

Department of **NORTHERN AFFAIRS** and **NATIONAL RESOURCES**

annual report FISCAL YEAR **1958 • 1959**

and a special article...

**EVERYBODY'S BUSINESS — TRAVEL IN
CANADA**



*Department of
Northern Affairs and
National Resources*

ANNUAL REPORT

FISCAL YEAR 1958-1959

Including an article
Everybody's Business - Travel in Canada

Price 50 cents

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*To His Excellency Major General Georges P. Vanier, D.S.O.,
M.C., C.D., Governor General and Commander-in-Chief of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

The undersigned has the honour to lay before Your Excellency the Annual Report of the Department of Northern Affairs and National Resources for the fiscal year ended March 31, 1959.

Respectfully submitted,

ALVIN HAMILTON
*Minister of Northern Affairs and
National Resources*

*The Honourable Alvin Hamilton, P.C., M.P.,
Minister of Northern Affairs and
National Resources*

SIR:

I have the honour to submit the Sixth Annual Report of the Department of Northern Affairs and National Resources for the fiscal year which ended March 31, 1959.

The expansion of departmental activities is reflected in expenditures which totalled \$65,176,832 in 1958-59 as compared with \$49,071,273 in the previous fiscal year. It is interesting to note that while our expenditures increased by about 32 per cent, revenues climbed 300 per cent from last year. Most of this increase in revenue is attributable to the much greater exploration activity on the part of oil and gas companies working in the North.

The results achieved by our efforts to implement your policies of national development have been gratifying during the period under review. The momentum of northern development accelerated sharply, necessitating an administrative re-organization of the Northern Administration Branch. Particular attention has been devoted to territorial development roads and the pace of their construction has been stepped up. Nine of the ten provinces have accepted your offer of federal assistance for the construction of Roads to Resources and work is already underway on agreed programs in all participating provinces. Preliminary planning has commenced for the National Conservation Conference. The effectiveness of the Forestry Branch has been greatly increased by the completion of the two new Forest Products Laboratories in Vancouver and Ottawa. Good progress has been made on Canada's newest National Park—Terra Nova in Newfoundland. Our Water Resources Branch continued to provide valuable advisory service to the Government in connection with the Columbia River and other complex problems in water use. Planning to enlarge the National Museum considerably and to institute a program to make it a more positive force in Canadian life has gone ahead, as well as the usual research work in the human and natural sciences.

The Canadian Government Travel Bureau continued its program to promote travel to Canada. The special Atlantic Provinces campaign was particularly successful and was undoubtedly a factor in the significant increase in the number of tourists visiting the area during 1958. The Bureau made good progress in the revision of all its tourist literature and adopted a new slogan for its U.S. advertising: "Canada—the wonderful world at your

doorstep". I would particularly draw to your attention a special article examining the Canadian tourist industry which appears as a preface to this Report.

National attention was attracted to the economic potential of the Northwest Territories by the eagerness of private enterprise to explore for oil and gas. Exploration permits for more than 48 million acres in the Yukon and Northwest Territories were issued and priorities for permits allotted on more than 80 million acres in the Arctic Islands. In the light of this activity and of probable developments in future years, oil and gas regulations were studied continually throughout the year. The new Territorial Oil and Gas Regulations, which came into effect in August, 1958, are intended to encourage additional exploration and development and to further safeguard the public interest. At year's end, new regulations were being prepared for the oil and gas areas lying north of 70 degrees latitude and for the lands lying under Canadian territorial waters.

In this connection, the area of Canada available for exploration and development has been significantly augmented as the result of the International Convention on the Continental Shelf adopted in April 1958 at the Geneva Conference on the Law of the Sea. This Convention gives the coastal state sovereign rights to explore and exploit the resources of the sea-bed and subsoil out to a depth of 200 metres, or beyond that depth if exploitation is economically feasible.

The major northern construction project was the extension of the Mackenzie Highway to Yellowknife. Fifty-eight miles of construction was completed bringing the road to a point 35 miles north of Fort Providence at its southerly end. About 40 per cent of the northern section from Yellowknife to Rae has been finished. Work was started on the Dawson-Eagle Plain Road in the Yukon Territory, the bridge across the Yukon at Carmacks on the Whitehorse-Dawson Road came into service, and construction of the Pelly and Stewart bridges continued. Schools, hotels, housing units, workshops, warehouses and other structures were built or improved.

As in earlier years, the Department was concerned with the problems being encountered by the Eskimo people as a result of the changing economy of the North. For those Eskimos who depend on the dwindling caribou herds and the other resources of the land, the situation is grave unless measures are taken to diversify their economy. During the year, 120 people from the interior of the Keewatin District were re-settled at Rankin Inlet on the west coast of Hudson Bay in order to protect them from the ever-present threat of starvation. Regular patrols were made to outlying camps in the Keewatin District and our ability to locate Eskimos in distress was greatly improved by the assignment of two R.C.M. Police aircraft to operate in cooperation with Northern Service Officers under an arrangement by which this department shares in their costs of operation.

To cope with the diverse and swiftly changing problems of northern administration, the Northern Administration Branch was reorganized. In

this reorganization, more administrative responsibility was delegated to the field staffs and the functions of the various divisions defined more clearly. A new division was created to foster those smaller economic developments that will bring practical and immediate benefits to the Eskimo people. This division supervised the organization of the first Eskimo co-operatives during the year.

The Sir John Franklin School at Yellowknife, together with its 100-pupil residence, Akaitcho Hall, were opened in September 1958. This composite high and vocational training school was built and is operated by the Federal Government in co-operation with the Territorial Government, which contributed toward the cost of the school. Forty-six schools were operated for 3,692 full-time and 237 part-time pupils, including 1,394 Eskimo children.

The Advisory Committee on Northern Development has met regularly throughout the year. This Interdepartmental Committee is charged with the responsibilities of advising the government on questions of policy relating to northern Canada and of providing for the effective coordination of government activities in that area. Sub-committees concerned with Construction, Transportation, Telecommunications, and Scientific Research considered more detailed matters. The Secretary of the Committee has arranged for the co-ordination of government activities in accordance with the recommendations of the Advisory Committee and its sub-committees.

In research and in administration of agreements providing assistance to the provinces, the Forestry Branch continued to make significant contributions to the knowledge of silviculture and forest management, to the provincial administration of forests and to the technology of the wood-using industries. Federal financial assistance to the provinces was provided under Canada Forestry Act agreements for inventories, reforestation, fire protection and the construction of access roads. The forestry agreements, since their inception in 1951, have provided more than \$15 million in federal funds to the provinces.

Reports of the seven provinces participating in the Federal-Provincial agreements for forest inventories were completed by March 31, 1959, and cover a national gross inventory area of 1,129,000 square miles of forest. During the fiscal year, six provinces received payments for the planting of a total of 15,548,000 trees, and nine provinces were allotted \$750,000 to assist in the extension of fire protection facilities. Agreements under which the Federal Government contributes half the cost of constructing forest access roads and trails were implemented for a second period of eight months. Federal contributions under these and the previous agreements amounted to \$2,698,333 up to the end of the fiscal year.

The Forest Products Laboratories of Canada exploited the facilities provided by its new laboratories at Ottawa and Vancouver to pursue 200 research projects. Research in timber physics achieved some important results, notably the development of a sonic device for detecting defective glue bonds in plywood.

Visitors to the National Parks totalled more than four million. The road reconstruction program continued to improve travel facilities within the parks. The winter works program undertaken by the National Parks Branch provided 6,415 man-months of employment. Steady employment for 1,500 men was provided between January and March.

In addition to the development of Terra Nova National Park, major projects undertaken by the National Parks Branch included the construction of a promenade between Dufferin Terrace and the Plains of Abraham at Quebec City, and completion of the restoration of Fort Langley under an agreement with the Government of British Columbia. The 18th century building at 17 St. Louis Street, Quebec City, was acquired as a national historic site and its restoration started. Seven historic sites were marked.

The Canadian Government Travel Bureau reports that travel expenditures in Canada by visitors from the United States and other countries in 1958 was \$352 million, about \$10 million less than in 1957. An increase in interprovincial travel by Canadians helped offset this decrease in U.S. tourist traffic. More than 28 million people come to Canada each year for holidays, and this flow of tourist traffic can be increased, with beneficial results to the economy. Of significance to the tourist industry was the Government's announcement that federal aid would be available to the provinces for the construction of campsites and picnic grounds along the route of the Trans-Canada Highway. The details of this program were decided in consultation with representatives of the provinces at the Federal-Provincial Tourist Conference in December 1958, and the Federal Government agreed to meet one-half of the estimated \$4 million cost of providing these facilities.

While the Trans-Canada campground and picnic area program was a new undertaking, the winter work program of the previous year was repeated. Under these arrangements federal assistance was available to the provinces for the construction of campgrounds and picnic areas anywhere within a province. More than 4,000 man-months of winter employment were provided by the projects undertaken under these agreements. Since this work began, 500 picnic areas and campgrounds have been started and \$3.5 million provided as the Federal Government's share of this work.

The Water Resources Branch continued its studies and recording of Canada's water power resources. Field operations of the hydrometric survey, which is a major part of the branch's program, involved 7,206 stream discharge measurements and 2,097 inspections at the 1,268 gauging stations maintained all across Canada. Almost 2½ million horsepower of new hydro-electric capacity was added during the year bringing the total installed turbine capacity to 22 million horsepower.

This review is intended to summarize briefly the activities of the Department during the fiscal year. I trust that you will be able to discern in these bare facts some notable accomplishments achieved through the efforts of a capable and loyal staff. I also wish to acknowledge the outstanding spirit

of co-operation displayed by other departments of government and the various provincial, territorial and municipal agencies with which we have dealt. Their assistance and advice has been appreciated deeply. In particular, I should like to express appreciation for the services rendered to our Department by the Translation Office and the Office of the Chief Treasury Officer.

Your obedient servant,

R. G. ROBERTSON,
Deputy Minister

CONTENTS

	PAGE
LETTERS OF TRANSMITTAL	3, 4
SPECIAL ARTICLE	
Everybody's Business — Travel in Canada	13
ANNUAL REPORT	
Introduction	23
Northern Administration Branch	24
Education Division	24
Engineering Division	26
Industrial Division	27
Resources Division	30
Territorial Division	35
Welfare Division	37
National Parks Branch	41
National Parks Service	41
Engineering Services Division	44
National Historic Sites Division	45
Canadian Wildlife Service	46
Water Resources Branch	48
Hydrometric Surveys	48
Waterway Problems and Water Power Administration	49
Forestry Branch	53
Forest Research Division	54
Forestry Operations Division	57
Forest Product Laboratories Division	60
National Museum of Canada — Natural History Branch	63
— Human History Branch	66
Canadian Government Travel Bureau	70
Travel Counselling	71
Publications	71
Publicity	72
Administration Services Branch	74
Economic Division	74
Editorial and Information Division	74
Legal Division	75
Personnel Division	75
Purchasing Division	76
Northern Research Co-ordination Centre	77
APPENDICES	
Appendix A—Summary of Revenues and Expenditures	79
Appendix B—Northern Administration Branch	80
Appendix C—National Parks Branch	85
Appendix D—Forestry Branch	90
Appendix E—National Museum of Canada—	
Natural History Branch	94
Human History Branch	94
Appendix F—List of Technical Publications issued 1958-59	96
Appendix G—Report of the Commissioner Northwest Territories	103
Appendix H—Report of the Commissioner, Yukon Territory	109

Inserted at the back of this Report is a map showing the location of national and historic parks; game reserves; highway projects; forestry, water resources, wildlife, engineering and Northern Administration offices and posts, and other centres of departmental activity.

Department of Northern Affairs and National Resources*

Minister HON. ALVIN HAMILTON, P.C., M.P.
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 Special Assistant R. A. FAIBISH

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 National Historic Sites Division *Chief*—J. D. HERBERT
 Engineering Services Division *Chief*—G. L. SCOTT
 Canadian Wildlife Service *Chief*—W. W. MAIR

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 Operations Division *Chief Engineer*—J. D. MCLEOD
 Hydraulics Division *Chief Hydraulic Engineer*—R. H. CLARK

* as of December 1st, 1959.

Forestry Branch

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Forest Research Division *Chief*—D. R. REDMOND
Forestry Operations Division *Chief*—H. W. BEALL
Forest Products Laboratories Division *Chief*—J. H. JENKINS

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Mineralogy S. C. ROBINSON (Hon. Curator)
Palaeontology (Vertebrate) W. LANGSTON JR.
(Invertebrate) H. W. FREBOLD (Hon. Curator)
Zoology A. W. F. BANFIELD

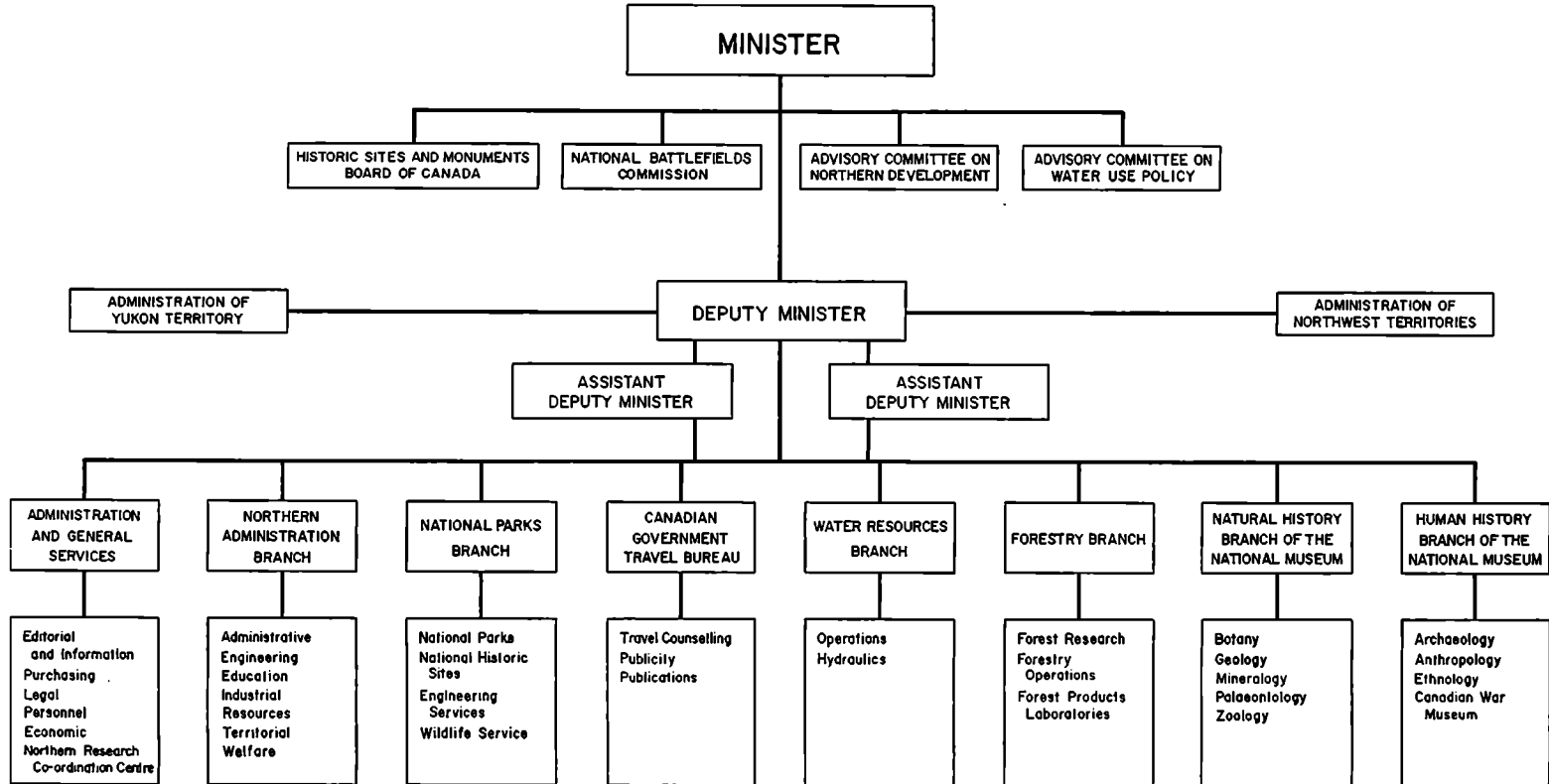
**National Museum of Canada—
Human History Branch**

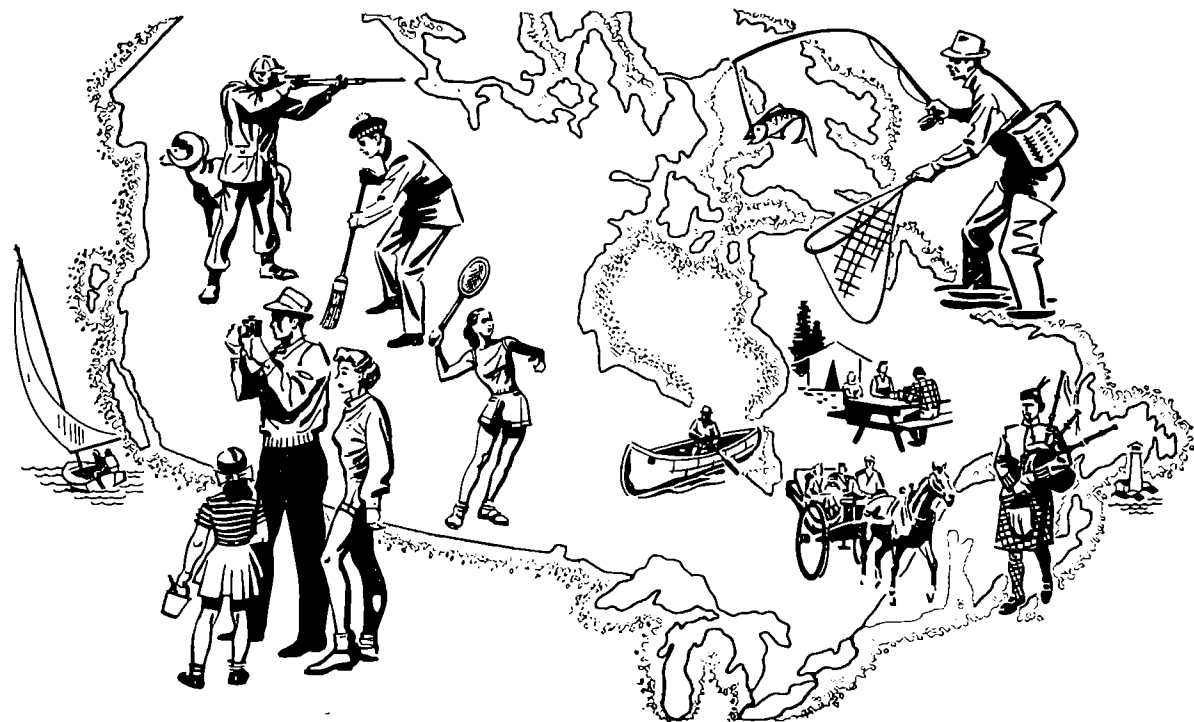
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Archaeology R. S. MACNEISH
Anthropology T. F. S. MCFEAT
Folklore CARMEN ROY
Canadian War Museum L. F. MURRAY

Canadian Government Travel Bureau

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Publicity R. DEGROBOSIS
Research H. CROMBIE
Films and Television F. GALIPEAU
Administration H. LYLE KOHLER

DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES





Everybody's Business — Travel in Canada

The desire to travel stems from the very first man who roamed the earth in search of food and shelter, and to satisfy an insatiable curiosity about his environment.

Through the centuries this deep-rooted restlessness was a driving force behind the great explorers and adventurers. It opened new lands for settlement, created vast empires, and increased our knowledge in every field of endeavour. As civilization progressed, new reasons for travel developed. There was travel for commerce, for religion, for education and for health. There was travel for pleasure, too, but it was almost exclusively reserved for the wealthy. Even then, only the hardy few dared to take journeys of any length. Transportation was slow, uncomfortable and costly, and trips were oftentimes dangerous.

During the twentieth century, this picture has been changed by new developments in transportation, accommodation, and services, and by the increase in personal incomes and leisure time. Travel for pleasure is now available to almost all North Americans. Interest in visiting distant places has grown as the opportunities have increased and today masses of people travel everywhere on a scale never before known.

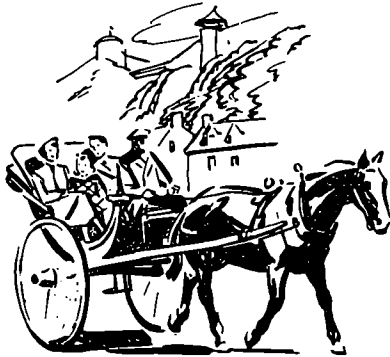
In economic terms, recreational travel has become one of Canada's major industries. It is our third ranking source of export income, surpassed only by newsprint and wheat. It has grown to such an extent over the past two decades that the standard of living of every Canadian is affected to some extent by the progress it makes each year.

But to see tourism only in economic terms is to miss its wider significance. Experience of other regions has important effects on the growth of national consciousness in Canada, and impressions gained at first-hand in other countries can contribute to wider international understanding. Visiting gives, both to the guest and to the host, deeper insights into a world where all peoples are neighbours.

Most Canadians are frequently tourists themselves, and expect and appreciate good facilities and a hospitable welcome in the regions they visit. In return all share the obligations of the good host.

Tourist Fundamentals

Our reputation among our visitors depends on human satisfaction of the most personal kind. It thrives on the application of good public relations



principles, on the revival of interest in such things as conservation, Canadian history and the preservation of historic sites, on community beautification, and on maintenance of our national characteristics. Service and courtesy are always essential. Good food, transportation facilities, comfortable accommodation and entertainment are its foundations, and each fundamental is dependent upon all the others. The most magnificent scenery, the most attractive facilities, the best high-

ways and the most varied programs of entertainment will fail if they are not coupled with considerate attention and service to the individual visitor.

Statistics show that Canada's receipts on international travel account have not kept pace with the total rate of increase on world expenditures for travel. Have we neglected some of the fundamentals expected of hosts? This question surely deserves some thought by each one of us. Americans, for instance, have confined the greater part of their increased travel to their own country and to countries overseas. Even among Canadian travellers themselves, other countries figure prominently in vacation plans, as indeed they should. Too much reliance may have been placed on the acknowledged attractiveness of our scenery, our resources of fish and game, our accessible wilderness areas.

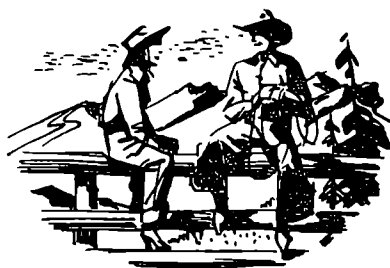
What does the tourist expect when he visits Canada? No matter what country he comes from, he wants a change first of all, he wants to see new scenery, exciting events and unusual attractions. Nevertheless, his basic requirements remain similar to those of Canadian travellers. He wants a clean, comfortable room and bed, he wants competent personal service, he wants good food and he looks for reasonable rates. He also expects courtesy and fair dealing. These last ingredients are perhaps the ones which most affect the prospects for his future business. Given all these he will return again and again and again. Repeat business in every field of tourist service determines the real future for Canadian travel.

Nothing will encourage the flow of travel to Canada more than a well-founded belief on the part of all tourist operators that Canadian hospitality is based on genuine good will, basic friendship and honesty to the visitor. Each year it is demonstrated many times that courtesy and honesty are the most appreciated items on the tourist bill-of-fare. The warm, friendly attitude which is so characteristic of most Canadians is a far greater asset than the knowledge that tourism is a paying commercial proposition. It is the attitude of the Canadian whom the tourist and his family meet which shapes his opinion of our country. A single unfortunate incident can give rise to a feeling of antagonism which will make the rounds of his friends and neighbours when he returns home. Studies made by the Travel Bureau over the years indicate that more than 40 per cent of the Americans coming to Canada did so on the advice of friends. We should encourage publicity like this. Should we fail in any essential of hospitality, the tourist will not spread the word of welcome. Accuracy and truth are essential. False or misleading information disappoints visitors, and leads to losses to resort owners and ill will toward the whole nation.

Some Statistics

The structure of the Canadian tourist industry can most easily be outlined in economic terms. Unfortunately, reliable statistics on recreational travel in Canada by Canadians are not available, but the figures on visitors from other countries alone are sufficient to indicate the importance of the industry to each one of us.

The greatest percentage of tourists visiting Canada come from the United States whose citizens each year cross the border in increasing numbers. Using the "long-stay" automobile entry figures plus those by plane, train, bus and boat, issued by the Dominion Bureau of Statistics, it is estimated that well over 7,000,000 United States visitors annually spend all or part of their vacations in Canada. In



1958, they left \$309 million in this country. Visitors from countries other than the United States spend \$43 million on vacationing in Canada.

Producers and distributors throughout Canada all share, directly or indirectly, in the earnings of the travel industry. The typical dollar spent by a tourist in Canada is first distributed as follows: between 31 and 32 cents are spent on food and beverages; over 23 cents for lodging and 16 cents for transportation; seven cents are spent on handicrafts and souvenirs and 12 cents for other merchandise; and about 10 cents for other miscellaneous items. This income is then redistributed through all channels of

commerce and taxation in the country. Gasoline taxes paid by visiting motorists, for instance, help build more and better highways, while income from fish and game licences does its share in conserving those resources.

Tourism is Everyone's Concern

The job of entertaining the thousands of visitors who yearly stream across the international border and provincial boundaries therefore rests not only with those actively engaged in the tourist industry like hotel owners, tourist camp operators, and restaurant proprietors, but with all Canadians in every community. The people who visit us will go home with impressions not only of our hotels and our scenery, but also of the individual people they meet. They will remember, too, the facilities provided for our own people, which the tourist shares while he is here.

How can the ordinary Canadian citizen assist the development of the tourist industry? There are several ways. One of them is to further the growth of a distinctive Canadian cuisine, and to encourage the improvement of existing standards of catering in the hotels and restaurants serving our tourists.

We have neglected many of our culinary opportunities. There are not nearly enough regional dishes. There is not nearly enough use of good, local foods. They do not have to be fancy. The operative word is "good". Even the provinces bordering the oceans are apt to overlook the wealth of seafood available for their menus. We can do a great deal of valuable work in encouraging improvement in regional menus, and in supporting the use of special seasonal dishes on the tourist menus. However, above all, the cooking and ingredients must be good. An artificially contrived and second rate dish—however "distinctive" or by whatever "Canadian" name it may be called—is not enough. To-day's tourist gets good food at home—and good food on the road in his own country. He won't come back if he doesn't get it in Canada.

There is a tendency, too, to overlook the importance of Canada's historic past. History has a strong appeal for the visitor as well as contributing to a consciousness of our national identity. We can and should visit our historic places and direct visitors to them. The success of places like Fort Henry at Kingston where red-coated, university students depict the drills and manoeuvres of British forces of another century, the pageantry of history developed so successfully in British Columbia during its centennial celebrations, in the Yukon gold-rush diamond jubilee and the bi-centennial in Louisbourg, Nova Scotia, are only a few illustrations of how effective this kind of attraction can be in bringing visitors. Events like these recall images of our history, with which many tourist guests are often unfamiliar. Great pageants and festivals could become the feature projects of any group striving to help its community.

Of vital importance to the country as a whole, and to tourism in particular, is the conservation of our forests, waters and wildlife. The distinctively Canadian attractions of great wilderness areas, studded with lakes

and streams, and filled with animal and bird life, offer a travel bargain with which few other forms of outdoor recreation can compete on even terms. Improvements to existing highways, new road construction, high automobile ownership and the popularity of outboard motors have led to increased pressure on hunting and fishing throughout Canada. There is an ever-rising demand for recreational development of wilderness areas which can now be reached conveniently.

Thousands of Canadians engaged in serving the wants and needs of tourists owe their very livelihood to the fact that vast sections of Canada are still relatively untouched by civilization. But it has also been most important that provisions were made to set aside choice recreational areas before pressure from industrialization and population growth wiped them out. A direct result was the creation of the national and provincial parks systems which preserved some of the country's most beautiful regions, embracing a wide variety of scenery. They are maintained for the use and enjoyment of the people of Canada and other visitors, and many of them are absolute sanctuaries where it is hoped to maintain the forests and wildlife in perpetuity.

The national and provincial parks not only attract the tourist from beyond Canada's borders, but have played a large part in the decided increase in inter-provincial travel during recent years. There is no doubt that Canada's travel industry owes a great deal to the wise conservation and development measures taken in past years, which led to the establishment of fish and wildlife, and forestry branches of federal and provincial governments and the creation of preserves throughout the nation.

The tourist operators who profited from these conservation moves and the tourist who enjoyed their benefits have in their own turn done much to further the cause of conservation throughout Canada. Their efforts have ranged from joint movements through local groups of tourist operators and sportsmen, to representation at the national level by the Canadian Tourist Association, provincial government tourist branches, the transportation companies and the Canadian Government Travel Bureau.

Increasing demands for recreational areas create new problems for conservation. Conservation is important for tourism, but it is even more important for Canada's future. Every Canadian should concern himself



with the rational use of Canada's forests, lakes and wildlife. These are precious resources that, wisely used and husbanded, constitute a vital asset for the health and enjoyment of future generations.

Whether it be in food, courtesy, promotion of historic places, supporting community beautification or conservation programs, there are many ways in which all of us may encourage the further growth of tourism in the future. Activities like these pay added dividends in making our country pleasanter, not only for tourists, but also for all Canadians.

Changing Trends, New Challenges

The tourist pattern for North America has been changing over the past decade. With higher disposable incomes and regular holidays with pay, an annual vacation away from home has become the rule for most North Americans rather than the prerogative only of the well-to-do. Widespread automobile ownership and tremendous public investment in highways have brought most of the continent within reach of the temporary wanderer, and offer endless opportunities for him to plan a trip to suit his inclination and his purse.

With these basic changes in wealth and mobility have come new interests and new activities which were of little importance a few years ago. The popularity of skiing is an example; from a cult for a few specialists before the war, this sport has come to support growing installations in both Eastern and Western Canada. Other examples are the new popularity of camping holidays and, most recently, the growth of boating by sail or power on the lakes and canals of central Canada and on the coasts. New developments like these offer both an opportunity to the industry and a challenge which must be met if it is to compete effectively with facilities offered in other countries.

New ideas to encourage increased overseas travel have created new problems for Canada. An example is the "travel on credit" programs which have opened the door to overseas vacations to a vast new group of people once economically compelled to vacation within the limits of cash-and-carry budgets. Not only have the new concepts increased competition but they have brought about a decided change in promotion and advertising themes. No longer is it advisable, for instance, for a country to compare its beauties with those of Switzerland or France when these places with all their distinctive appeal are within easy travel time for first hand inspection. The emphasis must be towards unique, unusual, and distinctive national attractions.

Tourist operators in this country will undoubtedly keep in mind that the attraction which Canada has for visitors from other countries depends to a very great extent on their rate structure and on the value they give for money. This is particularly important at times when the exchange rate makes Canadian prices higher in terms of foreign currency.

It is true that Canada, with its winter temperatures, is an expensive country in which to build the kind of accommodation tourist guests have

come to expect. It is also true that in some seasons of the year food costs are higher than in the United States. Yet it remains a fact that Canada and the United States are competing for very much the same kind of traveller, and he and his wife are more discriminating than ever before.

In the past we have been inclined to think in terms of the usual short intensive peak of recreational travel in Canada. July and August are by far the heaviest tourist months and most of our developments are set up for the summer season. This points to one of the greatest problems in providing for recreational travel: how are we going to be able to improve and extend facilities in Canada if these have to stand idle for at least eight months of the year?

Part of the answer lies in developing tourism all the year round. By deft promotion and advertising, a few sections of this country have capitalized already on the charm of all four of Canada's seasonal periods.

Although spring, autumn and winter have yet to attract visitors in the same numbers as flock to Canada in summer, the winter season has become very important in the Laurentians and other parts of Quebec, and in some parts of Ontario, Alberta and British Columbia. To the popularity of skiing, which yearly entices thousands of devotees to mountain slopes in both eastern and western parts of Canada, have been added an increasing number of events such as winter carnivals, ice-fishing and other special attractions. Coupled with new, comfortable accommodation and fast, inexpensive transportation, the winter tourist trade has been booming in these regions. There is no reason why other sections of Canada, with equal physical attractions, could not enjoy the same benefits.

Not nearly enough effort has been made to increase tourist activity in the spring and autumn periods. There are events such as tulip festivals and blossom festivals during the spring, and colour cavalcades and grape and apple festivals during the autumn season but there is still much that can be done. There are too few colourful festivals and events in Canada's travel year. They have proved their worth over the years, and there is every reason to believe that development of special events year-round would help reduce "off seasons" in Canada's tourist centres.

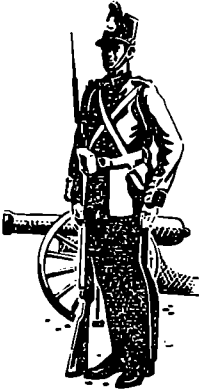
There will also be opportunities to develop the attractions of parts of Canada now too rarely visited, even by Canadians from other regions. Tourists looking for new experiences will follow the new roads in the Northwest Territories and Yukon as they do now in better-known areas of the country. Statehood for Alaska has itself increased the interest of Americans in our Northwest, and the Alaska highway, connecting the new State with the road system to the south, will see increased tourist traffic. In another part of the north, buffalo hunting for sport will be available in 1959 for



the first time in more than sixty years. If its tourist resources are developed with care and imagination, the north can expect over the next decade to play host to an increasing number of tourist visitors.

Organized Promotion Services

To make known Canadian tourist attractions and facilities, the Federal Government and all ten provincial governments support active travel bureaus. Transportation companies and other interests including regional and local organizations are also actively engaged in bringing their facilities to the attention of tourists. With the expansion of pleasure travel and the resulting competition has come wide use of marketing surveys and other research techniques. Valuable as these tools of analysis are, those who are concerned with travellers must not lose sight of the fact that they are dealing with people, rather than statistics.



Like everyone else, each tourist has his own special desires and tastes. Some find retreat from the fast moving city life in the quiet wilderness of Canada's mountains and forests. Others prefer the luxurious comfort of hotels or the gracious relaxation to be found in lavish tourist resorts. Whatever his tastes may be, service to the individual traveller begins long before he and his family ever start their journey. He may have become interested in a Canadian vacation in any number of ways, but interest is not enough. He wants the clear, honest answers to many questions before he makes the final decisions about his holiday.

He is concerned with what a vacation will cost him in relation to what he will get for his money. He wants to know such things as the exact price of accommodation; if it includes a single or double room, a bathroom with shower or bath; if it has electric lights and indoor plumbing; if it is heated or winterized. He is also interested in where he will eat on his vacation; if there is a central dining hall, a restaurant or snack bar; if there is a clean, modern kitchen and well prepared food; if fresh local produce will be served and what it will cost him for a full course meal.

Important to the vacationer are the recreational facilities; is there good hunting and fishing, are boats, equipment and guides available and what will be the cost? Are golf, tennis, swimming, riding, and other forms of recreation to be found? He may also want to know about routes, road conditions, and transportation schedules, about the best week for the autumn colour, or about skiing conditions in March.

In the field of travel promotion the Canadian Government Travel Bureau discharges the federal responsibility for "selling" Canadian vacation opportunities to the people of the United States and other countries. Its methods combine advertising and publicity in a host of media together with a direct mail and free travel counselling service that operates on a very large

scale. The natural basis for all its advertising and promotion has always been an essentially human appeal. How successful it has been is illustrated by the tremendous response. During 1958, for instance, some 750,000 requests for travel information were handled by the Bureau's offices in Ottawa, New York and Chicago.

The Canadian transportation companies as well as the provincial governments carry on extensive promotion and advertising activities both inside Canada and in the United States. The major responsibility for promoting more travel by Canadians in Canada has been borne by these agencies. To increase traffic from abroad the Canadian railways and airlines maintain offices in leading cities in the United States and Europe, as well as in Latin America. The Provincial Governments of Nova Scotia and Quebec have year-round offices in New York City. British Columbia and Alberta share a representative office in San Francisco.

What does the Future Promise?

If we make intelligent and imaginative use of our opportunities, Canada has a bright future as a vacation land. Increased leisure, improved transportation, and growth of disposable income, which have made possible dramatic developments since the war, seem certain to continue and to offer even greater opportunities. Travel times have recently been cut by the new jet services, and it is reasonably sure that both times and costs will shrink even further. The mere fact of population growth in the United States and in overseas countries will be a significant factor. Perhaps most important of all, more and more people in all parts of the world are interested in seeing strange countries and visiting new places.

The United States Department of Commerce estimates that Americans are currently spending up to \$20 billion on foreign and domestic travel. Most of our visitors for the future will continue to come from below the border, but visits from overseas should also increase with growing incomes and the removal of restrictions on travel allowances. Already British tourists intending to come to Canada are permitted an increased amount of travel dollars; prepayment of accommodation and other expenses may shortly be allowed also. Because of immigration since the war, a surprising number of people in countries like Holland and Italy have relatives living in Canada. Many of them intend to pay extended visits to this country in the next few years. The habit of travel is growing everywhere.

The challenge to Canadians is to capitalize in a constructive way on these opportunities. The search for new methods and ideas in promotion and service must continue. The typical tourist now is not the typical tourist of twenty years ago; the facilities offered and promotion used must reflect his changing and expanding needs. By these means Canada, as a vacation land, will increase its importance and prestige not only in other countries but among travel-loving Canadians themselves.

Most of us in Canada have not been sufficiently conscious of regions of our country other than our own. With the completion of the Trans-Canada Highway, it should now be easier to learn more about other parts of this country. Mass "interprovincial visits" can help to build a better nation. By getting to know more of our fellow Canadians, we will learn of the great material resources of our land and spiritual endowments of our people. This understanding will be a source of satisfaction to all Canadians who acquire it, and a source of gratification when we are all able to share it with our neighbours.

We Canadians are eager to visit the great and powerful nation to the south of us, and our less familiar neighbours overseas. We should now increase our efforts to encourage their citizens to "return our calls". We should do all we can to have them learn about our way of life in the world we share with them. The benefits derived in this way, though intangible, are at least as precious as the dollars earned. Warm northern hospitality awaits them all.

Annual Report of the Department of Northern Affairs and National Resources

Although the Department of Northern Affairs and National Resources has operated under this name only since 1953, it is actually a very old department. Under various other identities, it has been associated with national development almost since Confederation. It is a development department—charged with fostering growth and progress in the northern territories and with assisting, by various means, the orderly and wise use of certain national resources.

Eight branches form the Department.

The Northern Administration Branch bears heavy responsibilities for the economic and social development of the Yukon and Northwest Territories and for the welfare of the Eskimo people.

The National Parks Branch is the administrator of Canada's National Parks and National Historic Sites and Parks, conserving for future generations the richness of Canada's past and the wonders of its natural beauty. The Canadian Wildlife Service, forming part of this Branch, is the federal agency responsible for national wildlife conservation and research.

In the resources field are the Water Resources Branch and the Forestry Branch. The Water Resources Branch collects and evaluates basic information on Canada's water-power resources and studies broad questions of water use policy.

The Forestry Branch engages in forest and forest products research and administers various agreements with the provinces made under the Canada Forestry Act.

The Natural History and Human History Branches form the National Museum of Canada which is engaged in scientific research in natural history, archaeology, and anthropology.

The Canadian Government Travel Bureau works in many ways to increase the tourist traffic, its major effort being the vigorous promotion of Canadian tourist attractions in the United States.

To serve these various operating Branches are the administrative divisions—Economic, Editorial and Information, Legal, Personnel, and Purchasing—which, under general direction from the Chief Administrative Officer, comprise Administration Services.

In addition to the regular Branches, there are established certain Boards, Commissions and Advisory Committees which report to the Minister. These include the Historic Sites and Monuments Board of Canada, the National Battlefields Commission, the Advisory Committee on Northern Development and the Advisory Committee on Water Use Policy.

The Deputy Minister also holds the office of Commissioner of the Northwest Territories and is Chairman of the Northern Canada Power Commission.

Northern Administration Branch

The administrative responsibilities of this Branch cover a third of Canada, an area where something less than 32,000 people live.

These responsibilities, which include Eskimo affairs, the administration of the natural resources of both the Northwest and Yukon Territories and certain Crown lands and mineral rights in the provinces, are distributed among the eight major administrative units in the Branch.

The rapid pace of northern development as reflected in the growth of the Branch made desirable a complete re-organization of the Branch early in 1959. The re-organization was designed to meet changing conditions in the north and through its emphasis on decentralization it gave much more administrative responsibility to the field.

As a result of the re-organization, one Division—Arctic—disappeared and in its place two new Divisions, Industrial and Welfare, were created. The Industrial Division is newest in concept. Its responsibilities cover the whole north and include such matters as industrial liaison, community and area planning, market research, the development of co-operatives and the encouragement of handicraft production. The Welfare Division is responsible for welfare services in the Northwest Territories and amongst Eskimos wherever they live. The administration of mineral and other resources are dealt with through the Resources Division; supervision and extension of educational facilities come under the Education Division. The Engineering Division is responsible for all departmental construction and maintenance in the northern territories.

The administrative work of the Northwest Territories Government is carried on by the Territorial Division; there is no territorial civil service. This division also administers Wood Buffalo Park which lies across the Northwest Territories—Alberta boundary. A new office, Administrator of the Arctic, handles all field matters in the Eastern Arctic. Its counterpart, the Administrator of the Mackenzie, performs a similar function in the District of the Mackenzie.

The Yukon Territory is administered by a territorial civil service under the Commissioner. Advice on federal activities and their co-ordination, including general supervision of Government affairs in the Territory, is provided by the Territorial Division.

Education Division

The education of children in the Northwest Territories is a joint responsibility: the Federal Government is responsible for the educating of Indians and Eskimos; the Territorial Government is responsible for educating the other children.

The average school attendance of non-native children is much higher than that of Eskimos or Indians because most of the former have a permanent home in a community with a school while attendance of many Eskimo and Indian children is determined by movement of the game which often takes them several hundred miles from any school. As a result the enrolment of all native children is only 52 per cent.

With improved medical and social measures, the Eskimo and Indian population is increasing. Shrinking wildlife populations and poor prices for many furs have resulted in more Eskimos and Indians turning to wage employment. To compete in this new field, they need both primary and vocational education. It is the Department's aim to provide elementary education, and advanced academic or vocational education for students and adults with special aptitudes. This program is being developed by the construction of new government schools and students' residences, by providing more bursaries and other aids for students, by development of special curricula for northern schools and by conducting special vocational education projects.

The Department operated 46 schools, 19 of them in the Arctic. The Department also assisted mission schools by providing grants, supplies and teachers. Schools operated throughout the year were attended by 3,692 pupils, an increase of 620 over the previous year. Largely as a result of this, the part-time schools showed a decrease in attendance from 500 to 237. There were 1,394 Eskimo children who received schooling on either a full-time or part-time basis.

At Fort McPherson and Yellowknife, 100-pupil residences were opened in September. The Sir John Franklin School at Yellowknife opened in conjunction with the opening of the residence. This is a composite vocational training and high school built and operated by the Federal Government in co-operation with the Government of the Northwest Territories.

Arrangements were continued for the maintenance of Eskimo and Indian children in the Anglican and Roman Catholic residential schools at Aklavik and for Indian children in the Roman Catholic residential school at Fort Providence. Fourteen part-time schools were conducted by missionaries of the Roman Catholic and Anglican Mission organizations in settlements in the Northwest Territories and Northern Quebec.

In the District of Mackenzie, 38 schools were in operation with a total enrolment of 2,904 pupils. Of these 1,522 pupils were of white status, 948 were Indian and 434 were Eskimo. Seasonal schools for Indians were conducted at Nahanni Butte, Snowdrift and Trout Rock.

In the District of Keewatin, eight schools were in operation, three of which were part-time schools. In the District of Franklin, 14 schools were operated, eight of which were conducted on a part-time basis. Along the coast of northern Quebec, where Eskimos live, eight schools were in operation, three of which were on a part-time basis.

In the field of vocational training, 298 persons benefited from training on-the-job, apprenticeship training and attending courses in technical institutes. Some 23 vocational fields were covered to take advantage of employment opportunities created by the northern construction program. Greater emphasis was placed on local training programs in building construction, carpentry, electricity and plumbing. These programs were carried out at Aklavik, Yellowknife, Fort Smith, Fort Wrigley, Jean Marie River and Inuvik in the Mackenzie District and at Baker Lake in Keewatin District.

The Leduc Training Program for Eskimos in operation and maintenance of heavy equipment was transferred to Yellowknife in July.

Engineering Division

Mackenzie District, N.W.T.

The largest single project was the continuation of work on the extension of the Mackenzie Highway from Enterprise to Yellowknife. About 58 miles of road construction was completed, bringing the road to about 35 miles north of Fort Providence from the southerly end. This represents completion of about 40 per cent of the Yellowknife to Rae section. About \$3 million was spent on this project.

There was also a considerable program of minor road construction in Wood Buffalo Park, amounting to \$450,000, some of which was carried out as part of the winter works program. Other roads throughout the District were surveyed, cleared and rough graded at a cost of \$350,000.

Construction and improvements to buildings in this District amounted to \$6.2 million. Major work was the construction of the school and hostel programs, which saw the start of the Fort Simpson project, the continuation of the Inuvik project and the completion of the Fort McPherson and Yellowknife projects. Other construction included water systems, several departmental housing units, small schools, garage workshops, warehouses and various other structures.

Districts of Keewatin and Franklin, N.W.T., Northern Quebec and Churchill

Construction costs in these areas amounted to \$3.8 million with the greatest activity centred at Frobisher Bay where the program included a four-classroom school, a small office building, 25 housing units, six warehouses, and other works. At Cambridge Bay the school and residential facilities were extended and a number of housing units were erected for Eskimo employees on the DEW Line.

Yukon Territory

Construction in the Yukon cost some \$2.2 million on roads and bridges, and about \$120,000 on buildings. Work was started on the Dawson-Eagle Plain Road, and the reconstruction of the Stewart Crossing-Dawson

Road was continued. Extensive work on the reconstruction of the Whitehorse-Keno Road was carried out. The largest single item was the start of construction of the steel highway bridge over the Yukon River near Carmacks. Two departmental houses and other minor works were constructed at various locations in the Yukon Territory.

Industrial Division

This Division is concerned with the day-to-day use of resources by small companies and individuals in the Northwest Territories, and with the planning of townsites or normal community services that will be required to meet the industrial and population expansion which will follow on large-scale resource development.

Area Economic Surveys and Community Planning

During 1958 a series of area economic surveys was initiated to determine the weaknesses in the economies of specific areas and to find ways to strengthen them. The first of these was undertaken in the Ungava Bay region of northern Quebec and, as a result, organized commercial Arctic char and cod fishing, handicrafts, blueberry picking and other industries, and a timber operation to provide lumber for new houses, are being planned for the summer of 1959.

A similar area economic survey is being planned for the summer of 1959 for the Mackenzie Delta region, where standards of living, housing and morale are exceedingly low despite a relative abundance of fish, fur and timber resources.

The Division is compiling a complete set of research information on population, resources, employment opportunities, etc. for each locality within the Northwest Territories. It is carrying out liaison with other government departments and private groups interested in expanding into northern communities, and is advising on such matters as local housing policy, the provision of local services and ways and means of re-developing existing communities.

Frobisher Development Group

The Frobisher Development Group maintained active co-ordination of all activities at Frobisher Bay, and a Regional Administrator was appointed to act as local co-ordinator for the Department. Frobisher Bay was declared a development area to facilitate the control of business and construction in the community. Commercial interest has increased considerably in response to growing population and extensive construction activity in the area. Local and long-distance commercial telephone facilities are in prospect and tourist interest has been spurred by the establishment of a sports-fishing camp 20 miles outside Frobisher.

Construction of a refuelling base and its combined living and operations buildings for the Strategic Air Command, U.S.A.F. was started in mid-summer, 1958 and continued throughout the winter. The extension of the airport runway to accommodate jet aircraft was commenced in the spring of this year. Both projects are bringing a large number of workers to Frobisher.

The Department constructed a new Administration building, a four-classroom school, warehouses and other dwellings in the vicinity of the airport, thereby moving the principal Northern Affairs' housing and administration centre from Apex Hill to the Airbase area. It is anticipated that all future departmental expansion will be in this area and that Apex Hill will continue largely as an Eskimo Rehabilitation Centre.

A townsite about half a mile to the northeast of the airport was selected for the permanent town and a team of design consultants was engaged by the Department of Public Works to plan it. This team, comprising five Canadian engineering and architectural firms, assisted by a town planner, will establish an office in Ottawa for this project.

Projects

The Department continued its administration of the reindeer industry which was initiated in 1935 on the Mackenzie Delta, as a project to provide the Eskimo with employment and a supplementary source of subsistence. At present, there is one Eskimo-managed herd numbering about 1,535 animals. The remaining reindeer, approximately 3,826 animals, constitute a main Government herd, which it is hoped to increase through selective breeding. In 1958, 342 animals from the Government herd and 111 animals from the native were slaughtered and distributed.

To curb attrition of animals from natural causes, intensified research has been conducted into predator control, parasite control and range conditions. As a considerable number of animals are lost through straying, a 28-mile fence will be built from the East Channel to the Eskimo Lakes to prevent straying to the south of the range.

A number of projects, mainly experimental, have been carried out in a continuation of research into means of expanding and diversifying the Eskimo economy.

Efforts were maintained to stimulate the production of carvings and other cottage industries such as Arctic clothing manufacture and the return to the Eskimos is now estimated to be in excess of \$130,000.

A supervised Eskimo handicraft program consisting mainly of sewing parkas and other clothing was carried out with the assistance of the staffs of the Welfare Division and the Administrator of the Arctic on the CGS *C. D. HOWE* during the Eastern Arctic patrol for the benefit of Eskimos being repatriated.

Further efforts at conversion and utilization of eiderdown were carried on in the Payne Bay and Cape Dorset areas. An experiment in commercial fishing of Arctic char at Frobisher Bay established the existence of a profitable market for this great delicacy.

A community for the re-establishment of certain Keewatin Eskimos, who faced starvation due to the decline of caribou, was established at Rankin Inlet. The Eskimos are to be provided with the means of achieving financial independence through a variety of means including hunting, handicrafts and casual labour, and of providing the children with an education.

Experiments in low-cost Eskimo housing were continued with several prototypes being built and tested with varying results at Frobisher Bay, Cape Dorset and Povungnituk.

Further experiments in the development of stoves were carried out and tests were made of stoves developed by other agencies.

Field experiments in the use of Arctic marine resources were conducted and further research undertaken to assess the potential for both domestic and commercial harvesting. This work was done in co-operation with the Department of Fisheries, the Royal Canadian Mounted Police and the Fisheries Research Board.

Experiments were carried on in the field of food processing and storage, initial work having been done on a new method of Arctic refrigeration in co-operation with the National Research Council.

Co-operatives

At the first 1959 session of the Council of the Northwest Territories, an Ordinance for Co-operative Associations was passed. Good possibilities exist for an Eskimo char fishing co-operative at Port Burwell at the eastern tip of Ungava Bay, for a sport fishing co-operative at Cape Dorset on Baffin Island, and for a second char fishing co-operative at the mouth of the George River in Ungava Bay. The incorporation of these co-operatives will mark the introduction of Canadian Eskimo people into ownership of their own complex businesses. The Division is providing assistance and organizational help to these co-operatives which will be financed under the Eskimo Loan Fund.

Industrial Promotion

While much of the Division's work is in relation to the north, part of it is related to southern Canada. Markets are found for specialty food items and handicraft products which can be and are produced in the north. Southern business and industry are encouraged, where feasible, to consider operations in northern Canada. The Division acts as a clearing house for information on advanced technology which has application in the north, information on local labour forces and other matters of vital interest to potential northern business people. In addition, it works closely with private enterprise to encourage maximum Eskimo employment.

Tourist Development

Tourist development, too, is of great potential value to the people of the north. In 1959 the Division assigned an officer to investigate the tourist possibilities of the Northwest Territories and, where feasible, to encourage the development of local tourist industries. The first two tourist camps in the eastern Arctic were planned for the summer of 1959 to cater to sport-fishermen and collectors of Eskimo art. It is expected that through sound planning and development, a substantial tourist industry will be developed in the Northwest Territories during the next few years.

Resources Division¹

During the year the name of the Division was changed from Mining and Lands to Resources Division to describe more accurately the work of the Division.

The Division administers the Crown-owned mineral rights, the forests and lands in the Yukon and Northwest Territories, and certain under-rights and surface rights vested in the Crown on lands in the provinces.

During the year a study was commenced to consider revision of the basic policies covering Crown land disposition in the north. A number of provincial Crown land disposition programs were studied and reports and recommendations on land policy and land administration were prepared.

The Territorial Oil and Gas Regulations were under continual study during the year and a major amendment was made with the introduction of the Crown Reserve principle. In the latter part of the year, new oil and gas regulations were drawn up under both the Territorial Lands Act and the Public Lands Grants Act to permit disposition of oil and gas rights under the territorial waters of Canada not under provincial jurisdiction. At the same time, the lands in the Arctic Islands were withdrawn from disposition to permit the study of any special regulations needed for this region. In the interim, priority applications for Arctic Island acreage were received and a rush to obtain such priorities took place. At the end of the fiscal year, priorities were held by 28 individuals and companies for over 80 million acres in the Arctic Islands. At the end of the year, the proposed new Canada Oil and Gas Regulations were still under active study. Although the regulations were not yet promulgated, a number of companies were planning exploration work in the Arctic Islands for the summer of 1959.

A study of the present Territorial Quartz Mining Regulations and our northern mining policy was begun. It became apparent that in order to keep pace with northern exploration and development trends, the mining legislation required a complete overhaul. Discussions were held with the industry and reports proposing changes in mining policy were prepared.

The major activity in the development of northern Canada's mineral resources was in oil and gas. During the fiscal year over 48 million acres of oil and gas land permits were issued in the Yukon and Northwest Territories.

¹See Appendix B, Nos. 1, 2, 3.

Practically the entire Mackenzie Delta was taken up and the activity spread south and east. This area has become one of the greatest oil exploration frontiers in the world.

Oil and Gas—Northwest Territories and Yukon and Federal Lands in the Provinces.

Northwest Territories and the Yukon

The outstanding events in this field were the large acreages taken under permit and the revenues derived from the permits offered for public tender. During the year a total of 954 oil and gas exploratory permits, covering an area of 43,453,609 acres, were issued in the Northwest Territories and 98 oil and gas exploratory permits, totalling 4,947,035 acres, in the Yukon Territory. This made a total of 82,913,639 acres under exploratory oil and gas permit and reservation in both territories at March 31, 1959—a much larger area than in any of the provinces. In addition, priorities for permits had been allotted on 80,450,162 acres in the Arctic Islands pending revision of the Regulations for those areas north of 70° north latitude.

Revenue derived from oil and gas lands under the administration of the Oil and Gas Section amounted to a total of \$8,383,784.14. The major part of this revenue came from permit bonus bids and permit fees on Territorial lands which amounted to \$7,805,465.25.

During the year there were 32 oil companies and individual permit holders doing geological and geophysical work in the Territories employing helicopters and fixed-wing aircraft with a total of 193 personnel. This work consisted of geological studies and seismic, gravity, aero-magnetic, and other geophysical surveys to determine the nature and depth of various strata where oil and gas might accumulate. There were nine wells drilled and one well still being drilled at the end of the fiscal year. The discovery of natural gas in northeastern British Columbia early in 1959 drew particular interest to the area just north of the 60th parallel. A large amount of geological information is now being amassed on the northern areas.

Three major formal meetings and many informal meetings were held with the oil industry during the year. All regulations were discussed with the representatives of the oil and gas industry before being submitted for approval. Studies were commenced on oil and gas regulations for those areas north of 70° N. latitude having in mind the problem of producing low-cost oil in a high-cost development area.

Oil and Gas in the Provinces

During the year there were three public competitions for the acquisition of leases of oil and gas rights underlying 11 parcels of land in Manitoba, 10 parcels in Saskatchewan and six parcels in Alberta. As a result of these competitions, four leases were granted in Manitoba, six in Saskatchewan and

six in Alberta. Royalty was received from six wells in Alberta, six wells in Saskatchewan and 11 wells in Manitoba. At the end of the fiscal year, there were 537 oil and gas leases in the Provinces of Alberta, Saskatchewan and Manitoba administered by the Oil and Gas Section. Revenue from these public lands consisting of bonus bids, lease fees and rentals, extensions, assignments, and royalties amounted to \$201,138.25.

Mining—Northwest Territories and Yukon

Northwest Territories

A total of 2,293 quartz mineral claims were recorded during the year, 1,344 in the Yellowknife Mining District, 495 in the Mackenzie District and 454 in the Arctic and Hudson Bay Mining District. The trend in mineral claim staking and exploration was to gold, nickel and copper. Late in the autumn an interesting nickel-copper sulphide zone was discovered north of Fort Smith which commenced a minor staking rush to the area during the winter. Four placer gold claims were recorded in the Mackenzie Mining District and some interest was being shown on the known placer gold deposits in the Nahanni River area.

Uranium production was increased as one additional producing mine commenced shipping concentrates. Another mine shipped nickel-copper concentrate in excess of \$2 million in value. The three producing gold mines continued at a normal rate although production was down slightly from the previous year.

There are indications that at least one additional gold mine may be producing during 1960-61.

Revenue from miner's licences, quartz fees and royalty, and other fees totalled \$142,403.87.

Yukon Territory

In the three mining districts 798 quartz claims and 28 placer claims were recorded. The most active areas for mining exploration were the Quiet Lake, Selwyn Mountains, Rancheira River, 40 Mile River, and Wind River areas. A molybdenum showing proved interesting and a company was formed to do further development work with plans being made for underground operations in 1959. More ore reserves were determined on the asbestos deposit at Clinton Creek but production is not justified now owing to over-production elsewhere. There seemed to be a trend towards extensive exploration during 1959 in the Selwyn Mountain area for base metal deposits.

Production at the silver-lead-zinc mine on Galena Hill was decreased because of the low lead-zinc market price. The amount of gold produced was lower than the previous year.

Quartz fees and royalty, placer fees and royalty, and other fees produced revenue totalling \$110,476.75.

General

The total revenue from the mineral resources administered by the Resources Division amounted to \$8,636,664.76. This includes all sources of revenue from oil and gas in the provinces, the Northwest Territories, and Yukon Territory, as well as from both quartz and placer mining in the Yukon and Northwest Territories. The increase in revenue can be directly attributed to the bonus bids on oil and gas permits which had reverted to the Crown after being surrendered by permittees.

Lands and Timber*Yukon Territory*

Although the total amount of revenue derived from the administration of lands in the Territory is lower than that received during the preceding twelve months, continued public interest in acquiring land is indicated by the substantial increase in the number of new leases and agreements of sale issued during the year.

To implement the policy recommended by the Interdepartmental Committee on Federal Territorial Financial Relations, all lots in new subdivisions at Haines Junction, McRae, Teslin and Watson Lake, were transferred to the Commissioner of Yukon Territory for disposal.

Complete survey plans are expected shortly of additional subdivisions at McRae and Watson Lake. These lands also will be turned over to the Commissioner for disposal.

Four parcels of land were sold to religious organizations at a nominal price of \$1.00 per parcel.

Twenty-three parcels of land were reserved for the use of various departments of the Government of Canada, making a total of 392 parcels in the Territory reserved at the 31st March, 1959, for government use.

At the request of the British Yukon Railway Company, arrangements have been made for the survey of a subdivision of approximately two hundred residential type lots, on land owned by the railway company in the southerly part of Whitehorse. A subdivision of similar size is to be surveyed at Porter Creek on Crown land, about two miles north of Whitehorse.

Permits for the removal of a total of 287,681 cubic yards of gravel, loam and rock, were issued during the year. Of this total, 274,621 cubic yards were used by the Government of Yukon Territory, for which no royalties were paid.

The volume of lumber produced decreased by approximately ten per cent with a corresponding drop in the amount of revenue received. The production of round timber and fuelwood is slightly in excess of the quantities cut during the previous year.

Northwest Territories

The number of land sales completed and agreements of sale issued compares favourably with the previous year.

A substantial increase in the number of new leases issued during the year denotes a continued interest in leased land. Although a number of cancellations were effected, leases in force for commercial and residential purposes exceed in number those in effect at the end of the 1957-58 year. During the year the survey plan of the Enterprise Subdivision at Mile 28, Mackenzie Highway, was completed, and all lots were transferred to the Commissioner of the Northwest Territories for disposal.

Sixty parcels of land were reserved for, or transferred to, various departments of the Government of Canada during the year, making a total of 429 parcels reserved for Government use at the 31st of March, 1959.

Owing to recent interest displayed in land at Franks Channel, 30 miles northwest of Yellowknife, arrangements have been made for the survey of a subdivision during the coming year, in addition to surveys of new subdivisions at Fort Smith, Hay River, Inuvik and Yellowknife.

A total of 1,620 cubic yards of gravel were removed under permit during the year.

The volume of lumber, round timber and fuelwood produced was approximately equal to the amount cut during 1957-1958.

Public Lands in the Provinces

Public Lands

These lands comprise former Ordnance and Admiralty Reserves, Public Lands previously administered by other Federal Government departments, and former Dominion Lands which were reserved for other departments but have reverted to the control of this department.

During the fiscal year 25 parcels of land were placed under this department's control by other departments, while parcels were alienated by transfer to the provinces, other Federal departments and the National Parks Branch. Ten sales were completed, two assignments were recorded and four appraisals were carried out. There are now 19 Agreements of Sale and 84 Leases in force, and an undetermined number of vacant parcels of land are being investigated. Six title searches were carried out and negotiations are being completed for the disposal of the lands concerned.

Dominion Lands Records

These records cover the administration of lands, timber, mining and grazing rights in Western Canada, the Railway Belt and Peace River Block of British Columbia, between 1873 and 1930, when the natural resources were transferred to the provinces.

During the past year, over 8,000 closed seed grain files were listed and shipped to the provincial archives, in accordance with the provisions of the 1930 Resources Agreements relating to records. One hundred and forty-three certified true copies of Letters Patent were prepared on request, and

71,385 Patents were indexed according to land description. Eight historical research projects were completed, and 15 title searches were carried out. More than 2,000 inquiries from other departments and the general public were dealt with.

Seed Grain Indebtedness

Between 1876 and 1925, the Federal Government advanced seed grain, fodder for livestock, and other relief to needy settlers in Western Canada, and secured the advances by liens registered against their homesteads, pre-emptions and other lands. Advances for fodder and relief in 1919-22 in Saskatchewan and Alberta were implemented on a joint 50-50 basis with the provincial governments. The Minister is authorized to investigate, adjust or write down individual accounts, and the Governor General in Council may approve cancellation of accounts, when warranted. Seed Grain Advisory Boards have been set up under Order-in-Council authority to investigate and report on the outstanding accounts in Alberta and Saskatchewan.

In 1958-59, the Seed Grain Advisory Boards made recommendations relating to 191 accounts, and one other account was paid in full, while 708 liens were discharged. Principal and interest totalling \$108,116.73 was written off and \$21,860.28 was received in payments during that period. On the 1st April, 1959, there were approximately 435 Federal and 590 Joint Federal-Provincial accounts outstanding. Over 800 inquiries concerning seed grain indebtedness were received from the general public, legal firms, Farm Loan Boards and the provincial governments.

Territorial Division

The re-organization of the Branch, by altering the geographical basis of administration, affected the responsibilities of the Territorial Division. While its direct supervision of field offices in the District of Mackenzie was transferred to the Office of the Director, it continued to provide advice on Yukon affairs while discharging its tasks relating to Territorial Government affairs in the Northwest Territories including the Arctic and sub-Arctic. It was therefore active in the operation of the Territorial Liquor System, the Workmen's Compensation Office, together with legislation and policies of the Council of the Northwest Territories relating to all territorial matters including game management and conservation, forest protection, health, welfare, labour, municipal affairs, professional and business licensing, motor vehicle control and taxation.

Northwest Territories

The Council of the Northwest Territories held two meetings during the year, both of which were in Ottawa. A review of the activities of the Council is contained in the Annual Report of the Commissioner of the Northwest Territories which appears in Appendix G to this report.

Aklavik Relocation

Work on the two departmental student residences being built to accommodate 500 students continued on schedule. Construction began on the 25-room federal school, the federal hospital and the federal office building for which pilings and foundation were placed the previous year. Northern Canada Power Commission let tenders for the superstructure of the powerhouse and central heating plant. A piling program for the main utilidor lines through the townsite was undertaken. Construction work on the airstrip neared completion. More lots were allocated for the use of residents of the old town and consideration was given to surveying an additional area for private, industrial and warehousing requirements. Further compensation negotiations were carried out with the valuation on only one or two claims remaining to be settled.

Fort Smith Town Planning

The 200-lot residential subdivision surveyed in 1957-58 was registered and the road allowances cleared in preparation for the laying of water and sewer lines. Thirty lots in the subdivision were reserved for immediate requirements of the Territorial Government. Consulting Engineers completed the design and specification for the revised water and new sewer system. Five per cent of the new water lines and 91% of the new sewer lines were laid. Proposed new access roads in conjunction with the new development plan of Fort Smith to complement the existing road system were discussed with residents of Fort Smith at a general meeting, and their approval obtained. A large warehousing area was laid out for the departmental requirement for machine repairs and general warehousing.

Wood Buffalo National Park

The continued emphasis on fire prevention to protect timber resources of this park were increased during the year. This involved new fire towers, ranger patrol cabins, and extension of the present trail and road system. In April and May of 1958, the inundations caused by the Peace River rising proved to be one of the most disastrous in the history of the park. It was estimated that up to 1,000 buffalo were drowned. Many of the animals were cows and calves, all basic breeding stock. Thus the buffalo management program together with the annual slaughter were curtailed.

The goldeye fishery was continued in Lake Claire and the season was successful. The first migration of whooping cranes into the park was observed on May 28, 1958. Eleven adult "whoopers" were counted in the nesting area. The birth of nine young cranes was the greatest breeding success in many years. During the summer of 1958 an investigation was carried out on the gypsum cliffs and from this investigation a large deposit of gypsum has been indicated.

Plans were made for sport hunting of buffalo in the Northwest Territories under a system of licensed outfitters and guides, the first hunting season to be the autumn of 1959.

Yukon Territory

The Council of the Yukon Territory met twice during the year. A complete review of the activities of the Territorial Government is contained in the Annual Report of the Commissioner which appears as Appendix H to this report.

The emphasis during the year was placed on added fire protection to conserve the forest areas. During 1958 the Yukon Territory experienced the worst fire season in living memory and steps were immediately taken to enlarge the fire suppression organization so that adequate fire suppression activity could be undertaken.

Added emphasis was given to the tourist industry by enlarging the tourist facilities and camping grounds along the highways in the Territory. As further evidence of interest in the tourist business, a survey was undertaken with the object of establishing national and territorial parks in the Territory.

Welfare Division

In 1956, the first social workers were employed to cope with some of the more pressing problems affecting Eskimos. During the intervening three years, a wide range of needed facilities and services was introduced and many new policies were recommended and implemented. A small welfare staff in Ottawa and in the field, working closely with administrators, teachers, policemen, missionaries and others, have built up a welfare program which now includes rehabilitation and medical social services, family and child welfare services, and a new emphasis on Eskimo language and culture.

The Welfare Division now makes possible a more complete integration of welfare services. Although the Division makes its services available to all residents in the Territories, welfare costs for Indians are charged to the Department of Citizenship and Immigration; the Territorial Government for all non-Eskimos and non-Indians.

The Welfare Division has four sections in Ottawa: an administrative section, a rehabilitation section, a family and child welfare section, and an Eskimology section. There is an increasing trend toward decentralization in the administration of various sections. A start in this direction has been made this year in welfare with the appointment of a Superintendent of Welfare for the Mackenzie District with offices at Fort Smith and a Regional Supervisor with offices temporarily at Aklavik. Similar appointments are scheduled next year with offices at Churchill, Frobisher Bay and Ottawa.

In addition to an establishment of eleven social workers, the Welfare Division is staffed by administrative officers, technical officers, interpreters and other specialists. Almost a quarter of the total staff in Ottawa and in the field are persons of Eskimo origin.

Rehabilitation

A pilot rehabilitation program was started in the Eastern Arctic almost two years ago. It is also evolving in modified form in the Mackenzie Delta.

The main feature of the program is a Rehabilitation Centre at Frobisher Bay which consists of housing for Eskimo residents, quarters for transients, a dining room and kitchen, a bathhouse, workshops, and other facilities designed for specific projects. The Centre admits Eskimos who can function adequately only under sheltered conditions because of illness and disability, Eskimos who, with assistance, can be placed in wage employment, and Eskimos who, with assistance, can be established in small self-sustaining businesses in the north. The Centre also provides shelter and food for Eskimos en route to and from hospitals.

The Centre now supervises an Eskimo-operated laundry, movie theatre, crafts store and concession, a sewing factory, a bakery, visitors' accommodation, and a low-cost housing program. In outlying settlements, where a shortage of purchasing power affects all families, cottage industries have been organized. The result has been a substantial reduction in relief costs. Cottage industries are now in operation at Povungnituk, Sugluk, Fort Chimo, Pangnirtung, Clyde River, Arctic Bay and Coral Harbour. Handicrafts are also bought at Cape Dorset and Grise Fiord. During the first year of operation, projects operated by the Rehabilitation Centre resulted in revenues totalling \$60,000.

A fundamental education approach, incorporating economic, social, health and welfare factors, underlies the program within the Centre itself. The program includes instruction in nutrition and the preparation of foods, child care, sanitation and management of income, and is intended to facilitate transition from a hunting to a wage economy.

The rehabilitation program in the north is complemented by medical social services which are made available to hospitals in the provinces where Eskimos receive hospital care. In the year ended March 31, 1959, there were 900 admissions of Eskimos to hospitals and 640 discharges. Most of these patients are victims of tuberculosis and need help with problems that result from illness. Social workers and interpreters of the Welfare Division make regular visits to these hospitals to assist in overcoming barriers of language and culture that sometimes hinder effective treatment. Contact between patients and relatives in the north is also maintained by facilitating correspondence, sending north medical progress reports at regular intervals, and in serious cases, arranging for close members of the family to visit a patient in hospital.

An arrangement with private and provincial Children's Aid Societies and rehabilitation agencies makes possible a wide range of social services

related mostly to discharge planning. In addition to counselling services that are made available in some instances, at point of discharge, care is taken to ensure that Eskimo patients return north properly equipped for Arctic conditions of life. Follow-ups are arranged whenever there is reason to believe that patients will encounter adjustment difficulties after discharge.

Because of the long distances and irregular transportation arrangements in the north, steps have been taken to erect transit centres at key settlements in the north. These facilities provide shelter and food to Eskimos en route to their homes and for patients being sent to hospitals.

Each summer, a member of the Welfare Division accompanies a medical survey party to the Eastern Arctic. The work of the medical team has been greatly facilitated in this way. The social worker assists in instances where persons have to be sent out to hospital by explaining the implications of the diagnosis to patients and relatives. Assistance is also given to dependants who may be left behind for long periods of time without guardianship or support.

Family and Child Welfare

In the year ended March 31, 1959, 522 Eskimo families were assisted with relief issues, expenditures averaging \$250 annually for each family needing relief. In this way, some families were helped over periods when hunting and trapping cannot provide a living, or when other employment is not available. Persons returning from hospital after treatment for tuberculosis are also eligible for this type of assistance.

Relief is regarded as a preventive measure; sometimes, when given in time, it staves off starvation and many times it prevents the physical debilitation which often leads to costly illness and hospital admission.

Residents in the Territories can be eligible for federal and territorial pensions such as Old Age Security, Old Age Assistance, and Blind and Disability pensions. Increasing knowledge of the allowances, especially among Eskimos, and increased case-finding facilities in the Welfare Division have resulted in a large increase of applications. Among the Eskimo population alone, 172 applications have been approved to date.

The existing system of family allowance payments in the north has been reviewed and changes recommended to the Department of Health and Welfare. Eskimos are the only remaining ethnic group in the Northwest Territories who receive their family allowance as a credit at the trading post rather than by cheque. A start has been made in introducing payment by cheque to four northern communities and the remaining communities will be converted to the new system over the next two or three years.

Negotiations have been completed to open a Home for the Aged at Chesterfield Inlet. The Home will accommodate aged persons who cannot be looked after adequately by their own families. Similar facilities are now in existence at Churchill and at Pangnirtung and will be introduced shortly in the Mackenzie District.

Although child welfare services in the north are still in a rudimentary stage of development, studies have been started as a preliminary to new legislation and higher standards. During this year 101 children were in the custody of the Superintendent of Child Welfare. An additional 19 children were in the care of the Yellowknife Children's Aid Society. A number of these children are in foster homes and institutions in the provinces and in residential schools in the Mackenzie District. The total also includes children in correctional institutions in Alberta and Manitoba.

The high rate of hospital admissions and other forms of family dislocation has created an urgent need for facilities which would provide temporary care for children. An Eskimo-operated Children's Receiving Home was started at Churchill a year ago. During this time, it provided care for a total of 81 children from the Keewatin District alone. Similar Homes are to be introduced at Fort Smith, Inuvik and Frobisher Bay.

Eskimology

The Eskimo language section of the Welfare Division serves as a very necessary bridge between two languages and cultures. Any welfare service relies heavily on good communication with the people it is serving, if it seeks to be effective. In the north, the Welfare Division would be especially handicapped without this type of communication.

The Welfare Division receives on an average between twenty and thirty letters a week in the Eskimo language. Most of these letters originate with patients in hospital or with relatives who are worried about members of the family who are in hospital. Eskimo members of the staff translate all letters into English and in consultation with social workers, prepare replies.

Eskimo staff provide interpreting services in the various hospitals and occasionally accompany social workers on trips in the north. They also fulfil an important consultative function in matters pertaining specifically to Eskimo culture and language and conduct Eskimo language courses.

The publication this year of *Inuktitut*, an Eskimo language magazine, marks a major effort to bolster some aspects of Eskimo culture and assist Eskimo people to maintain a sense of self-worth in the face of crumbling traditions and customs. *Inuktitut* (The Eskimo Way) publishes material submitted by Eskimo writers and reproduces Eskimo art work.

National Parks Branch

Administration of the National Parks is carried on by four divisions: the National Parks Service, the National Historic Sites Division, the Engineering Services Division, and the Canadian Wildlife Service.

National Parks Service¹

"The tendency nowadays to wander in wildernesses is delightful to see. Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountains is going home; that wilderness is a necessity and that mountain parks and reservations are useful, not only as fountains of timber and irrigating rivers, but as fountains of life."

This observation is as true today as it was when written by John Muir, American naturalist, writer and lover of wilderness, in 1898. As an indication of the tendency "to wander in wildernesses" visitor attendance at the National Parks in Canada during the year 1958-59 reached 4,287,343, a new record.

The most encouraging feature relating to park attendance was the increase in camping. During the 1958 season approximately 277,000 persons used the public camping grounds in the parks. The average stay was 4.3 days, making an estimated total of 1,195,000 camping days. This compares with 1957 figures of 225,000 campers and 980,000 camping days.

Notwithstanding the fact that the parks administration has been progressively expanding campground facilities during recent years, the progress made so far was not sufficient to cope with the increased use in 1958 and as a result many of the campgrounds were taxed to capacity. The heaviest increase was experienced in the parks in eastern Canada, where a remarkable interest in camping has developed during the past few years. To meet the increased demand for camping facilities, it is planned to spend approximately \$1,300,000 on development over the next two years. This figure covers only new campgrounds and does not take into consideration the cost of operation, maintenance and renovation of existing installations.

There is no novelty in new records of total attendance and use of public campgrounds. The total attendance at the parks has reached a new height each year since the impact of World War II brought attendance to a low of 226,000 in 1942-43. Although the novelty of new records is gone, with their implied compliments, they remain gratifying.

However, there is a reverse side to the coin that creates some apprehension. Every facility has a limit of usability. When that limit is reached, use must be restricted. With constantly growing attendance at the parks, the day may come when people may have to be refused admittance. Considering the 4,200 square miles area of Jasper National Park alone, the possibility of having to refuse admissions seems preposterous. However, when

¹See Appendix C, Nos. 1 to 6.

thinking of the National Parks, the limiting factor is not how many people an area can support in a physical sense. Rather, it is how many can use the area without gradual deterioration destroying this great national heritage. It is the perpetuation of these areas of natural beauty, undiminished by present use, for the benefit of future generations, which is the main objective of the National Parks Service.

Following this line of thought, the most significant development of the past year has been the work of the long range development planning section, which was established in 1957-58. The first important task of this unit was the establishment, in co-operation with other officers of the Department, of a broad policy of administration and development of the parks. This policy was drafted early in 1958. Working within its limitations and guided by it, the planning section then took the first steps to guarantee, in so far as it is humanly possible, that "Parks shall be maintained and made use of so as to leave them unimpaired for the enjoyment of future generations".

An inventory of all developments within each National Park was completed. This inventory will be weighed against the needs and uses, future as well as present, of each park and a long range development plan devised for each park. Long range plans have already been drawn up, on a priority basis, for Point Pelee and Elk Island National Parks. Plans for a visitor service centre at Lake Louise in Banff National Park were also completed. Coupled with this, an aerial survey program was initiated to assist in planning and engineering. With the gathering momentum of the planning section's efforts, it is hoped the day will never come when a visitor need be refused admission to a National Park.

Private enterprise within the parks was also responsible for providing or improving visitor facilities. In Banff, 83 building permits were issued for a total construction value of \$1,704,428. Six of these permits were for construction exceeding \$25,000. The two largest developments were the gondola lifts at Sulphur Mountain and Mount Whitehorn in Banff Park.

At the Whitehorn development, concrete bases have been poured for 33 towers and 13 towers completed. At the upper terminal, footings and walls were poured and the machinery foundation 60 per cent poured. At the lower terminal, excavation has been completed for the counterweight shaft.

On Sulphur Mountain the upper terminal concrete walls and footings were poured, machinery base 75 per cent poured and structural steel erected.

In Jasper, 76 building permits were issued for a total construction value of \$585,441. Similar expansion, on a reduced scale, occurred in other parks with permanent townsites.

A winter works program was undertaken commencing in November, 1958. By the middle of December more than 1,000 men were employed. The number rose steadily until early March, 1959, when 1,913 men were on the payroll. Over 1,500 men were given steady employment from January 15th until March 31st. A total of 6,415 man-months of employment was provided.

The third year of the previously reported 8-year program for the major reconstruction of park highways saw considerable progress. Further progress was made in the construction of the Trans-Canada Highway through the National Parks. During the year the section of the highway from the east gate of Banff Park to the west gate of Yoho Park was opened for public travel following the completion of grading and the laying of the stabilized bituminous base course. The final course, or lift of asphalt, will be laid in 1960.

In Glacier National Park clearing and grubbing was completed over the entire right-of-way. Six grading contracts involving 23.3 miles were awarded and work commenced on the base course. Contracts were also awarded, and work commenced, for three bridges and a reinforced concrete arch culvert over the Illecillewaet River. In addition, construction was started on an overpass of the Canadian Pacific Railway as well as bridges over Loop Creek and Beaver River. In Mount Revelstoke Park clearing and grubbing was completed for the full 7½ miles. A contract was awarded for the grading. Contracts were also awarded for the various structures required in conjunction with the highway. In Terra Nova National Park, grading work was continued. The contract for Miles 18 to 25.2 was completed. Two other contracts, for Miles 0 to 10 and 10 to 18 were 45 per cent and 96 per cent completed respectively at the end of the year.

Contracts were let for gravelling and grading on the Banff-Jasper Highway. On the Banff-Windermere Highway preliminary drainage, stripping and waste cuts were carried out from Miles 1 to 7. The highway from Miles 32 to 56 in Kootenay Park was paved to a width of 44 feet. Grading and clearing was carried out on other sections and the replacement of 4 bridges, commenced in 1957, was completed in 1958. In Prince Edward Island Park, satisfactory progress was made on the reconstruction of the Gulf Shore Road between Rustico and New London. Fifteen miles of the Cabot Trail in Cape Breton Highlands Park were paved. In Prince Albert Park seal-coat patching was applied to approximately 16 miles of the Wasquesiu Highway. The foregoing information relates to major projects only.

The development of Terra Nova—the latest addition to Canada's National Parks system—was continued. A number of permanent buildings required for administration purposes were completed, together with ten units of a cabin development to be utilized for visitor accommodation when the park is opened for public use. In addition to the section of the Trans-Canada Highway already mentioned, the construction of other roads within the park was undertaken. A forest protection service was organized and manned by the appointment of a Chief Warden and 2 Wardens. Fire-fighting equipment was purchased and work started on the construction of 2 fire look-outs, warden residences, and fire access trails. Officers of the Forestry Branch of the Department began the preparation of a forest management plan for the park.

A total of 40 forest fires burned a total of 1,404 acres throughout the parks. However, over 1,000 acres of this total was grassland and many of

the fires were simply "spot" fires and were extinguished without loss, so that the total timber value lost was only \$596. Of the 40 forest fires, 10 were caused by smokers; 5 by campers and various public works; 4 by lightning; 3 by railways; 2 by settlers; and 3 by miscellaneous human agencies. Four fires started from unknown human causes and 4 fires were of incendiary origin.

The practice of acquiring title to freehold lands within or adjoining park boundaries for the purposes of National Parks was continued as funds and opportunity permitted. During the year a valuable parcel containing approximately 115 acres near Banff, and a small parcel in the vicinity of Lake Louise, in Banff National Park, were purchased. Two small parcels adjoining the boundary of St. Lawrence Islands Park were also acquired, and negotiations entered into respecting the purchase of privately-owned lands within the boundaries of other parks.

Engineering Services Division

The past year witnessed enlarging of facilities preparatory to undertaking, by contract, a much larger share of the construction program. By the summer of 1959, construction farmed out to the Department of Public Works will be limited for the most part to the reconstruction of trunk highways within the National Parks.

Water systems, staff housing, administrative buildings, comfort stations, central service garages, warehouses, and smaller structures and facilities were designed by the Division's architects and engineers. The Landscape Planning Section furnished landscape designs for all new construction and worked on a backlog of modernizing landscaping for existing structures and facilities in the National Parks of Canada.

The Division prepared technical specifications and requisitions and reviewed tenders for the purchase of heavy road building equipment, power operated equipment for machine and carpenter shops, building construction materials, engineering, survey and scientific equipment, trailers for construction camps, grass seed, fertilizer, and other materials generally requiring some measure of technical knowledge.

The architectural designs of buildings and structures planned for erection in the National Parks by private concerns were examined and approved, or modification recommended.

The Division, through the offices of Supervising Engineers at Banff, Alberta, Halifax, Nova Scotia and in its Ottawa Office, prepared numerous plans for road location, site conditions, boundary line delineation and various other ground surveys. The Division awarded aerial survey and mapping contracts totalling more than \$72,000 and supervised the work of all three contractors.

The Division selected and trained technical personnel. Engineers and technicians were seconded to the Park Superintendents to serve as resident engineers, draftsmen and building inspectors.

The Division provided direct supervision for all construction projects undertaken on behalf of the Historic Sites Division. Supervision was also provided for all work undertaken by contract in the National Parks. Some of the more interesting projects undertaken are as follows:

- (1) Construction of a promenade between Dufferin Terrace and the National Battlefields Park, Quebec City. The contract was awarded to Emile Frenette Limitee, Quebec City, in the amount of \$379,635. Work was 15 per cent completed this year.
- (2) Construction of a bathhouse and swimming pool with associated car parking lot, Waterton Lakes National Park, Alberta. Contract was awarded to Bennett and White Alberta Limited, Calgary, Alberta, in the amount of \$425,209.25. Work was 5 per cent completed this year.
- (3) Construction of a floodlighting and a secondary electrical distribution system, Halifax Citadel, Halifax, Nova Scotia. A contract was awarded to Bedard Girard Limited, Montreal, Quebec in the amount of \$24,600. The contract was 60 per cent completed this year.
- (4) Construction of a Central Service Garage, Waskesiu Townsite, Prince Albert National Park, Saskatchewan. A contract was awarded to Patrick Construction Co. Ltd., Saskatoon, Saskatchewan in the amount of \$114,785. The contract was 40 per cent completed.
- (5) Restoration of Fort Langley, B.C., under an agreement with the Province of British Columbia. This project was begun in 1956 and was completed in 1958 at a total cost for the three years under construction of \$307,685.41, toward which the Province of British Columbia contributed \$125,000.
- (6) Construction of a 350,000-gallon reservoir and a water supply system for the Headquarters Area, Fundy National Park. The reservoir was completed and a good beginning was made on the water system. A contract was awarded for the construction of a masonry valvehouse and a masonry pumphouse to Foundation Maritime Limited, Halifax, N.S., in the amount of \$68,054. Twenty per cent of the work was completed this year.

National Historic Sites Division¹

The National Historic Sites Division is responsible for the operation and maintenance of 20 national historic parks and for the care and preservation of 574 historic sites which have been erected since 1922. The Historic Sites and Monuments Board of Canada, comprised of authoritative historians

¹See Appendix C, 7 to 9.

from each province, advises the Minister on the marking of historic sites, the commemorating of persons and places including buildings of national historic interest by reason of their age or architectural design.

During the year the old Commissariat Building, 17 St. Louis Street, Quebec City, was acquired. Restoration of the house was begun early in 1959 and it is hoped work will be completed early in 1960. Work at Cartier-Brebeuf Park, commissioned by the Historic Sites Division, was carried out by the National Battlefields Commission. Land was acquired at the Alexander Graham Bell Museum, Batoche, Fort Malden, Grand Pré and Signal Hill National Historic Parks. Negotiations for additional areas were continued at Fort Malden.

The program of erecting monuments to mark historic places, events and prominent figures in Canadian history was continued with the establishment of tablets at Kamouraska, P.Q.; Parliament Buildings, Toronto, Ont.; Windsor, Ont.; Gravelbourg, Sask.; McLeod's Lake and Victoria, B.C.; University of Saskatchewan, Saskatoon, Sask. and Newcastle, N.B.

Canadian Wildlife Service¹

Waterfowl breeding conditions and waterfowl populations were again studied throughout all the provinces and territories in co-operation with the U.S. Bureau of Sport Fisheries and Wildlife and provincial and other game agencies. Factors affecting the production and survival of ducks were investigated in detail, and the problem of waterfowl damage to crops continued to receive attention.

A waterfowl kill survey by mail was conducted in Quebec and New Brunswick.

Spring counts of woodcock were carried out in the eastern provinces, and the status of the species was studied.

Among the investigations carried out was one dealing with waterfowl concentrations in the Western Arctic. Ground investigations were carried out in the Anderson River breeding area. Data were obtained on the breeding biology and food habits of and predation on brant, snow geese, swans, white-fronted geese and ptarmigan. Wildlife surveys of Somerset Island and surrounding islands were carried out by aeroplane. At a banding station on Mills Lake, Mackenzie River, more than 2,000 ducks were banded.

Organization of banding programs and participation in them were continued during the year. A total of 129,295 records of banded birds were received and processed during 1958.

Administration of the Migratory Birds Convention Act was continued in conjunction with the Royal Canadian Mounted Police and in co-operation with the provincial game branches.

¹See Appendix C, 10 and 11.

The intensive study of caribou conducted jointly by federal, provincial and territorial agencies was completed in the autumn of 1958. A preliminary report was presented in November and a final report in February. The results of the study were considered by Committees representing both technical and administrative personnel of the several agencies concerned and recommendations for action were evolved.

After the termination of the co-operative study, the Canadian Wildlife Service continued physiological investigations of caribou at Yellowknife and distributional investigations at Aklavik. Observations of caribou also were continued in the vicinity of Dawson, Yukon.

During the summer of 1958 musk-oxen at Lake Hazen, Ellesmere Island were studied as part of the International Geophysical Year program there. Results of this study, and of previous studies of the species, were compiled during the succeeding winter period.

White fox investigations were resumed in the eastern Arctic, and wolf control operations were continued in Mackenzie and Keewatin Districts as an aid in caribou conservation. Investigations in the National Parks involved bighorn sheep, elk and beaver in the western parks, and buffalo, beaver, mink, and squirrels in Wood Buffalo Park.

Surveys of lakes and streams and fisheries management projects in the National Parks were conducted by three limnologists and summer assistants. The program of reclaiming trout waters polluted with coarse fish was continued and several lakes were treated with chemicals toxic to fish life. Thanks to the application of modern procedures the production of park fish hatcheries was increased. Since hatchery plantings are essential to maintain adequate populations of trout for recreation owing to lack of suitable spawning facilities, investigations were conducted to further improve the efficiency of fish culture operations in the Mountain Parks.

The pilot plant was installed at Riding Mountain Park for the hatching of yellow walleye eggs and the rearing of fry and fingerlings in nearby potholes. Full grown fingerlings were planted in Clear Lake. Assistance was given to park authorities in the control of nuisances, such as mosquitoes, black flies, algae and aquatic weeds, in areas frequented by visitors.

Advice and assistance were provided to the Northwest Territories Administration for the development of a rainbow trout fishery in Wood Buffalo Park.

Water Resources Branch

The Water Resources Branch comprises two Divisions: Operations, which is responsible for most of the basic Branch functions, and Hydraulics, which is responsible for special studies required in the solution of waterway problems referred to the Branch. It carries out the systematic hydrometric survey program throughout Canada, studies and analyses problems involving waterways of federal-provincial and international concern, compiles the water power resources inventory of Canada and administers legislation concerning international rivers, water power and water conservation.

The Branch co-operates with public and private agencies in water-power and water-supply problems, in the maintenance of gauging stations and in the performance of hydrometric surveys and investigations of mutual concern. The Branch Director and senior engineers are active members of numerous federal-provincial and international engineering boards and boards of control established to deal with waterway problems. The Director also is a member of the Northern Canada Power Commission. As a part of its continuing hydrometric survey program, the Branch operates certain gauging stations of international interest in co-operation with appropriate United States Government agencies.

Special investigations were carried out during the year in connection with Lake Ontario and with the Columbia, Fraser, Yukon and St. Lawrence Rivers. Through its Director as Honorary Secretary of the Canadian National Committee, World Power Conference, the Branch participated in the Canadian Sectional Meeting of that Conference which was held at Montreal in September.

Hydrometric Surveys

Conduct of the systematic hydrometric survey program comprises a major part of the Branch activities. A large part of the program is operated in co-operation with some 78 different organizations including various federal, provincial, municipal and private agencies. Most of these organizations have been listed in Appendix "D" of the Department's 1957-58 Annual Report. Field operations of the Branch are carried out through six District Offices and thirteen sub-offices distributed across the country from Newfoundland to the Yukon Territory. As part of the maintenance of 1,268 gauging stations, field operations during the year included 7,206 stream discharge measurements and 2,097 additional inspections of gauging stations.

Records compiled from the operation of the hydrometric survey program are published in biennial Water Resources Papers, each of which covers one of four main drainages of Canada. Papers covering the Atlantic drainage and the St. Lawrence and Southern Hudson Bay drainage were issued during the year.

The Current Meter Rating and Experimental Station located at Calgary was operated for the repair and calibration of current meters and related equipment and for the investigation of new types of pertinent instruments. Its services were available also to other organizations. Based upon the flow records from 23 typical rivers distributed across Canada, a monthly statement covering stream flow conditions in Canada was released to the public early in each month. The flow records were supplied also to the United States Geological Survey at Washington which published a monthly summary of stream flow in North America.

For Canada as a whole, total runoff for the year was slightly above normal, the average for the 23 typical rivers being 114 per cent of their median flow. In Manitoba and in the more southerly rivers of Ontario, well below normal flows were general for most of the year. Similarly, low flows occurred in British Columbia during the summer months and in southern Quebec during the late autumn and winter periods. Well above normal runoff occurred in New Brunswick and southern Quebec during the summer months, in Alberta and British Columbia during the spring and winter periods and in northern and northwestern Ontario for the greater part of the year.

On several rivers subject to dangerous floods frequent observations of stage were obtained and a flood warning service was provided during periods of high flow. Water levels were obtained at 26 key locations in the Columbia River and Fraser River basins in British Columbia, at about 20 locations in the Saskatchewan River basin in Alberta and Saskatchewan, and to a smaller extent on certain rivers in some of the other provinces. From this information, together with a study of river conditions and current meteorological data, day-by-day computation of probable stages in the lower reaches of these rivers was made available to interested agencies. In Alberta, the District Office at Calgary participated in the work of the Bow River Ice Committee in alleviating the flood hazard caused by ice jams in the Bow River.

The customary annual program of snow surveys was carried out in areas where this information is required to prepare estimates of the amount of spring runoff. It supplements similar programs operated in different areas by other agencies. As part of a continuing program of biennial surveys of representative glaciers in British Columbia and Alberta, seven glaciers in these provinces were surveyed during the year.

Waterway Problems and Water Power Administration

Personnel of the Branch served on twenty-two international and six federal-provincial boards and committees, which were established to study problems relating to the control of boundary or other waters. In addition, Branch representatives served on or assisted in the work of seven miscellaneous national committees related to one aspect or another of the water resource field. The District Offices of the Branch assisted other federal

agencies by the provision of engineering advice with respect to specific water problems and by providing administrative assistance with respect to certain federal lands.

In connection with its representation on the International St. Lawrence River Board of Control, and the International Lake Ontario Board of Engineers, the Branch participated in an extensive study of the regulation of Lake Ontario to determine the most effective use of storage on the lake in the operation of the St. Lawrence River power project in the International Rapids reach of that river and the Seaway project from Lake Ontario downstream to Montreal. This study evolved the plan of regulation of Lake Ontario which has been adopted by the United States and Canada. Plans and specifications for the works in the International Rapids reach of the St. Lawrence River were approved by the Board in so far as those works affect the levels and flows of the St. Lawrence River and Lake Ontario.

The Branch continued to provide technical advice to the Department of External Affairs and to the Canadian Section of the International Joint Commission in their considerations and studies of international waterway problems which have arisen on various rivers across Canada. Among the most important studies of this nature undertaken by the Branch are those of the Columbia River. In March 1959, the International Columbia River Engineering Board presented its report to the International Joint Commission marking the end of 15 years of detailed investigation of water resource development, in which the Branch has made a major contribution. The report presents alternative plans of development with a primary objective of producing the maximum feasible hydro-electric development of the international basin. During the year the Branch participated in the work of several advisory committees set up by the Governments of Canada and British Columbia to study ways and means of bringing about early development of Columbia River power under co-operative agreement with the United States. The most important feature of these studies has been the problem of measuring and apportioning between the two countries the downstream benefits in power production and flood control which would accrue in the United States from the use of storage projects in British Columbia. This work is continuing in close collaboration with the International Joint Commission.

The Yukon River has been the subject of previous study to determine the possibilities of diversion of its upper reaches into the Taku River system for power production in northwestern British Columbia. Since the Canadian portion of the Yukon River with its tributaries lies almost wholly within the Yukon Territory and hence is a federal responsibility, the Branch continued its power resources reconnaissance survey, initiated in 1956. When this work has been completed, it will be possible to provide a reliable estimate of the power potential of the Yukon River system which might be developed within the Yukon Territory.

In the study of the water resources of the Souris and Red Rivers by the International Souris-Red Rivers Engineering Board consideration has been given to the advantages and disadvantages of diverting Missouri River water to the Pembina River by way of the Souris River.

In eastern Canada the International Passamaquoddy Engineering Board was active in its engineering and planning on development of power by the tides of Passamaquoddy and Cobscook Bays. The Board has completed the required field surveys and is currently preparing its final report.

As part of its investigation of the water resources of the St. Croix River basin, the International St. Croix River Engineering Board assisted in the public hearings held by the International Joint Commission in June 1958 to solicit briefs on proposals in development of the water resources of that basin.

During the year the Branch continued to participate in the activities of the Advisory Committee on Water Use Policy. Personnel of the Branch offered technical advice and co-operated with the Secretariat of the Committee in a number of its assignments.

An important part of Branch activities is the provision of technical assistance in investigations and studies being conducted on a joint federal-provincial basis.

The Branch continued its participation in the studies being made under the direction of the Fraser River Board to determine the possibilities of general Fraser River basin development with particular reference to flood control and hydro-electric power generation. This Board was established by the Governments of Canada and British Columbia and in 1956 it submitted an interim report covering investigations to that time. Late in 1958 the Board completed a preliminary report outlining the results of its studies and its recommendations with respect to flood control and hydro-electric power development. Several major schemes of comprehensive development were included in this report which is now under consideration by the Governments of Canada and British Columbia.

In January 1959, the Technical Liaison Committee on British Columbia Power Problems was established by the Governments of Canada and British Columbia for the purpose of reviewing all available technical information affecting federal-provincial interests in the power supply problems of British Columbia, with particular emphasis on the Columbia River power potential.

The Lakes Winnipeg and Manitoba Board was established in 1956 by the Governments of Canada and Manitoba to investigate and report upon the possibilities of further development and control of the resources of waters within Manitoba flowing into and from those lakes, with particular reference to flood control and hydro-electric power generation. In mid-1958 the Board submitted its final report to the two Governments, thereby completing the assignment under its terms of reference.

In March 1959, the Saint John River Board was established by the Governments of Canada and New Brunswick for the purpose of determining how the present and future power developments in New Brunswick would be affected by the development and operation of storage on the upper Saint John River and its tributaries.

The Branch administers the Dominion Water Power Regulations, in regard to water power developments carried out on federal lands. One final licence and one priority permit were issued during the year and another final licence in April 1959. The Branch was active also in the consideration of various matters regarding several other water power developments and carried out its regular function with respect to the collection of rentals for each of the nine developments under federal licence. Rentals collected during the year totalled \$50,645.73 of which amount \$6,090.25 was collected for the National Parks Branch of this Department and \$32,416.11 for the Indian Affairs Branch of the Department of Citizenship and Immigration.

The Branch conducted its activities relevant to its responsibilities for the administration of the International River Improvements Act and Regulations and the Canada Water Conservation Assistance Act. Annual reports detailing the Branch's activities in this respect are tabled in the House of Commons.

Based upon the Branch's hydrometric surveys, field investigations and other data, the current estimate of the water power resources of Canada is 66,203,000 h.p. at ordinary six months flow. During 1958, a net total of 2,485,040 h.p. of new hydraulic capacity was added, bringing the total installed capacity of all water power developments in Canada to 22,379,626 h.p. New stations and extensions under active construction for operation in 1959 were estimated at about 2,000,000 h.p.; others with a total capacity exceeding 2,600,000 h.p. were under preliminary construction or were definitely planned for development.

Three regular annual water power bulletins and one bulletin covering thermal-electric installations in Canada were issued during the year, and water power articles were revised for several publications of other agencies. A special publication entitled "Water Powers of Canada" was released initially at the Canadian Sectional Meeting of the World Power Conference in September 1958, and further distribution was made subsequently to public libraries and co-operating agencies.

Forestry Branch

The Forestry Branch carries out programs of research directed towards the improvement of forest management and the utilization of forest products. It administers agreements with the provinces through which federal financial assistance is extended for certain forestry activities carried on by provincial departments. Forest surveys are undertaken and advice on forest management provided for forest lands administered by this Department and other federal departments.

The Forestry Branch is organized in three divisions, namely, Forest Research Division, Forest Products Laboratories Division, and Forest Operations Division. In addition, there are separate sections dealing with Forest Economics and Branch Administration. New Forest Products Laboratories at Ottawa and Vancouver were occupied and the latter was formally opened in February 1959. The new laboratory building at Point Claire, Quebec, provided for the use of the Pulp and Paper Research Institute of Canada, was opened in September 1958.

*Forest Economics*¹

Research in the economics of forestry provides the basis for intelligent decisions on the economic aspects of managing forest lands and of utilizing their products and services. It embraces the whole range of economic activities which relate to the use of forest resources, including the fields of consumption, distribution and processing of the products of the forest.

The Forest Economics Section provides both statistical and economic services. In addition to maintaining basic data on forest resources and on production, consumption and trade, and forest products, it acts in an advisory capacity to the Director on matters of economic policy. Its economic activities include the analysis of forestry statistics, studies of legislation relating to forestry, the preparation of economic reports to international organizations, such as the Food and Agriculture Organization and the Economic Commission for Europe, and research projects in the economics of forestry.

The Section continued to provide a representative on the Interdepartmental FAO Committee. Advisory assistance was given to the Technical Co-operation Service of the Department of Trade and Commerce in providing courses of instruction for forestry graduates and students under the provisions of the Colombo Plan and the Expanded Technical Assistance Program.

¹See Appendix D, 1 to 3.

Forest Industries

Canada's forest industries in 1958 were affected by the North American business recession which began in 1957. Production and shipments declined substantially in the first half of the year but showed a marked recovery by the year's end. The major effect was the reduction of abnormally high stocks of lumber and plywood. Newsprint production declined despite a continuing increase in the industry's capacity.

Lumber production increased slightly over 1957 but remained seven per cent below the 1955 record figure of 7.9 billion board feet. Exports of lumber to the United States increased by 15 per cent but shipments to the smaller United Kingdom market declined by 14 per cent.

Newsprint output declined by five per cent to approximately 6.1 million tons in 1958. The operating ratio in Canadian mills fell from the 1957 figure of 95 per cent to 84 per cent.

Total utilization of forest products in 1957 dropped from 1956 by 10 per cent to 3,100 million cubic feet. This was two per cent lower than the average utilization for the 10-year period 1947 to 1956.

Forest Research Division¹

Research activities included fact-finding surveys to evaluate existing conditions, fundamental studies concerning the characteristics and behaviour of forest species and the influence of different factors of their environment, and applied research to develop practical methods for influencing forest development and improving operating and research techniques.

The Forest Research Division conducted research in silviculture, management, ecology, tree physiology, tree improvement, and reforestation from six district offices located at Calgary, Alta.; Winnipeg, Man.; Ottawa, Ont.; Valcartier, Que.; Fredericton, N.B.; and St. John's, Nfld.; and at the Petawawa Forest Experiment Station. Studies in tree physiology were also conducted in British Columbia and an ecological reconnaissance made in the Northwest and Yukon Territories. Research in forest inventories methods and in fire protection was conducted by two sections located in Ottawa.

Silviculture and Related Research

Silviculture deals with the theory and practice of controlling forest establishment, composition, and growth, while forest management is concerned with the application of business and technical principles to the operation of forest properties in order to achieve continuous production, with the net growth and harvest in approximate balance.

¹See Appendix D, 4.

The principal tasks within this field of forest research are as follows:

1. Development of satisfactory systems for classifying forests and forest sites as a basis for proper silviculture and management. This includes a study of physiographic and edaphic features, lesser vegetation, and the forest itself.
2. Determination of the silvical characteristics of Canadian tree species and the ecological relationships of the associations in which they occur. Included are fundamental studies of plant growth as related to such factors as temperature, light, moisture, frost, and studies of succession, all of which determine the character of the forest.
3. Development of methods of silviculture applicable to the more important forest types and to Canadian economic conditions. Studies are concerned with economic and practical harvesting methods for existing forests and experimentation to ensure future forests of desirable species.
4. Development and testing of practical methods for the actual and potential growth and yield of forests. An assessment of the potential productivity of forest sites and an accurate prediction of future yields of forests are essential for long-term management.
5. Development of improved techniques for reforestation and of improved strains of tree species suitable to Canadian conditions. Included are studies for the improvement of planting, seeding, and nursery techniques, and the development through selection and hybridization of better trees for use in reforestation programs.
6. Improvement of methods of organizing forest data into plans of regulation and silviculture for forest areas suitable to different intensities of management. This provides not only technical information for the implementation of management, but also valuable demonstration of various intensities of management in commercially important forest types.
7. Improvement of research methods, mensuration techniques, and the design of experiments. Experimental designs are developed to ensure the validity of results, mathematical functions of growth developed, and mensurational techniques tested and improved.

In all districts, studies of forest and forest site classification were in progress to provide the basic framework within which both research and forest management must be conducted. Fundamental ecological studies, tree breeding, provenance studies, and research in tree physiology continued, with the major part of this work being done at the Petawawa Forest Experiment Station, Chalk River, Ontario.

Tests of silvicultural techniques, with emphasis on regeneration following cutting and fire, continued in all districts. Basic data were obtained as a preliminary to the management of selected and representative forests in

each district, and data collected as a basis for the preparation of yield tables for important species. Studies of different cutting practices were expanded to include additional important forest types. Requests continued from forest industries and provincial agencies for technical assistance in planning such applied experimentation.

Forest Inventories Research

Stand volume tables based on factors ascertainable from air photographs are being prepared to facilitate estimates of the quantity of timber per acre in various forest types. Data were collected in northern forest stands on the Peace and Slave Rivers.

Methods of air photography are being investigated to obtain maximum forest information at minimum cost. Studies of photographs taken with air cameras of improved design or with special films are being made. Techniques of controlling the blur that occurs because the air camera is on a moving platform are under investigation in relation to large-scale sampling photographs.

Instruments and other equipment for use in the field and for interpretation of air photographs are being tested.

Research in methods of field sampling with particular regard to co-ordination with information obtainable from the air photograph is being conducted. Investigations in point sampling and in measurement of tree heights and recognition of species in air photographs were made.

Fire Protection Research

Many problems relating to the protection of forests against fire were studied. Most investigations were made at the request of provincial and other forest protection agencies, which often co-operated in them. Most members of the staff of the Section are in Ottawa, but the research is conducted during the fire season in the field at forest experiment stations or at temporary fire-research stations.

Two field parties continued investigations in British Columbia, one on Vancouver Island and the other on the Cariboo Plateau of the interior, to obtain data for the preparation of fire danger tables for the province. Analyses of the field data obtained in Alberta and Saskatchewan for fire danger table preparation were completed and provisional editions were published.

A field study of fire behaviour was commenced in Ontario to obtain data relating to forest fuel-type classification. Laboratory investigations to determine the equilibrium moisture content and rate of moisture loss or gain in some common forest fuels were begun at the Petawawa Forest Experiment Station. Plans were prepared for conducting experimental prescribed burns. A new type of device for folding forestry hose was designed.

Forestry Operations Division

Agreements between the Governments of Canada and the provinces, under the Canada Forestry Act, were administered by this Division, providing federal financial assistance to provincial forest inventories, reforestation, fire protection and forest access road construction. Federal participation, in the cost of an aerial spraying operation against the spruce budworm in New Brunswick was continued in 1958, but the infestation has now subsided. Total contributions by Canada to the provinces under the forestry agreements, since their inception in 1951, amount to more than \$15 million.

This Division is also responsible for conducting forest surveys and for advising and assisting other branches and departments of Government on forest management in forest areas under federal jurisdiction. The provision of forest fire protection and timber administration at Camp Gagetown, New Brunswick, was continued in co-operation with the Department of National Defence. A small education unit was also maintained by the Division.

Provincial Agreements¹

Forest Inventories

Under the terms of the federal-provincial agreements respecting forest inventory, the Federal Government pays half the cost of the approved programs of the seven participating provinces. These agreements, executed in 1956, provided for completion of the initial inventories by March 31, 1958, and for maintenance of the inventories until March 31, 1961.

Last year the completion of all initial inventories was reported, but a number of the final reports had not yet been published. By March 31, 1959, reports were available for each participating province encompassing a national gross inventory area of 1,129,000 square miles.

In 1958-59 all the provinces were engaged in inventory maintenance. This work is carried out in areas where disturbances such as cutting and fire, or where growth and changes in stand structure, have significantly affected the initial inventory estimates. For the most part, current maintenance work is being conducted in areas which were inventoried prior to 1951, and in general inventory maintenance work will be carried out on an approximate 10-year cycle.

Reforestation

Under the agreements, the participating provinces which maintain their reforestation programs on unoccupied Crown lands at a level equal to or above the previous three-year average are entitled to a federal contribution of \$10 per thousand trees planted and \$1 per acre seeded. In addition, the Federal Government contributes one-fifth of the cost of establishing and operating new forest nurseries.

¹See Appendix D, 5 to 7.

The Province of Prince Edward Island, under a special agreement, receives 50 per cent of the cost of reforestation on waste lands unsuitable for agriculture.

In 1958-59, payments were made to six provinces for the planting of a total of 15,548,000 trees, the seeding of 374 acres in Saskatchewan and the establishment and operation of new nurseries in Ontario, Prince Edward Island, and Nova Scotia. Since 1951 the Federal Government has shared in the planting of 89,852,000 trees, the seeding of 7,636 acres, and the cost of 12 new nurseries.

Forest Fire Protection

Federal financial assistance for fire protection was continued to nine provinces under the five-year agreements executed in 1957. Federal contributions under these agreements are available for capital expenditures on fire prevention, detection, and suppression equipment, buildings and improvements, and the hiring of aircraft and vessels.

The federal allotment in 1958-59 was \$750,000 as compared to \$500,000 for the preceding year. Equal annual allotments of \$1,250,000 are to be made available for the final three years of the agreements. The allotment to each province is dependent upon the province's expenditures on fire protection and also its forested areas.

Aerial Spraying Operations—New Brunswick

The year 1958-59 was the sixth and final year in which the Federal Government, under an agreement with the Province of New Brunswick, contributed to an aerial spraying program designed to combat an extensive spruce budworm infestation. Operations under this program were again conducted by Forest Protection Limited. The Federal and Provincial Governments, and the forest industries in the area, contributed equally to the cost of the operation during the six-year period. In 1958-59, an area of 2,588,000 acres was sprayed, to the cost of which the Federal Government contributed \$452,047.

Investigations by entomologists indicated, late in 1958, that the budworm infestation had collapsed in the sprayed areas. Continued operations in 1959 were not justified. However, in 1959, a serious infestation developed to the south of the sprayed areas indicating a need for spraying some 2½ million acres in 1960. So far the spraying program in New Brunswick has preserved the forest cover on approximately 6 million acres.

Forest Access Roads and Trails

In January of 1958, agreements were entered into with nearly all provinces for the period January 2nd to June 30th, 1958, under the terms of which the Federal Government contributed half the cost of constructing forest

access roads and trails. In the autumn of 1958, similar agreements were again implemented to cover the period November 1st, 1958 to June 30th, 1959.

The access roads and trails constructed under these agreements serve to improve forest fire protection and to aid in the development of the forest resources. The federal contribution to the eight participating provinces under both agreements up to March 31st, 1959, amounted to \$2,698,333.

Forest Management

Forest Inventories on Federal Lands

Because of the tremendous area and the variety of conditions encountered in Northern Canada, Wood Buffalo National Park and the Northern Territories were subdivided into twenty forest management divisions, varying in size from 4,000 to over 100,000 square miles. Forest inventories are to be summarized and forest management planned on this basis.

During the year there was 7,040 square miles of new reconnaissance forest cover mapping and 15,720 square miles of this type of forest cover mapping was planimetered. Detailed forest inventories were completed for 300 square miles. This gives a total to date of 51,700 square miles of completed forest cover mapping in Northern Canada with timber estimates for 31,600 square miles.

A northern field survey party measured 223 one-fifth acre field plots along the Peace River in Wood Buffalo National Park and 288 field plots along the Northwest Territories portion of the Slave River.

Forest surveys were made on twelve small military areas in Eastern Canada. The survey party measured 1,196 field plots.

Camp Gagetown, New Brunswick

The Forestry Branch is responsible for forest fire protection and forest management on the 430-square mile Camp Gagetown Military area. One timber sale was conducted during the year and permits were issued for small quantities of timber and hay. Two small fires occurred in which two acres of non-forested land were burnt.

Other Military Areas

The Forestry Branch supervised one small timber sale at Camp Borden, Ont., and one each at the Woodstock and Gloucester Junction Rifle Ranges in New Brunswick.

Education¹

The main function of the Education Section is the distribution of information stressing the importance of the forests in the national economy and

¹ See Appendix F.

the measures taken to ensure the preservation of this valuable resource. This is performed through correspondence, publications, addresses, films, photographs and displays.

Thirty-nine publications were added to stock and distribution made of 88,000 pieces. Two thousand three hundred inquiries were replied to by individual and form letters.

Forty-eight prints were supplied from the photographic library to illustrate publications of outside organizations and 188 colour transparencies were loaned for inclusion in film strips and the illustration of lectures. A loan service of four fire protection training films was maintained.

Forest fire prevention posters were provided to the Post Office Department for display in post offices across Canada and window exhibits were shown at the Forestry Branch Head Office.

Forest Products Laboratories Division

The past year has been one of considerable importance for the Forest Products Laboratories Division. In April, 1958, both its Laboratories moved into modern buildings which provide more than double the floor space formerly available and greatly improve research facilities. While this move involved some dislocations and interruption of work, the past year, nevertheless, has been one of considerable activity and progress in the research field. It was possible to extend research activities, previously restricted by space limitations. Of special interest were studies on the use of wood as an engineered building material, the application of electronics and ultrasonics to the non-destructive testing of wood and to the manufacture of plywood.

Under active study during the year were some 145 research projects at the Ottawa Laboratory and 55 at the Vancouver Laboratory.

Research into the use of wood in housing construction continued as an important activity of the FPLC. This research was undertaken in close co-operation with the Division of Building Research, National Research Council, and with Central Mortgage and Housing Corporation. For the latter, the FPLC investigated new developments in the use of wood products for housing. DBR and FPLC continued co-operation in bringing an engineering approach to the design of the many wooden components of family dwellings, particularly in the field of panel walls and glued and nailed wooden truss roofs for houses. Important contributions were made to the National Building Code and to Canadian Standards Association Committees.

The past year saw the introduction, by FPLC, of a series of two-day courses on "Improved Sawmilling Techniques" as a means of informing the lumber industry of results of sawmill research undertaken by the Ottawa Laboratory. The first of these courses, which was given in Nova Scotia on

November 5 and 6 last, was arranged in co-operation with the Nova Scotia Department of Lands and Forests, the Nova Scotia Forest Industries Association and the Maritime Lumber Bureau. Similar courses are being arranged on behalf of the lumber industries in Quebec and Ontario.

The FPLC continued to work closely with the forest industries of Canada with special attention being paid to the lumber and wood working industries. Research into the various factors affecting improved utilization continued to receive attention so that fuller and more efficient use can be made of Canadian species. During the past year special studies were made in the field, at logging operations and manufacturing plants of co-operating companies, covering the effect of tree size on lumber manufacture, the relationship between log defects and the cost of lumber produced, and the effect of pre-barking on sawmill operation.

Utilization of sawmill residue for pulpwood continued to show encouraging progress with the annual volume of residue going into pulp having increased six-fold to 15 million cubic feet during the past six years. The Laboratories have been active in this field for a number of years and have carried out extensive research on the barking, chipping and transporting of mill residue. The FPLC is the organizer of, and provides the secretariat for, a committee investigating the problems connected with the utilization of sawmill residue in Eastern Canada.

Important developments were made during the past twelve months in timber physics, a relatively new field of research for the FPLC. Of primary importance was the development of a sonic device for the detection of defective glue bonds in plywood. Applications were made for patents and a licence for the production of commercial models was granted to a Vancouver manufacturer. In the field of non-destructive testing, research was initiated on the development of a method for testing the strength of wood by vibration techniques.

Studies in the plywood and adhesives fields included extensive research required for the preparation of national specifications for adhesives used in the manufacture of a wide range of wood products. Special techniques and tests were developed for the rapid evaluation of the quality and durability of glue bonds in plywood, doors and core stock.

Research was carried out on glued truss rafters for use with glued laminated construction, on special types of timber roof construction and on the strength of power and communication poles. In container research, attention was given to improving the efficiency of wood-based container materials, particularly in the packing of poultry and eggs. Projects included the development of a performance test for poultry boxes and research covering suitable methods for the testing of fibreboard containers for use in the storage and shipment of eggs. Special attention was paid to the durability of exterior coatings and natural finishes and on the adherent qualities of paints when applied to wood, including the causes of blistering.

Promising results were obtained in laboratory scale experiments on the chemical utilization of wood residues for the pulping of sawdust and other comminuted wood material, using gases dissolved in organic solvents. The technique permits the production of satisfactory pulps in good yield and in short pulping cycles.

The staff continued active on numerous committees which included those of the National Building Code, Canadian Standards Association, Canadian Government Specifications Board, American Society for Testing Materials, Food and Agriculture Organization of the United Nations, as well as technical committees on lumber, plywood, furniture, wood preservatives, railway ties, and pulp and paper. Assistance was also given in the form of laboratory work and technical analyses to the Department of National Defence, Department of Agriculture and a number of Crown Agencies.

The dissemination of research findings continued to be a matter of utmost importance at both Laboratories. During the past year technical information was supplied by the FPLC in response to over 3,000 inquiries received by mail or resulting from personal visits by manufacturers and users of all forms of forest products. In addition, some 36,000 FPLC publications¹ were distributed, 36 articles published in various trade and technical journals and 30 talks and lectures delivered by the staff to industry and to the general public. Several reports and articles emanating from the FPLC were re-published in foreign countries.

Exhibits illustrating the properties of wood and portraying the results of research were prepared for meetings in Ottawa and Montreal. Co-operation was given the Maritime Lumber Bureau in the preparation of its exhibit for the Trade Fairs in the British West Indies. In addition, 6,376 samples of Canadian timber species were sold to the general public.

Advisory committees of industries, with their technical sub-committees, continued to assist both Laboratories in assessing the program of research work in relation to the needs of industry. Such committees, with members representing various timber producing and wood using groups, permit discussions of trends and reviews of technical advances, thereby clarifying the needs of the national economy, of industry, and of the consumer. On an international basis, close and friendly liaison continued with the forest products research institutions in other lands, so that through the exchange of research data, Canadian interests may be better served.

¹ Appendix F shows list of publications issued during the year.

National Museum of Canada—Natural History Branch

This Branch is concerned with the collection, study, preservation and display of material illustrating the geology and botany of Canada. Its scientists study minerals, rocks, fossils, plants and animals.

Eleven field parties were sent out and returned with specimens and valuable scientific information from many parts of Canada. Research was pursued in many areas of botany, zoology, and vertebrate palaeontology and the results of this research published in *Bulletins of the National Museum* and in scientific journals.¹

The Director visited natural history museums at London, Edinburgh, Brussels and Paris to effect greater co-operation between the Natural History Branch and its European counterparts. These visits have encouraged closer relations between the museums and more contributions of information and specimens by direct exchange. While in Europe the Director presented papers to the (British) Museums Association and the International Zoological Congress.

The staff was busy planning new and improved exhibits which will become possible as more exhibit space is made available. It is proposed to establish new Halls of Geology, Palaeontology and Mammalogy which will present exhibits of significant interest to the Canadian public. Two temporary exhibits were set up in the main lobby of the National Museum building, one featuring sea shells and the other Canadian fishes.

Botany

Three botanical parties were in the field during 1958. One ranged the Rocky Mountains of Alberta and British Columbia studying the alpine floras of Banff and Jasper National Parks in preparation for a manual of Rocky Mountain floras. The second continued research on the Atlantic seaboard for a study on the floras of that region, and visited northern Manitoba to prepare for the Churchill tour of the IX International Botanical Congress. The third conducted field research in the Winisk, Ontario, area of the Hudson Bay Lowland, then moved to the Boreal Forest region of Quebec and Ontario to prepare for the Boreal Forest tour of the Botanical Congress.

The botanists were engaged actively in preparations for the Botanical Congress, which will be held in Canada during the summer of 1959. Each botanist will act as a guide on a tour of a particular region, providing the visiting botanists with the benefit of his specialized knowledge of the floras of that region. These duties involved the preparation of guide books on the tours to the Rocky Mountains, Churchill and Boreal Forest regions and advance reconnaissance of the areas that will be toured.

¹See Appendix F.

The Chief Botanist, who last year studied the plants of northern Europe and Asia under a Guggenheim grant, mailed 100 botanical reprints and books to Russian botanists in return for Russian botanical literature he had received during his visit to Leningrad. He also selected a set of 525 Arctic plants for exchange with the Herbarium of the U.S.S.R. Academy of Sciences at Leningrad.

During the year 6,170 herbarium specimens were received by exchange, 723 by donation, and approximately 7,387 resulted from field work or were obtained in exchange for determination by members of the National Museum staff. Specimens numbering 2,952 were sent on loan to other botanical institutions, and 415 were borrowed from them. Duplicate specimens, 1,836 in number, resulting from field work of the herbarium staff, were distributed to Canadian and foreign herbaria in continuation of exchange. A total of 5,396 specimens of vascular plants were mounted and inserted in the herbarium, bringing the total number of mounted vascular plants in the National Collection to 254,726 and 8,116 specimens of cryptogamic plants were packeted and inserted into the herbarium. Type specimens numbering 50 were collated and indexed, bringing the number of indexed types of vascular plants in the herbarium to 1,811. The herbarium collection was used by 87 Canadian and foreign botanists.

Zoology

Eight field parties carried out research and collected specimens in various parts of Canada. Parties collected birds in the Mackenzie River Valley of the Northwest Territories and the Ungava district of Quebec, small mammals in the Eastern Townships of Quebec and in southern Ontario, mammals on Vancouver Island and smaller islands of Georgia Strait, birds and mammals on Prince of Wales Island, N.W.T. and amphibians and reptiles on Prince Edward Island and Cape Breton Island. A study was made of the distribution and ecology of the seashore invertebrates of the Atlantic Provinces.

Studies are in progress on the caribou, on the Talitridae of the world and the amphipod genus *Gammarus*. The manuscript of "Canadian Atlantic Seashells" was completed and progress achieved on the books "Mammals of Canada" and "Birds of Canada". The collection of fishes was sorted and identified and a checklist of Canadian marine fishes prepared.

A biologist served as an expert witness at the hearing of a charge laid under the Migratory Birds Convention Act at Sorel, P.Q., identifying the live Canada geese that were exhibits in the trial as wild birds.

Advice was given to the National Parks Branch on the improvement of natural history museums at Riding Mountain and Banff National Parks.

During the year the following additions were made to the zoology collections: 12,250 invertebrates, 1,669 birds, 1,336 mammals, 3,265 reptiles and amphibians and 318 fishes. The numbers of specimens in the various

collections at the end of the fiscal year were: invertebrates, 190,000; birds, 44,000; mammals, 25,500; reptiles and amphibians, 15,000; and fishes, 2,500. Schools were loaned 275 birds and mammals for teaching purposes.

Palaeontology

Field work was carried out in southern Alberta between May and August. A party of three palaeontologists collected fossil vertebrate specimens in Upper Cretaceous rocks near Manyberries and a skeleton of the horned dinosaur *Chasmosaurus* south of Irvine. A small collection was made from the Foremost formation.

The Chief Palaeontologist also inspected a reported Triassic vertebrate occurrence in Nova Scotia in December and, while on annual leave in Texas, collected at his own expense part of a skeleton of the Permian pelyosaur *Dimetrodon* and a small representative group of other Permian vertebrates.

A study of a dinosaur ichnite from the St. Mary River formation of Alberta and the preparation of a monograph on the Tertiary crocodiles of South America were advanced during the year. Manuscripts on "Anchiceratops from the Oldman Formation of Alberta", and "Alberta and Fossil Vertebrates" were completed and submitted for publication.

The Vertebrate Palaeontological Laboratory was actively engaged in planning the new Fossil Vertebrate Hall, renovating and improving present palaeontological exhibits and preparing skeletons for exhibition. The *Chasmosaurus* skeleton group on exhibit was renovated. A *Gorgosaurus* skeleton was prepared for reconstruction and mounting and work started on the preparation of a *Hypocrossaurus* skeleton and the reconstruction of a plesiosaur skeleton.

There are now 4,711 catalogued specimens in the collection of vertebrate fossils plus many more that have not yet been unpacked and catalogued.

National Museum of Canada—Human History Branch

This Branch collects and preserves artifacts and records of the prehistoric, aboriginal and immigrant peoples of Canada. The physical characteristics, culture, folklore, society and languages of those diverse ethnic components that have contributed to the Canadian nationality are studied and the results of this research embodied in reports, papers, publications and exhibits. The Human History Branch is concerned with the study of man-anthropology in its widest sense.

The Canadian War Museum was added to the Branch on April 1. There was no change in the staff, location and policy of this museum as a result of its transfer.

Two temporary exhibits were placed in the main lobby of the Museum. One presented Indian birchbark work, the other artifacts from the three cultural levels of the Eskimos.

Archaeological field work was carried out along the coast of the Yukon Territory, in the Ungava district of Quebec, in Ontario and on Vancouver Island. The addition of a physical anthropologist to the scientific staff greatly stimulated the scientific work of the Branch and made possible studies that had not been previously possible. Ethnological research was carried out in many parts of Canada and much valuable material on folklore and folk-songs collected and classified.

Archaeology

A 66-day archaeological reconnaissance of the Firth River was carried out, yielding 419 bone or stone tools, about 1,000 potsherds, about 650 fragments of bone and seven pollen samples.

Study of these specimens indicates that the people of the Flint Creek culture date from 8,000 to 12,000 years ago rather than from 6,000 to 8,000 years ago as was previously estimated.

Studies on the origin and development of the Cape Dorset Eskimo culture continued at Sugluk, Ivugivik and Mansel Island. About 5,200 specimens were collected, including the oldest Eskimo bone ever found, a mandible believed to date from 500 B.C.

A study of skeletal remains from Manitoba was commenced by the physical anthropologist while the other physical anthropology project on the blood groups of the Metis and other ethnic groups of Western Canada continued in Saskatchewan and Manitoba.

Other archaeological work was carried out in the Kingston area of Ontario, at Flin Flon, Manitoba, and the Churchill River area, on Manitoulin Island and in northern Ontario and at the midden area of Courtenay, B.C.

The senior Archaeologist spent four weeks leave on archaeological research in Mexico. This work, carried out at his own expense, involved the excavation of a cave containing the earliest remains of Maya culture in Chiapas State.

Plans for new exhibits on archaeology and the Canadian Eskimo were completed and planning and assembly of materials for an exhibit on the "Evolution and Races of Man" commenced.

Ethnology

Research was carried out in numerous ethnological fields. An ethnologist continued anthropological studies of Canadian Eskimos at Povungnituk. Four successive levels of acculturation were discovered among the Eskimos of this region, each level with its own technology, social organization, white-Eskimo interaction and migratory pattern. Six tapes of linguistic material were recorded and 20 tapes of folk tales and folk songs. About 100 traditional artifacts were collected as well as substantial collection of carvings illustrating the traditions of the Povungnituk Eskimos. A group of weapons used for hunting seals at their breathing-holes was acquired from Pelly Bay.

Two temporary exhibits were displayed in the main lobby of the building. These were "The Changing Eskimo", a visual presentation of artifacts from three cultural levels of the Eskimos, and the exhibit displaying the traditional use of birch bark by the Indians of Canada.

Folklore investigations continued in Nova Scotia, New Brunswick, the English-speaking settlements of the Magdalen Islands, the north shore of the St. Lawrence River, Acadian villages in the Atlantic Provinces, and Newfoundland. Research on the Hare Indians of the Colville area of the Mackenzie District, N.W.T. was conducted with the participation of Carleton University.

Re-organization and enrichment of the collection of recorded folk songs continued. All of the 7,090 wax cylinder recordings are being transferred to tape and at the year's end 3,790 recordings had been transferred.

A collection of 100 Indian, Eskimo and early French-Canadian artifacts was donated by Dr. Jacques Rousseau and other collections of artifacts were donated by Richard Ray, George Fensom, Miss Juliette Gauthier, S.C. Ells, and Duggan Gray. A Mohawk lexicon bequeathed to Dr. Marius Barbeau by the late Charles A. Cooke, archivist of the Indian Affairs Branch of the Department of Citizenship and Immigration, was donated by Dr. Barbeau.

Various artifacts were loaned to Crawley Films Ltd. for the production of a television series on the R.C.M.P. and assistance given to the setting up of a Canadian exhibit at Neuchâtel, Switzerland. Forty-eight Eskimo carvings were purchased for the National Museum collection and an inventory maintained of all Eskimo carvings purchased by the Northern Administration Branch.

Canadian War Museum

This Museum, which is devoted to the preservation and care of relics relating to Canada's military history, was transferred to the Human History Branch on April 1, 1958.

Considerable effort was made to rotate the material on display during the year. Two special exhibits were arranged, one dealing with the relics and effects of the three Canadian pilots who won the Victoria Cross during the First Great War and the second presenting interesting specimens relating to the history of Canadian military aviation. This second exhibit, which included a fine specimen of a B.E. 2C biplane of the First Great War, was presented to observe the 50th Anniversary of Powered Flight in Canada.

The museum continued to attract great interest among the Canadian public. A total of 127,531 visitors was recorded, many of these groups from schools who were visiting the museum while on conducted tours of Ottawa institutions. Many inquiries on Canadian military history from high school and university students were answered.

Common Services

Four sections provide common services in support of the scientific, educational and exhibition functions of both the Natural History and Human History Branches.

The Mechanical Services Section, which carries out all the electrical and mechanical maintenance of the buildings and constructs and renovates exhibits, built and set up four temporary exhibits during the year and acted as a technical consultant on the planning for new and improved exhibits and the general enlargement of the branches' office and display space.

The Library, which has shared its collection of books with the Geological Survey of Canada, commenced re-organization as a distinct National Museum Library. A committee of representatives from the Geological Survey of Canada and the National Museum began the distribution of books and journals between the two organizations. About 30,000 volumes have been retained by the National Museum Library and 499 new books were added.

The Education Section continued to encourage public interest in the scientific activities of the Museum through lectures, conducted tours, the loan of films, photographs and specimens to schools, and special programs. Twenty-two adult lectures in English were presented to audiences, totalling 8,665 and four lectures in French to a total audience of 337.¹ The popular "Canada in Colour" film series was repeated during the summer with the cooperation of the National Film Board, providing enjoyment to 5,548 persons.

¹ See Appendix E.

The lecture hall of the National Museum continued to be used by educational and other organizations who availed themselves of its facilities for projecting films and slides and accommodating sizable numbers of the people.

Conducted tours were provided for 117 groups, mainly from schools, and 18 special children's film programs presented on Saturday mornings to audiences totalling 17,886, a 100 per cent increase in attendance. As a service to Museum visitors, a sales desk was operated in the main lobby; sales of books, pamphlets, postcards and Eskimo stone carvings amounted to \$3,123. Schools were loaned 88 films, six film strips and numerous anthropological specimens. A great number of inquiries for general information were received by telephone and letter. Arrangements were made to move the 261 reels of 35 mm. documentary film taken by the National Museum to the National Film Board storage vault at Pendleton, Ont.

The Photographic Section completed 3,445 items of photographic work of which 2,351 were contact prints.

Canadian Government Travel Bureau

The Canadian Government Travel Bureau was established in 1934 "to assist in promoting tourist business in Canada". Since that time it has been the federal agency responsibility for the encouragement of tourist travel to Canada, with particular emphasis on attracting visitors from the United States.

Each year the Bureau carries out extensive newspaper and magazine advertising campaigns in the United States on behalf of Canadian travel; provides a detailed travel counselling and referral service for prospective visitors; produces travel literature and other informational material and carries out its distribution as well as literature provided by provincial tourist organizations, transportation companies and other agencies. The Bureau maintains, in co-operation with the National Film Board of Canada, a chain of 16 mm. sound and colour travel film libraries in the United States; and conducts publicity programs in the United States, Canada and abroad on behalf of travel to Canada.

The Bureau's Ottawa staff of up to 84 persons (including seasonal employees) occupies offices on the first and second floors of the Kent Building in downtown Ottawa and branch information offices have been established in New York City and Chicago. In April, the Bureau's Chicago office was moved to a new and more central location in ground floor offices at 102 West Monroe Street, in that city, and in October, the New York office was formally opened in its new location in Canada House on Fifth Avenue.

On December 3 and 4, the Thirteenth Federal-Provincial Tourist Conference was held in Ottawa with delegates from federal departments, provincial tourist organizations, transportation companies and the Canadian Tourist Association attending. The Conference examined the results of the 1958 tourist year and concluded that while there had been a slight setback in United States tourist traffic because of uncertain economic conditions and other factors, increased inter-provincial travel had kept Canada's tourist business on a par with the previous season.

Travel expenditures in Canada by travellers from other countries totalled \$352 million of which \$309 million came from United States visitors. This was five per cent lower than the 1957 record year. Receipts from other countries, however, set a new high of \$43 million, an increase of \$5 million over the previous year. In the meantime Canadians spent \$411 million on travel in the United States and \$133 million in other countries. There were 28,530,700 individual entries into Canada in 1958. The National Parks of Canada played host to 4,948,910 visitors during the calendar year, an increase of 452,087.

For the 1958-59 season the Bureau allocated \$1,400,000 for advertising in United States magazines and newspapers. Of this amount approximately \$800,000 was used for a general magazine campaign, \$300,000 for

a general newspaper campaign (including production charges) and \$300,000 for a special Atlantic Provinces campaign. During the year, by judicious selection of advertising markets, the Bureau was able to gain 3½ million in circulation and add 6 magazines to its list, using relatively the same amount of money—with some allowance for increased cost of space and production. The 1958 general campaign ran in 42 different magazines with a total circulation of 58,476,543, and in 72 different daily newspapers with a total circulation of 28,691,212. Advertising for the Atlantic Provinces was placed in six magazines with a combined circulation of 19,493,234, and in 26 newspapers with a total circulation of more than 14½ million.

Travel Counselling

As a result of this extensive advertising campaign, the Bureau serviced a record 756,987 requests for Canadian travel information. Of this total, approximately 658,988 were serviced from Ottawa, 60,816 by the New York Office, 18,221 by the Chicago Office, and 18,962 by Canadian Consulates in the United States.

Of the 658,988 inquiries serviced from Ottawa, 263,747 were requests for detailed information on travel in Canada, which required special attention by the Travel Counselling Section. These requests are serviced with appropriate material from Ottawa and are then referred via the Bureau's special referral system to provincial and local bureaus across the country as well as to all main transportation companies so that they may follow up with additional assistance.

A total of 20,218 inquiries were given personally dictated replies by the Bureau's Travel Counselling staff. The increase in detailed inquiries clearly indicates that more and more prospective visitors are demanding this type of specialized information to help them plan their vacations in Canada.

Publications

A total of some 5,000,000 of the Bureau's publications and leaflets were distributed in 1958, with large runs for such principal items as *Canada-Vacations Unlimited*, both booklet and folder; *Canada-United States Highway Map* and *How to Enter Canada*. All existing service booklets were brought up-to-date by the Travel Counselling Section, and some additional ones were produced including a new service booklet on the Trans-Canada Highway and another entitled *Where to Fish in Canada*.

Wide distribution of a leaflet and poster suggesting exchange of American dollars at Canadian banks was made through border crossing points, Canadian Chambers of Commerce, transportation companies, and provincial and local tourist associations. Similar distribution of a special poster regarding Customs exemptions on purchases by U.S. residents was also carried out.

In addition to the large volume of material sent out in reply to individual requests from prospective visitors, a large percentage of the Bureau's literature and maps was distributed through such important travel outlets in the

United States as automobile clubs, travel agencies, transportation companies, personnel departments of industrial organizations, chambers of commerce, gasoline and oil companies' touring bureaus, and to a lesser extent in other foreign countries.

Promotional mailings of literature encouraging distribution to prospective visitors were carried out early in the year to well over 6,500 contacts.

To assist in promoting attendance at various conventions in Canada and to encourage as well pre- or post-convention travel, the Publications Section carried out special mailings of material to prospective delegates.

Publicity

The Bureau's publicity programs in the United States, in Canada, and in overseas countries included the regular mailings of release material to more than 2,200 media. In addition, mailings of 10,087 glossy prints in black and white and the loan of 2,111 colour transparencies to magazines and rotogravure sections showed a sharp increase over the previous year. The Bureau carries out few unsolicited mailings of photo material and over 90 per cent of the photos are distributed as the result of direct requests. Publicity service during the year was expanded, for special travel sections of major United States newspapers, to include the offer of many special feature stories on vacationing in Canada. The articles were offered on an exclusive basis to editors and were especially written and slanted to each newspaper and its readers. They provided a very wide additional coverage to the Travel Bureau's publicity campaign.

Besides making direct placements of Canadian travel publicity, the Bureau helped many editors in the United States and overseas countries develop their own Canadian travel stories.

During July and August, picture-taking assignments were carried out for the Travel Bureau by a National Film Board of Canada photographer, and by four private photographers. The program included coverage in New Brunswick, Prince Edward Island, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia. They provided a good new selection of black and white and colour still photos for advertising, publicity and publications use.

In 1958 Canadian travel films continued to promote visits to Canada through direct showings to community groups and over television. The program now includes approximately 485 outlets in the United States—160 deposit outlets and 325 circuit points—organized and serviced by National Film Board offices in New York and Chicago.

In February, 1958 an advisory committee, representing sponsors of travel films, was set up to discuss plans for new productions in line with the needs of the Canadian Travel and Wild Life Film Program. A sub-committee to evaluate new films has functioned regularly since that date. New outlets and circuits have been organized, and a special study completed on

the comparative importance of each State in relation to travel potential to Canada. The Travel Bureau purchased nearly 800 prints of some 175 titles in 1958.

During the year 4,126,387 persons saw Canadian Travel Films through 70,940 direct showings. This represented an attendance increase of 14 per cent over the previous year.

There has been a moderate but steady increase of the number of telecasts since the establishment of a free television library at New York in 1954. In 1958 an estimated audience of 60 million people was reached through 1,835 telecasts (277 of which were in colour) over 126 stations in 102 cities covering 38 States.

A series of 10 "televisit" subjects (2-4 minute Canadian vignettes) were released in June of 1958 and during a four-month period—June to September—were telecast 568 times over 26 stations in 26 cities covering 16 States.

The new NFB 56-minute film *Trans-Canada Summer* was telecast on the ABC network in two parts on August 29 and September 5 from 9:00 to 9:30 p.m. Thirty-two stations used this particular network program and according to an estimate based on Neilson data, some 5 to 10 million people viewed this particular program.

Administration Services Branch

During the year under review, administrative assistance was provided to the Deputy Minister and to the operating Branches by the office of the Chief Administrative Officer and the various administrative divisions.

Economic Division

The primary function of the Economic Division is to carry out economic research and to provide advice on economic questions relating to the Department's role in administering and developing the northern territories, and in the management of resources generally.

During the past year the staff of the Division provided economic advice on the Roads to Resources program and made detailed studies of certain roads being considered for inclusion in the program. It also concerned itself with questions relating to minerals and energy fuels, transportation, resource processing, territorial revenues and expenditures, tourist development, and economic growth prospects for communities in the north. Among the specific studies carried out were analyses of the proposed railroad to Great Slave Lake, hydro-electric power in Newfoundland, transportation on the Mackenzie waterway, and the economic potential of Frobisher Bay. The Division also participated in negotiations concerned with the transfer of the Canol pipelines and related facilities from the United States to Canada.

The Division provided consultation on matters of policy as well as of substance and members of its staff represented the Department on a number of interdepartmental and special committees which met during the year.

Editorial and Information Division

Assistance and advice on most aspects of public information were offered to all branches of the Department during the year. As its name implies, this Division has a double function: it provides a complete editorial service for the Department and also acts as an information agency which collects, processes and distributes material of general public interest.

A total of 156 departmental publications—the majority of a technical nature—were produced during the fiscal year. Editorial and Information made arrangements for printing and carried out subsequent liaison with the Queen's Printer for all these publications and for many the Division provided a complete editorial service to the various branches. A total of 293 articles were also edited. Thirty-five publications in the French language were edited as well as the translation of press releases and speeches.

Information activities included the preparation of 107 press releases, the distribution of 750 black-and-white photos of the Northwest Territories and the Yukon Territory, and the writing of 35 articles, radio scripts and

speeches. Drafts were written for booklets on Inuvik, the Canadian Wildlife Service, Batoche Rectory National Historic Park and the Canadian War Museum. Five chapters were written for "Landmarks of Canada's Past", a guide-book to Canada's history and historic sites. Information was collected and prepared for use in special editions of newspapers and magazines and for Canadian, United States and British encyclopedias and year-books.

Special exhibits were presented at the Pacific National Exposition at Vancouver and the Quebec Provincial Exhibition at Quebec City. The Vancouver exhibit, which featured Eskimo life and customs, attracted 165,000 spectators while the Quebec City exhibit, which presented visual material on historic sites, drew an estimated 150,000 spectators. Short-term exhibits were also presented. The Division continued to co-ordinate travelling exhibits of Eskimo carvings in the United States, South America and Europe.

Mail inquiries for information totalled 15,148 and 39,555 mimeographed information pieces were mailed in response to these requests. Many reports, statements, speeches and other documents were stencilled and mimeographed for departmental use or public distribution; in all, more than 4,000 stencils were cut and 500,000 pages run through the mimeograph machine.

Legal Division

Legal advice on matters coming within the responsibility of the Department was offered during the year. The Division provides a complete legal consultative service, representing the Department in litigation and advising on the legal implications of departmental policies, acts and regulations.

Special advice was given on the drafting of various contracts, agreements, legislation and regulations and counsel was provided to the Councils of the Yukon Territory and the Northwest Territories.

Personnel Division

The Personnel Division is responsible for planning and executing the departmental personnel policy and provides an advisory service on personnel administration. Records designed to produce a variety of information affecting staff are maintained. Specialized services are provided in the field of establishment and classification, staff training and employee welfare.

Members of the Personnel Division take an active part in the selection of candidates for promotion and during the year 102 competitions were held in the department and 244 separations of full-time employees occurred. During the fiscal year, total departmental establishment of full-time positions was 2,390, an increase of 249 from the previous year. In addition to full-time employees the department also employed a substantial number of seasonal and part-time persons. Staff are located in every province of Canada and both northern territories.

Purchasing Division

The Purchasing Division is responsible for procuring all supplies and equipment needed by the Department. Its officers represent the Department in dealing with suppliers and investigate equipment and supplies on the market to see if they are acceptable for the general and specific requirements of the Department.

During the fiscal year the volume of purchasing increased to a level higher than any previous year. The Division received 15,295 requisitions and issued 13,189 purchase orders. The proportion of procurement to total departmental expenditure continued to increase; in 1958-59, procurement made up 62 per cent of total departmental expenditure. This yearly increase in procurement has been evident since 1954-55 when procurement accounted for 42.7 per cent of the total departmental expenditure. In the past dozen years, procurement has increased five-fold.

Reorganization of purchasing procedures continued. A start was made on the bulk purchasing of supplies and equipment whose use is common to all branches, such as petroleum products, asphalt, tires and tubes, paint, and clothing. The use of Canadian Government specifications enabled the Division to achieve a greater degree of standardization and uniform quality. Such bulk purchasing has proved very satisfactory, providing greater economy and more efficient delivery.

The Division continued to help co-ordinate supply operations in Northern Canada. For the first time petroleum products were shipped to Frobisher Bay by tanker and pumped into storage tanks from which distribution could be made. One hundred and fifteen pre-fabricated housing units were purchased by tender and shipped north. Contracts were made with Yellowknife suppliers to provide a year's supply of food to the Yellowknife Hostel, which is administered by the Department. The furnishing of territorial schools and the homes of northern teachers continued to be a major activity. Purchase and shipment of food for departmental staff living in the Northwest Territories was carried out under a system by which the field staff repays the cost in monthly instalments.

Vehicle and machinery purchases included cars and trucks as well as road construction and maintenance equipment, electric generators, boats, and special tracked vehicles for use over snow and muskeg. A "Rat" tracked vehicle was purchased for use at Fort Norman, N.W.T., and is being evaluated as a possible general-purpose vehicle for northern transportation over difficult terrain.

The Division represented the department on the Canadian Government Specifications Board. Its officers participated in drawing up specifications for sleeping bags, summer uniforms for park wardens, residential and school furniture, tents, blankets, bedding, trailers and other articles.

Northern Research Co-ordination Centre

Under the Department of Northern Affairs and National Resources Act, assented to on 16 December, 1953, the Minister of Northern Affairs and National Resources was made responsible for fostering through scientific investigation and technology, knowledge of the Canadian north and of the means of dealing with conditions related to its further development. To assist in carrying out this responsibility a small Northern Research Co-ordination Centre was established in 1954, reporting through the Secretary of the Advisory Committee on Northern Development.

The terms of reference of the Northern Research Co-ordination Centre are: to collect and disseminate technical and scientific information on the north, to co-ordinate departmental and interdepartmental research in the north, to sponsor and conduct research on northern subjects in fields for which no other government agency is responsible or which are concerned with a number of different fields; to encourage government and non-government agencies to undertake research in the north, to assist in planning projects for northern development, especially those affecting the Eskimos, to arrange for the working up and publication of materials and results of expeditions in Northern Canada which have not been adequately published, and to handle the issue of Scientists and Explorers Licences and Permits to archaeologists for the Northwest Territories.

The Centre keeps in touch with arctic research carried out both in Canada and other countries and conducts research, especially in the field of social anthropology, with seasonal employees, and by means of contracts and grants-in-aid. The Northern Affairs Library, which is part of the Northern Research Co-ordination Centre, provides library services for the Northern Administration Branch as well as the Research Centre and handles an increasing number of technical and scientific inquiries. There are 4,203 books and 171 periodicals in the library. During the year 1,713 loans were made, 1,128 inquiries answered and 3,216 periodicals circulated.

As part of its co-ordinating function, the Centre provides the secretariat for two research committees. One of these is the Scientific Research Sub-Committee of the Advisory Committee on Northern Development, which co-ordinates government research at the interdepartmental level, and the other is the departmental Northern Research Committee co-ordinating northern research within the department.

Eleven research projects were undertaken in 1958 including eight Social Anthropology studies, two in Biology, and one in Physics. This made a total of twenty-seven projects carried out in the past four years.

The main anthropological research projects were undertaken in five Eskimo communities by seasonal employees and university scientists. Their object was to determine the degree of Eskimos adjustment to changed social and economic circumstances at Rankin Inlet, Coppermine, Frobisher Bay,

Port Harrison, and Camp 20 at Fort Churchill. The information thus gained was of value in determining Eskimo employment policies and the role the government might play in the social and economic development of each community.

One grant supported a study on nutrition and growth rates of reindeer fawns and the effect of lactation in reindeer cows at the Reindeer Station near Aklavik. Another allowed a botanist to accompany the Defence Research Board expedition to Lake Hazen, Ellesmere Island to collect flora and study muskox range conditions. A contract was arranged for an investigation of the feasibility of using heat pumps as a source of domestic heat in the north, and a comparative study covering the use of a diesel unit, equipped with conventional devices to recover heat, but without the heat pump element to generate light, power, and heat.

Several research projects begun in 1956 and 1957 were completed in 1958. These included preparation of a draft Eskimo orthography, an examination of the possibility of assessing caribou range conditions by aerial photography, a study of legal concepts among the Netsilik Eskimos, and a social and economic study of the community at Tuktoyaktuk.

APPENDICES

Appendix A

Summary of Revenues and Expenditures, 1958-59

	Revenues	Expenditures
ADMINISTRATION SERVICES.....	\$ 242.75	\$ 739,910.00
Contributions to the Provinces for Camp- ground and Picnic Area Developments.....		1,723,436.49
NORTHERN RESEARCH CO-ORDINATION CENTRE.....		85,968.14
NATIONAL PARKS BRANCH		
Branch Administration.....		139,151.18
National Parks and Historic Sites.....	2,189,055.85	21,950,399.14
Grant to Jack Miner Migratory Bird Founda- tion.....		5,000.00
Grant in aid of the development of the Inter- national Peace Garden in Manitoba.....		14,841.56
Grant to the City of Orillia.....		15,000.00
National Battlefields Commission.....		178,625.00
Canadian Wildlife Service.....	1,834.56	592,409.07
	2,190,890.41	22,895,425.95
WATER RESOURCES BRANCH.....	126,831.96	2,379,822.09
NORTHERN ADMINISTRATION BRANCH		
Branch Administration.....	243,366.03	1,223,926.98
Yukon Territory.....	1,800,017.18	3,854,608.86
Northwest Territories.....	7,570,099.16	20,504,150.43
Roads to Resources.....		1,750,732.79
	9,613,482.37	27,333,419.06
FORESTRY BRANCH		
Branch Administration.....		143,145.86
Forest Research Division.....	78,150.83	1,480,508.85
Forestry Operations Division.....	13,307.96	4,620,921.13
Forest Products Laboratories Division.....	4,706.99	973,352.47
Grant to Canadian Forestry Association.....		20,000.00
Eastern Rockies Forest Conservation Board.....		5,445.60
	96,165.78	7,243,373.91
NATIONAL MUSEUM OF CANADA.....	2,412.12	569,347.46
CANADIAN GOVERNMENT TRAVEL BUREAU.....	4,067.34	2,206,129.32
TOTALS FOR DEPARTMENT.....	\$12,034,092.73	\$65,176,832.42

Appendix B

1. Mineral Production

	1957		1958 ¹	
	Quantity	Value	Quantity	Value
NORTHWEST TERRITORIES				
		\$		\$
Gold.....	340,018 oz.	11,407,604	335,720 oz.	11,392,475
Silver.....	69,104 oz.	60,376	73,355 oz.	63,723
Copper.....	330,472 lbs.	95,672	906,000 lbs.	230,395
Nickel.....	1,056,341 lbs.	734,157	4,233,000 lbs.	2,994,848
Uranium.....	838,264 lbs.	8,801,769	964,000 lbs.	9,628,000
Petroleum.....	420,844 bbls.	294,591	471,000 bbls.	475,000
Natural Gas.....	19,243 M. cu. ft.	6,446	21,500 M. cu. ft.	7,075
TOTAL.....	—	21,400,615		24,791,516
YUKON TERRITORY				
		\$		\$
Gold.....	73,962 oz.	2,481,425	69,210 oz.	2,351,756
Silver.....	6,484,185 oz.	5,605,232	5,860,499 oz.	5,091,015
Lead.....	24,985,830 lbs.	3,488,023	21,589,447 lbs.	2,446,084
Zinc.....	17,119,445 lbs.	2,069,741	14,527,390 lbs.	1,577,675
Cadmium.....	185,754 lbs.	315,782	162,706 lbs.	247,313
Coal.....	7,731 tons	91,595	4,544 tons	58,975
TOTAL.....		14,111,798		11,772,818

¹Preliminary figures.2. Timber Permits Issued and Volume of Timber Cut,
Yukon and Northwest Territories

Type of Permit	Yukon Territory				Northwest Territories ¹			
	Permits Issued	Lumber (ft.b.m.)	Round Timber (lin. ft.)	Fuel-wood (cords)	Permits Issued	Lumber (ft.b.m.)	Round Timber (lin. ft.)	Fuel-wood (cords)
Commercial permits.....	27	2,653,260	1,097,298	1,232	18	12,402,323	170,975	3,594
Free of fees and dues.....	11	—	300	440	8	—	11,440	183
Free of dues.....	15	—	2,000	900	11	—	14,000	1,016
Dues paid.....	176	25,000	75,805	2,955	115	47,000	132,120	3,021
TOTAL.....	229	2,678,260	1,175,403	5,527	152	12,449,323	328,535	7,814

¹Includes Wood Buffalo National Park.

3. Revenue

	Northwest Territories		Yukon		Provinces		Totals ¹	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.
Mining.....	142,403	87	110,476	75	—		252,880	62
Oil and Gas.....	6,634,330	75	1,548,315	14	201,138	25	8,383,784	14
Lands, Timber and Grazing.....	101,310	27	44,752	61	63,517	20	209,580	08
TOTALS.....	6,878,044	89	1,703,544	50	264,655	45	8,846,244	84

¹All royalty statements had not been received at the end of the fiscal year.

4. School, Location, and Attendance

MACKENZIE EDUCATION DISTRICT	School	Location	No. of Teachers	Status and Number of Pupils Enrolled as of March 31, 1959			
				Eskimo	Indian	Others	Total
	Aklavik.....	Aklavik.....	7	54	50	65	169
	All Saints Ang. Residential.	Aklavik.....	5	74	10	5	89
	All Saints Ang. Hosp.....	Aklavik.....	1	16	4	0	20
	Arctic Red River.....	Arctic Red River.....	1	0	13	0	13
	Cambridge Bay.....	Cambridge Bay.....	2	41	0	0	41
	Coppermine.....	Coppermine.....	2	32	0	4	36
	Discovery Mine.....	Yellowknife.....	1	0	0	13	13
	Feraud's R.C. Hosp.....	Fort Rae.....	1	0	3	0	3
	Fort Franklin.....	Fort Franklin.....	2	0	50	3	53
	Fort Good Hope.....	Fort Good Hope.....	2	0	58	15	73
	Fort Liard.....	Fort Liard.....	1	0	17	5	22
	Fort McPherson.....	Fort McPherson.....	6	0	110	31	141
	Fort Norman.....	Fort Norman.....	2	0	16	33	49
	Fort Rae.....	Fort Rae.....	2	0	44	10	54
	Fort Resolution.....	Fort Resolution.....	5	0	16	83	99
	Fort Simpson.....	Fort Simpson.....	4	0	49	45	94
	Fort Smith.....	Fort Smith.....	21	0	198	299	497
	Fort Wrigley.....	Fort Wrigley.....	1	0	23	0	23
	Hay River.....	Hay River.....	11	0	29	211	240
	Immaculate Conception R.C. Residential.	Aklavik.....	7	92	27	53	172
	Immaculate Conception R.C. Hospital.....	Aklavik.....	1	6	3	2	11
	Inuvik.....	Inuvik.....	3	18	9	30	57
	Jean Marie River.....	Jean Marie River.....	1	0	21	0	21
	Lac La Martre.....	Lac La Martre.....	1	0	17	3	20
	Norman Wells Mine.....	Norman Wells.....	1	0	1	9	10
	Old Crow.....	Old Crow (YT).....	1	0	0	39	39
	Port Radium Mine.....	Port Radium.....	1	0	2	9	11
	Rayrock.....	Rayrock.....	1	0	3	11	14
	Reindeer Station.....	Reindeer Stn.....	1	17	0	2	19
	Rocher River.....	Rocher River.....	1	0	7	5	12
	Sacred Heart R.C. Residential.....	Ft. Providence.....	4	0	96	22	118
	Sir John Franklin.....	Yellowknife.....	15	28	28	93	149
	St. Annes R.C. Hosp.....	Ft. Smith.....	1	1	18	3	22
	St. Josephs R.C. Hosp.....	Fort Resolution.....			Closed during 1958-59		
	St. Margarets R.C. Hosp.....	Ft. Simpson.....	1	0	7	0	7
	Tuktoyaktuk.....	Tuktoyaktuk.....	3	55	0	4	59
	Yellowknife P.S.....	Yellowknife.....	12	0	1	283	284
	Yellowknife S.S.....	Yellowknife.....	6	0	18	132	150
Totals for Mackenzie Education District.....			138	434	948	1,522	2,904

4. School, Location, and Attendance—Continued

ARCTIC EDUCATION DISTRICT	School	Location	No. of Teachers	Status and Number of Pupils Enrolled as of March 31, 1959			
				Eskimo	Indian	Others	Total
	Arctic Bay.....	Arctic Bay.....	1	15	0	0	15
	Baker Lake.....	Baker Lake.....	2	46	0	2	48
	Cape Dorset.....	Cape Dorset.....	1	17	0	0	17
	Chesterfield Inlet.....	Chesterfield Inlet.....	4	108	0	8	116
	Coral Harbour.....	Southampton Is.....	1	45	0	1	46
	Fort Chimo*.....	Fort Chimo.....	1	16	0	6	22
	Frobisher Bay.....	Frobisher Bay.....	6	109	0	25	134
	Great Whale River*.....	Great Whale River.....	4	80	12	1	93
	Keewatin Rehab. Project.....	Rankin Inlet.....	1	22	0	0	22
	Pangnirtung.....	Pangnirtung.....	1	16	0	0	16
	Port Harrison*.....	Port Harrison.....	1	28	0	5	33
	Povungnituk*.....	Povungnituk.....	1	54	0	0	54
	Rankin Inlet.....	Rankin Inlet.....	3	81	0	3	84
	Resolute Bay.....	Resolute Bay.....	1	20	0	0	20
	Spence Bay.....	Spence Bay.....	1	17	0	0	17
	Sugluk*.....	Sugluk.....	1	51	0	0	51
TOTALS FOR ARCTIC EDUCATION DISTRICT.....			30	725	12	51	788
TOTAL FOR BOTH EDUCATION DISTRICTS.....			158	1159	960	1,573	3,692

*Located in Northern Quebec.

5. Part Time Schools—Attendance

MACKENZIE EDUCATION DISTRICT	School	Location	No. of Teachers	Status and Number of Pupils Enrolled as of March 31, 1959			
				Eskimo	Indian	Others	Total
	Gjoa Haven R.C.....	Gjoa Haven.....	1	14	0	0	14
	Holman Is. R.C.....	Holman Is.....	1	7	0	0	7
	Bathurst Inlet R.C.....	Bathurst Inlet.....		no attendance			
TOTALS FOR MACKENZIE EDUCATION DISTRICT.....			2	21	0	0	21
ARCTIC EDUCATION DISTRICT							
	Eskimo Point.....	Eskimo Pt.....	1	22	0	0	22
	Eskimo Point.....	Eskimo Pt.....	1	13	0	0	13
	Igloolik.....	Igloolik.....	1	14	0	0	14
	Ivuyivik*.....	Ivuyivik.....	1	17	0	0	17
	Koartak*.....	Koartak.....	1	13	0	0	13
	Lake Harbour.....	Lake Harbour.....	1	24	0	0	24
	Maguse River.....	Maguse River.....	1	15	0	2	17
	Pelly Bay.....	Pelly Bay.....	1	24	0	0	24
	Pond Inlet R.C.....	Pond Inlet.....	1	no attendance reported			
	Pond Inlet Ang.....	Pond Inlet.....	1	25	0	0	25
	Repulse Bay R.C.....	Repulse Bay.....	1	27	0	0	27
	Wakeham Bay*.....	Wakeham Bay.....	1	20	0	0	20
TOTALS FOR ARCTIC EDUCATION DISTRICT.....			12	214	0	2	216
GRAND TOTALS FOR BOTH EDUCATION DISTRICTS..			14	235	0	2	237

*Located in Northern Quebec.

6. Report of Administrator of the Arctic

This office is responsible for the general administration of Arctic areas of the Northwest Territories known as the Districts of Keewatin and Franklin (except Victoria Island and Banks Island) as well as the administration of Eskimo affairs in these areas and in northern Quebec.

Significant changes in the economy of the north were under way in 1958. These changes resulted from a number of factors—greater penetration into the Arctic from the south, an increasing Eskimo population and a decreasing game supply. The problem of introducing some diversification in the economy of the people still living off the land became acute. Incidents of death and privation among the interior Keewatin Eskimos early in 1958 called for drastic remedial measures. A new community was established on the west coast of Hudson Bay at Rankin Inlet for those most seriously threatened by the shortage of caribou. By the end of the year, approximately 120 persons were resettled in this community and had erected their own low-cost housing with guidance and materials organized by the Branch. A school and small store were in operation, and a start had been made on handicraft production as well as organized hunting and fishing projects.

As a further precautionary measure, arrangements were made with the R.C.M.P. to operate a Government aircraft at Frobisher Bay and a second aircraft in Churchill, Manitoba, with funds provided by the Department of Northern Affairs and the Police. Regular patrols were made by the Department of Northern Affairs and the R.C.M. Police, particularly to the outlying camps in the Keewatin District.

Because of the many factors affecting a livelihood from the land, many Eskimos turned to some source of wage employment to support themselves. These changes in their way of life are inevitably bringing problems of adjustment to a great many of the Eskimo people. The task of guiding Eskimos during this difficult transition period falls upon northern service officers and other field staff. Four more northern service officers were employed in 1958, making a total of eighteen stationed at the following points in the Northwest Territories, Northern Quebec and Northern Manitoba: Cambridge Bay, Baker Lake, Frobisher Bay, Sugluk, Tuktoyaktuk, Rankin Inlet, Fort Chimo, Cape Dorset, Churchill and Great Whale River. Three northern service officers stationed at Frobisher Bay, Cambridge Bay and Tuktoyaktuk acted as field liaison officers between the DEW Line employers and the Eskimos working at various stations on the Line.

In the operation of the DEW Line about a hundred Eskimos had permanent employment, and many others found seasonal employment in connection with the Line.

The Administrator's Office assisted the Education Division in the vocational training program for Eskimos. Field officers helped in selection of Eskimo candidates and arranged their transportation to the training centres.

The "Arctic University"—a series of lectures, seminars and language classes designed primarily for new staff members—was held from October to February.

Officials of the District Office again undertook the duties of officer-in-charge of the first and second halves of the Eastern Arctic Patrol, aboard the CGS *C. D. HOWE*, which visited all major communities in the Eastern Arctic between July and October.

In August and September, a party of ten Eskimos from widely scattered communities, together with four officers of the departmental staff in Ottawa made a visit to Greenland on the CGS *ERNEST LAPOINTE*. In addition to this visit and in accordance with the Department's plans to encourage liaison with Arctic administration in other northern countries, two officers made an extensive tour of Alaska at the invitation of the United States Government.

The Ninth Meeting of the Committee on Eskimo Affairs was held in Ottawa on May 26, 1958.

Early in 1959, Regional Administrators at Frobisher Bay and Churchill were established. They supervise field staff in their areas and report to the Administrator of the Arctic. In the Arctic regions, the role of area administrator is performed by the northern service officers. They are responsible both for normal civil administration and for the particular assistance needed by Eskimos during the rapid and decisive adjustments which they are undertaking.

Teachers, social workers and engineers are on the staff of the Administrator in their area, and report by this means. This system is designed for the fullest co-ordination of activities in the north.

Officers of the Administrator of the Arctic represented the Department on such committees as the Interdepartmental Meteorological Committee, Subcommittee of ACND on Northern Transportation, Committee on Eskimo Affairs, Subcommittee on Eskimo Education, Interdepartmental Committee on Fur Promotion, Walrus Committee, and Caribou Technical and Administrative Committee.

Appendix C

1. Location, Area and Comparative Statements of Visitors to the National Parks,
April 1, 1958 to March 31, 1959

	Province	Area	1958-59	1957-58	Increase or Decrease
NATIONAL PARK—					
Banff.....	Alta.	2,564 sq. mi.	880,150	790,910	+ 89,240
Cape Breton Highlands.....	N.S.	377 "	162,938	128,397	+ 34,541
Elk Island.....	Alta.	75 "	222,695	183,041	+ 39,654
Fundy.....	N.B.	79.5 "	179,277	143,662	+ 35,615
Georgian Bay Islands.....	Ont.	5.4 "	14,521	26,300	- 11,779
Glacier.....	B.C.	521 "	386	222	+ 164
Jasper.....	Alta.	4,200 "	332,251	332,024	+ 227
Kootenay.....	B.C.	543 "	385,736	347,678	+ 38,058
Mount Revelstoke.....	B.C.	100 "	27,669	39,028	- 11,359
Point Pelee.....	Ont.	6 "	604,149	591,235	+ 12,914
Prince Albert.....	Sask.	1,496 "	135,546	123,280	+ 12,266
Prince Edward Island.....	P.E.I.	7 "	206,245	200,748	+ 5,497
Riding Mountain.....	Man.	1,148 "	667,561	630,189	+ 37,372
St. Lawrence Islands.....	Ont.	172 acres	53,573	59,250	- 5,677
Waterton Lakes.....	Alta.	203 sq. mi.	362,829	302,872	+ 59,957
Yoho.....	B.C.	507 "	51,817	41,875	+ 9,942
SUB-TOTAL.....		11,832.2 sq. mi.	4,287,343	3,940,711	+346,632
NATIONAL HISTORIC PARKS					
Alexander Graham					
Bell Museum.....	N.S.	14 acres	45,804	36,053	+ 9,751
Fort Anne.....	N.S.	31 "	30,443	24,052	+ 6,391
Fort Battleford.....	Sask.	37 "	18,099	15,214	+ 2,885
Fort Beausejour.....	N.B.	81 "	16,051	13,778	+ 2,273
Fort Chambly.....	P.Q.	2.5 "	56,804	72,985	- 16,181
Fort Langley.....	B.C.	9 "	55,010	*3,500	+ 51,510
Fort Lennox.....	P.Q.	210 "	10,816	13,335	- 2,519
Fortress of Louisbourg.....	N.S.	339.5 "	25,796	20,705	+ 5,091
Fort Malden.....	Ont.	5 "	28,855	21,197	+ 7,658
Fort Wellington.....	Ont.	8.5 "	18,859	17,426	+ 1,433
Grand Pré.....	N.S.	14 "	38,945	31,362	+ 7,583
Halifax Citadel.....	N.S.	37 "	237,259	234,000	+ 3,259
Port Royal					
Habitation.....	N.S.	20.5 "	28,085	23,441	+ 4,644
Signal Hill.....	Nfld.	243.37 "	26,307	*500	+ 25,807
Sir Wilfrid Laurier's					
Birthplace.....	P.Q.	1.5 "	6,363	*4,650	+ 1,713
Woodside.....	Ont.	11 "	2,046	1,284	+ 762
Batoche Rectory.....	Sask.	1.25 "	*600	*800	- 200
Cartier-Brebeuf.....	P.Q.	5 "	*10,200	+ 10,200
Lower Fort Garry.....	Man.	13 "	*15,000	*21,300	- 6,300
Fort Prince of Wales.....	Man.	50 "	425	*550	- 125
SUB-TOTAL.....		1,134.12 acres	671,767	556,112	+115,655
GRAND TOTAL.....			4,959,110	4,496,823	+462,287

*Estimated.

N.B.—No attendance records available for Wood Buffalo Park, Alta.—N.W.T. (17,300 sq. mi.) Terra Nova Park, Nfld. (156 sq. mi.).

2. Mileage of Park Roads and Trails

National Park	Motor Roads	Secondary Roads	Fire Roads	Trails
Banff.....	216.50	—	135.75	714.25
Cape Breton Highlands.....	56.26	9.47	58.79	25.87
Elk Island.....	18.00	8.00	18.00	44.00
Fundy.....	19.90	—	—	—
Georgian Bay Islands.....	—	—	11.25	28.00
Glacier.....	—	—	25.75	124.50
Jasper.....	146.50	20.00	101.80	622.75
Kootenay.....	59.40	—	53.80	199.50
Mount Revelstoke.....	18.50	—	—	47.00
Point Pelee.....	11.50	2.00	2.00	1.50
Prince Albert.....	65.70	67.75	—	250.75
Prince Edward Island.....	15.15	4.85	—	1.00
Riding Mountain.....	75.05	13.56	96.50	12.00
Waterton Lakes.....	43.80	13.50	29.00	83.00
Yoho.....	41.10	—	39.00	250.00
TOTAL.....	787.36	139.13	571.64	2,404.12

3. Major Construction in Parks*

National Park	By National Parks Branch	By Private Enterprise
BANFF.....	No new major construction.....	74 building permits issued for total construction value of \$1,646,103; 5 permits were for construction exceeding \$2,500; Banff School of Fine Arts, Archway Motel and Bel Plaza Motel additions; also, Sulphur Mountain and Mount Whitehorn Gondola Lifts
JASPER.....	No new major construction.....	76 building permits issued for total construction value of \$535,441; completed during this period were a hotel, 2 service stations, a motel and a bungalow camp; also, completed addition to high school.
ELK ISLAND.....	Staff duplex residence at headquarters and gate office at North Gate being built under D.P.W. contract.	

*Reassessment of definition of Major Construction has eliminated much of the minor work reported in previous years.

4. Fire Losses in the National Parks

Park	Number of Fires		Area Burned (acres)		Cost of Suppression	
	1953-57 Av. 1958		1953-57 Av. 1958		1953-57 Av. 1958	
					\$ cts	\$ cts
Banff.....	7.5	1	13.6	3.0	492.41	82.30
Jasper.....	4.8	12	5.0	10.8	695.02	486.35
Glacier.....	3.2	2	12.7	6.0	2,048.49	3,025.51
Kootenay.....	1.6	2	24.4	1.5	1,543.27	297.10
Yoho.....	4.4	3	180.0	0	4,249.22	0
Revelstoke.....	1.2	2	1.4	2.0	397.71	155.00
Waterton Lakes.....	0.6	0	0	0	16.66	0
Elk Island.....	0.0	1	0	4.0	0	12.00
Prince Albert.....	2.0	0	20.3	0	545.98	0
Riding Mountain.....	1.6	14	323.0	1,372.6	635.94	2,356.51
Georgian Bay Islands.....	0.4	0	0	0	0	0
St. Lawrence Islands.....	1.6	0	.8	0	17.86	0
Point Pelee.....	0.2	1	0	.4	1.25	15.00
Fundy.....	0.2	1	0	0	58.40	2.00
Prince Edward Island.....	0.8	1	.1	1.5	1.20	0
Cape Breton Highlands.....	0.8	0	1.9	0	164.08	0
Terra Nova.....	—	0	—	0	—	0
TOTALS.....	30.9	40	583.2	1,401.8	10,867.49	6,431.77

Causes		Size Classes			
Smokers.....	10	Incendiary.....	4	0- $\frac{1}{2}$ Acre A.....	17
Campfires.....	5	Unclassified.....	3	$\frac{1}{2}$ -10 Acres B.....	14
		(Garbage Fires)			
Railways.....	3	Unknown.....	4	10-100 Acres C1.....	4
Public Works.....	5	Settlers.....	2	100-500 Acres C2.....	4
Lightning.....	4	—	—	500 A +	D 1

5. Statement of Large Mammals in Fenced Enclosures in National Parks

	Buffalo	Elk	Moose	Mule Deer	White-tailed Deer	Total
Banff Park Paddock.....	10	—	—	—	—	10
Elk Island Park Paddock.....	975	823	208	40	55	2101
Prince Albert Park Paddock..	10	—	—	—	—	10
Riding Mountain Park Paddock.....	25	20	3	—	37	85
Waterton Lakes.....	18	—	—	—	—	18
	1,038	843	211	40	92	2,224

6. Reduction of Mammals

National Park	Mammal	Number Killed	Disposal of Meat and Hides
BANFF.....	Elk	100	Meat and hides donated to Indian Affairs Branch and Banff Indian Days Committee.
	Buffalo	2	Meat consumed at departmental work camp.
ELK ISLAND.....	Buffalo	355	Meat sold by tender. Approximately 50% of the hides sold by tender, balance sold by the Department.
	Elk	177	Meat and hides donated to Indian Affairs Branch.
Moose	92		
JASPER.....	Elk	88	Meat and hides donated to Indian Affairs Branch.
WATERTON LAKES.....	Buffalo	12	All hides and 8 carcasses of meat donated to Indian Affairs Branch. Balance of meat consumed at departmental work camp.
	Elk	201	Meat and hides donated to Indian Affairs Branch.
PRINCE ALBERT.....	Buffalo	8	Meat consumed at departmental work camp. Hides sold by the Department.
RIDING MOUNTAIN.....	Buffalo	16	Hides sold by the Department. Ten carcasses of meat donated to Indian Affairs Branch, balance of meat consumed at departmental work camps.

7. Tablets Unveiled in 1958.

Honourable Jean Charles Chapais and his son Thomas, St. Louis de Kamouraska, P.Q.
 Meetings of the Parliament of Canada in Toronto, Ontario, prior to Confederation.
 The Francois Baby House, Windsor, Ontario.
 Father Louis-Pierre Gravel, Gravelbourg, Saskatchewan.
 The Mooring Rings, Victoria, British Columbia.
 Fort McLeod, McLeod's Lake, British Columbia.

8. Tablets Erected in 1958 but Not Unveiled.

Arthur Silver Morton, University of Saskatchewan, Saskatoon.
 Peter Mitchell, Newcastle, New Brunswick.

9. Members of Historic Sites and Monuments Board.*

Rt. Rev. Mgr. A. d'Eschambault, Genthon, Manitoba, (Chairman).
 Dr. Walter N. Sage, Vancouver, British Columbia.
 Dr. W. Kaye Lamb, Dominion Archivist, Ottawa, Ontario.
 Dr. A. G. Bailey, Dean of Arts, Fredericton, New Brunswick.
 Dr. C. B. Fergusson, Halifax, Nova Scotia.
 Richmond Mayson, Esq., Prince Albert, Saskatchewan.
 Edouard Fiset, Esq., Quebec, Quebec.
 Jules Bazin, Esq., Montreal, Quebec.

*as of December 1st, 1959.

O. L. Vardy, Esq., St. John's, Newfoundland.
 Dr. A. R. M. Lower, Queen's University, Kingston, Ontario.
 Dr. D. G. Creighton, University of Toronto, Toronto, Ontario.
 R. Earl Taylor, Esq., Charlottetown, Prince Edward Island.
 Richard Y. Secord, Esq., Winterburn, Alberta.
 J. D. Herbert, Esq., National Historic Sites Division, Ottawa, Ontario, (Secretary).

10. Banding of Wild Birds

Species	Number
Banded in 1958—	
Ducks (including Coots).....	76,422
Geese.....	870
Trumpeter Swans.....	4
Colony nesting water birds.....	18,985
Other Migratory Birds.....	25,244
TOTAL.....	121,525
Banded to date.....	1,318,903
Banded birds recovered to date.....	171,564
(This total includes birds banded in Canada and recovered in Canada or elsewhere; also records of birds banded elsewhere than in Canada and recovered in this country.)	

11. Licences and Permits Issued Under the Migratory Birds Convention Act

Nature of Permit or Licence	Number Issued
To collect birds for scientific purposes.....	412
To take migratory birds for propagation.....	15
To possess migratory birds for propagation.....	679
For bird-banding.....	269
For taxidermy.....	67
TOTAL.....	1,442

Appendix D

1. Research in the Economics of Forestry

Advisory Committee on Forestry Statistics

The participation of the Section staff in the work of the Interdepartmental Advisory Committee on Forestry Statistics constituted the major portion of the year's activities. A comprehensive memorandum was prepared for the Dominion Statistician covering the whole field of forestry statistics and recommending improvements in methods for obtaining more complete coverage. One of the more important recommendations was the development of a separate forest products questionnaire for use in the 1961 Census of Agriculture. The Section provided an observer for a test survey of farm woodlot production carried out by the Dominion Bureau of Statistics and using the questionnaire developed by the Committee.

In co-operation also with D.B.S. an analysis of export data on primary forest products for the month of October, 1958 was prepared to show the necessity for reporting export statistics by province of origin rather than by port of exit.

Analysis of Christmas Tree Production

Export data for the Canadian Christmas tree industry for the year 1957 were recompiled by province of origin, and the resulting publication, *The Christmas Tree Industry in Canada*, gave the complete picture of the source and destination of Christmas trees produced in Canada.

Pilot Study—Forest Production on Private Lands

At the suggestion of the Interdepartmental Advisory Committee and in co-operation with the New Brunswick Department of Lands and Mines, a study was made of sampling procedures to be used in estimating forest production from small private holdings in New Brunswick. A pilot survey was carried out in the southwest portion of the province and a preliminary report of the results obtained indicated that the method employed could be used successfully in conjunction with information obtained for large private holdings and for Crown lands.

Rehabilitation of Whitehorse Airport Escarpment

In co-operation with the Forest Research Division, an investigation was made into the feasibility and costs of restoring forest cover to the eroded slopes of the airport escarpment at Whitehorse, Yukon Territory. The report, which was prepared for departmental use, included estimates of cost for two different planting measures which could be used in conjunction with drainage improvements to bring about the rehabilitation of the slope.

2. Annual Forest Depletion¹

	Millions of Cu. ft. of Usable Wood		Percentage of Depletion	
	1947-56	1957 ²	1947-56	1957
Products utilized:				
Logs and bolts.....	1,453	1,436	42.7	45.3
Pulpwood.....	1,241	1,318	36.5	41.6
Fuelwood.....	376	280	11.0	8.8
Other products.....	77	61	2.3	1.9
TOTAL.....	3,147	3,095	92.5	97.6
Wastage:				
By forest fires.....	255	75	7.5	2.4
GRAND TOTAL.....	3,402	3,170	100.0	100.0

¹Does not include wastage caused by agencies other than fire, such as insects, diseases, and natural mortality for which no reliable estimates are available.

²Preliminary estimate.

3. Forest Industries

SUMMARY OF PRINCIPAL STATISTICS, 1956

	Number of Employees	Salaries and Wages	Net Value of Production ¹	Gross Value of Production
		\$	\$	\$
Woods operations.....	132,015 ²	472,035,290	841,334,193	939,142,602
Pulp and paper industry.....	65,985	297,571,944	736,346,393	1,465,057,726
Lumber industry.....	57,078	153,809,204	279,710,804	639,414,360
Wood-using industries.....	78,505	222,540,063	366,512,499	815,543,652
Paper-using industries.....	27,720	89,314,472	172,380,525	436,213,262
TOTAL.....	361,303	1,235,270,973	2,396,284,414	—

¹Net value of production is gross or sale value, less cost of materials, fuel, purchased electricity, and process supplies consumed.

²Man-year basis (300 working days).

4. Forest Fire Losses in Canada, 1957*(Compared with 10-year average 1947-56)*

	Provinces		Yukon and N.W.T.	
	Annual Average 1947-56	1957	Annual Average 1947-56	1957
Total number of fires.....	5,227	5,950	98	130
Total area burned (acres).....	1,535,895	452,356	554,020	450,904
Size of average fire (acres).....	294	76	5,653	3,468
Saw timber burned (M ft. b.m.).....	383,419	175,629	12,571	83
Small material (cords).....	1,886,964	442,206	178,044	26,198
Actual cost of fire fighting.....	\$ 2,843,147	\$ 2,019,475	\$46,139	\$55,042
Other fire protection costs (1956).....	\$ 14,135,484	\$ 20,512,055	\$111,475	\$275,382
Area under protection (sq. mi.).....	—	1,208,170	—	125,000

5. Reforestation Under the Forestry Agreements

Province	Number of Trees Planted		Area Planted		Area seeded	
	Fiscal Year 1958-59	Total to Date	Fiscal Year 1958-59	Total to Date	Fiscal Year 1958-59	Total to Date
			acres	acres	acres	acres
Prince Edward Island.....	47,000	378,000	40	306	—	—
Nova Scotia.....	193,000	915,000	231	1,087	—	—
Ontario.....	13,070,000	68,860,000	13,070	68,860	—	6,000
Manitoba.....	850,000	4,970,000	774	4,303	—	—
Saskatchewan.....	233,000	1,625,000	250	1,353	374	1,636
British Columbia.....	1,155,000	13,104,000	1,438	15,598	—	—
TOTAL.....	15,548,000	89,852,000	15,803	91,507	374	7,636

6. Payments to Provinces Under the Inventory and Reforestation Agreements

Province	Forest Inventory		Reforestation		Total Federal Payments	
	Fiscal Year 1958-59	Total to Date	Fiscal Year 1958-59	Total to Date	Fiscal Year 1958-59	Total to Date
	\$	\$	\$	\$	\$	\$
Prince Edward Island.....	—	—	17,281	102,920	17,281	102,920
Nova Scotia.....	16,170	323,720	2,752	11,695	18,922	335,415
New Brunswick.....	9,175	138,503	—	—	9,175	138,503
Ontario.....	205,571	1,953,635	157,533	749,541	363,104	2,703,176
Manitoba.....	22,820	348,955	8,500	61,984	31,320	410,919
Saskatchewan.....	19,358	271,295	2,705	16,617	22,063	287,912
Alberta.....	110,480	649,859	—	—	110,480	649,859
British Columbia.....	443,109	3,360,314	11,550	148,731	454,659	3,509,045
TOTAL.....	826,683	7,046,281	200,321	1,091,468	1,027,004	8,137,749

**7. Payments to Provinces Under the Forest Fire Protection and Access Roads
and Trails Agreements**

Province	Forest Fire Protection		Access Roads and Trails	
	Fiscal Year 1958-59	Total to Date	Fiscal Year 1958-59	Total to Date
	\$	\$	\$	\$
Newfoundland.....	54,741	88,654	56,202	59,074
Prince Edward Island.....	2,250	3,768	—	—
Nova Scotia.....	35,808	56,340	31,755	45,895
New Brunswick.....	52,364	89,226	21,761	51,595
Ontario.....	220,709	373,307	988,714	1,237,961
Manitoba.....	49,840	91,889	235,556	353,769
Saskatchewan.....	68,920	118,423	179,438	274,495
Alberta.....	94,573	156,669	133,296	156,938
British Columbia.....	170,795	271,724	441,243	518,606
TOTAL.....	750,000	1,250,000	2,087,965	2,698,333

Appendix E

Natural History Branch and Human History Branch

Wednesday Evening Adult English Lectures

- "Oddities of the Sea"—John F. Storr, University of Miami.
 "Russia—the New Face"—Neil Douglas, explorer-lecturer.
 "1200 Bald Eagles"—Charles L. Broley, naturalist.
 "Folk Songs of Ontario"—Edith Fowke, folklorist.
 "Newfoundland Travelogue"—D. M. Baird, Ph.D., University of Ottawa.
 "Ontario Mennonites"—Blodwen Davies, author and folklorist.
 "Ripple Rock" and "Generator 4" (films), Dupont Co. of Canada (1956) Ltd., Aluminum Co. of Canada, Ltd.
 "Flowers of the Midnight Sun"—R. W. Wood, J.D., A.R.P.S.
 "The Wonder Metal"—K. H. J. Clarke, B.A.Sc., N.D.C., International Nickel Co. of Canada, Ltd.
 "Secrets of the Deep Sea"—film from Royal Danish Embassy, introduced by E. L. Bousfield, Ph.D., National Museum of Canada.
 "The Races of Burma and S.E. Asia"—L. Oschinsky, Ph.D., National Museum of Canada.
 "Two Totem Towns"—Wilson Duff, Provincial Museum of British Columbia.
 "Manitoba—Land of the Manitou"—H. A. Quinn, Ph.D., Geol. Survey of Canada.
 "Scandinavian Folklore"—W. E. Richmond, Ph.D., Indiana University.
 "Bermuda in Bloom"—R. O. Earl, Ph.D., Queen's University.
 "Volcano In The Sea"—W. H. Parsons, Ph.D., Wayne State University.
 "Petroleum—From Fossil to Fabric"—W. D. Stuart, Can. Petroleum Association.

Special Adult English Lectures

- Opening of Fish Exhibit "Canadian Fish and Fisheries"—G. R. Clark, Deputy Minister of Fisheries.
 "The Silent World" film showing. 6 showings.
 "The Migration and Native Use of Greenland Birds"—Dr. Finn Salomonsen, Zoologisk Museum, Copenhagen.
 "Galathea Deep Sea Expedition"—Dr. Torben Wolff, Zoologisk Museum, Copenhagen.
 Opening of Exhibit "The Changing Eskimo"—His Excellency, John Knox, Ambassador of Denmark.
 Opening of Exhibit "Birch Bark".
 "Canada In Colour" summer film showings (N.F.B. and N.M.C.)

Adult French Lectures

- "Le développement des Alpes françaises du Nord depuis 50 ans", Raoul Blanchard, l'Université de Grenoble.
 "En passant par la Lorraine"—M. F. Weymuller, l'Ambassade de France au Canada.
 "Les Marionnettes de Montréal"—Micheline Legendre, Marionnettiste et Directrice de "Les Marionnettes de Montréal".
 "Epanouissement et superposition des cultures en Espagne et au Mexique"—Henri Prat, l'Université de Montréal.

Saturday Morning Children's programs

U.K. Travelogue (Royal Commonwealth Society).

"The Silent World", underwater film.

5 Films on natural history.

4 Assorted natural history and human history films.

3 Nature films.

Films on Australia and New Zealand (Royal Commonwealth Society).

"World In A Marsh" (nature film), "Man Explores Space" (Disney film).

Rattlesnakes (live) S. W. Gorham, National Museum of Canada.

"Nigeria Greet Her Queen" (Royal Commonwealth Society).

Magic Show, Legari the Magician.

"The Unchained Goddess", weather film, Bell Telephone Co. of Canada.

Films on India, Pakistan, Ceylon (Royal Commonwealth Society).

"Northwest Passage", feature film, with Indian locale.

"Manitoba—Land of the Manitou"—H. A. Quinn, Ph.D., Geol. Survey of Canada.

Films on South and West Africa (Royal Commonwealth Society).

Nature Films.

Royal Danish Embassy films.

Puppets (Mrs. A. W. Horwood) and two eskimo films.

Appendix F

LIST OF TECHNICAL PUBLICATIONS ISSUED 1958-59

National Parks Branch

Canadian Wildlife Service

Translations of Russian Game Reports

- Volume 3 Arctic and Red Foxes, 1951-55.
- Volume 4 The Bird Bazaars of Novaya Zemlya.
- Volume 5 Sable and Squirrel, 1951-55.
- Russian—English Bird Glossary.

Wildlife Management Bulletin

- Series 2, Number 9. The American Goldeneye in Central New Brunswick.
Brian C. Carter.

Technical Articles

- A Preliminary Study of the Ungava Caribou. A. W. F. Banfield and J. S. Tener. *J. Mamm.* 39(4): 560-573, 1958.
- Ross's Geese Nesting at Southampton Island, N.W.T., Canada. T. W. Barry (collaboration). *The Auk* 75(1): 89-90, 1958.
- Moose "Sickness" in Nova Scotia. D. A. Benson. *Can. J. Comp. and Vet. Sci.* 22(7): 244-248, (8): 282-286, 1958.
- Hand-reared Mallard Releases in the Maritime Provinces, George F. Boyer. *Can. Field-Nat.* 73(1): 1-5, 1959.
- On Some Helminth Parasites Collected from the Musk Ox (*Ovibus moschatus*) in the Thelon Game Sanctuary, Northwest Territories. H. C. Gibbs and J. S. Tener. *Can. J. Zool.* 36(4): 529-532, 1958.
- Do Eared Grebes have Dump Nests? J. B. Gollop. *Blue Jay*, 16(4): 151, 1958.
- Albino American Coots Near Vermilion, Alberta. R. D. Harris. *Can. Field-Nat.* 72(4): 174, 1958.
- Arviligjuarmiut Names for Birds and Mammals. A. H. Macpherson. *Arc. Circ.* 11(2): 30-33, 1958.
- Ornithological Research at Pelly Bay in the summer of 1956. A. H. Macpherson. *Arc. Circ.* 11(1): 11-13, 1958.
- Observations on the Lesser Snow Goose nesting grounds, Egg River, Banks Island. Eoin H. McEwen. *Can. Field-Nat.* 72(3): 122-127, 1958.
- Some Additions to the List of Birds of the Mackenzie Delta. W. E. Stevens (collaboration). *Am. Field-Nat.* 72(4): 168-170, 1958.
- Present Distribution and Population of the Starling in Newfoundland. Leslie M. Tuck. *Can. Field-Nat.* 72(3): 139-144, 1958.
- The Distribution of Muskoxen in Canada. J. S. Tener. *J. Mamm.* 39(3): 398-408.

Water Resources Branch

Water Resources Papers

- No. 120 Atlantic Drainage, Climatic Years 1954-55, 1955-56.
- No. 115 St. Lawrence and Southern Hudson Bay Drainage, Climatic Years 1953-54, 1954-55 (bilingual).

Booklets

- Water Powers of Canada (English and French).

Mimeographed Reports

1. Hydro-Electric Progress in Canada, 1958, Bulletin No. 2625 (English and French).
2. Water Power Resources of Canada, Bulletin No. 2642 (English and French).
3. Principal Hydro-Electric and Hydraulic Developments in Canada with Turbine Capacities not less than 2,000 hp., as at 31 December 1958, Bulletin No. 2640.
4. Provisional List of Principal Thermal-Electric Generating Stations in Canada with Prime Mover Capacities not less than 2,000 hp., as at 31 December 1957, Bulletin No. 2601.

Forestry Branch

Technical Notes

- No. 66 Scarifying for Jack Pine Regeneration in Manitoba. J. H. Cayford.
No. 67 Rooting Habits of Lodgepole Pine. K. W. Horton.
No. 68 Chemical Herbicides and Their Uses in the Silviculture of Forests of Eastern Canada. R. F. Sutton.
No. 69 Nine Years of Observations on the Condition of 241 Yellow Birch. D. A. Fraser.

Miscellaneous Series

- No. 10 The Christmas Tree Industry in Canada (Third Edition).

Periodicals

- Forests Fire Protection Abstracts
Vol. VIII No. 2
Vol. IX No. 1
Forest Fire Losses in Canada, 1956.
Canada's Forests, 1959.
Annual Report on Forest Research for Year Ended March 31, 1958.
1959 Amendments—Bulletin 106—Forest and Forest Products Statistics.

Mimeographed

- Factors Affecting Natural Regeneration on Cut-over and Burned-over Lands, Newfoundland. W. A. Dickson, D. E. Nickerson.
Growth of Jack, Red and Scots Pine and White Spruce Planted in 1922 at Grand-Mère, P.Q. J. D. MacArthur.
Seeding Jack Pine, Sandilands Forest Reserve, Manitoba. J. H. Cayford.
Observations on the Use of Prescribed Burning and Other Silvicultural Practices in the Pine Types of New Jersey and the Carolinas. A. Bickerstaff.
Two Grades of Partial Cutting in Black Spruce Stands, 1950, Hants County, Nova Scotia. M. H. Drinkwater.
Forest Conditions on the Lower Peace River. D. S. Lacate, K. W. Horton.
Our Co-operative White Spruce Provenance Experiment. M. J. Holst.
Partial Cutting with Diameter Limit Control in the Lake Edward Experimental Forest, Quebec, 1950 to 1956. R. J. Hatcher.
Key To The Native Trees of Canada. T. C. Brayshaw.
The Relascope, Its Principles and a Test in Eastern Canada. T. G. Honer, L. Sayn-Wittgenstein.
Valcartier Forest Experiment Station, Northwest Portion, Period 1933-1955, on Camp Valcartier Area, Dept. of National Defence. R. G. Ray.
Growth of Alberta White Spruce after Release from Aspen Competition. G. Ontkian, L. A. Smithers.
Spacing as a Factor in the Development of Red Pine Plantations. W. M. Stiehl, A. Bickerstaff.
Rehabilitation of the Whitehorse Airport Escarpment. W. M. Stiehl and P. H. Jones.

Reprints of Articles and Papers

- A Spacing Aid for Machine Planting, W. M. Stiell. U.S.D.A. Tree Planters' Notes, February 1958.
- Soil Sterilants and Herbicides in Forest Fire Control, D. G. Fraser, Woodlands Review, Pulp and Paper Magazine of Canada, May 1958.
- A Planting Method Experiment with White Spruce, W. M. Stiell. Woodlands Review, Pulp and Paper Magazine of Canada, June 1958.
- Pulpwood Plantations in Ontario and Quebec, W. M. Stiell. Woodlands Section, Index No. 1770 (F-2) July 1958, Canadian Pulp and Paper Association.
- What Price Browsing? M. H. Drinkwater. Timber of Canada, July 1958.
- Growth Mechanisms in Hardwoods, D. A. Fraser. Woodlands Review, Pulp and Paper Magazine of Canada, October 1958.
- Planting Red Spruce on Ill-drained Land, J. W. McLeod. Woodlands Review, Pulp and Paper Magazine of Canada, October 1958.
- A Standard for Spot Seeding, J. Krewaz, Forestry Chronicle, December 1958.
- Seasonal Leader Growth of Lodgepole Pine in the Subalpine Forest of Alberta, K. W. Horton, Forestry Chronicle, December 1958.
- Big Timber in the Far North, K. W. Horton, Timber of Canada, December 1958.
- Planting for Christmas Trees, J. W. McLeod, University of New Brunswick Forest Extension Service, January 1959.
- Five-year Progress Report on Project RC-17. D. W. MacLean. Woodlands Research Index No. 112, Pulp and Paper Research Institute of Canada.
- Our Forests—Riches that Grow. (Annual Report, 1957-58, Department of Northern Affairs and National Resources.)
- Partial Cutting with Diameter Limit Control in the Lake Edward Experimental Forest, Quebec 1950 to 1956, R. J. Hatcher. Woodlands Review, Pulp and Paper Magazine of Canada, Convention 1959.
- Growth of Jack, Red and Scots Pine and White Spruce Plantations 1922 to 1956, Grand-Mère, P.Q., J. D. MacArthur. Woodlands Review, Pulp and Paper Magazine of Canada, Convention 1959.
- Highlights of 5-year progress report on RC-17, D. W. MacLean. Woodlands Review, Pulp and Paper Magazine of Canada, March 1959.

Addresses and Articles Not Listed Under Reprints

- High-yield silviculture at the Petawawa Forest Experiment Station, M. G. Bowen. Paper presented at field meeting. Woodlands Section, C.P.P.A. September 1958.
- Our co-operative white spruce provenance experiment, M. J. Holst. Paper presented at field meeting Woodlands Section, C.P.P.A. September 1958.
- The Petawawa Forest Experiment Station. Paper presented at field meeting Woodlands Section, C.P.P.A., September 1958.
- Co-ordination of Forest Fire Research in Canada, J. C. Macleod. Paper presented at Forest Fire Research Conference, Dorset, Ontario, Aug. 1958.
- A photoreaction in paper birch seedlings, C. W. Yeatman and G. K. Vaight, Forest Science, Vol. 4, No. 3, September 1958.
- Interspecific grafting of hard pines, M. J. Holst and J. B. Santon. Paper presented Seventh Annual Meeting of Committee on Forest Tree Breeding in Canada, Montreal, 17-19 August 1958.
- Fifty Years of Forestry in Canada—The Scotsman, December 1958. P.H. Jones.

Forest Products Laboratories of Canada**Technical Notes**

- Tech. Note 2 Le séchage artificiel à haute température des bois résineux de l'est du Canada. J. L. Ladell.
- Tech. Note 8 Durability of Urea-formaldehyde and Casein Adhesives at Elevated Temperatures. E. G. Bergin.
- Tech. Note 9 The Efficiency of Scarf Joints. A. P. Jessome.
- Tech. Note 10 The Short-Log Bolter—Its Use in Conversion of Canadian Woods. W. W. Calvert.

Technical Reports

Export Packing.

Wood Residues in the Pembroke Forest District of Ontario. J. A. Doyle, FPLC, and J. D. Giles, Ont. Dept. Lands and Forests.

The Vancouver Laboratory.

Program of Work.

Semi-Annual Reports.

List of Publications.

Monthly News Letter—"FPLC Reports".

Reprints

Research and more research—The answer to our problems. J. H. Jenkins. Timber of Canada.

Grading time studies in the B.C. Southern Interior. D. C. Gunn and F. W. Guernsey. B.C. Lumberman.

Application of the logistic function to toxicity testing of wood preservatives. T. S. McKnight. Forest Products Journal.

Circular Headrig—How to get the most from it. G. W. Andrews. Timber of Canada.

Determination of dihydroquercetin in Douglas fir and western larch wood. G. M. Barton and J. A. F. Gardner. Analytical Chemistry.

Differentiation of sapwood and heartwood in western hemlock by colour tests. H. W. Eades. Forest Products Journal.

Is spiral grain the normal growth pattern? P. L. Northcott. Forestry Chronicle.

Distribution and fungicidal extractives in target pattern heartwood of western red cedar. H. MacLean and J. A. F. Gardner. Forest Products Journal.

The plywood industry of Japan. J. H. Jenkins. Canadian Woodworker.

Controlling your sawmill production. G. W. Andrews. Canada Lumberman.

Japan's plywood industries. J. H. Jenkins. Canada Lumberman.

The extraneous components of western red cedar. J. A. F. Gardner and G. M. Barton. Forest Products Journal.

Wood failure—Within species and between species. P. L. Northcott. Forest Products Journal.

The Forests and Forest Industries of Australia and New Zealand. J. H. Jenkins. Timber of Canada.

Reducing heat distortion in the knife and pressure bar assemblies of veneer lathes. A. O. Feihl. Forest Products Journal.

Factors affecting the amount of naphthalene in condensate during boiling under vacuum in creosote. G. Bramhall and W. M. Conners. Forest Products Journal.

High temperature kiln-drying of lumber. A survey of Eastern Canadian progress. W. W. Calvert. Forest Products Journal.

Increasing the durability of wood. H. P. Sedziak. Canada Lumberman.

The chemical composition and pulping characteristics of normal and tension wood of aspen poplar and white elm. L. P. Clermont and F. Bender. Pulp and Paper Magazine of Canada.

Revue des modes d'Utilisation des forêts du Canada. J. H. Jenkins.

Traitement des poteaux de clôture fait d'essences peu durables au moyen de préservatifs en milieu aqueux par la méthode de l'imprégnation de la base. J. Krzyzewski.

Some factors influencing the design of Douglas fir plywood panels. H. G. M. Colbeck and P. L. Northcott. Forest Products Journal.

The effect of compression wood on the mechanical properties of white spruce and red pine. E. Perem. Forest Products Journal.

- A Canadian's impressions of Russia's forest industries. J. H. Jenkins. *Forest Products Journal*.
- Electrode systems for stray field heating. D. G. Miller. *Canadian Woodworker*.
- Fungistatic effectiveness and leachability of copper abietate and formate preservatives. T. S. McKnight and Elizabeth Merrall. *Forest Products Journal*.
- Review of literature on bark adhesion and methods of facilitating bark removal. E. Perem. *Pulp and Paper Magazine*.
- Spiral grain in wood. P. L. Northcott. *B.C. Lumberman*.
- Improved device for measuring deformation of wood specimens in compression parallel to the grain. W. M. McGowan and J. T. Yelf. *Forest Products Journal*.
- How to select adhesives. E. G. Bergin. *Canadian Woodworker*.
- Lumber—Is its future secure? J. H. Jenkins. *Timber of Canada*.
- Salvage yarding on the B.C. Coast. J. A. McIntosh and D. C. Gunn. *B.C. Lumberman*.
- Physical and anatomical characteristics of hardwoods. J. D. Hale. *Pulp and Paper Magazine of Canada*.
- Will synthetics replace wood products? J. H. Jenkins. *Canadian Woodworker*.
- Work of FPLC of interest to pulp and paper industry. *Pulp and Paper Magazine*.
- Ultrasonic device for detecting blisters in plywood. (FPL News Release published in various trade journals.)

Magazine Articles Additional to Those Listed Under Reprints

- The Seventh British Commonwealth Forestry Conference. J. H. Jenkins. *Forestry Chronicle*, March 1958.
- How to figure the chip potential of your sawmill. G. E. Bell. *Canada Lumberman*, April 1958.
- Forestry and the economic structure of the country. J. H. Jenkins. *Australian Timber Journal*, February 1958.
- Blistering of paints on wood. J. J. G. Veer. *Timber Technology (England)*, April 1958.
- Barking and chipping—How much does it cost? G. E. Bell. *Timber of Canada*, April 1958.
- High-temperature kiln-drying of Eastern Canadian softwoods. J. L. Ladell. *Australian Timber Journal*, April 1958.
- Gluing pre-treated laminating stock. P. L. Northcott. *Wood (England)*, March 1958.
- High-temperature kiln-drying of lumber—A summary of Canadian progress. W. W. Calvert. *Forest Products Journal*, July 1958.
- Reducing heat distortion in veneer lathes. A. O. Feihl. *Timber Technology*, December 1958.
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- Occurrence of beta-dolabrin (4-isopropenyltropolone) in western red cedar (*Thuja plicata* Donn.). J. A. F. Gardner and G. M. Barton. *Canadian Journal of Chemistry*, December 1958.

Natural History Branch of the National Museum

- A Preliminary Study of the Ungava Caribou. A. W. F. Banfield with John Tener in *Journal of Mammalogy* 39(4): 560-573.
- Dermoid Cysts—a basis of Indian legends. A. W. F. Banfield. *Science in Alaska*, Trans. 6, Alaska Science Conference, 1955.
- Plants of the Clay Belt of Northern Ontario and Quebec. W. K. W. Baldwin. *Bull., Nat. Mus. Canada*, 156: 324 pages. 1959.

- A zoogeographical study of the amphibians and reptiles of Eastern Canada. Sherman Bleakney. Bull., Nat. Mus. Canada, 155: 119 pages. 1958.
- Cannibalism in *Rana sylvatica* tadpole. Sherman Bleakney. Herpetologica. Vol. 14, Part 1, April 25, 1958.
- Postglacial dispersal in the turtle *Chrysemys picta*. Sherman Bleakney. Herpetologica, Vol. 14, Part 2, July 23, 1958.
- Variations in a litter of Northern Water Snakes, from Ottawa, Ont. Sherman Bleakney. Can. Field-Nat. 72(3): 122-132.
- Distributional Ecology of the Terrestrial Talitridae (Crustacea: Amphipoda) of Canada. E. L. Bousfield. Proceedings, 10th International Entomological Conference, 1956. 1: 883-898, Dec. 1958.
- Mammals of the Islands of the Gulf of St. Lawrence. Austin W. Cameron. Bull., Nat. Mus. Canada, 154: 165 pages. 1959.
- Mammals of Banff National Park. Austin W. Cameron. Bull., Nat. Mus. Canada, 159:53 pages. 1959.
- Review of "A Guide to Saskatchewan Mammals" by W. H. Beck. Austin W. Cameron. Can. Field-Nat. 73(1): 60.
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- New Mammal Records for Prince Edward Island. Austin W. Cameron. Journal of Mammalogy. 39(2).
- A Record of *Sorex arcticus* for New Brunswick. Austin W. Cameron. Journal of Mammalogy 39(2).
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- An annotated list of the marine algae of B.C. and Northern Washington. Robert F. Scagel. Bull., Nat. Mus. Canada, 150: 289 pages. 1958.
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- Intercultural Relations of Great Whale River, Hudson Bay. A. Balikci. Contributions to Canadian Anthropology.
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- An introduction to the archaeology of Southeast Manitoba. Richard S. MacNeish. Bull., Nat. Mus. Canada, 150:289 pages. 1958.
- Preliminary Archaeological Investigations in the Sierra de Tamaulipas, Mexico. Richard S. MacNeish. Vol. 48. Part 6. Transactions, American Philosophical Society.
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- 1958 Archaeological Survey in Northwest Ungava and Mansel Island. William E. Taylor. Arctic Circular, Ottawa.

- A Preliminary Account of 1958 Field Research. William E. Taylor, *American Antiquity*, Vol. XXIV, No. 4, Part 1.
- Archaeology in the Canadian Arctic. William E. Taylor. *Canadian Geographic Journal*, Sept. 1958.
- Report of Archaeological Survey in the Illinois River Valley and Ceramics of the Irving Sites. William E. Taylor in J. C. McGregor's "The Poole and Irving Villages", University of Michigan.
- L'Indien de la forêt boréale élément de la formation écologique. Jacques Rousseau. Ottawa, 1958. Queen's Printer.
- Botany. *Encyclopedia Canadiana*, Vol. 2. 26-29. Jacques Rousseau.
- Snowshoe. *Encyclopedia Canadiana*, Vol. 9, 347-348. Jacques Rousseau.
- Toboggan. *Encyclopedia Canadiana*, Vol. 10, 91. Jacques Rousseau.
- Ces gens qu'on dit sauvages. *Les Cahiers des Dix*, No. 23. Jacques Rousseau.
- L'identité de l'établissement d'Hévreuil. *Revue d'Histoire de l'Amérique française*. Vol. 12, 596-597, 1959. Jacques Rousseau. Hakluyt et le mot esquimau. *Revue d'Histoire de l'Amérique française*, 12, 597-601, 1959. Jacques Rousseau with D. B. Quinn.

Appendix G

Annual Report of the Commissioner of the Northwest Territories 1958-59

Commissioner—R. G. ROBERTSON

Legislation

The Council of the Northwest Territories met twice during the year, from July 14-18, 1958, and from January 26-February 3, 1959.

Twenty bills were passed, among them ordinances providing for the establishment of credit unions and cooperatives, and for the sharing of unemployment assistance expenditures with the Federal Government. Authority was given the Commissioner under the Loan Agreement Ordinance (1958) to borrow \$800,000 to meet the heavy capital expenditures involved in the expansion of educational facilities. The Game Ordinance was amended to permit the sport hunting of buffalo.

John Parker, the elected member for Mackenzie North, resigned to become Judge of the Territorial Court of the Yukon in June, 1958, and was replaced by E. J. Gall, of Yellowknife. R. A. Bishop resigned as Secretary of the Council and was replaced by F. B. Finland. Aklavik (East 3) was re-named Inuvik.

Economic Activity

The rate of economic expansion in Canada as a whole declined slightly last year and this was also the case in the Northwest Territories. However, a good deal of interest was shown in the search for resources as evidenced by the greatly increased activity in oil and gas exploration.

The natural fur market operated at a level slightly lower than that of last year. Although prices for particular furs, such as white fox, muskrat and lynx, may rise, the general trend in fur prices is downward. The decline in the caribou herds continues, only slightly mitigated this year by an unusually large crop of calves.

Government construction in the settlements and municipalities increased over last year and was a major source of economic activity. Several large buildings such as the schools and hostels at Fort Smith and Yellowknife were completed, and substantial progress was made on the extension of the Mackenzie Highway to Yellowknife. The construction program at Inuvik proceeded satisfactorily and it is hoped that the major buildings will be completed next year.

There was a decrease in the number of mineral claims staked and recorded from the previous year. A total of 2,205 mineral claims were recorded in the Arctic and Hudson Bay Mining District which again was the most active area. There were fewer mining exploration companies active in all mining districts mainly due to low-price markets, although diamond drilling programs increased during the year.

Late last autumn a promising copper-nickel discovery was made about 75 miles north of Fort Smith which resulted in a minor staking rush to the area during the winter months.

The preliminary figures for the value of mineral production to December 31st, 1958, were \$24,791,516, which is an increase over the value of mineral production for the year 1957 which was \$21,400,615. Gold production increased from \$11,360,702 in 1957 to \$11,392,475 and pitchblende production at \$9,628,000 was greater than it has been for the past three years. This is mainly attributable to the production from an additional mine.

The number of quartz claims recorded in the Northwest Territories during 1958 totalled 2,293.

The increase in metal mining activity was far over-shadowed by the interest of oil and gas exploration companies in the potentialities of the sedimentary areas in the Northwest Territories. At March 31st, 1958, there were only 403 exploration permits issued in the Northwest Territories covering 21,439,160 acres, while at March 31st, 1959, there were 66,426,209 acres under oil and gas exploratory permit.

In the areas lying north of 70 degrees latitude, the oil and gas industry made representations that due to the shorter working season the period of the exploratory permit should be extended. Therefore, it was decided not to issue any further permits but if anyone were interested in acquiring oil and gas permits in that area a priority system would be established. Until the new regulations are promulgated for the area lying north of 70 degrees latitude, any interested party may claim a priority on the area of his choice providing that such area has not already been filed upon. By the end of March, 1959, applications for priorities covered 80,450,162 acres in the Arctic Islands. Oil and gas regulations were in the course of preparation at the end of the fiscal year dealing with potential oil lands under the territorial waters of Canada over which the Federal Government has responsibility for the disposal of oil and gas rights. The new Territorial Oil and Gas Regulations which came into effect in August, 1958, were designed to provide an incentive for additional exploration work and development work, and at the same time protect the public interest by the establishment of a Crown Reserve system for leasing at the end of the permit stage.

During last summer's field season, there were approximately 22 private field parties working in the Northwest Territories, most of them in the Mackenzie Delta area or to the west of it. These parties were supplied with fixed-wing aircraft and some 18 helicopters were engaged moving fly-camps and local parties about the country. Eight wildcat wells were drilled during the past winter and of these wells, all were abandoned except one which has been suspended.

The fur trapping industry in the Territories, after showing a considerable increase in 1954-55, declined in the crop year 1955-56 and again in 1956-57. In 1956-57, a total of 256,887 pelts with an estimated value of \$732,000 were exported compared with 366,000 pelts with an estimated value of \$806,000 for 1955-56. There was little change in 1957-58 when 257,183 pelts were taken with an estimated value of \$735,000. Muskrat prices were down and white fox showed a slight drop in price. The 1958-59 fur market showed signs of strengthening, principally in white fox, muskrat and lynx.

The Great Slave Lake fishery yielded 5,763,000 pounds of white fish and lake trout during the summer of 1958 (June-September), and the winter of 1958-59 (December 1958-March 1959). This was a decrease of 378,000 pounds from the 1957-58 catch and is well below the quota of nine million pounds.

Workmen's Compensation

During the year an X-ray Film Library was established in the Workmen's Compensation Office at Edmonton to serve as a central filing depot for all chest X-ray films taken in the Territories. This essential record will provide a history of workmen that will assist the Referee in adjudicating future claims for compensation for silicosis.

The enforcement of the Ordinance was again directed to non-resident contractors taking workmen to the Northwest Territories for short periods of employment. The number of employers in this class engaged in exploration for oil and gas and in the sub-trades of construction was considerably increased, resulting in the granting of 101 Exemption Orders as compared to 59 in 1957. At the same time, there were 276 insured employers in 1958 compared to 271 in 1957.

The cost of operating the Workmen's Compensation Office increased from \$15,585 in 1957-58 to \$17,756 in 1958-59 due principally to the higher rental charged for accommodation in the Federal Public Building. Some relief from these costs will result in the new apportionment of costs whereby the Federal Government will pay 40 per cent and each of the Territorial Governments 30 per cent of salaries, accommodation rental and office services. The revenue from assessments and exemption fees showed a decline from \$20,069 in 1957-58 to \$16,254 in 1958-59. This reduction in income is due chiefly to the loss of the accounts of two Crown Corporations, the Eldorado Mining and Refining and the Northern Transportation Company which are now covered by the Federal Government Employees Compensation Act, and to the fact that there are no longer any large operations in DEW Line construction.

Comparative figures for the number of accidents and payments by insurers for the last two years are:

	1957	1958
Non-compensable accidents	670	542
Compensable accidents	454	384
Compensation payments	\$319,138.60	\$297,857.68
Medical and hospital payments	\$126,975.95	\$142,659.80

Health

The enactment of the Hospital Insurance and Diagnostic Services Act by the Parliament of Canada and the agreements made between several provinces and the Federal Government had its effect on developments in the field of health in the Northwest Territories. An interdepartmental committee consisting of representatives of the Federal Departments of Health and Welfare, Finance, and Northern Affairs and National Resources was of the opinion that a hospital insurance program could be developed in the Northwest Territories within the terms of the Federal Act. The committee also prepared cost estimates for the financing of a program.

The Council, at the January 1959 Session, approved in principle the recommendations of the interdepartmental committee and recommended that the program come into operation on the 1st of January, 1960. The program will be financed from general tax revenues and a per diem co-insurance charge. The benefits immediately apparent to residents of the Territories will be that the cost of general hospital care of qualified residents will no longer be the responsibility of the individual regardless of whether this care is incurred in the Territories or outside. As well, territorial hospitals will have a guaranteed income and they will not have to be as concerned with financial matters as formerly and will be able to devote more attention to raising the level of hospital standards.

In May 1958 accounts were issued for the first time to non-indigent persons receiving medical attention from Northern Health Services personnel in the Territories who did not pay for the services at the time they were received. This program, which is in conjunction with the cost sharing agreements between the Territorial Government and the Department of National Health and Welfare for Northern Health Services' facilities, is applicable to all non-indigent persons except those who are residents and are receiving free medical services for tuberculosis, cancer and mental disease. Revenue received in the eleven month period from May 1st to March 31st amounted to \$11,400. It is estimated that this revenue will increase during the coming year to approximately \$20,000.

Under the National Health Grants Program, Salk Vaccine was provided free of charge to all residents of the Territories under forty years of age except in isolated communities where it was made available to the entire population. Public Health training was provided to four graduate nurses who will be employed in the Territories upon graduation. As part of the Northern Health Services survey, a T.B. case-finding survey was conducted throughout the Territories. The Alberta Co-ordinating Council for Crippled Children undertook a case-finding survey to allow crippled children to receive treatment and rehabilitation. Other programs under the Health Grants Program included the hydatid survey, dental care for school children and cancer control.

There was a total of 864 live births during 1958, of which 222 were Indian, 381 were Eskimo, and 261 were others. There were 280 deaths during the year, 45 Indians, 184 Eskimo and 51 white. In addition, there were 136 marriages.

Welfare

Relief assistance to indigents increased substantially during the year. This increase was particularly noticeable in the two Municipal Districts of Hay River and Yellowknife. The slight recession during the winter and spring of 1958 appears to be the main factor for this increase, but the increase in the professional Social Work staff in the Territories also appears to have been a factor.

At March 31st, 1959 there were 124 recipients of Old Age Assistance compared to 103 at the same time in the previous year. Eighty-two of these were Treaty Indians, 29 were Eskimos, and 13 were other than Indian and Eskimo. There were 28 recipients of Blind Persons Allowance at March 31st, 1959 compared to 27 at March 31st, 1958.

Nine of these were Indian, 18 were Eskimo, and one was other than Indian and Eskimo. Twelve persons were receiving Disabled Persons Allowance on March 31st, 1959 compared to 6 the previous year. Five were Indian, 6 were Eskimo and one was other than Indian and Eskimo.

A new Superintendent of Welfare for the Mackenzie District took up her duties in Fort Smith during the year. The responsibilities of the Superintendent will include the review of existing practices and policy and the development of new services and facilities to provide residents of the Territories with a higher level of welfare services.

Education

Day Schools were operated throughout the Territories by the Department of Northern Affairs and National Resources and the Territorial Government reimbursed the Federal Government on a per pupil cost basis for non-Indian and non-Eskimo children in attendance.

The Sir John Franklin School (a new combined high and vocational training school) and Akaitcho Hall, a 100-pupil residence, were officially opened in Yellowknife on September 29th. Prior to this a new 100-pupil residence at Fort McPherson was opened on September 12th. These are the second and third of the new Federal-Territorial financed school and hostel projects to come into operation. The first, a 200-student residence, was opened at Fort Smith in January, 1958. Plans call for a new 30-classroom school and two 250-pupil residences to open at Inuvik in September, 1959.

Residential schools were operated by the Anglican Church at Aklavik and by the Roman Catholic Church at Fort Providence and Aklavik. The residential schools at Aklavik will close concurrently with the opening of the new school and hostels at Inuvik. However, a 6-room government day school will continue to be operated at Aklavik to take care of those who do not make the move to Inuvik.

At Port Radium, Consolidated Discovery Mine, and Norman Wells, schools were operated jointly by the interested mining companies and the Territorial Government. The companies provided classroom accommodation and living accommodation for the teachers. The Territorial Government was responsible for school supplies and the salary and allowances of the teachers.

Yellowknife Public School District No. 1 continued to operate a 15-classroom elementary school and Yellowknife Separate School District No. 2 continued to operate a 6-classroom school. These are the only organized school districts in the Territories.

School enrolment at March 31st, 1959, compared with March 31st, 1958, was as follows:

	Eskimo		Indian		Others		Totals	
	1958	1959	1958	1959	1958	1959	1958	1959
Day Schools (Govt.).....	360	1015	431	684	726	974	1517	2673
Hospital Schools.....	30	29	95	60	10	7	135	96
Residential Schools.....	154	145	318	103	116	67	588	315
Company Schools.....	60	0	2	7	35	36	97	43
School Districts.....	0	0	17	45	427	397	444	442
TOTAL.....	604	1,189	863	899	1,314	1,481	2,781	3,569

Government hostels or student residences are operated at the following locations:

Yellowknife	100 pupils
Fort McPherson	100 pupils
Fort Smith	200 pupils

An 80-pupil hostel owned and operated by the Roman Catholic Church at Chesterfield Inlet has been purchased by the Federal Government and will be operated as a Government institution commencing in August, 1959.

The Territorial Government again provided a scholarship of \$1,200 to the student obtaining the highest mark in the final Grade XII examinations. The scholarship continues in like amounts for four years subject to satisfactory progress being made by the student. Three students are at present attending the University of Alberta under the plan.

Progress was made in the development of a special curriculum for schools in the Territories. Community film programs including educational films for schools were sent out on a monthly basis to settlements in the Mackenzie District, and periodically, depending on transportation facilities, to other settlements in the Keewatin and Franklin Districts.

The Vocational Training Program, designed to prepare trainees for gainful employment, was further expanded with the opening of the Sir John Franklin School at Yellowknife. Some 75 persons of non-native status either completed their training or were continuing training through local training programs, apprenticeship training, on-the-job training and training in vocational schools. Several received their training outside the Territories at such centres as Edmonton, Calgary and Winnipeg.

Game

The conservation of the mainland barren-ground caribou population continues to be a matter of immediate concern. As a part of the overall conservation program, funds were provided for an intensified wolf control program. During the 1957-58 program, 1,275 wolves were taken. Preliminary figures for the 1958-59 program indicate that despite increased control measures only 800 wolves were killed. This "diminishing returns" effect is an indication that the program has been successful in reducing the wolf population.

Municipal Affairs

The development plan of Fort Smith was brought closer to realization through the acquisition by the Territorial Government of land for re-development as residential, commercial and industrial subdivisions. Continued co-operation and assistance were received from the Chief Architect of Central Mortgage and Housing and his staff on layouts and land use. Private applications for subdivisions and rezoning were considered and dealt with. Construction of a water and sewer system for the town, to be financed on a joint Federal-Territorial basis, was commenced with completion due in 1959. Traffic Control Regulations and street names were established for Fort Smith by Commissioner's Order. The Local Advisory Committee made up of local citizens met regularly and gave valuable advice and assistance to the appointed Administrator in matters of local concern. The local ratepayers contributed under the Local Improvement District Ordinance to the expenses of road construction, road maintenance, street lighting, fire protection and an experimental insect control program.

In the Local Improvement District of Fort Simpson, the program of road construction and maintenance, street lighting and local fire protection was continued. The Local Advisory Committee met to approve the annual budget which involves contributions by the local ratepayers under the Local Improvement District Ordinance. A sewer and water system is under construction for Federal installations, with provision for local connection on an optional basis.

At Inuvik, substantial progress was made on the Federal construction program and increased interest was shown by private individuals and corporations in establishing at the new site. All private applications to build are handled under the Territorial Site Control Regulations. Private building plans examined included plans for a large Hudson's Bay Company store, a hotel, two private garages, and two residences in the serviced area. Some 60 lots have been reserved by Aklavik residents wishing to move to Inuvik. A proposal from an Aklavik resident for a telephone franchise at Inuvik is under consideration. Traffic Control and Sanitary Regulations have been issued.

The Frobisher Bay Development Area was established and Site Control and Traffic Control Regulations issued.

Grants to the Municipal Districts of Yellowknife and Hay River were administered and annual budgets and financial statements were reviewed. A territorial loan to the Municipal District of Hay River was made for the acquisition of a fire truck. An exploratory program for a safe water supply was undertaken at Hay River.

Fire prevention activities included the appointment of Mr. D. J. Ford, who is a specialist in fire prevention, as Territorial Fire Marshal, and the appointment of Assistants to the Fire Marshal at various points. Fire fighting equipment was furnished to a number of settlements. The construction and maintenance of local roads and sidewalks, and provision of street lighting was undertaken in a number of small settlements.

Finances

Territorial revenues and expenditures in 1958-59 as compared with 1957-58 were as follows:

	1957-58	1958-59
Revenue	\$ 2,131,066	\$ 3,008,235
Expenditure	2,654,792	2,992,946
Surplus		\$ 15,289
Deficit	\$ 523,726	

At the close of the fiscal year cash in the Northwest Territories Revenue Account amounted to \$705,783 as compared with \$690,493 at March 31st, 1958. Of this amount \$64,371 is being held as a reserve for Workmen's Compensation.

It should be noted that the revenue figure for 1958-59 includes \$600,000 borrowed from the Federal Government. Without this loan there would have been a deficit for the year of \$584,711 and a balance in the Northwest Territories Revenue Account of \$105,783.

Appendix H

Annual Report of the Commissioner of the Yukon Territory 1958-59

Commissioner—F.H. COLLINS

Legislation

The elected members of the Territorial Council are: J.O. Livesey, of and representing the Carmacks-Kluane district, Speaker; G.O. Shaw, of Dawson and representing the Dawson District; J. Smith and C.D. Taylor, Whitehorse, representing Whitehorse West and Whitehorse East; and R.L. McKamey, Mayo, representing the Mayo district. The appointed officers were H.J. Taylor, Clerk of the Council, and D.S. Collins, Legal Adviser.

Council sessions were held April 9-May 5 and Oct. 15-Oct. 30, 1958. At the first session 27 ordinances were passed and at the second four. Among the important legislation were ordinances providing for government control and sale of alcoholic liquor and respecting public health, game conservation, the safe operation of mines, the handling and use of explosives, the maintenance of parents, deserted wives and children, public printing, and pawn brokers and second hand dealers. Amendments were passed to the Old Age and Blind Persons Allowance, the Disabled Persons, the Business Licence, the Workmen's Compensation, the Insurance, the Elections, the Motor Vehicles, the Fur Export, the Steam Boilers, the Saw Logs Driving, the Evidence and the Reciprocal Enforcement of Judgments Ordinances.

Yukon Forestry Division

Protection of the forests from fire is one of the chief functions of the Yukon Forestry Division. The organization is supervised by a forest officer and comprises during the fire season, an operational staff of 15 and a clerical and maintenance staff of three. Headquarters are in Whitehorse where the Chief Warden and four-man suppression crew are located. A lookout is stationed on Haeckel Hill which commands a view of the Yukon Valley from Marsh Lake to Lake Laberge. Wardens are stationed at Teslin, Haines Junction, Mayo and Dawson and during the fire season additional stations are manned at Watson Lake, White River and Carmacks.

The weather conditions of the 1958 fire season and the period preceding it were the most adverse experienced since organized forest fire control was introduced to the Territory. The winter of 1957-58 was mild and snowfall was light. April was warm and much of the snow disappeared although no run-off occurred. Early May, on the other hand, was cool but dry and the remainder of the snow disappeared leaving the ground very dry. When warm weather came in late May a high hazard developed immediately. In the Whitehorse area during May, June and July the precipitation was about one-third normal, the temperature averaged over four degrees higher than normal and the total wind mileage was twenty per cent greater than normal. Together these factors combined to create very high fire hazards and render the control of the forest fires which broke out extremely difficult. The Whitehorse area, while perhaps experiencing the most severely adverse weather conditions, was typical of the Territory as a whole except for the Dawson and White River areas, which, after the beginning of July, received adequate rainfall.

The losses suffered from forest fires and the cost of forest fire suppression were both very much greater than in previous years.

Number of Fires and Fire Losses	1958	1957
Number of fires reported	96	88
Total area burned (acres)	1,554,402	116,246
Total merchantable timber burned (acres)	181,098	13,892
 TOTAL LOSS	 \$ 1,501,532.00	 \$46,727.50
Loss of Property other than timber	\$ 142,296.00	\$ 500.00
Cost of Forest Fire Suppression	\$ 190,823.00	\$24,332.00

Campfires were the most important cause of forest fires causing 38 of the 96 fires. Other important causes were: Lightning—25 fires; Smokers—9 fires; Settlers—2 fires; Incendiary—1 fire.

Tourist Campgrounds and Lunch Stops

At the beginning of the year there were 10 tourist campgrounds and seven lunch stops maintained along the Alaska Highway and picnic areas maintained at Kathleen Lake, on the Mayo Road, and Otter Falls on the Aishihik Road. During the year three of the lunch stops on the Alaska Highway were converted to tourist campgrounds through the addition of a cooking shelter. Work on this project was interrupted and not fully completed because of the forest fires. Work was also begun on the development of a lunch stop at Dawson City on the west side of the Yukon River.

All the tourist facilities were heavily patronized during the summer months and plans for the extension and improvement of these facilities are in progress.

Economic Activity

During the year 98 oil and gas exploratory permits covering 4,947,035 acres were issued in the Yukon Territory.

Total value of mining production declined slightly during 1958. Total value of mining production was \$11,772,818 compared to \$14,111,798 in 1957. Production and values of production of the various minerals were as follows: gold, 69,210 ounces, \$2,351,756; silver, 5,860,499 ounces, \$5,091,015; lead, 21,539,447 pounds, \$2,446,084; zinc, 14,527,390 pounds, \$1,577,675; cadmium, 162,706 pounds, \$247,313; coal, 4,544 tons, \$58,975.

In the Whitehorse district there was increased interest in placer mining. Production increased from 1,635 ounces to 2,608 ounces. There was a slight increase in prospecting activity but total revenue from mining, which amounted to \$16,053, was the lowest since 1952. While several minerals in current demand are known to exist in the Yukon, there is apparently less incentive for prospectors to get out into the field.

In the Dawson district the number of placer mining claims in good standing fell from 1,262 to 1,223 during the fiscal year, while the number of quartz claims fell from 577 to 478. Placer claims in the Mayo district increased from 79 to 86 and the number of quartz claims in good standing dropped from 1,324 to 1,113.

General economic activity, as reflected in the activity, production and revenue from mining, lands and timber, was down considerably from 1957-58.

Territorial Secretary's Department

The number of persons receiving Old Age Assistance in the 65-69 age group has not changed greatly during the past year. There were a number of additions but also a number of recipients transferred to Old Age Security. As at March 31st, there were 129 Indians and nine white recipients.

There were four recipients of Blind Persons Allowances and two claims for Blind Persons Allowances.

The Births, Marriages and Deaths recorded in the Yukon over the past two years are as follows:

	<i>Births</i>		<i>Marriages</i>		<i>Deaths</i>	
	1958	1959	1958	1959	1958	1959
White Status	404	392	99	102	66	68
Indian Status	91	82	11	7	28	23
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	495	474	110	109	94	91

There were 322 business licences and 12,507 motor licences issued during the year.

The total assessment for the past year decreased \$7,500 from the previous year. This was caused by a sale of one piece of property to the Federal Government and a reduction of assessment by the Court of Revision. New additions failed to compensate for the deletions by the above amount.

The Court of Revision was held at the usual time, the second Tuesday in January, and granted two appeals which resulted in a net decrease of some \$10,300 of property assessment.

The Territory now has the services of a Boiler Inspector who is retained on a year round basis. During the past year, the Inspector spent approximately one month on a full time basis inspecting boilers in the Territory.

A system of written test was arranged for applicants for steam engineer's certificates in the various categories. It is expected that all steam engineers in the Territory will be examined in this manner during the coming year.

There were 17 local companies incorporated and 27 companies whose head offices are outside the Territory licensed and registered under the Companies Ordinance. Three societies were incorporated under the Societies Ordinance. At the close of the year the register contained 270 companies of which 101 were incorporated in the Territory, and 34 societies, all in good standing.

Revenue for the fiscal year 1958-59 was as follows; incorporation of companies \$3,199; licensing and registering extra-territorial companies \$3,440; incorporation of societies \$33; annual returns and miscellaneous \$266.10.

Department of Health and Public Welfare

Due to the increase in social and child welfare problems in the Territory and the necessity for expanding our welfare services to meet changing conditions and existing needs, a professional social worker was employed on November 1, 1958. This social worker made 336 outside visits and interviewed 86 cases.

The annual chest X-ray survey was carried out during the summer months through the co-operation of the Indian and Northern Health Services of the Charles Camsell Hospital (Edmonton). Equipment and two technicians were supplied by the Camsell Hospital with the nurses and staff of the local division assisting. During the survey 4,906 persons (of white status) were X-rayed as compared with 4,470 X-rays taken during the 1957-58 survey, an increase of 436. Chest X-rays authorized by the local division of I. and N. H. S., and taken at Territorial hospitals of T.B. suspects, contacts, and followups on former sanatorium patients, numbered 140. An additional 904 had chest X-rays taken in territorial hospitals at the direction and upon the recommendation of the local doctors.

As there is no radiologist in the Yukon, the Territorial Government has an arrangement with a chest specialist in Edmonton for the reading and interpretation of all chest X-ray films taken in the Territory. X-ray readings for the year, including the X-ray survey, totalled 5,950 at a cost of \$4,539.50.

During the year three cases of tuberculosis were treated locally by confinement in the local hospital and anti-T.B. drugs. All three cases were discharged after short-term confinement, and treatment continued at home with bed rest and drug therapy. Two cases discharged after sanatorium confinement required a short period of drug therapy following their return home.

The total expenditure for this service in the fiscal year 1958-59 for confinement and treatment, medical and special fees, transportation, drugs, etc., amounted to \$47,492.05, as compared with a total expenditure of \$51,750.32 for the fiscal year 1957-58.

Two indigent persons (females) who had received treatment the previous year at the B.C. Cancer Clinic required terminal care in the local hospital. The total expenditure for this service for the year was \$356.

During the year in review 9 persons (6 male and 3 female) were adjudged insane by the Magistrate's Court, and were committed by Order of the Commissioner to the Mental Hospital at Essondale, B.C. Of this number, 6 persons were Yukon residents, and 3 persons had not gained Yukon residence at the time of their committal.

The total overall expenditure for this service (hospitalization, medical fees, transportation, etc.) amounted to \$48,169.61.

Emergency assistance was granted to a number of transients who became stranded in the Yukon and who could not obtain employment. Minimum assistance was granted to assist them in reaching the closest welfare agency in their home province. Assistance was also granted in a number of cases to persons and families who, because of indigent circumstances, were obliged to apply for public assistance before they had

gained twelve months' residence in the Territory. In all cases the responsible province agreed to reimburse the Territory for the assistance granted. Social assistance cases for which the Territory assumed responsibility numbered 218, of this number 37 were family units and 181 were individuals.

Throughout the year an average of 65 social allowances were issued each month, mostly to senior citizens where only income is Federal Old Age Security or the Territorial Old Age Assistance Pension.

A number of unskilled transient workers came to the Yukon hoping to find employment and usually these men arrived in the Yukon with very little funds. When employment could not be found and his funds became depleted, the non-resident applied for public assistance. It was usually in the best interests of the indigent person, as well as the Territory, to repatriate the non-resident to his home province or to the closest welfare office in his province. Most of the stranded non-residents were young men who had secured free rides up the Alaska Highway, and to these individuals a minimum allowance was granted for their subsistence while returning to their home province in the same manner in which they travelled to the Yukon. In other cases, the non-resident was returned to his province via bus.

Assistance was also granted during the year to families who moved to the Yukon from one of the provinces, and who, because of indigent circumstances, were obliged to apply for assistance before they had gained Yukon residence.

The total expenditures for the social assistance program in the fiscal year 1958-59 amounted to \$86,627.87 as compared with a total expenditure of \$50,474.88 for the previous fiscal year. This increase of \$36,152.99 is due to the increase in the number of social assistance cases, and the higher costs of hospitalization.

There were 28 children under care at the end of the year and 11 children placed for adoption. Four adoption placements were made by the British Columbia Child Welfare and one by the Alberta Child Welfare; two children became wards of the Yukon Superintendent of Child Welfare and four were surrendered by their mothers to the Superintendent and placed in adoptive homes.

Public premises were regularly inspected by the Sanitary Inspector who travelled 14,022 miles in the Territory in the discharge of his duties. General conditions in Whitehorse are improving slowly as additional premises were connected to the sewer and water systems. Working with the Local Board of Health in Whitehorse, many old shacks have been condemned as unfit for human habitation. This work is progressing favourably. Conditions in Dawson have improved considerably both in construction and general cleanliness.

Some 2,000 inspections were made, 241 notices issued, 161 complaints investigated and 38 water samples taken.

Workmen's Compensation

The number of employers operating in the Territory has remained stable. The number of accidents has decreased from 725 to 673 with only 18 cases referred to the Referee for adjudication.

Net assessment for the year was \$9,030.58 while the fee paid to the Referee was \$2,132.93.

There was 673 accidents reported: 469 non-compensable; 189 temporary disability; 12 permanent disability and three fatalities.

Medical expenses totalled \$79,144.91 and compensation payments \$112,595.54, both showing a slight increase over last year.

The Workmen's Compensation Ordinance is administered by the Workmen's Compensation Officer who is located in Edmonton. He performs the same function for the Northwest Territories as well as carrying out the duties of Agent, N.W.T. Administration.

Education

Education in the Territory is administered by the Superintendent of Education. There are 16 schools in operation employing 76 full time and one part time teachers at the end of the school year, June 30th, 1958, which number was increased to 81 full-time and 1 part-time teachers employed on the 31st March, 1959. Of the schools, one is a Separate School operated at Dawson on a fee basis by the Sisters of St. Anne;

another, Christ-the-King School at Whitehorse is a Territorial school but is operated as a Separate School on a fee basis by the Sisters of Providence. The others are Territorial elementary and-or high schools. Total enrolment at September 1st, 1958 was 1,877 with an average daily attendance of 1,688.

The Department of Education worked closely with the Yukon Film Society in the operation of a Yukon Film Library distributing educational films in the Territory. The Yukon Film Library contains over 250 films and 200 film strips. The number of shows over the past year has increased from 2,017 to 2,701; the total audiences have increased from 35,677 to 39,807.

The following new buildings were completed during this period: a seven-classroom school, including an auditorium-gymnasium at Dawson; a four-classroom school at Elsa, plus teachers' suite; a two-classroom school plus teachers' suite at Haines Junction; and a one-classroom addition to the Watson Lake Wye School.

Construction of the Selkirk Street Elementary School in Whitehorse, which consists of eight classrooms plus a small auditorium-gymnasium is proceeding on schedule and the building will be ready for the term commencing September, 1959.

Plans are progressing to establish a Vocational Training School and accompanying dormitory facilities on the site at present occupied by the old Whitehorse General Hospital.

Of the 14 centres in the Yukon where schooling is available, only three are in a position to offer a program of studies embracing grades 1-12 inclusive. In the other 11 communities, a child's education ends at the grade 8 or 9 level, unless the parents can afford to send their boy or girl either to one of the high schools of the Territory or "outside".

Game Department

The 1958-59 fiscal year has been an active and successful year for the Game Department although total revenue decreased from \$24,899.71 for the fiscal year 1957-58 to \$21,065.48. This decrease is due in part to the new Game Ordinance which brought into effect a new scale of licence fees which were reduced in some cases.

Because of the 49 bait stations established during the winter of 1957-58 by use of aircraft, there have been 23 known wolf kills plus 3 wolverines and 5 foxes. Of the 18 bait stations established by road there were 20 known wolf kills and 8 wolverine kills.

During the months of January and February, 1959, there were 44 bait stations set out by registered guides and forestry wardens. The final results of the setting of these bait stations are not known. However, 16 wolves, 2 coyotes and 3 wolverines have been reported killed by other means.

Very few reports concerning elk were received by the Game Department this year. A small herd of seven or eight elk spent the winter near Pelly Crossing. A lone bull elk was seen at Mile 87 on the Mayo Road. During the year a number of reports were received about coast deer being sighted in the southern Yukon. Two reports of pheasants being seen and identified were received.

Buffalos have established a range along the Nisling River near its confluence with the Donjek River. On a special game survey flight made in March by the Canadian Wildlife Service, three buffalos were seen and several buffalo yards were observed along the Nisling River. A lone buffalo was shot and killed on the Alaska Highway. The culprit was apprehended by the Royal Canadian Mounted Police and convicted.

During the first part of July, 1958, reports were received that beaver were continuously plugging a culvert at Mile 1119, Alaska Highway. One beaver was live trapped and released in Sulphur Lake, 100 miles south on the Highway. No further trouble was experienced at this point. In mid-September, at four places which were miles apart on the northern portion of the Alaska Highway between White River and the border, beaver were reported threatening to flood the highway. Arrangements were made with trapline holders to have these beaver trapped. At Mile 125 on the Haines Road it was reported beaver were flooding a bay meadow. The complainant was given powder and caps to blow up the beaver's dam. A native trapline holder covering this area claimed he trapped all the beaver out of this stream last spring.

Game Taken—Season 1957-58

Non-resident:	Black Bear	Grizzly Bear	Caribou	Moose	Sheep	Goat	Predators
Spring Hunt (1958).....	7	4	—	—	—	—	—
Fall Hunt (1958).....	3	38	33	34	65	6	1 wolf 1 wolverine
Resident Hunters (1957-58)	59	16	239	188	53	8	19 wolves 6 coyotes
Registered Trappers (1957-58).....	40	12	539	161	17	1	44 wolves
	109	70	811	383	135	15	64 wolves 6 coyotes 1 wolverine

Migratory and upland game birds taken by resident and non-resident hunters and registered trappers— Season 1957-58: ducks 2712; geese 150; ruffed grouse 168; blue grouse 160; spruce grouse 912; Franklin grouse 59; sharptail grouse 35; ptarmigan 550.

A total of 63,352 fur bearing animals were taken by registered trappers, mainly muskrat and squirrel.

There are a total of 190 individual traplines and five group areas registered. Total revenue collected was \$21,065.48.

Roads, Bridges, and Public Works

The Whitehorse-Keno Road was opened to all traffic on May 24, 1958. The Carmacks ice bridge went out on April 27 and the Carmacks, Pelly and Stewart ferries were launched between May 16 and 20. The Carmacks ferry stayed in operation until November 15 while the Stewart and Pelly ferries were taken out of the water on October 10-12, then relaunched due to mild weather, and finally removed from service October 22. The Carmacks ferry was used by 10,929 vehicles, the Pelly by 7,042 and the Dawson ferry, which was in operation from May 19 to October 8, by 3,119.

For the first time in history the road from Dawson to 60 Mile was opened to wheeled traffic in April.

Re-construction of the Flat Creek-Dawson Road continued and 107 miles of the Canol Road repaired. The Canol Road is now open for 150 miles from Johnson's Crossing, Mile 837 of the Alaska Highway, to the junction of the Ross and Pelly Rivers. In the Mayo-Elsa district ten miles of road were built between Elsa and Sullivan Creek.

Building construction included garages, clerks' residences at Mayo and Dawson, a residence for the Dawson mining recorder and residence and an office for the Mayo mining recorder.

