point Pelee National Park* and *The Plants of the Woodland Nature Trail in Point Pelee National Park*. In 1959 the Geological Survey of Canada agreed to prepare and publish a series of geological pamphlets that would facilitate the work of the national parks' interpretation staff. The first of the series was published in 1960, entitled *The Story of the Mountains in Banff National Park*. This was written by Dr. Helen R. Belyea of the regional office of the Geological Survey at Calgary.

In January 1960, the National Parks Branch engaged Dr. David M. Baird, chairman of the Department of Geology at the University of Ottawa, to prepare a small illustrated pocket guide that would assist in the interpretation of geological phenomena in the national parks. Later that year, it was published as *A Guide to Geology for Visitors in Canada’s National Parks*, and made available at a cost of $1.50.

The popularity of this guide led the Geological Survey of Canada to engage Dr. Baird to continue the series of books on the geology of the mountain national parks which had been initiated by Dr. Belyea. Between 1962 and 1967 Dr. Baird completed the text and provided pictures and sketches for guides to most of the mountain parks in Canada, which were published by the Geological Survey of Canada. Well illustrated, they provided excellent descriptions of the mountains, alpine lakes, glaciers and other physical features accessible by motor highway or walking trails in Banff, Jasper, Yoho, Kootenay, Waterton Lakes, Glacier and Mount Revelstoke National Parks. Dr. Baird expanded this series to provide geological histories of Prince Edward Island, Fundy, and Terra Nova Parks, and the national parks in Ontario.

In 1974 the Geological Survey resumed publication of geological guides to the national parks, which were written by Dr. Arthur H. Lang, a retired member of the Geological Survey staff. These additional guides describe Elk Island, Prince Albert, Riding Mountain and Pacific Rim National Parks.

Information Activities Shared

The preparation and distribution of national park pamphlets and map folders, together with the production of park films, were continued by the Canadian government Travel Bureau until March 31, 1960. In April that year, some of these functions were taken over by the National Parks Branch. It was agreed that the education and interpretation section of the branch would in future be responsible for producing brochures and other printed matter of an educational nature, while the Travel Bureau would continue producing pamphlets and films designed primarily to attract visitors to the national parks and other parts of Canada.

During the 10-year period in which the Canadian Travel Bureau served as an information and publicity agency for the national parks, several million copies of parks publications were printed and distributed. Eight new films featuring national parks were produced in colour with sound accompaniment, and made available for distribution through the National Film Board. Several new park pamphlets were compiled and published, and numerous press articles, still photographs and other public relations materials were released. Canada's national parks also were featured in the Travel Bureau's advertising program.

Park Information Bureaus

Requests for information received in national parks normally were answered either by the park information bureau or by the superintendent’s office. A public information service for visitors had been inaugurated in the townsite of Banff in 1924, when a small building was erected on Banff Avenue south of the superintendent’s office, then housed in the museum building. In 1939 the park information bureau was moved to the ground floor of the museum building, staffed by seasonal personnel engaged by the park superintendent. Originally the services provided had included the reserving of visitor accommodation, but this was discontinued in 1946 when it was undertaken by private enterprise. Similar information bureaus were established in other parks, where folders, maps and detailed information about the physical, recreational and educational attractions of the region were provided on request.

Information and Interpretation Workshops

Following the creation of an education and interpretation service, it was decided to establish training classes or workshops for field staffs engaged in disseminating information to park visitors. The first workshop for information bureau staff was held at Banff in June 1960 under the supervision of H.S. Robinson, assisted by Aileen Harmon.
of the Park superintendent’s staff. A total of 32 information officers, from 10 national parks, attended the sessions. This gathering was followed early in July by a workshop for interpretive personnel. Altogether, 11 interpretive officers from eight national parks attended. The program included lectures on the responsibilities of the new service, slide presentations on natural history topics by chief park wardens, a lecture on geology of the mountain parks by Dr. Helen Belyea of the Geological Survey, and a talk on the wildlife of the region by D.R. Flook of the Canadian Wildlife Service. On two successive days the program featured a field demonstration on the identification of shrubs and trees given by the regional forester, Steve Kun, and another on geological formations by Dr. Belyea. The workshop closed with a campfire interpretation program.

Shortage of Staff
During the first two years of its existence, the education and interpretation section of the National Parks Branch lacked adequate staff, both at headquarters and in the field. The section head, H.S. Robinson, shared the services of a stenographer with Dr. George Stirrett, the chief park naturalist; and it was not until February 1961 that clerical help was obtained through the transfer of a department employee, John Stotesbury. By January 1961 advice had been received that five seasonal park naturalists, classified at the level of Technical Officer 2, would be included in the branch establishment for 1961-62. Later the appointees were assigned to Banff, Kootenay, Waterton Lakes, Point Pelee and Fundy national parks to supervise interpretation programs carried on in the summer months. Seasonal naturalists in other parks were employed under contract.

Meanwhile, a brief guide or handbook for use by interpretation and information officers had been compiled and distributed. A start was also made on revising existing park information folders to emphasize the basic functions of the parks and the need to preserve their flora, fauna and geological features. Steps also were taken to reestablish within the section an adequate still photo library to replace the collection which had been transferred in 1951 to the Canadian Government Travel Bureau. In August 1961 delivery of a new illustrated pamphlet, Canada’s Heritage of Nature, was received. Compiled by H.S. Robinson, it reviewed the origin of the national parks, outlined their growth in numbers, and stressed the need for natural sanctuaries free of industrial and other forms of resource development. The publication also contained brief descriptions of the 18 national parks then in existence. A second edition of the pamphlet was printed in 1962.

In May, 1961, arrangements were made to repeat the information and interpretation workshops for field staff. The courses for interpretation officers were held at Banff from June 2 to 5, at which talks on natural history, forestry and geology were given by specialists in these subjects. The chief park naturalist of Glacier National Park in Montana reviewed the interpretation work undertaken in the United States National Park Service. A short course for information officers also was held at Banff from June 6 to 9, attended by a representative from Riding Mountain Park for the first time. Park staff participating in the workshop were taken on field excursions, including one to the summit of Sulphur Mountain where the local geology was explained by Dr. A.M. Stalker of the Geological Survey. Other outings included one to Yoho Park under the guidance of chief park warden Glen Brook, and another to Radium Hot Springs in Kootenay Park, where the seasonal naturalist, Kurt Seel, provided the group with details of the natural phenomena of the region.

Later, in July 1961, Dr. Stirrett inspected the information and interpretation services provided in Point Pelee, Fundy, Cape Breton Highlands and Prince Edward Island National Parks. After his return Dr. Stirrett offered numerous recommendations for the improvement of programs in these parks.

Staff Additions Obtained
Before the close of 1961, H.S. Robinson renewed his efforts to have the staff of the education and interpretation section at Ottawa increased, in view of his expected retirement from the public service in April 1962. Robinson recalled that before the transfer of information staff to the Canadian Government Travel Bureau in 1951 the national park publicity unit was composed of seven persons. He insisted that attempts to carry on an enlarged program with a staff of only three was not possible. Eventually assistance was obtained by the transfer of a Technical Officer 2 position from the establishment for Elk Island National Park, and the subsequent recruitment of a biologist, R. Dalton Muir, as an assistant to Dr. Stirrett. Robinson retired on April 30, 1962, and early in May was replaced by Sydney L. Roberts, an experienced information officer. For several years, Roberts had served with the department’s Information Services Division, and was familiar with national park policies and the functions of the education and interpretation section of the National Parks Branch. He already been called upon to assist in national park public relations work, and his transfer provided timely assistance to the understaffed national park unit.

Successive ministers of the department had shown a keen interest in extending public relations on behalf of national parks. They had encouraged the use of park superintendents and chief park wardens in calling public attention to the functions of national parks and their unique physical and educational features. These officers were encouraged to give talks to schoolchildren as well as adult community groups in the vicinity of national parks. Roberts had provided substantial assistance by drafting a suitable talk on national parks for use by park officers at public gatherings, and also had developed a series of lectures on public relations for delivery at the training schools for park wardens in 1962.

Advent of Panorama
Another assignment undertaken by Sydney Roberts before his formal transfer to the National Parks Branch was the compilation and publication of a monthly newsletter designed to keep staff members at Ottawa and in the field informed about department happenings and items of interest. Entitled Panorama, the first issue was published in February 1962, and incorporated material...
compiled mainly by officers at Ottawa. Later the newsletter contained contributions from park staff throughout the system from Prince Edward Island to British Columbia. Items ranged from descriptions of construction projects in national and national historic parks to control of surplus wildlife, rescue procedures and methods of assisting park visitors in distress, and natural phenomena such as the annual smelt run in Lake Erie at Point Pelee Park. Publication of Panorama was continued until November 1965, when it was ended mainly due to a lack of suitable contributions.

Section Relocated
By 1962 the education and interpretation section had been relocated in the Norlite Building, 150 Wellington Street, with other divisions of the National Parks Branch. This made it possible to give more direction to the program. A reallocation of duties made Dr. Stirrett responsible for nature interpretation and Sydney Roberts for information and press services, including the compilation, revision and distribution of park publications. Workshops for training field staff were continued at Banff in June, at which interpretation courses were coordinated by Dr. Stirrett and those on information by Syd Roberts. Later, in reporting on results of the training sessions, Roberts recommended that the annual gatherings be continued, and also that they be rotated among other parks. For the 1962-63 season the number of seasonal park naturalist positions had been increased by four, allocated to Jasper, Yoho, Riding Mountain and Prince Edward Island National Parks.

Palisades Training Centre
A substantial property acquisition in Jasper National Park in 1962 permitted the development of a new training and conference centre a few miles north of Jasper townsite. In February the Department of Northern Affairs and National Resources purchased the remaining privately-owned tract of land in the park, which had been developed by successive owners as a dude ranch. Known as Palisades Ranch, the 152-acre property contained a private residence, a 10-unit motel and about 10 other buildings capable of providing visitor accommodation. With alterations, the ranch complex was found capable of accommodating small conferences, training sessions and similar departmental gatherings.

Both the information and interpretation workshops were held there in 1963 under the direction of Dr. Stirrett, assisted by Dalton Muir. They featured talks by geologists, naturalists and foresters from federal and provincial government departments, and from the United States National Park Service. The 1964 the interpretation workshop was repeated at Jasper, but the information services training session was carried on at Banff. A feature of the 1964 interpretation workshop was a trip from Jasper to Maligne Lake, the largest glacier-fed body of water in the mountain national parks. Dr. David Baird of the University of Ottawa acted as guide and narrator, calling to the attention of those present the significant geological features of the region.

Dr. Stirrett Retires
In September 1964 Dr. George Stirrett reached retirement age, and, after vacating the post of chief park naturalist, moved to Grand Falls, New Brunswick. He had completed 38 years as a Canadian government scientist. His career had begun as an entomologist with the Department of Agriculture in 1926. In 1948 he had joined the Canadian Wildlife Service, and later served with distinction as a biologist for that division of the National Parks Branch in Ontario. His choice as chief park naturalist provided the opportunity to organize and direct the natural history function in the national parks' education and interpretation program inaugurated in 1959. By the date of his retirement this had been solidly established in most of the larger national parks.

Dr. Stirrett had a pronounced affinity for research and study in Point Pelee National Park, Ontario. The park forms the most southerly part of mainland Canada, and because of its geographical position and climate, it supports trees, plants and bird life normally found in more southerly areas. The need for a nature trail along which visitors could observe unique forms of nature had been recognized by park authorities as early as 1942. The start of a trail was made in 1955, when a suitable route was selected by Dr. Stirrett, then an officer of the Canadian Wildlife Service. Later he initiated another development which permitted visitors to observe the interesting wildlife in the park marsh which comprises 75 percent of the park area. This was a boardwalk similar to one located in Everglades National Park, Florida. Completed in 1963 and now known as the Boardwalk Trail, it extends about two-thirds of a mile into the marsh. An elevated platform at the end of the walk affords views of much of the marsh. By 1973 an extension to the trail had been completed in the form of a floating walk. The extension forms a loop which joins the original boardwalk about 125 yards from its starting point. An observation tower at the entrance also provides views of the area.

The natural attractions of the park, given wider prominence by an interpretation program in 1961, led Dr. Stirrett to recommend the construction in Point Pelee and other parks of buildings to be known as nature centres. As proposed, they would provide essential services for park visitors and also assist in the organization and operation of natural history activities. The size of each building would normally be determined by the scope of the park natural history program, and might contain an exhibit hall, auditorium, service area and workshop, display rotunda, office space for park naturalists, storage space for collections, and a small library. Ideally, it also would border on or be near a completed nature trail.

Eventually Dr. Stirrett's hopes were realized. In March 1965 the Minister of Northern Affairs and National Resources, Arthur Laing, announced that the first of a series of nature centres in national parks would be constructed in Point Pelee Park. Construction continued throughout 1965, and the building was formally opened on August 19, 1966. 20 It contained many of the features suggested by Dr. Stirrett, and has since housed displays concerning the geological origin of the park and its unusual fauna and flora.
New Chief Parks Naturalist
The vacancy caused by Dr. Stirrett's retirement remained unfilled for nearly nine months, during which Dalton Muir carried on as acting chief parks naturalist. On June 1, 1965, Alan F. Helmsley of Toronto was appointed to the position. A graduate of the University of Toronto, Helmsley had been an officer of the Department of Lands and Forests for Ontario since 1949. He had assisted in the organization of training courses for personnel attending the annual Ontario forest ranger school near Dorset, Ontario, at which he supervised instruction on fish and wildlife matters. He also developed and directed early park interpretation activities in Algonquin Provincial Park. Following the formation in 1954 of a parks division in the Department of Lands and Forests, Helmsley was appointed to the new position of supervisor of interpretation for the Ontario park system. He was the author of several publications, including the only manual of park interpretation published before 1960. As successor to Dr. Stirrett, Alan Helmsley entered on his duties as chief parks naturalist with a background which adequately qualified him for the position.

Field Staff Enlarged
The year 1965 was notable in other ways for the natural history and interpretation section of the National Parks Branch. Field staff was expanded to include 10 permanent park naturalist positions. Seven of these positions were allocated to parks in western Canada and the remaining three to parks in eastern Canada. Appointed as permanent park naturalists were David Coburn in Banff Park; Peter Heron, Jasper Park; J.C. Findlay, Elk Island Park; E.B. Cunningham, Waterton Lakes Park; Kurt Seel, Kootenay Park; Dudley Foskett, Yoho Park; Robert Walker, Riding Mountain Park; Patricia Narraway, Prince Edward Island Park; and David Christie, Fundy Park; later that year William Wyett was appointed in Point Pelee Park. Before the end of the fiscal year, illness forced Coburn to retire as Banff park naturalist, and he was replaced in 1966 by E.B. Cunningham. Banff Park also was provided with two permanent assistants, Aileen Harmon and Bruce Gordon. For several years Miss Harmon, a devoted outdoors enthusiast and naturalist, had assisted in the park interpretation program while also carrying on duties in the park administration building. With the assistance of Bruce Gordon, she had laid out the first two nature trails in Banff Park - one at the Hoodoos east of Tunnel Mountain and the other at Bow Pass summit over-looking Peyto Lake. In other national parks, additional interpretation staff was engaged on a seasonal basis.

The head office staff at Ottawa, comprising Alan Helmsley and Dalton Muir, was augmented by the appointment of a technical officer, John Crosby, to serve as an exhibit planner. Crosby already had undertaken work for the National Parks Branch by improving exhibits at the Banff Park museum. Another helpful appointment was that of Harry R. Webster as regional park naturalist for the western region at Calgary; this permitted closer coordination of interpretation activities in the western parks. A graduate of the University of British Columbia, Webster had been employed as a public relations officer in the British Columbia national parks in 1948. He joined the National Parks Branch staff in 1949, serving as a wildlife officer in the Atlantic provinces and later as a wildlife biologist in Alberta, specializing in waterfowl. In 1959 he was appointed superintendent of Elk Island National Park. He remained there until February 1965, when he was transferred to a similar position at Riding Mountain National Park, Manitoba. His service as western region park naturalist at Calgary began in April 1965.

Park Program Popular
The appointment of year-round park naturalists and the engagement of additional seasonal personnel significantly improved national parks interpretation programs by the end of the 1965 season. A review of the services developed for visitors to Banff National Park was described by assistant park naturalist Bruce Gordon in the November 1965 issue of the department staff paper Intercom. A staff of seven, operating under the park naturalist, offered visitors a choice of guided walks on nature trails, talks and evening programs, as well as self-guiding nature trails near Banff and Lake Louise. Leaflets showed the location of these trails, and contained information on the flora, geological features and objects of natural interest along the way.

Interpretation officers also arranged film showings in outdoor amphitheatres. Programs normally were prefaced by short talks on the purpose and functions of the national parks, and short explanatory discourses on the film subject preceded each screening. In addition, photo slide shows proved useful in providing visual presentations not available in motion picture films. Fireside talks also were popular, presumably because they helped to create an outdoor atmosphere. The complete naturalist program undertaken at the park was outlined in posters and by leaflets distributed to the public.

Additional Nature Centres
The opening of the nature centre at Point Pelee National Park in 1966 was followed by the conversion of two existing park museums to interpretation centres. The museum at Waskesiu in Prince Albert National Park, constructed in 1935, had been placed under the supervision of the park interpretation service in 1961. Later, steps were taken to have the existing exhibits coordinated with the park interpretation program. In 1967, the building was extensively renovated and new exhibits installed. The new displays emphasized the significance of the boreal forest in today's world, and also explained the geology and natural features of the park. After its reopening in June 1967, the building was officially known as the Interpretation Centre.

In 1975, the Interpretation Centre at Waskesiu was renovated again, and most of the former exhibits were replaced. New presentations featured the natural history of the park: they dealt with its glaciation during the Ice Age, the Indian history of the park and the surrounding region, the development of the fur trade and later the lumber industry in areas adjacent to the park. They also highlighted the activities of Grey Owl, the self-educated naturalist who resided in the park for several years and
gained fame as a writer, lecturer and conservationist. Grey Owl’s activities have been mentioned in more detail earlier in this chapter. A small theatre installed in the centre enabled the park naturalists to screen both films and slides, which were supplemented by talks on the park wildlife and other natural features.

Riding Mountain Interpretation Centre
Another national park museum was converted into an interpretation centre at Riding Mountain National Park in 1968. Originally constructed and opened in 1933, it was one of the attractive log and stone buildings erected in the townsite of Wasagaming following establishment of the park in 1930. Among its principal attractions was a collection of Indian artifacts assembled by the park superintendent, James Smart, before its opening. A number of small dioramas were displayed in lighted display cases, along with indigenous geological and paleontological specimens, among other items.

By 1958 the physical condition of the building had deteriorated and the exhibits had become outmoded. In 1960, following an inspection by John Crosby of the National Museum at Ottawa, a program involving building restoration and upgrading of the museum exhibits was carried out. Several new display cases were installed, and specimens of native mammals including deer, black bear, lynx, beaver, wolves and snowshoe rabbits were obtained for display. Most of the exhibits relating to Indian life, and representative specimens of birds, insects and butterflies of the region were retained. Botanical, geological and paleontological specimens were rearranged for display, and where necessary new specimens were obtained and carefully grouped.

Changes in Presentation
Early in 1967 it was agreed by the chief park naturalist, A.F. Helmsley, and members of the Interpretation Division at regional and park levels, that Riding Mountain Park needed museum renovations and a new interpretation concept. In July of that year the regional director for western parks submitted to Helmsley a story line prepared by the park naturalist, which would be followed in portraying the geological and human history of the park. It was summed up in the words, “Riding Mountain - the Past, Present and Future”.

Through maps, drawings and a series of illustrated display panels, grouped in three stages, the park visitor could follow the changes in the form of the land comprising the park through successive geological periods.21 These included the Jurassic, the lower and upper Cretaceous and the Pleistocene (Ice Ages), all of which shaped the present landscape. At one time, the highest portion of the park rose like an island from the post-Cretaceous sea, and, as the waters receded, the steep escarpment on the eastern side of the park took form, leaving traces of ancient beach lines.

A major display illustrated the diversity of wildlife and plant life in Riding Mountain Park, including birds, small and large mammals, trees, shrubs and flowering plants.

The renovation proposal was accepted, and in 1968 a Winnipeg firm, Daly Display Limited, undertook the construction and installation of exhibits under contract. This work was supervised by John Crosby, the exhibit planner of the Interpretation Division at Ottawa. Complementing the exhibits in the interpretation centre was audiovisual equipment purchased for the lecture hall in the building. This equipment, including projectors and screen, is used in support of talks on the natural wonders of the park.

Interpretation Centres Expanded
During 1969 funds were made available for the renovation of the Point Pelee Nature Centre. New exhibits replaced those previously on display, and a small theater with a capacity of 150 persons was incorporated in the building. Equipment purchased for use in the theatre included five projectors, permitting special audiovisual projection with spoken and musical accompaniment.

An additional interpretation or nature centre was developed between 1971 and 1973 near the Columbia Icefield in Jasper National Park. A substantial building, constructed as an information centre in 1962-63, was converted for this purpose, and opened for public use in September 1973. Facing the Athabasca Glacier, the most accessible glacier flowing from the Columbia Icefield, it has an ideal location for the interpretation of the unique geological phenomena in the vicinity.

Interpretive Program Broadened
Early in 1968 the interpretation section, now a part of the Operations Division of the National and Historic Parks Branch, initiated a program which involved the planning and construction of additional interpretive facilities in the national parks. As proposed, the first phase of the program would extend over a five-year period, concerned with the development of interpretation centres, outdoor amphitheatres, on-site exhibits and nature trails. As envisioned, the cost of projects approved would not exceed $275,000 for interpretation centres and $25,000 for on-site exhibits. These figures were expected to include the cost of preconstruction design, site improvement, exhibits, furnishings and equipment. Proposed developments would be suggested by park naturalists. On approval by the regional director, preliminary plans would be prepared in the Engineering and Architectural Division at Ottawa. On final approval, if funds were available, implementation of the project would proceed.22

Some changes in the proposed plans were brought about by cost estimates which were higher than expected, by the length of time required to construct interpretation centres, and by indecision about their location. The solution was the development of mobile interpretation centres, using a number of trailers obtained from Crown Assets Disposal Corporation. Eight vehicles which had been used in 1967 by the Canadian Centennial Commission were purchased at a cost of $6,500 each. The centennial exhibit in each vehicle was replaced with a new display relating to the park concerned, along with audiovisual projection equipment. This permitted the use of films and slides with sound accompaniment.

Of the eight trailers purchased, six were allotted for use in national parks and two in national historic parks or sites. Following the necessary renovations and installations, these mobile interpretation centers were opened in
Terra Nova, Prince Edward Island and Kejimkujik Parks in the Atlantic provinces, at Georgian Bay Islands Park in Ontario, Saskatchewan Crossing in Banff Park, and Marble Canyon in Kootenay National Park. Another trailer was opened at Rocky Mountain National Park, east of Banff National Park, the site of an early trading post established in 1799 by the North-West Company of Montreal. Although originally used as a temporary expedient, some of the trailers are still in use.

**On-Site Exhibits Constructed**

The expanded program of the interpretation service indicated a need for a specialist in exhibit design. A new position was established in 1968, and staffed by an exhibit planner, Bruce Harding. Harding had previously been employed in the interpretation service of the Ontario provincial park system. Harding and John Crosby, the design specialist for interpretive installations, were responsible for work necessary in the development of interpretation centers and trailers, and for the design and installation of on-site exhibits.

During the period from 1968 to 1970, several attractive on-site exhibits were completed in parks across Canada. One installed at Vermilion Lakes, near Banff, showed the characteristics and habitat of the big horn or Rocky Mountain sheep, one of the most prevalent large mammals native to the park. An exhibit in Waterton Lakes Park focused on the bison or buffalo which one populated the western plains of North America in great numbers. A small herd of bison had been established in the park nearby. Another on-site exhibit at Takakkaw Falls in Yoho Park explains the origin and nature of the spectacular falls that cascade into the Yoho Valley canyon. In the Atlantic provinces, an exhibit in Kejimkujik National Park is concerned with ancient petroglyphs or rock carvings discovered near Kejimkujik Lake; another at Herring Cove in Fundy National Park calls attention to the tides in the Bay of Fundy, probably the highest in the world. In Riding Mountain National Park, Manitoba, an exhibit on the Lake Audy plains relates to the bison; a small herd of bison was reestablished in the vicinity of the lake by park authorities in 1931.

Another on-site exhibit installed on Beausoleil Island in Georgian Bay Islands National Park in 1971 called attention to the aquatic life around Fairy Lake, and to the geology of the region. The area surrounding this small lake is extremely rocky and supports coniferous trees, unlike the southern portion of the island where the forest is largely deciduous. In 1974 the former park administration building on Beausoleil Island was redeveloped as an interpretation centre incorporating a small theatre and numerous exhibits.

**Traveling Trailer Exhibit**

In the early 1970s a special interpretation project was aimed at Quebec residents, to make them aware of the national parks recently established in that province - La Mauricie and Forillon. The need for such a project was urged by Peter Lesaux, assistant director of national parks. What was required was a traveling exhibit that would appeal to Quebec residents who, it was believed, did not appreciate the purposes of national or provincial parks, apart from hunting and fishing.

Alan Helmsley and his exhibit designer, Bruce Harding, interviewed officers of the exposition section of Information Canada and arranged for the production of three separate design concepts. One proposal involved the use of open-sided trucks which would permit the use of both audiovisual and other displays. None of the designs was approved, however, and interpretation staff had considerable difficulty deciding what type of exhibit was wanted. Eventually an alternative design concept, offered by Shirley Popham, head of the department's Conservation Program information unit was approved. This involved the use of a large trailer, outfitted to the desired design and specifications by officers of the exposition section; slides for audiovisual presentations were supplied by the Interpretation Division. Personnel accompanying the trailer on its itinerary through Quebec included two chanteuses, whose songs were accompanied by guitar music. The trailer design differed substantially from that of mobile trailers used at interpretation centers in other national parks, and the results obtained were disappointing. The vehicle had poor air circulation, and in hot weather proved uncomfortable for both visitors and staff. Eventually the proposed itinerary was curtailed and the project was abandoned.

**Information Services Regrouped**

Preceding paragraphs have reviewed the activities of the education and interpretation section, along with the work of park information services. But changes in departmental organization in 1968, which had the effect of separating the park information and interpretation functions, make it desirable to review these two activities separately.

Between 1966 and 1968, a departmental reorganization seriously affected the information and interpretation units of the National Parks Branch, which operated under the supervision of the director. Under authority of a Treasury Board minute of March 3, 1966, the branch officially became the National and Historic Parks Branch, and the Canadian Wildlife Service became a separate branch of the department. The Government Organization Act, effective June 16, 1966, altered the name of the department from Northern Affairs and National Resources to Indian Affairs and Northern Development. Included within the new department, was the Indian Affairs Branch of the Department of Citizenship and Immigration. A revision of responsibilities brought the National and Historic Parks Branch within the Conservation Program under the administrative authority of the senior assistant deputy minister. After a further review of legislation, objectives, policies and existing organization structures, further changes were announced by the new deputy Minister, J.A. MacDonald, in 1968. They included the appointment of J.H. Gordon as senior assistant deputy minister responsible for the Conservation Program.

Although the departmental establishment had, since 1962, included an Information Services Division, most branches of the department also had their own publicity or information unit. In 1967 MacDonald, after consultation with his executive assistant, W.D. Mills, and other
officers, decided to have these services or units brought under a senior information officer. Subsequently, a departmental press release of October 24, 1967, announced the appointment of Michael Dibben as public information adviser for the department. Before his appointment, Dibben had been in charge of press, radio and television services for Expo 1967. His background included extensive service in the British and Canadian armed forces, in which he served as a press officer and as editor of an armed services newspaper. Mr. Dibben reported for duty in November 1967.

Park Services Affected
Meanwhile, Sydney Roberts had continued for some time as a one-man information unit for the National and Historic Parks Branch. Besides maintaining liaison with the Information Services Division in preparing press releases, writing speeches for senior department official, and rebuilding a photographic library, Roberts had completed the revision and reprinting of the series of park information folders developed before the transfer of park publicity media to the Canadian Government Travel Bureau. In 1967 D.D. Melville of the Information Services Division had been transferred to the National and Historic Parks Branch as a press relations officer. One of Melville's contributions was the compilation, editing and printing of a portfolio of park photographs in color, which were selected from a large group of negatives exposed on special assignment for the branch by a Vancouver photographer.

In March 1968 Roberts accepted the position of information officer with the Department of Labour. Darrell Eagles, who had been an information officer for the Canadian Wildlife Service, then took over the duties of chief information officer for the conservation group. These included supervision of information activities for both the National and Historic Parks Branch and the Canadian Wildlife Service. Further changes in departmental and park information personnel occurred in 1970. In January J.A. MacDonald was appointed deputy minister of the Department of Public Works, and on his departure from Indian Affairs, organized for Michael Dibben to head the information services of his new department. Dibben's position in Indian Affairs and Northern Development was filled later in the year by Kenneth White. In November 1970 the Canadian Wildlife Service was merged with the Department of Fisheries and Forestry, which on June 11, 1971 became a component of a new Department of the Environment. Darrell Eagles accompanied other members of the Canadian Wildlife Service involved in the transfer, and accepted a position in the Information and Consumers Division of the Department of Fisheries and Forestry.

Departmental Reorganization
The office of the public information adviser in 1970 was providing information and public relations services for three major programs of the Department - Indian and northern affairs, northern development, and conservation. Each program was served by a specialized information unit which was seconded to the program concerned. In turn, each seconded unit was supported by administrative and specialized services, including design, graphic arts, print production service, audio-visual displays and exhibits under the general supervision of the Public Information Adviser.

Effective April 1, 1973, a reorganization of the Conservation Program changed its name to Parks Canada, and created a new position of director general who, with the directors of five national park regions, reported to a senior assistant deputy minister for the Parks Canada program. The reorganization also provided for an information services division for the program, on assignment from the public information adviser. The information services unit responsible for publicity for national and national historic parks, and for educational activities under the Conservation Program, had been headed since 1970 by Shirley Popham. She continued in that capacity for the Parks Canada program until April 1, 1974, when she became acting public information adviser on the departure of K.F. White from the department. In September, 1974, Miss Popham was seconded to the Privy Council Office, to supervise an information service created to assist the secreteriat for International Womens' Year.

New Director Appointed
On April 1, 1974, W.D. Mills, who had been secretary of the department and later an assistant director in the northern affairs program, was appointed director of the Department's information services - now known as the Public Information Branch. He served in that capacity until 1976, when he was selected as departmental representative for a special training course at National Defence College. On his return to the department, he became deputy director general for northern pipelines in the Northern Affairs program.

Information units of the Public Information Branch which had been assigned to various departmental programs were decentralized in 1975. They have since operated independently as components of the programs they serve, under a chief who reports to the assistant deputy minister. In 1976 the remaining support units of the Public Information Branch were merged with the Parliamentary Affairs Division and the departmental secretariat to form a new branch - Public and Parliamentary Affairs. A further reorganization, late in 1978, brought the information support services - including publishing, graphic design and the staff magazine - under the director of administrative services.

Following the departure of Shirley Popham from Parks Canada Information Division, several members served in succession as acting chief. In December, 1975, James Shearon was appointed chief of the Parks Canada Information Division. With a background in press, radio and television work, Shearon undertook the task of providing the Parks Canada program with an adequate information service. He instituted new measures for publicizing the attractions, advantages and benefits accruing from personal use of the national parks.

New Publications Issued
On June 1, 1972, jurisdiction over six canal systems in Nova Scotia, Quebec and Ontario was transferred from the Department of Transport to Indian and Northern...
Affairs. This led to the development of a new program known as Byways and Special Places, later changed to Agreements for Recreation and Conservation. The National Parks program was broadened to embrace canal systems, national marine parks, national landmarks and wild rivers. In cooperation with other departments and governments, new programs were initiated to meet the growing need of urban residents for recreation in quiet country places, along historic trails and natural avenues of water travel. Their recreational potential was set forth in two attractive illustrated publications printed in color in 1972 by the National Parks information unit. Entitled Special Places and Byways and Special Places, they provided the reader with brief descriptions of the 28 units comprising Canada's national park system, and portrayed various forms of outdoor life and recreation against attractive scenic backgrounds.

The reorganization of the National Parks Branch as Parks Canada in 1973 increased the three existing administrative regions to five, and provided for an information services unit in each region. A direct result of this phase of reorganization was a growth in the number of publications about natural phenomena, native wildlife and the recreational advantages available in national parks. These publications included revised editions of the national park information folders that had been introduced in the late 1930s, and a complementary series of folders describing national historic parks and sites. The compilation, editing and printing of much of this material fell to regional information and interpretive officers. Regional information staff, with the assistance of park interpretive officers, undertook the production of aids to interpretation and extension programs: guides to nature trails, leaflets and folders describing natural phenomena, as well as posters and maps.

Wild Rivers Featured
Another accomplishment was the compilation of a series of attractive illustrated pamphlets describing wild rivers in Canada. In 1971 the Planning Division of the National and Historic Parks Branch began a study of wild rivers situated in little-travelled regions of Canada, to assess their natural significance and recreational potential. The first study, undertaken in Yukon Territory, covered the examination of 15 rivers. The success of the study led to an extension of the project in 1972 to the Northwest Territories, Manitoba, Saskatchewan and Quebec, and to other areas in 1973. The studies were conducted by seasonal crews of students, directed by two project managers from the Planning Division in Ottawa. By 1979, from individual reports of the river studies, editors of Parks Canada's Information Division produced eight publications describing wild rivers in Alberta, British Columbia, Saskatchewan, Quebec, Newfoundland, Yukon Territory, the northern barren lands and the James Bay and Hudson Bay regions.

Audiovisual Presentations
In 1976 the Parks Canada Information Division launched a series of short color films which were distributed to Canadian television stations. Made by the National Film Board, they provided views of many of the national parks recently established in Canada, from Pacific Rim on the Pacific Ocean to Gros Morne and Forillon Parks on the Gulf of St. Lawrence. The films also provided glimpses of national historic parks and sites. Altogether 13 films were released - four in 1976, six in 1977 and three in 1978. That year a series of seven-minute films was released for distribution to movie theatres. A new departure was a commercial advertising campaign instituted in 1978, using such periodicals as the Canadian Geographical Journal, Macleans, Chatelaine and Readers Digest.

A group of scenic photographs of the national parks of Canada, taken for the branch between 1920 and 1945 by the late W.J. Oliver of Calgary, was mounted as an exhibition. The collection subsequently was on view in several prominent buildings in Ottawa, and later toured Canada's larger cities.

Two volumes of A History of Canada's National Parks were published in English and French in 1976 and 1977. A third volume was completed in 1978 and published in 1979. Publications printed for free distribution included a Guide to Camping in the National Parks of Canada and a Guide to the National Historic Parks and Sites of Canada. Another new pamphlet, National Parks - Who We Are and What We Do, summarized the functions and organization of the Parks Canada program. It also outlined the organization of a national parks region, and the administrative branches at departmental headquarters at Ottawa - including National Parks, National Historic Parks and Sites, and Program Coordination. The pamphlet included a complete list of the ministers of the various departments which had been responsible for national park administration, beginning with the Department of the Interior established in 1873.

Interpretation Activities Expanded
Although a reorganization of the department in 1968 had resulted in some changes in the information services, the National Parks interpretation section continued as a unit of the Operations Division, National and Historic Parks Branch. The chief park naturalist, Alan Helmsley, had made progress in widening the role of interpretation in the Conservation Program. During the 1968 season, field staff had been increased to include, in 14 national parks, a total of 17 permanent park naturalists and 33 seasonal naturalists. Before the season ended, interpretive programs had been presented to more than 750,000 visitors. By 1969 the new interpretation centres, the use of trailers to present the displays and interpretive messages, and the newly completed on-site exhibits, had helped swell the attendance at park interpretation programs to a new high of 825,000.

Early interpretive planning had been concentrated on national parks already established. But consideration was also given to areas examined as potential parks. As agreements were reached with the governments of the provinces or territories concerned, preliminary planning was undertaken so that interpretation activities would not be delayed unduly when the new parks were officially established. The creation of Kejimkujik National Park in Nova Scotia in 1968, and Kouchibouguac National Park in New Brunswick in 1969, highlighted the need for
In March 1970, through open competition, the interpretation section recruited Grant E. Tayler, a former associate of Alan Helmsley in the Ontario provincial park system. A biologist, Tayler had served as a seasonal naturalist in Algonquin Park as early as 1956, and from 1959 to 1965 he had been chief park naturalist there. Following Helmsley’s Ottawa appointment, Tayler took over the supervision of park interpretation in the Ontario park system. In 1970 he won a competition for a position of interpretation specialist in the national parks interpretation service, and began his new duties in March that year.

The addition of Grant Tayler to Helmsley’s staff, however, was offset by the departure of Dalton Muir. Muir had been active in helping to establish interpretation units in the individual national parks, and carried out field reconnaissance studies so essential for interpretative planning. He accepted a transfer to the Canadian Wildlife Service in June, 1970, to undertake environmental studies in the Northwest Territories on the impact of natural resource development by private enterprise.

From 1969 to 1972 the head office staff of the interpretation section was under heavy pressure from the branch directorate to complete park interpretation planning, arrange for field research, coordinate individual park programs and use increased appropriations being made available by parliament. With a limited staff available, some projects were completed but others were not.

Planning for a large interpretation centre in Waterton Lakes National Park began about 1969, and a substantial sum was included in the national parks estimates for 1970-71, as a portion of a contemplated overall expenditure of $500,000. A site overlooking Lower Waterton Lake was originally selected for the centre, and considerable time and effort were devoted to its overall planning. An appropriation was continued in the departmental estimates for 1972-73, although the contemplated overall expenditure was reduced. Eventually the project was cancelled by the director of the National and Historic Parks Branch. Instead a new indoor theatre was constructed in the townsite of Waterton Park, to replace an outdoor amphitheatre which had been used by park interpretation officers for audiovisual productions and other presentations. The site selected for the new theatre within the townsite area, near Cameron Falls, was readily accessible from the park campground; it was also close to the fish-rearing ponds, which continued to be a popular attraction for visitors.

**Cheticamp Interpretation Centre**

Although plans for a large interpretation centre at Waterton Lakes National Park were discarded, the park interpretation section had better luck with a similar project in the Atlantic region. Planning for an interpretation centre near the Cheticamp entrance to Cape Breton Highlands National Park in Nova Scotia was under way by 1971, and the park estimates for the ensuing five years included an appropriation for the project. Major construction, however, was delayed until 1975, and the center was completed the following year at a cost of nearly $450,000.

**Research Projects**

There was only a limited staff with the requisite academic qualifications to undertake research projects related to the needs of an interpretation service. Part-time assistants were therefore engaged under service contracts. Although Stirrett, Muir and Helmsley all were qualified to undertake scientific investigation, administrative duties preempted much of their time. This difficulty was largely overcome, however, by engaging university staff with degrees in biology, geology, history and other subjects. Research was usually carried out during summer periods when the university personnel members were free from normal duties.

From 1965 to 1970 inclusive, research studies were undertaken under 46 separate contracts. Studies included botanical and ornithological research in Point Pelee National Park, the exploration of caves in Glacier, Jasper and Banff national parks, and geological studies in several of the mountain parks. Among the notable explorations completed was that of Castleguard caves in the Columbia Icefield, in the vicinity of Mount Castleguard.

Until 1971 most of the work in drawing up contracts fell to the national park staff at Ottawa. That year it was decided that the terms of reference for a contract could best be prepared by park naturalists, and later referred to the branch director at Ottawa through the offices of regional directors.

**Interpretation Planning Decentralized**

By December 1971 it was agreed by Alan Helmsley and senior officers of the National Parks Branch at Ottawa that the interpretive planning function should be decentralized to the regional offices of the Atlantic, central and western regions. At that time, Helmsley and his limited staff were responsible for interpretation planning. The staff consisted of Grant Tayler, the interpretation specialist, and three interpretation planners - Robert Gray, William Wyett and Mary Dwyer. The three last-named officers had been recalled from park interpretation duties to Ottawa. The technical staff consisted of Bruce Harding and John Crosby, design and exhibit specialists. Another officer, Gordon Avent, was responsible for the administration of the section, including financial and contract coordination. Later he undertook these responsibilities for the entire Operations Division.

Reassignment of staff began in April 1972. Gray went to the Atlantic region at Halifax, and Wyett to the central region at Cornwall. The position of interpretation planner for the western region at Calgary remained vacant for some time before John MacFarlane was transferred there from Fundy Park. The design specialist, Bruce Harding, also was assigned to Calgary, while John Crosby, who was slated for the Atlantic region at Halifax, decided to return to the Design and Technical Services Division of the National Museums of Canada in Ottawa. Interpretation projects of varying character were then under way or contemplated in 18 national parks - six in the Atlantic region, five in the Central region, and seven in the Western region. Priorities were established for a number of these projects, and others were deferred.
Early Interpretation Planning

A significant factor in the extension of park interpretation in Canada's national parks has been the development of interpretation planning. Introduced by Alan Helmsley in 1965, it was carried on sporadically for several national parks until 1972, when steps were taken to establish a plan for the whole park system. In February 1972 interpretation officers from all existing parks and park regions attended a seminar conducted by Grant Tayler in the interpretation centre at Point Pelee National Park. Here, under the coordination of Tayler, the basis for a unified approach to national park planning was reached through the development a conceptual interpretation plan for Point Pelee Park.

During the two years following, the efforts of a planning team coordinated by John MacFarlane, interpretation planner for the western region, resulted in a composite interpretation plan for seven mountain parks: Banff, Jasper, Kootenay, Yoho, Waterton Lakes, Glacier and Mount Revelstoke National Parks. Much of the team's success was achieved by a departure in method using a conservation approach to interpretation rather than the traditional natural resources approach. By combining a systems approach with communications planning, the team achieved a basis for subsequent programs and projects throughout the western region. It has since been adopted by other national park regions in Canada and other countries.

The planning team responsible for the mountain parks conceptual plan included the coordinator, John MacFarlane; Bruce Harding, media planner, and Kurt Seel, interpretive specialist, both of the western region; chief park naturalists Ross Dobson, Bob Greyell, Ian Jack and Dave Neilson; and park naturalists Greg Belland, Don Karasiuk and Jim Todgham.

Helmsley Bows Out

Meanwhile Alan Helmsley, who had headed the interpretation section since 1965, had been giving personal consideration to the changes in administration that were under way. At this point he had spent 25 years in interpretation work in the Ontario and federal public services; and in establishing programs and recruiting personnel for more than 20 national parks, he had achieved considerable success with the aid of a small executive staff. He had, however, experienced some frustration in reconciling his proposals with those of his senior officers; and the department's decision to decentralize interpretation activities and delegate exhibit planning and programs to the park regional offices finally triggered his departure.

The Public Service Commission referred Helmsley to the National Museums of Canada, reorganized as a corporation in 1968. At that time the corporation was establishing its "museumobile" program, and Helmsley believed that he could make an adequate contribution in that field. After discussions with the assistant director of National Parks and the director of the Museum of Natural Sciences, Helmsley was seconded to the museum staff. A formal transfer was arranged later. Helmsley's immediate task, undertaken on April 14, 1972, was the development of an interpretation program that would be implemented after the opening of the National Museum of Natural Sciences in the reconstructed National Museums building in Ottawa. Helmsley already had served under Dr. Louis Lemieux, director of the new museum, while Lemieux was chief of the National Parks Service, from August 1969 to May 1970. Helmsley remained with the Museum of Natural Sciences until his retirement in June 1977, after serving as chief of interpretation and extension and later as exhibits adviser.

The duties of chief of national parks interpretation were carried on by Grant Tayler as acting coordinator. On April 1, 1973, with the reorganization of the Conservation Program as the Parks Canada Program, the interpretation function was given new status and a new name - the Interpretation and Extension Division. The division was now responsible to the director of the National Parks Branch for the development and coordination of policies relating to the interpretive programs in the national parks; for the extension of programs to schools and outside groups; for interpretive research; for park information systems; for international and special visitors' programs; and for maintaining a speakers' bureau.

Additional Staff Acquired

From 1972 to 1975, replacements were obtained for staff members transferred to regional offices. A notable addition was Gary D. Sealey, who joined the National Parks Branch late in June 1973 as an interpretation specialist. A native of British Columbia, he had attended schools and university in that province, specializing in history and English. He obtained a master's degree in history at the University of Western Ontario in 1970. Later he was employed in the Parks Division, Ministry of Natural Resources for Ontario, filling the positions of historical research officer, research historian and park interpretation supervisor. While engaged in provincial interpretation work in Ontario, he was active in helping to expand the provincial parks system. He undertook the regionalization of several aspects of the Ontario parks functions, and developed a children's interpretive program at eight different provincial parks for two successive years. Besides lecturing, he participated in seasonal naturalist workshop and in planning and policy seminars. In 1972 the Interpretation Division staff at Ottawa was augmented by a project officer, J.P. Foley, and an audiovisual specialist, B.R. Dore. By 1973 the division staff numbered eight, including some members who had served as park naturalists before being transferred to Ottawa.

Division Chief Appointed

In January 1975 the long-vacant post of chief of the Interpretation and Extension Division was advertised, and the examining board selected Gary Sealey for the position, effective February 3, 1975. Subsequent reorganization confirmed Grant Tayler as head of planning and development; other officers were given responsibility for interpretive planning, extension services, interpretive services, program evaluation and cooperative activities. In 1973, a new interpretation division was established to plan and direct interpretive programs for the national
historic parks and major historic sites. This history, however, is concerned only with national parks, and additional information on historic parks interpretation may be obtained from the National Historic Parks and Sites Branch, Parks Canada, Ottawa.

1979 Administrative Changes

A further change in the responsibilities and functions of the Interpretation and Extension Division of the National Parks Branch occurred on March 1, 1979. With the approval of the assistant deputy minister for Parks Canada, the visitor services section of the Park Activities Division was transferred to the Interpretation Division to form a new Interpretation and Visitor Services Division. Gary Sealey remained as chief of the new division. In turn, the cooperative activities section of the Interpretation Division was merged with the rest of the park activities section to form the Communities and Cooperative Activities Division, headed by Donald Lockwood. Grant Taylor now was responsible for interpretation services, John MacFarlane for extension activities, and James Lunney for visitor services policy. Assisting Donald Lockwood were Blair Stevens in cooperative activities, Jean Pilon in management plan review, and Ken Craigie in community relations.

More Recent Programs

Considerable space would be needed to relate in detail the numerous activities and programs of the Interpretation and Visitor Services Division. Consequently, this chapter will conclude with brief descriptions of some of the more successful methods employed in publicizing the benefits and attractions which national parks hold for Canadians. As newer forms of presentation are unfolded, it can be expected that public participation will increase, resulting in a better understanding and appreciation of this part of our national heritage.

The reorganization of the former Conservation Program as the Parks Canada Program in 1973 created a broader field of endeavor for staff members engaged in interpretation activities. The section responsible was renamed the Interpretation and Extension Division, with a view to bringing about a wider understanding of the parks to cities, homes and schools. A major study of educational needs for national parks was undertaken, and an interagency task force began research into ways of improving park education. Interpretation and extension programs and methods were evaluated to determine what steps were necessary to make them more effective.

An important interpretation project commenced in 1974 was the preparation of major audiovisual programs for national parks. These took the form of multiprojection slide shows, with musical and narrative sound accompaniment. Two shows dealt with the new national parks in the province of Quebec - La Mauricie and Forillon - while two others described the national parks of eastern and western Canada. Within two years, each of the national park regions had developed its own audiovisual unit and the headquarters unit at Ottawa was disbanded.

Parks Conservation Corps

During the summer of 1971 the National and Historic Parks Branch had sponsored a junior park warden program in Fundy and Georgian Bay Islands National Parks. It was undertaken as an experiment to enable young Canadians to study park resources, wildlife and fisheries management. Officers of the Interpretation Division were involved in the training program which, in its initial year, proved very successful.

In 1972 the program was expanded as the National Parks Conservation Corps. Funds were provided in 1973 to recruit, through Canada Manpower offices and schools, candidates for 16 positions in each of 11 national parks across the country, permitting training opportunities for 176 students. The program was continued through successive years until 1978-79, when it was temporarily suspended. During the seventh year of its operation, the Conservation Corps program offered training for 224 students in 14 national parks. The students were instructed in trail and trail bridge construction, forest fire prevention and suppression, wildlife surveys, restocking of park waters with game fish, and other phases of park conservation activity. They were also trained in the use of boats and canoes. Camps in some parks were confined to boys, in others to girls; in some parks both boys and girls were accommodated. Canada’s native population was also represented.

Park Awareness Program

The year 1976 marked the beginning of a “park awareness” program, a successful cooperative venture under which sponsoring conservation agencies hired 42 students to create meaningful projects for communicating the purpose of national parks to Canadians. Projects undertaken included student mime-theater presentations, traveling exhibits, a compilation of St. Lawrence Seaway historic songs, educational media for schools and social club use, and other projects telling the story of national parks to audiences across the land. Parks Canada provided the funds to the sponsoring agencies, which in turn paid the students involved. The budget for the project was $100,000.

One of the most successful projects was a travelling clown show, Fantasy National Park, which was sponsored by Heritage Canada in cooperation with Ottawa’s Theatre Resources Centre. An early performance was given in the National Conference Centre, Ottawa, before a large audience of Parks Canada and other departmental personnel. Later the show was staged in major cities in Canada from coast to coast. The Ontario regional office of Parks Canada published a whimsical guide to reptiles and amphibians found in the national parks in Ontario, entitled Foul and Loathsome Creatures.

The Canadian beaver, a symbol long associated with Canada’s national parks, was selected as a logo identification for Parks Canada, complementing a successful sign program. At the same time uniforms for male and female Parks Canada staff were modernized.

Low Power Radio Transmission

The year 1973 saw the experimental use of low-wattage radio transmitters. Then, beginning in 1975, standard
broadcast French and English language stations began operation at the Columbia Ice Field interpretation centre in Jasper National Park, and at park information centres at Rogers Pass in Glacier Park and at Ingonish Beach in Cape Breton Highlands Park. The use of these transmitters enabled visiting motorists equipped with radios to tune in on taped programs broadcast on standard bands, which provided information on notable park features and public facilities. Difficulties experienced in broadcast strength and the servicing of imported equipment led to the development of Canadian 5-watt transmitting equipment which overcame these problems. The success achieved in the experiment led to additional installations being made in Waterton Lakes, Banff, and Prince Edward Island National Parks.

Communications Program
Another interpretation program was launched as a pilot project in 1976, using park concessionaires. Concessionaires in Banff National Park who bring the visiting public into direct contact with the park environment were invited to participate in the scheme, which, as envisioned, would produce a multiplier effect. This involved the use of various agencies and personnel, not directly employed by Parks Canada, to promote its communications objectives.

During the first season of the program’s operation, the superintendent of Banff Park engaged Sheila Robinson on contract to train concessionaires’ employees. Mrs. Robinson, had previously been a seasonal member of the park interpretation staff. The training sessions attracted employees drawn mainly from the largest motor tour operator in the park. Lecture subjects included the history of the park, its flora and fauna, geology, park administration, examples of unique natural phenomena, and outstanding scenic landmarks. After training, the concessionaires’ employees staff members, were able to interpret the areas in which they operated to a larger number of visitors.

The program was an unqualified success. It was repeated in 1977, when 208 members of concessionaire staffs registered at training sessions. These were drawn from companies engaged in bus tours, boat and raft tours, gondola and cable car lifts, and major hotels. In 1978 the number of trainees accepted for training rose to 709. That same year Mrs. Robinson produced a reference manual entitled The Book of Banff. This manual, used to supplement formal training sessions, contained a great deal of information on subjects of interest to park visitors. Its 160 pages contained sections devoted to the flora and fauna of the park, descriptions of the park’s geology and glaciology, a brief park history and details of national parks administration.26 Copies were made available to local schools, libraries and national park staff. The original edition of 300 copies was rapidly exhausted, and a second edition of 1,500 copies was printed in 1979. At the time of writing, the program gave promise of further expansion, with a similar program planned for Glacier and Mount Revelstoke National Parks.

Cooperative Activities
In July 1978 Hugh Faulkner, the minister responsible for Parks Canada, announced a study of a proposal to provide for the establishment of a non-government, non-profit association dedicated to the promotion and interpretation of the values of Canada’s national parks. As proposed, the National Parks Cooperating Association would maintain activity centers in or near each of the national parks. Its function would be the enhancement of public appreciation and enjoyment of the national heritage.

The study, aimed at determining the best arrangements for establishing the cooperating association, was entrusted to Dr. Theodore Mosquin, a former director of the Canadian Nature Federation. Dr. Mosquin’s report was received by the Department of Indian and Northern Affairs in May, 1979, and at the time of writing, its recommendations were being studied.27 Cooperative activities would involve a sharing of resources, expertise and responsibilities to achieve common objectives. Such activities, initiated by Parks Canada, would rest on formal arrangements to achieve a more beneficial result than any of the parties could have achieved by itself. The cooperating association and its agencies would produce, sell and distribute park-related publications and similar items to the public on a cost-recovery basis. They would operate their own information outlets, expand library facilities, extend support to interpretation activities and assist in providing visitor information. Plans called for the association to become self-sufficient through profits from the sale of items to the public.

Conclusion
During the 20 years that followed the launching of an authentic interpretation program in Canada’s national parks, much was accomplished. Permanent naturalists were appointed in most of the larger and easily accessible parks, and new methods of interpretation had been developed. More visitors than ever before were learning why national parks were established, and discovering through personal experience the benefits to be derived from using them. In 1965, when the first permanent park naturalist positions were created, 12 permanent field staff were divided among 12 parks, while seasonal staff totalled 13. By comparison, in 1978–79 the permanent staff involved in interpretation activities in 26 national parks was 51, and seasonal staff engaged numbered 131.

Nearly 50 years ago J.B. Harkin, Commissioner of National Parks, made the following observation:

The day will come when the population of Canada will be ten times as great as it is now, but the National Parks ensure that every Canadian, by right of citizenship, will still have free access to vast areas possessing some of the finest scenery in Canada, in which the beauty of the landscape is protected from profanation, the natural wild animals, plants and forests preserved, and the peace and solitude of primeval nature retained.28

During the interval, the number of our national parks has increased substantially and their areas have expanded, thus enhancing the opportunities for Canadians to visit and enjoy them. Parks Canada - the administrative authority - is now entering an era of cooperative resource management and of new technology in commu-
communications. This is a period in which Canadians are indicating, more than ever, a desire to help Parks Canada to increase opportunities for their fellow citizens to visit, appreciate and enjoy this part of the national heritage. With the 1985 centennial of Canada’s national park system approaching, preparations were under way to celebrate the anniversary. The Interpretation and Visitor Services Division of Parks Canada was counted upon to exert every effort to help Canadians to participate and gain a new insight into what national parks mean to the nation.

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The compilation of this volume was achieved with the generous assistance of many former associates and friends in the Public Service of Canada. Although much of the required research involved the examination of existing records, documents and files now in the custody of the Department of the Environment and the Public Archives of Canada, valuable contributions were received from other sources. Especially helpful were the recollections and data provided by Parks Canada personnel - both active and retired - which help bridge the time gap from the date I retired from the Public Service until the manuscript was completed.

To Jean-Paul Cuerrier, former limnologist of the Canadian Wildlife Service, and later senior scientific adviser to the director general, I am indebted for invaluable help in narrating the history of game fish propagation in the national parks. The contribution of Joe Kilistoff of the Resources Division, Western Region, Parks Canada, in reviewing the manuscript, also is appreciated.

The chapter recording the growth of the Canadian Wildlife Service provided interesting research. When I first became associated with the National Parks Branch in 1930, the Wildlife Division had grown from a one-man effort to a substantial group concerned with the protection of migratory birds and assisting in the administration of the wild animal parks. Later, as the Canadian Wildlife Service, it assumed greatly enlarged responsibilities in wildlife protection, and was given branch status before being transferred to another ministry. An insight of its growth and activity was obtained by the review of an unpublished history written by Harrison F. Lewis, Ph.D., its chief officer for eight years. I especially appreciate the interest of Dr. John Tener and Alan Loughrey, successively the former and current director general of the Canadian Wildlife Service - both of whom read my manuscript. Thanks are also due to Dr. N.S. Novakowski, coordinator of wildlife research; Dr. V.E.F. Solman, coordinator of habitat and ecological assessment; Dr. L.P.E. Choquette, chief of wildlife pathology and parasitology; and Roy Webster, acting chief of interpretation, Canadian Wildlife Service, for valuable information and assistance.

Former associates in the Western Regional Office at Calgary took a special interest in chapters dealing with the buffalo and antelope, the park warden service, and the repossession of title to mineralized and forested park lands. James Sime, recently retired natural resources officer and a former chief park warden, was more than generous with his time and effort. He reviewed the first, third and fourth chapters and offered constructive suggestions. He also made possible an interview with "Bud" Cotton, former senior park warden at Buffalo National Park, Alberta, from whom I obtained previously unknown facts relating to the development, decline and eventual elimination of Canada's great bison herd at Wainwright. Completion of the text dealing with the acquisition of timber berths and mining claims in the national parks was facilitated by Steve Kun, director of the National Parks Branch and formerly regional forester, Western Region; Reinhardt Kroll, former parks conservation officer, and Brian McDonald, resource officer, Western Region, Parks Canada. All assisted by reviewing the manuscript and furnishing relevant documentary source material.

The history of the national park interpretation service proved an interesting field for research, in which I received assistance from present and former members of the Interpretation and Visitors Services Division. Dr. George Stirrett, first chief park naturalist now retired, provided details concerning the development of the first park nature trail at Point Pelee, and also of the organization of early interpretation activities. Alan Helmsley, chief of interpretation from 1965 to 1972, recalled details of interpretation development and offered constructive comment on the draft manuscript. Grant Tayler, interpretation policy head, and John MacFarlane, extension head, extended generous assistance by providing comments, background material and reports. Gary Sealey, chief of Interpretation and Visitor Services, indicated a keen interest in this history, and his suggestions helped broaden the scope of the manuscript. Observations offered by Harry Webster of the Western Region and Dick Sutton of the Prairie Region also are gratefully acknowledged, as are the recollections of Syd Roberts, former chief parks information officer at Ottawa.

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W.F. Lothian, Ottawa, April 30, 1980.
William Fergus Lothian, the author of this history, on March 31, 1981, completed nearly 64 years in the Public Service of Canada, much of it in Parks Canada. He fulfilled successively the duties of clerk, book-keeper, publicity assistant, publicity writer and administrator, ending his permanent service of 51 years as Assistant Chief of the National Parks Service.

Following his retirement in 1968, he accepted an invitation from his Director to compile a definitive history of national park development in Canada under contract. This volume, the fourth, completed the original assignment.

"Ferg" Lothian has had an active life. He has headed tennis and badminton governing bodies in the national capital; wrote a sports column for the Ottawa Journal for 17 years; and is an honorary life member of the Ottawa Tennis Club. He is a former director of the Historical Society of Ottawa, an emeritus member of the Professional Institute of the Public Service of Canada, and in 1978 was awarded the J.B. Harkin medal by the National Parks and Provincial Parks Association of Canada in recognition of his service and contribution to national park administration. He was 81 years old on June 16, 1981.