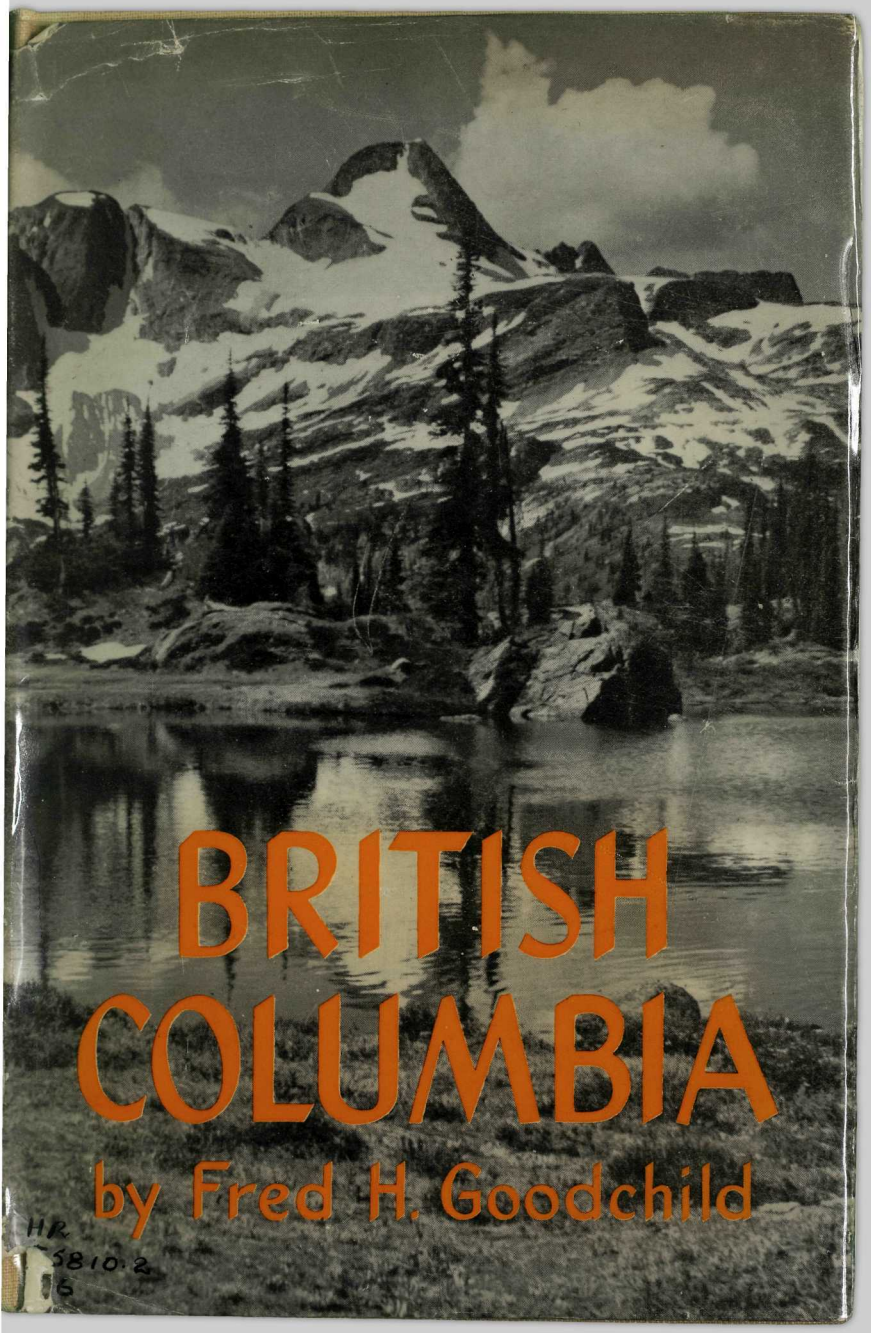


BRITISH COLUMBIA

by Fred H. Goodchild

HR
SB10.2
5

At the present time British Columbia is the fastest growing and fastest expanding province in Canada. Primarily a lumbering, fishing and mining region, it was projected into a wide variety of industrial activity by the necessities of war. The province is now exploiting its war-time manufacturing achievements and has entered an era of expansion that has made it a substantial prop in Canada's economy.

The author tells the story of the Pacific Coast province of Canada from the earliest days of fur trading to the present, with special emphasis on the new industrial prominence that is being achieved. Everything concerning British Columbia is described, from the geography and history to social welfare and recreation. Industries, new and old, ports and shipping, government and public works, legends and the characteristics of the people are all included. The most important statistics are grouped at the end for easy reference. The book will be invaluable to all tourists in Canada.

See back flap

Photograph by Ronald White

Mar 6, 1952 Nelson 80 76 3

At
an
lu
a
wa
fa
th

of
se
ne
Br
his
an
wo
in
en
to

Photograph by Ronald White

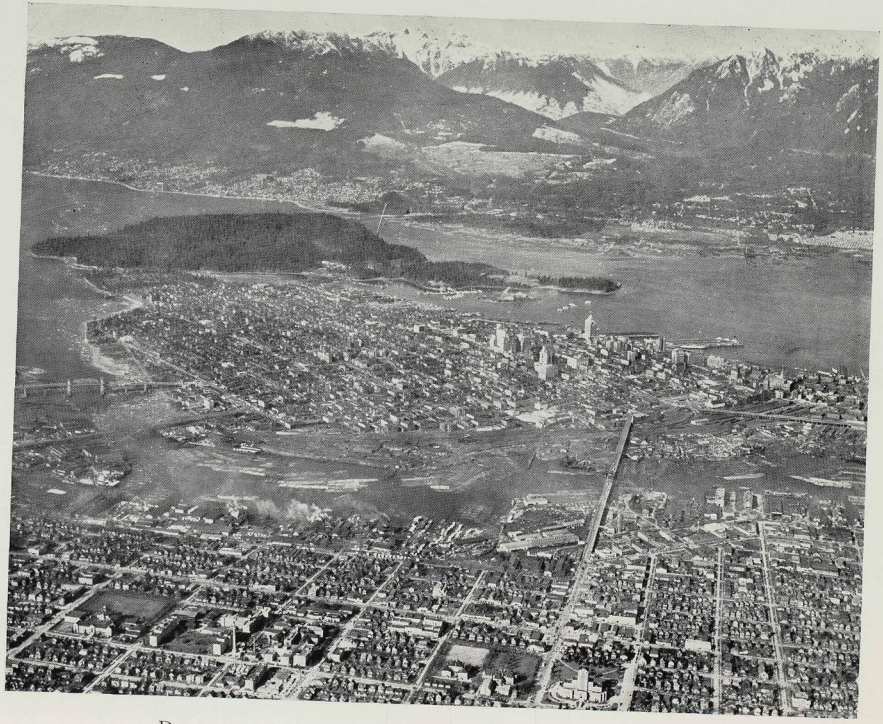
BRITISH COLUMBIA

A
ar
lu
a
w
fa
th

of
se
ne
B
hi
ar
w
in
er
to

Photograph by Ronald White

Photograph by Ronald White



Downtown, Vancouver, looking over the harbour to the north shore

British Columbia

Its History, People and Industry

FRED H. GOODCHILD

Foreword by
BYRON I. JOHNSON
Premier of British Columbia

GEORGE ALLEN & UNWIN LTD
RUSKIN HOUSE MUSEUM STREET LONDON

FIRST PUBLISHED IN 1951

This book is copyright under the Berne Convention No portion may be reproduced by any process without written permission. Inquiries should be addressed to the publishers.

227616

HR
F5810.2
G6

PRINTED IN GREAT BRITAIN
in 12 point Bembo type
BY UNWIN BROTHERS LTD
WOKING AND LONDON

Photograph by Ronald White

Dedicated to

JOYCE and BUD

In tribute to their abounding faith

Photograph by Ronald White

FOREWORD

British Columbia, Its History, People and Industry, as so ably narrated by F. H. Goodchild, will give to our friends in many lands a deeper understanding of Canada's most westerly province.

Progress and prosperity in British Columbia have been achieved primarily through the development of our forests, mines, farms and orchards. The steady development of hydro-electric power is perhaps one of the most important factors in the expansion of our manufacturing capacity.

The extensive railway and road development that is in progress will open the door to a vast area rich in minerals and farm lands. There will be ample opportunity to participate in the future of British Columbia.

BYRON I. JOHNSON,
Premier of British Columbia.

Photograph by Ronald White

PREFACE

IN compiling this book on British Columbia, the Canadian province whose shores are washed by the Pacific Ocean, I have had the assistance of many authorities, past and present. All the material facts are available to the reader in a wide range of government reports, reference books and historical records. This book is an attempt to give a comprehensive picture of the province with notes to guide the reader to more detailed information should he desire it. Happily the fur-trading days and the later pioneering days were not without their historians, and without the invaluable records they left behind the task of the chronicler to-day would be infinitely more difficult. The late Judge F. W. Howay, Mr. B. A. McKelvie, and Mr. R. E. Gosnell have been indefatigable in piecing together British Columbia's story and I have used their writings freely. Mr. Gosnell's Year Book gives factual information up to 1914 and Mr. McKelvie's Manual covers the record to 1929. Mr. McKelvie has also written other volumes on the early history of British Columbia. A fuller history of earlier days was written by Judge Howay and E. O. S. Scholefield, a volume that also contained the full text of the Nootka Convention, a document of great historical importance to the Pacific Coast. Other sources of information used were: Parkman's *The Makers of Canada*; *Canada and Its Provinces*, edited by Adam Shortt and Arthur G. Doughty, and compiled with the assistance of one hundred associates; The Vancouver Daily Province Library; The Hudson's Bay Company Record Society; the *Canada Year Book*; *The Canadian Almanac*; *Parliamentary Guide*; the Dominion Bureau of Statistics; Vancouver Board of Trade reports; the monthly *Business Review* issued by the provincial government; the Vancouver Art, Historical and Scientific Association; and the reports of the British Columbia Resources Conference. I wish to acknowledge the co-operation of officials of the government departments who promptly gave all the information requested.

I believe this to be a significant time at which to direct attention to British Columbia because it is in the midst of developing secondary industries which in less than a decade have built up imposing production totals, and because the province is on the eve of even greater developments which will have an effect on the entire Canadian economic picture.

If this book entices the reader to further study of British Columbia it will not have been a wasted effort.

F. H. G.

Photograph by Ronald White

CONTENTS

Foreword	page 7
Preface	9
1. *Introductory*	15
2. *Geography, Climate and Geology*	18
3. *Coveted by Four Nations*	31
4. *Government and Population*	42
5. *The British Strain is Dominant*	52
6. *Cultural Traditions*	59
7. *Place-Names and Legends*	66
8. *The New Empire of the North*	73
9. *The Industrial Picture*	80
10. *Lumbering*	100
11. *Agricultural Riches*	110
12. *Mineral Riches*	122
13. *Fishing Came First*	129
14. *Power from the Rivers*	136
15. *A Hub of World Shipping*	143
16. *Rapid Airport Growth*	154
17. *The Conquest of Distance*	162
18. *Health, Welfare and Education*	173
19. *The Enforcement of Law*	189
20. *The Press*	194
21. *Touring in British Columbia*	201
Appendix	211
Index	217

Photograph by Ronald White

ILLUSTRATIONS

Downtown Vancouver, looking over the Harbour to the North Shore *frontispiece*

facing page

1. *Arctic Trout taken from the Peace River* 32
2. *Farming Country in the Dry Belt of the Cariboo* 33
3. *The Commonwealth's only Woman Speaker* 48
4. *Parliament Buildings at Victoria* 49
5. *British Columbia's Emblem: the Pacific Dogwood Flower* 64
6. *Farm Lands in the Peace River Valley* 80
7. *A Coal Seam in the Peace River Country* 81
8. *Trucking Logs to the Booming Grounds* 96
9. *Making up a Boom of Logs at Jordan River* 97
10. *Blossom Time in the Orchards of the Okanagan Valley* 112
11. *Ore Train in the Bralorne Gold Mine* 113
12. *The Fishing Fleet puts out from Vancouver Harbour* 128
13. *Mount Fraser from above Peter's Lake* 192
14. *The Somass River and Mount Arrowsmith* 208

Map of British Columbia *at end of book*

Photograph by Ronald White

I

INTRODUCTORY

BRITISH COLUMBIA is stepping over the threshold into a new era, leaving behind a hundred years that started with a wilderness dotted with fur-trading posts and ended with the province third in the Dominion's industrial production, third in size and third in population. As it passes into a new century we see it firmly embarked on wide manufacturing expansion, with newly-developed secondary industries almost equalling production values of the four basic industries, lumbering, mining, fishing, and agriculture, and with projects under way to open up the north country to tap the tremendous mineral, water power, and farm riches of the Peace River country and its adjoining regions to the south and west. More than half the area of the province is waiting to be developed and its resources exploited. Just as the fur trade of a hundred years ago set the province on the path of settlement and industry, so will the storehouse of the north send British Columbia into a new and more vigorous period of expansion once the doors are unlocked.

The discovery of gold led to mining operations which began in the fur-trading days, and then agriculture was started in a small way. Lumbering and fishing followed. For many years these activities were the only supports for the province's economic structure. The weakness—that they were dependent on expendable resources—was readily recognized by industrialists, the Government, and the public. Gradually manufacturers adventured into wider fields with by-products; science found new processes, improved technique, and new resources; and the Government co-operated with enterprising businessmen in developing new trading channels. The second world war gave tremendous impetus

to this progress and the records of production that were then established have continued through the post-war years. A comparison of the values of 1949 with those twenty years before is arresting evidence of the great forward strides.

None can envision with finality what the new era holds in store. The possibilities are tremendous. Millions of acres of fertile land are unsettled, billions of feet of lumber can be cut and processed for a variety of supplementary industries, there are vast untapped coal deposits, a wealth of minerals and water power in almost superabundance. As will be shown, a new empire awaits development, a land that could constitute another province of the Dominion but which, being part of British Columbia may make that province the richest in the country. Road and railway access is the immediate need and the Government is in the process of meeting that need. Cautious banking heads share the optimism of Government leaders and businessmen. H. L. Enman of Toronto, president of the Bank of Nova Scotia, for instance, says: "British Columbia is not only a coming province. It has definitely arrived and its future is assured. British Columbia was given top priority in the bank's post-war expansion plans and has continued to hold that priority. We have opened more than twenty branches in British Columbia since 1945. That is concrete evidence of our faith in the future of the province."

While British Columbia is moving forward the Government is guarding as much as it can against any wild boom that might get out of hand and lead to a collapse. There are statutes through which it can prevent many of the evils of the occasional "boom and bust" periods that marked the opening of some parts of the west. However, they do not expect to have to use these powers as there is practically no element of speculation in the northern developments. Land settlers, for instance, are given advice and assistance. Care, too, is taken that hodge-podge municipalities do not develop in the wake of expansion. Town planning boards keep future requirements in mind and they operate under the paternal eye of a government department.

For more than ten years, since the first year of the war, British

Photograph by Ronald White

Columbia has been marching forward. During the war years the Federal Government helped her over the difficult parts of the new road. For five post-war years she has been on her own and now she marches towards a new horizon with faith in her heart, initiative in her sturdy people, and a spirit of adventure in her youth who find that the home fields are looking greener than distant pastures did in bygone years.

II

GEOGRAPHY, CLIMATE AND GEOLOGY

DISTANCES and the facts of geography are bothersome to some people but this knowledge is important because constantly repeated mis-statements are eventually accepted as truth, thus producing a distorted mental picture. A common phrase used to embrace the breadth of Canada is "From Newfoundland to Vancouver Island." Before Newfoundland joined the dominion in 1949 it was "From Cape Race to Vancouver Island," while the anthem *The Maple Leaf for Ever* has the words "Our great dominion now extends from Cape Race to Nootka Sound." Neither Vancouver Island nor Nootka Sound is the westernmost part of Canada, but the titles were allowed to pass without challenge for many years, until Mr. D. A. McGregor, Associate Editor of the *Vancouver Daily Province*, pointed out that one offender, a federal politician, had done even worse and cut off Canada at Vancouver, thus lopping off four important federal electoral constituencies, three on Vancouver Island and one in the northern part of the mainland.

As a matter of fact, fully half of British Columbia lies west of Vancouver. Mount Logan (19,850 feet) just inside the Yukon border at British Columbia's north-western tip, is about 600 miles west of Vancouver, 470 miles west of Nootka Sound, and 390 miles west of Cape Scott, the most westerly point on Vancouver Island. The extent of the Dominion since the accession of Newfoundland is well over 88 degrees and British Columbia covers more than a quarter of this.

It is important to know the geography of British Columbia because its distance and its physical characteristics will certainly have a great effect on future development. Briefly it is a

Photograph by Ronald White

quadrangle 700 miles long and 400 miles wide, from latitude 49 to 60 degrees north and west of 120 degrees longitude in the top half of the province and west of 115 degrees in the lower half. Its land area is 366,255 square miles, which is considerably greater than the combined areas of the United Kingdom, France, Belgium, The Netherlands, and Denmark; its area is twice that of Germany, larger than the Australian state of New South Wales, and bigger than the American state of Texas, which is the largest in the Union. Its population of about 1,200,000 (the decennial census will be taken in 1951) represents a density of about three per square mile, compared with Ontario's 11, Quebec's 6, and the United Kingdom's 507. But 80 per cent of the population is concentrated in the south-western corner of the province. Nearly half is in the city of Vancouver and the balance in New Westminster, on Vancouver Island and the agricultural and fruit valleys of the Fraser, Okanagan, and Kootenays. It should not be assumed, however, because such a vast area is so sparsely populated that there is room for fifty or sixty million more people. There is room only for such numbers as the province can support, and the most informed authorities, basing their estimate on foreseeable production development, place the figure at three millions. It could go higher because full surveys of resources have not been completed. Meanwhile the experts confine their findings to the knowledge in hand. Immense potentialities lie in the soil and water power, but their exploitation depends on heavy capital investment, the provision of roads and railways, and, most important, on market needs. Exploitation can only follow a general pattern of development when every phase of industry from production to selling is co-ordinated. A great part of the province is rugged country. About two-thirds of it, about 155 million acres, is either situated on mountain slopes above an elevation where timber of commercial quality can be produced, or consists of rocky unfertile soil, swamp and water at lower levels. Much of this area, however, carries an alpine or scrub type of forest of value for watershed and game protection, and includes highland pastures suitable for summer grazing for sheep.

The chief physical features are the mountain systems, the Rockies on the eastern boundary and the Coast Range on the west, both stretching in a north-westerly direction. Between them the country is dotted with valleys, lake basins, plateaux, and low mountains. On the western rim of the Rockies trench is the Columbia mountain system, which continues across the international border. Along the sinuous coastline are hundreds of islands, the largest of which are Vancouver Island and the Queen Charlotte group. A number of rivers which have cut their way through the Coast Range, with timbered valleys and passes to the interior at their head, have formed large estuaries on their coastal passages, and many fine harbours are possible. There are nearly one hundred lakes more than ten square miles in area, ranging up to Babine Lake, 260 square miles and 105 miles long. Kootenay and Quesnel Lakes are 87 miles in length, Okanagan 67, Shuswap 85, and steamers ply a regular service on a dozen of them. Vancouver Island is 285 miles long and has an area of 11,000 square miles.

The geodetic survey branch of the federal department of mines and resources lists 246 mountains ranging from 10,000 feet to 15,300 feet (Fairweather in the St. Elias range). Mount Robson, probably the best-known peak to visitors, is 12,972 feet, while Mount Logan (19,850 feet) and Mount Elias (18,008 feet) are just outside the British Columbia boundary in Yukon territory. Mount Baker in the neighbouring State of Washington, which frequently is a spectacular sight from the south-western part of British Columbia and which is a popular ski-ing centre, is 10,730 feet high. British Columbia has 116 mountains topping this.

There are twelve passes through the ranges that straddle the province. They are at different elevations ranging from 7,100 feet (the south Kootenay) to 2,000 feet (the Peace River Valley). There is a general but very gradual northward slope of the land from the mountainous country on the southern boundary, but this slope is not enough to prevent the southward flow of water from the higher reaches. A huge plateau is thus created which forms the chief agricultural area of the province. The whole of

Photograph by Ronald White

the area south of 52 degrees and east of the Coast Range is a grazing country up to 3,500 feet and a farming country up to 2,500 feet.

Excepting the Peace and the Liard in the north-east, which are tributary to the Mackenzie and flow into the Arctic, the rivers mainly flow south-westward to the Pacific. There are ninety of them, and the headwaters of the largest rivers, the Fraser and Columbia systems, are in the Rocky Mountains trench. A dozen rivers, including the Thompson, flow into the Fraser, a similar number into the Columbia, six into the Skeena, four into the Liard, three into the Parsnip, three into the Stikine, and two into the Peace. The Columbia flows through the Kootenay Valley and then through American territory into the Pacific. The Fraser, 750 miles long, enters the sea close to Vancouver harbour. The Skeena, 300 miles long, broadens out into the ocean at Prince Rupert. The Stikine, about the same length and originating just south of the Pelly Range to the north, finds its way to the sea a hundred miles north of Prince Rupert. Farther north the Liard leaves the Mackenzie to join the Arctic, but 300 miles of this river is in British Columbia. The same applies to the Peace.

Thus British Columbia is a great watershed for the whole Pacific coast region. All the rivers of importance, with the exception of the Colorado, rise within its borders. The Fraser, Columbia, Skeena, and Stikine are of the greatest importance in the provision of hydro-electric power, in irrigation, in transportation, and in preservation of the fisheries.

The fjords and passages along the coast resemble a magnified copy of the Norwegian coastline. There are innumerable little bays and coves, and the high mountain walls behind them gives them a grandeur that never fails to impress. Though it is less than 800 miles between the southern and northern extremities of British Columbia by straight line the indentations give the province a coastline of 7,700 miles.

The geology of the province is an immense and absorbing study. As noted elsewhere, that part of the Cordilleran belt that lies in British Columbia is tremendously rich in minerals. The

present glaciers are the remnants of the continental ice cap that once covered much of the northern part of the American continent. The glaciers are still retreating and their progress is regularly measured. Mr. Victor Meek, chief engineer of the Dominion Water and Power Bureau of the Department of Mines and Resources, told of the ice recession in the *Canadian Geographical Journal*, November 1948. He pointed out that glacial observation had been under Government direction only since 1945, but measurements and studies had been made by mountaineers for many years, the first record being for the year 1887. Studies to date show a general and practically continuous recession since that date. Mr. Meek found indications that the general rate of recession has accelerated in recent years and from the records available it appears that recession is greatest in the Coast Range, somewhat less in the Selkirks, and least in the higher altitudes of the Rockies. For instance Franklin Glacier in the Coast Range has retreated 4,520 feet since 1927, and probably more than two miles in the last sixty years. The Illecillewaet Glacier in the Selkirks has withdrawn 4,100 feet since 1887. The minimum recorded recession is that of the Victoria Glacier in the Rocky Mountains, only 1,000 feet since 1885. He concluded: "It is generally agreed that the recession of our glaciers has been caused by a gradual long-term change in climatic conditions, primarily a slight increase in annual mean temperature." The meteorologist contributes a fact to support his brother scientist: between 1906 and 1923 the mean annual temperature on the southern mainland was 49 degrees: between 1923 and 1943 it was 51.

Superficial deposits of boulder clay and water-worn stones occur at all heights up to 5,000 feet, and, in the lower levels, especially in the northern low country, is found a fine white silt. The line of retreat of the glaciers towards the mountain ranges is marked by large bodies of debris, brought down as the ice swept southward. There is much evidence that large bodies of water existed at various heights between the present sea-level and over 5,000 feet, such as shore lines and terraces, and clays which must have been deposited in water.

Photograph by Ronald White

The Strait of Georgia must have been filled with a great glacier,[1] called by Dr. G. M. Dawson of the Geological Survey, the Strait of Georgia glacier, with a width of over fifty miles and a thickness in places near its termination of more than 600 feet. Ice groovings of remarkable depth and polish are seen in recently exposed rock near Victoria on Vancouver Island, showing that the glacier must have swept over the Saanich peninsula in a direction mostly towards the south with a slight westerly deviation. On the south-west coast of Vancouver Island, in the Strait of Juan de Fuca, the groovings point nearly west, showing that the ice probably escaped to the open ocean through that channel. Farther north, above Seymour Narrows, indications are that a second large glacier, fed from the fjords of the mainland, pushed in a north-westerly direction, called by Dr. Dawson the Queen Charlotte Sound Glacier.

Tertiary rocks, containing marine shells, are found on the south-west coast of Vancouver Island near Sooke.[2] Tertiary leaf-bearing rocks are found in Burrard Inlet and about the estuary of the Fraser River. Farther north, in the Queen Charlotte Islands, Dr. Dawson found the whole north-eastern portion of Graham Island to be underlain by tertiary rocks, mainly of volcanic origin. On the mainland east of the Coast Range the tertiaries occupy large areas with lignites; in certain places even bituminous coal occurs. In the north there has been little disturbance of the beds, but the southern part of the interior plateau is more irregular and mountainous, and the strata, as in the Nicola region, are sometimes found dipping at an angle of thirty degrees. Remains of plants, insects, and a few fresh water molluscs found in these interior regions resemble those elsewhere considered to be miocene, and indicating a temperate climate. Underlying the tertiary beds in many places are cretaceous rocks. These include the true coal-bearing beds of Nanaimo, Comox, and the anthracite region of the Queen Charlottes. On the mainland the Coast Range is largely composed of granite or gneissic rocks. Geologists have found indications that the sea apparently at one time spread

[1] See *The Year Book of British Columbia*, by R. E. Gosnell. [2] Ibid.

uninterruptedly eastward across the Rocky Mountains into the Peace River country, at least as far as the 55th parallel.[1]

A relief model of British Columbia would show a very uneven surface. There would be many ridges and depressions, many lakes and rivers, wide valleys with rich growing lands, and there would be a comparatively small level area. Proceeding from east to west one would first see the great triangle of the Kootenay district in the south-east corner, an area of more than 15 million acres, split approximately down the middle by the Purcell range of the Selkirk mountains. There are three main valleys: the east Kootenay, the drainage basin of the Columbia River; the west Kootenay, which includes the Kootenay River and the Kootenay Lakes; and the third lying between the Selkirk and Gold Mountains, through which the Columbia River, expanding into the Arrow Lakes, flows into these three valleys. East Kootenay contains much farming land, but it requires irrigation. The western valley has little arable land except near the southern boundary. It is a heavily mineralized district and its lode operations gave birth to the mining industry. In recent years, however, with much of the speculation removed from mining the greatest development has been in fruit growing. The Crow's Nest Pass in the East Kootenay possesses immense coal deposits with indications of oil pools. As the railway traveller goes through the pass the valley opens up to view and it is one of the magnificent scenic sights on the journey to the coast. The Columbia River, after flowing northward for one hundred miles from its source, the Columbia Lakes, turns southward, and, with the Arrow Lakes, drains a large area, mostly mountainous and well-timbered until it crosses the international boundary near Trail.

The next great area the traveller will see west of the Kootenays is the Yale region. Though lying almost wholly within the dry belt, it has, because of its extent, a wide variety of climate and soil conditions. It includes, to the eastward, the rich fruit and

[1] For a more thorough study of the geology of the province consult the Federal Department at Ottawa or the Department of Geology at the University of British Columbia.

Photograph by Ronald White

agricultural valleys of the Okanagan, the Nicola, the Similkameen, the Kettle and the north and south Thompson, the largest area of arable lands in the province. Within this belt are the large Cariboo cattle ranches with their miles of lush, rolling grazing ranges, and there are also several mining operations. The fruit-growing Okanagan Valley, aptly called "The Garden of British Columbia," lies west of the Kettle River Valley and is divided from it by a comparatively low watershed. West of Salmon Arm is the Thompson River Valley, richly fertile on both sides of the river.

Adjoining is the Lillooet district of more than ten million acres, lying west of the northern half of the Yale district. It is bisected by the Fraser River and the old Cariboo waggon road passes through it northward from Ashcroft. It is largely a pastoral region now but with some fruit-growing in the southern areas. On the coastal side of the lower part of the Yale district lies the Westminster district, but although its area is only four and a half million acres it is a very important part of the production picture. It is bounded on the west by the Strait of Georgia, on the north by Lillooet, on the east by Yale, and on the south by the United States border. Within its boundary is the valley of the Fraser River, which, Dr. Dawson believes, is the bed of an ancient arm of the sea which extended as far inland as Hope. The Fraser is a mighty river and its power in the flood season, built up as it tumbles down from the mountains to the sea, is irresistible. The extent of its floods depends on the amount of snow far up in the mountains and how quickly it melts in the spring. The amount of snow is less important if the run-off is gradual. The spring of 1948 was disastrous. A sudden warm spell melted the snow faster than the river could handle it and the roaring torrent swept away dyking systems, bridges, roads and railway tracks. The whole lower part of the valley, 20 miles wide, became a vast lake. The provincial and federal governments spent more than twenty million dollars in building stronger dykes and in rehabilitating the farmer victims.

Vancouver, the biggest city in the province, and New

Westminster, British Columbia's second port, are on the north side of the river.

Looking at that part of British Columbia north of the route followed by the eastern traveller we come to a great stretch of promising country. North of the Yale district is the great Cariboo region, embracing 96 million acres. It is drained in the south by the Fraser and its tributaries, in the centre by the Parsnip and Peace Rivers and their tributaries, and in the north by the Nelson and Liard River system. The lower region was the scene of the gold rush a hundred years ago and a number of mining companies are now operating in the area where gold was first discovered. The central portion was a rich fur preserve of the Hudson's Bay Company.

To the west of the Cariboo lies a larger area, the Cassiar district, embracing 105 million acres and including in its boundaries the Queen Charlotte Islands. The Skeena and Stikine, flowing parallel, are its largest rivers. Cassiar is another district prominent in the mining district.

From the height of land at the headwaters of the Fraser River and its branches the country slopes gradually to the north and west, forming a series of valleys containing many thousands of acres of good farming and pastoral land. The part that lies east of the Rocky Mountains is an almost level plateau, with a slow dip to the valleys of the Peace and Smoky Rivers. Owing to the depth of these valleys and the absence of rock the conditions for drainage are perfect. In what is called the Peace River country, both north and south of the river, there are nearly 10,000 square miles of fine agricultural land within British Columbia. The government has reserved four and a half million acres fronting on the Peace and Parsnip Rivers which will not be disposed of except by pre-emption.

Across from the southern mainland, separated by the Strait of Georgia and the Straits of Haro and Juan de Fuca, lies Vancouver Island, almost 300 miles long and averaging about 60 miles in width. Both the inside and outside coastlines are deeply indented and there are numerous deep water harbours. The country on the

Photograph by Ronald White

southern and eastern coast is comparatively level, while the interior is broken up by mountains and heavily-wooded valleys. The Saanich district, close to the capital city of Victoria in the south, is important agriculturally. Northward along the coast are Nanaimo and Comox, two notable coal areas, the latter also a farming region. Nanaimo coal which has played a big part in British Columbia's history and economy, is still being mined and its seams may lead geologists to important oil pools. One hundred and fifty miles north of Vancouver Island is the Queen Charlotte group, Graham, Prevost, Moresby and North being the biggest of 150 islands. The southern ones are mountainous and heavily timbered, but the northern portion of Graham Island is flat. About half a million acres are arable. Prince Rupert, the northern port, is 80 miles away by water.

The mainland coast is rugged, but there are many settlements and some towns with thriving local industries. Their communication so far with the south is solely by steamer. The provision of roads would be a costly project because of the mountainous terrain and must await further growth of industry and population. When roads to the coast are constructed, however, they will be grand scenic highways. The coastline is indented along its whole length with deep fjords that run many miles inland, flanked by precipitous rock walls.

Climatologists have declared that the south-western part of British Columbia is one of the four most favoured climatic zones in the world. It meets all the requirements for "optimum," the best climate for mankind, animal and plant in regard to temperature, humidity and variability. Except for the effect of the warm Japanese current this climate roughly resembles that of European countries in the same latitudes. The prevailing winds are westward off the Pacific Ocean, and because of the mountain ranges there is a wide variety of temperatures and precipitation. Along the coast the range is relatively small. The summer season is not uncomfortably hot because the warm airs from the Pacific must rise to flow over the mountains. Zero weather rarely occurs anywhere along the southern coast. In the central region the range

of temperature is wider. The summer days are hot and the nights cool: winters are cold with spells of zero weather. Similar conditions occur in the Rocky Mountain sections with the addition of heavy snowfalls. In the Peace River country the winters are colder, and although the summers are shorter there are daily more hours of hot sunshine—a condition reflected in the rapid growth of crops.

The province as a whole has a plentiful supply of water—an average annual precipitation of about 42 inches. The distribution, however, is by no means ideal. Some wet areas are close to the maximum for North America, while some of the dry belt areas approach desert conditions. For instance, the average annual precipitation at Ocean Falls on the central west coast is almost 166 inches, at Seymour Falls, on the south-west coast, it is 146·78 inches, while at Ashcroft in the central interior it is 7·18 inches, and at Merritt in the same area 8·88 inches. Penticton and Kamloops are a couple of inches higher. Prince Rupert on the northern coast records just under 100 inches. Vancouver's average is 56 inches while at Victoria, 72 miles across the Strait of Georgia, it is 27 inches. Sunshine is about 2,000 hours a year. British Columbia experiences few thunderstorms and few gales, except on the west coast of Vancouver Island. Fog in the lower south-western part of the province is usually confined to a period of about two months in the early winter. About thirty days are foggy and only on some half-dozen nights does it get really thick on land. The fogs do not penetrate into houses as in London. Neither are they soot-laden.

British Columbia's boast of an equable climate, however, received a rude jolt in the winter of 1949–50. As if to confound those who declare the winters are getting milder this last one was the severest in the meteorological records. Twice the mercury touched zero in Vancouver, many new low-temperature records were made in different parts of the province, an unprecedented amount of snow fell, piled up in the Fraser Canyon, severing transcontinental railway communication for more than a week, and generally played havoc with roads and communications all

Photograph by Ronald White

over southern British Columbia. It was phenomenal but not confined to British Columbia, for while the coast shivered the usually iced-up east was basking in balmy temperatures. The head of the Dominion's meteorological service said observers were amazed at the persistence of the abnormal weather pattern; "there had been abnormalities in the flow of atmosphere right around the globe with the most unusual storms located between the centre line of the Pacific and the centre line of the Atlantic, with Canada about in the middle, and British Columbia and Alberta bearing the brunt of it. The recurrence of the unusually long shifts in winter weather two years in succession indicates some systematic control is at work."

This reversal of normal weather conditions has awakened the interest of world scientists and a score of meteorological scientists from Canada, the United States, Britain, Finland, Norway and Switzerland left Montreal for Baffin Land in May (1950), to see if the muskeg wastes on that bleak Arctic Island contain any clue to the change. An examination of the glacial structure there is expected to reveal whether the retreat of glaciers and ice-caps, already observed in Canada, Alaska and Norway, is a world-wide phenomenon, with possible effects on climate and water reserves. Mild weather in eastern North America and sub-zero temperatures in the usually balmy west have puzzled the weather experts, who, on checking records, found a definite trend towards warmer winters had set in as far back as 1870.

British Columbia is fortunate in the large areas of land that require water are so situated as to offer good possibilities for irrigation works of varying magnitude. In some localities the acreage is limited, but has access to water which can be placed on the land at fairly reasonable cost. In other cases the acreage is extensive and would require large-scale expenditure.

In a paper dealing with water resources read at the Second Resources Conference, Col. G. E. Whyte said British Columbia in general had good water supplies for domestic purposes, except in the central interior, where the water tends to be alkaline. As one of the prime necessities of mankind is a source of potable

water, it is most fortunate that the province has suitable sources of supply adjacent to the major population concentrations. For instance, the city of Vancouver and the adjacent metropolitan area are supplied from Capilano and Seymour Creeks and Coquitlam Lake, which provide adequate amounts of water sufficiently pure that it requires little treatment other than possible chlorination.

The sea distances from Vancouver to the world ports are: Antwerp 8,930 miles, Auckland 6,205, Calcutta 8,639, Cape Town 10,527, Halifax (Canada) 6,455, Hong Kong 5,754, Liverpool 8,647, Montreal 7,260, New York 6,089, Panama Canal 4,050, San Francisco 820, Singapore 7,089, Valparaiso 5,950, Yokohama 4,280. The distances between Vancouver and the chief Canadian cities are: Prince Rupert 546 miles, Calgary 642, Edmonton 769, Winnipeg 1,474, Ottawa 2,774, Toronto 2,207, Montreal 2,884, Quebec 2,995, while 3,594 miles separate Halifax on the Atlantic from Vancouver on the Pacific.

Photograph by Ronald White

III

COVETED BY FOUR NATIONS

EARLY in the nineteenth century a great stretch of North America was saved to the British flag by the work and allegiance to Britain of fur-trading explorers. The land lay between the Rocky Mountains and the Pacific coast and from the American border almost to the Arctic Circle, an area of about 360,000 square miles. Eventually it became the Canadian province of British Columbia. Vast in extent though it is, the province could have been immensely larger had the fur companies been a little more far-sighted. They had a footing in what are now the American States of Washington, Oregon and California, and had they maintained that hold and fostered development as they did farther north the boundary line set by the Oregon Treaty of 1846 would have been much farther south than the present line along the 49th parallel and may even have reached into California.

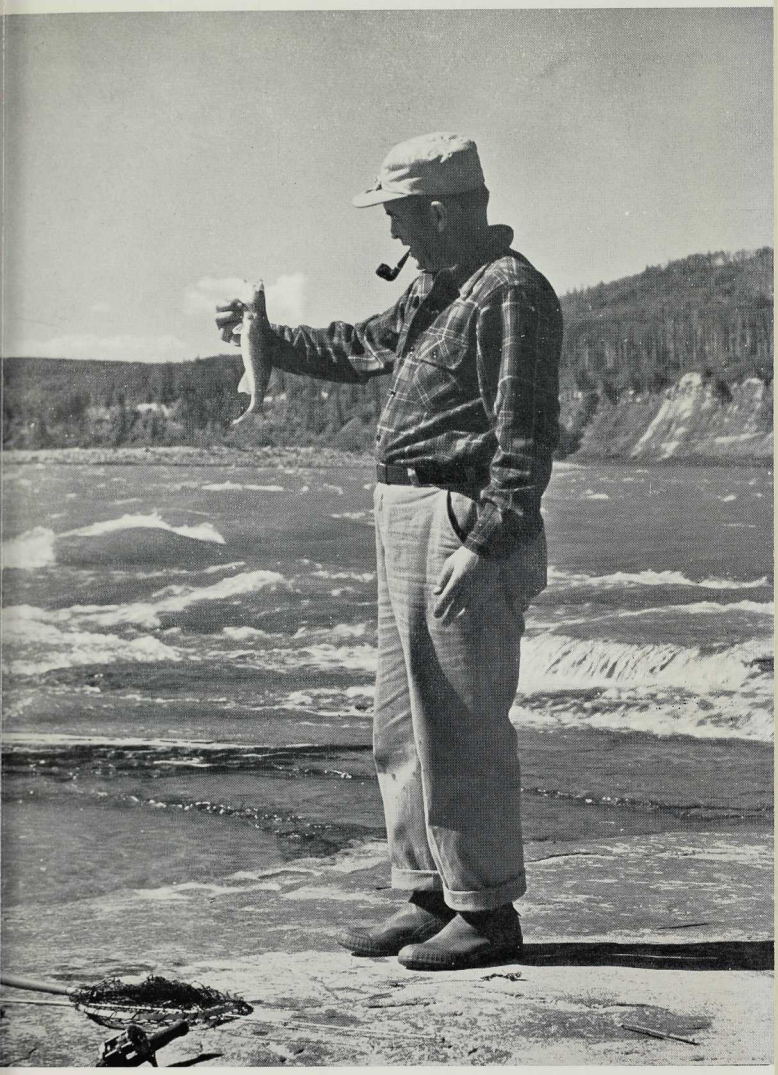
After the exploration and settlement of the Atlantic coastal regions the next rich plum of empire was the Pacific coast. The exploring Spanish sea captains who felt their way northward from California, and the voyage of Captain James Cook to Nootka Sound in 1778, set in motion important empire-making events. Just two hundred years before this Sir Francis Drake had landed at a spot where San Francisco now stands and proclaimed British sovereignty over the North Pacific littoral, but his claim was forgotten, or ignored, when, centuries later, four nations contested sovereignty over the western coastal area of Canada. In any case no attempt at settlement immediately followed Drake's discovery so his claim was not a very substantial one. It was not as absurd as Balboa's, however, who, in 1513, when he crossed the mountains of Panama and sighted the

Pacific, laid claim for Spain not only to the "land on which he stood and the waters which he beheld, but to all the territory washed by those waters for all time, past, present, or to come, without contradiction . . . north and south . . . from the Pole Arctic to the Pole Antarctic."[1] It was the British fur traders who carried out the requirements for possessing discovered land. Spain, nevertheless, did attempt to hold the lands along the northern Pacific coast. Cook's arrival at Nootka was an important step in the extension of the Empire, for through his discoveries and surveys Britain's claim to the lands between California and Alaska had become much stronger than Spain's, whose mariners, although they had named headlands and bays along the coast, had made no landing on the shores of what is now British Columbia. Cook, on the other hand, traded with the natives, who offered skins of bears, wolves, foxes, deer, racoons, polecats, martens and sea otter. That was the beginning of fur trading, the initial step in bringing the north-west coast under British rule.

From the time of Cook's arrival until the signing of the Oregon Treaty no nation's claim to the land had been admitted or recognized. Peter the Great of Russia, Charles the Third of Spain, George the Third of England, President Jefferson and President Polk of the United States all cast covetous eyes on these lands; and little wonder, for here was a country more than four times the area of the United Kingdom, well-timbered and containing incalculable wealth in fur and minerals. Peter sent the daring Danish navigator Vitus Bering exploring into Alaskan waters and down to the Queen Charlotte Islands and the lower part of the coast. A Russian trading company was organized and Spain, assuming a proprietorship over the land because of her early voyages and fearing a further Russian advance southward, sent her ships up from California. However, Bering and the Spaniards did not meet, but years later Peter's successor, Alexander the First, claimed the British Columbian coast for Russia. This was at the time that the British Government became interested in the possibility of an Arctic waterway connecting the Pacific and Atlantic

[1] See *Canada and Its Provinces.*

Photograph by Ronald White



1. An Arctic Trout taken from the waters of the Peace River

Photograph by Ronald White

2. Farming country in the dry belt of the Cariboo

Oceans, and they sent Cook to the north-west Pacific to seek such a passage. He worked north until he was stopped by ice, retreated, and wintered in Hawaii where he was slain by natives. During his sojourn at Nootka, however, he saw the fur trade possibilities and his reports of the wealth to be derived caused many traders to head for the coast. In 1805 the North-West Fur Company, which had been organized in Montreal, crossed the Rockies and established the first trading post on the Pacific side of the mountains. It was soon followed by its rival, The Hudson's Bay Company. One of the most notable of the early voyagers attracted by Cook's reports was Captain John Meares, and it was through him that the dispute with Spain was brought to a head. Meares established a trading post at Nootka in 1788 and the Spaniards seized his property. Britain demanded restitution and an indemnity. Spain at first was inclined to make an issue of the matter, but finding she would not be supported by France in case of war, acceded to the British demands. Captain George Vancouver was sent to confer with the Spanish envoy Don Juan Quadra in 1792. Before meeting Quadra, Vancouver carried out a leisurely but thorough exploration and mapping of the coast and islands. Spain made the final actual surrender of the country March 28, 1795.[1]

Meanwhile Alexander Mackenzie, an employee of the North-West Company, was struggling to make his way overland to the Pacific coast. He was the first man to make the arduous journey and was knighted for his achievement. Mackenzie was a man of great courage, inspiring leadership, and inflexible determination. He needed all these qualities in full measure to control his French-Canadian and half-breed followers, and in being the first man to cross the continent north of Mexico he met a challenge which he always faced when he looked at empty places on the map. The story of his journeyings is one of the early Canadian epic tales and one of the best accounts of this trader-explorer's life was written by Hume Wrong, assistant professor of history at the University of Toronto, for a series on Canadian Men of Action edited by

[1] See *Early History of British Columbia*, by B. A. McKelvie.

W. Stewart Wallace. Mackenzie joined the North-West Company at a time when Americans had a monopoly of the fur trade on the Pacific coast, and there was impatience, both in London and Montreal, because the Hudson's Bay Company was not offering strong enough competition to the Americans. When Mackenzie pushed his way through the mountains and down to the coast he was greatly impressed with the possibilities of trade and wanted a chain of posts established west of the Rockies: he wanted trading stations right across Canada, from Montreal to Nootka, "which would open and establish a commercial communication between the Atlantic and Pacific Oceans, to the great advantage and furtherance of the Pacific fishery of America and the fur trade of Great Britain, and in part indirectly through the channel of the possessions and factories of the East India Company in China." Thus the Stornoway boy, reared in a life of hardship, showed himself a man of empirical vision by the time he was thirty; he had earned his place among the great explorers of history, an achievement permanently recorded on a rock on the shores of the Pacific which Mackenzie himself painted, while hostile Indians watched him with curiosity: "Alexander Mackenzie, from Canada, by land, the twenty-second of July, one thousand seven hundred and ninety-three."

The North-West Company had been spurred to establish themselves west of the Rockies by news that President Jefferson had told the United States Congress, in secret session, of his plan to annex all the territory west of the Rockies to the United States. American explorers and traders were already in the country and the fur company feared they would soon complete their hold on the region. So when Jefferson fostered John Jacob Astor's Pacific Fur Company, which in 1810 planned to establish a post on the Columbia River and thus acquire that territory for the United States, the North-West Company instructed David Thompson, a young Scottish explorer, to hasten to the mouth of the Columbia and establish a fort there to forestall the Astorians. He was one of the most indomitable and courageous of the early travellers, and with Mackenzie and Simon Fraser was in the forefront in the

Photograph by Ronald White

battle for trade and territory. In his race to the Columbia, Thompson met great dangers and difficulties, including desertion by his men, and he arrived at the mouth of the river just too late. The Americans were established and wide lands that now constitute the states of Washington and Oregon were lost to the British flag.

The North-West Company and the Hudson's Bay Company were merged under the latter's name in 1821 and George Simpson became the head of the company's affairs in America. Another young Scot, James Douglas, joined the company about this time and was sent to the Pacific coast. Because he achieved more than any other man in bringing about settlement of the country and the establishment of orderly government he has gone down in the history books as "The Father of British Columbia," while his memory is perpetuated in the naming of many parks, buildings, streets and communities.

In 1824 the Hudson's Bay Company, which was working in closer co-operation with the British Government, planned expansion in the north, a project designed to bring about a settlement with Russia, and an agreement limiting Russia's southern operations was reached without difficulty.

There remained the question of the boundary between the United States and British Columbia, and there was heated bickering before the Oregon Treaty of 1846 established the border as it is to-day—along the 49th parallel as far eastward as the Lake-of-the-Woods. The Hudson's Bay Company, anticipating the loss of their post on the Columbia River in the border negotiations, had already established a fort at Victoria on Vancouver Island. Public feeling had been aroused and the platform on which J. K. Polk was elected President of the United States in 1844 included a claim for the whole of Oregon, the name then given to all the land from California to Alaska. That would have meant putting the whole of British Columbia, discovered, explored and peopled by British fur traders, inside the American border and cutting the British in Canada off from the sea on the west. An election cry "Fifty-four forty or fight" swept the nation (54.40 is the southern tip of Alaska). Blusterings by both British and

Americans eventually gave way to reasoned negotiations, and when Britain renewed an earlier proposal of the 49th parallel it was immediately accepted, apparently with great relief on both sides. Incidentally the discovery of coal near Nanaimo on Vancouver Island remained unrevealed until after the treaty was signed. Coal, of course, was a mineral of the highest value in those days and had the Americans known of the great deposit on the island the boundary agreement might not have been so easy.

The Oregon Treaty marked the beginning of real settlement on the west coast. Vancouver Island was created a Crown Colony and Richard Blanshard, a barrister, was sent out by Earl Grey as governor. The Hudson's Bay Company, however, was still the chief power in the land and the intrusion of a governor from England was not welcomed. Blanshard, on his arrival in H.M.S. *Driver*, was placed in a humiliating position. He found no residence had been provided for him, he had no office quarters, no staff, no salary, and practically no one over whom he could exercise authority. He found only fifteen white people who were not in the employ of the fur company. The rest considered themselves responsible only to the company. To climax his unhappy state Blanshard received little sympathy with his difficulties from the Colonial Office. So, as his position was untenable and he was several thousand pounds out of pocket he resigned within a year, and James Douglas, by that time chief factor of the fur company, was appointed in Blanshard's place.[1]

But Blanshard's period of office, which was little more than a symbol of the fact that Britain's dominion over the Pacific coast had been established, was marked by one historic occasion. On March 11, 1850, Blanshard, midst disillusionment and in dreary weather, read the document setting up responsible government in the new colony.

In 1856 a legislative assembly of seven members was granted. Two years later gold was discovered on the Fraser River and thirty thousand adventurous gold-seekers from England, Australia and California swarmed to the mainland. Communities sprang up

[1] See *The Makers of Canada*, Parkman edition.

Photograph by Ronald White

and in August 1858 the mainland became the colony of British Columbia, with Douglas at the head. Thus the young fur clerk of the 1820's became ruler of two colonies, and resigned his post in the company. Organization on the mainland was rapid. Officials were sent out from England; the Royal Engineers spent many years in the colony doing much survey work and road building, including the tremendously difficult undertaking of putting a road through the Fraser Canyon. New Westminster became the capital and gold started to flow down from the rich Cariboo creeks. By 1864 there were 7,500 whites on Vancouver Island, more on the mainland, and 4,000 Chinese in the two colonies.

By this time official opinion in England about the worth of the new colonies had become a little more realistic. Twenty years previously, even just before the signing of the Oregon Treaty, there were men in power who were not impressed with the potentialities of the new lands. In 1842 the Chancellor of the Exchequer, speaking in the House of Commons, said: "These territories (British Columbia) are bounded by frost and banked by fog, and woe betide any unfortunate individual who might be so far diverted from the path of prudence as to settle in these parts." It is interesting to compare such a depressing viewpoint with the glowing official eulogies of British Columbia, its climate, its products, and its prospects a century later. Men on the scene, such as Rev. R. C. Lundin Brown who went to British Columbia in 1863, were so impressed with the glowing agricultural prospects that they could not refrain from twitting the chancellor. Ninety years ago when Mr. Brown was viewing the valleys and tablelands of the mainland there was no science of husbandry as practised to-day, yet he forecast abundant fruit-growing regions, a prophecy that has been richly fulfilled. It is pleasant to think that doubtless the unfortunate chancellor's descendants have often relished the luscious products from "the frost-bounded and fog-banked" valleys along the Pacific coast.

In 1866 Vancouver Island and British Columbia united, with Victoria as the capital, and as eastern Canada moved towards confederation an agitation for similar status was started on the

coast. Frederick Seymour, Governor of British Honduras, succeeded Douglas as governor of the united colonies, and for the last three years before his death in 1869 fought vigorously against confederation with Canada. Opposition to the move weakened with his death. In November 1870, a few months after the terms of Confederation had reached Victoria, a Legislative Council to deal with union was elected from eight districts. The council ratified the terms in January 1871. Then an Act was passed abolishing the council and establishing a legislative assembly. On March 28th resolutions for admission of British Columbia were moved in the Canadian House of Commons and adopted after four days' debate. On July 20, 1871, British Columbia entered Confederation.

The Hudson's Bay Company had ceded its territory and James Musgrave, Seymour's successor as governor, guided the province into the Dominion, though not before Dr. J. S. Helmcken of Victoria made one last fight[1] and issued a warning couched in the following terms:

> No union between this colony and Canada can permanently exist unless it be to the material and pecuniary advantage of this colony to remain in the union. The sum of the interests of the inhabitants is the interest of the colony. The people of this colony have, generally speaking, no love for Canada; they care, as a rule, little or nothing about the creation of another empire, kingdom or republic; they have but little sentimentality, and care little about the distinctions between the form of Government of Canada and the U.S.
>
> Therefore no union on account of love need be looked for. The only bond of union outside of force—and force the dominion has not—will be the material advantages of the country and the pecuniary benefit of the inhabitants. Love for Canada has to be acquired by the prosperity of the country, and from our children.

That was the attitude of those who wanted British Columbia to remain a Crown Colony.

[1] See *British Columbia and the United States*, by F. W. Howay, W. N. Sage and H. F. Angus.

Photograph by Ronald White

One of the terms of the union, proposed by the Dominion Government, was the completion of the transcontinental railway to the Pacific coast, but because of delay in carrying out this obligation British Columbia was very close to repudiating the Confederation agreement. Construction of the railway was to begin within two years and completed in ten, but Sir John A. Macdonald's government, which was doing the bulk of the financing, was defeated in 1872 and the succeeding Liberal Government abandoned this part of the union agreement as being impossible of fulfilment. Only the powerful influence of Lord Dufferin, then Governor-General, in 1876 prevented the secession of British Columbia. Macdonald returned to power in 1878 and immediately set the railway project in motion again, this time through a syndicate of private capitalists. The railway was completed and Sir Donald Smith, later Lord Strathcona, drove the last spike on November 6, 1885. By the next year the Canadian Pacific Railway had linked British Columbia with the rest of Canada and settlers began to flock to the coast from Ontario, the Maritimes and England. Miners, lumbermen, fishermen, ranchers and farmers laid the foundations more than half a century ago of what to-day is one of the most prosperous provinces in the Dominion. But for one lengthy period its fate was in the balance and only the steadfast loyalty of the earliest adventurers and the wisdom and devotion of later administrators kept this great section of the continent under the British flag.

C. H. Lugrin in an article on the fur trade in *Canada and Its Provinces* uses an arresting illustration of the retention of the British Columbia coast to British authority. The article concludes: "As the years have passed, the fur trade has lost nearly all the features which made it so alluring to adventurous sailors and enterprising merchants. We no longer hear of ships laden with priceless cargoes of sea otter pelts; the fascinating tales of the sealing ventures will never be renewed; but it must be remembered that the fur traders won and maintained for the British flag a place on the north-west coast. From Cape Horn in South America to Singapore on the Malay Peninsula, is a long coastline,

broken only a few miles by Bering Strait. It extends across, approximately, 180 degrees of latitude, or more than 12,000 miles. Along this great distance, equal to one-half the circumference of the globe, or, if the sinuosities of the coastline were measured, probably equal to the entire circumference, the only part, with the exception of Hong Kong and Wei-hai-wei, over which the Union Jack flies is that embraced in the less than 6 degrees of British Columbia coastline which the fur traders claimed and held for Britain. When we reflect upon what the possession of this coast has meant to Canada, when we endeavour to grasp the potential development of commerce on the Pacific, and when we try to pierce the future and contemplate what a globe-encircling empire may mean to the British people and to the world at large, we are able to form some conception of the value of the services of Meares, Mackenzie and their successors in the fur trade. The record of their deeds is an honourable one. It is one of the few stories of the supplanting of an aboriginal race by a civilized people that can be read without a blush. Justice, equity, fair dealing have marked it no less than daring, energy and splendid manliness. In the long record of British achievement there is no chapter which reflects more credit upon the race."

In 1872 Alexander Caulfield Anderson, a high official of the Hudson's Bay Company who was particularly well-informed of the economic capabilities of the province, wrote: "To sum up the qualifications of British Columbia as a field for settlement, I may succinctly state that, though it may never become a large exporter of cereal products, it possesses within itself all the requisites for success; and the power to support, in connection with its varied industries and external relations, a population of at least several millions in ease, happiness and comparative affluence." This observation is still pertinent and as British Columbia enters a period of industrial expansion economists and public men repeatedly stress the conviction that millions of additional population could be supported west of the Great Lakes, and particularly in British Columbia where vast resources of water

Photograph by Ronald White

power wait to be harnessed for the development of industry and millions of acres of land wait to give up their riches.

Until well into the present century the history of Canada was divided into five phases. The first was the French period, 1534–1760; the second, early British rule, 1713–1814; the third, exploration and settlement of the great west, 1610–1867; the fourth, the struggle for responsible government, 1815–1860; and the fifth, confederation and expansion, 1861–1908.[1] The third phase, the opening of the western country, was a saga of unflinching courage, vision and perseverance, culminating in the advance to the Pacific Ocean. The settlement of the great western coast country is by no means complete. Many rich areas are beckoning the modern pioneer. Historians may judge that Canada has entered upon a sixth stage of her development, the post-1939 era in which the Dominion assumed a new and greater importance in international politics, trade and security. The Second World War exposed great unknown assets not only in eastern Canada but specifically in British Columbia, and 1945 saw plans made by industrialists and government to exploit the newly-won position, build a greater British Columbia, and justify the faith of the traders of a century ago and of the men of vision who followed them.

[1] See *Makers of Canada*, edited by Laurence J. Burpee, F.R.G.S., and Arthur G. Doughty, former Dominion archivist.

IV

GOVERNMENT AND POPULATION

AFTER the unhappy Richard Blanshard had proclaimed responsible government in 1850, development of administrative processes as we know them to-day was tardy. There had been trouble with the Indians, particularly in the early days of fur trading when ships were attacked and their crews massacred, and later with outbreaks of violence in the gold rush districts. The Colonial Office appointed fourteen officials of the Hudson's Bay Company to be justices of the peace, and these men were largely responsible for bringing the native Indians into the realm of established order.

When the British Columbia Legislature met early in 1950 the centenary of responsible government was duly noted, and was marked by two felicitous events. The first was the election of Mrs. Nancy Hodges as Speaker, the first woman to preside over a parliamentary assembly in the history of the British Commonwealth. The second was the welcome given the first full-blooded Indian to be elected to the Legislature. The franchise had been given native Indians only a few months previously, at the general election in June 1949, and one of their number, Frank Calder, was elected in Atlin, northern British Columbia. Two chiefs, in full tribal regalia, appeared at the bar of the House to thank the Legislature for giving the right to vote. But the status of the Indian is still an anachronism and Mr. Calder finds himself in an anomalous position. As an elected representative he enjoys all the privileges of a member of the Legislature as long as he is within the confines of the Parliament Buildings, but as soon as he goes outside he becomes an Indian again, a ward of the federal government, which means that he cannot purchase alcoholic spirits, is not eligible for the old age pension, and is placed in a special

Photograph by Ronald White

category under various social welfare measures. Nevertheless it is a long advance since the native sons were contesting the incursion of the white man.

Blanshard, on returning to England, left the colony in charge of an executive council of three, one of whom was James Douglas, who succeeded to the governorship. After Confederation the Hon. J. F. McCreight headed the first government and a Legislative Assembly of twenty-five members. The towns of New Westminster, Hope and Yale had sprung up in the wake of the gold rush: Victoria, on the island, had become a bustling city. Douglas had followed the sound British practice of encouraging municipal government and by 1860, eleven years before confederation, New Westminster had its own civic administration, followed two years later by Victoria. Vancouver did not have a council until 1886 and ten years later there were still only eight organized municipalities on the mainland. Now the province has one hundred, thirty-six of them being cities. Naturally municipal government developed slowly because of the widely-separated areas. This geographical disadvantage produced an unusual form of administration—government agents. Administrative authority was vested in them and sometimes they handled business which in more settled areas would have occupied a dozen different government departments. The system continues in a minor form because there are still settlements far removed from governmental centres.

The twenty-five members of the first legislature came from twelve districts, elected for four-year terms.[1] For federal purposes the province was divided into five electoral districts to send six representatives to the Dominion House of Commons. The province was also entitled to three seats in the Senate. The growth of the province has forced several redistributions, both provincially and federally. There are now forty-eight members of the Legislature. Vancouver has six members and Victoria four, the other thirty-seven ridings being single-member constituencies. British Columbia's representation in the Dominion House has been increased to sixteen, and will be eighteen when the latest federal

[1] See *Canada and its Provinces*, and Parkman's *Makers of Canada*.

redistribution becomes effective. The province has one federal cabinet portfolio and six seats in the Senate.

The constitution of British Columbia and source of power of the provincial government is the British North America Act of 1867. Under its terms the province has wide powers of self-government. Disputes over powers under the British North America Act have hitherto been settled by appeals to the Privy Council in London, but this procedure was ended by federal legislation in 1948, the Supreme Court of Canada becoming the final court of appeal. In 1949 the British Parliament was asked to grant Canada the right to amend the British North America Act in respect to federal matters. Royal assent was given to this measure late in the year. As far as Westminster was concerned this was a welcome change as for many years the Imperial Parliament's function had been little more than to act as rubber stamp whenever Canada requested constitutional changes. In the Dominion, however, the situation was more complicated. The provinces are jealous of their rights under the British North America Act, and the disposition of these rights does not yet rest with the Dominion Government. So far only federal rights are involved. Prime Minister St. Laurent called another Dominion–Provincial conference in 1950 in another attempt to iron out relationship between the governments of the country. There are many obstacles to a full agreement. For instance, British Columbia is one of the seven provinces that turned over its income tax field to the Dominion Government on a "rental" basis. The amount of rental is calculated from population and production figures at the time of the agreement. Now British Columbia is dissatisfied because expansion and continued prosperity in the coast province has made the deal much more profitable to the federal treasury than was anticipated, or would have been countenanced. Now British Columbia wants an upward revision of the "rental." The province was one of the first to use income tax as a source of revenue, and relied heavily upon it. Consequently the entry of the Dominion Government into the field of income taxation in the first world war was regarded with concern as it

Photograph by Ronald White

limited the value of a revenue field which the province considered its own. Eventually it became clear that what Ottawa proclaimed as a temporary war measure was to be a permanent fixture. Dual occupation of the field was carried on until the second world war when, as a war measure, British Columbia temporarily surrendered her income taxation to facilitate freedom of federal fiscal policy, and received compensatory payments in return. That agreement expired in 1947 and new conferences were held with a view to continuing some form of single income taxation policy. Eventually the province agreed to lease to the Dominion for a period not exceeding five years from April 1, 1947, the exclusive rights to the fields of income, corporation income and corporation taxation, and succession duties. For these rights the Dominion is required to pay the province a minimum rental as follows: $12·75 per capita on the 1942 population, estimated at 870,000 ($11,092,500); 50 per cent of the provincial income and corporation tax revenue for 1941 ($6,024,184); statutory subsidies payable in 1947 ($1,003,440), a total of $18,120,124. In practice payment varies upward from the minimum because of increases in provincial population and gross national production. Both these have risen to a greater extent than was anticipated and the net rental fee for the fiscal year 1949–50 was $24,202,106. Meanwhile, Dominion tax collections have increased heavily and the bargain grows much more profitable for Ottawa and much less profitable for the provincial government. Hence the desire for a revision.

Mines, unworked Crown-granted mineral claims, trust and loan companies, public utility corporations, telegraph and express companies, banks and railways are subject to special taxation. Rural taxation is split into two divisions, the general taxation on lands, and the taxes for rural schools.

In the general taxation structure there are amusement taxes of 25 per cent on entertainments, dances, horse races (plus a 12 per cent pari-mutuel tax), boxing and wrestling, and 5 per cent on miscellaneous events where there is no private gain. Gasoline for motor vehicles carries a 10 per cent tax, fuel for domestic heating or industrial purposes is taxed half a cent a gallon. Since 1948 the

government has imposed a social security and municipal aid tax, commonly known as the sales tax. Three per cent is collected on "all sales of tangible personal property at retail for consumption or use and upon taxable property brought into the province for consumption or use." This means that the majority of everyday articles, excepting such things as food and medicines, is taxed, from the fifteen cent popular magazine to luxury goods. The first year's revenue from this source was twenty-four million dollars, just double the estimate when the tax was imposed. Two other provinces, Quebec and Saskatchewan, impose a similar tax, as do twenty-seven of the American states. Of the proceeds of this tax two-thirds are set aside for social security purposes and one-third for grants to municipalities. The latter is expected to ease the burden on real property to meet increasing education costs. Other sources of government revenue are licences, fees, royalties, trading profits—the liquor board, for instance, which shows a surplus of sixteen million dollars. Twenty-four per cent of the government's revenue comes from the Dominion Government in some form; more than 23 per cent from taxation; nearly 25 per cent from liquor; 11 per cent from motor vehicle and other licences and fees; 14 per cent from lands, forests, etc., and miscellaneous sources make up the balance. Expenditures are grouped under four general headings: debt services 17·52 per cent; social service 43·62 per cent; productive services 22·81 per cent; and general services, such as cost of government and aids to municipalities, 16·05 per cent. The annual budget now exceeds one hundred million dollars, a fivefold increase in twenty years.

The King is represented by a lieutenant-governor appointed by the governor-general-in-council, and governs with the advice and assistance of his ministry, or executive council, which is responsible to the provincial legislature. There is no second chamber. Under Section 92 of the British North America Act the Legislature may exclusively make laws in relation to: Amendment of the constitution of the province except in regard to the lieutenant-governor; direct taxation within the province; borrowing money on the credit of the province; establishment of

Photograph by Ronald White

provincial officials; management and sale of provincial public lands and timber thereon; establishment, maintenance and management of prisons, hospitals, asylums, charities and eleemosynary institutions in and for the province other than marine hospitals, municipal institutions; trading licences for raising provincial or municipal revenue; local works and undertakings other than interprovincial or international lines of ships, railways, canals, telegraphs, etc., or works which, though wholly within the province, are declared by the Dominion Parliament to be for the general advantage of Canada, or of two or more provinces; incorporation of companies with provincial objects; solemnization of marriage; property and civil rights in the province; administration of justice in the province, including the constitution, maintenance and organization of provincial courts, both civil and criminal jurisdiction, and including procedure in these courts; imposition of punishment by fine, penalty or imprisonment; and generally all matters of a purely local nature.

The province may make laws in relation to education, but subject to stipulated provision with respect to denominational schools which any class of persons had by law in the province at the time of union, so as to preserve to a religious minority the same rights and privileges in regard to education which it had at the date of Confederation. It may also make laws affecting agriculture and immigration if not inconsistent with federal legislation.

It is clear, therefore, that British Columbia has a wide measure of self-government. The authority of the federal government does, of course, reach into every province to a considerable degree and there have been frequent appeals to the Privy Council, and from its rulings there has emerged a clear outline of the relative authority of the provincial and federal governments.

The early governments of British Columbia professed no political affiliations. Legislators were elected because of their prominence, interest in public welfare, or their personal popularity. It was not until 1903, when Richard McBride became premier, that he proclaimed his government Conservative in

politics. For thirteen years the Conservatives were in power, followed by twelve years of Liberal regime. Simon Fraser Tolmie headed the return of the Conservatives in 1928, Liberals under T. D. Pattullo won in 1933 and were in office until 1941 when a coalition government of Conservatives and Liberals was headed by John Hart, a Liberal. It continued as a coalition after the war, but Mr. Hart resigned in 1948 and Byron I. Johnson succeeded him as premier with Herbert Anscomb, leader of the Conservative Party, as Minister of Finance and Vice-Premier. For twenty-one years Mr. Hart had been Minister of Finance and for six of those years he had been Premier as well.[1] Since 1933 there has been a third party in the Legislature, the Socialist Co-operative Commonwealth Federation, generally given the shorter label C. C. F. There had previously been individual Socialist candidates. but in 1933 they emerged as an organized political party under the leadership of Mr. Harold E. Winch. They won seven seats, doubled their representation in 1941, were reduced to 11 in 1945, and to 6 in the 1949 vote, when the Coalition Government under Mr. Johnson was returned with 41 seats out of 48. In this election native Indians and Canadian-Chinese voted for the first time, having been given the franchise by the Legislature in 1947.

Municipal institutions in Canada are under the jurisdiction of the provincial governments. They are instruments of local self-government, elected by local inhabitants. The province has much rugged terrain. Vast areas of the north and central parts are sparsely settled. Eighty per cent of the population is concentrated in the south-western part of the province. More than 60 per cent of the people live in Vancouver, Victoria and their adjacent suburbs. Municipal organization therefore is largely conditioned by geography and topography and, because of this high concentration in one area, only one-half of 1 per cent of the land area is under municipal organization.

As mentioned the first councils were formed at New Westminster and then Victoria. Since then areas have grown steadily

[1] See *Canadian Parliamentary Guide* for members of legislatures and election results.

Photograph by Ronald White

3. Mrs. Nancy Hodges, Speaker of the First Session of the Twenty-Second Legislature of British Columbia, 1950

Photograph by Ronald White

4. The Parliament Buildings, Victoria

by settlement and now there are 36 cities, 28 municipal districts, and 35 villages, all running their own affairs. The physical features of the province also have some effect on the conditions of municipal incorporation not found elsewhere. A city or town requires a population of 100 adult British males in an area not exceeding 2,000 acres, while a district or township municipality requires 30 adult British males in an area not limited by the Act. A city in British Columbia is, therefore, not necessarily an area of big population or of major economic importance. In fact some villages have a greater population than some of the cities. Only 5 cities and 5 districts have more than 10,000 people, while 18 cities and 11 districts still have a population of less than 3,000. Small units thus remain an outstanding feature of the municipal system.

Mr. H. Carl Goldenberg, who investigated provincial-municipal relations in 1947, expressed the opinion that the small municipal units have failed to keep up with present day economic and social realities, and are not appropriate for the performance of important governmental functions. He recommended that changes in the conditions of incorporation be made to meet modern requirements, that no locality should become a city unless it had a population of 4,000, that an urban area with a population between 1,500 and 4,000 should become a town, and that an area with less than 1,500 should be a village.[1] These points are important because the government accepted the chief recommendations, and although all the changes have not yet been implemented Mr. Goldenberg's report gives the broad picture of what will eventually be the relationship between municipal and provincial governments.

Substantial grants are made to the municipalities from the provincial treasury to meet expenditure for functions that are the joint responsibility of the provincial and municipal governments, such as education, social and health services. Prior to 1933 the government made annual grants to the municipalities representing a share of certain revenues, including liquor profits and taxes on

[1] See Goldenberg report, 1947.

horserace betting. This division was ended, but the government has increased its share of the cost of education and social and health services.

Victoria, on Vancouver Island, some 70 miles from the mainland, is the capital of the province. It is a charming, non-bustling city, peopled largely by English families. Its Parliament Buildings, an imposing mass of grey stone with acres of lawn and flower beds in front, is a delightful sight for the visitor as the incoming steamer turns into the inner harbour. Although almost all the government's business has to do with the mainland, rarely is it suggested that the capital should be moved to Vancouver, a city of more than half a million people and the hub of all the province's business activity. While the government departments are in the Parliament Buildings it is necessary for most of them to have offices and staffs in Vancouver. This adds to the cost of administration, but apparently the people of British Columbia are well content to have it so.

There is unusual significance in the province's coat of arms. It is designed to express heraldically and appropriately the peculiar position of British Columbia with regard to the British Commonwealth. The features emphasized are: first, unity with the British nation, both by descent and government; second, its extreme western geographical position; third, its maritime strength; fourth, its assured permanence and glory; fifth, its local fauna. These objects are attained in this way: first, the field is covered by the Union Jack, the grand standard and national emblem; second, upon a chief is defined the setting sun; third, this charge is placed upon a field, barry undy, which heraldically symbolizes the sea; fourth, the motto, "Splendor Sine Occasu," which has been adopted by no other state or individual, refers to the sun, which, though apparently setting, never decreases, and to the Empire which has a glory or radiance encircling the world; fifth, the supporters, a wapiti stag and big horn, are the most noble creatures of the province, and typify dignity and strength. These two animals have another significance inasmuch as they represent the unity of the mainland and Vancouver Island, the wapiti being

Photograph by Ronald White

confined to the island and the big horn to the mountain ranges of the mainland.

When British Columbia joined Confederation it had a population of 36,247. Each succeeding year has seen a steady increase, the total being roughly doubled every ten years. The Dominion counts heads decennially and the 1941 census gave British Columbia a total of 817,861. Since then a heavy wartime and post-war influx has raised the figure to an estimated 1,200,000. Some of this gain has been made at the expense of the Prairie Provinces, chiefly Saskatchewan. Sixty thousand war workers went to Vancouver between 1941 and 1945 and the majority of them remained on the coast at the conclusion of hostilities. Old Country brides and families of war veterans, plus a steady immigration, has swelled the total. More recently selected D.P.s—Displaced Persons from Europe—have been admitted, but only as they could be absorbed in the labour or business field. Greater Vancouver, with a population exceeding half a million, has been the third city in Canada since 1937, topped only by Montreal and Toronto.

The editors of *Canada and Its Provinces*, published in 1914, had this to say of British Columbia:

> In many respects British Columbia has been the most progressive of the provinces of the Dominion. Though the most westerly province, for so many years practically isolated from the rest of Canada and slow and difficult to develop physically, the various administrations have kept well abreast of the times. In legislation pertaining to municipal affairs, to agricultural development—particularly in respect of methods in the fruit-growing industry—to mining, to forestry, to educational institutions, to the fisheries, to water conservation, to the regulation of the liquor traffic, to the care of the sick, aged, and indigent, to the inspection of public utilities, to the system of penology, and to the treatment of the mentally weak, it is doubtful if any other part of the Empire has, taking all things together, made equal advancement.

That the province has been fully as progressive since 1914 as it was in the earlier years is shown in the various chapters of this book.

V

THE BRITISH STRAIN IS DOMINANT

WHEN British Columbia entered Confederation in 1871 she added 36,247 citizens to Canada, of whom approximately ten thousand were white and the remainder Indian and Chinese. Now the population is nearly one million and a quarter, a virile, mixed population but with the British strain strongly predominant. The fertile interior valleys and Vancouver Island, particularly Victoria and Duncan, are reminiscent of scenes, ways and manners of the Old Country. In Victoria the policemen are still Bobbies and until a year ago still wore helmets. This headgear has been replaced by the peaked cap customary with all police forces on the North American continent. A few men whose beat is in the vicinity of the docks and the hotels are still helmeted to satisfy the expectations of the tourists. Victoria is still the most English city in Canada and takes a dignified pride in that fact; it frowns at the blatancy of the other English cities of Vancouver and Toronto; and reluctantly accepts the trends of modernization and progress that are breaching the walls of quietness and reserve. But everyone loves Victoria, probably because it is different. It is an antidote to the buoyant exuberance of the rest of the west.

Over on the mainland, in the bustling metropolis of Vancouver, the Old Country characteristics are not so obvious because of the size of the population and the racial mixture. Nevertheless, affiliations with, and affection for Britain and things British are deep and strong, as was exemplified in countless ways during the war years and Britain's difficult post-war period. This influence was strengthened by the arrival of thousands of British war brides of British Columbia service men and it was a noteworthy fact that less than one per cent returned to England and of these those

Photograph by Ronald White

who were dissatisfied with things as they found them could be counted on the fingers. They had a difficult time of readjustment because they arrived at the height of a grave housing shortage, but most of them are happily and contentedly settled now.

Canadians of English birth retain their interest in English affairs. Arguments about English politics or sports are as common on the street corners of Vancouver, over the coffee counter or in the beer parlour as in London, although the verbal contestants may have lived in British Columbia for thirty years. A huge volume of English periodicals comes weekly and the travel backwards and forwards is steady, even excluding business trips. Except for the accent of speech there is little distinction between the native Canadian and the citizen from the United Kingdom. Their ideals are the same, they think along the same lines, soundly and dispassionately from a fund of knowledge, they love the same sports and the out-of-doors. The first white settlers of British Columbia were mainly British stock and the heritage they brought has endured through the years and been given new life by Britons who arrived later. The pride, self-assurance, enterprise, and skill of the Canadian are matched by the ready initiative, experience, and thoroughness of the Britisher. Assimilation—if there can be assimilation between citizens so closely akin—is natural, easy, and quick. All the fine qualities are moulded into a sturdy and vigorous race found at its best in British Columbia where so much remains to be done and so many enterprising men of ability and vision are ready to do it.

Beside the Old Country influence British Columbians, in common with other westerners—certainly Albertans—have another characteristic that the easterner, for instance, notices immediately. It is a lightheartedness and a candour, particularly in the lack of respect for irksome conventions, that is infectious. British Columbians have a keen sense of values in people, affairs, and events, a faculty for putting things in their proper place, of putting first things first, and flicking away the mask from any man or problem; they like to learn the full value of a man quickly and to get at the root of a problem quickly; they are impatient of

the longer processes even though they might be more reliable. That is all part of the vigorous Western spirit. It is not easy to define the so-called Western spirit. To say it is the antithesis of sedateness and decorum probably comes as close as anything; it comes naturally, it cannot be assumed. The Easterner glimpses this as he rides through the prairies to the coast, and when the Westerner is in the conference halls of the East he will call a spade a spade and expects other people to do the same. The mixture of hospitality and informality on the coast has surprised many travellers, but the friendship and easy contacts have made countless friends for the province.

The British Columbian, however, is not solely occupied in leg-pulling at the expense of the ponderous and pontifical officialdom of the East; nor is he spending most of his time in bubbling good humour. As this book will show he is very heavily engaged in business and big industry, pretty nearly as big as the East, that he is in the forefront in the development of culture and the arts, and that he has a well-rounded and full life. He chuckled not long ago when an Eastern publishing executive after a tour of the West was compelled to confess to a surprised Eastern intelligentsia that British Columbia probably leads the whole Dominion in serious reading, its thoughts and its book knowledge; that instead of *Victoria Regina* being mistaken for a racehorse, as he was warned would be the case before he left Toronto, he found the book widely read and discussed in British Columbia; that seven copies of *The Seven Pillars of Wisdom* were found in one village; and that everywhere were circles for the discussion of literary matters. All the bantering between the East and West, however, is in the spirit of fun; underneath all are Canadians.

Vancouver is a fascinating and beautiful city, a polyglot seaport with turbaned Sikhs, shuffling Chinese, sturdy Japanese (slowly returning to the coast after being taken inland during the war), native Indians, Finns, Norwegians, Swedes, French, Germans, Russians—a score of alien nationalities have their flourishing little communities. It is one of the beautiful cities, profuse with

Photograph by Ronald White

grassed parks and horticultural displays. Every house has its attractive and well-kept gardens; the houses are distinctive, built and landscaped according to taste. Rarely does one see a row of houses of the same design. Thus no street, except the poorest slum, looks drab. There is a slum area, but it is small compared with most cities and its size is being steadily reduced.

The approach to the city from the sea is an unforgettable treat. Coming in from the Strait of Georgia the ship gradually closes in towards the Coast Range of mountains that come down to the shore across the harbour. Rising in the centre are twin peaks of seven thousand feet, resembling two couchant lions. They look down at the spot where the waterway narrows to a bottleneck entrance to the harbour. The port entrance is called Lions' Gate, the narrows being spanned by a bridge connecting with the suburbs of North and West Vancouver. A sharp peninsula juts out from the southern shore to form the narrows and on this peninsula is the famous Stanley Park, one thousand acres of majestic natural beauty, circled by a motor drive and criss-crossed by bridle paths and walking trails. The Brockton Point cricket and rugby fields are in the park. Beyond the narrows the great harbour opens up, a land-locked area of 48 square miles providing the safest anchorage in the world. Approaching from the sea, only the university buildings and lands and the residential area on both shores can be seen because the business and industrial districts are hidden behind the thick stand of towering fir trees in Stanley Park, but once in the harbour the traveller suddenly sees a skyline of two hundred million dollars worth of business building, industrial plants, and shipping facilities.

On the evening of June 28, 1886, a train steamed out of the Canadian Pacific Railway station at Montreal bound for the Pacific coast, and five and a half days later with its engine bell clanging it pulled into Port Moody, on the outskirts of Vancouver. That was not only an important event in Canadian history but an epochal year in the story of Vancouver, for on April 6th Vancouver had been incorporated as a city, only to be destroyed by fire two months later, June 13th, a few days before the first train left

Montreal. It was actually a year later before the first train reached Vancouver. The opening of the transportation link across Canada was the signal for a steady influx of settlers from Eastern Canada, notably Ontario and the Maritime provinces. They were sturdy folk and took with them skills and qualities that enriched the standards in the new young province. They were attracted to the Pacific coast by the same lure that drew hundreds of thousands in later years—chance for initiative in a new land that had an equable climate, a life that could be spent in the open winning a living in part or wholly from the soil. Vancouver's area is big—45 square miles—bigger than Toronto and a little smaller than Montreal. Nearly a quarter of a million of the population of Greater Vancouver live in the suburbs that sprawl in every direction. Even industrial workers can live in the outskirts where they have a piece of land to cultivate.

British Columbia is a province of home-ownership and this fact contributes another characteristic. A sense of security and stability, a feeling of independence which in time is reflected in the thinking, comes from land ownership and the many hours spent outdoors, either in recreation or work. Thousands of fishermen along the coast own their boats and many of them live on an acre or two of land. The farmers with their broad fields and mechanized equipment, the ranchers with their miles of range land, the retired farmers from the Prairies who settle on a few acres on the coast to enjoy the evening of their days, men retired from Government service of many countries who pick out quiet, pretty spots along the coast, and the city businessman with his "place in the country," probably breeding prize cattle—all are part of the pattern of life in British Columbia. Those who study the trends of how people like to live and the movements of population are convinced that even with increasing industrialization, or perhaps because of it, residence in urban outskirts, "where there is room to breathe," will be more pronounced. Already some Vancouver businessmen live in the Fraser Valley, thirty or forty miles from the city, and drive to and from the city daily. This will be common within a few years, say the experts.

Photograph by Ronald White

The fact that the province looks out over the Pacific to the two sister dominions of Australia and New Zealand and to the Orient is not without its influence. British Columbians are conscious of the great ocean at their door. Their outlook is broadened and the post-war international troubles in which the Pacific coast of Canada was of vital strategic importance along with the northern boundary of the province had a sobering effect. A scant score years before only a few visionaries had dreamed of flying across the Pacific and when, in 1928, Kingsford-Smith made his epochal first crossing in the Southern Cross, his achievement was hailed as heroic, daring, and skilful; he had blazed the trail, but it was generally felt that the era of Pacific flying was far in the future—not in our time anyway. But the war changed all that and the coast faced the fact that it was only two days' flight from Australasia, the same flying time from Russia, that hops to Alaska were a daily occurrence, that Montreal was only an overnight trip, and that people were dining in London on Friday and breakfasting in Victoria on Sunday. So British Columbia instead of being a pleasant, quiet outpost suddenly found itself in the centre of things; instead of its old isolation from any possible scene of hostilities it is now, like the rest of the world, within the orbit of possible operations.

Even in the earliest days there were influences towards stability. In the Cariboo gold rush days there were no "wild West" scenes such as marked the California gold rush. There was no counterpart of the Barbary coast in British Columbia. This was not solely because law and order were rigidly imposed but also because so many of the earliest citizens came from old, settled communities in Britain, Eastern Canada, and the United States. Therefore in a very short time society in the newly-settled areas began to "crystallize along conventional lines," to quote the words of Mr. R. E. Gosnell. Hotels, churches, fraternal societies, newspapers, schools, libraries, and theatres came in quick succession to provide modern amenities. So the traditions of decency, law, and order, that are inherent in the British stock, assisted by the quick establishment of institutions for pleasure, recreation,

culture, and learning, played their part in building up the society as it exists to-day.

Americans, who naturally constitute British Columbia's greatest number of visitors, recognize and appreciate these traits. They find that British Columbians are much the same as themselves. There is a constant intermingling between the people of British Columbia and the neighbouring States and this is a potent force in strengthening the friendship between peoples who are divided only by an invisible frontier and whose only practical difference is that of allegiance. Sport teams of the two countries play in the same leagues, crossing and recrossing the border frequently with only the slightest of formalities; businessmen of Vancouver and Victoria in British Columbia and of Bellingham, Seattle, and Portland in the United States have many interlocking interests; families are scattered on both sides of the line, so there is never a day without a steady crossing of the frontier both ways. The neighbouring States of Washington and Oregon had the same beginnings as British Columbia and their progress has been complementary, one a province under a democratic monarchy and the others States in a democratic Republic. They are good neighbours, amicable and co-operative, respectful of each other's customs and laws, and feeling quite at home in each other's houses. There could not be a happier relationship between nations.

Photograph by Ronald White

VI

CULTURAL TRADITIONS

IN a country as young as British Columbia it may surprise many to find so much cultural activity. The amenities of life can be found in full measure in cities like Vancouver and Victoria, and to a lesser degree in the smaller cities. The long distances between communities in the interior naturally retard artistic development and expression, but the number of educational and social endeavours, even in the villages, is evidence of a desire for the better things of life. The best in arts and crafts is by no means confined to Vancouver. The efforts of the smaller communities are dwarfed only in size, not in enthusiasm, and international renown has been won by many artists from all over the province, both individually and in groups and both amateur and professional.

The pioneers of sixty years ago provided the first leadership of developing cultural pursuits. Migrating from long-settled areas they fitted easily into organizational roles and they gave Vancouver a definite and ordered social pattern even when it was still a frontier town. Facilities for a wide range of endeavours followed in quick order. Now Vancouver has its own symphony with a junior symphony and a youth symphony, an oratorio society, choral groups, one of which, the Elgar Junior Choir, made a tour of the United Kingdom in 1949, many amateur theatricals which compete annually for provincial and drama awards, a children's theatre, a professional stage group, international discussion clubs, United Nations Society branches, many literary clubs such as the Dickens, Shakespeare, John O'London, and Burns societies. There are many instrumental bands, the chief of which is the Kitsilano Boys' band which, under the conductorship of Arthur W. Delamont, won the world's championship at

the Chicago Fair in 1932 and later competed at the Crystal Palace in London before touring the United Kingdom.

It is not surprising in a land of such outstanding scenic beauties that photography, painting, and sketching should have such large followings. In these hobbies, too, many international awards have gone to British Columbia. Artistic talent has been shown by several native Indians in the last few years and from them it is hoped to enrich the history of the coast tribes, a subject which hitherto has been given little attention. Indian life and lore were put into prose and on canvas by Emily Carr, but, as so often is the lot of artists, the true value of her work was not recognized until after her death. Professor Hill-Tout, Mr. Bruce McKelvie, and Mr. Hugh Weatherby have made their contributions to what is known of Indian arts and crafts, but the full story of the first coast native has yet to be written. The art gallery has been compelled to enlarge its quarters and the several art schools in the bigger cities are overcrowded. There are many Service clubs in Vancouver, such as the Canadian Club, Chamber of Commerce, Board of Trade, both senior and junior, Rotarians, Lions, Kinsmen, Kiwanis, etc., who besides bringing notable speakers to their luncheons do an immense amount of good work in social welfare, educational scholarships, etc. All these organizations are duplicated in scores of interior towns and cities, where they carry on a similar work.

Vancouver, and less frequently Victoria, is on the touring route of many high-class professional shows annually such as the Don Cossacks, the San Carlo Opera Company, and the Ballet Russe, while most noted artists who tour alone include Vancouver in their itinerary. British Columbia has made many contributions to the English and American entertainment field. The list of artists who have won international renown, and rich rewards, in movies, on the radio, on the concert stage, in the legitimate theatre, in the ballet, and in the opera is a very long one. Playwrights and authors are also winning wide recognition.

A striking annual cultural event is the Folk Song and Dance Festival. For several years the exhibition was unique. The origin-

Photograph by Ronald White

ator was Mrs. John T. McCay, member of a Prairie pioneering family of United Empire Loyalist stock, who went to Vancouver in 1923 and immediately interested herself in the Oriental groups in the city. She was surprised at the cosmopolitan character of the city's population. She found there were forty-five foreign communities, all with a national cultural background, but their folklore, their songs, picture dances, and legends, their colourful costumes, instruments, and ornaments seem to have no place in the bustling Western world. Only a few were trying to keep their Old Land customs and crafts alive. Mrs. McCay decided to organize a festival, but it took four years of patient work to break down the barrier of detachment with which the foreign-born had surrounded themselves, largely as a result of the Oriental segregation policy which was then effective on the coast. The effect of this policy was to make all foreigners feel they were not wanted. In 1933 Mrs. McCay held her first festival with 500 exhibitors from 25 national groups. It was an instant success, not only among an appreciative public but among the exhibitors themselves. Peasant girls from Southern Germany saw the skills and customs of Arctic Eskimos and coast Indians for the first time. Japanese who knew nothing of Ukrainian folklore and dances saw these things at this festival; and when Hebridean fishermen, who had recently settled on the west coast of Vancouver Island, sang the legend of Kishmull's Galley in remote Isle of Barra, it was a strange and thrilling experience for listeners of all nationalities.

Besides the singing and dancing, many exhibition rooms were given over to the handicrafts and historic treasures of the nations. Yearly the exhibition has grown until now every foreign national group participates with more than a thousand performers and exhibitors. The arts and crafts have been kept alive and they now hold smaller exhibitions in their own community halls. The assimilation of these groups into Canadian life has been facilitated by the cultural unity that naturally developed and in the process of becoming Canadians they enriched the life of their new land. Untapped dramatic talent was discovered, and one theatrical group won its way into the finals of the Dominion Drama Festival.

Because of Mrs. McCay's efforts ancient handicrafts and almost priceless treasures, which were being discarded and in some cases destroyed, have been preserved. Hand-wrought jewellery from England, antique furniture and old murals from Sweden, royal robes from Albania, Turkish, Persian, and Armenian hand-woven carpets, bead work, baskets, weaving, wood-carving, and pottery by the coast Indians, Flemish art treasures, Belgian lace and glass, trophies from Rhodesia, Belleek china and rare porcelains—all have brought a richness to British Columbian cultural life that attracted attention beyond the borders of Canada. American cities became interested in what was being done in British Columbia and Mrs. McCay visited several of them to explain what she had achieved. Now there is an annual American folk festival.

Since folklore is now recognized as being important in tracing the social history of mankind, British Columbia has gained immeasurably from these exhibitions and performances. Some of the lore originated in an ancient day and some of the skills in handicrafts were unknown until the New Canadians showed them to the Old Canadians. There is a great deal of co-operation between the various groups and this annual festival is probably the most effective agency in welding cosmopolitan groups into one nationality.

Library statistics are sound indications of intellectual progress and these prove there is little mental stagnation in British Columbia, even in the isolated communities. The heaviest proportion of steady readers of educational and non-fictional works is to be found along the sweeping benchlands and thriving fruit centres of the Okanagan Valley, among the people living in retirement on Vancouver Island, and in Vancouver city. But it is in supplying the reading needs of scattered and far-distant communities that a very fine service is being performed with outstanding success. The Fraser Valley Union Library, established with the aid of the Carnegie Foundation in 1930 to give good book service to the 40,000 people living in the valley, was the first of its kind in Canada, a pioneering effort that has been copied all over the

Photograph by Ronald White

Dominion and in many parts of the United States. It is used as a model for South Africa and Australia. Mr. R. F. M. Immelman, librarian at the University of Cape Town and vice-president of the South African Library Association, was in Vancouver early in 1950 during the course of a tour of Canada and the United States to study library and educational methods. "I think the Fraser Valley Union Library is the best known of its kind abroad, the best sample for use in the dominions," he remarked. "There are travelling libraries in South Africa, but this education medium is still in relatively early stages there. I'm struck by the fact that the library in North American centres is regarded as a sort of information bureau for all. Ours are not yet so well developed." He added that libraries were playing a vital role towards ameliorating the racial problem in South Africa.

It may or may not be significant—but it is worth remembering —that British Columbia, which has advanced library facilities, is almost entirely without racial antipathies or intolerance, with the sole exception of the intractable group of Doukhobor fanatics.

Union library books are distributed through branches, bus stations, and schools, and mobile services have been set up for the remote districts. Other union libraries are located on Vancouver Island and in the Okanagan Valley, all under the jurisdiction of the Public Library Commission. The three unions have 307 agencies with 108 cities, villages and school districts co-operating. There are 72,000 books constantly on the move. The mobile sections serve 152 communities and 230 schools right up to the Yukon border. Begun in experimental form its facilities were quickly overtaxed by the book-hungry settlers in isolated regions. Now Library Day and the travelling book van is an institution in the scattered rural areas. The van arrives regularly once a month, or fortnight, and stops at its regular stopping-place—a crossroads, a gas (petrol) station, or a village corner. Some of the borrowers walk five miles to keep their rendezvous to exchange books, sometimes to collect a technical book that has been requested. Library Day also provides an occasion for meeting one's neighbours, many of them separated by several miles. Much business

has been transacted and many social events arranged during the business of exchanging books. It is surprising, too, to learn from the Government reports that the demand for books from the rural areas leans heavily towards serious material—fine arts, history, science, politics, and economics, in addition to the technological works required by rural mechanics and farmers. The annual circulation by the book vans is 600,000.

There is another division of book service which the Library Commission considers its most important. It is called the "Open Shelf," and numbers 100,000 books sent out and collected free of all charges to borrowers in eleven lighthouses and isolated areas not within reach of union or travelling libraries. Borrowers merely write to Victoria stating their needs (from specially prepared catalogues) and may have six books at a time on six weeks loan, without postal fees. What this means to the lonely lighthouse keeper and the tiny fishing hamlets can easily be pictured. This division also provided a surprise. There was an immediate heavy demand for children's books and improved standings in school courses quickly followed, while the reading tastes of the adults broadened considerably.

The Provincial Library in Victoria is recognized as the best in Canada, both in its material and in its newspaper reference and file. In the latter connection Mr. Gavin Astor of the London *Times* when visiting Victoria in 1949 found copies of *The Times* of 1870 on file, some of which *The Times* did not have in London. He was able to photostat the library copies and thus complete the files in *The Times'* office.

There are also five municipal libraries, at Vancouver, Victoria, New Westminster, Prince Rupert, and Nelson, with 278,969 volumes, 87,714 borrowers, and a circulation of 1,364,883. The reference departments of these city institutions show a thirst for knowledge on the part of the public. For instance, the Vancouver reference department answered 24,504 questions of a serious nature in 1948, 5,684 more than in 1947.

A cultural centre for Vancouver has reached the stage of definite planning. It is to include a new building for the library,

Photograph by Ronald White

Photo by Norman M. MacNeil]

5. The Emblem of British Columbia: Dogwood (*Cornus Nuttalli*)

Photograph by Ronald White

an auditorium, radio centre, and a Little Theatre for amateur players. An entire city block in the downtown business area will be taken for the project. The library, which will be the most costly and dominating building in the group, is to be ten storeys high. Floors not needed for library purposes at present will be rented for stores and offices. The absence of elaborate ornamentation, costly decoration, unnecessary stairs, high ceilings, etc. will permit the construction of the library building for ten million dollars, including equipment. The auditorium is planned to seat about 3,500 and the Little Theatre about 700, while the radio building will be three storeys and house a large public restaurant. It is hoped to start construction by 1951.

The fur traders and early miners were avid readers. Few pioneers went to British Columbia without a trunkful of books and some of these collections are still extant. The Royal Engineers when they went to New Westminster from England in 1859 took a small but comprehensive library with them.

There is considerable cultural development in the community centres and youth clubs, a movement that has grown rapidly since the war. Many crafts and hobbies are taught at regular classes and some of the work is featured at Vancouver's annual exhibition. Private organizations and public bodies are also alert in meeting any cultural needs.

In addition to all these facilities in his own province the British Columbian is peculiarly fortunate in his radio listening. He has the programme of the whole continent at his fireside or in his car: there is fare to suit every taste. The weekly Metropolitan Opera performance can be heard on any radio in British Columbia; the whole week can be filled with first-class symphonic listening should one so desire. There is increased listening to the Canadian stations because of the greatly improved programmes. In all these broadcasts the time element favours the British Columbian. There are few dull moments in his leisure hours.

VII

PLACE-NAMES AND LEGENDS

SIX languages can be traced in the origin of the place-names of British Columbia—Spanish, Indian, Russian, British, French, and Mongolian, and it is the last one that is a constant source of speculation among students and scientists. Mr. Tom MacInnes, an authority on place-names, points out that some Mongolian names are used without alteration, such as *Tsacha, Uhal-gak, Tchai-kazan,* while numbers of others are obviously derived from China. One theory is that Mongols at one time inhabited the coast. There are only a few names of Russian origin as the tenure of the Russians on the coast was limited, both in area and time. The other four languages are used to perpetuate the memory of notable events and people in the province's history. There is hardly a name that does not signify a link with some phase or person concerned with the coast's history. There are still a few Spanish names and there is regret that many others have faded from use, but this is because, mellifluous though they were to the ear, they were usually too long for everyday use. For instance the Spanish name for the Strait of Georgia was *El Gran Canal de Neustra Señora del Rosario la Marinera*—a beautiful name for a beautiful inland sea but hardly suited to a terse age that has no time for musical phrasing. Among the survivors, however, are Strait of Juan de Fuca, Port Angeles, Bonilla, Camanoa, Quimper, Gonzales, Valdes Flores, Cortes, Lopez, Laza, Lasquetti, Cala Descanso, Rada de Solano, Saturna, Galiano, Gabriola, Malaspina, Sonora, Narvaez, Cordova, Hernando, Mexicana, Espinosa, Cayetano, Esperanza, San Jacinto, San Cristobal, and Alberni.

The city of Vancouver and Vancouver Island (for many years called Vancouver's Island) was named in honour of Captain

Photograph by Ronald White

George Vancouver, who sailed into Burrard Inlet in 1792. Before incorporation Vancouver was known as Granville and then Gastown. New Westminster's name was chosen by Queen Victoria, as also was the name of the province. Prince Rupert was named for the first governor and royal friend of the Hudson's Bay Company. Queen Charlotte Islands and Sound are in honour of George the Third's consort and Prince George took the name of the present king. The names of early ships, commanders, officers, soldiers, doctors, trappers, and pioneer businessmen are given to many areas, both land and water. Nelson has changed its name three times. First it was Salisbury (for Lord Salisbury), then Stanley (for the governor-general of Canada 1886–93), and finally for Hon. Hugh Nelson, one time lieutenant-governor of the province. Enderby is taken directly from the village of that name in Lincolnshire, England, and Huntington is from Huntington in Quebec, which in turn was taken from England.

The Indian names have a fascination of their own and have been applied with neat aptness. One of the most pleasing and lilting is Illecillewaet (meaning swift water), a mining area split by a fast-running river; Kamloops is another (meeting of the waters) not far from where the Fraser and Thompson Rivers meet; others are Lillooet (wild onion), Naas (stomach or food depot), Penticton (meeting of the ways), Coquitlam (small red salmon). Stories of adventure and history lie behind the names of islands, channels, headlands, mountains, and valleys, but there are also casual and amusing examples as one cited by the late Mr. A. G. Harvey. Piebiter Creek (near Lillooet) was named for a miner who was a ravenous pie-eater whenever he went to town. Others are Kicking Horse Pass, where Dr. James Hector was kicked during an expedition into the mountains; Katz, where a cat on one of the early steamboats stopped to give birth to kittens. Fraser River creeks, named during the days of the gold stampede, are eloquent and forceful. Crazy, Damfino, Deadeye, Hoodoo, Hunger, Hell, Whisky, Hellroaring, Jack of Clubs, Joker, Lockup, Misery, Poison, Suicide, to name a few, seem to have been named from deep emotions. The *Gazetteer* shows that

25 lakes have been named Long, 18 streams Mud or Muddy, and 19 Clear or Clearwater: there are 42 Boulder Creeks, 41 Canyon Creeks; Beaver is used 100 times, Bear 76 times, Fraser 34 times, Anderson 33 times, and almost every fur trader has something named after him, even the French-Canadian voyageur Jean Kasleau, whose name is perpetuated in the Kootenay city of Kaslo. But beyond these links with the more recent past the southern part of British Columbia is rich in tradition, much of it based on Indian legend. Many of the stories, of course, are not founded on historical fact, such as are the relics of England's past. Nevertheless there is enough truth for an absorbing background.

One of the best-known myths is symbolized in the Thunderbird, a bird of great strength, the flapping of whose wing caused the thunder while the flashing of his eye caused lightning. There was a Thunderbird fighter squadron in the R.C.A.F. during the second world war. The emblem presented by Chief Edward Jim of the Saanich tribe was taken to England and the insignia painted on each plane in the squadron.

Vancouver's Indian poetess and writer, Pauline Johnson, daughter of an Indian chief, spent the later years of her life collecting Indian legends. Before she died in 1913, she had immortalized dozens of stories in verse form, and other writers have carried on the task in prose. Mr. Hugh Weatherby has published some of the stories of the totem poles under the title *Tales the Totems Tell.*

Almost every visitor to Vancouver sees Siwash Rock, either during his stay or on the way in from the sea, for it lies just off the Stanley Park shore at the entrance to the harbour. It is conspicuous because out of the top of this huge rock a tree is growing and it is always green. In Indian lore it is the symbol of fatherhood. It was the custom ages back for prospective parents to swim until they were very clean and fresh before their child was born. A young chief about to become a father was still swimming after his wife had gone ashore for the birth when a great canoe with four giants came through the Narrows. They commanded the young chief to get out of their course, but he laughingly defied them. The giants dare not touch a human or they would lose all

Photograph by Ronald White

their powers. When the baby was born the young chief swam ashore and the biggest giant in the canoe promised him everlasting life because he had placed a clean future for the child above all else. As the chief stepped ashore he turned to stone. He is now Siwash Rock and beside is a smaller rock, his wife, and a still smaller one, the baby, and out of the top of Siwash the evergreen never fades.

Across the harbour are The Lions, the twin mountain peaks, that, dominating the range of hills, portray brotherhood. Below them, down the Capilano Valley, rushes the turbulent, untamed Capilano River. Opposite them, just inside the harbour, is Deadman's Island, just a stone's throw off storied Stanley Park, where an Indian massacre took place centuries ago. All these points have their place in Indian mythology and some have a place of fact in Vancouver's history. These tales are carried down from generation to generation and the Indians on the reserves round about the harbour have a deeper feeling for these shores than have the thousands of tourists and holiday-makers who merely see breath-taking scenery and waters for fishing, swimming and sailing.

Of greater scientific importance, however, is the Great Fraser Midden. This heap of clam shells, debris, and human bones found at Marpole, a suburb of Vancouver, indicates that a human settlement existed there more than three thousand years ago. This ancient burial-ground covers an area of four and a half acres and was discovered by Professor Charles Hill-Tout, F.R.S.C., F.R.A.I., internationally-honoured anthropologist, quite by accident forty years ago. He was watching workmen excavating for Marine Drive when he saw what looked like bones being shovelled into a dump truck. His subsequent studies, excavations, and explorations exposed one of the largest ancient burial-grounds ever found. His discovery turned out to be of major importance in tracing the history of the human race. The Midden was found under what was a dense forest. The age of the trees were definitely fixed at almost one thousand years. Several feet below their roots and forming the upper layer of deposits were the remains of a

25 lakes have been named Long, 18 streams Mud or Muddy, and 19 Clear or Clearwater: there are 42 Boulder Creeks, 41 Canyon Creeks; Beaver is used 100 times, Bear 76 times, Fraser 34 times, Anderson 33 times, and almost every fur trader has something named after him, even the French-Canadian voyageur Jean Kasleau, whose name is perpetuated in the Kootenay city of Kaslo. But beyond these links with the more recent past the southern part of British Columbia is rich in tradition, much of it based on Indian legend. Many of the stories, of course, are not founded on historical fact, such as are the relics of England's past. Nevertheless there is enough truth for an absorbing background.

One of the best-known myths is symbolized in the Thunderbird, a bird of great strength, the flapping of whose wing caused the thunder while the flashing of his eye caused lightning. There was a Thunderbird fighter squadron in the R.C.A.F. during the second world war. The emblem presented by Chief Edward Jim of the Saanich tribe was taken to England and the insignia painted on each plane in the squadron.

Vancouver's Indian poetess and writer, Pauline Johnson, daughter of an Indian chief, spent the later years of her life collecting Indian legends. Before she died in 1913, she had immortalized dozens of stories in verse form, and other writers have carried on the task in prose. Mr. Hugh Weatherby has published some of the stories of the totem poles under the title *Tales the Totems Tell.*

Almost every visitor to Vancouver sees Siwash Rock, either during his stay or on the way in from the sea, for it lies just off the Stanley Park shore at the entrance to the harbour. It is conspicuous because out of the top of this huge rock a tree is growing and it is always green. In Indian lore it is the symbol of fatherhood. It was the custom ages back for prospective parents to swim until they were very clean and fresh before their child was born. A young chief about to become a father was still swimming after his wife had gone ashore for the birth when a great canoe with four giants came through the Narrows. They commanded the young chief to get out of their course, but he laughingly defied them. The giants dare not touch a human or they would lose all

Photograph by Ronald White

their powers. When the baby was born the young chief swam ashore and the biggest giant in the canoe promised him everlasting life because he had placed a clean future for the child above all else. As the chief stepped ashore he turned to stone. He is now Siwash Rock and beside is a smaller rock, his wife, and a still smaller one, the baby, and out of the top of Siwash the evergreen never fades.

Across the harbour are The Lions, the twin mountain peaks, that, dominating the range of hills, portray brotherhood. Below them, down the Capilano Valley, rushes the turbulent, untamed Capilano River. Opposite them, just inside the harbour, is Deadman's Island, just a stone's throw off storied Stanley Park, where an Indian massacre took place centuries ago. All these points have their place in Indian mythology and some have a place of fact in Vancouver's history. These tales are carried down from generation to generation and the Indians on the reserves round about the harbour have a deeper feeling for these shores than have the thousands of tourists and holiday-makers who merely see breath-taking scenery and waters for fishing, swimming and sailing.

Of greater scientific importance, however, is the Great Fraser Midden. This heap of clam shells, debris, and human bones found at Marpole, a suburb of Vancouver, indicates that a human settlement existed there more than three thousand years ago. This ancient burial-ground covers an area of four and a half acres and was discovered by Professor Charles Hill-Tout, F.R.S.C., F.R.A.I., internationally-honoured anthropologist, quite by accident forty years ago. He was watching workmen excavating for Marine Drive when he saw what looked like bones being shovelled into a dump truck. His subsequent studies, excavations, and explorations exposed one of the largest ancient burial-grounds ever found. His discovery turned out to be of major importance in tracing the history of the human race. The Midden was found under what was a dense forest. The age of the trees were definitely fixed at almost one thousand years. Several feet below their roots and forming the upper layer of deposits were the remains of a

tribe of obviously Mongolian type, with some resemblance to the modern Indian. The discovery strengthened the theory that the Pacific coast Indians came directly from Asia by way of Alaska. That was not particularly startling as there has been other evidence over the years leading to the same conclusion. But below this layer there was another distinct and much older level of burial-ground, direct evidence of a primitive race. The remains of beings with long skulls, like the Eskimos, were found, in contrast to the Mongolian broad skulls in the upper layer. Implements and weapons that only the Eskimos use were found; there were ornaments and weapons of copper; there were the bones of a young male and female wrapped in cedar bark and encased in beaten copper. Alaska was the nearest supply of copper. There was evidence of trepanning in many of the skulls—holes made in the heads to let the "evil spirits" escape.

The deposits proved that these primitive people lived on the shoreline. The clams came from the nearby beach, which is now 20 miles away. Silt that has been swept down from the mountains through the ages has built up the two heavily-populated islands of Lulu Island and Sea Island.

Another world renowned anthropologist, Madame Erna C. von Engel-Baiersdorf, F.R.A.I., of Hungary, is now a resident of Vancouver, and had "one of the most exciting moments of her life" when she inspected the Fraser Midden remains, particularly the "keeled skull," which she thinks may indicate that Eskimos once lived close to what is now Vancouver. A skilled sculptress, she intends to try to reconstruct the owner of the Midden skull. She is said to have few peers in "measuring a skull in anthropological terms." Madame von Engel-Baiersdorf spent six months of the summer of 1949 with the Anahim Indians of British Columbia. She returned from the reserves with a mass of data and is creating the first anthropological section in the Vancouver Museum. She took more than one thousand photographs and collected innumerable physical items with which she hopes to preserve the fading lore of one of the finest Indian tribes and from which she expects to obtain many clues to the origin

Photograph by Ronald White

of British Columbia's native people. In appreciation of the band's friendship and help she is painting in oils the first Indian "Madonna and Child," modelling the Madonna after the Anahim girls with whom she lived.

In the less definitive field British Columbia has other phenomena with which imagination sometimes plays rather freely. The province has two counterparts of the famed Loch Ness monster, the giant sea serpent Ogopogo of the inland land-locked Lake Okanagan whose existence will readily be attested in any desired means of oath-swearing by hundreds of enterprising lakeshore residents; and the equally lengthy sea serpent Cadborosaurus, derisively known as "Caddy," who has the loyal support of residents of Vancouver Island in the vicinity of Cadboro Bay. Tourists have been very unlucky in trying to see these monsters, who apparently never show themselves when visitors are around. Then there are the Sasquatches, primitive, hairy giants that inhabit the shores of the Harrison near the town of Agassiz. These huge beings emit only gutteral grunts, have scared the wits out of many local settlers, and have attracted hundreds of tourists, who, however, are never fortunate enough to be present when a giant hurls a huge rock at a canoe in the river, or have come growling out of the nearby bush. The Thompson Indians say these giants once occupied land between Galveston and Corpus Christie, Texas, and when advancing civilization forced them to move they were given refuge by Jean Lafitte, the notorious buccaneer who pillaged Spanish ships. Eventually they found their way to Harrison where, for a small fee, visitors can see their 16-inch footprints. Like Ogopogo and Caddy the Sasquatch disappear for long periods and then some still evening their weird wolf-like howl pierces the peaceful silence of the beautiful Morris Valley. Then we know the "silly season" is with us again.

And then over in the Kootenay where the Columbia River widens out to form the beautiful Arrow Lakes, in a valley probably cut by the descent of ice at the close of the Ice Age, legend says that Wishpoosh, the huge king of all beavers, fought his

final battle with Speelyei, the coyotte god of the Columbia. The fur trade, Indian wars, and the rivalry of nations for possession of a rich land make their contributions to the lore of the land that loses none of its fascination through the addition of myth.

In the far north, in the Yukon–Mackenzie district some 300 miles from Yellowknife, is the fabulous, sinister, and mysterious Nahanni Valley, sometimes called Headless Valley and sometimes called The Tropical Valley because of a section warmed by hot springs and geysers where luxuriant flowers grew. But its notoriety is founded chiefly on the toll it has taken among prospectors lured there by stories of rich gold deposits. The police have records of thirteen bodies found in the valley. In many there were indications of foul play; three were headless, others had been shot, and others were bereft of valuable or personal belongings. Old Indians at Fort Liard claim they know exactly where the gold is, but, according to Rev. Father Lecoat, Oblate missionary, they refuse to take white men into the valley because evil spirits dominate the immense canyon. But Ed Clausen, a well-known prospector, who had been in Nahanni, interested the scientists in 1933 with the announcement that he had discovered traces of Mongol cavemen in the strange caverns in the valley. But many men have been through the valley and they agree it is no place for the tenderfoot, and none of them will forget the sinister, weird wailing of the wind as it swirls past the rocky ramparts, but whether the valley carries a curse, like the curse that is supposed to strike those who meddle with the Luxor Tombs, it is not possible to say.[1]

[1] See *British Columbia Gazetteer*, "Place Names of British Columbia, Pauline Johnson's poems, and publications of the Vancouver Art, Historical, and Scientific Association.

Photograph by Ronald White

VIII

THE NEW EMPIRE OF THE NORTH

A GLANCE at a map of British Columbia will show that commerce, production, and population are heavily concentrated in the south-west corner with the port of Vancouver as the hub. Industrial activity is limited to 1 per cent of the land area and in this zone live nearly 80 per cent of the people. The northern boundary of the province is some 800 miles away, and it is the hundreds of miles of sparsely settled country in between that is ready for development.

Eastward of Vancouver are the fertile and prosperous fruit and agricultural valleys of the Fraser, the Okanagan, and the Kootenays; northward, but still in the lower half of the province, 2,000 feet above the canyon where the mighty Fraser River goes tumbling down to the sea, are the great cattle ranges and gold mines of the Cariboo plateau. Between this area and the eastern end of the Yukon boundary lies the Peace River block, where 6 million acres of rich farming land and 2 million acres of grazing land await settlement. The block is as large as the combined areas of the three Maritime provinces of Nova Scotia, New Brunswick, and Prince Edward Island in eastern Canada, while its agricultural land is greater than the combined areas of the English counties of Norfolk, Lancashire, Somersetshire, Kent, and Northumberland. Its hills, valleys, and tablelands contain a treasure-house of resources: oil, gas, huge quantities of high grade coal, molybdenite, gold, mercury, copper, silver, lead, zinc, and mica, vast timber lands and water power. Only a fraction of its land is being farmed, but grain yields per acre are the highest in Canada, and small fruits and vegetables grow prodigiously and intensely in the short but hot

summer. As to the quality of the grain, its pioneering growers have taken the world wheat championship repeatedly, sometimes in successive years.

Adults of to-day were taught in their schools that the Peace area was an "unexplored land of snow and ice—a sort of Never, Never Land," and there is not even yet a full realization of its immense potentialities. One disadvantage is that it is cut off from the southern part of the province. Its route to Vancouver is a roundabout one through Alberta. The south, too, is unfamiliar with the fine growing weather in the Peace—the soft, warm winds from the Pacific, called chinooks, which exert a moderating influence on the winter cold and bring warm, moist, quick-growing conditions in the summer. True, the aeroplane has brought this promising land to within a three-hour flight of the southern areas, but this communication is not enough to encourage large-scale settlement.

It was in the Peace area, at Tate Creek, in the Tupper Creek region, that a community of anti-Nazi Sudetens, who fled from Sudetenland before the war, were settled. They were backed by the British Government up to $1,500 each. They organized a co-operative business organization, bought 23,000 acres for $42,000, and in four years had paid off 90 per cent of the purchase price, spent $8,000 on farm machinery, built 25 granaries, 10 new barns, and 12 other buildings.

A commission of experts has made a thorough study of resources as a guide to business that could be obtained if a railway tapped the area. Their findings, issued in 1945, were couched in the cautious language of the specialist. Their cold facts are the most eloquent testimony of the possibilities of the Peace River country: the millions of acres of farm lands, 19 coal outcroppings which, without making a detailed survey, would provide one million tons annually for several hundred years, timber stands that would produce nearly fourteen billion feet board measure, and a similar amount between Prince George and Squamish.[1]

[1] See British Columbia Government committee report and maps on Resources and Railways, 1945.

Photograph by Ronald White

The Peace River block crosses the border into Alberta. The boundary line, in fact, just about splits it in half. The whole block, of course, looks to Vancouver in the south and Prince Rupert, 550 miles to the north, as its principal port outlets, but the former, because of its size, facilities, and closer proximity to the shipping lanes is the natural funnel. The extension of the Pacific Great Eastern Railway to Prince George and into Vancouver in the south will give the Peace its direct outlet, although it will not gain the fullest advantage until the railway reaches Dawson Creek. Vancouver's economic zone would then approximate 150,000 square miles, just about the same size as the three chief American agricultural States of Iowa, Illinois, and Indiana, and larger than the United Kingdom, including Northern Ireland, and Greece combined. Contiguous to the Peace, in the north-west corner of the province, are the Atlin and Stikine areas, with an abundance of minerals. Southward, but also adjoining the Peace, is the heavily mineralized Omineca district, in which is the immensely fertile Nechako Valley of which the town of Vanderhoof is the centre. There are eleven and a half million acres of fertile land in the valley, the biggest single agricultural area in the province. It lies 70 miles west of Prince George, the hub of the interior. Land settlement, instigated and fostered by the Dominion Government, started just before the First World War and had reached something approaching a "rush" when the outbreak of hostilities halted development. Homesteaders were flocking into the country in 1914, but when war started tens of thousands of fertile acres reverted to the Crown. Now eyes are turning again to this rich central area. In some places the valley is 20 miles wide and its rich soil gives abundant yields. The main crops are oats, sometimes reaching 100 bushels to the acre, and wheat, the soft variety going to 60 bushels an acre. Forty miles to the north is Fort St. James, established in 1806 by the North-West Fur Company. It became the centre of the fur trade of New Caledonia. Now it is a fine settlement, a Mecca for tourists because of the excellent fishing.

Fifty years ago British Columbia was going through something

of a railway boom, and it is fortunate that speculative projects to-day are not entered into with the dash and verve that marked the rush for riches half a century ago. If all the railways had been built for which charters were granted there would be 170 lines in the province to-day. The linking of Vancouver with eastern Canada fired the imagination of speculators and also encouraged the hunt for minerals. Prospecting was successful and mining developed. The immediate reaction was railway promotion. In 1890 the Provincial Government adopted the policy of bonusing railways by a grant of 20,000 acres of land per mile. Within nine years 73 railways had been incorporated, 27 of them in the Kootenay country, which was then the principal mining centre. However, only 11 railways were built. Some of them were quite short and most of them were absorbed into the C.P.R. Several charters were granted for lines which projected railway connection between Vancouver Island and the mainland by bridging Seymour Narrows. In nearly every case the details of these old charters showed that their applicants were men of vision. Many of them had their eyes on the north and were trying to carry out what the Government is now starting to do.

A group of British capitalists were among those who saw opportunities in the north. They all tried to race ahead too quickly. There was not enough production to support a north-south railway half a century ago. The British group received a charter to build a line from Kitimat to Omineca and thence to Telegraph Creek. Kitimat is an Indian village at the head of Douglas Channel, one of the long inlets that cuts into the coast-line just south of Prince Rupert. Although the Dominion Government sent experts to examine the harbour prospects, quarantine and fortification sites, nothing came of this enterprise. That was not the end of Kitimat's hopes, however. Some years later it was the rival of Prince Rupert for the terminus of the Grand Trunk Pacific Railway, now the Canadian National. Kitimat lost, however. Now this little Indian settlement is entering its third railway boom. It is strategically situated in the region under investigation by the Aluminium Co. of Canada. If the company

Photograph by Ronald White

decides to establish in that region Kitimat will probably become a short-line railway terminus. In any event it is bound to benefit from northern developments, eventually justifying the vision of pioneers of fifty years ago.

Development in British Columbia was rapid after the Canadian Pacific Railway pushed through to the Pacific Coast in 1886. Comparable progress is anticipated when the P.G.E. provides transportation for the Peace River. The early apostles of the north have seen their claims more than justified by official surveys and scientific tests. But a hinterland with a wealth of resources must have transportation if settlement and development are to be encouraged and its products marketed. The present route from Dawson Creek via Edmonton to Vancouver is about 1,200 miles. The P.G.E. route, if extended to Dawson, would be little more than half that distance.

The P.G.E. was started in 1912 by a private company. The promoters, however, could not complete the project and the Provincial Government took it over, and, to date, has invested more than one hundred million dollars so far with little profitable return. Until the last few years of mounting revenues and surpluses the Government was not in a financial condition to extend the railway in the difficult, mountainous north country. Now, firmly convinced of the importance of the north in the expanding economy the Government has started work on extension to Prince George, and to Vancouver in the south. This was decided after attempts to interest either or both of the transcontinental railways in a joint extension plan had failed.

In 1925 the Legislature passed the "Act in aid of the Pacific Great Eastern Railway," which set aside four great tracts of land contiguous to the existing railway and its probable line of extension into the Peace River country as subsidy lands. The tracts totalled 25,000 square miles, larger than Belgium and The Netherlands combined. All natural resources were to go with the lands as bonus to any corporation or individual who would take over the P.G.E.'s constructed road. The lands were to be free of taxation for twenty years. Only in the last few years,

after extensive surveys of the resources, has it been realized what a fabulous bait was being dangled before enterprising capitalists. But there was not a single bite. Doubtless there have been groans among the financiers since. It is significant of the big change in British Columbia's fortunes that the people would have been happy had they been able to unload this "white elephant" fifteen years ago. Now it is destined to be one of the most important factors in the province's development. It was Premier John Hart, who headed the Coalition Government during the war years, who determined that something should be done about the railway, but first quietly repealing the Act of 1925. He, and his successor, Premier Byron Johnson, had several conferences with the C.N.R. and C.P.R., but nothing satisfactory resulted so extension of the line and improvement of the roadbed and equipment were decided on as a Government project.

For thirty years the railway has run along in single tract isolation, snaking through mountain passes, along canyon rims, and across high plateaux, through some of the finest scenery in the world, only to stop a few miles short of tapping the great traffic possibilities of the Prince George timber belt, where there are hundreds of sawmills, the vast anthracite coal deposits of Hudson Hope, the prize-winning wheat of the Peace River country, and the storehouse of mineral riches waiting to be taken out of the ground. Were the P.G.E. to go on to Fort Nelson it would give access to more resources and help to solve the transportation problems for the gold of the Yellowknife, the uranium of Great Bear Lake, the furs of the Arctic, and oil from the Fort Norman wells. On the Carbon River near Hudson Hope, Swedish capitalists have been exploring and done some preliminary work in the coalfields. They have considered a railway to Stewart, 150 miles north of Prince Rupert, the northern terminus of the Canadian National Railway, but they would have three mountain ranges to cross or tunnel through, and no river to follow, like the C.N.R. follows the Skeena.

Soon there will be transportation to these fields, and when the north finally gains its outlet to shipping ports the story of its

Photograph by Ronald White

struggle for recognition will not be complete without tribute to those rugged pioneers who traded, and farmed, and trapped, who with indomitable spirit and faith in the future cut their own roads, stuck it out against heavy handicaps, and in the face of many disappointments, even as their forefathers did when pushing the wilderness back in other parts of Canada. Voluble and vigorous spokesman for them has always been Col. J. K. Cornwall, trader, trapper, and frontiersman, a rugged man of the north. Because of his fervent and articulate convictions it was natural that he should be known as "Peace River Jim" or "The Apostle of the North." For more than forty years he argued the merits of the country. At first he was almost a lone voice in the wilderness, but he gained adherents by the power of his faith and facts. His was a dominant voice, a big voice as fitted a man of big frame and vision. Ottawa, London, Paris, and New York knew him, and although a land so rich in natural resources would inevitably be exploited sometime, credit must go to Jim Cornwall for speeding up the process. His first investigation was made soon after the turn of the century. He took a tip from Alexander Mackenzie's journal of his famous overland journey in 1793, in which he mentioned seeing traces of oil in the vicinity of Fort Norman. Cornwall went there and found the oil, but no company was interested in a discovery so far north. It took the urgencies of the second world war to obliterate the wilderness frontier and bring Fort Norman wells into production.

Now in the years of peace British Columbia is at last turning her eyes to the north, and what riches may come out of that vast area may well be beyond the vision of men to-day.[1]

[1] See articles by B. A. McKelvie, G. M. Murray, M.P., and Col. J. K. Cornwall.

IX

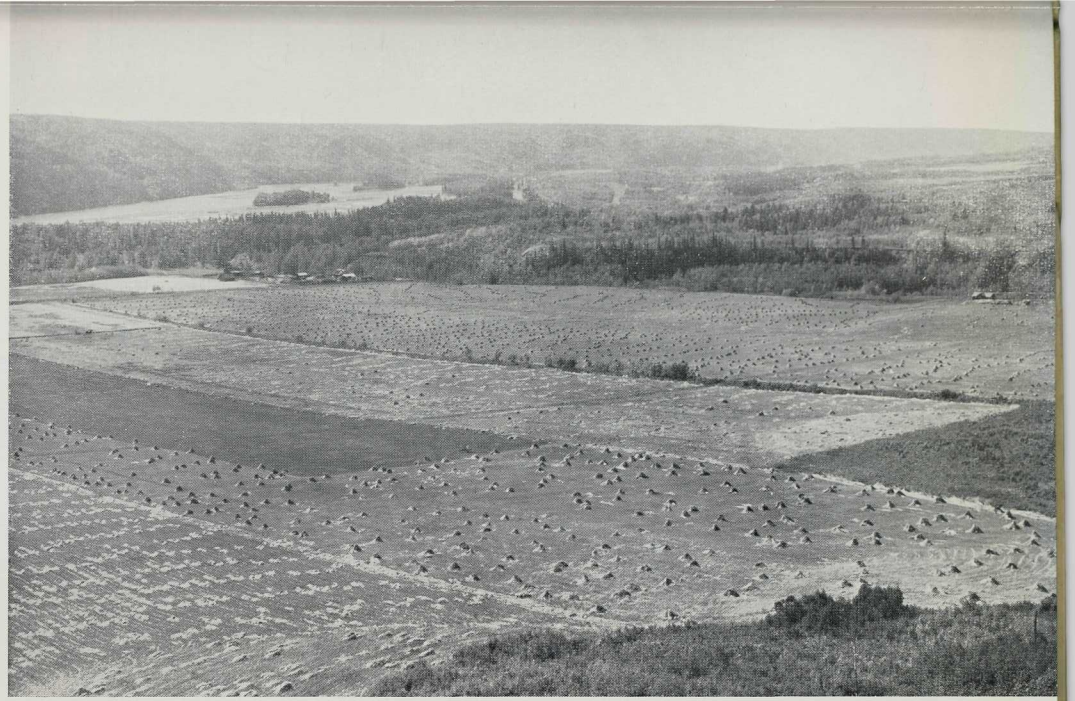
THE INDUSTRIAL PICTURE

THE beginning of industrial activity in British Columbia came with the advent of responsible government. When the first governor was sent out from London in 1851 gold had been found on the mainland, coal had been discovered on Vancouver Island, and trade in fish and lumber was in prospect. By the time the province entered Confederation in 1871 pioneers were building up communities, municipalities had been organized, and there was a little export trade. A year before Confederation eight coastwise steamships were in regular service; seven sailing vessels brought general merchandise from England and twenty-four ships took lumber and fish from British Columbia ports. By 1874 export trade had reached an annual value of $2,000,000. As mining and agriculture developed, production values and commerce grew steadily, and so products of the sea and the soil formed the foundation of the province's economy. This complete dependence on raw natural resources continued for many years, watched with increasing uneasiness because of the possibility of exhaustion. Enlightened Government measures and industrial enterprise corrected this trend. Conservation and control were practised, by-products were manufactured, and eventually many new industries broadened the base of the economic structure.

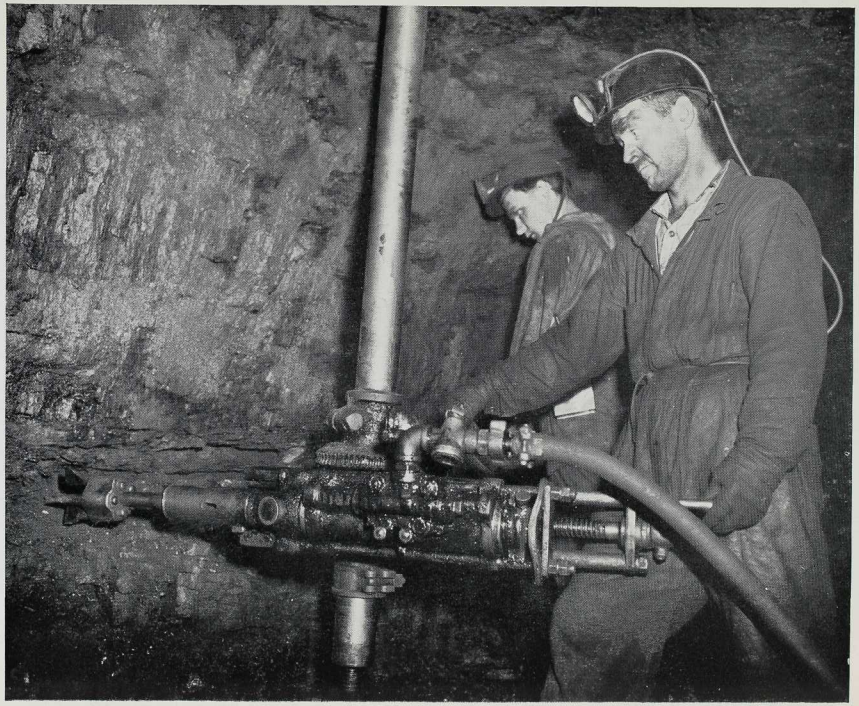
The value of British Columbia's production now exceeds one billion and a half dollars, more than half of which is accounted for by secondary and new industries. The gross value of manufactures, which has trebled in the last ten years, is now greater than the combined total of the three other western provinces, and makes British Columbia the third industrial province in the Dominion.

Photograph by Ronald White

6. Farm lands of the Peace River Valley



Photograph by Ronald White



7. Power-drilling a coal seam in the Peace River country

Comparative figures for twenty and thirty years show the gross value of manufacturing, now close to one billion dollars, is five times what it was thirty years ago, and surpassing the wartime peak. Mining production has grown from $35,000,000 in 1920 to an estimated $140,000,000 in 1949; 300,000 fine ounces of gold mined compared with 124,000 ounces in 1920, and 617,000 ounces in 1940 (a special war effort); in the thirty-year period the value of fisheries has nearly trebled, and forest products have jumped from $92,000,000 to $360,000,000, a particularly significant figure because this industry reached the hundred million dollar mark only in 1940, remained below one hundred and fifty million dollars during the war, and then surged upwards to its new peaks through the development of by-products, such as the manufacture of plywood, the use of former waste woods, and so on. Since 1920 agricultural production has risen from $68,000,000 to $145,000,000 to displace mining in third place. In a quarter of a century the cash income from farm produce has quadrupled. Construction contracts were just under eighty million dollars in 1949, higher than any previous years by many millions. Both exports and imports went to new peaks, outgoing shipments totalling $453,489,000, a gain of eighty millions over 1948, while imports were $217,000,000, some twenty million dollars more than the previous year. Exports did not reach the two hundred million dollar mark until the mid-war years, and the climb in the post-war period is evidence of expanding trade in British Columbia-produced goods.

Employment, both in numbers and wages, has kept pace. The average weekly earnings continue to be the highest in Canada, more than $48. Agriculture, mining, forestry, fishing, manufacturing, and miscellaneous industries employ 420,000 and the payroll is almost $700,000,000 dollars. In 1920 it was $50,000,000. To-day twice as many employees are taking home a pay cheque four times greater than in 1939. The records of nine thousand firms show their wages and salaries divided as follows: 9 per cent to officers, superintendents, and managers; 12 per cent to clerks, stenographers, and salesmen; 79 per cent to wage earners.

Increased profits, investment income and wages have been reflected in the mounting retail trade, which reached a record total in 1949 of $768,250,000. Here again the greatest increase in the post-war years—some three hundred million dollars since 1945. Sales of life insurance almost exactly doubled between 1945 and 1949, while the cheques cashed against individual accounts amounted to $7,540,592,000, the highest on record and four times the 1924 figure.

The cost of living is high but the standard is also high. With the prices prevailing between 1935–39 taken as a basis of 100 the index of retail prices in 1949 was 160·9 and the index of retail food prices 203·0, both higher than the 1948 figure but in line with the general trend throughout the country.

These figures emphasize the tremendous change in the economic situation over a quarter of a century, and such totals can, of course, be sustained only by broadening the industrial field—by developing auxiliary manufacturing and by attracting new industries. Agriculture offers a good example. The farmer's cash income is between ninety and one hundred million dollars a year, most of it received from the sale of products outside the province. That is, most of his income is derived from export trade. With this money he buys the products of more than thirty trades and industries. A few years ago most of this spending money went outside the province; now almost all of it stays in the province because most of his needs can be met by home production.

Of all Canada probably British Columbia's economy was least affected by the sudden cessation of the manufacture of war munitions in 1945. The Federal Government was able to provide manufacturing facilities which British Columbia industrialists could not have set up alone, and the province found itself with plants, machinery, a labour supply and new skills with which to promote urgently needed secondary industry. After markets had been sounded out and the prospects of permanency studied production went ahead quickly, but not beyond absorption capacity. Scientists, industrial experts, and ingenious and enterprising businessmen, many of them young war veterans, sought

Photowash by Ronald White

raw materials, new and improved processes, how to get the greatest value out of natural resources, and new markets.

The story of magnesium is illustrative, though not unique. During the war a young Vancouver scientist, Dr. Lloyd M. Pigeon, son of Rev. E. Leslie Pigeon, D.D., perfected a new way of making magnesium. It proved a valuable aid to victory, and Canada and the United States spent $40,000,000 on plants to use his process on magnesium taken from dolomite deposits in eastern Canada. Now magnesium metal made by this process is used for many peacetime requirements. Foundries in Vancouver are working full time. A wide range of articles where the weight of metal is a factor can be made from magnesium. One being produced in large numbers is a wedge for use in logging operations. Its weight is 30 ozs. A steel wedge of the same size weighs 9 lb. A special steel top enables the magnesium wedge to withstand sledgehammer blows. A bowling pin is made of magnesium, also a ladder for the fruit orchards with a special one designed for the Okanagan ranches. These tall ladders can be lifted with one hand.

Another new manufacture allied with the metal industries is porcelain-on-steel bathtubs, sinks, wash basins and other sanitary ware. The bathtubs are stamped out of sheet steel at a plant in Ohio and then shipped to Vancouver for finishing and enamelling. This is also a product that weighs several hundred pounds less than the old tub.

About the turn of the century Hethey's of Swansea, Wales, had a contract to supply iron lighting standards to Vancouver and New Westminster. Now, fifty years later, Mr. Hethey's two sons, Ben and Axel, are in the iron and steel business in Vancouver, producing iron pipe for the domestic market, using scrap steel from the shipyards and other heavy industries. The Consolidated Mining and Smelting Company at Trail is experimenting with the production of pig iron, using the tailings from the Sullivan mine concentrator which have been saved over the last twenty-five years. The tailings, what is left after the zinc, lead, silver, gold, tin, antimony, bismuth, and other metals have been

extracted, contain large quantities of iron. High freight rates on steel from eastern plants have deterred many heavy industrial projects on the Pacific Coast. It is the biggest handicap faced by British Columbia shipbuilders. The establishment of a steel foundry is one of the province's most urgent needs.

Until a few years ago the British Columbian had to send three thousand miles, to the other side of the Dominion, to get a box of matches. Now there are two match factories in the province. The same thing applied with many other articles—electrical appliances, chemicals, pottery, magnesium fittings, specialized porcelain ware, plastics, furniture, etc. But the label "Made in B.C." is appearing on an ever-growing list of such articles. Except for canned salmon and fruit containers that label was rarely seen before the war.

The peat bogs of the lower Fraser Valley are producing another industrial livelihood. Peat moss has many industrial uses such as insulating material and litter for poultry and livestock buildings. A small quantity was exported in 1946. Now more than one hundred thousand tons are shipped out annually, chiefly to South Africa, India, France, Egypt, the Philippines, China, and Japan.

Vancouver-made diesel engines are now being sold all over the world. Heavy ropes for steamers and steel cables for logging are made in the same city; power saws, big and small, radios, portable pumping plants, furniture, pistons for 200 types of small engines, electric irons, toasters, packaging material for the products of 21 industries, automobile batteries, baggage, brushes, inks, pastes, broom handles (made from edgings that used to go into the fuel bin), pleasure boats and commercial ships of all sizes, men's tailored suits, shoes, blankets, gloves, umbrellas, brick, tile, wallboard and floorings, fancy fish pastes, soft drinks, felt products, toys, tallows for soap-making, asbestos, cement products, biscuits, glues and plastics—that is a partial list of articles now being produced in the province, most of which used to be imported. They are small industries, of course, but in the aggregate and in their variety they are important.

Photograph by Ronald White

There are oil fields in British Columbia and major companies are test-drilling at several widely separated locations, the most promising at the moment being on the west coast of Graham Island in the Queen Charlotte group, where seepages have been known for many years. The Peace River region, Vancouver Island, and the Gulf Islands, between Victoria and Vancouver are other prospects where land has been leased by oil companies. It is estimated there are 56,000,000 acres of potential oil lands, of which some 2,000,000 acres are under reserve for exploration. British Columbia imports every pint of oil it uses, mostly from the Alberta fields but a considerable quantity from American companies, which, of course, means a drain on Canada's American dollar funds. Should oil be found in commercial quantities the gain to British Columbia would be tremendous.

For several years the department of trade and industry has been encouraging new industries to enter the province, and each year the campaign has borne fruit. Columbia Cellulose Co. Ltd., is building a $30,000,000 plant at Port Edward, near Prince Rupert, to produce cellulose acetate; Canadian Western Timber Company is building a $25,000,000 pulp mill at Campbell River; the new Nanaimo Sulphate Pulp Co. Ltd., mill at Nanaimo is completed. European capitalists have entered the lumbering industry and have shown interest in textiles. The Government department says a United Kingdom branch factory producing men's outer wear is assured, while British plants to manufacture textiles, pulp and paper, leather and metal goods await a final decision. The department prepared a list of the more inviting possibilities because of the availability of raw materials: ceramics—high-grade clay products and china; glass; hydro-magnesite—cements and magnesium chemicals; bleaching clays —bentonite; slag utilization for foam glass and mineral wool; grinding balls, axes—replacement of metal imports in the light metal field; ferro-alloys; marine plants—seaweed; barite—barium; deposits of iron ore; lead alloys and pigments; hydrogenation of fish and vegetable oils; textiles—linen and wool. As already indicated some of the opportunities are being followed up. A

year ago Hon. Herbert Anscomb, Minister of Finance, commented: "Never before in the history of the province has there been so keen an interest in what British Columbia has to offer the forward-looking industrialist. British Columbia is entering upon an era of great expansion in the field of secondary industries. New wartime processes, new techniques, and closer utilization have been absorbed and fitted into an established industrial pattern. This has been done with intelligence and thoroughness. Many believe it may change and enlarge the whole industrial future not only of British Columbia but of Canada as well."

The harnessing of water power by both the British Columbia Electric Power Company and the British Columbia Power Commission is being undertaken with the growing industrial needs in mind. Power for industry is cheap, about 1·17 per cent of industry's production costs. This power is available in such abundance that British Columbia has a strong advantage over eastern provinces, where in some cases the limit of power development has been reached. That is the important point in the project of the Aluminium Company of Canada to establish a plant in northern British Columbia. If it is carried out it will be the biggest development in the province's history. The company found that preliminary studies over a great part of 1948 justified the expenditure of $1,000,000 on a longer and more detailed investigation of the possibilities. At this writing, tests for a power plant location are still being made, and it may be late 1951 before a final decision is made. Two other companies, Reynolds Metal Co., of the United States and the Aluminium Company of America, are interested in a similar undertaking in the province. The establishment of such an industry on the northern coast would mean that a city of probably 50,000 people would arise in a region where there are only a few small towns and isolated villages; it would mean the utilization of as much electric power as is now being used by domestic and industrial consumers throughout the province; the original capital investment would be a minimum of three hundred million dollars and would reach half a billion by the time the project was completed;

Photograph by Ronald White

there would be a regular payroll of fifty million dollars a year; a maritime trade between the northern and southern ports would develop, with 35 ships making 200 trips a year, taking in bauxite and carrying away aluminium ingots; agriculture and servicing industries for the new city would follow.

Three sites are under examination and each entails drilling a tunnel through the Coast Mountains and dropping water from interior lake systems quickly down to sea-level. The sites are: (1) Tidewater plant on Bute Inlet, water power derived from Taseko-Chilco-Homathko lake system, providing one million horsepower; (2) tidewater plant on Dean Channel, water power from Eutsuk-Whitesail-Kimsquit lake systems, providing three-quarters to one million horsepower; and (3) tidewater plant on Gardner Canal, water power from Tahtsa-Kemano lake systems, providing three-quarters to one million horsepower.

There are several interesting phases of the project. The Government water rights branch did preliminary work on mapping out the power possibilities of these sites prior to the war and when the magnitude of the power resources was realized it became a question of what type of industry could make use of it. The list narrowed down to aluminium, for these reasons: aluminium production requires more electric power than any other commercial process. For instance, it requires twice as much as for the electro-chemical method of producing chlorine or caustic soda, three times as much as for wood pulp, six times as much as for other types of metals, and thirty times as much as for typical metal and wood-finishing processes. The power must be low in cost because the product made in Canada must absorb freight rates to world points and protective tariffs of the importing countries. Aluminium is made from British Guiana bauxite. It could be shipped all the year round to a British Columbia plant, while it can be shipped to the Aluminum Company's plant at Arvida in Quebec only in the summer months. Another important advantage that British Columbia would have over Quebec is hydro power. At Arvida the company is using all the power available, but it is not sufficient to bring production up to its

peak year, 1943, when 490,000 tons were produced. That was for war purposes, so the Government gave the company priority in the use of power, even to power cuts in private houses. With such immense power resources the province would become the world's greatest producer of aluminium.

British Columbia has taken most of its productive wealth from extractive industries, some of which are ultimately expendable, like forests. In the case of an aluminium industry the province's contribution would be a non-expendable resource, volumes of water which would be flowing into the sea. The rugged nature of the terrain would make it difficult and costly to transport power from these mountain lands any great distance. Hence it will be harnessed only by a substantial industry which needs a large amount of power at its site. It would be necessary to store water in the flood season so that there would be an adequate flow in the dry season. This would prove of great assistance to the control of rivers which sometimes cause floods in the valleys and lowlands.

The only other pertinent point is protection of the salmon-spawning-grounds. The International Fisheries Commission has stated that the more northerly sites radiating on Dean Channel and Gardner Canal would in no way affect the fisheries, while if the company wants the Bute Inlet site every possible consideration will be given the fisheries.

British Columbia was the first of the provinces to apply scientific knowledge to industrial problems on a wide scale, an example that is now being followed by every industrial area in Canada. Behind many projects that are enlarging the industrial picture are thirty-two scientists and technicians who form the staff of the British Columbia Research Council, an organization formed five years ago when representatives of the Government, industry, business, labour, and the University of British Columbia, discussed the need of an organization which would bring the benefits of science to industry. The Government and industry agreed to finance the project jointly, and its value is indicated in the fact that in the first four years the scientific staff solved

Photograph by Ronald White

1,500 problems submitted to it by industry, such things as the development of new instruments for testing the moisture content of wood, methods of impregnating and compressing cedar to produce floor tiles which will outwear oak, a practical system of drying wet sawdust, the construction of earth dams for flood control, the elimination of poultry diseases. At the request of the British Columbia Electric Company the council is conducting experiments for the production of gas from wood. Any firm, individual or group, may send a problem to the council. Most minor solutions are free, but if costly tests are necessary the expense is borne by the sponsor who receives full rights to the results. In cases where an entire industry benefits, or where the research leads to a new industry, the council pays the cost. The council points to the experience of the American State of Connecticut, which, like British Columbia, depended in earlier years mainly upon extractive resources such as mining and lumbering for the major source of its income. To-day, through the development of secondary industries, especially in the manufacture of metal goods and chemicals, only 6 per cent of the State's income is derived from mining and lumbering. These new industries have been made possible by the availability of water power and the assistance of research scientists. California, Washington, and Arkansas have made similar progress under like conditions.

The extraction of cascara is an important project that is before the council. Extracts from the bark of this tree are extensively used in medicines, and British Columbia is the only place in the world where the tree grows wild. Until a few years ago 300,000 trees a year were destroyed to meet the world demand for cascara. Ninety per cent of this destruction was caused by peeling off all the bark, thus robbing the tree of its life veins, instead of leaving the stump alive whence new shoots could grow. Now all gathering of cascara bark is carried out under Government permit. Meanwhile the research council is conducting experiments to see if cascara can also be extracted from the wood of the tree. The prospects are declared to be hopeful. The early Indians on the coast were aware of the medicinal value of the

cascara and passed the information on to the Mexican and Spanish priests early in the nineteenth century. The Spaniards believed cascara wood was used in the construction of King Solomon's Temple and in the building of the Ark. The United Kingdom takes 300 tons of cascara extract from British Columbia annually and cargoes also go to Australia.

There are fifty other plants growing wild in the province that have medicinal value, and some of them, like foxgloves (digitalis) grow more luxuriantly than in England. Others which have useful properties are common in every lawn and field, but little attempt has been made to gather them because the manufacturing chemists are in eastern Canada and the United States. From the findings of the Research Council it is anticipated that drug farming on a profitable scale will be established in British Columbia. Cascara seeds have already been planted in several places, but the trees need fifteen or twenty years' growth before peeling.[1]

Firs, hemlock, and pine are now grown specially for the Christmas-tree market, in which there is a growing export trade. Holly is being shipped to other parts of Canada, while a plant in Victoria more than meets the local demand for Christmas crackers.

The federal department of agriculture, through its several experimental stations in the province, the provincial and university departments, and the research council are constantly engaged with the vast number of problems connected with farming, such as diseases among dairy cattle, food values of fruits and vegetables, disease resistance in poultry strains, abscessed livers in beef cattle. An investigation is under way to improve the Fraser Valley raspberries. There is a steady improvement in agricultural methods as the findings of the research bodies are turned over to the farmers. Scientists are determining the existence of vitamin D in fish oils. Highly sensitive equipment had to be designed for this purpose and the problem was considered so important that the National Research Council at Ottawa made a special grant.

[1] See publications by the Department of Botany, U.B.C., and the provincial forestry branch.

Photograph by Ronald White

A seaweed chemical industry is another possibility from scientific tests. Preliminary work has shown that algin of good quality can be extracted from marine plants. Similarly early tests show that cilica concentrates of a grade suitable for making window glass and amber bottles can be obtained from the flotation tailings of a cement concentrator. The better construction of highways in order to reduce the very heavy maintenance costs, several problems dealing with house building, public health questions, chiefly the abatement of smoke in urban districts, are among questions before the researchers.

The science and engineering faculties at the University are also working steadily on industrial research. Experiments to produce a "natural" rubber have been going on for some time, but so far rubber with the necessary bounce has not been produced. Dr. H. V. Warren, head of the department of geology and geography, is working in the field of biochemistry, attempting to find methods of improving the locating of ores by analysing the chemical composition of vegetation. Concentrations of mineral content have been revealed by the chemical breakdown of twigs. The department of physics is engaged on a metal detector, which is a variation of the electromagnetic mine detector which locates ore by setting up an electric current. Certainly in this modern day the worker is in close partnership with the test tube.

One of the first beneficial effects of British Columbia's industrialization was the great decline in what has been called "The export of Brains" to the United States. For many years university graduates crossed the border in thousands, to the country where there were better rewards and more opportunities. At one time the annual exodus of university men was more than 20,000. The picture is far different now. With a few exceptions, including those who have studied for special positions in other countries, graduates of the University of British Columbia are finding attractive openings in their own province. For instance, in 1948 less than 1 per cent of the graduates went to the United States, and some of those who did returned.

British Columbia has had for many years a lop-sided trade

balance with the rest of Canada. Put briefly, for every dollar's worth of raw material that the province sold to the east she bought two and a half dollar's worth of finished goods, on which she paid abnormal railway freight charges plus an additional "mountain differential." For instance, automobiles are from $150 to $300 more in Vancouver than in Toronto, due to freight charges. The development of secondary industry is steadily correcting the balance, but the long, bitter struggle over railway freight rates is not yet ended.

The expansion of manufacturing has also made the province less sensitive to the vagaries of world trade. The restriction of production when foreign markets dry up is not nearly as severe as when almost full dependence was placed on the four primary industries. Nevertheless, despite a healthy domestic market, foreign export is essential for continued prosperity and exploitation of industrial opportunities. But as British Columbia has had more goods to sell so she has found more foreign buyers. The post-war troubles of many European customers, and particularly the dollar difficulties of the United Kingdom, would have been disastrous to British Columbia had she not had the goods to attract new customers. Thus the growth of secondary manufacturing could not have come at a more opportune time. Britain's former heavy purchases of salmon, fruit, and lumber have been drastically reduced, and, for some months, suspended. Trade with Britain at the moment is unpredictable, and surpluses, particularly in agricultural produce, frequently occur. Foreign trade is still growing, but in a different direction to fifteen years ago when the flow was preponderantly towards the United Kingdom. The most notable change has been with the United States, which bought $38,000,000 dollars worth of British Columbia goods in 1939 but five times that amount in 1948. In the same period imports from the United States multiplied four times. The United States displaced Britain as the chief customer in 1942, and has remained in that position ever since.

British Columbia products are exported to one hundred different countries, but the bulk of the buying is done by eight

Photograph by Ronald White

of them, the United States, the United Kingdom, Australia, South Africa, France, China, the Netherlands, and Palestine. Shipments to other countries were less than five million dollars each. In point of value the most important products exported in 1947 were planks and boards, lead, newsprint paper, fertilizers, red-cedar shingles, plywoods, canned salmon, canned herring, apples, copper, and zinc. Imports entered from seventy-four countries, mostly from the United States with Britain second. British India, Philippine Islands, Fiji Islands, Colombia, Cuba, and Australia were among the exporters to British Columbia. In point of value the most important imports were gasoline, crude petroleum, sugar, coffee, copra, logging machinery, jute fabrics, gasoline traction engines, tin-coated sheets, and tea.

British Columbia traders look for considerable readjustment in the next few years but feel certain that trade will continue to be largely with British Commonwealth countries and the United States. They anticipate, however, increased exports to such countries as France, Belgium, the Netherlands, etc. Exports to France showed a nine million dollar gain in 1948 over the previous year; Belgium was about the same at four millions; Australia was down eight millions (because of dollar shortage); South Africa increased one million, and Japan five millions. It is significant of the exchange difficulties in world trade in 1948 and 1949 that British Columbia in the dollar area increased her imports from Australia, in the sterling area, by four million dollars while losing eight million dollars worth of Australian trade.

Statistics of trade between the provinces are no longer compiled, but it is estimated that a little more than half the total imports are from other parts of Canada, mainly Ontario and Quebec, while the shipment of British Columbia products to the other provinces is about 25 per cent of the exports to foreign countries.

The Government department of trade and industry is an effective auxiliary to the efforts of businessmen in finding new markets and in promoting new manufacturing. It investigates matters of economic and industrial interest, collects and publishes

statistical information, develops tourist travel, and assembles factual data on urban and suburban areas for the guidance of prospective manufacturers. For these purposes the department is composed of four divisions. The trade commissioner's office co-operates actively with overseas trade commissioners and with visiting foreign missions. It undertakes surveys for new industries, plant expansions, and branch factory establishments. This is in addition to its main function of expanding domestic and foreign markets. An industrial and trade promotion office was established in British Columbia House in London in charge of Col. H. F. E. Smith. The bureau of economics and statistics has two primary functions: the first to collect and compile economic and statistical information for the Provincial Government, and the second to provide economic counsel, and, when necessary, to conduct investigations into economic questions affecting the province. Mining and labour divisions of the bureau compile statistics for these two departments and a particular effort is made to publish these reference reports quickly.

Since the beginning of 1949 the department has issued a monthly report of business activity, a comprehensive and valuable reference for the businessman. It also publishes a British Columbia Trade Index, a directory of products manufactured by British Columbia industry. The travel bureau is active in promoting tourist trade. It has a motion picture branch which has produced a number of important films, both recreational and industrial, which have had a wide circulation on the American continent and in the United Kingdom. The regional development division is a new project for the purpose of investigating industrial development possibilities in particular areas.

The province is divided into ten regions which are broken down into seventy-three districts with more detailed facts.

Regions one and two are the East and West Kootenays with a combined area of 29,327 square miles (18,769,280 acres) and a population of about 80,000. Both are mineral and agricultural areas with opportunities for expansion. Region three is the Okanagan Valley, 10,729 square miles (6,866,560 acres), popu-

Photograph by Ronald White

lation 75,000. Besides being the foremost fruit region there are large deposits of copper with gold and silver in the south-west, coal and bentonite. Region four comprises the lower mainland and includes the cities of Vancouver and New Westminster. Its area is 9,764 square miles (6,248,960 acres) and has a population of about 800,000. Besides the prosperous Fraser Valley agriculture there is also some mining activity from copper and gold deposits, nickel, important refractory and other clay accumulations, peat, marl, lime and talc. There are nearly ten thousand farms in this area with an investment of more than fifty million dollars. The annual fruit crop is worth about four million dollars and vegetables about five million. A great part of the fishing industry, including boats, canneries, and processing plants, is in this region. Vancouver city, of course, is the chief centre of industrial activity. Region five is Vancouver Island, on which is situated the capital city and port of Victoria, the ports of Alberni and Nanaimo. There is coal mining, some milling and considerable agricultural activity. The area is 13,206 square miles (8,451,840 acres) and population is close to 200,000. Region six is the southern central interior, 31,420 square miles (20,108,800 acres), population about 40,000. It includes gold and coal mining, some farming and big cattle rangelands. There are scattered occurrences of mercury; tungsten, copper, molybdenum, gypsum, sodium carbonate in lakes near Clinton; sodium sulphate in the Kamloops lakes; Epsom-salt in lakes near Basque; and mica and cyanite along the north Thompson River. Region seven is the central mainland coast, 22,187 square miles (14,199,680 acres), population less than 20,000, mainly centred in the pulp and paper manufacturing centres of Ocean Falls and Powell River. The coast is heavily indented and has many isolated fishing villages and canneries. Region eight stretches almost the width of the province and is called the northern central area. It comprises 20 per cent of the land area of British Columbia, but its 71,985 square miles (46,070,400 acres) has a population of not much more than 30,000. It has, however, a promising future. The city of Prince George is in the centre and the region includes the thriving towns of Williams Lake, Quesnel, Vanderhoof,

Burns Lake, Smithers and Hazelton, the country that will be served when the P.G.E. reaches Prince George. The district contains gold, silver, lead, zinc, mercury and coal. Mercury and tungsten are shipped to eastern Canada and foreign buyers. Region nine is the north-western coast and Queen Charlotte Islands, area 88,128 square miles (56,401,920 acres), population less than 20,000. The northern port of Prince Rupert is in this region. The country is heavily mineralized and has vast water power resources. The Aluminium Company of Canada is testing in this area. Region ten, 82,533 square miles (52,821,120 acres), is another big area embracing the Peace River and the north-eastern interior, but its population is not much more than 11,000. It contains coal, oil and many minerals, while its agricultural possibilities are among the best in Canada.

Diversification of employment has naturally resulted from the growth of secondary industries. Many thousands of workers are engaged in other skills than those of the basic industries. This factor has made its contribution to a more stable economy. Enlightened legislation and government administration, in both provincial and federal fields, have helped to keep unemployment at a minimum and wages at a high level. In 1948 the highest employment record in the province's history was made—an average of 423,000 persons. This was an increase over the previous year of 3 per cent while the improvement for the whole of Canada was 1 per cent. The average weekly wage became the highest in the country. These records were made in a year when industry was hampered by weather conditions. There were wide-spread floods which threw seasonal workers out of jobs early in the summer. The succeeding winter was severe and lumber mills had to close temporarily. Power shortages developed, closing down several industrial plants. In addition there was a steady migration of workers from other parts of the country, attracted by the customary mild climate and high earnings. But industry proved itself big enough to absorb these setbacks. A decade previously a combination of such circumstances would have had a serious effect.

Photowash by Ronald White

8. Logs on their way to the booming grounds

Photograph by Ronald White

9. Making up a boom of logs at Jordan River, Vancouver Island

The federal Unemployment Insurance Act and the National Employment Service were effective cushions against hardship when work was slack. These two legislative measures were born of the depression years 1929–34. The insurance was to guard against a repetition of the tragedies of those years, while the countrywide employment service was brought in during the war when Canada's whole manpower was mobilized. It was so effective that when the war ended the machinery was geared for peacetime work. What it has accomplished in keeping employment at a high level is indicated by the fact that in the Vancouver area alone in 1948 it found jobs for 55,645 individuals, 18,277 being women. The service offers three types of assistance. First, a man who wants work may find out what jobs are available. Second, if there is nothing suitable and he has fulfilled the statutory conditions, he may draw unemployment insurance benefits. If there are no opportunities in the occupation in which he is skilled he may obtain the necessary training in another occupation. Special consideration is given to the needs of particular groups. There is a women's division, a veterans' placement division, an executive and professional division, and a special placement division concerned with handicapped persons, older workers, and young men and women entering the employment market for the first time. In the Vancouver placements mentioned above jobs were found for 11,000 war veterans and 395 professional men were placed in higher salary bracket positions. There are twenty employment service offices in British Columbia, each with a thorough knowledge of conditions in its locality. This up-to-date information enables the service to take quick remedial action if a danger spot in the employment situation appears. It works in close co-operation with employers. It strives to avoid any aspect of a bureaucracy: its officers are trained to handle each case with care and courtesy. In the largest cities advisory committees of labour and employers work with the service officials and never is the human factor in the employment problem overlooked. Favourable employment conditions have enabled the insurance fund to grow until it now stands at about six hundred million

dollars, a bulwark against reverses. The measure is flexible and several revisions have been made as administrative experience is gained. At the 1948 session of Parliament benefit and contribution rates were increased. The maximum benefit rate is now $18·30 weekly instead of $14·40 for an assured person with a dependant, and $14·40 instead of $12·30 for a single person. (In addition, of course, the family allowance for children is continued.) The maximum contribution rate is now 42 cents weekly for both employer and employee, the Government adding a fifth.

The provincial department of labour set up a board of industrial relations in 1934, with authority to set minimum standards of wages, to consider special requirements in administering the Hours of Work Act, and to act in an advisory capacity to industry as required. An industrial conciliation and arbitration branch was set up in 1937 to facilitate negotiations between employers and employees. This was replaced by the Labour Relations Board in 1948.

British Columbia labour is strongly unionized under the British Columbia Federation of Labour and the Vancouver Trades and Labour Council. There are forty-four labour-management production committees operating in plants employing 300,000 workers and there is no doubt that these co-operative bodies have helped smooth the path of labour relationships. These joint committees do not deal with subjects covered by collective bargaining agreements, but in their deliberations on production and efficiency they have certainly operated to mutual advantage by keeping alive a bond of understanding between management and worker. Seven companies have a payroll exceeding five million dollars a year, more than fifty employers exceed one million dollars a year, and more than seven hundred pay out more than one hundred thousand dollars yearly. The payroll in the province of federal, provincial, and municipal governments, the major wholesale and retail firms, and the railway and shipping companies aggregate two hundred millions annually.

Thus British Columbia is building up productive values and payroll totals to heights that were undreamed a dozen years ago.

Photograph by Ronald White

By branching out into auxiliary manufacturing a foundation is laid for a stronger and wider economy. When the vast undeveloped regions of the province and the wealth of resources they contain are considered alongside the world's need for the things that British Columbia has in abundance, it seems inevitable that the province is at the beginning of an era of tremendous development.

X

LUMBERING

THE main support of British Columbia's economic framework has always been and still is the lumber industry. Forest products are the basis of many of the new industries and 48 cents out of every dollar income still comes from the trees. The natural wealth in the vast wooded lands is immense and the province is fortunate in possessing great water power reserves without which this resource could not be fully exploited. At the same time the need for more intensive conservation and reforestation has been recognized if the forests are to continue as an industrial basis.

The climate and soil of the coastal area are exceptionally favourable to the growth of large softwood trees, mainly Douglas fir, cedar, spruce and hemlock. There are also very large stands in the drier interior regions, but these lack the size, quality and accessibility of the coast timber. The latest official estimate of merchantable timber available is 250 billion board feet, of which 155 billion is on the coast. More than 100 billion board feet is readily accessible for marketing under present conditions.[1]

From the first shipment of a cargo of Douglas fir to China in 1832 to the four hundred million dollar industry of 1949 the forests have provided the basic wealth of the province. For half a century lumbering has been the bread-and-butter industry, and it is calculated that four-fifths of the value of manufactured lumber represents the wages of labour, and in consequence circulates through every artery of commerce. The logging operations give employment to 40,000 men. The trees they cut down give

[1] See Provincial Government's ninth review of resources, production, and Government finances.

Photograph by Ronald White

work to many thousands more in the pulp and paper mills, more thousands in the rapidly-expanding plywoods manufacture and shingle mills, and the hundreds of others in all the trades in which lumber is used, besides those employed in making special equipment for lumbering operations. Also significant in the post-war economy, lumber is the chief of the products earning foreign credits, chiefly bringing urgently-needed American dollars to Canada.

In recent years lumbering has undergone wide diversification and improvement in methods, developments that saved the industry from serious decline, or worse, in the difficult post-war exchange troubles which forced British Columbia's oldest customers to restrict their buying. The province lost most of its lucrative United Kingdom market because of this difficulty, so other markets had to be found and encouraged. But other influences appeared which enabled the industry to continue at a prosperous level. One was the tremendous expansion in pulp and paper-making in which throughout 1948–49 British Columbia was the world leader. Another was the growth of the plywood industry and the greater use of coast woods in the domestic market. A growing export to United States areas and uses found for hitherto waste woods helped maintain full activity. Thus from the post-war difficulties of world marketing there began to emerge a pattern of what forestry experts say the industry should represent —complete utilization of the entire lumber crop. The transition is significant as showing what a large part lumber plays in building up secondary industries. An instance resulted from the United Kingdom's demand for a much greater percentage of first grade lumber in its post-war orders. As this would have left a mounting pile of cheaper grades on the lumbermen's hands a research bureau was set up to see how this second class wood could be used. One answer was a house of solid cedar construction (instead of a frame of studs and joists). Cedar is resistant to almost all wood-destroying agencies. Other important advantages were found: the strength and rigidity of a solid plank wall avoids plaster cracks and jamming doors; the danger of collapse in fire is almost

eliminated; and it has insulating qualities equal to 9 inches of brick or 14 inches of concrete.

Investment in pulp and paper manufacture now exceeds two hundred million dollars with nine mills in production and three more under construction. Here, too, the pulp-grinding machines are leading to wider diversification. Columbia Cellulose, a subsidiary of the Celanese Corporation of America, has built a plant near Prince Rupert to produce cellulose for United States manufacture into a large group of fabrics and plastics.

On the North American continent it is the custom to roof a house with cedar shingles instead of slate or tiles, as in the United Kingdom. Frequently, too, the side of a house is shingled. Shingles are thin pieces of cedar of varied widths, 16, 18 and 24 inches long, with parallel sides and tapering to a fraction of an inch. When nailed down they overlap, one-third of the shingle being exposed to the weather. Shingle-making accounts for thirty million dollars of the total production of the lumber industry. Seventy mills are engaged the year round in cutting shingles for a heavy domestic and export trade.

When the first settlers arrived at the Pacific coast the Indians told them of a wood that would last for ever; it was straight of grain, remarkably free from knots and other defects, and never rotted. They pointed to the tall red cedar trees. So the first cabins along the banks of the roaring Fraser River and along the shores of Burrard Inlet were constructed of hand-made cedar shakes or shingles. And to-day every type of dwelling from the fisherman's hut to the luxurious city residence uses this magnificent wood. There are countless proofs of its rugged qualities, corroborating the Indian assertion of almost permanent life. An Indian dugout canoe, made of red cedar, lay submerged in a swamp for more than half a century, yet when discovered it was completely water-tight and seaworthy. The Long Island, New York, home of John Edward Payne, composer of *Home, Sweet Home*, has to-day the same cedar walls that were put on the house in 1600. In a recent tornado in the United States a shingled barn roof was ripped off and blown a thousand yards away, but it remained intact, every

Photograph by Ronald White

shingle in its place. Cedar is pleasantly aromatic and possesses a natural oil preservative. In contrast to the back-breaking method of making shingles by hand machinery now turns them out at a rate of nine million a day. The average small family house requires about five thousand for a roof, so the number available for export after domestic demands have been met is considerable.

Along with the development of new woods and the government's reforestation and forest "farm" policy departmental officials and scientists are constantly striving to cut down the losses in standing timber from fire and insects. Against both depredations the forces of conservation are steadily gaining ground. The loss by fire has been appalling. Every summer there are scores of outbreaks in the tinder-dry woods. Fortunately most of them are small and soon brought under control, but occasionally blazes get out of hand and go roaring through thousands of acres of timber, and sometimes wiping out little communities in their path. A programme to educate the public on forest fire dangers and appealing for the greatest caution in the summer months is never relaxed by the government's forestry department and the British Columbia branch of the Canadian Forestry Association. The campaign is carried on through the newspapers and magazines, by radio and by films, and how necessary is public co-operation in a province where there is almost unrivalled facilities for hunting, fishing and camping may be judged from official findings that 75 per cent of the forest fires are caused by human agency.

One of the largest plywood plants in the world is at New Westminster, the Fraser River port 12 miles from Vancouver. Here the Pacific Veneer and Plywood division of Canada Forest Products Ltd., which has already pioneered several plywood advances, is working three daily shifts transforming British Columbia softwoods into products with astonishing new properties, both in appearance and performance. Their latest development is a three-dimensional plywood that has greater wear-resistance and more pleasing surface finish than previous products. Thus step by step properties of hardness are being

imparted to British Columbia softwoods while grains are being exposed and treated to improve the appearance of the wood—all from the transformation of waste woods. In addition there is the huge volume of fir plywood, the demand for which is multiplying rapidly because of the multitude of uses to which it can be put. This particular veneer product is, pound for pound, stronger than steel. It can be moulded like plastic, it will not split like ordinary wood and is also made with waterproof glue. This was the plywood used in the famous Mosquito bomber in the last war. In 1947 striated plywood was introduced and was an immediate success. This furrowed, or scored, product has become an established favourite for interior decorating, store displays and furniture. To the utilitarian and economical advantages of plywood is added a surface treatment that is an adornment. Each step in plywood development so far has met marketing success.

The plywood industry is among the important leaders in new manufacturing. Contrasted with the old-time export of raw logs with a minimum return of revenue it is a symbol of how industry has progressed. One firm is pressing cedar sawdust, otherwise unmarketable, into hearth logs that rival coal for heat. Fir sawdust, which used to be a waste and a fire menace in the woods, first became a household fuel when small sawdust burners were designed. Now it is being treated and pressed into serviceable woods of considerable strength. One of several new machines that has increased the uses of forest products is the hydraulic barker, an improved piece of equipment which uses a high pressure nozzle to strip down logs so that slabs and edgings can be used in paper mills. The bark is sprayed with oil and used for fuel to power the whole project. Tree tops used to be left in the forest to rot, or worse still, become an additional fire hazard. They are now made into newsprint. One pulp company has succeeded in experiments with smaller trees from logged-off area. Twenty years ago the sky over Vancouver and other sawmill centres was blackened by the waste sawdust being burned. Someone built a sawdust burner for use in houses and soon half the Vancouver houses were being heated by sawdust. Now that

Photograph by Ronald White

methods have been discovered of pressing sawdust into a useable wood product sawdust supplies for house heating are getting shorter.

Complementary with the development of by-products is the government's forest management programme, whose purpose it is to prevent British Columbia's forests being diminished. Besides planting thousands of young trees a year and sowing an equal number of seeds the government enforces a licensing system under which an operator is granted perpetual rights on lands he needs to sustain his plant on condition that he plants as many trees as he cuts. But this policy is apparently not enough. The fears of ten years ago, that if tree-cutting continued at its rate at that time British Columbia would become a barren land in sixty-five years, are not lulled. That was the dread prospect when two billion board feet were being cut annually. In 1948 the cut was the greatest ever made, nearly three and a quarter billion feet. Hon. E. T. Kenney, provincial minister of lands and forests, recently stressed the fact that more timber is being cut than can be replaced. The government's conservation and planting measures can support an annual cut of 2,200,000,000 feet, but for ten years the average cut has been 600 million feet more than that, and in 1948 the excess was alarming. At that rate the end of the supply was in sight—fifty or sixty years according to the minister. In time the government plan would be able to support double the minimum, but only, of course, if it could build up a surplus year by year.

Significant of the efforts to use every part of the tree is the fact that the salvage of waste wood increased tenfold in 1948, and Mr. Kenney is authority for the statement that "without cutting a single extra foot from the province's reserve timber there is sufficient waste in the woods operations to support from five to ten new pulp mills." Subsequently three new mills, two of them now in operation, were built to treat waste woods. The plentiful supply of waste woods tends to lower the cost of pulp operation because salvaging the discards is far less costly than felling trees for the sole purpose of feeding the paper-making machines. How

this fits into government policy was cited by Mr. Kenney in a typical instance: under the management plan the operators would get 80 per cent of their present requirements in the form of primary supply. They can get a further 16 per cent of their requirements through closer utilization of wood which was formerly wasted (computed at 20 per cent of the 80 per cent). Development of the hydraulic barker makes further savings in the mill. An extra 16 per cent of requirements can be obtained in this way. Immediately, then, by adoption of these practices operators can be assured of 112 per cent of their present requirements. But the greatest advantages will come in the future. The experts say that management will eventually mean a 50 per cent increase in the yield of licensed land, and this will mean that operators can eventually look for 162 per cent of their present requirements.

The forest management policy also has a sociological aspect. Hitherto logging "camp" life has been too insecurely anchored to permit the adjacent development of servicing industries. When a stand of timber was cut the camp moved on to another site. In most cases the camps have been peopled by men without ties or whose families live in the cities. The camps have rarely had community services other than those needed in company operation. Under the new policy the industry will operate on a "farm" basis—to a large extent each camp will grow its own crops. With more of the tree being used lumber operations on any one site will last very much longer than before. Headquarters, therefore, can be stabilized and accommodation built for the men's families. Schools will be built and the necessary retail shops opened. A start has already been made in building up small communities on a permanent basis round logging camps and the possibility of starting up small secondary industries is being investigated.

From a production standpoint the effects of the management policy will be cumulative and forestry officials estimate that within a century the sustained yield can be increased to five billion board feet annually—that is more lumber can be cut than is now taken out of the forests without loss to the stands. The giant Douglas

Photograph by Ronald White

fir, many of which tower 200 feet above the ground and have a girth at the base through which an automobile could be driven, are a spectacular feature of the coastal forests. A tremendous amount of timber can be obtained from one tree. At the turn of the century this was practically the only wood that was cut; now it constitutes only 50 per cent of the felled trees. Experts of the United States Forest Service have demonstrated that it is possible to grow Douglas fir from seed on the Pacific coast at a commercial profit. Not only is it the conviction of forest scientists that these stands of giant trees are overripe and need to be cut but the demand for smaller trees will increase as the world's supply of big timbers diminishes. Trees 12 inches in diameter at a height of 5 feet will be merchantable, and on this basis the American experts find that the average yield per acre of Douglas fir seed in fairly favourable conditions such as exist in the wetter regions west of the Cascade Mountains will be as follows:

At 40 years	12,400 feet b.m.
At 50 years	28,000 feet b.m.
At 60 years	41,000 feet b.m.
At 70 years	51,700 feet b.m.
At 80 years	61,100 feet b.m.
At 90 years	70,200 feet b.m.
At 100 years	79,800 feet b.m.
At 110 years	90,300 feet b.m.
At 120 years	101,500 feet b.m.
At 130 years	113,000 feet b.m.[1]

Thus in sixty years a heavy crop of Douglas fir may be grown, and the wisdom of the government in carrying out its own re-seeding programme and compelling operators to do the same before devastation begins to make inroads on the forest wealth is apparent. The dismal story of many other countries made barren by the exhaustion of timber supplies will not be repeated in British Columbia.

The government has also expressed concern because tree-cutting is too concentrated regionally to permit such operations to be

[1] See *The Forests and Their Future* and *Canada and its Provinces.*

continued indefinitely without exhausting some areas. The lumber cut in the coast areas greatly exceeds the production of new growth in those areas while in the interior districts it is the other way round. As the wise farmer changes the crops in his fields from year to year and periodically allows ground to remain fallow, so the government wants tree-felling to be spread over a greater area in order to preserve forest life. Losses by fire, insect and decay bring the annual depletion of the forests to six billion feet. Concentrated in one section of the province this would soon mean a desolate land. The forest at Sayward, north of Campbell River, is an instance. Within its 385,000 acres forty-four different companies have at one time or another logged holdings there, disposed of their logs on the open market and then closed their operations or moved on to other regions. More than six billion feet were taken off this one area in nineteen years. In less than two decades the forest capital of one of the most highly-productive areas of the province (because of its heavy rainfall) was reduced by 52 per cent. In another eighteen years this huge forest area would be wiped out. There has been no clearer or more urgent example of the need for a balanced and strictly enforced conservation policy. Power projects of the British Columbia Power Commission are encouraging lumber operations away from the coast. One step is the building of a pulp mill at Quesnel, in the north-central part of the province, which will take its timber from interior stands.

The new pattern of conservation has been set, centring round the annual planting. With the use of waste woods, more efficient logging methods, and improvements in the industries using the products of the forest a new lumbering era is setting in. As Mr. Kenney told the Legislature at its session in 1949: "the day of the tidewater export mill that took rough green lumber from the saw and stowed it away in the ship at the dock is past."

The opening of the Panama Canal in 1915 was the turning-point in the history of British Columbia lumbering. By cutting the water distances from British Columbia ports to the United Kingdom and Europe by more than 50 per cent it meant a saving in voyage time of from seventeen to twenty-three days, and thus

Photograph by Ronald White

lower freight charges. The opening of the great cut really marked the birth of heavy lumber export trade from the province. But it brought other important advantages that were not so obvious. Coast lumbermen had been unable to gain a foothold in the big eastern markets because of the very high freight rates—more than twice the value of the product. The canal corrected that situation and opened the eastern markets to coast woods. That in turn ended the glut of over-production on the coast caused by the fact that only first grade fir was shipped out. Markets existed for the lower grades, but British Columbia, like the neighbouring states of Washington and Oregon, were barred from them by railway freight charges. Good lumber material, therefore, had to be destroyed. American lumbermen, also caught in the same over-production trouble, had been dumping their surpluses into the Prairie Provinces of Canada. The Panama route ended that practice, too.

For thirty-five years British Columbia lumber has had access to the world markets on a fair competitive basis, has won a strong place in world trade, laid the foundation for a sound provincial economy and is now building new industrial frontiers.

XI

AGRICULTURAL RICHES

AGRICULTURE is one of the primary industries of British Columbia, accounting for approximately $150,000,000 of the province's total production value. But, as in other industries, the productive capacity has hardly been touched. Between the mountains and the rivers there are fertile valleys and, while the percentage of land suitable for cultivation is small in comparison with British Columbia's size, that percentage represents 4,000,000 acres only a quarter of which is being farmed. One government authority places the available farm land at 6,000,000 acres. Irrigation is converting several disused areas into fertile land. Two million acres are suitable for fruit-growing, yet less than 100,000 acres are planted for that purpose, the greater part being in the prosperous Okanagan Valley, home of the famed McIntosh apple.

The agricultural trend is towards diversification. Poultry raising and vegetable and small fruit growing are carried on close to the cities, dairy and mixed farming on parts of Vancouver Island, the Lower Fraser Valley, Shuswap, Okanagan and some scattered mainland regions, commercial orcharding, notably in the Okanagan and West Kootenay Valleys, livestock raising and some mixed farming in the Columbia Valley, Nicola, Lillooet and Cariboo districts. Great stretches in the central regions are suited to mixed farming and dairying. All fruits except tropical varieties can be grown in the fruit regions, apples, apricots, cherries, peaches, plums, grapes, nectarines, figs, various small fruits and nuts; there is a heavy production of melons, cantaloupes, tomatoes, celery, etc., while tobacco is grown in several districts. The field crops, roots and vegetables, lead all Canada in production per acre. Bulb-growing, which was a solid

Photograph by Ronald White

but small phase of agriculture before the second world war, expanded greatly when supplies from Holland were cut off. A considerable part of the newly-gained market was retained and several Dutch growers have migrated to British Columbia, but competition is stiffening. Dominion and provincial authorities are assisting the growers in producing bulbs of the highest quality. The Fraser Valley and parts of Vancouver Island are the chief bulb-growing areas, with the acreage devoted to this crop increasing every year.

Fruit growing is concentrated heavily in the southern interior and is dominated by the Okanagan Valley apple, of which six and a half million boxes were produced in 1948. Each year more land is irrigated, thus adding to the total area in orchards. The 34,000 acres under cultivation in the Okanagan has been augmented by 15,000 acres in the north and east. The industry is prosperous, valued at $25,000,000 a year, and credit for this success is due to the unity of effort by the grower, the shipper and the selling agency, British Columbia Tree Fruits Ltd. This organization is designed to achieve orderly marketing, thus eliminating cut-throat competition among the growers themselves, and to direct the flow of produce to the market in quantities which avoid unnecessary gluts, and to bring the best financial returns to all the growers. Like other basic products the fruit trade was tied closely with Britain and the growers were victims of the same currency troubles. The effect for them, however, was more serious as their product is a perishable one. The loss of the British market in 1946 compelled the selling agency to drive hard to find new buyers. Instead of the bulk of the crop going to the United Kingdom only 555 boxes were sent there in 1948, while Palestine took 82,000 cases. In 1949 Britain placed a "token" order for 435,000 boxes of apples. As the annual harvest is about seven million boxes the province was hard-pressed to find buyers. However, at the end of the year there was still a surplus, and early in the new year the growers made a gift of a million boxes to Britain, and expected to do the same in 1950. The United States market takes about two million boxes of apples and the rest of

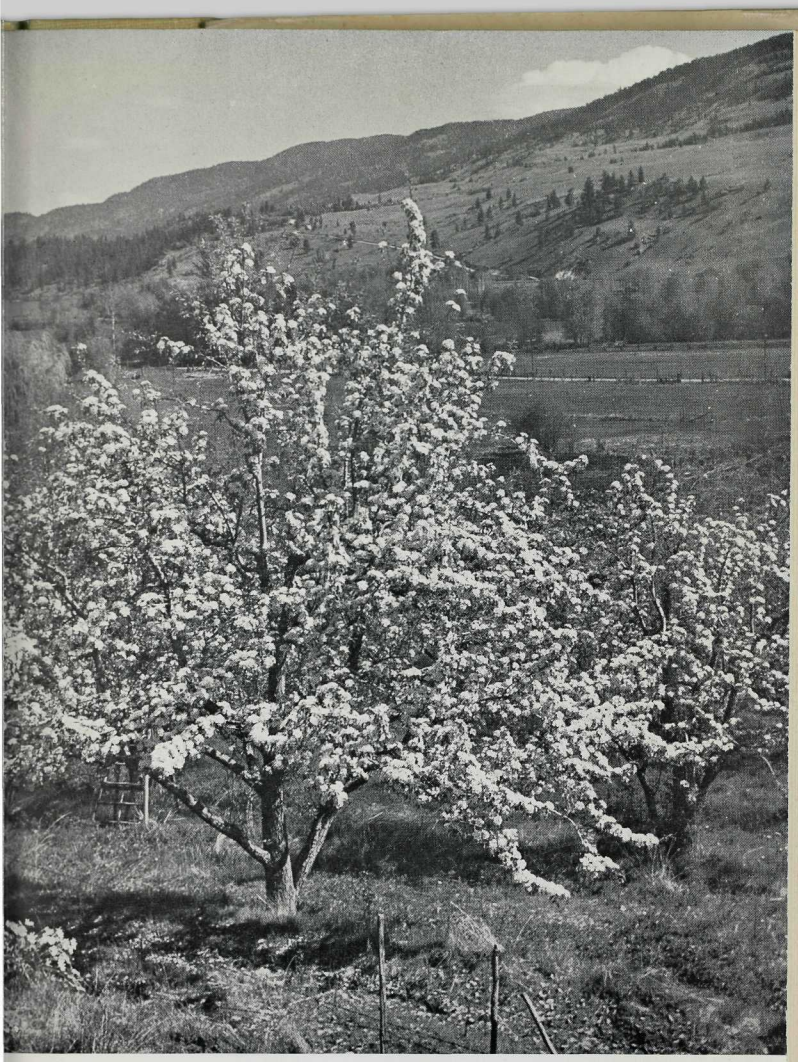
the Canadian market about four million. Brazil is developing as a major buyer and in 1948 took a quarter of a million cases; Hong Kong took 74,000 cases and the South African demand is increasing. Efforts are continuing to interest other countries in British Columbia fruit. Mr. A. K. Loyd, President of Tree Fruits Ltd., says the stabilized programme built up through the years by the selling agency, shippers and growers prevented the British loss being more seriously felt. Concerted action enabled the industry to minimize an adverse situation. Two million boxes of peaches, 876,000 boxes of prunes and 607,000 boxes of pears were sold quickly and large shipments were made of all other kinds of fruit.

The three thriving interior cities of Vernon, Kelowna and Penticton reflect the prosperity of the fruit valley, a prosperity that was founded on an apple and a group of colourful pioneers. The largest producer is still the Coldstream ranch covering more than 11,000 acres. Fifty years ago Lord Aberdeen, then Governor-General of Canada, bought this tract and planted the first commercial orchard. He was the pioneer in irrigation, storing the mountain snow in small lakes and bringing the water down by ditches in the summer. From the benches, covered with sage brush and fit only for a few head of cattle, came the fruit belt that now numbers nearly two million trees.

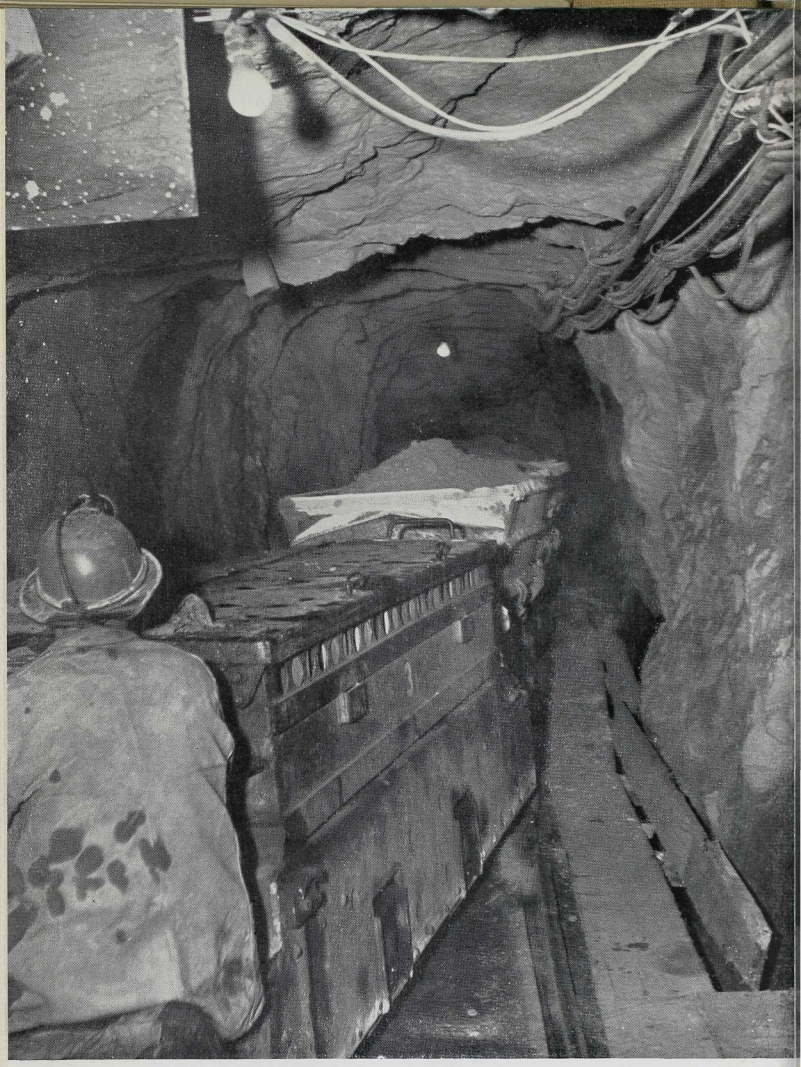
Over the last fifteen years the apple tree population has slightly decreased, but the output has increased considerably. In the Okanagan horticultural district the apple tree count has dropped from 1,130,554 in 1935 to 1,052,037, and in the Kootenay district from 244,557 to 143,216. But while economists in 1922 were urging orchardists to produce 500 bushels an acre they are now producing 1,200, and sometimes 1,500 bushels, or boxes, to the acre. Mr. W. H. Robertson, provincial horticulturist, has made figures available showing similar production increases in other fruits such as pears, plums, prunes, cherries, apricots and peaches. In the same period, however, the costs of production and distribution have mounted, through causes outside the growers' control, to three times what they were ten years ago.

The fruit grower must be constantly watchful, constantly

Photowash by Ronald White



10. Blossom time in the fruit orchards of the Okanagan Valley



11. Ore train in the Bralorne gold mine

Photograph by Ronald White

fighting to prevent infestation of his trees by insect pests, a risk that becomes more threatening as the fruit lands expand, but he has his first reward in blossom time, when the great valley is never so beautiful, again late in the summer when the green orchards are splashed with red, and finally at harvest time when he receives golden tribute from half the world. An orchard in fruit is a temptation to the growing boy and an inspiration to the poet. Milton put in imperishable words the emotions alike of the boy and the man: "Each tree, laden with fairest fruit, that hung to th' eye tempting, stirred in me sudden appetite to pluck and eat." The universal appeal of fruit is one of the most constant things in life.

The research, advice and service provided by government departments has taken much of the risk out of all phases of agriculture. Land—its soil, mineral, plant and animal life—and water are the basic assets of every national economy. Man's welfare depends on soil and water being maintained in a productive state. If this is not done other resources perish; there can be no basic industries of agriculture, forestry, fisheries and mining; there can be no secondary industries such as manufacturing and water power development, and no wild life and recreation without maintenance of life in the soil. The third annual Resources Conference in 1950 gave some consideration to the expansion of agriculture. Mr. William MacGillivray, provincial director of agricultural extension, advocated a definite government policy of land settlement and colonization, with the government clearing much of the land without cost to the settler. He placed the farm land available at 6,000,000 acres, mostly in the northern Cariboo, central regions and the Peace River country with limited areas in the Kootenays, southern interior, lower mainland, Vancouver Island, and possibly the Queen Charlotte Islands. He pointed out that the province produces only 42 per cent of its beef requirements, 22 per cent of its veal, 27 per cent of its mutton, and 12 per cent of its pork needs.

It is the concern of the provincial government lands department under the Hon. E. T. Kenney that the soil should be put

to the use for which it is best suited. Not all land is adapted to settlement and agricultural development. Disadvantages of either climate, topography, soil or location have handicapped many hopeful settlers, as can be seen by the abandoned homesteads in almost every settled area, mute witnesses of futile years of struggle and hardship before the final decision was reached that odds against eventual success were too great. Yet such land will have other important economic and social values, such as forest and wild life crops, watershed protection, or scenic and recreational purposes. In order to direct settlement away from these unsuitable sites and to determine the best uses for the undeveloped lands the department of lands instituted in 1942 a programme of systematic land classification, with surveys and maps issued covering the areas inspected and tested. To date more than 1,000,000 acres of land have been classified. These soil analyses and maps are available to the public and are a tremendous help to the intending settler, for he can find at a glance areas that contain the soil he needs. If he doesn't know the best type of soil for the crop he has in mind the assistance of the provincial and federal agricultural departments is his for the asking. The old gruelling years of hopeless struggle to make a living off unsuitable land need never be repeated in British Columbia.

The lands department has three main branches: the lands branch, the survey branch, and the water branch. The lands branch has supervision and general administration covering the disposal of Crown lands by pre-emption, lease, sale and reserves for various purposes. The survey branch is working in high gear to classify the land and to gather maps and information for industrial development. The water branch has administrative charge of all the rights of the province and individuals in the use of water. Scientific investigations are in progress throughout the year to determine the best uses to which the water may be put. It supervises irrigation operations, waterworks, drainage, fir protection, and makes snow surveys as a step in the precautions against floods. The disastrous Fraser River flood of 1948, when more than 20,000 acres of rich farm land were inundated pre-

Photowash by Ronald White

sented this department with the heaviest task in its busy history—the building of a new dyking system by which it hopes to control permanently the turbulent river in its spring flood.

Rural life in British Columbia has many attractions. Much of the uncertainty of reward has been removed by co-operative methods of marketing; technical assistance and mechanization have eased the labour; and the amenities of modern living considerably offset the drudgery and boredom. In fact Mr. R. E. Gosnell, an authoritative writer in the historical work *Canada and Its Provinces*, says: . . . "the general conditions of physical and social life are pleasant, prices are high and the demand exceptional, and the lot of the farmer is, on the whole plane of existence, as good, if not a little superior to, that of his brother tiller of the soil in any other part of the known world to-day." That was written many years ago and to-day the farmer's lot is even better than pictured by Mr. Gosnell. There are, of course, many unfortunate experiences and a word of caution is always directed at an intending settler against paying too much for his land. Sometimes the price asked per acre is excessive and sometimes, too, there is speculation in arable land.

There are co-operative organizations in every branch of farming; there are Farmers' Institutes, Women's Institutes, and calf clubs and junior farm organizations for the youngsters, all providing facilities for fruitful co-operation, instruction and social life. The institutes are an important part of an agricultural community. There are 183 such organizations in British Columbia with a membership of 8,500, while the 210 women's institutes have a roll of about 5,000. They carry out the type of service in the country that the service clubs do in the city. The Farmers' Institute was organized in 1897 and for more than fifty years the recommendations of its executive have helped to form the agricultural policy of the government. It fostered co-operative marketing and buying, and it stimulated the early growth of the fruit industry in the interior. Mr. T. F. Paterson, B.Sc., still active in farming interests, was responsible for the organization of the Institute when he toured the agricultural areas in 1896 urging

settlers to unite for their mutual welfare. Half a century ago the Institute preached the possibility of tree fruits in the Okanagan Valley and orderly disposal of the crop. The first cargo of apples was shipped overseas in 1898 and in the space of a man's lifetime a wealthy fruit industry has been built. When Mr. Paterson toured the lower Fraser Valley hens did not produce sufficient eggs for local needs. Now one hundred million eggs a year are shipped to overseas markets, in addition to supplies for the domestic market. The Institute idea quickly won favour and organization proceeded immediately, chiefly due to the efforts of the late Hon. J. H. Turner, a former premier, who backed Mr. Paterson's lecture tour. Now Mr. Paterson sees a new agricultural era opening in the northern areas, chiefly the Peace River country, containing possibilities for the next fifty years that cannot at present be evaluated.

The Women's Institutes, which should not be considered auxiliaries of the Farmers' Institutes, are performing an equally important work. The same year that Mr. Paterson left Ontario for British Columbia a little boy in Ontario died from impure milk. His grieved mother started a campaign to spread better food knowledge among women. An institute was formed and immediately copied right across the country. There are now three thousand organizations with a membership of 70,000 rural women. The first was organized in 1909, and they are a potent force in bettering living conditions, particularly among the younger generation. The British Columbia women have completed several projects of enduring benefit. The first was to raise an endowment fund for the assistance of crippled children. The next was to raise a fund of $19,000 to enable rural girls to take the home economics course at the university. Then came the second world war and the first venture was making jam for Britain from fruit donated by growers. Nearly half a million pounds was shipped to the Old Country as a gift. Seven thousand woollen comforters were made and presented to Britain, $500 was sent to the Queen Elizabeth Fund, and $1,000 provided for mobile canteens. That, perhaps, was not much in terms of total war

Photograph by Ronald White

effort, but these gifts were made by a few hundred busy farm women who carried on many other activities concerned with the war, as, for instance, counsel on rationing problems and voluntary distribution of the ration cards.

One important work fostered by the rural institutes has been handicrafts, which has revived strongly in recent years. Many women of European birth are now settled in farming communities and they have added their native skills and crafts to the local cultural and recreational life. The handicrafts are of three kinds: the crafts of the pioneer women whose work is of a practical character, first undertaken to ease the rigors of pioneering life and continued to-day with more decorative effects. Then there are the national handicrafts from many nations, practised by the New Canadians. Finally, there are the modern crafts which, in general, is the application of up-to-date methods to the work of the pioneers. In many cases crafts have been developed into a thriving business, particularly among the summer tourists. Displays from the rural areas is one of the chief features of the annual Vancouver Exhibition.

The Women's Institutes of the United Kingdom owe their origin to British Columbia. Mrs. Alfred Watt, M.B.E., took the idea to Britain in 1915. It attracted interest immediately, spread to many other countries and now has a membership of well over one million. Mrs. Watt explained the organization and its purposes to the late Lord Baldwin who called it "the greatest idea to come from the Dominions," and Mrs. Watt was subsequently requested to explain it to Queen Mary, who later became president of the Sandringham Women's Institute.

The objectives of the association are broad, giving plenty ot scope for the voice of rural women to be heard alongside their sister service clubs in the urban districts. The aims include: promoting home economics, public health, child welfare, education and better schools, immigration and settlement, encouraging agriculture, friendly relations, mutual helpfulness, diffusion of knowledge, and generally improving community conditions. It is clear, therefore, that the Institute is an important part of the

social structure, concerning itself with everything that affects the public welfare. It has been instrumental in bridging the gap between life in the country and life in the city.

From the earliest days the provincial department of agriculture has worked sedulously for the improvement of the industry, and one of its most important measures is the Horticultural Board Act, designed principally to prevent the importation of pests in fruit and nursery stock. Because of rigid enforcement British Columbia has remained relatively free from diseases which have struck fruit in many other countries.

Potato growing is a $6,000,000 business and three factors are responsible for its steady yearly expansion: the increasing quantities of good seed, efficient growing and improved cultural methods, and a first class marketing organization of trained experts. Hong Kong is a heavy buyer of British Columbia's potatoes, and next come the United States, Malay States, and the Philippines. Seed potato growing is a specialized branch that has reached a high standard. The growing of vegetable and flower seed is also highly developed. British Columbia produces 80 per cent of Canada's total of these types of seed. This specialty was born in the first world war when most of the seed growing areas of Europe were cut off. Europe regained much of its business when the war ended, but British Columbia retained enough trade to keep a small industry going. Meanwhile, growers improved the quality and operating methods and by 1939 this business was firmly entrenched with the United Kingdom taking the bulk of the seed produced. This proved a lucky development for the Allies in the second war when the great seed areas of Denmark, Holland, Belgium, France and Hungary were again cut off. British Columbia and California were practically the only seed-producing areas left. British Columbia expanded its industry thirtyfold to help meet the seed famine. Now, with the European fields in production again there was a contraction, but, as in 1918, a large part of the wartime market has been retained. It is the high quality and efficient operating methods that are gaining business, and the British Columbia grower is in his best position to meet world competition.

Photowash by Ronald White

The value of the poultry industry, now more than sixteen million dollars a year, has trebled in the last ten years. It really did not become economically important until about 1920 by which time many war veterans had taken up poultry farming in the Fraser Valley and on Vancouver Island. Similar impetus was given after the second war and now the poultry business ranks next to fruit and vegetables in production. Quality has counted again, as testified by government certification of record of performance—a gilt-edged assistance in marketing. The production of baby chicks and hatching eggs is the most important phase of the industry, and shipments to California and the Prairie Provinces are increasing each year. Since 1945 there has been a rapid development of turkey breeding and British Columbia is now the principal source of supply of hatching eggs for Alberta, Saskatchewan and Manitoba. A Poultry Industries Council was organized in 1945, its members representing the producers, wholesalers, feed manufacturers, department stores, co-operatives, turkey improvement associations, the provincial and federal department of agriculture, and the University of British Columbia, and it has achieved a great deal in bringing about improvements in the whole industry.

It is a short span in years from May 22, 1811, when Daniel William Harmon, a fur trader, planted the first potatoes, barley and turnips at Fraser Lake, to the agricultural picture to-day, but the period between embraces a crowded story of advancement in quality of product and efficiency of farming, both of which are yearly demonstrated at the exhibitions and fairs all over the southern part of the province.

Actually the first attempt at farming was twenty-five years before Mr. Harmon set the pattern for other traders to follow. In 1786 when a fur-trading ship left John McKay behind at Nootka Sound to recover from an attack of scurvy, the convalescent cleared a tiny patch of land and planted some seeds. When he left the next year the Spaniards enlarged his garden. Black cattle, swine, goats and domestic fowls were brought in by Don Pedro Alberni, and when Captain George Vancouver took

over the settlement from Quadra he found a well-cultivated plot of land.[1]

The first land transaction was on June 20, 1791, when John Kendrick, a Boston fur trader, gave Maquinna and other Indian chiefs ten muskets for nine square miles of land. He extended his holding to 72 square miles in the next few years and then his employer tried to sell the land. He had advertising circulars printed in English, French, German and Swedish, but British Columbia's first real estate venture turned out to be a fizzle.

Mr. Harmon's successful attempt at crop growing helped settlement on lands outside the trading forts. From then on, as new forts and stations were opened, the land around them was cultivated. Lands were soon being farmed on Vancouver Island, in the Fraser Valley at Fort Langley, and in the Puget Sound region. The Fort Langley activity resulted in the first trading when butter was sold to the Russians in Alaska. Fort Kamloops at this time was the centre for horse-breeding and training. The Fraser River gold rush provided another encouragement to farming when there were 30,000 prospectors in the market for food supplies. As mines began operation cattle and sheep had to be imported. Between 1861 and 1864 a total of 7,720 cattle, 5,378 horses, 998 mules, and 1,371 sheep were driven from the states of Oregon and Washington through the Okanagan Valley to the Cariboo mining country. By 1865 cattle ranching was fairly well established in several parts. Prices were: bacon 80 cents a pound, beans 80 cents a pound, potatoes $90 per 100 pounds, and eggs $8 a dozen. Because of the liberal land laws large scale agriculture was typical. North and east of the Cascades 320 acres could be pre-empted; elsewhere it was 160 acres. Two years' residence was required as well as improvements to the value of $2.50 an acre. The purchase price was $1 an acre. Crown lands were sold outright in blocks of 640 acres, $5 for first class land, $2.50 for second, and $1 for third. With the completion

[1] For early farming history see Hudson's Bay Company records and address by Dr. Margaret Ormsby, assistant professor of history, University of British Columbia, to the Canadian Colonization Association.

Photograph by Ronald White

of the Canadian Pacific Railway, however, the big Okanagan ranches were cut up into smaller fruit ranches, and as cattle ranches gave way to orchard lands values increased from $1 in 1898 to $1,000 an acre in 1910. The Fraser Valley turned to specialized farming. There were land booms and influxes of settlers, but the farm communities still suffered from competition from the prairies, and even as late as 1905 agricultural imports exceeded exports by $2,000,000. It was not until 1911 that the balance was reversed. Ten years later British Columbia agriculture had passed the experimental stage, farmers were taking advantage of the knowledge offered them by the Dominion experimental stations, the provincial government experts, and the university department of agriculture. Technical improvements were made, co-operative marketing was initiated, ruthless exploitation of the soil ended, and farming became a business—one of the most valuable of the industries in its aggregate production.

XII

MINERAL RICHES

BRITISH COLUMBIA is sitting on a vast storehouse of mineral wealth, the extent of which cannot be known for many years, nor even closely estimated. The province occupies 1,300 miles of the great Cordilleran mineral belt that stretches right down the Pacific coast into Mexico. *Geology and Economic Minerals of Canada*, published by the geological survey branch of the Dominion Department of Mines, has the following to say of this 400-mile wide belt that crosses British Columbia: "The Cordilleras stand unparalleled in the world for continuity, extent and variety of their mineral resources. . . . In Canada the belt is not only rich in gold, silver, lead, copper and zinc, but has enormous resources of coal of excellent quality from lignite to anthracite, which is conveniently distributed. . . . The prospective resources of the Cordilleran belt in Canada (that is in British Columbia) may, therefore, be considered enormous. . . . It has been proved to possess the greatest coalfields, one of the greatest copper mines, one of the greatest lead-silver mines, and two of the greatest placer-gold camps in western America—a region noted for its extraordinary mineral wealth. . . . In Canada the region includes all of British Columbia, parts of western Alberta, the whole of the Yukon territory, and a large tract in the adjacent western portion of the North-West Territories—an area, in all, of approximately 600,000 square miles."

More than forty years ago the Dominion Mines branch made an estimate of the coal deposits surveyed up to that time, and gave a total of more than forty billion tons. Since then at least one great area, at Hudson Hope, with nineteen outcroppings, adds an official estimate of several hundred million tons.

Photograph by Ronald White

In the past hundred years two and a half billion dollars worth of minerals have been taken out of British Columbia's hillsides and valleys. Lead accounts for the biggest share of the total, with gold, coal and coke close behind, and then copper, zinc, silver, structural materials and miscellaneous metals. There was a jump of $40,000,000 in production in 1948, with a total of $152,524,752, the highest in history. The average for the twenty-five years preceding 1947 was about $60,000,000.[1] Dr. Hartley Sargent, chief mining engineer for the provincial government, in an address to the Canadian Institute of Mining and Metallurgy, told of the discovery of "perlite rock" in Francois Lake that may have important economic advantages. "It possesses great advantages in its lightness and good insulating properties. Its use in lightweight plaster and in wall board has grown rapidly in the western United States," he said. He also sees possibilities in the volcanic glass on the Queen Charlotte Islands, and Empire Valley, west of the Fraser, for insulating materials. Among the miscellaneous metals and elements are antimony, bismuth, cadmium, tin, tungsten and sulphur. Gypsum deposits discovered in 1947 proved to be the world's third largest in extent and the crude ore is to be shipped to Spokane, Washington, for processing. Exploration is continuing on a deposit of asbestos found in the Okanagan Valley. Late in 1948 the production of iron ore for export to a ferro-alloy plant in the state of Washington was commenced on Vancouver Island.

The increased values of base metals helped to make 1948 a record year, but the actual output of minerals was also the highest in history. Combined, they put the mining industry in second place, ahead of agriculture, for the first time in many years. The expansion that got under way in 1948 was continued the following year, and the number employed passed the sixteen thousand mark and the payroll approached forty million dollars. The recovery of raw materials from the soil is the basis of many industries, and government officials state that every man working in a mine provides employment for five others in the province, and that

[1] See annual report of British Columbian Minister of Mines, 1948.

for every dollar of new wealth created six dollars worth of new business follows.

Because of higher market prices the emphasis for some time is likely to be on silver and base metals. Not only have these rising values put new life into what were at one time considered secondary mines, but they have intensified the search for new deposits. This is particularly so in the extensive Kootenay-Boundary region, which produced the bulk of 1948's mineral record. Famous properties of sixty years ago, which had degenerated into semi-decay, have been rehabilitated and new ones developed. There are now more than one hundred mineral plants operating in this area. The Slocan district, famed for its silver production in former years, is booming again. A dozen companies are putting hundreds of thousands of dollars into new equipment and renovation of old properties. The Consolidated Mining and Smelting Company of Canada Limited, at Trail (usually abbreviated to Comingo), is the largest producer of non-ferrous metals in the British Commonwealth and is among the leaders in exploration and development. The company was formed in 1906 by combining the smelter interests of the Canadian Pacific Railway and several smaller properties.

The background of the mining industry goes back sixty years to the beginning of the Rossland camp. Claims were first located on the gold-copper lode in 1890, and as a result the city of Rossland was born and south-eastern British Columbia came into prominence in the mining world. The camp developed rapidly and the ore was shipped out by waggon road to the Columbia River and then by steamer and rail to Montana for smelting. In 1895 Augustus Heinze of Montana built a smelter at Trail, and a narrow gauge railway from Rossland to Trail and later to the Columbia River. The next year the Red Mountain Railway, connecting Rossland with Northport was completed, giving standard gauge connections with three transcontinental lines at Spokane. Important developments then followed quickly, chief being the completion of the Crow's Nest Pass branch of the Canadian Pacific through the coalfields to Kootenay Lake. The West Kootenay

Photograph by Ronald White

Power and Light Company completed its first power plant at Bonnington Falls on the Kootenay River, and thus coal, coke and electric power were made available for the Trail smelter and the Rossland mines. In 1898 the Canadian Pacific Railway took over the Heinze interests. In 1901 a blast furnace was installed for lead smelting, the bullion being refined in San Francisco. In the next year bullion was refined at Trail by the A. G. Betts electrolytic process. Sales to eastern Canada and the Orient marked the beginning of the export of metals. Now Trail supplies about 10 per cent of the world's requirements of lead and zinc, as well as considerable quantities of silver, gold, cadmium and bismuth. The Canadian Pacific Railway's smelter interests came under the present company name in 1906, and three years later when the production of gold-copper ores from Rossland, and lead ores seemed to be on the decline Comingo took a lease and option of the Sullivan mine in the east Kootenay, a mine that was to become world famous because of its great wealth. Since 1914 it has been the largest lead producer in Canada. In latter years metallurgical developments have been concerned mainly with the recovery of by-products from the lead and zinc operations. From this an extensive chemical industry was set up, a phase of Comingo's operations that expanded rapidly during the war.

Speaking early in 1949, just after he had completed a survey of the entire mining situation, Dr. Hartley Sargent, the government's chief mining engineer, said: "High prices for silver and base metals have enabled the producers of these metals to meet the increased costs for labour and materials that have caused such difficulty in gold mining. Almost the entire production of these metals is sold outside British Columbia at world market prices, and despite evidence of some concern over the price of lead it is expected that the prices for the principal base metals will remain high." Dr. Sargent pointed to the increased outputs already reported in the early months of 1949, and to the new companies entering the base metal field. Comingo is extending its base metal operations and is also experimenting with a steel mill, using the tailings from the Sullivan Mine which have been

stockpiled for that purpose for twenty-five years. Evidences of uranium have been found and are under investigation.

Growing knowledge of mining operation and metallurgical research will undoubtedly increase the production of metals now grouped under the miscellaneous heading. What has been termed the "know how" must be acquired before the discovery and mining of some metals can become a profitable enterprise, but scientists and technicians of the bigger companies, the governments and universities are constantly working on natural resources problems. For instance, Dr. H. V. Warren, of the University of British Columbia department of geology and geography, is seeking improved ways of locating ore bodies by analysing the chemical composition of vegetation. A chemical breakdown of twigs has shown significant differences in the concentration of copper and zinc absorbed by the trees. Dr. Warren and fellow scientists are trying to find a consistent pattern. Their field work in the summer of 1949 was devoted to an analysis of vegetation for manganese and iron. Botanists, plant pathologists, chemists and soil experts co-operated.

As British Columbia enters a new era of development of natural resources the department of mines becomes one of the most important branches of government. To meet the new conditions the department is split into four divisions, administrative, mineralogical, inspection and analytical. The mining laws are adequate, revised from time to time to meet changing conditions, and are rigidly enforced. The mineralogical branch is staffed by geologists. Their work supplements that of the Federal Department of Mines which does the basic geological mapping of the province while the British Columbia branch does the detailed mapping in mining areas. This branch gives technical information to the public, provides prospectors' sets for bona fide prospectors, and examines rock and mineral specimens for anyone. The chief duty of the inspection branch is to ensure safe operation of the mines. Mine rescue apparatus is compulsory and miners are encouraged to take first aid and rescue courses. The analytical branch has the finest equipment obtainable for its assay work.

Photowash by Ronald White

All this technological advance and scientific aid has taken the old colourful prospector almost entirely off the scene. The cheerful, bearded man who set off into the hills with his packmule, his pockets empty and probably grubstaked by some trader in the mountains, is never seen now. His was a hit or miss adventure, but he was happy and independent and if he found gold it was all his, except for the little debt to whoever gave him credit for food. But now prospecting is different. The men sent out to seek minerals are usually university graduates, some of them employed by a big mining corporation. They take a course from government instructors in hunting for metal, their grubstake is a weekly pay cheque, and usually are taken to the selected prospecting ground by plane. The company employees and shareholders will be the chief beneficiaries of what they find. There are still many individual prospectors and they too are eligible for the course in prospecting, and if approved the government will give them a great deal of help, including a grubstake. The old characters were likeable and attractive, but it is the "professional" prospector with his specialized knowledge and equipment who is achieving the most in expanding British Columbia's mining industry. But it should also be remembered that it was the hardy adventurers of the gold rush days who first directed attention to the wealth in the hills.

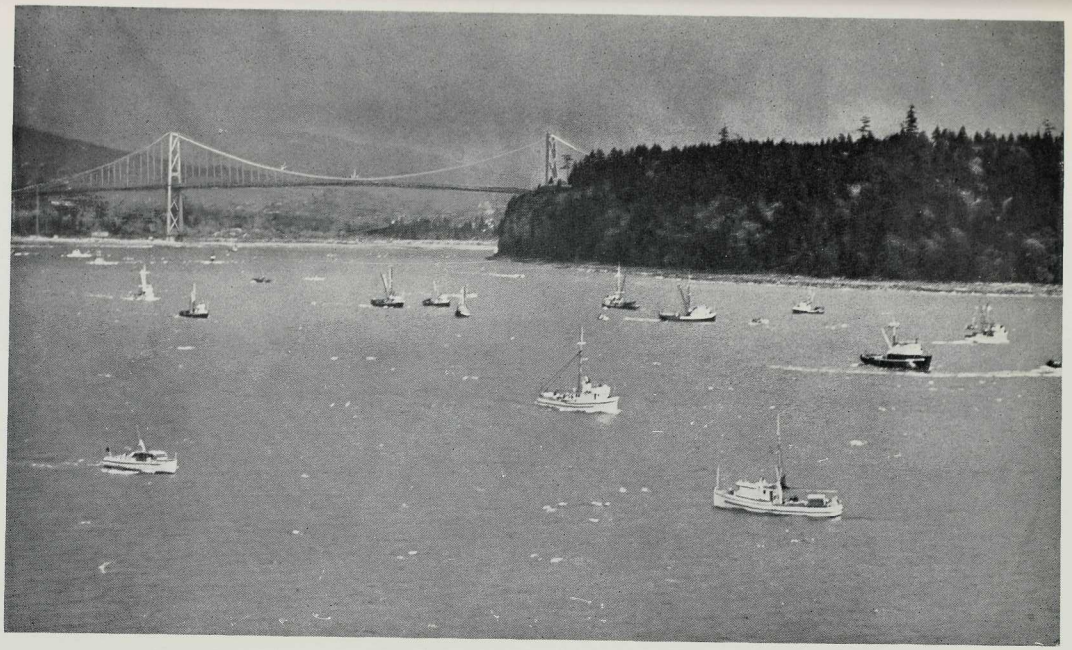
The Spaniards were the first to work placers of gold in British Columbia. By 1821 fur traders were taking lead for bullets from outcroppings at Riondel. Twelve years later Indians showed them coal at Suquash, where Scots miners worked a pit until the Indians found more extensive deposits at Nanaimo. Hudson's Bay traders began sending in gold they had obtained from placer workings, and soon the stampede was on, from Oregon, California, and all parts of Canada. It was the era of pick and shovel prospecting and washing gravel from the beds and streams in a frying-pan. The year of the rush, 1858, marks the beginning of gold mining in British Columbia, the output jumping quickly to $4,000,000. In the ten years 1860–69 the total recorded value was almost $30,000,000. Williams and Lightning Creeks in the Cariboo were

two of the most noted producers and lucky prospectors who staked there became rich in a very short time. On Williams Creek the maximum yield was $6,544 a day and on one claim 80 by 25 feet more than $100,000 was taken. Three prospectors in partnership cleared $40,000 each on another site. Scores of creeks were giving up their wealth and the records of the early days of gold mining are full of fabulous tales of fortunes quickly made. These successes are, however, far outnumbered by heartbreaking disappointments. Many men spent years tramping the hills and never found a trace of gold. The turn of the century saw organized development gradually displace wild speculation. Prospecting was pressed in a wide range of districts and resulted in the start of several famous mines, the famous Sullivan property, for instance. Silver and lead were found to be of exceptionally high grade and easily marketed. The production of lode gold began in 1893, copper in 1895, and zinc in 1909.

Following brief operations at Suquash coal mining was started at Nanaimo on Vancouver Island in 1852, then at Comox, also on the island, and then at Crow's Nest on the mainland in 1897. Later smaller developments started at Nicola, Tulameen, Princeton and Telkwa. Other deposits, chiefly in the Peace River, await exploitation.

Mineral production is taking its place in the new economy. It is an essential phase of the broadening of the industrial picture. Its future is very bright but the immense riches yet to be wrested from the soil cannot even be guessed at.

Photograph by Ronald White



12. Fishing vessels putting out from Vancouver Harbour

Photograph by Ronald White

XIII

FISHING CAME FIRST

FISHING is the oldest and still one of the most prosperous of the primary industries. British Columbia's best known fish is, of course, the salmon, and while it was the foundation and is still the mainstay of the industry, other fish are caught in important numbers. Salmon accounts for about half the catch, 20 per cent are herring and the rest halibut, pilchards, the liver fish, and shell fish. British Columbia palates have probably been spoiled because of the abundance of the delicious salmon. For many years the lowly little pilchard has been scorned, fit only for fertilizing the fields. But this little fish is very tasty and a sufficient favourite in other parts of the country to make pilchard fishing worth while.

Because of the high nutritional values of fish oils, this by-product of the fishery industry is expanding rapidly. Attempts are being made to breed Atlantic lobsters and oysters on the British Columbia coast. There are plenty of crabs but no lobsters. There are, however, some native oyster of very high quality but limited in size and difficult to handle commercially. Just before the last war oyster seed from Japan was introduced into favourable waters. They thrived but did not multiply as much as in their native Japan. The increase was not sufficient for permanent marketing. New seed was therefore imported from Japan every few years until Pearl Harbour stopped the business. Now, by special arrangement with General MacArthur, the importation of seed has been resumed and fisheries scientists hope the Japanese oyster will become acclimatized to the cooler water conditions in a few years and reproduce as abundantly as in Japanese waters.

The lobster experiment was not immediately successful. Two thousand were placed in water where the temperature, currents,

and food supplies were similar to their habitat in the North Atlantic, but so far there have been very few young lobsters, but the studies and experiments are being continued.

The fishing industry gives employment to about 22,000 and has a payroll of $40,000,000. The market value of the catch in 1948 reached the record total of $70,000,000, but what captured the imagination was the heavy run of Albacore tuna and the resumption of whaling. Tuna fishing is new in northern waters. It is only in the last few years that these fish have been found north of California, but they are now being caught in large numbers close to the British Columbia coast. This fact is being studied in connection with the contention that the climate of British Columbia and the temperature of the surrounding waters are getting warmer. The tuna, called the "chicken of the sea" and known in England as the tunney, is the largest of the mackerel family, reaching a length of more than 10 feet and a weight of 1,500 lb. It is robust, bluish above and grey spotted with silver below. It is found in all warm seas and periodically approaches the coasts. It feeds on other fishes and is excellent food. The sport of catching tuna with rod and line from launches originated in California and has spread to New Zealand and Europe. The tuna caught by the British Columbia fishermen do not approach the great sizes found in southern waters.

The fisheries have benefited tremendously from the controls established jointly by the governments of Canada and the United States, particularly in relation to salmon and halibut. In 1930 halibut was in danger of extinction from the intensive hunting. A joint commission, equally representative of the two countries, was set up by special treaty. A limit was set on the total catch and when that limit is reached all halibut fishing is stopped for the season. As a result the average annual catch has been considerably raised all along the north Pacific coast. Incidentally the treaty setting up the commission was the first to be signed by Canada as a fully autonomous member of the British Commonwealth of Nations under the Statute of Westminster.

Similar supervision and co-operation between the two nations

Photowash by Ronald White

has brought stability to salmon fishing. The Pacific salmon, unlike the Atlantic species, dies after spawning. Usually in its fourth year it returns to the river where it was born, lays its eggs in the sandy bottom of the upper reaches and expires. Sockeye is the choicest and most valuable of the five kinds of salmon. The same circumstances that nearly killed halibut fishing were strangling the salmon industry—intense and uncontrolled fishing. Worse still, fish traps were placed at the mouth of rivers to catch the salmon as they tried to return to the spawning-grounds. The commission immediately established controls and abolished the fish traps, but it still had a major problem which took some years to solve—the killing journey to the sand bars of the upper Fraser River.

The chief spawning-grounds are far inland, chiefly up the Fraser, Skeena, and Naas Rivers. Each of these main water highways has many tributary rivers and each of the rivers has scores of creeks with gravelly beds on which the fish spawn. The Fraser, mighty and boisterous and nearly 800 miles long, has a watershed of 90,000 square miles and among the rivers which join and carry the salmon to and from the sea are the Pitt, Harrison, Coquitlam, Stave, Chilliwack, Thompson, North Thompson, South Thompson, Chilcotin, Quesnel, West Road, Nechako, Stuart, and Bowron. There are other major streams which have not yet been biologically explored. By far the greatest number of salmon come from this Fraser system, but a few years ago it seemed that the upper part of the river would be abandoned as a breeding-ground.[1]

One hundred and thirty miles from the mouth is the Fraser Canyon, a narrow rockbound gorge, through which the river swirls and tumbles so quickly and powerfully that sometimes mud and silt are carried 30 miles into the ocean. Fighting foot by foot up these turbulent waters the salmon makes its final journey. It had to be big and strong to accomplish this under the best of conditions, but in 1917 a blast on the railway line that snakes along the river bank sent hundreds of tons of boulders crashing into the canyon at Hell's Gate, blocking the salmon route to the spawning

[1] For the life story of the salmon see *Return to the River*, by Roderick L. Haig-Brown.

grounds. It used to be a popular sight for the late summer tourists —and a sad sight for sportsmen—to stand on the road hundreds of feet above the river at Hell's Gate to watch the salmon leaping at the rock obstacles trying to find a pool from which they could jump another short stretch. Few succeeded and many millions fell back exhausted and died in the pools below the "gate," or sank into the soft silt in the bed of the river. Year by year for thirty years the salmon run dwindled. The loss of eggs—of unborn fish—in those three decades was stupendous. The International Pacific Salmon Fisheries Commission in its annual report for 1943 made the estimate that the loss of revenue in that period totalled probably one and a quarter billion dollars.

Scientists and technicians studied the problem of the blockage for years. A model of the canyon and its rushing waters was constructed in the laboratory of the University of Washington. The piles of great rocks in the swirling river could not be removed and the construction of ordinary fish ladders would not serve because of the sharp fall in the water, as much as 40 feet at times. Eventually the commission decided on a million dollar project of parallel weirs on each side of the river, a series of pools at rising levels so that the salmon could leap from one to the other without difficulty. Each pool had a backwash in which the fish could rest. The construction job, particularly the blasting, was tricky and dangerous. In dynamiting for the weirs there was danger of bringing down the whole river bank.

The weirs, or ladder, opened for the spawning hordes in 1946. Salmon were caught in the pools below the weirs, tagged and put back in the water. Shortly afterwards the same fish was caught far above the river obstruction. Officials at the weirs watched the sockeye ascend the ladder, were able to count them in their thousands, and were confident that man's interference with Nature's ways had been repaired. The first season the weirs were in operation the number of salmon reaching the spawning-grounds was several times the total in the preceding cycle year. For instance, on the Stellako River gravel bed 48,000 fish spawned in 1942. In 1946 the number was 250,000. The first real indication

Photograph by Ronald White

of the success of the ladder will be seen in the 1950 salmon catch, the first of the four-year cycles since the weirs were opened.

The escapement of salmon to the spawning-ground is the most vital factor in the industry and the journeys up the rivers are carefully watched and checked. If the number reaching the spawning-ground is large then a heavy salmon run four years later is pretty well assured. The federal and provincial departments of fisheries and the International Control Commission give every possible aid to the fish ascending the rivers and, when necessary, fishing is suspended to permit the salmon to get up to the spawning-grounds. The Pacific salmon returns to his home river to spawn—on the same ground on which itself was spawned, and these fish will fight to the last gasp to get there. How the salmon finds its way back to its birthplace from far out in the Pacific Ocean remains a mystery. The International Commission is engaged on a five-year programme designed to make things easier for the home-coming salmon at each one of the scores of spawning-grounds washed by the three main rivers or their tributaries, and, when all the ladders and other aids have been provided, the Commission expects the salmon to increase until they reach the huge runs that astounded the Hudson's Bay Company officials when they pioneered the country in the 'sixties.

The development of by-products from the fishing industry is a belated recognition of the wealth in the waters offshore. It was because salmon was easily accessible in the estuary waters that the era of fur trading was possible; and it was because salmon could be caught easily that it dominated the fishing industry for nearly three-quarters of a century. It still is the chief product but other fisheries are steadily expanding. It was not until 1912 that thought was given to seeking other fish offshore. Now the industry is branching out in whatever direction will bring rewards. The government fisheries departments give all the assistance they can. Patrol boats equipped with sounding devices developed for war purposes help the fishing fleets find the schools of fish. As they did years ago with salmon and halibut government biologists are studying the habits of the tuna. The first step was to tag some of

those caught, put them back in the water and wait for the report of their second capture. The market value of this fish sometimes runs up to five hundred dollars a ton, but the price has dropped lately because of the heavier supplies. In 1948 a tuna canning industry was started in Vancouver, bringing the investment in this part of the industry to $1,000,000.

Whaling in British Columbia waters started eighty years ago and about the turn of the century was in a prosperous condition with about one thousand mammals being killed each season. The catch began to fall off about 1910 and from 1919 to 1924 the average killing was down to 387, valued at about half a million dollars. At that rate the industry was not profitable and by 1943 whale-hunting had ceased. It was revived in 1948 and the catches were sufficiently good to justify the operations being continued.

Not only have fishermen learned that catching other fish besides salmon and halibut is worth while but government and university scientists have shown the way to profitable expansion of the market in by-products. The herring is an example. Each year a substantially greater portion of the catch is being marketed in the form of oil and meal. This is important because it is one branch of the fisheries that can sustain far greater exploitation. In 1948 four times as much of the herring catch was used for oil and meal as was processed in 1946. The failure of the herring run on the Atlantic coast in 1948 meant a bait shortage for the Nova Scotia fishermen. So the British Columbia herring season was re-opened and two million Pacific herring were sent to the Atlantic for bait. The winter of 1949–50 saw new records made in the herring harvest. The best of the old marks had been passed when the season still had several weeks to go, and by January two and a half million gallons of oil had been produced.

Halibut is third in value and also has a thriving market for oil extraction. An attempt to market fresh whale meat has won a limited acceptance but the bulk of this catch is reduced to meal and oil.

There are other delicious table fish awaiting scientific study and exploitation, such as the skil, to be caught in abundance round

Photograph by Ronald White

the Queen Charlotte Islands, the oolachan, or candle fish, and the anchovy, all too tender for the ordinary means of shipment to market but all of considerable economic value if the shipping problem can be solved. Oolachan particularly are plentiful, thanks to the measures adopted by the government to keep the sea lion menace down. Oolachan, when the run is on, can be scooped up in buckets. The Indians extract grease from these fish, which they use much as we do butter, while refined oolachan oil has a high commercial value.[1]

Sturgeon used to be caught off the coast but no attempt is now made to hunt, although Professor E. E. Prince, Dominion Commissioner of Fisheries forty years ago, declared it was one of the most valuable of fishes because of its many and important uses, of which he enumerated eleven.

The respective powers of the Provincial and Federal Governments over British Columbia fishing were a matter of contention for many years but were finally clearly laid down by the Privy Council in 1913. But just before this controversy was ironed out new cause for concern arose in the gradual penetration of coast fishing by the Japanese. By 1912 they constituted a majority engaged in the industry, and although the Governments took steps to encourage white fishermen, with some effective results, the Japanese hold was maintained. This domination continued until 1940 when it was ended at one stroke by the Federal Government's war order of removing all Japanese from the coastal region. Some three thousand Japanese fishing boats were sold to other interests. The ejected Japanese were scattered all over Canada and when the ban against their residence on the coast was lifted in 1948 few showed any inclination or had the financial means to set up in the fishing business again.

Developments have made fishing more than a seasonal occupation. The fisherman can be busy most of the year and he has greater assurance of stability than he had in the days when there were no control and little scientific assistance.

[1] See R. E. Gosnell's *Year Book of British Columbia* and the Records of the Victoria Natural History Society.

XIV

POWER FROM THE RIVERS

THE change in the trend of British Columbia's economy to one based on manufacturing is largely founded on the vast hydro-electric power resources. More than 9 per cent of Canada's hydro-electric output is now being generated in this province where production now exceeds one million horsepower from seventy-eight plants, while even more significant is the fact that known and accessible potential power is more than one-quarter of the Dominion's total. Between six and ten million latent horsepower gushes in rivers and streams and over lofty falls, in many cases ideally located for new enterprises, but the power picture is by no means complete as many sources have not yet been surveyed. It was water power that enabled mining, forestry, manufacturing, and agriculture to reach the present stage of development, and it is water power that is carrying the province into a new era. Power expansions that are projected run close to seven hundred million dollars.

The province, traversed by three distinct mountain ranges and with, on the whole, a high rate of precipitation, has many mountainous rivers whose water powers have not yet been fully surveyed.[1] The regional topography of the interior of the province, with high mountain ranges and large catchment basins, is equally as productive of power possibilities as the wetter coast regions. The predominance of developed water power on the coast is due to the growth of lumber and allied industries there, and the larger industrial and general population. At the end of 1948 the Dominion Bureau of Statistics reported that 1,009,769 h.p.

[1] See report of Dominion water and power bureau of Department of Mines and Resources.

Photograph by Ronald White

had been developed; more than 625,000 h.p. was in use in central electric stations selling energy to customers for commercial and domestic purposes, 126,000 h.p. was used in pulp and paper mills, and the balance in other industries such as mines and sawmills. Only Ontario and Quebec have greater hydraulic development. The latest estimates by the same government bureau show that available water resources in British Columbia amount to 7,023,000 h.p. at ordinary minimum flow, and 10,998,000 h.p. at ordinary six months' flow, again second only to Quebec, but with British Columbia possessing the advantage of a very much larger backlog of potential undeveloped resources. It is believed the Kootenay–Columbia water system alone, an area of some 15,000,000 acres dotted with hundreds of mountain streams, has 30,000,000 h.p. United States interests want to tap part of this reservoir, first with a dam at Castlegar to build up a winter reserve for the Grand Coulee and Bonneville power projects, and then supply power to the state of Montana from the Kootenay River. There are power opportunities of magnitude on the Fraser, Columbia and Pend d'Orielle Rivers in the south and central interior, and on the Nass and Bulkley Rivers in the north, while a great deal of energy can be obtained from many smaller rivers and tributaries.

Canada's New North-west, the report of the joint Canadian-United States North Pacific Planning Project, contains a thorough study of all the resources of the north-west, a term that includes British Columbia. Since the Japanese attack on Pearl Harbour it has been realized that British Columbia cannot be separated from the northern area when considering the destiny of this part of the Continent. Except for the discovery and development of mineral resources—gold in the Yukon in 1897, oil at Fort Norman in 1921, and gold at Yellowknife and radium at Great Bear Lake within the last decade—the new north-west has lain dormant for many years. It was never foreseen that Alaska, lying off the tip of British Columbia, would ever have such war significance as it did in 1941, and that troops from French Quebec would be up there in American territory helping to defend the continent.

With the sudden threat to Canadian and American territory the United States Corps of Engineers built a military road from the end of the railway at Dawson Creek, British Columbia, to Fairbanks, Alaska. From Dawson Creek southward the road went via Edmonton, Alberta. Other undertakings rapidly constructed were the Canol project which included oil development in the Lower Mackenzie; a pipeline west to Whitehorse; airfields between Edmonton and Norman Wells, and a number of winter roads.

With the end of the war it was felt these developments had a peacetime economic value that should not be ignored. A joint study of the resources of the area was undertaken. The territory totalled 1,360,000 square miles, more than half of which lay in Canada. Two-thirds of British Columbia was included in the area surveyed as the resources of that province are closely linked with the development of northern Alberta, the North-west Territories, the Yukon, and United States-owned Alaska.

This report notes that a broad survey of the water power resources indicates that the greatest concentration is found in the coastal and Upper Fraser River drainage system of British Columbia, due to particularly favourable conditions of topography and precipitation. In the coastal area, where ocean transportation costs are low, the abundance of power sites, both great and small, indicates the possibility of establishing industries based on mineral and forest resources, particularly electro-chemical or electro-metallurgical industries which are dependent on low cost power and transportation. This report adds: "In the interior of British Columbia, in the Yukon, in the North-west Territories, and northern Alberta the development of mineral resources would appear to offer the most likely market for power."

The Canadian part of the coastal drainage system consists of about 97,000 square miles on the mainland and 4,000 square miles in the Queen Charlotte Islands. The system is dominated by the Coast Mountains which closely parallel the coast. Most of the rivers rise in these mountains and several of the larger ones, such as the Homathko, Klinaklini, Dean, Skeena, Nass, and Stikine,

Photograph by Ronald White

break through the mountains from the interior plateau. The water supply in this drainage area is the most abundant of any part of Canada, due to the very heavy precipitation on the west slopes of the mountains, varying from 40 inches to more than 200 inches annually. To the east of this range, on the interior plateau, precipitation varies from 15 to 30 inches.[1]

The power possibilities of the Fraser River are impressive, more than three million horsepower, but this river is the salmon's highway to the most numerous spawning-grounds, and little of it could be dammed without grave damage to the fishing industry. The Skeena River in the north is another vital salmon river. Both, however, have some power possibilities without interference with the salmon. The watershed of the Fraser and the Chilcotin, which joins it south of Quesnel, is 53,300 square miles, draining the west slope of the Continental Divide and the eastern slope of the Coast Range. From its source in Fraser Pass to its junction with the Chilcotin the Fraser drops 2,500 feet and records at Quesnel for twenty years show a mean annual flow of 47,000 c.f.s. with a minimum of 9,100 c.f.s. and a maximum of 202,000 c.f.s. Means of harnessing some of this power without damage to the fisheries are being studied, for in addition to the 3,000,000 h.p. available on the main river it is believed a similar amount can be developed by diversion in the upper reaches westward to the coast. For instance, one of the sites being investigated by the Aluminium Company of Canada for establishment of a plant would use water from the Nechako River which joins the Fraser west of Prince George. Ten-mile tunnels would be built to shoot the water down to the installation on the coast. Government engineers say three such great diversions are possible from the Upper Fraser.

The Fraser River has only recently been recognized as a national asset of immense value and a joint body of federal and provincial engineers is studying the problem of using the river for electric

[1] For a description of the water power resources of the principal rivers flowing into the Pacific see *Canada's New North-west* (The King's Printer, $1), or reports of the Department of Mines and Resources.

energy, irrigation of the dry lands, and flood control. Like the St. Lawrence River in the east the great western river has been a determining factor in political and economic development. It was the gold at the Fraser's sand bars that gave incentive to white settlement in British Columbia; it provided the only practical route for railway connection between the east and the west; it was a weak Canada's front line in resisting the northward expansion of the United States; and it was down the Fraser that Alexander Mackenzie travelled to be the first white man to reach the Pacific coast by the overland route. All through the years the Fraser has been the avenue which man travelled from the Rocky Mountain Barrier down to the coast. If its higher waters are diverted towards the coast and harnessed the fury of the river's plunge through the lower canyons will be lessened and the annual flood threat in the lowlands ameliorated.

The increase in the development of water power in the last few years has been marked, chiefly on the Fraser tributaries and in the Columbia River Basin. The British Columbia Power Commission, set up by the Provincial Government in 1945 to develop and extend rural electrification, has undertaken the consolidation and extension of several systems in the interior and on Vancouver Island. It has borrowing powers totalling $45,000,000 and so far has used less than half this sum. It began operations with the acquisition of five electrical properties serving 11,906 customers. By March 1949 the commission had obtained an additional sixteen properties with 10,346 customers. It had also installed 9,367 new services, so the total customers in the rural areas is now 31,619. The commission is operating in nineteen power districts and negotiations are in progress to serve the Dawson Creek–Pouce Coupe area of the Peace River country, Hazelton, the Lake Windermere region. The largest single capital construction project has been at Campbell River on Vancouver Island, a $10,000,000 undertaking which, when complete, will serve most of the island except the region contiguous to Victoria. The horsepower generated will be 150,000. Work has been started on a plant to develop energy from Whatshan Lake, in the Lower

Photograph by Ronald White

Arrow Lake district of the mainland. There will be four units of 12,500 h.p. each, two of them to be held in reserve for future needs. The commission is building a power plant at Quesnel, this being the first major attempt to attract industry to the interior and ease the concentration on the coast. The commission announced its third major project at the beginning of 1950: the harnessing of Clowhom Fall, at the head of Salmon Arm, about 40 miles north-west of Vancouver, to develop 20,000 h.p. to serve the needs of all the communities on Sechelt Peninsula. This area has had considerable growth in the last few years. It is within easy access of Vancouver by frequent steamer service, is a favourite summer resort region and has a growing all-year-round population.

There are also several non-government projects in progress, the biggest of which is the British Columbia Electric Company's Bridge River development. This is an instance of a tributary of the Fraser being used. It will have an ultimate capacity of 620,000 h.p. in ten units, three of which are now in operation. Most of the power produced by the last unit is being exported to the neighbouring states of Washington, Oregon, and Idaho until it is needed in British Columbia. At the same time the company is building a storage dam at La Joie Falls, 40 miles upstream from the power plant to provide an adequate flow in the dry season. It has extended its Ruskin plant on the Stave River which will increase the output there by 47,000 h.p., and is surveying Jones Lake, 75 miles east of Vancouver, for a development of 70,000 h.p. For additional distribution facilities an extensive programme of sub-station construction is being carried out in Vancouver, on Vancouver Island and in the Fraser Valley. Altogether the company is spending $17,000,000 on power expansion and by the beginning of 1951 the power available to the lower mainland will be doubled.

The Consolidated Mining and Smelting Company of Trail has added a third unit of 37,000 h.p. to its plant at Brilliant on the Kootenay River, while the city of Nelson has built a unit on the same river at the Upper Bonnington plant. The Pacific

Mills Company will augment its facilities at Ocean Falls with a development on Nascall River.

During 1949, British Columbia added 228,366 h.p. to its electrical energy, more than in any other part of Canada, although throughout the country power facilities are being expanded to meet pressing industrial needs, but no part of the Dominion approaches the advantages of British Columbia in its vast volume of undeveloped power still latent in its mountains, streams and lakes. Only a tenth of the water available is being used and when the surveyed sources are being exploited there are many other possibilities, though less accessible.

The relationship between the pulp and paper industry and the water power resources is important. It leads all manufacturing in Canada and must have an abundance of hydro power for its operation. Mill capacity for the production of newsprint exceeds four million tons a year, 90 per cent of which is exported. This industry, therefore, contributes heavily to Canada's export trade balance. British Columbia's nine mills have world leadership in the production of pulp and paper. Three more mills will be in operation shortly and as mechanical power installation of approximately 100 h.p. is required to produce one ton of newsprint the importance of the province's water resources in the expansion of a major industry is obvious.

Photograph by Ronald White

XV

A HUB OF WORLD SHIPPING

IT is only necessary to look at a map of the Pacific Ocean and see the number of steamship lines converging on the British Columbia ports of Vancouver, New Westminster, and Victoria to realize that here is one of the world's busiest shipping areas. British Columbia's coast far outstrips any other part of Canada in seaborne activity, as shown by comparisons in the port figures for 1947 (the last year for which statistics are complete). In that year there were 42,284 coastal departures in British Columbia compared with 9,820 for Quebec, the next highest. The Quebec figures include Montreal, the City of Quebec, and the smaller St. Lawrence River ports. Foreign departures in that year were 7,734 for British Columbia and 2,822 for Quebec. Tug business, however, is the best indicator of business volume and in this category British Columbia is far ahead of any other Canadian port: 12,933 departures compared with 710 for Quebec and 820 foreign-bound tugs against nine from Quebec. More than 40,000 ships left Vancouver in coastal traffic, compared with Montreal's 2,779, Victoria's 3,354, and Prince Rupert's 1,825. In foreign departures Vancouver's total was 1,828, Montreal's 1,774, Victoria's 1,618, and Prince Rupert's 1,476.

The trade of ninety-nine countries passes through the port of Vancouver and fifty shipping companies use its docks. Excepting Alaska it is nearer the Oriental markets than any other port on the whole North American coastline. It is the gateway through which passes much of the trade to the Far East and when normal business is resumed with the Asiatic countries port activity along the British Columbia coast will be greatly increased. The British Columbia ports are always ice-free while Montreal and Quebec

harbours are frozen up for five winter months. The opening of the Panama Canal enabled British Columbia shippers to capitalize on the winter shut-down in the east.

Vancouver has one of the safest and largest harbours in the world, capable of tremendous expansion should the need arise. It is the terminus of two transcontinental railways, the Canadian National and the Canadian Pacific, which link the Atlantic Ocean with the Pacific. Each has a fleet of ships with which to extend land-borne commerce. The Canadian National also has a northern terminus at Prince Rupert, the key port for American operations in Alaska in the Second World War. Vancouver is also the terminus of the Great Northern serving United States coastal cities. Twelve miles from Vancouver, on the Fraser River, is the bustling fresh-water port of New Westminster, and 70 miles across the Strait of Georgia is the capital city and port of Victoria on Vancouver Island. Dotted along the coast of Vancouver Island and the mainland are several smaller but important ports, such as Nanaimo, Port Alberni, Chemainus, Ocean Falls, Powell River, Woodfibre, Britannia, Cowichan Bay, and Union Bay, from which paper, lumber, and some ore are shipped. The little port of Squamish, at the head of Howe Sound, 40 miles from Vancouver, may be destined for a more important place in the shipping picture. It is the southern terminus of the Pacific Great Eastern Railway and when that line is extended into the fertile Peace River country, tapping great wheat and coal fields, Squamish is certain to benefit even though the line is to be extended into Vancouver.

A study of a map of British Columbia will also show that many coastal cities and towns are wholly dependent on water-borne transportation. A railway journey from Vancouver to Prince Rupert, for instance, means travelling eastward and northward into the neighbouring province of Alberta and connecting with the northern lines of the Canadian National Railway. The steamship service between Vancouver and Prince Rupert is, therefore, one of the most important. Numerous pulp and paper, and lumber towns on the coast are dependent on sea communications, besides many isolated communities and fish canneries.

Photograph by Ronald White

Vancouver Island, with a population close to 200,000, can export and import only by steamer. There is a frequent plane service with the mainland but the bulk of the passenger traffic is by steamer. A bridge to the mainland, across Seymour Narrows, has been considered but engineers declare it not feasible. The Queen Charlotte Islands off the north coast are attaining importance in the industrial picture, principally in the matter of lumber, and prospectively as a source of oil. There are also the Gulf and other islands which have little industry but whose residents must have transportation facilities.

From wilderness to one of the major world ports in the span of a lifetime is, in a phrase, the story of Vancouver. It is certainly Canada's most colourful port, both in fact and fancy, though there is little need to attempt embellishment of the happenings that brighten many a page in the harbour's history. It has had drama in plenty and as a port at the crossroads of the oceans it sees most of the races of the world along its waterfront. Three milestones appear on the path of Vancouver's progress in seaborne commerce: Captain George Vancouver's first exploration of the harbour in 1792, the completion of the Canadian Pacific Railway in 1886, and the opening of the Panama Canal in 1915. The last two events hurried along the destiny that was inevitably Vancouver's because of its great natural harbour. Its area is 49 square miles with 98 miles of shoreline, and it is almost landlocked, undisturbed by wind and safe at all times. The nine-mile wide Burrard Inlet narrows down to the Lions' Gate entrance, a width of waterway that accommodates three ocean steamers abreast. Visitors going to Vancouver by sea enter in the lee of the mountains of the north shore, gliding past the beautiful Stanley Park Peninsula on the south shore, and suddenly see the harbour opened before them, ringed by industrial areas with extensive shipbuilding yards dominating the north shore. Into this port comes the traffic from the seven seas besides the many ships in coastwise trade. The port has berths for fifty-six deep sea ships. There are twenty-eight piers and wharves with their accompanying sheds. The piers are equipped with the latest mechanical

devices, including cranes that will lift one hundred tons. There are seven grain elevators with nineteen loading berths, while the grain storage capacity is 17,843,000 bushels, exclusive of domestic storage of 625,000 bushels. There are eight fish oil tanks on Lapointe pier which can store 172,112 imperial gallons. A special oil dock has seven tanks for vegetable, wood, and nut oils. The fish docks are as modern as any on the continent with adequate water arrangements, smoke houses, ice-making plants, freezing and holding rooms, two canneries, and six all-electric cranes for unloading. Vancouver is one of the eight principal ports of Canada that went under the control of the National Harbours Board in 1935, following a report on shipping and port conditions throughout the country by Sir Alexander Gibb, the British port authority.

Ninety years ago, when the port area was virgin forest, the Royal Engineers were stationed at New Westminster. They cut a trail for six miles through the thickly-treed country to Port Moody, at the eastern end of Burrard Inlet. Not one white person was then living on the shores of the inlet, but the timber wealth attracted commercial enterprise and by 1862 T. W. Graham & Company, of New Westminster, began cutting logs along the northern shore of what is now Vancouver Harbour, and in August 1863 the steamer *Flying Dutchman* sailed out of the inlet with the first export, 25,000 feet of lumber for New Westminster, a voyage of only a few hours round the Point Grey headland into the Fraser River. Periodical shipments continued to the river port, and then across the Gulf of Georgia to Victoria and Nanaimo, but no attempt was made to win foreign trade.[1] Graham & Company sold their venture to a New Westminster grocer, John Oscar Smith, who, although he did not make a success of his project did gain a place in the records by being the first deep-sea exporter, a shipment of lumber to Australia in the barque *Ellen Lewis*. Smith soon passed off the scene and in 1864 S. P. Moody & Company of New Westminster took over the timber lands, and this company's operations started the steady

[1] Judge F. W. Howay in the *British Columbia Historical Quarterly*, January 1937.

Photograph by Ronald White

development of industry and shipping on the inlet. Moody went after world markets and built up a steady business with Australia. Between preparing his logs for export he cut the 70-foot "sticks" for the bell-tower of Holy Trinity Church to support the chime of bells donated by Baroness Burdett-Coutts. Moody also found a market for his logs in Mexico and in 1865 the British barque *Kent* arrived from Glasgow with mill machinery. The next year French, American, and British ships arrived for loading and unloading and by 1869 trade via Burrard Inlet was of sufficient volume to need tabular records. Forty-five ships were loaded that year from two mills then operating, Moody's and Captain Edward Stamp's, the latter financed by half a million dollars of English capital. Stamp placed his mill on the south shore and the port of Vancouver grew around it. Port Moody, where the Engineers' trail ended, was a bustling little place, and anticipated becoming a great city when, in 1871, it was announced it would be the terminus of the transcontinental railway. The railway, however, went through to Vancouver. During the 'seventies and early 'eighties the inlet was a busy place with ships from all over the world riding at anchor or tied up at one of the mill berths.

A steamship line from the Pacific coast terminus to the Orient was an integral part of the plan of the Canadian Pacific Railway's transcontinental service, and with the opening of the railway to Vancouver in 1886 the Canadian Pacific Railway tendered for carrying mails from Vancouver to Hong Kong. The offer was rejected, but the company, not wanting to lose its advantage in ocean trade, appointed Frazar & Company its agents in the Orient. This was the era of the China tea clippers and a famed American barque, the *W. B. Flint* (burned at Seattle in 1937), carried the first cargo of tea from Japan to Vancouver. From the dockside the Canadian Pacific Railway rushed it to eastern markets. The tea reached New York in forty-nine days from Yokohama. It was adventurous voyaging in those days. Some of the clippers were chased hundreds of miles by Chinese pirates.[1]

In 1887 the Canadian Pacific Railway acquired three old

[1] See article by W. Kaye Lamb in *British Columbia Historical Quarterly*, July 1937.

Cunarders, the *Abyssinia*, *Parthia*, and *Batavia* to open their own service to the Orient and these ships made nineteen trips the following year. The powerful San Francisco shipping combine began to feel the Canadian competition and began to fight back with a rate war and modern steamers, with which the old Cunarders could not compete. In 1889 the Imperial Government granted the mail contract to the Canadian Pacific Railway which made it possible for the company to build fast, modern liners. Three steamers were ordered and in 1891 the *Empress of India*, *Empress of Japan*, and *Empress of China* entered the Oriental service. As the years passed and war came there were other Empresses. They were all painted white and for half a century they were queens of the Pacific. They have given way to a new fleet of Empresses—air liners that span the Pacific in as many days as the steamers took weeks. In 1896 the Canadian Pacific Railway started a passenger service to Alaska which is still in operation. Another American port, Seattle, is served by a two-way triangular run, Vancouver–Victoria–Seattle.

New Westminster, on the Fraser River, is not the oldest port in British Columbia but it has had ninety years of steady growth since the first harbour master, James Cooper, was appointed. It has paralleled the advance of Vancouver and is the province's second port, taking pride in the fact that it is the only major port in Canada not operated by the National Harbours Board. Its strong position is a visible memorial to private initiative, and the courage, vision, and persistence of pioneer businessmen. It was the first port to feel the effects of the loss of British markets in 1948 because much of the products of the Fraser and Okanagan Valleys went to the United Kingdom from there. That year, too, brought the great Fraser River floods with disastrous effects on trade, and the west coast maritime strike. Nevertheless almost three hundred deep-sea ships loaded 1,000,000 tons of freight. In the previous year more than five hundred ships had loaded at the river port for foreign destinations. Twenty years previously only a score of ocean vessels found cargoes there, but the number of arrivals increases each year and the port now ranks fourth in

Photograph by Ronald White

Canada's export business. In 1949 there was another marked increase, both exports and imports being higher, and although lumber shipments were threatened by slim British buying and devaluation of the pound there was an appreciable gain in other markets, chiefly the Atlantic coast ports, Africa, Hong Kong, and the Hawaiian Islands. The number of ships using the port increased by fifty, and this, of course, was reflected in the general employment situation. New Westminster is the principal lumber manufacturing centre and its many wooden products are still the backbone of the shipping business. The Fraser River and its tributaries constitute the heaviest salmon breeding-grounds and much of the fishing industry's $40,000,000 business is centred here. Before the United Kingdom slashed her salmon buying in 1948 New Westminster's salmon export to Britain averaged 9,000 tons. It is the shipping point for grain, minerals, and fertilizer, and to replace the loss of British trade, a variety of new products are being exported to new markets, such as the high-content nitrogen fertilizer called nitraprills, which, since the first shipment in 1946, grew to an export of 94,000 tons in 1948, chiefly to South Africa, India, France, Egypt, the Philippines, China, and Japan. Other markets are being developed. Peat moss and Christmas trees are now regularly shipped to the Hawaiian Islands, seed goes to Switzerland and Holland, cattle feed to Denmark, rope to Buenos Aires, and pre-fabricated houses to the Argentine. New Westminster also handles most of the eggs produced in Western Canada for export.

The Harbour Board has jurisdiction over 35 miles of frontage on the Fraser River Estuary, of which 5 miles is within the city limits. There is ample room for industrial and dock expansion and all transcontinental railways serving the Pacific North-west have direct access to the waterfront. A million bushel grain elevator was built in 1928.

Victoria was not envisioned as a harbour when the Hudson's Bay Company fur traders established a post there, which they named Fort Camosun. They used Esquimalt, several miles westward along the coast, as the port for their commerce with England.

Some of the freight was taken to Victoria over a waggon road but the bulk was taken round by water in shallow-draught boats. With this growth of industry and trade around the fort, however, demands were made for the provision of a harbour in the James Bay area, to which the Dominion Government eventually acceded. Two outer wharves were built in 1890, one 688 feet long and the other 1,050 feet. They served ocean vessels for twenty years when a breakwater, 2,750 feet long, was built, enclosing about 300 acres, giving a depth of water 35 to 80 feet. In this harbour two large concrete piers were built. Tracks connect with a car-ferry slip for railway cars towed over from the mainland, while a grain elevator and a cold storage plant are at the dockside. The inner harbour, used chiefly by coastal vessels, has twelve wharves. Victoria is the headquarters of the Pacific Salvage Company which maintains the most modern and powerful salvage vessels on the Pacific coast. They have performed many epic rescue feats. The port does a large export and import business, the former made up principally of forest products and general cargo.

Esquimalt, with two dry docks, is maintained as a naval station. There is also a shipyard there, hitherto a branch of Yarrows of England but since the war a subsidiary of the Wallace Shipyards of Vancouver (Burrard Drydock).

Eighty miles north of Victoria on the east coast of the island is the growing port of Nanaimo, through which island coal has been shipped since 1851 and which for many years handled a large herring business. In recent years, however, it has become important as the distributing centre for island passengers and general freight. It has a spacious natural harbour protected by two islands, Newcastle and Protection. With the expansion of thriving towns and cities all over Vancouver Island, Nanaimo's port facilities became inadequate and a new Canadian Pacific Railway dock with improved loading and unloading facilities was opened for the 1949 summer season. Nanaimo is only two hours' sailing from Vancouver and steamers plying between the two cities are equipped to carry several hundred motor-cars.

Photograph by Ronald White

Prince Rupert, terminus of the northern branch of the Canadian National Railway, has also a large land-locked harbour well-equipped with wharves, floating dock, marine repair, and boat building yards, and oil tanks along a frontage of 4,000 feet. During the war the United States used it as the port for Alaskan operations. They increased the facilities, which are now adequate for greater business when the development of the Peace River country and other northern areas is begun. The port is the base of the halibut fishing and has a cold storage plant for 14,000,000 lb. of fish. The Skeena River, one of the major salmon breeding-grounds is only a few miles south. The port will be the greatest beneficiary of the opening of the $30,000,000 Columbia celanese plant in 1951, while other industrial developments under consideration assure a bright future for the port.

Shipbuilding on the coast has had many ups and downs. It faces two serious handicaps: it is in a high wage area and is removed from the source of heavy steel. These difficulties are almost insurmountable in times of world-wide competition. An example that is apt for the entire shipbuilding industry is the Burrard Drydock Company of Vancouver, the largest shipbuilders in the province. At the wartime peak they employed 14,000 men. Three years after the war ended employment was down to 2,500 as the last of some French contracts were being wound up. With no major building in prospect repair work would require only about 300 men. A similar situation prevailed at the company's subsidiary, Yarrows Limited, at Esquimalt, at the Victoria Machinery Depot, and Pacific Drydock Company. A government order for two naval ships late in 1949 was nothing more than a stimulant and shipbuilders and the Canadian Maritime Commission are seeking a method by which the price of Canadian-built ships would be comparable with those in foreign yards. Ships are built and sold on what is virtually a world market. Thus, because of wage differences and shorter material haul ships are being built on the Clyde 25 per cent cheaper than they can be built in British Columbia. For a time the British Columbia yards could offer a speedier delivery as an

offsetting factor to higher cost, and this was responsible for some post-war activity, but this advantage is not so pronounced now. There is always considerable activity in small boat building, such as fishing boats, tugs, and pleasure craft.

Navigation of British Columbia waters has been made safer by scientific aids. Lions' Gate bridge at the entrance to Vancouver Harbour is equipped with radar, specially designed and installed by the National Research Council in time for the 1949 winter fog season. Many ships now have their own radar installations and fog casualties along the coast have been heavily reduced. Most of the smaller vessels are equipped with radio-telephones and over this system of communication the signalman on the bridge, with his eye on the radar screen, "talks" the blinded skipper into a safe harbour berth. Vancouver has moved into first place among the world ports in the use of harbour-control radar. The new double antenae gear on the bridge is not duplicated anywhere else. It can pick up a vessel at 6 miles and follow it right in. Other installations can do either distance or close-up work, but not both. Because of the large towing fleet and many fishing craft using radar assistance Vancouver has displaced Liverpool as the leading radar port. Five times as many ships use it as at the English port. Deep-sea ships are "talked in" right to their docking berth and, as a result of the success of the system, the Royal Mail Line has installed radio-telephones so that help of radar can be used when visiting Vancouver. The Canadian Navy is similarly impressed and all its ships have been ordered to use the Lions' Gate radar when using the port in thick weather.

The radio-telephone is particularly important along British Columbia's rugged and sharply indented coastline. More than thirteen hundred coastal ships are equipped with it and any householder with a telephone can talk to a person on a ship merely by lifting the receiver and asking the operator at North-west Telephone Company, a subsidiary of British Columbia Telephone Company, for connection with the vessel. It is a unique service, started as an experiment twenty years ago to establish verbal communication with Powell River, the pulp and paper town, 100 miles north

Photowash by Ronald White

of Vancouver. In addition to the ships, 143 land points depend on the radio-telephone. A few private yachts are also equipped so that owners can keep in touch with their offices while cruising. For tugboat crews and tug owners the service is invaluable and some of drama heard over the radio-telephone is related in another chapter.

Bringing a ship into port by radar and radio-telephone is a long advance from the days when the Old Man "took her in by sense of smell." But the British Columbia coastal waters with their crooked channels, treacherous tide rips, strong currents, rocks, and islands, still call for the maximum amount of caution and skilful navigation in dirty weather, and only to a lesser degree in fine weather. Coastal skippers have developed their own navigational aid—steering the ship by echo—to a fine art over the years. By the blessing of Providence most of the coastline of British Columbia is bold and high, indented with countless bays and fjords, and marked by many jutting points. Fog is a splendid sound conductor and the steep shores return sharp echoes of a steamer's whistle or a fisherman's horn. As sound travels a mile in six seconds a skipper can proceed safely provided he has a complete mental picture of the shoreline. Most of them have and some of their steering feats in thick fog seem fantastic to the landsman.

Radio has also minimized the deadly menace of the south and west coast of Vancouver Island. More than sixty ships have ploughed on the rocks of the Strait of Juan de Fuca and Barkley Sound, and several others sailed and disappeared without a trace. Vessels proceeding up the coast bound for Vancouver or Victoria used to have trouble picking up the Race Rocks foghorn. At times it could not be heard—there was an unexplained "zone of silence" —and many a ship sailed unwittingly into "the graveyard of the Pacific." Radio has ended that menace and the waters leading to British Columbia's busy harbours now have all the navigational aids of a motor highway.

Not only the chief ports mentioned here, but all the smaller ones—Port Alberni, Powell River, Ocean Falls, Chemainus, Sidney, and Union Bay—reflect the expanding industrial and trade picture and are being equipped for even greater business.

XVI

RAPID AIRPORT GROWTH

THE international airport at Vancouver has grown in a few years into one of the world's major flying ports, a centre of air travel to all parts of the world. Its area of 600 acres rank it with the larger ports, but plans are in hand for considerable expansion. It is the busiest airport in Canada because of its all-year-round use and the volume of private flying, and has a unique safety record, with not a major accident in its seventeen years of existence. Not one passenger has been injured in landing or taking off.

British Columbia produced many of the flying pioneers of western Canada who blazed the air trails with flimsy "crates" in the early years of the century. Forty years ago, six years after the Wright Brothers flew in North Carolina, a young Scotsman, William G. Gibson, living in Victoria, built the first flying machine in the West, but there is no record to show that he flew. However, two American-built planes were assembled in Vancouver and made short flights from a race track. In 1911 a machine built by William Templeton was the first plane built in British Columbia to fly successfully. It was due to Mr. Templeton's efforts that the city acquired land for an airport and it was due to his vision that the airport was developed on a scale that would fit it for the important place it holds in world aviation to-day. The airport was opened July 22, 1931, and Mr. Templeton was its manager until 1949, when he retired to continue in an advisory capacity. What surprised the foresighted men of twenty years ago was the volume of public support that has been revealed in the passage of money by-laws for the purchase of land and erection of buildings. While other by-laws for public welfare were being defeated or carried by small majorities the airport

Photograph by Ronald White

by-laws were carried by overwhelming majorities. Public support has never flagged.

Only five planes were based at Vancouver when the field was opened, there was only one runway, 2,400 feet long, and if a plane landed at night the staff of four had to run out with lanterns to mark the runway. "We had an airport, but no night lighting, no weather bureau, no radio aids, and, of course, no business," remarked Mr. Templeton recently. But business was not long in coming. It was the day of the "bush pilots," those daring flyers who, without navigational aids on the ground and the minimum of flying equipment in their craft, opened up the wilderness of the north. To use a colloquialism they were the men who "flew by the seat of their pants," and many of those who survived the rough days are now top executives in Canada's aviation industry.

In 1932 the first daily flights to Seattle were started; the same year saw the Vancouver–Victoria service inaugurated; the next year a service was started to the interior, chiefly to service the Bridge River mining district. Then in 1934 Vancouver was linked by air with 200 American cities when United Airlines established at the airport. The runway was extended and the Dominion Government provided radio and meteorological services. The radio beam system and night lighting were installed. Grant McConachie, now president of Canadian Pacific Airlines (the aviation division of the C.P.R.) started a service from Vancouver to the Yukon in 1937 and a few months before the war airmail service between Vancouver and eastern Canada was set up. Trans-Canada Airlines (the aviation division of the C.N.R.) grew to its world-wide dimensions from a flight made from Vancouver to Seattle in September 1937 by E. P. H. Wells, an R.A.F. pilot in the Middle East in the first world war and later a "bush pilot" in British Columbia. For many months while planes were being acquired, crews trained and passenger facilities set up, the Seattle mail and passenger run was the only service operated by T.C.A. The first extension was from Vancouver to Winnipeg, later on to Montreal and eventually to

Newfoundland and the United Kingdom. Now Mr. Wells is base manager for T.C.A. at Vancouver.

During the war, of course, the airport was used by the R.C.A.F. and thousands of young men from all over the Commonwealth took part of their training there. The Boeing aircraft plant was built, new hangars were constructed, and Canadian and British engine plants set up. In 1946 the airport became the western crossroads of the world's airways with the start of trans-Pacific service by Australian National Airways. The Queen Charlotte Airlines began operations the same year. In 1947 the service to New Zealand was started. T.C.A. and C.P.A. were already spanning the Atlantic and Canada, and in 1949 C.P.A. opened its service to Australia. Add United Airlines with its several flights daily, the several services to interior and coastal points, the private and club flying and charter services, and the volume of traffic in and out of the airport becomes apparent. Eleven hundred landings and take-offs a day have been recorded, and 800 clearances daily are common. The Aero Club of British Columbia, the oldest flying club in Canada, with 300 members, has 15 planes in the hangars.

With business having increased 1,000 per cent since before the war it has been necessary to extend facilities. Runways of 7,000 feet have been laid down for the heavier craft, with provision for extension to 10,000 feet. New administration buildings are planned. A complete weather map is now prepared every six hours from meteorological tests carried out at the airport and information gathered from other airports, planes, and ships at sea. Canadian Pacific Airlines are building repair shops and other improvements bring the airport's value up to $3,000,000.

The bulk of the 339,798 passengers who used the airport in 1949 were carried by five airlines; airmail poundage has jumped to nearly two million, cargo pounds to more than three million, and aircraft movements to 134,675. This means there is now as much activity and business in a month as there was in a year before the war. Behind this development lies the story of vast wartime expansion facilities being converted to peacetime needs,

Photowash by Ronald White

introduction of new services, increased schedules, added maintenance and repair facilities, and mounting employment rolls. Nine hundred persons are employed at the port, exclusive of R.C.A.F. personnel.

There are now five round trips daily between Vancouver and Seattle, a minimum of eleven between Vancouver and Victoria, the capital city. Before the plane service the Vancouver businessman could not get to Victoria, transact his business in a government office, and return in one day. Now he can do it between breakfast and lunch, or between lunch and dinner. There are five daily trips each way across the Rocky Mountains, a daily each way to northern British Columbia and the Yukon, twice weekly trips to the Queen Charlotte Islands and Prince Rupert, and twice weekly across the Pacific. The shrinking distances and the speed of air travel were exemplified recently when a resident of Lulu Island, adjoining Sea Island where the airport is located, was at home forty-eight hours after leaving Amsterdam, Holland. The air mileage from Montreal to Vancouver is 2,672, and passengers travelling to New Zealand and Australia by the C.P.A. go via San Francisco, Hawaii, Canton Island, Fiji, Auckland, and Sydney, a distance of 8,899 miles. Orient-bound passengers go by way of Kodiak, Alaska, Shemya, Tokyo, Shanghai, and Hong Kong, 6,555 miles.

Airport requirements for the future are demanding attention sooner than anticipated because of the phenomenal growth in business in the last few years. The airport is situated on the south end of Sea Island, near the mouth of the Fraser River, and is about 8 miles from the city. The site was chosen because it offered the best possibilities for a combined land and water airport, lowest rainfall, most free from fog, low mist and smoke, greatest freedom from obstructions in making landings, maximum safety for pilots and passengers in case of forced landings on land or water, and lowest in cost of construction and development. There are now three runways, but there are physical limits to the amount of business an airport can handle. Exceeding that limit can be dangerous. To avoid coming face to face with that

situation the Vancouver Town Planning Commission prepared a metropolitan airport plan in 1946.

Studies of the number of airports that will be needed over the next fifteen to twenty years have been made in a number of American cities. In a plan made for Dallas, Texas, it was estimated that thirteen airports would be required to serve a future population of 667,000. This is a ratio of one airport for each 51,000 persons. In a plan prepared for the St. Louis metropolitan area a system of thirty-five airports was proposed to serve a future population of two million. In a plan made for Milwaukee, Wisconsin, the ratio was one airport for each 77,000 persons, and a plan made for Detroit, Michigan, proposed one airport for each 70,000 persons. The Canadian Ministry of Transport has been using a general standard of one airport for each 50,000 persons. It was estimated that the future population of the Vancouver–New Westminster metropolitan area would be 650,000. So on the basis accepted by Ottawa thirteen airports would be required, not all big ones, of course.

The growth of population is pressing the issue. While the estimate of 650,000 for this metropolitan area was not expected for some years, it is already close to that total. The town planners survey noted that the number of landings at the Vancouver airport have multiplied fourteen times in fourteen years, and if, in the next twenty years, the rate of increase is only half as fast, the airports in Vancouver would be called upon to accommodate 800,000 plane movements a year by 1966. This would be approximately 2,100 in an average day. If the present ratio of scheduled and non-scheduled operations continues there would be 350 movements per day of scheduled aircraft and approximately 58 in a peak hour. One major airport with a dual system runway could accommodate this traffic. However, the non-scheduled movements can be expected to be twice as large in volume as the scheduled movements, or approximately 116 in the peak hour. "Thus," says the report, "it would appear that the total peak hour operations of scheduled and non-scheduled commercial aircraft would require more than two major airports. The re-

Photograph by Ronald White

mainder of the aircraft movements would take place at minor and secondary airports."

To meet this anticipated demand the commission proposed: three major airports, including the present Vancouver airport to be enlarged to cover the whole of Sea Island: another to serve the New Westminster area; and the third the military airport at Boundary Bay. Two secondary airports would serve non-scheduled commercial operations, private flying, and transients. There would be eight minor airports, six to serve private flying needs of local populations and two to be training fields.

These recommendations are based on studies of flying trends by expert researchers and the town planning commission expressed its conviction that "a very large increase in the number of private planes can be expected, not only those owned by persons living in Vancouver, but also those owned by non-residents entering as tourists and sportsmen." Air transportation of goods is increasing rapidly, because the former major disadvantages—relative undependability, greater hazard, and higher cost—are being overcome. The commission believes many farmers will soon own planes, a belief that can easily be accepted when the advantages of quick marketing are remembered. Some of the fruit of the Fraser Valley was flown to prairie markets for the first time in 1949 with considerable advantage to the growers. As most of the products are disposed of under a co-operative marketing system the acquisition of aircraft would seem to be a logical step.

Norway wanted some thousands of power saws in a hurry. A Vancouver firm had a supply ready for export, but the shipment had to be aboard a freighter in Montreal the next day. It was—by plane. When T.C.A. began its regular commercial service the first shipment was 2,000 lb. of daffodils, 2,500 dozen from Vancouver Island. They were selling in Toronto stores the day after the blooms were plucked in British Columbia. The hazardous business of shipping young chicks and turkey poults has been undertaken by the aeroplanes with an amazing reduction in the mortality rate. Salmon from the Pacific Ocean is being

sold two days later in Montreal; raw fur hides are rushed to Montreal, New York, and London by air, all reminiscent of the "silk trains" that used to rush away from the docks as soon as the Empresses arrived from the Orient. It appears that soon all perishable goods will be shipped by air.

Transportation is the backbone of the Vancouver–New Westminster area. Much of the trade and traffic of the country passes through this zone and its strategic situation becomes even more pronounced in the development of air transportation.

There are several other airports in British Columbia and many landing-fields have been laid out by municipalities, but the rapid growth of air travel demands a long-term plan of expansion of facilities. That is what the town planning commission has tried to do.

Vancouver's faith in its airport facilities was justified in the flood crisis of early 1948. The city was isolated when all railway and highway links were washed away by the raging Fraser and Columbia Rivers. Scores of communities in the valleys were cut off by the flood waters. Planes and airport stepped into a vital and effective role. First hundreds of workers, including army detachments, were flown to danger-points where the waters threatened fresh encroachments. Urgently needed foodstuffs from the prairies and eastern Canada were flown into Vancouver; food, medical supplies, doctors, and nurses were flown into the flooded areas; stranded transcontinental train passengers were picked up at Calgary and Kamloops and flown into Vancouver; express shipments, both to and from Vancouver, were organized on schedule and damage to business was thus kept at a minimum. The elasticity of modern airport operation met a tough challenge successfully.

On Dominion Day, July 1, 1948, the Federal Post Office inaugurated first-class letter mail service by air at the same 4 cent rate, which means that a letter mailed in Halifax in the morning arrives in Vancouver the same night—3,255 miles away. What this has meant in tightening family bonds between east and west, and in expediting business, is obvious. This postal

Photograph by Ronald White

"air lift" has been extended to the United Kingdom, and first-class mail from Britain is now delivered in Vancouver two days later. Whether all this speed is good for the soul or not, British Columbia, through its metropolitan area, is keeping abreast of the trends.

XVII

THE CONQUEST OF DISTANCE

THERE are occasions when the speed of transportation and communication to-day makes even the most sophisticated pause in wonder. Distances mean little in these days of extraordinary facilities for bridging them. The advances made in these services can be particularly appreciated in British Columbia, and more specifically in Vancouver, the centrifugal point round which the province's activity revolves. It is as easy to telephone to a ship at sea, or to Montreal, Ottawa, Toronto, or New York, 3,000 miles away, as to telephone to someone in the next street; it takes only a few minutes longer to telephone to London, 6,000 miles away, or to Australia, across the Pacific. One can breakfast at home in Vancouver, fly to Montreal in time for dinner, and on to London for breakfast the next day, and still the speed of travel has not reached its peak.

To older people who approached adulthood in the more leisurely days before the turn of the century, this speed era—what an earlier writer with potent phrase called the annihilation of time—is a bit bewildering, albeit very acceptable. This quicker communication touches so many phases of ordinary living that the whole tempo is faster, and thoughtful ones pause to ponder whence it leads. Nevertheless, there is much more zest to life because of these advances. It is not necessary to argue the benefits of radio, for instance, but it is not inappropriate to point out what the radio means to rural districts in a country the size of Canada. When it is remembered that three-quarters of the vast area of British Columbia is sparsely settled it is easily realized what the radio means to these homes. There are, in fact, so many regions beyond the use of ordinary communications that all radio

Photowash by Ronald White

broadcasts in British Columbia include emergency messages directed at individuals in isolated communities. There are agricultural and market broadcasts, news several times a day, and entertainment such as the farmers' families never had a generation ago.

Canada's radio system evolved from the recommendations of a special commission which toured the country. The size of the country and diversifications among the population were major problems. It was not a compact country; there are great areas that are not settled; there are two official languages; and a wide variety of interests and cultural background. French is the common language of the province of Quebec with its 3,000,000 inhabitants. Ontario has strong ties with the United Kingdom and also close association with the United States. It is therefore subject to some American influence. But Ontario reaches far north, and it has many isolated communities. The three prairie provinces of Manitoba, Saskatchewan, and Alberta include great stretches of vacant spaces between vigorous and progressive cities and towns. There are many foreign communities in the 1,000 mile wide belt of prairieland. The Maritime Provinces of the Atlantic coast, Nova Scotia, New Brunswick, and Prince Edward Island, and the new province of Newfoundland have cultural and entertainment needs that may be said to correspond roughly to Ontario's. On the other side of the Dominion on the Pacific coast is the most anglicized of the ten provinces, British Columbia, with radio requirements differing in some respects from every province.

But in radio there are certain things peculiar to Canada. For instance, the big friendly United States over the border. Not only is it as easy for Canadian listeners to tune in to the chief American stations as on to their own local stations, but many American programmes are carried by the Canadian stations. There is, therefore, a great deal of listening to United States broadcasts, but while the two peoples have a lot of ideas and tastes in common, Canadians prefer to go their own way in some things. Particularly they want more Canadian programmes produced by Canadian

artists. In this they are not merely blithely ambitious, as all parts of the country have given many notable radio personalities to both the B.B.C. and the American systems. Canada, too, is sensitive to British tradition and background, and has watched the system worked out by the B.B.C. Further, some form of national radio seemed to be the only way of establishing an hourly link between the many widely scattered communities, the only way of drawing them into the daily life of the country. There was also the time differences to be considered. When it is 6 p.m. in Halifax it is only 2 p.m. in Vancouver, and C.B.C. clocks between the Atlantic and the Pacific have to be set at five different hours.

In the early 1920's there was a tendency to concentrate radio stations in the large urban centres, with the result that much of the country's rural population were not able to enjoy the new medium of entertainment and information. It was a haphazard business and was threatening serious confusion when the Government appointed the inquiry commission. The Canadian Broadcasting Corporation was established by Parliament in 1936 with instructions to build a chain of high-power stations across Canada in order to serve as many Canadians as possible. At this time network broadcasting was being carried on for only six hours daily and only about 60 per cent of the population was being reached. The facilities of the public-owned stations were expanded and now C.B.C. owns eleven stations across the country outright, including four big 50,000-watt stations. But these do not cover the whole country and there are some 1,700 private stations, some of which join the national network for several hours each day. Thus Canada's radio system is based on regional and national network service that is publicly operated, and local community service that is privately owned. The plan is a compromise between the B.B.C., which is entirely state-owned, and carries no commercial programme, and the American system, which is privately owned and supported entirely by commercial revenue. It seems well-suited to Canada's desires, and while it may surprise some to see the two systems operating side by side, the arrangement is

Photograph by Ronald White

satisfactory, and there is a considerable measure of co-operation between the two. Each owner of a radio set pays an annual licence fee of $2.50, compared with the United Kingdom $4, Australia $3.25, New Zealand $3.80, South Africa $7.75, Czechoslovakia $7.20, and Yugoslavia $9. For less than one cent a day the Canadian listener has choice of local programmes, the Canadian network, American broadcasts, and some from the B.B.C. From the licence fees and other revenues the C.B.C. pays more than one million dollars a year to Canadian musicians, singers, actors, and playwrights. There are five regional networks, emanating from Vancouver, Winnipeg, Toronto, Montreal, and Halifax. The C.B.C. has nine governors who serve for three years without salary. They are representative men and women from different parts of the country—businessmen, lawyers, representatives of labour and agriculture, and educationists. They meet frequently, but the chairman works full time and receives a salary.

Vancouver has four radio stations, one of which, C.B.R., is the commission's station. Victoria has two, and there are stations in New Westminster, Nanaimo, Chilliwack, Prince Rupert, Prince George, Dawson Creek, Kamloops, Kelowna, Penticton, Vernon, Nelson, Port Alberni, and Trail. Most of these join a national network for several hours daily. Governments and police are expanding their own radio services. Marine radio stations have a particularly useful function while the British Columbia provincial police has thirty-seven stations for communication between headquarters and the various units.

To most people radio is sufficiently old now to be taken for granted, just one of the benefits of the modern age like buses, planes, and telephones, but sometimes the radio becomes the centre of dramatic events, and when great distances are involved the occasion is deeply impressive. For instance, Vancouver vividly remembers the afternoon of January 20, 1936, when, just before Big Ben chimed midnight, the B.B.C. announced the death of His Majesty King George V. In common with people over most of the world British Columbians had stayed close to their radios as the time of their king's passing approached. The

C.B.C. was tuned in by short wave to B.B.C. and in Canada all C.B.C. stations waited for a flash message. Newspaper radios were also tuned to C.B.C. and at 4.12 p.m. crowds outside newspaper offices, restaurants, business establishments—wherever there was a radio— knew the sad tidings. Within a few minutes of the B.B.C. announcement all but the isolated regions of British Columbia had the news. The first newspaper extra was on the street at 4.20, several minutes before the first editions appeared in London. Normally this fact would be of interest only to newspapermen, but it impressed itself on the people in the sudden realization of what radio communication would mean in their lives. The next startling realization came in the second world war, when the C.B.C. overseas unit went with the Canadian troops into action in Africa, Sicily, France, the Low Countries, and Germany. Fathers who had fought in the first world war were able by means of the C.B.C. short wave recordings to follow their sons' units in the new war. No wonder it seemed fantastic.

Education, discussion forums, school broadcasts, entertainment from opera and symphony to comedy and crooners are part of the radio fare offered British Columbians. C.B.C.'s programme service includes light and serious music which takes up 62·5 per cent of network time; drama, news, public affairs, women's interests, children's programmes, religious broadcasts, farm and fishermen's service, variety and features, and a growing list of educational broadcasts. No aspect of Canadian life is ignored. Of the musical programmes, 15 per cent are classical music, 60 per cent semi-classical, and 25 per cent dance, old time and band music.

One other problem faced the C.B.C. engineers in making programmes available to the greatest number. There are many small, scattered communities in the interior valleys of British Columbia, too small to support local radio stations. Because of the mountain barriers listeners in these places cannot pick up distant stations. Engineers worked out a scheme that was both economical and effective—small, unattended transmitters

Photowash by Ronald White

connected to the wire lines that carry the C.B.C. network service. This plan "lifts" the programmes into isolated regions. They are called "booster stations."

In the short-wave field the C.B.C. broadcasts news, talks, music, and other entertainment to the United Kingdom, Europe, the West Indies, and Central and South America. Expansion of this service takes Australia, New Zealand, and South Africa, and will eventually include a longer list of foreign countries. More than ten thousand letters are received annually from foreign listeners, and as the object is to develop friendship and understanding of Canada and promote international goodwill this plan is having some effect. Television broadcast has not yet come to Canada and there has been some criticism of C.B.C.'s hesitancy to adopt it, particularly in view of its increasing use across the border. Some Canadian television sets, of course, are picking up the American television programmes.

Steamship and main airlines serving British Columbia are linked with the two transcontinental railway systems. The Canadian Pacific Railway was the first to link the Atlantic with the Pacific. As explained elsewhere the construction of a transcontinental railway was one of the terms of British Columbia's entrance into Confederation. British Columbia agreed to convey a belt of land extending on either side of the railway to the Dominion in trust for furtherance of construction of the railway, an area later augmented by 3,500,000 acres in the Peace River district under agreement whereby the Dominion gave $750,000 to aid the construction of the Esquimalt–Nanaimo railway on Vancouver Island and take over and complete a graving dock at Esquimalt.[1] Surveys for the Canadian Pacific Railway began in 1871, the route was selected in 1878, and the last spike driven at Craigellachie on November 6, 1885, when the first train reached Port Moody, a few miles east of Vancouver. The first train reached Vancouver May 23, 1887. The Esquimalt and Nanaimo railway was opened in August the previous year. Actually these railways were antedated by a mile and half of

[1] See *British Columbia Manual*, 1929.

trackage (metal strips laid on wood) across the portage between Seton and Anderson Lakes in 1862, over which freight was hauled between the lake steamers. The advent of the railway was naturally an incentive to mining operations and more branch railways were demanded. Before the turn of the century ninety-three companies had been given charters for railways. But only eleven lines were built and most of the survivors that were of use were incorporated in the Canadian Pacific system. A coastal steamship service, to Vancouver Island, Seattle, and other points in British Columbia became part of the system. The Empress liners that spanned the Pacific Ocean to Australia and the Orient are mentioned elsewhere.

The Canadian National Railways have their origin in three great groups of rail interests formerly independent: the Grand Trunk Railway of Canada, chartered in 1852, and its subsidiary transcontinental enterprises embodied in the Grand Trunk Pacific Company and the eastern division of the National Transcontinental Railway; the Canadian Northern, built by Mackenzie and Mann, and all their subsidiary enterprises; and the Intercolonial Railway (in the Maritime Provinces). The Canadian Northern opened a line between Vancouver and Edmonton, the capital of Alberta, in 1915, passing through the mountains by the Yellowhead Pass and following a route originally intended for the Canadian Pacific. Meanwhile the Grand Trunk Pacific, extending westward from Edmonton, built a line, also through the Yellowhead Pass, to its British Columbia terminal at Prince Rupert, which was completed in 1914. Thus when the Government-owned Canadian National Railways assumed control in 1922 it acquired two terminals on the British Columbia coast. Each transcontinental line goes through the Fraser canyon, one on each side of the river, and each has many branch lines running north and south to serve the districts through which they pass. There is a Canadian National Steamship service on the coast with regular service between Vancouver and Prince Rupert, and both railways have their own telegraph systems.

As these trans-Canada lines ran into Vancouver from a north-

Photograph by Ronald White

easterly direction other interests saw the need of a railway striking northward from Vancouver to tap the cattle range and mining country between the Fraser River and the coast. So the Pacific Great Eastern Railway, from Squamish, at the head of Howe Sound, 40 miles from Vancouver, to Quesnel, thriving town of the north-central mining region, was begun in 1912, the bonds being guaranteed by the Provincial Government. The government took over the railway in 1918, and until the industrial expansion that followed the second world war the line was something of a white elephant. But with the opening up of northern British Columbia and the importance of Alaska to American interests, the P.G.E. faced far brighter prospects and extension of the line became essential. It is now being lengthened to Prince George and will eventually reach into the Peace River country, while at its southern end it will be carried into Vancouver. A highway from Squamish to Vancouver is also planned, providing a trucking route and a scenic drive.

The Great Northern Railway connects Vancouver with Seattle and other American points.

Telegraph lines cover a heavy mileage in British Columbia. They are operated by the Dominion Government and by the chartered railway and telegraph companies. The first line was built into the Cariboo mining country in 1865 as part of a project to build an overland telegraph which was to have crossed British Columbia, Alaska, and Siberia to connect the North American continent with Europe. But when an Atlantic cable was laid the project was abandoned and the portion built into the Cariboo was operated as a commercial telegraph line from 1871.

The Pacific cable lands in British Columbia. It connects Bamfield, on the west coast of Vancouver Island, with Australia in five sections: Bamfield to Fanning Island, 3,458 miles; Fanning to Suva, 2,043 miles; Suva to Norfolk Island, 981 miles; Norfolk to Southport, Queensland, 837 miles; and Norfolk to Doubtless Bay, 519 miles. The cable was laid jointly by Britain, Canada, Australia, and New Zealand, and began operation in 1902. A second cable was laid in 1926.

A year after Alexander Graham Bell invented the telephone, an experimental line between two city blocks in Victoria was built. It was successful and by 1880 there was a telegraph company on Vancouver Island. Four years later the British Columbia Telephone Company was granted a charter, and by 1904 had acquired the various small companies then operating. Now it is the second largest organization of its kind in Canada. With its associated companies in British Columbia it gives service to more than 230,000 telephones. Sixty thousand instruments have been added since 1946. The British Columbia system is part of the world network and theoretically the British Columbia subscriber can lift his receiver and talk to any of 60,000,000 other subscribers all over the globe. Phoning across the continent to Montreal, Ottawa, and New York is quite common in government and business circles, while the British Columbia traffic in transocean calls is considerable. Rates are listed for ninety countries and territories, a sample being Antigua $12, Belgian Congo $15, Shanghai $12, Balearic Islands $16·95, Athens and Isle of Man $15, Kenya, Luxembourg, Northern Rhodesia, and Pakistan $15; the Philippines $12, while Spanish Morocco is in the $16·95 class, all rates being for three minutes' conversation. The company uses more submarine cable than any other on the North American continent. It maintains more than seventy stretches of underwater cable containing nearly 5,000 miles of wire between the mainland and Vancouver Island.

British Columbia has the most extensive radio-telephone system in Canada and because of the unusual communication difficulties along the heavily indented and rugged coastline the service is unique, and invaluable to tugboat crews and owners. Through the North-West Telephone Company, an associate of the British Columbia Telephone Company, 1,350 ships and 180 land stations are served. For years the system has operated on medium frequency which means that the communications could be heard on the ordinary household radio, and "eavesdropping" became a popular evening pastime. Soon, however, this type of listening will not be available, except to the short-wave set owner, as the

Photowash by Ronald White

system is being converted to VHF (very high frequency). Listeners sitting by their firesides have listened to discussions about storms between tugboat skippers, they have heard calls for medical aid from some lonely camp upcoast, they have heard distress calls from ships out in the storm, and they have sat in on tense drama which they will not soon forget. One stormy night six years ago hundreds of quiet homes were startled as Captain John Bruno of the tug *Eagle Six* picked up his radiophone to appeal for help as his ship was sinking off Nanoose, Vancouver Island. Every minute or so he told how the water was rising, and then: "Hurry up! We can't stay afloat much longer! We are sinking! Hurry up, *Arbutus* [another tug that had answered Captain Bruno]. We are sinking now! We'll have to leave, the boat is going down." There was silence for five minutes. Then a new voice: "*Snow Cloud* calling. All hands taken safely off *Eagle Six* by *Arbutus* and bound for Nanaimo. Tug has sunk."

On a summer day in 1945 a small tanker headed out of Vancouver harbour into a westerly gale that was piling mountainous seas. She began to sink. Housewives and listeners on office radios followed the struggle to save ship and crew. Finally a tug got lines aboard, and a voice from shore said: "It's up to you and the tanker now. You're on your own."

"Okay . . . I think we can make it. The after deck is level with the water. We're filling up aft. I think we have it okay now," but in the same breath, ". . . the water's coming up fast. The batteries might go any second."

The ship and crew were saved, but there were others that weren't, and radio listeners will never forget them. The first was a tug pounding in a mid-winter storm and the captain was able to gasp a farewell to his family into the radiophone before the ship went down. On the other occasion the crew of a doomed ship took it in turn to say farewell over the phone. So many people heard the tragic last words that telephone lines to all the newspapers were clogged for hours.

The commercial advantages of the radio-telephone are important. Fishing-boats at sea can telephone to shore headquarters

to report the presence of fish and packers (bigger ships that collect the catches from the smaller boats on the fishing-grounds) can phone the size of the catch and delivery instructions to the shore staff. Tugs can be diverted by their office to various jobs, thus saving time and sometimes hundreds of miles of steaming. Mining or logging camps can call for equipment, or supplies, or get quick medical attention in case of an accident or sudden illness.

The radiophone was inaugurated twenty years ago and besides providing a link with ships gave communication to many isolated districts. It, therefore, has an important function in growing industry. Approximately fifteen thousand calls are made monthly and the operators at the special ship-to-shore switchboard are a specially trained group of girls. They, themselves, have sometimes been the unheralded angels in helping to save life at sea or in an isolated camp. Nowhere else in Canada is there a demand for such specialized communication, but soon the Vancouver family will not be able to listen as the tug seaman makes a Saturday night date with his girl ashore.

Finally, in the communications system are the highways and the bus services. The province has several main highways stretching north and south and east and west, but a great deal remains to be done to make many parts conveniently accessible by road. The Government has embarked on a ninety-million-dollar road programme, part of which is to complete British Columbia's section of the highway across the whole dominion. The whole southern part of the province is adequately covered by buses. One can travel across the continent in comfort in these streamlined, air-conditioned coaches. Air services are dealt with elsewhere.

As the south-west corner of the province is the centre of commerce and industry, so it is the hub of communication and transportation.

Photograph by Ronald White

XVIII

HEALTH, WELFARE AND EDUCATION

THE promotion of good health and well-being is one of the major efforts of the Provincial Government through its Department of Health. Equable climatic conditions and the long hours of outdoor work and recreation have made British Columbia one of the healthiest provinces in the country. This natural advantage is augmented by advanced social and health services, grouped under the authority of the Provincial Secretary and Minister of Health, Hon. A. D. Turnbull, with each of four divisions headed by a deputy minister. Under the health branch there is nursing, a complete health unit service including public health engineering, sanitation research, laboratory facilities, child medical and dental care, pre-natal advice, and free diagnosis of tuberculosis by means of a mobile unit which is constantly on tour. The results from this travelling testing station have been remarkable, and hundreds of cases of the disease have been detected in its early stages. Treatment is free for those who cannot afford to pay. The branch also offers free diagnosis, free treatment, and free drugs for the elimination of venereal disease, supplies free immunization against communicable disease, and a strong organization for preventing and combating epidemic. The deputy minister of this division is Dr. G. F. Amyot.

The welfare branch under E. W. Griffith, recipient of the gold medal of the Professional Institute of the Civil Service of Canada for the most outstanding public service in 1948, has grown tremendously in the last few years. It cares for the aged, the sick, destitute, unemployable, and the helpless. Millions of dollars are paid out annually in social allowances, old age pensions, mothers' allowances, and child protection. In 1948 an agreement

was reached with the College of Physicians and Surgeons of British Columbia whereby full medical assistance is extended to every social assistance recipient, who number 40,000, for which the Government pays $600,000.

The third division of this department is the provincial secretary's office which administers the complex affairs relating to mental sickness. The task of providing hospital treatment and all the facilities of therapy belong to this department. Legislation has been put on the Statute books and measures prepared for reducing the incidence of mental illness. This effort is being closely studied by Canadian and United States medical authorities.

In 1948 a fourth division was added to the department, compulsory hospital insurance, the most important health measure the government has undertaken. Under its provisions every man, woman, and child in the province, with certain exceptions such as Christian Scientists and people in remote areas where the provision of hospital accommodation is not practicable, can have hospital attention. The original measure set the contributions as follows: single persons $15 a year, head of a family with one dependant $24, and head of a family with more than one dependant $30. The contributions of old age pensioners are paid by the government and most steady employees pay their dues by payroll deductions. In the first year, however, there were many delinquents, and the revenue of $10,000,000 was below the estimate and there was a deficit of more than $3,000,000. For 1950 the rates were increased to $21 for single persons with no dependants, and $33 for a married person with dependants or a single person with dependants, and there were indications that there might be a further increase. However, some early defects in the machinery of operation were responsible for part of the deficit and a study of the administration has been undertaken to correct the flaws. The insurance does not cover medical or surgical costs. In the first year 200,000 persons were provided with hospitalization. The province, however, urgently needs 4,700 more hospital beds—2,800 for acute cases and 1,900, for chronic cases—by 1951. This building programme will cost

Photograph by Ronald White

$15,000,000. This plan, and other provincial health measures, will not be affected by the overall health scheme that is being mapped out by the Dominion Government. British Columbia's hospital needs will be partly met by funds from the Federal Government which has announced that the province will receive $25,800,000 in the next ten years, $8,000,000 of which will be devoted to hospital construction.

The Department of Health has not a special division for cancer work, but it maintains the closest relationship with those organizations concerned with fighting this disease, the cancer committee of the British Columbia Medical Association, the provincial branch of the Canadian Cancer Society, and the British Columbia Cancer Foundation. The Foundation, with funds provided by the provincial department, has expanded its services in the prevention, diagnosis, and treatment of cancer. The department is also co-operating fully with the national organization formed in 1948 for the study and control of arthritis.

British Columbia was the first province to have a Red Cross blood transfusion service. It was established in 1947 in co-operation with the Department of Health, local health services, the Department of Veterans' Affairs, the hospitals, and the medical profession. The Vancouver depot serves the entire province with the exception of the Peace River district and East Kootenay, which have been taken over by the Edmonton and Calgary depots. Whole blood and plasma are supplied free of charge to hospitals, and so far no patient has gone without a transfusion when needed. The Royal Canadian Air Force has frequently co-operated in flying blood to emergency cases. Twenty-one thousand bottles of blood were used for 18,000 patients in 1948.

All these health services faced a sudden challenge in the great floods of the spring of 1948 when scores of rivers, including the Fraser and the Columbia, burst through their banks, flooded scores of thousands of acres, and brought the gravest hazards to health. The worst threat was in the more thickly settled area of the lower Fraser Valley. The federal health authorities, army medical corps, and all the provincial bodies united in manning

the menaced regions with doctors, nurses, nutritionists, sanitarians, and public health engineers. Water was chlorinated, typhoid immunization clinics established; nurses rowed to flooded houses to inoculate the stranded victims; milk supplies were processed and the navy and air force kept up food deliveries from Vancouver. When the waters receded there were more health problems, particularly in the mosquito breeding-grounds. These were sprayed from the air by university students. No home could be reoccupied without a permit from the health authorities; all water systems were checked, superchlorinated and flushed out; the sanitarians tested nearly five hundred wells, and condemned or decontaminated the water. Tinned and bottled food supplies that had been under water had to be destroyed. As a result of these efforts not a single case of typhoid or other flood-borne illness occurred. It was a triumph for effective health measures and administrative organization.

A feature of the various health measures that is particularly satisfying is the progress made in the control of tuberculosis. There was a greater drop in the death-rate in 1948 than in any previous year. A shortage of 500 beds for tubercular patients has been halved by a new unit in Vancouver provided by the British Columbia Tuberculosis Society. The institution is now able to carry out every form of active treatment and has one of the best-equipped units on the continent. Of the 138 hospitals in the province, 5 are tuberculosis sanitoria and there are 2 T.B. units attached to other hospitals. There are 70 general public hospitals and 34 private hospitals. To meet increasing needs, accentuated by compulsory hospital insurance, new hospitals and additions to present ones are being constructed or projected.

Vital statistics show that the younger people are becoming healthier and that the life span is being lengthened. For two decades, during which time there has been an increase of 500,000 in the population, the death-rate has remained almost constant between 8 and 10 per 1,000. Infant mortality has declined in both number and rate. In 1948 it was 22·8 per 1,000, a reduction of 22·7 per cent over 1947. Births during 1947

Photograph by Ronald White

numbered 26,286, compared with 22,609 in 1946, a rate increase from 22·54 to 25·18. Deaths totalled 10,613 and marriages 11,852. The two leading causes of death, diseases of the heart and arteries, and cancer, each showed increased rates in 1948, the former higher by 7·4 per cent and the latter by 3·3 per cent. Accidents are the third leading cause of death with automobile fatalities topping the list.

Finally, in the health field the department is organizing eighteen full-time local health centres covering the whole province. Eight are already in operation.

After some early difficulties a medical faculty has been added to the university. Dr. M. M. Weaver of the University of Minnesota has been appointed dean and the first unit of the new buildings is in use. The need for medical men is growing, and while more than five hundred graduate each year in Canada, the yearly loss through retirement and death is about three hundred and fifty. The net gain is not sufficient to meet the demand. Hitherto a British Columbian seeking a medical degree had to go to an eastern college, a deterrent to many because of the added expense. The new University of British Columbia school hopes to graduate fifty each year. The first doctors will enter their interneship in 1953. The medical school will be in three divisions, the first building being for bacteriology, preventive medicine, and a nursing health unit. A second building will house the sciences of anatomy, physiology, and pharmacology, and eventually a teaching hospital will be added. For the present students will use the facilities of city hospitals.

Hon. W. T. Straith, Minister of Education, places the cost of graduating a medical student at $6,000.

The social welfare branch of the Department of Health has wide ramifications and performs a difficult but essential service. It works on the theory that the welfare of the citizen is the government's first concern yet is careful not to go too far in making the government a paternal body. Any idea that government assistance should be considered permanent, except in the obvious cases of need, is discouraged. For instance, the title of

Mothers' Pension Act was changed to Mothers' Allowance Act to imply an allowance granted for the period of need rather than a perpetual pension. This policy has avoided such abuses that have occurred in several American cities, and is the reason why American welfare officials have been studying British Columbia's pattern.

Although British Columbia has had unemployment relief measures since the province entered Confederation in 1871, it is only in the last twenty years that social welfare administration has assumed an enlightened and comprehensive aspect. The motivating force was the depression of the early 'thirties. Grave conditions necessitated the formation of an unemployment relief branch of the Department of Labour. Many municipalities became impoverished in meeting the situation, which was aggravated by the migration of individuals and families to the milder weather on the coast. Provincial and municipal treasuries were near the breaking-point when the outbreak of war in 1939 brought a sudden end to unemployment, except for the physically and mentally incapacitated. In 1941 the Provincial Government assumed 80 per cent of the cost of direct relief to unemployable persons and the policy established towards the end of the depression of granting such assistance on a basis of need yet within a maximum scale has continued. In other words, individual consideration is given to individual situations, with the objective of rehabilitation firmly in view.

British Columbia has been paying mothers' allowances for thirty years, the broad intention of the Act being to provide a widowed deserving mother with an income sufficient to allow her to give her children undivided attention and care. It is essentially a child welfare measure. The mothers, of course, remain eligible for the federal family allowance grants. About one thousand mothers and two thousand children are presently being assisted under this Act. The fund comes from the profits of liquor sales, which are under government control. The cost of this assistance is decreasing yearly (from $810,000 in 1939 to $441,000 in 1948). This does not mean, however, a decreasing need for

Photograph by Ronald White

assistance because of prosperous times. The only plausible explanation in the minds of welfare officials is that the stigma that was once felt at the receipt of public assistance has greatly diminished, and as the rates of all assistance measures are now about equal the receipt of a mothers' allowance has lost its appeal. Nevertheless, since mothers' allowances were first started in 1920 some $15,000,000 in assistance has been granted.

With more than thirty-two thousand persons in receipt of the old age pension in British Columbia the cost to the Government is $10,000,000 a year. In 1947 the Federal Government raised the pension from $25 to $30 a month. British Columbia had been the first province to add a cost of living bonus of $5, and when the pension was increased British Columbia added another $5. At the same time the maximum sums that could be earned by pensioners without injury to their status was raised. The position of blind pensioners was similarly improved.

There has been child welfare legislation in British Columbia for fifty years. In 1919 the problem of neglected children became acute and the following year two Acts were passed, "The Adoption Act" and "Children of Unmarried Parents Act." In 1927 a child welfare survey sponsored by the service clubs of Vancouver and conducted by the Canadian Welfare Council resulted in far-reaching reforms. Experienced social workers were sent from eastern Canada to give effect to the progressive recommendations. These moves led to the first social work course being offered by the university. Everything possible is now being done for children who are victims in some form of parental neglect. The growth of this service since 1935 has been outstanding. Reforms became effective in time to care for the additional problems brought on by the war and its aftermath. There is now an adequate supply of social field workers who are the basis of the whole service of health and welfare, a service that is now costing the taxpayers more than twenty million dollars a year. But there are no complaints at this outlay because the work is remarkably effective and no price tag can be put on saving the lives of the young, treating sicknesses, and lengthening the days of the aged.

Although British Columbia (as a colony) had set up the legal machinery to care for the health of the people in 1869, very little was done under this authority, chiefly because the population was small and constantly on the move. When British Columbia became a province of the Dominion the old ordinance became part of the statutes, but it was not until 1892, when there was a smallpox epidemic, brought in from the Orient, that any public health measures were taken. Early in 1932 there was another serious outbreak of the virulent type in which sixteen victims died. In the last ten years there has not been a single case. But the 1892 epidemic caused a panic and there were insistent demands that a health body be established. Dr. John Chapman Davie was appointed the first provincial health officer and took immediate steps to halt the epidemic. At the same time cholera was present in several cities of Europe and the threat to the American continent aroused public opinion to the need of more effective measures to guard health. The British Columbia government quickly drew up sanitary regulations and enforced them. From these two scares grew the public health structure that has become a model of efficiency and progress. The biggest advance in earlier years was in 1910 when medical inspection in the schools was started. Qualified medical practitioners inspect every school child annually and notify the parents of defects, if any. Health regulations have been added to statutes whenever needed.

The first provincial laboratory was established in Victoria in 1913. There are now several in the province offering complete facilities to physicians. The public health nursing service was started in 1917. Full-time health units, composed of a medical officer, nurses, and a sanitary inspector, have been set up in many districts. Three cities, Vancouver, Victoria, and Trail, and one municipality, Burnaby, have their own medical health departments with nursing services. The International Health Division of the Rockefeller Foundation gave substantial financial assistance in organizing the health units. The University of British Columbia was the first university in the British Empire to offer a course in nursing leading to a degree. In 1919 a five-year course leading to

Photograph by Ronald White

B.Sc. (nursing) was provided, consisting of three years' university training and two years' hospital training.

British Columbia's health and welfare services are among the best organized in the Dominion, and when the Federal Government's health programme is fully implemented British Columbia's facilities should be second to none.[1]

Each province in Canada is responsible for education within its borders and almost the entire cost is borne by the provincial taxpayers. The standards, curricula, and administration are broadly the same throughout the Dominion. British Columbia has free, non-sectarian public schools with compulsory attendance. The government organization, set up fifty years ago, has expanded and progressed with the growth of the province and changing trend in educational requirements. It has been in the forefront in modernizing its system, and in 1948 embarked on an extensive programme of modern school construction. All are designed to admit the maximum light and sunshine and contain the latest equipment. Topping the list is the technical vocational building in Vancouver, a fully modern training centre in many crafts, occupying half a city block.

The cost of educating nearly 150,000 students (34,000 of foreign parentage) in 1,000 schools with 5,000 teachers is about $25,000,000 a year. At the head of the department is a cabinet minister who is an elected member of the Legislature. His deputy minister and other officials of the department are civil servants, and each is attached to the branch of the administration in which he specializes. Each district has a resident inspector charged with general supervision and inspection of school work. There is a large measure of local autonomy, however. All cities, district municipalities, and rural areas have their own school trustees, elected with their civic councillors. Their duties include the provision of school accommodation, maintenance of buildings and grounds, furnishing of equipment, fuel and light, provision of health instruction, appointment of teachers and other employees,

[1] For statistics and facts quoted in this chapter see annual reports of the Department of Health.

responsibility for efficient management, and the amount to be raised locally for school purposes.

Prior to 1946 there were 650 school districts, but on the recommendation of the Cameron Commission they were abolished and the province divided into seventy-seven administrative areas, each under a director.[1] The reorganization of the areas and new system of grants brought immediate benefits, both educationally and financially. Many small, isolated rural schools were closed and the pupils taken to bigger schools by bus. Schools are divided into four main groups—elementary, junior high, superior, and senior high. In addition there are the Vancouver School of Art, the school for the deaf and the blind, night schools for manual training, domestic science, commercial and technical courses, agricultural instruction and correspondence courses. There are two provincial normal schools for the training of teachers and two institutions of higher learning, the University of British Columbia and Victoria College. The government now requires that every teacher be a member of the British Columbia Teachers' Federation, and it is the federation's scale that has been accepted as the salary minimum. The average is now the highest in Canada.[2] There are no separate schools for religious denominations receiving grants from the government, but there are both sectarian and non-sectarian private schools, and some excellent institutions fashioned after English public schools. Many new schools have been erected since the end of the war, half the cost of which is assumed by the government. School books are free up to the sixth grade and rented for a nominal sum up to grade twelve.

Vancouver has the heaviest concentration of educational facilities. The rapid increase in the population brought about an overcrowding crisis that called for drastic measures. In 1947 the school board began a ten-year expansion programme costing $30,000,000. In the first year 69 classrooms were added and construction started on another 130. This was sufficient to

[1] See *Cameron Commission Report*, 1944.

[2] Annual reports of the Department of Education give complete details of the education system and tables of costs.

Photograph by Ronald White

relieve the immediate pressure and the remainder of the building programme is designed to meet a peak enrolment which is anticipated about 1954.

The new Vancouver vocational institute has been built on the site of Vancouver's first school to house adult classes. It contains 17 workshops in addition to classrooms. Every practical trade and skill will be taught. This phase of the educational policy is in line with British Columbia's changing economic conditions. Education does not end with the 'teen-agers. More skills have to be learned to keep up with the new manufactures. That is the chief reason why 10,000 adults attend night classes in Vancouver and 12 different trades are conducting 35 classes for apprentices.

It is seventy-nine years since the first little schoolhouse was set up in Moodyville. In 1891 Vancouver had only 5 schools. Now there are 54 elementaries, 4 junior, and 12 senior high schools, attended by 45,000 pupils.

At the instigation of the Canadian Education Association and fostered by the Canadian Manufacturers' Association a survey is being conducted into practical educational facilities in the secondary schools. The study will be carried on for some years, but meanwhile, in response to an insistent call for more practical tuition, the trend in the high schools is away from the traditional academic courses. In this adaptation to meet requirements British Columbia is abreast of the times. There is now more general acceptance of the contention that students in the top grades should have more technical instruction as the majority of high school students do not continue to college or university. There is a research committee in each province and every class in the community is represented in its membership. Obviously the problem is complex and a solution may not be reached for some years. It is agreed that sound educational principles must not be impaired in revising the curriculum to include more practical teaching; neither must academic teaching be so reduced as to handicap college-preparatory teaching for those students who plan to continue their education.

In order to equalize educational opportunities throughout the

province the Department of Education initiated correspondence courses in academic, technical, and vocational subjects. Full advantage of this, of course, is taken by pupils in distant points. In Vancouver there are two regularly organized commercial high schools and one technical high school, but the present policy is against separate specialized institutions. Instead composite high schools are being developed with special technical and commercial departments. In addition to regular academic subjects pupils may now choose courses in industrial arts, art, mineralogy, agriculture, home economics, commercial work, and vocational subjects, of which there is a wide variety. Local economic needs are considered in this training. Opportunities for employment at the conclusion of a course are surveyed, committees of employers and employees act in an advisory capacity, and the vocational teacher must be fully qualified and have the confidence of the industry in which he is engaged.

Since 1940 the Provincial and Federal Governments have given financial assistance to those students of ability who cannot afford higher education. Pupils are now being assisted in universities, normal, nursing, technical and vocational, and art schools. There is a guidance and counselling service; drama groups are fostered; the department offers a wide programme of physical education and recreation. This is available to everyone and has a membership of thousands of adults. Films and radio now supplement other educational efforts and enable useful knowledge to reach the smallest hamlet. Another expanding branch of education is the health service which includes regular medical inspections.

Close contact between the school authorities and the families of the children is maintained through parent-teacher associations. There are scores of these organizations throughout the province. These associations are credited with many co-operative efforts in educating the child, both in the school and at home.

Sixty years ago there was bitter jealousy between the mainland and Vancouver Island and these animosities were a stumbling-block in the way of educational progress. The need for a university was pressed as early as 1877. The British Columbia University

Photograph by Ronald White

Act was passed in 1890, but because of the lack of co-operation between the island and the mainland this Act never became effective. Still seeking facilities for advanced learning the Vancouver school board pressed an amendment to the School Act whereby the high schools of Vancouver, Victoria, Nanaimo, and New Westminster became affiliated with McGill University in Montreal in 1906 and assumed the teaching of the first three years in arts and the first two in applied science at McGill University College. Meanwhile pressure for the establishment of a provincial university was intensified and in 1907 an Act was passed endowing the university with 2,000,000 acres of Crown lands. In the following year a new university Act was passed, repealing the Act of 1890, and establishing and incorporating the University of British Columbia. Early in 1910 the government appointed a group of distinguished educationists from outside the province to consider the vexed question of a site, and after several months of touring the province they recommended the present site at Point Grey.[1]

The university stands upon a headland 300 feet above the sea, separated from the water by a steep bluff, crowned in places with heavy forest growth. The three main considerations which guided the commission appear to be: the great beauty of the setting; proximity to the largest centre of population in the province; and the fact that since there is open water on three sides the area can never be surrounded by the city, no matter how large Vancouver may become. The location is really magnificent. To the north, across English Bay and Burrard Inlet, rise the rugged Coast Mountains, covered with snow a great part of the year. Eastward the inlet narrows to the Lions' Gate entrance to the harbour. The university golf course parallels this shoreline. West and south-west are the waters of the Strait of Georgia, with the Gulf Islands and Vancouver Island on the other side. The superb view across the sea takes in the promontories and wooded islands of the Gulf with the snow-tipped mountain summits of Vancouver Island forming the background.

[1] See *The University of British Columbia: Twenty-first Anniversary, 1936.*

Past this bluff, almost beneath the lecture-room windows, streams the commerce of the world. But more important for its utilitarian purpose the university is situated in the midst of a vast laboratory. A great city, mountains, sea, rivers, and forests are at its door. Few seats of higher learning have such exceptional facilities for field work.

The 1914–18 war delayed the establishment of permanent buildings and for ten years, from 1915 to 1925, McGill College was used for lectures and classwork. The development of the campus is continuing. There are many beautiful and permanent buildings, of course, but the second world war again interrupted plans and at the same time brought a need for expansion beyond that projected in 1939. There are five faculties, arts and science, applied science, agriculture, law, and medicine. Three institutions are affiliated with the university, Victoria College, which is undenominational, and two theological colleges of the Anglican and United Churches of Canada, the last two now situated on the campus.

The first chancellor, chosen in 1912, was Mr. F. L. Carter-Cotton, and when he retired in 1918 at the end of two terms, Dr. R. E. McKechnie was elected and served continuously until his death in 1944. He was succeeded by the present incumbent, Hon. Eric W. Hamber, formerly lieutenant-governor of the province. Dr. F. F. Westbrook was the first president, succeeded on his death in 1918 by L. S. Klinck, dean of agriculture, Dr. Klinck retired in 1944 and was followed by Dr. Norman A. M. MacKenzie.

Scientific research at the University of British Columbia has contributed a great deal to the advancement of British Columbia industry, particularly in the development of auxiliary manufacturing. It has established its own research council which works in co-operation with the provincial body. Its services are available to every manufacturer, and are frequently used. Its scientific contributions to the war efforts were considerable and not all of it has been revealed, particularly its help in atomic research.

For several post-war years the facilities of Canadian universities

Photograph by Ronald White

were pressed to the limit by some thirty thousand veterans who took advantage of the Government's offer to finance university courses through re-establishment credits. The University of British Columbia, for instance, instead of a normal enrolment of about 2,500 students, suddenly faced the problem of training 10,000. The major difficulty was one of living quarters. The end of the war saw an acute housing shortage in Vancouver. Men and women of the armed forces were permitted to take their discharges in any province they chose. They went to British Columbia in great numbers and accentuated the accommodation difficulty. The administration tackled and solved the difficulties. It engaged hundreds of additional instructors and lecturers, used the lecture-rooms over and over again through most of the hours of the day, with many students sitting on the floors and in the doorways, and provided accommodation for the veterans, their brides, and in many cases their children. War surplus army huts were purchased whenever possible, others were built, some of the bigger ones were used as classrooms, and hundreds of the veterans were able to rent or buy two-room trailers. In a few months the vast campus instead of having the atmosphere of quiet cloisters about the halls of learning, was dotted with all kinds of temporary habitations from which usually hung the day's wash and around which a small army of children played. It was a matter of astonishment that under such conditions of inconvenience the veterans were able to study at all, but their examination ratings were even more surprising. University authorities did not surrender to sentiment by lowering the standards, either in teaching or in examination requirements, yet the veterans did better than anyone considered possible. The president, Dr. Norman MacKenzie, himself a victim of the housing shortage, lived for several years in an army hut on the campus and knew the difficulties under which the students did their work.

By 1950 most of the veterans had completed their courses and had found their place in the economic or industrial life of the community. The educational machine was strained to the limit in this post-war undertaking. The success surpassed the most

optimistic hopes of educators and public leaders. More than thirty thousand men and women, their vision and knowledge broadened by war and travel, were given higher education and technical training which most of them normally would not have had. The effect of these benefits on the standards of living and citizenship is considerable and will be reflected in future generations.

Photograph by Ronald White

XIX

THE ENFORCEMENT OF LAW

POLICE work in British Columbia comes under three jurisdictions, none of which conflict, however. Most of the urban municipalities have their own police forces. The rest of the province comes under the authority of the Provincial Police, directed by the Attorney-General. The provincial body and the city police, particularly in such cities as Vancouver and Victoria, work in the closest co-operation which has been greatly facilitated by two-way radiophone equipment. Also operating in the province is the Royal Canadian Mounted Police, whose duties are concerned with upholding federal statutes. They are the Red Coats, the old Royal North West Mounted Police, who added colour to Canada's early history, but the plane, speedboat, and automobile has supplanted the horse, except in some interior regions and for ceremonial occasions. The penitentiary (for major crimes) is administered from Ottawa, while the province maintains Oakalla prison, a number of gaols, a boys' industrial school, a girls' industrial school, and has recently reopened the Borstal home.

The provincial police force was organized in 1858 as a colonial force and became the provincial police in 1872 following Confederation. It is the oldest territorial police force in North America, one of the best equipped, and one of the most efficient. It has a science bureau and an up-to-date criminal investigation branch. In the last twenty years it has taken over the police duties of forty municipalities. At the 1950 session of the Legislature, however, the Attorney-General was given authority to negotiate with the Federal Government with a view to turning over the duties of the provincial force to the Royal Canadian Mounted

Police. Most of the provincial men would be absorbed by the Royal Canadian Mounted Police, the Government would save about a million and a half dollars a year, and believes the change would mean greater efficiency. Two other western provinces have made a similar change. (The transfer to the R.C.M.P. was made August 15th, 1950, just before this book went to press.)

When the young, small city of Vancouver burned down in 1886 the buildings left standing could be counted on the fingers of one hand, but the day after the fire tents were thrown up on the still warm ashes and the citizens set about building a new Vancouver. In one of those tents the Vancouver police force was born. The first step was the appointment of a magistrate and then the establishment of a constabulary. J. M. Stewart was named the first chief of police and for some weeks he was the entire force. It now numbers 650 men with all the aids that science can give them. The force is largely motorized, is equipped with two-way radio communication, has a science bureau, and a speedboat for harbour work. Many individual policemen are doing important work among the youngsters. It began with a schoolboy patrol, groups of boys picked from each school to see that children get across the streets safely. They are given instruction by police officers, equipped with conspicuous cap and arm bands, and have full authority to stop any motorist. It is just as costly for a motorist to disobey a school patrol boy as to defy a police officer. With 45,000 children going to and from school twice daily the patrol is a tremendous help to the police force and in several years of operation there has not been an injury to a pupil while the patrol officer was on duty. Police officers also sponsor, operate, and instruct at athletic clubs for boys where there is a lack of recreational facilities. Recently after an outbreak of teen-age hooliganism a group of specially-selected officers was detailed to work among these youths and their parents in an effort to halt the lawless tendency before they embark on a career of crime. The heads of the police department feel that most of these young offenders can easily be directed to more useful pursuits.

Photograph by Ronald White

The courts of the province, in the order of their authority, are: (1) Court of Appeal, consisting of a chief justice, who is called Chief Justice of British Columbia, and four other judges, all appointed by the Federal Government. The court exercises general appellate jurisdiction; (2) Supreme Court, consisting of a chief justice and five puisne judges, appointed by the Federal Government. This court has unlimited original jurisdiction throughout the province in civil and criminal matters; (3) County Courts, one in each of the nine counties, Vancouver, Victoria, New Westminster, Prince Rupert, Cariboo, West Kootenay, East Kootenay, Nanaimo, and Yale, with one or more judges. They have jurisdiction in personal matters in sums up to $1,000 and in some cases up to $2,500. They have no jurisdiction in certain types of personal actions such as libel, slander, or breach of promise of marriage, but they have authority in criminal and probate matters; (4) Small Debts Courts. The Provincial Government may appoint any stipendiary magistrate, police magistrate or any two justices of the peace to exercise jurisdiction in cases involving $100 or less. There are ninety-seven small debts court magistrates; (5) Admiralty Court, which deals with marine and shipping cases and is presided over by a federal appointee. In addition there are many stipendiary magistrates and justices of the peace exercising a more or less limited jurisdiction under the Criminal Code of Canada as well as under the provincial Summary Convictions Act. There are also separate juvenile courts in Vancouver and Victoria and a family relations court in Vancouver.

To trace the history of the administration of justice in British Columbia the historian must cross the Dominion to Montreal to find the origin.[1] The trail will take him to the rivalry between the old fur-trading companies. The strife that marked the battle for supremacy in the west by the North-West Company of Montreal and the Hudson's Bay Company has often been recounted. The Nor'westers were the first to establish trading posts beyond the Rockies, and through their influence among the

[1] See "History of the Judicial System" in *Canada and its Provinces*.

executive council of what was then Lower Canada they were able to bring charges against the older Company of Adventurers of "outrages perpetrated upon the poor traders from Canada." The result was that in 1803 the courts of Upper and Lower Canada were given jurisdiction to try persons accused of crime in the Indian territories to the north and west of the two Canadas. Factors and superior employees of the North-West Company were appointed justices of the peace. The disturbances continued until 1821, and then, with the amalgamation of the two rival companies, the administration of justice passed into the hands of the Hudson's Bay Company. In 1849 the statutes under which the fur company officials meted out justice were repealed as far as Vancouver Island was concerned and the Crown assumed authority in civil and criminal matters. A regular court was not established until 1853 when Governor Sir James Douglas established the Supreme Court of Civil Justice of Vancouver Island.

When the Fraser River gold rush necessitated the establishment of a new colony on the mainland the fur traders' statutes had to be repealed there, too, and for some years Douglas, who became the first governor, was the sole law-maker. In 1858 an English barrister, Matthew Baillie Begbie, of Lincoln's Inn, was sent to assist Douglas. He had a commission as a judge and the law of England as of that date was proclaimed as the law of the new colony. Begbie was knighted in 1874 and for thirty-six years he was the most outstanding figure in the judicial history of the west. His name throughout the upper country was a synonym for law and order.

The jury system still bears the imprint of the early days of the province when British subjects were scarce in the mining camps. The sheriff was then empowered to summon anyone he thought fit for jury duty. Twelve jurymen have always been required for criminal cases, but seven or more might sit on civil cases if twelve cannot be readily procured. Civil cases are now regularly tried by a jury of eight, who must, however, be British subjects except in districts where the old rule still obtains.

Photograph by Ronald White

13. Mount Fraser (9,000 feet) from above Peter's Lake (6,800 feet)

Photo by Ronald White, Kamloops

Photograph by Ronald White

By 1907 the work of the Supreme Court had become so heavy that a Court of Appeal was established, but the Act setting up this court did not come into force until 1909. This statute provides that on the retirement or demise of the chief justice, the chief justice of the Court of Appeal would be styled the Chief Justice of British Columbia, a position now occupied by Hon. Gordon Sloan.

XX

THE PRESS

THE story of newspaper publishing in British Columbia is spread over a century, the first half of which was devoted, with a few notable exceptions, to many adventurous attempts to capture leadership. Many papers were started in a small way with practically no capital, and met an early and hardly noticed death; some achieved only one issue; others hung on for years only to fade away. It took high courage, integrity, and above all capital to enable the newspapers to survive the difficulties of the early years.

The Roman Catholic Bishop, Modeste Demers, assisted by a titled Frenchman who had left some political embarrassments behind him in Paris, published the first paper in the province in 1851. It was printed in French, was devoted solely to religion, and survived only a few issues. But the press on which *Le Courier de la Nouvelle Caledonie* was printed had a longer and more varied history. It was first used in France. Then it went to the California goldfields with the French missionaries. Bishop Demers acquired it and when his paper ceased publication it went into the goldfields again, but this time in the Cariboo country of British Columbia where it printed *The Cariboo Sentinel* at Barkerville. This paper first appeared June 6th, 1864, and immediately became prosperous because it was the only paper available to the 30,000 men who rushed up the Fraser banks to pan and dig for gold. The publisher accepted no advertisements for less than five dollars, and charged one dollar a copy, gold dust across the counter, for there were no newsboys and no deliveries. There are now five weeklies serving the area that *The Sentinel* had to itself. Next the wheezy old hand press had a brief home at Emory, south of Yale.

Photograph by Ronald White

It moved on to Yale, and did its last printing at Kamloops. It is now an historic relic in St. Ann's Convent at Victoria.

British Columbia is well served by modern newspapers, both in the cities and in the country. No organized community is without its paper. The metropolitan dailies, of course, rank among the most important in the Dominion. They are served by several news agencies as well as their own staffs of correspondents and special writers. There are three daily newspapers in Vancouver, the morning *News Herald*, and the Vancouver *Daily Province*, and the Vancouver *Sun* in the evening. The *Province* and the *Sun* have their own bureaux at Victoria and Ottawa, while the *Province* in addition has editorial staffs in Washington, London, and in Europe. The evening papers have a unique advantage in time element. There is a difference of three hours between Vancouver and Ottawa and Washington, and eight hours between Vancouver and London. So the noon editions of the evening papers have reports of a full day's developments in London and Europe, and their last afternoon editions complete coverage of the North American continent. The evening radio news broadcasts, therefore, have little to add to reports in the evening in the matter of consultative or governmental developments.

Victoria has two dailies, the *Colonist* in the morning and the *Times* in the evening. The *Colonist* first appeared December 11th, 1858, and is the oldest publication west of the Great Lakes. Victoria was a straggling trading post and Hudson's Bay Company fort, and gold had been discovered in the Fraser River creeks when Amor de Cosmos, a bearded young Nova Scotian, arrived in Victoria with the gold-seekers from California. His name was really William Smith but he had found so many Bill Smiths in California that he adopted the unusual name by which he was known the rest of his life. Instead of continuing on to the goldfields he stayed in Victoria and started the *Colonist*, calling it the *British Colonist*. It was at first a weekly, then a tri-weekly, and in less than four years a daily. It jumped into the fight, and quickly assumed leadership, for responsible government and union of the two colonies of Vancouver Island and British

Columbia. During de Cosmos' editorship the paper reflected his peppery disposition and pugnacity. De Cosmos went on to become premier of the province and then a British Columbia member of the Dominion Parliament. Control of the paper passed to J. S. H. Matson in 1906 and to-day is published by his younger son, H. T. It is a staunch Imperialist of the Old School, is fondly called "The Old Lady of Broad Street," as the Vancouver *Daily Province* is sometimes referred to as "The Old Lady of Victory Square," tributes to the wisdom that comes with age and experience. The *Colonist* has the distinction of being one of the few morning papers in North America with a larger circulation than its evening rival, the *Times*, which started in 1884.

Daily newspapers are also published at New Westminster, Nelson, Nanaimo, Prince Rupert, and Trail, and semi-weeklies at Kamloops and North Vancouver. There are sixty-six weeklies, including eight suburban papers in Greater Vancouver. The *Weekly Columbian* of New Westminster is the oldest of the weeklies having first appeared in 1860. The Canadian Weekly Newspaper Association conducts an annual competition among its membership throughout the country. The papers are divided into classes according to circulation, and awards made for different features, such as the best editorial page, the best front page, the best advertising display, with a special trophy going to the best all-round paper. The country editor occupies a high place in the community, alongside that of the country doctor, and the province takes pride in the fact that the bulk of these awards are usually won by the smaller British Columbia towns and cities. Although facilities for rapid distribution of city dailies to all parts of the province are increasing, the local weekly has lost none of its strength as a source of information and guidance. The country editor must strike a nice balance between recording his local happenings and keeping his readers informed of events in the bigger field. Because of its distances British Columbia's need of a strong rural Press is probably unique, and is excellently met. There are twelve papers among the farming communities of the

Photograph by Ronald White

Fraser Valley, and the Okanagan fruit valley, besides several small weeklies, is served by three big weeklies, the Vernon *News*, Penticton *Herald*, and Kelowna *Courier*. The Kamloops *Sentinel* also has an important influence in the interior. The Powell River *News*, the Cowichan *Leader* in the Duncan area of Vancouver Island, and further north the Comox *Argus* and Courtenay *Free Press*, and in the Kootenay Valley on the mainland such papers as the Nelson *News* and Grand Forks *Gazette* are all fine Class A papers. All told the weekly Press has a circulation of about 150,000 and its editors are as conscious of their responsibility to their communities as the city publishers.

There are also many monthly publications devoted to lumbering, fishing, mining, agriculture, commerce, and other business interests. The Socialists have their paper, the *C.C.F. News*, a few foreign language papers appear regularly, and the native Indians are now publishing their own paper.

It is impossible to trace down every newspaper that has seen the light of day in the province. As already mentioned, some of them achieved only one issue, and some were published to further some particular purpose and languished when that purpose was achieved or defeated. The political fights and feuding that were carried on in the editorial columns of some of the early papers would make a present-day editor's eyes bulge. There was apparently little regard for the laws of slander and libel. An editor to-day would have to pay heavily for such slanging bouts as enlivened the columns of earlier papers.

Miss Bessie Lamb, of the University of British Columbia, and Mr. D. A. McGregor, associate editor of the Vancouver *Daily Province*, have each made a painstaking and complementary research into the history of Vancouver newspapers and have filled a gap in the provincial archives with valuable material. Mr. McGregor traced nearly 300 papers that had been published in Vancouver since the city received its charter sixty-four years ago. Mr. B. A. McKelvie of Victoria, an outstanding authority on British Columbia's history, has been equally active in newspaper researches in other parts of the province. These three historians

have gathered many interesting stories of early days of newspaper publishing.

Miss Lamb begins with the first paper published in Greater Vancouver seventy-three years ago (1878), *The Moodyville Tickler*, sub-titled "The Pioneer Advocate of Burrard's Inlet." Its editor was a bright young lumber clerk, William Royde Colbeck, eldest son of Rev. W. R. Colbeck, vicar of Fressingfield, Suffolk, who, however, could devote only three evenings a week to his publishing business because of his other duties in the lumber mill. Mr. Colbeck imbued his editorship with a brashness and high spirit that hardly bespoke a long life for his brainchild, as witness the following quoted by Miss Lamb from the first edition: "Notices of deaths, unless accompanied by a special fee, will be restricted to two lines and a half, but an enclosed five dollar bill (silver taken at a discount) will ensure a double-headed, double black-edged column, devoted to praises of the deceased, and enumerating his peculiar vices (if he had any). His pedigree will be traced back to the Conquest, and his whole life's career will be 'done up' so brown that his dearest relative, not even his mother-in-law, would be able to recognize the picture. For a gratuity, however, of twenty dollars, the editor guarantees to indite a delightfully sublime and pathetic obituary notice in blank verse, to put in a personal appearance, if requested, at the wake, and ere morning dawns amidst the ruins of broken heads and broken bottles, so customary at these mournful family gatherings, to pronounce such a eulogy over the dear remains as would bring tears to the eyes of a Dromedary."

Mr. Colbeck was an active and public-spirited man and won some prominence in the community, even though the flippant *Tickler* seems to have died after three issues. He went to Australia in 1882 and became a sub-editor on a Sydney paper but died ten years later in Cape Town while visiting his brother.

Miss Lamb carried the history to 1898 when, to use her words, "a new personality and a new paper—W. C. Nichol and the *Province*—blazed into the journalistic heavens and opened a new era in Vancouver's newspaper world."

Photograph by Ronald White

Mr. McGregor carried on from there and his account of the adventures of Vancouver newspapers between 1892 and 1926 forms a sequel to Miss Lamb's history. He tells the story of the failures of many ambitious journals, the amalgamations, sales, bartering—all the transactions from which emerged the three papers that dominate the scene to-day. And passing on and off the stage were many men notable in the development of the province. There have been exciting and difficult periods, but with all the leading papers it has been a case of the survival of the fittest; they had to be strong to win against the toughest kind of competition. That strength is their biggest asset to-day and most of them are old enough now to have traditions in which they take pride and are careful to preserve.

Several unusual publications have flitted across the scene. For several years in the 'eighties *Delta Doings* was published at Ladner, near Vancouver. It was written in longhand, a beautiful script, on foolscap. Its publishers and writers are not known but they were obviously men of erudition and skilful penmanship. At first they accepted no advertisements, until the growth of circulation made mechanical production a necessity, and then they couldn't get sufficient advertising to survive.

Another artistic and odd publication was the *Hazleton Queek*, a pioneer paper in the Omineca mining district. Its complete file of thirteen copies is one of the prized possessions of the Provincial Archives. It appeared at the end of 1880 and in the early part of 1881. It was started by Bishop and Mrs. Ridley, who arrived in 1880 to take charge of the Anglican Church mission in central British Columbia and established themselves at "The Forks," as Hazelton was then known. The *Queek* was designed to relieve the tedium of the winter months. The bishop had an old press and among his friends were those skilful in art and some entertaining writers. Mrs. Ridley was clever with her pencil and was presumably responsible for many of the excellent sketches, among the more interesting being the one showing how the Indians raised their giant totem poles. Mrs. H. K. Andrew was a contributor, the "foreign editor" was Mr. H. G. Warburton, who

clearly had to call on a fertile brain, while Mr. Thomas Hankin, one of the great builders of the Omineca district, wrote on Indian life and about his travels. There was even crime news, for the *Queek* reported that on Christmas night someone had stolen a clothes line and a pair of trousers. But like all other newspapers then and since, the *Queek* had press trouble. The Bishop's ancient press gave out, and a sad note appeared early in March: "We take up our pen for the last time, and it is with regret that we do so, but our press for the *Queek*, being of such a complicated character, and the principal part having failed us, we are obliged to send it for repairs a long distance, probably the Island of Siam will find men competent to understand the intricate arrangements. Until then we give the *Queek* some rest."

Before the turn of the century Father Le Jeune, a Jesuit missionary among the Indians at Kamloops, invented a Chinook shorthand, an abbreviated script of the tribal language. In 1891 he began publishing the *Kamloops Wawa*, eight pages written in shorthand. The first edition numbered one hundred copies, but within four years the circulation had risen to two thousand copies, and the paper had subscribers in many foreign lands. But as the Indians began to forsake their native tongue for the English language the paper lost its appeal and passed out of existence.

A freak paper was the *Sapperton Diamond*, which was diamond-shaped and set in the smallest type that could be read without a magnifying glass. Its first issue was also its last.

The archives and the memories of pioneers still alive have many stories of the adventures of publishing fifty and more years ago. It is a lively part of British Columbia's history and an entertaining background to the modern and progressive dailies and weeklies of to-day.

[1] The articles by Miss Lamb and Mr. McGregor were published by *The British Columbia Historical Quarterly*.

Photograph by Ronald White

XXI

TOURING IN BRITISH COLUMBIA

AN asset that is fast catching up with the values of some of the primary industries of British Columbia is the tourist trade. Physical contours, geology, and climate have combined to make British Columbia a land of unusual natural beauty. The rugged grandeur of mountains, valleys, rivers, and fjord-dotted coastline is softened by the rich green of the forests, while more conventional beauty is to be found about the cities and suburbs where residential grounds and parks are landscaped with an array of colour and a variety of design. The equable climate—adequate moisture, warmth, and sunshine, without the scorching heat of more southern regions—produces luxuriant growth in trees, shrubs, flowers, and lawns. These pleasant scenes alone lure tourists by the hundreds of thousands. Add the almost innumerable lakes and rivers for fishing, the vast wooded lands for hunting, the rock-girt coastal waters for cruising, and facilities for all kinds of outdoor sports and you have a land with few peers in tourist attraction. The business therefrom is yearly becoming an increasing economic factor.

The visitor arriving in British Columbia has a wide variety of choices, whether he wishes to tour or remain in one place. He can sail up the coast to Prince Rupert and Alaska in the north. If he is aboard his own cruiser or yacht he will find scores of cosy coves where he can drop anchor, numerous little fishing communities and several Indian villages. There are magnificent scenic drives on Vancouver Island, notably over the Malahat, north from Victoria, or across island from Qualicum to Port Alberni passing through Cathedral Grove, a stately stand of trees that has been preserved for posterity. The southern part of the

island is rich in historical associations and many interesting mementoes of the early days can be viewed. The entire island has an atmosphere of relaxation that distinguishes it from any other part of the province, and but for the currency the visitor might feel himself to be in England. As the mainland steamer slowly turns into the inner harbour at Victoria, the ivy-clad hotel and sweeping lawns and gardens and, adjoining, the massive pile of the Parliament buildings, their granite dignity mellowed by luxuriant landscaping, burst upon the gaze. There are few more beautiful settings.

Most visitors cross the Strait of Georgia to the mainland 70 miles distant, to the thriving, bustling, young modern city of Vancouver, which accommodates half the population of the province. Thence he may head north into the Cariboo, romantic land of the gold rush but to-day a country of huge cattle ranches and scene of the search for uranium and other precious ores. To do this he will pass through the Fraser Canyon, driving along the rim of the great cut for 40 miles, sometimes at the level of the swirling river and sometimes 1,000 feet above it, past Lady Franklin Rock, named for the great explorer's widow who tried to get to the Arctic via the Fraser to seek her lost husband, and so on up to the bench lands of the dry belt. He can see the creeks where prospectors fought Indians and each other for the gold on the river bars, creeks with nostalgic names like Jack o' Clubs, Suicide, Whisky, Chinaman, Last Hope, and so on. The tourist can continue north to the Peace River country and join the Alaska highway which connects Edmonton with Fairbanks. Or he can go eastward over the new Hope–Princeton highway to the lush fruit valley of the Okanagan, round the shores of the lake to the prosperous fruit cities, or on to the fertile and equally beautiful Kootenay Valley, whence he can drive down from timbered mountains to the American border.

Nature herself provides the most enticing lure. The country is a paradise for the photographer and artist; the fisherman can indulge his sport every month of the year from the fighting rainbow trout of the lakes to the 70 lb. tyee salmon of the

Photograph by Ronald White

seacoast: there is shooting, from grouse to grizzly bear, mountain climbing, ski-ing, golf, swimming, and sailing. There are several summer spectacles and festivals that are always popular attractions, the Williams Lake stampede when the Indians display their riding tricks, the Chilliwack cherry, and other fruit festivals and agricultural fairs, the internationally-known Kelowna regatta with world champions competing, dozens of yacht-racing contests, the Okanagan fruit valley in blossom time—with always a chance of seeing the fabulous lake serpent Ogopogo—and the Pacific National Exhibition in Vancouver, the last major attraction of the summer.

Cricket has a firm hold in British Columbia, with several leagues operating in Vancouver, others in the Okanagan and on Vancouver Island. The chief Vancouver matches are played at Brockton Oval, a ground which Sir Don Bradman declared has the most beautiful setting in the world. It is on the side of Stanley Park that faces the entrance to the harbour. The pitch is rimmed three-quarters of the way with towering firs and cedars and through the remaining open space, a few hundred yards away, the sea traffic of the oceans can be seen passing in and out. Looking benevolently down on the scene are the Two Lions, the snow-capped peaks that guard the port's gate. Flanking them east and west are other mountains, ridges, and valleys, destination of thousands of skiers in the winter and ramblers in the summer. Hundreds of week-end cabins dot these slopes. Climbing up from the shore line are the suburban cities of West Vancouver and North Vancouver. Americans flock to the Oval and gaze at the scenery while struggling with the fine points of the most British of Britain's games. British Columbia plays in the annual week's tournament for the Dominion championship and attempts are being made to send a team to England again. The standard of cricket is good, about on a par with minor county cricket, but is improving as more youngsters take up the game. English rugby also has a strong hold in Vancouver and Victoria and teams have played the New Zealand All-Blacks and the Australian Wallabies; one team toured Japan in 1932. The game is also

played in Southern California and visits are exchanged each winter.

One phase of the tourist trade that is growing into big business is angling and hunting. Hundreds of lakes and rivers on Vancouver Island, and all over the mainland, offer abundant sport, and few countries have keener thrills or finer rewards for the hunter. Magnificent trophies are assured in the big game areas. The big-horned sheep, wapiti and caribou, tall and rangy moose, giant grizzly, goat, deer, black and brown bear, wolves and cougars provide ample range. Hunters and anglers do not go to British Columbia merely for an overnight or week-end visit. They head for the hills, lakes, and rivers, sometimes by aeroplane. Their stay is lengthy and involves considerable expense. They must have licences, a source of considerable revenue to the government treasury. Guides, packhorses, supplies, and transportation may reach $100 a day. Similar expenses are involved in the efforts of angling visitors to win a gold, silver, or bronze tyee button for the season's heaviest fish caught with light tackle. That, of course, is enjoying oneself in the grand manner and less affluent sportsmen get their fun for a fraction of this cost. Years ago the supply of fish and game seemed inexhaustible, but as the population and number of tourists mounted it was realized that controls were necessary. Game management is in its infancy, but it is well organized and there is now no danger of the preserves being denuded.

The scarcity of good motoring roads into the interior was for many years a deterrent to touring. This handicap is being removed as quickly as possible. Highway construction is the major item in the department of public works annual budget. Before the war the government's treasury would not permit major road construction, but revenues have swelled as the province moved into the industrial front rank and the first post-war expenditure was to repair roads which had deteriorated during the war, and then embark on a new road programme providing accessibility to beautiful scenic and sporting country. The highlight of the 1949 operations was the opening of the Hope-Princeton highway, a

Photograph by Ronald White

twelve-million-dollar, broad, graded, 80-mile cut-off through the mountains to the Okanagan and Kootenay Valleys, bringing those rich areas within a day's journey of Vancouver. It has been called the "Road of Destiny" because it is the most important of the highway undertakings to date and was opened in the year that the province made its greatest progress. It will give visitors a new great circle tour of one of the most prosperous and most beautiful sections of the province. This road provides access to Manning Park, a magnificent stretch of country set aside and preserved as a public domain in memory of Hon. E. C. Manning, the minister of lands and forests who was killed in an aeroplane crash early in the war. It was Mr. Manning who inaugurated the policy of acquiring suitable lands for provincial parks. Before the highway was opened it was an arduous journey into the hunting- and fishing-grounds and only a few hardy sportsmen had penetrated the area. Now it is just a few hours drive from Vancouver with modern tourist accommodation available.

This road has had a place in British Columbia's history for the last hundred years. The earliest pioneers were quick to see the need of a cut-off to the interior valleys and ninety years ago there was a project to cut a trail through. Construction of a road actually started fifty years ago, but progress was slow. Occasionally a mile or so was hewn out of the mountainside, but one government after another found itself unable to accomplish anything tangible towards completing the road. The project became a joke among the political pundits until the present government with its adequate resources finished the job.

The next most important highway nearing completion is the Hart road into the Peace River country, a route that has been urgently needed for many years. Others are under construction, including one from Squamish, at the head of Howe Sound, to Horseshoe Bay at the foot of the Sound, which is already connected with Vancouver by a scenic road skirting the shoreline. Industrial development is responsible for the building of this road, yet as a tourist asset it will rank high because it will provide easier access to another preserve, Garibaldi Park. Here there is climbing

to challenge the mountaineer, ideal ski-ing half the year round, and wonderful fishing opportunities. This park, too, is close to Vancouver. So gradually the metropolitan city is ceasing to be the end of the trail for motorists from the south. It is fortunate that wherever the government builds a road for industrial purposes it will almost certainly open up new and attractive country for visitors. No part of the province is desolate or barren; it abounds in outdoor sporting facilities and scenic attractions. The government plans to put in good roads to many more areas. British Columbia, therefore, has unique advantages in the creation of parks and it far exceeds all other provinces in the acreage set aside for this purpose. The Provincial Government follows the policy of the Federal Government in reserving and maintaining areas that are beautiful or that have some other interest for the benefit of present and future generations. There are three classifications: A.—Of high recreational value, of which there are 17; B.—Large parks allowing multiple land use, of which there are 4; and C.—A community type of park, of which there are 27. These parks have a combined area of 11,480 square miles. In addition there are five Special Act parks with a total area of 5,415 square miles. Other areas not included in these classifications have been reserved. Since British Columbia embarked on its park policy in 1911 the number has grown to 58 with a total area of 16,898 square miles. In both number and area this is greater than the 36 national parks of the United States and the world-known park lands of Switzerland, Belgium, the Netherlands, and Denmark. Mount Seymour and Manning Parks are the two most important Class A reserves, having both winter and summer recreational facilities. Both Tweedsmuir and Wells Gray Parks (Class B) possess outstanding mountain, lake, and river scenery, and some of the finest fishing and big game areas in the province. Tweedsmuir Park, 5,400 square miles, is the largest wilderness park in North America. Garibaldi Park, 973 square miles, is the chief of the Special Act parks. This rugged alpine area of peaks, glaciers, and snowfields is famous for its meadows of vivid wild flowers and geological features. Liard River Park

Photograph by Ronald White

on the Alaska Highway and Strathcona Park in the centre of Vancouver Island are other Special Act scenic areas that are rapidly coming into prominence. The smaller Class C parks are strategically located throughout the province to provide many communities opportunities for convenient outings.

Four of the Dominion Government's twenty-six national parks are in British Columbia: Yoho, on the west slopes of the Rockies, 507 square miles; Kootenay, with mineral hot springs, 543 square miles; Glacier, in the Selkirk Mountains, a superb alpine region, 521 square miles; and Mount Revelstoke, a rolling mountain-top plateau on the western slopes of the Selkirks, scene of the world-championship ski-jumping competitions, 100 square miles.

The members of the British Columbia Resources Council examine the resources with a specialist's eye, and therefore more thoroughly than the perfunctory examination of the businessman. Some attention was given to the parks policy at the 1949 conference and it is a surprise to the layman how many different points have to be considered in mapping out a park programme. There is no set pattern of what a provincial park should be. The first thing the government has in mind is the effect that indiscriminate reservation of large areas has on the development of primary resources, such as hydro-electric projects, water storage, logging and mining. Unless all aspects are carefully co-related there could easily be conflict between the commercial and conservation interests. For instance, the natural beauty of Garibaldi Park is outstanding, and because of its easy accessibility from Vancouver has a potential tourist value that at present is incalculable. But it undoubtedly possesses important hydro-electric resources. There must, therefore, be a large measure of co-operation if the reservation of park lands is not to stifle industrial expansion. Garibaldi is only one of many areas that have important industrial possibilities.

There is also the important consideration of the difference in park visitors' preferences. Officials who keep a check on these points find a wide variety among those who travel to the parks. Some are interested in the flora, others in the scenic attractions;

winter sports have a mountain attraction for people who would never think of visiting them in the summer. Areas unspoiled and untouched may be the high points of one tourist's trip, while to another the geology and historic aspect may be the most appealing. Another may be able to take an extended wilderness trip by pack-horse into fine fishing and hunting country; another may be motoring or cycling and depending on convenient stopping-places along the route. Sportsmen frequently fly into the country and expect comfortable lodgings. So the parks have several specific values and the government is careful in developing the areas to preserve the natural environment and encourage the recreation that is appropriate. Only improvements essential for the convenience and safety of visitors is allowed. To avoid spoliation by large-scale commercial resort projects the government, wherever possible, builds and owns the required concession buildings.

The operation part of the park policy is still in its formative stage, and the opening of the Hope–Princeton highway giving access to Manning Park, was the first major test. The Public Works Department, the Lands Department, the Forest Service, Travel Bureau, Game Commission, Public Utilities Commission, and the Mines Department are all closely involved in the administration and in the preservation of a priceless heritage.

With such a vast playground it is no wonder that British Columbia anticipates a hundred-million-dollar tourist business.

Because the foreign exchange board keeps track of American dollars entering Canada, officials can make a close estimate of what the foreign visitor spends in each province. The minimum for British Columbia in 1949 was thirty-five million dollars. This excludes expenditures by visitors from other parts of Canada as inter-provincial tourists are not counted nor is there any means of knowing what they spend. But travel bureau officials estimate that revenue at fifteen million dollars.

The tourist influx in 1949 was the greatest in the history of the province. Automobiles registered at the border points numbered 214,731, and besides their passengers 50,000 others journeyed to British Columbia by train, 145,000 by steamer, 48,000 by bus,

Photograph by Ronald White

14. The Somass River and Mount Arrowsmith, Vancouver Island

Photograph by Ronald White

and 30,000 by plane. British Columbia had disastrous floods in 1948 and many roads were closed for several weeks in the early part of the summer, yet more than a million visitors flocked to the province, but still several thousands below the 1949 figure. For comparative interest the money they spent is equivalent to the total payroll of the entire provincial mining industry. On the tourist ledger, however, this money is not a gross gain, as British Columbians themselves are great travellers and the records of the Dominion Bureau of Statistics show that they are liberal spenders when abroad, except, of course, when limited by foreign exchange control restrictions as at present. A Canadian may take only a certain sum across the border.

Fifty per cent of the American tourists are from the neighbouring States of Washington, Oregon, and California, though in the course of a year cars will be registered from most of the forty-eight States of the Union. The United States Government has estimated that Americans spend 7 per cent of the national income in travel. This adds up to many hundreds of millions of dollars, about three hundred million of which goes to Canada, and British Columbia is keeping pace with eastern Canada, notably Ontario and Quebec, in attracting this holiday money. The transportation companies, civic bodies, tourist offices, and government departments are behind the twofold campaign—to attract tourists to British Columbia and to see that they go away satisfied. Advertising is placed in two dozen leading American magazines and more than two score newspapers directed at sixty-two million citizens in the eleven Western States. The average of eight hundred letter enquiries a day at the travel office during the summer is evidence of the effectiveness of the publicity campaign. The radio and cinema are also extensively used for the same purpose throughout the year.

Complementary is the establishment of tourist camps. Private enterprise has been alert to the opportunities but it is also part of the government's policy to see that the tourist resorts are clean, modern, efficiently run, and the accommodation adequate. The "Tourist Camp Act" was added to the Statutes in 1949, and under

its provisions sanitarians make an annual inspection of every resort. Camps are also graded by a trained staff, and of the 1,112 established, licensed, or registered, 73 per cent have been graded, the balance being under repair or construction. Merit stars are awarded which the operator displays. Thus the traveller can see the standard of the accommodation at a glance. Both the resort owners and visitors have been quick to appreciate this rating. These ratings, of course, are included in tourist bureau literature, and as the travel agencies in both countries work in close co-operation an unsatisfactory resort would quickly be noted.

Fact-finding, statistical research, and cross-section polls are part of the modern economic know-how, useful in judging the practical aspect of theory. Much pertinent knowledge is gained by these means. For instance a survey shows that the tourist spends his money as follows: retail stores 31 per cent, accommodation 23 per cent, food 18 per cent, entertainment 10 per cent, gasoline, oil, etc., 10 per cent, sundries 8 per cent. It is clear, therefore, that a great number of businesses and their employees benefit from every dollar spent by a visitor. The fact-finders have gone further than the first turnover of the tourist dollar, and a national survey breaks down the second turnover as follows: salaries and wages 47 per cent, interest on bonds and other debts 19 per cent, miscellaneous items 10 per cent, meats 6 per cent, groceries 5 per cent, light and fuel 5 per cent, general 2 per cent, milk 2 per cent, cable, radio and telephone 2 per cent, fish 2 per cent. After this the dollar passes through so many hands it cannot be traced. The Canadian Government, because of its need of American dollars, takes the visitors' money out of circulation as soon as it can, replacing it with Canadian dollars. The American Banking Service Survey finds that a new dollar taken into a community will circulate on an average fourteen times before it passes out of the community. The stimulus to business in the free movement of money is thus aptly illustrated. Researchers have also found that most of the new citizens of Vancouver either first went as visitors or were influenced by reports of other visitors.

Photograph by Ronald White

APPENDIX

THE Department of Trade and Industry, in a special supplement to its monthly publication *Business Activity in British Columbia*, gives the following figures of development between 1920 and 1949. The supplement gives the totals for each year, but for the purposes of this book the figures at the beginning and end of the period under review only are given, with most of the 1949 column being official government estimates. The comparisons follow:

	1920		1949
Gross value of mfg. production..	$230,256,725		$960,000,000
Mining production	$35,543,084		$140,000,000
Gold production, fine ounces ..	124,808		300,000
Coal output, short tons	2,906,540		1,850,000
Value of fisheries	$22,329,161		$58,000,000
Forestry production	$92,628,807		$360,000,000
Timber scaled FBM	2,046,468,959		3,833,000,000
Agricultural production ..	$68,926,090		$145,000,000
Farm products sale	$26,360,000	(1926)	$97,068,000
Construction contracts	$23,939,000	(1923)	$79,400,000
Building permits	$8,634,009		$90,000,000
Retail trade	$189,355,000	(1923)	$770,000,000
Wholesale sales index (1935–39 average—100) ..	81·7		335·0
Life insurance sales	$32,000,000	(1926)	$107,000,000
Gasoline consumption (gals.) ..	18,240,669	(1924)	142,307,270
Electric power consumption kWh	493,509,000		3,640,000,000
Exports	$97,905,313		$440,000,000
Imports	$67,108,323		$220,000,000

	1920		1949
Railway freight loaded in British Columbia (tons)	4,638,134	(1922)	10,400,000
Number of autos entering on 60-day permit	93,666	(1926)	214,731
Index of employment (base 1926—100)	81·1	(1921)	198·0

*

	1920	1949
Cost of living (1935–39—100)		
Retail price index	150·5	160·9
Retail food index	188·1	203·0
Wholesale price index in Canada, 1926—100) ..	155·9	157·0
Cheques cashed against individual accounts	$1,725,164,000	(1924)$7,600,000,000
Industrial production in Canada (1935–39—100)	108·0	184·0
Population .. .. .. (Next decennial census, 1951)	507,000	1,114,000

All the significant factors in the picture of business activity and prosperity are at present at the highest point in the last thirty years, or just below the peaks established in 1948. One exception, of course, is gold production, which is now less than half the 1938–41 period. The slight decreases from the peaks, as in forestry, building, and manufacturing, are due to uncontrollable circumstances, such as weather.

MANUFACTURING INVESTMENTS

1909	$50,000,000
1919	220,000,000
1929	311,806,456
1939	274,969,502
1948	525,000,000

PERSONS EMPLOYED, 1948

Agriculture	33,000
Mining	16,000
Forestry	41,000
Fishing	22,000
Manufacturing . ..	100,000
Miscellaneous	211,000
Total	423,000

Photograph by Ronald White

INDUSTRIAL PAYROLLS, 1948

Agriculture	$30,000,000
Mining	35,000,000
Forestry	80,000,000
Fishing	40,000,000
Manufacturing	190,000,000
Miscellaneous	275,000,000
Total	650,000,000

COLONIAL GOVERNORS BEFORE CONFEDERATION

Vancouver Island		*British Columbia (the mainland)*	
Richard Blanshard	1849–51	Sir James Douglas	1858–64
Sir James Douglas	1851–64	Frederick Seymour	1864–69
A. E. Kennedy	1864–66	Anthony Musgrave	1869–71

LIEUTENANT-GOVERNORS SINCE CONFEDERATION

Sir Joseph J. W. Trutch, K.C.M.G.	1871
Hon. A. N. Richards, K.C.	1876
C. F. Cornwall	1881
Hugh Nelson	1887
E. Dewdney	1892
T. R. McInnes	1897
Sir Joly de Lotbiniere, K.C.M.G.	1900
James Dunsmuir	1906
T. W. Paterson	1909
Sir Frank S. Barnard	1914
Col. E. G. Prior	1919
W. C. Nichol	1920
R. R. Bruce	1926
J. W. Fordham Johnson	1931
E. W. Hamber	1936
W. C. Woodward	1941
C. A. Banks	1946
Clarence Wallace	1950

ADMINISTRATIONS SINCE CONFEDERATION

Twenty-two legislatures have met since Confederation with generally four, and sometimes five, sessions in each. It usually meets once a year and lasts about two months. The members receive a sessional indemnity of $2,000 plus $1,000 for expenses (since 1948). The Premier receives $9,000 and the ministers $7,500 in addition to their indemnities. There have been twenty-five administrations as follows:

J. F. McCreight	1871–72
Amor de Cosmos	1872–74
G. A. Walkem	1874–76
A. C. Elliott	1876–78
J. Walkem	1878–82
R. Beaven	1882–83
W. Smithe	1883–87
A. E. B. Davie	1887–89
J. Robson	1889–92
T. Davie	1892–95
J. H. Turner	1895–98
C. A. Semlin	1898–1900
J. Martin	1900 (Feb. to June)
J. Dunsmuir	1900–02
E. G. Prior	1902–03
Sir Richard McBride (Cons.)	1903–15
W. J. Bowser (Cons.)	1915–16
H. C. Brewster (Lib.)	1916–18
John Oliver (Lib.)	1918–27
J. D. MacLean (Lib.)	1927–28
S. F. Tolmie (Cons.)	1928–33
T. D. Pattullo (Lib.)	1933–41
John Hart (coalition)	1941–47
Johnson-Anscomb coalition	1947–49
Johnson-Anscomb coalition	1949–

Photograph by Ronald White

THE CABINET

Premier	Byron I. Johnson
Deputy Premier and Minister of Finance	Herbert Anscomb
Minister of Health and Welfare ..	A. D. Turnbull
Attorney-General	Gordon S. Wismer
Minister of Agriculture	H. R. Bowman
Minister of Mines and Municipal Affairs	R. C. MacDonald
Minister of Public Works	E. C. Carson
Minister of Education, and Provincial Secretary	W. T. Straith
Minister of Labour	J. H. Cates
Minister of Railways, Fisheries, and Trade and Industry	L. H. Eyres

MINE PRODUCTION, 1948

(From the Annual Report of the Department of Mines)

Metallics	*Quantity*	*Value* $	*Gain over* 1947 *percentage*
Lead	332,996,351 lb.	60,072,542	43·4
Zinc	296,012,941 lb.	41,234,603	36·8
Gold	306,562 ozs.	10,603,250	21·7
Copper	43,025,388 lb.	9,616,174	12·9
Silver	6,718,122 ozs.	5,038,592	22·6
Miscellaneous metallics ..	—	3,806,384	23·4
Fuel (coal)	1,809,018 tons	10,854,108	26·4
Non-metallics	—	2,330,877	2·4
Clay products and structural materials	—	8,968,222	52·1
Total values		$152,524,762	34·7

AREA AND POPULATION

British Columbia has an area of 366,255 square miles, of which the Queen Charlotte Islands and Vancouver Island form a part. The latter island has an area of 12,408 square miles.

The highest peaks in the province are Mount Fairweather 15,287 feet, Mount Waddington 13,260 feet, and Mount Robson 12,972 feet.

There are a number of large and beautiful lakes, such as the Arrow, Kootenay, and Okanagan Lakes, and large and small rivers and streams. The most important rivers emptying into the Pacific are the Columbia, Fraser, Skeena, and Stikine, while the Peace and the Liard flow towards the Arctic.

According to the decennial census in 1941 the population was 817,861, 70 per cent being of British origin. The estimate in 1949 was 1,114,000 and is officially expected to be 1,200,000 at the 1951 census. Vancouver passed the half-million mark in 1949 and Victoria's total was approximately 116,000. The chief urban centres are Vancouver, Victoria, New Westminster, Trail, North Vancouver, Prince Rupert, Nanaimo, Kamloops, Nelson, Vernon, Kelowna, Port Alberni, Chilliwack, Rossland, Fernie, and the chief district municipalities are Burnaby, Saanich, Surrey, Richmond, Oak Bay, West Vancouver, Coquitlam, Chilliwack, and Langley.

In 1901, British Columbia's population was 3·33 per cent of the Canadian total, in 1911 5·45 per cent, in 1921 5·97 per cent, in 1931 6·69 per cent, in 1941 7·11 per cent, in 1945 7·83 per cent, in 1946 8·16 per cent, in 1947 8·34 per cent, and in 1948 8·50 per cent. From 1901 to 1921 the province ranked sixth in the Dominion by population, in 1931 it moved up to fifth place, to fourth place by 1941, and in third place by 1945.

Photograph by Ronald White

BRITISH COLUMBIA
Scale
40 30 20 10 0 40 80 MILES
REFERENCE
City Municipalities
Village "
Post Offices
Settlements
Main Highways
" " , Projected
Local Roads
Main Travel Routes designated thus
Road Mileages between points
Railways and Stations
Ferries
Ferry Routes
Customs Ports of Entry
Park Boundaries
Layer Contours —
0 feet to 3000 feet
3000 " to 6000 "
6000 " and over
F or Ferry
Cust
Prepared by Geographic Div. Dept of Lands and Forests
INDEX OF POST OFFICES APPEARING ON THIS MAP
PACIFIC OCEAN
DIXON ENTRANCE
HECATE STRAIT
QUEEN CHARLOTTE SOUND
YUKON
ALASKA
ALBERTA
U.S.A.
PRINCE RUPERT
PRINCE GEORGE
VANCOUVER
VICTORIA
KAMLOOPS
NELSON
CRANBROOK
KITIMAT
Stewart
Dawson Creek
Fort Nelson
Fort Simpson
Fort Smith
Fort Chipewyan
Fort Vermilion
Fort Resolution
Fort Rae
Fort Norman
Fort Providence
Fort Simpson
Fort Liard
Fort Nelson
Fort Reliance

Photograph by Ronald White

INDEX

Administrative development, 42
AGRICULTURE, 110
  Acreage cultivated, 110
  Bulb growing expansion, 110, 111
  Co-operative methods, 112, 115
  First farmer, 119, 120
  First land sale, 120
  Fruit growing, 111–13
  Institutes, 115–18
  Potato growing, 118
  Poultry raising, 119
  Rural life, 115
  Soil research and counsel, 113, 114
AIRPORT, 154
  Air distances, 157
  Airlifts in floods, 160
  Aviation in commerce, 159
  C.P.A. and T.C.A., 155
  Crossroads of world airways, 156
  First regular services, 155
  Mail service by air, 160
  Need for more airports, 158
  Opening of airport, 154
  Passengers, mail and freight, 156
  W. Templeton, the man responsible, 154
  Wartime expansion, 156
Anderson, A. C., 40
Area and population, 19, 51, 52

Blanshard, Richard, 36, 42, 43
Buses, 172

Cariboo, 24–6, 202
Cities, municipal districts and villages, 49
Climate, 22, 27–9
Colonial days, 36, 37
Confederation, 38
Constitution, 44
Cook's Voyage, 32, 33
Cultural amenities, 59

Distances from Vancouver to chief Canadian cities, 30
Douglas, James, 35

Earliest days, 31
Education, 181

FISHING, 129
  By-products, 133
  Controls, 130
  Employment, wages, production, 130
  Hell's Gate, 131–3
  Herring oil, 134
  Japanese inroads, 135
  Salmon spawning grounds, 131
  Tuna, 130
  War aids used, 133
  Whaling, 134
Folk Festival, 60–2
Fraser Canyon, 202
Fraser Midden, 69, 70
Fur trading, 32, 33

Geology and geography, 19–30
Glacial recession, 22, 23
Gold rush, 36
Goldenberg Report, 49
Government Revenue, 46

Health department services, 173–6
Highways, 172, 204, 205
Hospital Insurance, 174
Hudson's Bay Co., 33

Indian franchise, 42
INDUSTRY, 80
  Aluminium Co. Project, 86–8
  Cost of Living, 82
  Employment and wages, 81, 96–9
  Exports, 80, 92, 93
  Farmer's income, 82
  Government co-operation, 93, 94
  Industrial regions, 94–6
  Oil, 85
  Production values, 80, 81
  Reconversion from war, 82
  Retail trade, 82
  Scientific aid, 82, 83, 88–91
  Secondary Industries, 84, 85
  Steel making, 83, 84
  Trade with Britain, 92

Kootenay Valley, 24

Lakes and rivers, 20, 21
Language origins, 66, 67
Law enforcement, 189–93
Law-making powers, 46, 47
Legends, 68, 69
Legislature, 36, 42, 43
Library facilities, 62–5

LUMBERING, 100
Cedar, 102, 103
Employment, 100, 101
Forest fires, 103
Government's forest policy, 105, 106
Higher yields, 106, 107
Panama Canal, 108, 109
Plywood, 103, 104
Pulp and paper expansion, 101
Salvaging waste wood, 104, 105, 106
Timber available, 100

Mackenzie, Alexander, 33, 34, 40
Medical faculty at U.B.C., 177

MINING, 122
Coal, 23, 24, 27, 122
Cordilleran belt, 122
Gold rush, 127
Kootenay region, 124, 125
Production, 123
Prospecting, new and old, 127
Research, 126
Mountains, 20
Municipal government, 48, 49

Newspapers, 194–200

Oregon Treaty, 31, 35, 36

Pacific Great Eastern Railway, 75, 77, 78
Party government, 47, 48
Peace River, 73–9, 116
Pensioners, old age, 179
Physical features, 19, 20
Place names, 66–8
Political leaders, 48
Progress, 51
Provincial parks, 206, 207

Racial characteristics, 52–4
Radio, 65, 162–7
Radio-telephone, 170
Railways, 39, 55, 75–8, 167–9
Sea distances from Vancouver, 30
Sea serpents and giants, 71, 72
Secession threat, 39

SHIPPING, 143
Britannia, 144
Chemainus, 144
Coastal traffic, 143
Cowichan Bay, 144
Esquimalt, 150
Foreign trade begins, 146
"Graveyard of the Pacific," 153
Ice-free ports, 143
Lumber first export, 146
Nanaimo, 144, 150
Navigation aids, 152
New Westminster, 144–9
Ocean Falls, 144
Panama Canal's effects, 144
Port Alberni, 144
Port Moody, 146
Powell River, 144
Prince Rupert, 151
Shipbuilding, 151
Squamish, 144
Steamship lines, 147, 148
Tea from Japan, 147
The Empresses, 148
Trade with ninety-nine countries, 143
Tug business, 143
Union Bay, 144
Vancouver leading radar port, 152
Vancouver's harbour, area and facilities, 145
Vancouver the hub, 143
Vancouver's three milestones, 145
Victoria, 144
Woodfibre, 144
Social welfare, 177
Sports, 203

Taxation, 44–6
Telegraphs and cables, 169
Telephones, 170
Thompson, David, 34
Tourist attractions, 201–3
Tourist revenue, 208, 209

University, 182, 184–8

Vancouver, 51, 54–6, 202
Vancouver Island, 26, 27, 202

Photograph by Ronald White

Vancouver's (Captain) arrival, 33
Victoria, 50, 202
Vital statistics, 176, 177

WATER POWER, 136
Available H.P. resources, 137
B.C. Electric Co., extensions, 141
Fraser drainage and flow, 138–40
Fraser's influence on history, 140
Hydro-electric output, 136
Importance to manufacturing, 142
Kootenay-Columbia system, 137
North-west territories, 138
Power at Trail, 141
Power Commission projects, 140
Precipitation, 139
Watersheds and basins, 136

GEORGE ALLEN & UNWIN LTD
LONDON: 40 MUSEUM STREET, W.C.1
CAPE TOWN. 58–60 LONG STREET
SYDNEY, N.S.W.: 55 YORK STREET
TORONTO: 91 WELLINGTON STREET WEST
CALCUTTA: 17 CENTRAL AVE., P.O. DHARAMTALA
BOMBAY: 15 GRAHAM ROAD, BALLARD ESTATE
WELLINGTON, N.Z.: 8 KINGS CRESCENT, LOWER HUTT

Photograph by Ronald White

Photograph by Ronald White

Mr. Fred H. Goodchild is a well-known Canadian journalist at present on the staff of the *Vancouver Daily Province*. He was born at Liverpool, educated at St. Bonaventure's Grammar School and entered newspaper work at Clacton-on-Sea. He has been in Canada almost forty years, more than half that time on the *Daily Province* as news editor, magazine editor, editorial writer and librarian and special writer. In his early years in Canada he was on the *Ottawa Journal* for two years during which time he did considerable Parliamentary reporting. He is the correspondent in West Canada for *The Times* and is a frequent contributor to English, Canadian and American newspapers and periodicals. He is a widely-read student of British Columbia and Canadian history and a member of the British Columbia Historical Association.

Printed in Great Britain

WASA-WASA

by Harry Macfie and Hans G. Westerlund

Demy 8vo 15s. net

Far away and long ago—in the remoter parts of Canada and in Alaska at the turn of the century—Harry Macfie and his comrade, Sam Kilburn, spent their days hunting and trapping and searching for gold. And when they settled down to a more comfortable and civilized life, Macfie wrote the simple story of their experiences in a world which has already, to a large extent, ceased to exist.

It was a hazardous life and their tangible reward was small. They built their cabins in remote regions, in unexplored forests and beside unmapped rivers and lakes; they struggled against the immense cold of the arctic winter, fought with bears, moose and wolves, trekked with dog-teams across the great barren ranges of Alaska, fled from forest fires, made friends with Eskimos and Indians, and faced death a dozen times in a dozen different ways but always somehow survived.

It is an enthralling tale of true adventure without a dull word. It vividly depicts the Canadian and Alaskan scene in all its changing aspects and seasons, and leaves behind a memorable account of the wild life of the region.

BRITISH HONDURAS

by Stephen L. Gaiger

Demy 8vo About 16s. net

British Honduras is perhaps the most neglected of all English colonies. Even the larger histories of Colonial development barely mention it. The author has now told the story of this interesting country from the early days of its settlement by the logwood-cutters and buccaneers up to the present.

Beginning with the discovery of British Honduras by the Spanish Conquistadores, he describes the growth of the colony under its occupation and settlement by British adventurers, and consolidation by the buccaneers after the "conversion" of Harry Morgan. He gives an account of the early quarrels with the Spaniards which were later followed by controversies with neighbouring Central American republics, especially Guatemala. The dispute with Guatemala ended in the territorial Agreement of 1859, but the aftermath of diplomatic strife remains to the present day, and may be referred to U.N.O.

The concluding chapter deals with the Colony to-day with special emphasis on its economic and commercial status and recent Government proposals for development. The writer shows that its agricultural and other resources have been gravely neglected, and that this fertile land could maintain a population many times its present size.

books that matter