PROVINCE OF BRITISH COLUMBIA

DEPARTMENT OF RECREATION AND CONSERVATION

HON. W. K. KIERNAN, *Minister* D. B. TURNER, *Deputy Minister*

REPORT OF THE

Department of Recreation and Conservation

containing the reports of the

GENERAL ADMINISTRATION, FISH AND GAME BRANCH, PROVINCIAL PARKS BRANCH, BRITISH COLUMBIA GOVERNMENT TRAVEL BUREAU, PROVINCIAL MUSEUM OF NATURAL HISTORY AND ANTHROPOLOGY, PHOTOGRAPHIC BRANCH, AND COMMERCIAL FISHERIES BRANCH

Year Ended December 31

1965

Printed by A. SUTTON, Printer to the Queen's Most Excellent Majesty
in right of the Province of British Columbia.
1966

VICTORIA, B.C., January 27, 1966.

To Major-General the Honourable GEORGE RANDOLPH PEARKES,
V.C., P.C., C.B., D.S.O., M.C.,
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

Herewith I beg respectfully to submit the Annual Report of the Department of Recreation and Conservation for the year ended December 31, 1965.

W. K. KIERNAN,
Minister of Recreation and Conservation.

VICTORIA, B.C., January 27, 1966.

The Honourable W. K. Kiernan,
Minister of Recreation and Conservation.

SIR,—I have the honour to submit the Annual Report of the Department of Recreation and Conservation for the year ended December 31, 1965.

D. B. TURNER,
Deputy Minister of Recreation and Conservation.

CONTENTS

	Page
Introduction by the Deputy Minister of Recreation and Conservation	7
General Administration	13
Fish and Game Branch	17
Provincial Parks Branch	31
British Columbia Government Travel Bureau	45
Provincial Museum of Natural History and Anthropology	55
Photographic Branch	63
Commercial Fisheries Branch	69

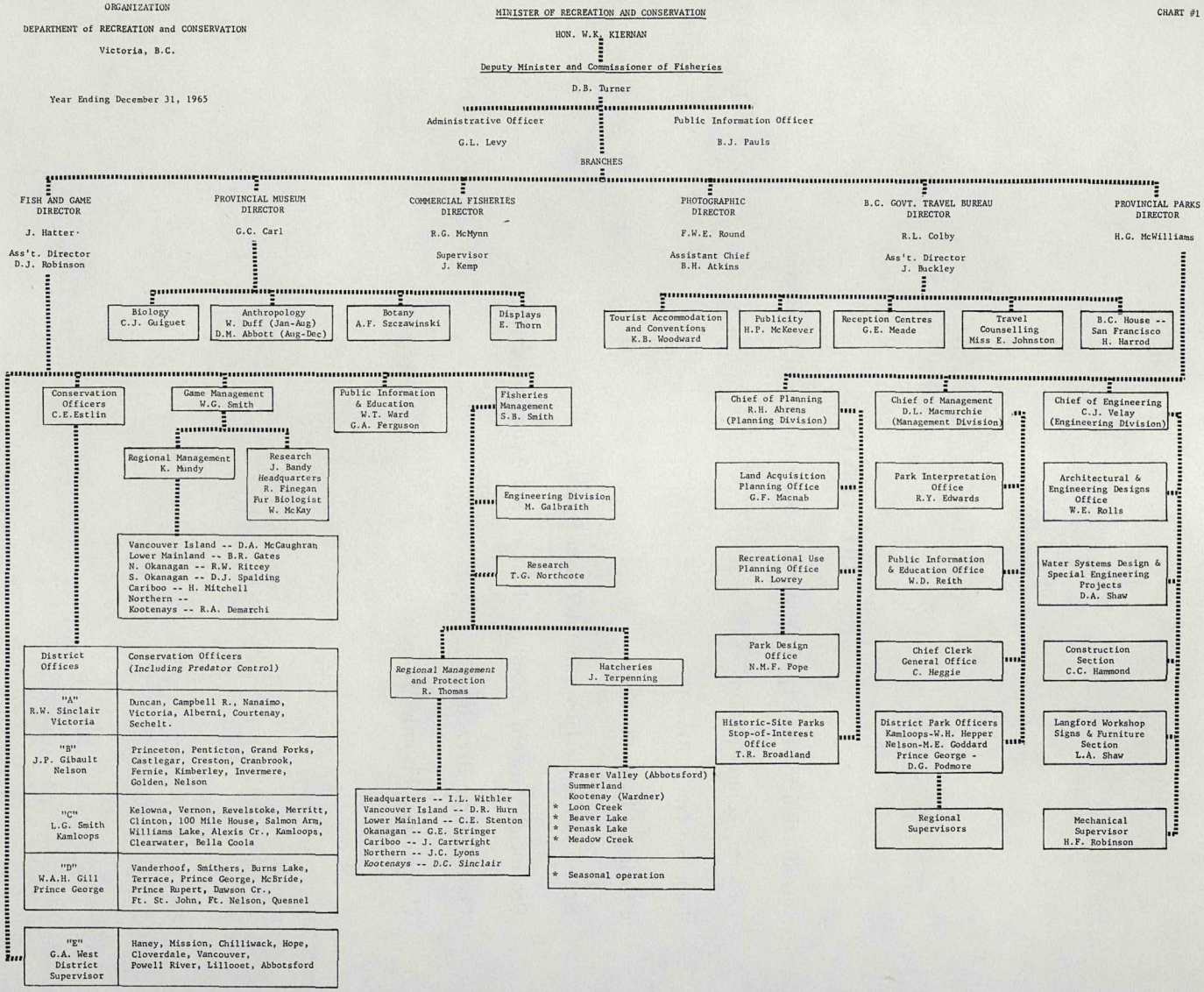
ORGANIZATION

DEPARTMENT of RECREATION and CONSERVATION

Victoria, B.C.

Year Ending December 31, 1965

CHART #1



District Offices	Conservation Officers *(Including Predator Control)*
"A" R.W. Sinclair Victoria	Duncan, Campbell R., Nanaimo, Victoria, Alberni, Courtenay, Sechelt.
"B" J.P. Gibault Nelson	Princeton, Penticton, Grand Forks, Castlegar, Creston, Cranbrook, Fernie, Kimberley, Invermere, Golden, Nelson
"C" L.G. Smith Kamloops	Kelowna, Vernon, Revelstoke, Merritt, Clinton, 100 Mile House, Salmon Arm, Williams Lake, Alexis Cr., Kamloops, Clearwater, Bella Coola
"D" W.A.H. Gill Prince George	Vanderhoof, Smithers, Burns Lake, Terrace, Prince George, McBride, Prince Rupert, Dawson Cr., Ft. St. John, Ft. Nelson, Quesnel
"E" G.A. West District Supervisor	Haney, Mission, Chilliwack, Hope, Cloverdale, Vancouver, Powell River, Lillooet, Abbotsford

Report of the Department of Recreation and Conservation, 1965

D. B. TURNER, DEPUTY MINISTER AND COMMISSIONER OF FISHERIES

INTRODUCTION

There are special items and happenings in the development of the Department for 1965 which, in chronicle form, will furnish a headline review of the progress of the component Branches of the Department and of the Department as a whole.

General Administration

In-training courses for Department and Branch staffs emphasized.

Public Information Officers throughout the Department formed into a committee unit.

Fish and Game Branch

Kootenay Trout Hatchery neared construction completion.

Biological studies intensified to determine effects of Duncan Dam on Kootenay Lake fisheries.

Under ARDA* programme, Canada Land Inventory programme will show capability of land to produce big game.

Rocky Mountain bighorn sheep epidemic gets concentrated study.

Provincial Parks Branch

New Park Act was Parks Branch highlight of 1965.

Regional Park Act was a unique advance in recreation field.

Park use up 26.7 per cent over 1964; 4.8 million park visits, with 25 per cent of them campers.

Nature Interpretation programme held in nine parks with more than 150,000 attending.

Fourteenth year for Youth Crew programme.

Eleven new Class A parks and two new Class C parks.

Restoration programmes at Barkerville and Fort Steele continue.

British Columbia Government Travel Bureau

Tourist revenue at record $200 million.

New approval system for accommodation establishments.

"Beautiful British Columbia" magazine circulation 145,000, with 58,000 subscribers.

Bureau participates in many tourist industry conventions and programmes.

Provincial Museum

Centennial construction of new museum and archives on schedule.

Museum attendance up 18 per cent over 1964.

* ARDA=Federal-Provincial relations and activities under the *Agricultural Rehabilitation Development Act*, June 22, 1961.

Photographic Branch

F. W. Eley Round named Director, Photographic Branch, July 5, 1965.

Photographs for "Beautiful British Columbia" magazine are major still-photo job.

More than 1,800 colour prints and negatives added to files.

Motion pictures "Land of the Overlanders" and "Barkerville or Bust" completed.

Television screenings up 20 per cent in United States.

Commercial Fisheries Branch

R. G. McMynn named Director, Commercial Fisheries Branch, April 1, 1965.

Record catches of coho salmon the only bright spot in the 1965 salmon fishery.

Additional staff permits increased participation in problems of British Columbia's shellfish industry.

Marked growth in liaison with Federal Department of Fisheries.

The plans and operations of the six Branches and of the Department as a whole are based on a flexible ten-year master plan, which is under constant review and revision in the light of recreation trends and conservation developments.

HIGHLIGHTS OF 1965

GENERAL ADMINISTRATION

TRAINING COURSES

Ten employees attended Executive Development Training Courses; one completed a Basic Public Administration Course; the Parks Branch and Fish and Game Branch were assisted in conducting in-service training courses for their field staff members, and more than 125 field staff members have now participated in first-aid courses.

PUBLIC INFORMATION

A Public Information Officers' committee was formed to determine how public information and education services might be improved.

FISH AND GAME BRANCH

FISH CULTURE EXPANSION

The Kootenay Trout Hatchery entered its final construction stage.

KOOTENAY LAKE FISHERY STUDIES

Studies of the effects of the Duncan hydro dam on the Kootenay Lake fishery were intensified.

CANADA LAND INVENTORY

The capability of land in the East Kootenay and Prince George areas to produce big game was determined by field studies.

DIE-OFF OF ROCKY MOUNTAIN BIGHORN SHEEP

A die-off of Rocky Mountain bighorn sheep using the Bull River range was investigated to determine the causes and their interrelations.

PROVINCIAL PARKS BRANCH

NEW PARK ACT

The Legislature passed a new *Park Act,* which defines the purpose for which parks are established, increases their protection from all forms of alienation, and introduces nature conservancy areas.

REGIONAL PARK ACT

The Legislature passed the *Regional Park Act* and the municipalities of Victoria, Saanich, Central Saanich, and Oak Bay formed the first Regional Park Board.

PARK USE

Park use in 1965 was 26.7 per cent greater than in 1964. There were 4.8 million park visits and about 25 per cent of the total were campers.

PARK INTERPRETATION

Park naturalists conducted interpretation programmes in nine parks with participation by more than 150,000 people.

YOUTH CREW PROGRAMME

For the fourteenth consecutive year, youth crews were employed in park development and maintenance work.

LAND ACQUISITION

Eleven new Class "A" parks, totalling 16,088 acres, and two Class " C " parks, containing 432 acres, were established during the year.

HISTORIC PARKS

Restoration work at the Barkerville Historic Park and the Fort Steele Historic Park continued.

BRITISH COLUMBIA GOVERNMENT TRAVEL BUREAU

RECORD TOURIST SEASON

Estimated revenue from all tourists exceeded $200 million, a record for the Province.

ACCOMMODATION REGISTRATION CHANGES

Government-inspected establishments will now carry an ATA (Approved Tourist Accommodation) sign. The star-grading system is replaced and establishments will now be approved based on the factors of cleanliness, comfort, and courtesy.

" BEAUTIFUL BRITISH COLUMBIA " MAGAZINE

Average circulation per issue now 145,000, with subscription list increased to 58,000.

CONVENTIONS

The Travel Bureau participated in a Travel-Trade Mission to Japan and Hong Kong and in the A.S.T.A. (American Society of Travel Agents) Convention in Hong Kong.

HOSPITALITY COMMITTEE

The Bureau continued its participation as a member of the Food Trade and Accommodation Industry Advisory Council and, as a sub-committee, it embarked on a programme to upgrade the service industries and to create an interest among high-school graduates to take up the hospitality industry as a career.

PROVINCIAL MUSEUM OF NATURAL HISTORY AND ANTHROPOLOGY

PLANNING AND CONSTRUCTION

Construction of the three-building complex to house the new Provincial Museum and Archives was started in May.

ATTENDANCE

Attendance figures (190,000) were up 18 per cent as compared with 1964, the highest on record except for 1962.

PHOTOGRAPHIC BRANCH

STILL PHOTOGRAPHY

Assignments for " Beautiful British Columbia " magazine constituted the major part of the work of the still photographers.

PRODUCTION

More than 1,800 colour prints and negatives were added to the Photographic Branch files.

MOTION PICTURES

The motion pictures " Land of the Overlanders " and " Barkerville or Bust " were completed in 1965. The film " East 1, West 1," which deals with the recreational aspects of the Trans-Canada Highway in British Columbia, was nearing its release date at the end of the year.

TELEVISION SCREENINGS

Television screenings in the United States increased by 20 per cent over 1964 to more than 500 showings, with one in five being telecast in colour.

COMMERCIAL FISHERIES BRANCH

INCREASED ATTENTION TO COMMERCIAL FISHERIES

Additional technical and enforcement staff have permitted increased Provincial participation in matters relating to British Columbia's commercial fishing industry.

COHO CATCH

Record catches of coho salmon were the only bright spot in the 1965 salmon fishery.

GENERAL ADMINISTRATION

BRITISH COLUMBIA
DEPARTMENT OF
RECREATION
AND
CONSERVATION

GENERAL ADMINISTRATION

General Administration consists of the Deputy Minister's office, the attached Public Information Officer, and the Accounts office.

The staff of General Administration works closely with all Branches in such Departmental matters as putting policy into effect, office and work facilities, personnel, and finance. Currently, there is constant liaison for the purpose of planning and organizing office and work facilities of new office accommodation which is expected to be occupied in 1966. The new accommodation will bring together, in one building, the entire Department, except the Provincial Museum. The change, bringing the Branches together, will be most beneficial for intra-Departmental work.

The Personnel Section of General Administration processed 51 requisitions to the Civil Service Commission for the purpose of obtaining replacement positions for all Branches in the Department. The Personnel Officer, who is also Departmental Comptroller and Administrative Assistant to the Deputy Minister, sat in on many interviewing panels for the selection of these positions. Two replacement positions which drew many applications were for the Director of the Photographic Branch and the Public Information Officer who is attached to the office of the Deputy Minister.

This Department in 1965 had seven employees selected to participate in the three-year Executive Development Course. Three people in the Department also completed this course. One employee attached to General Administration completed the one-year Basic Public Administration Course.

The staff of General Administration assisted both the Parks Branch and the Fish and Game Branch in conducting in-service training courses for their field staff members during the months of February and April respectively. These in-service training courses have proved most beneficial and are highly regarded by staff members. It is interesting to note that during the past three years more than 125 field staff have participated in first-aid courses conducted at these training sessions and have obtained a St. John's first-aid certificate or have participated in this course to obtain higher awards. The St. John's first-aid courses have been conducted by Senior Conservation Officer H. B. Tyler, who is a qualified St. John's first-aid instructor. His devotion in this respect has resulted in a first-class response from students participating.

The Accounts office, attached to General Administration, performed all financial functions required for all Branches of the Department. There was a slight increase in vouchers processed over the previous years. All information required by Branches was available when needed. The staff attached to General Administration held several Departmental meetings for the purpose of reviewing personnel accidents and to seek methods of improving work habits of employees to reduce time-loss of staff.

PUBLIC INFORMATION AND EDUCATION

Public information and education activities in the Department are manifested at all levels of the organization with most of them being in anticipation of wide general interest in some subject or activity of Departmental concern, or in response to specific inquiries from the public. In some Branches—Fish and Game, Parks, Travel Bureau—specialist Public Information Officers are engaged full time to handle the dissemination of information, in its many forms, to the public. Other

Branches either respond to inquiries as an administrative function or are assisted by other offices within the Department.

The Public Information Officers gain public attention and appreciation of the role of the Department by conducting lectures and trips, instructing classes, preparing pamphlets and brochures, and designing displays.

Intra-departmental liaison for information and education purposes is maintained at the Branch head and Public Information Officer level.

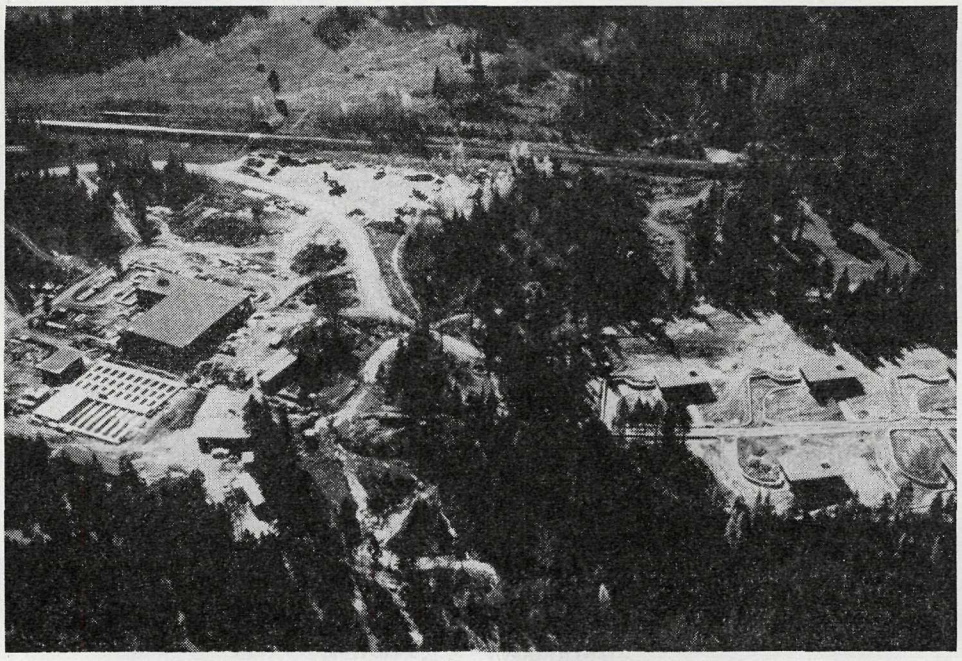
The Departmental Public Information Officer acts as the agent for the distribution of formal news releases, co-ordinates activity as necessary when more than one Branch becomes involved in the compilation and release of information, and assembles information for releases which are to originate from the offices of the Minister and Deputy Minister. Educational activities require a large share of his time.

A Public Information Officers' committee has been formed by the Public Information Officers. Branches that do not employ these specialists are represented by one of the regular members or by someone from his own Branch who has been nominated for that purpose. In this way, Departmental co-ordination is effected.

Primary role of the committee is to improve the services of the Public Information Officers, individually and collectively, to the Branches and the Department, and in that way serve the public. As the year ended, the committee was preparing an appreciation of the Department's "public information programme" and was discussing ways and means of accomplishing the main aim of the organization.

FISH and GAME BRANCH

BRITISH COLUMBIA
DEPARTMENT OF
RECREATION
AND
CONSERVATION



New trout hatchery under construction near Wardner.

A victim of complex environmental conditions.

FISH AND GAME BRANCH

JAMES HATTER, DIRECTOR

ADMINISTRATION

In 1965 the Fish and Game Branch continued to handle the increased pressures placed upon the outdoor resources by hunters and fishermen, as well as an ever-growing number of non-consumptive users. Even more noticeable than the increased use of this kind was the marked increase in the indirect effect of increased utilization of the Province's other resources upon fish and wildlife. Pulp-mills, mines, sawmills, manufacturing plants, and a rapidly expanding road system are all influencing markedly the management of fish and wildlife.

Other resource agencies have expanded their activities in ways which have influenced the Branch's activities. In this category fit such organizations as those dealing with the *Agricultural Rehabilitation Development Act,* and groups such as the Pollution-control Board of the Province, the Federal Fisheries Department, and the Canadian Wildlife Service. By and large the Fish and Game Branch was able to live up to its responsibilities and at the same time join and assist in the expanding conservation work being done by these other agencies.

The Game Management Division of the Fish and Game Branch undertook the most extensive inventory work to date in the East Kootenay and Prince George area. This was done under the ARDA* programme and it is expected that the programme will be expanded and extended to other areas. The Canada Land Inventory, which includes evaluation of the fishery in the recreation section, could well play a major role in the future development of the fish and wildlife resources.

The Fisheries Management Division has been engaged in the largest field programme which it has ever undertaken. There is no doubt that the Kootenay Lake study in connection with the Duncan River development is a major biological investigation. By the end of 1965 it was obvious that the work of the preceding year and a half had been done in a manner which would yield the results necessary to plan for the protection of this valuable fishery.

Aircraft patrols continued in the Chilcotin and Cariboo to evaluate the use that fish and wildlife resources are receiving from outdoor recreationists using air transport. This type of enforcement and fact-gathering programme was extended to the Cassiar during early September at the height of the hunting season. The results from this year's operations confirm the conclusions of previous years, namely, that the impact of persons using aircraft for transport to inaccessible areas is not serious either in use or deportment. Perhaps the most significant trend is the increasing number of residents using aircraft as a means of reaching hunting areas in Northern British Columbia. This trend will continue as more and more residents become aware of the outdoor recreation possibilities in Northern British Columbia.

" Wildlife Review " magazine, a highly regarded publication produced four times a year by the Information and Education Section, had a circulation of 34,000 at the end of 1965. It is distributed to 60 countries and is used widely in schools as an education aid.

Once again the Fish and Game Branch wishes to thank other Branches and Departments for their valued assistance and co-operation. Many individual citizens contributed to our programme and for this we are most grateful. We are pleased

* *Agricultural Rehabilitation Development Act,* Ottawa, 1961.

to acknowledge that the Royal Canadian Mounted Police gave valued assistance on many occasions.

GAME MANAGEMENT

The year 1965 was an active period for the Game Management Division. Continued co-operation in the Federally sponsored ARDA wildlife inventory, the investigation of an epizootic disease of Rocky Mountain bighorn sheep in the East Kootenay, and research on the status of the Peale's falcon on the Queen Charlotte Islands were activities in 1965 beyond the usual function of staff in managing wildlife resources.

Hunter numbers increased again in 1965, a trend which, in conjunction with the impact of an expanding Provincial economy upon wildlife habitat, broadens and intensifies the need for management of the wildlife resource.

Sales of hunting licences for the past four years illustrate the steady annual increase.

	1961	1962	1963	1964
Resident hunting licences	115,796	122,859	124,245	131,595
Non-resident hunting licences	3,840	4,377	5,224	5,263

Game Regulations and Seasons

The 1965 game regulations provided separate seasons for white-tailed and mule deer in Game Management Areas 8 and 11, an innovation designed to improve hunter opportunity in harvesting the annual surplus of these species. In Game Management Area No. 11 the bighorn sheep season was closed following the discovery of a serious disease outbreak over a wide portion of this species' range. The closure was imposed as a precautionary measure pending investigation of the extent and distribution of losses in the population. A closed season during the summer and a bag-limit of two was imposed on black bear. The moose tag-licence was changed to the recording type, containing the address of the holder. This change provides the basis of a much-improved hunter sample estimate of harvest for this species. There were no extensions to regular game seasons in the Province during 1965.

In most areas of the Province below-normal precipitation and above-average temperatures prevailed through the hunting season, reducing hunter success on deer and elk but resulting in better-than-average success on moose and native grouse. The hunter success on most other game species in 1965 is expected to approach the past five-year average. Restrictions on logging co-access on Vancouver Island due to fire hazard resulted in a 14-per-cent decline in hunting days.

Game Harvests

The introduction of a tag-licence on elk, sheep, goat, grizzly bear, moose, and caribou in the past two years has provided a basis for a much improved hunter questionnaire sample published in 1965. The use of questionnaire forms for single species and selected groups of game animals further improved hunter sampling procedures, allowing more accurate estimates of the annual harvest. Results were computer-processed and presented in a high-quality publication.

Tables 1 and 2 contain hunter sample kill estimates, illustrating the magnitude and trend of wildlife resource use in the Province.

Table 1.—Provincial Game Harvest Estimates from the Hunter Questionnaire Sample

	1960	1961	1962	1963	1964
Duck	390,000	377,200	460,500	368,570	383,961
Grouse	344,000	413,600	360,500	245,470	522,064
Pheasant	46,600	57,100	64,700	54,940	48,884
Moose	11,300	15,200	16,675	16,510	17,853
Elk	2,300	3,500	2,300	3,950	3,230
Deer	58,600	67,000	69,500	71,520	78,435
Goat	.....	.....	.....	1,625	1,567
Sheep	.....	.....	.....	.....	295
Caribou	.....	.....	.....	.....	465

Table 2.—Harvest Estimates for Deer, Moose, Ducks, and Grouse from Various Areas of the Province

Area	1963	1964
Deer—		
Vancouver Island	23,550	25,071
Mainland Coast	16,890	9,080
Interior	17,420	16,892
Northern British Columbia	1,680	3,357
Peace River	1,980	2,128
Kootenay	10,000	11,927
Okanagan-Boundary	.....	10,000
Moose—		
South of Quesnel	3,890	3,615
North of Quesnel	8,430	9,780
Kootenay	670	670
Peace River	3,040	3,292
South of Thompson River	500	302
Ducks—		
Vancouver Island	54,000	64,674
Mainland Coast	199,000	133,034
Interior	70,000	102,287
Northern British Columbia	14,000	18,369
Peace River	13,000	26,943
Kootenay	19,000	24,436
Grouse—		
Vancouver Island	57,000	83,000
Mainland Coast	39,000	13,800
Interior	81,000	112,900
Northern British Columbia	19,000	71,000
Peace River	4,500	20,000
Kootenay	44,000	92,000
Okanagan-Boundary	.....	129,000

Road checks are operated at a number of locations in the Province during the hunting season, providing detailed biological data and information of a general nature. The Cache Creek check is operated throughout the season on a 24-hour basis, yielding the comparative data contained in Table 3.

Table 3.—Cache Creek Check Station Data, 1961–65

	1961	1962	1963	1964	1965
Deer	4,800	3,690	3,656	3,765	2,241
Moose	4,175	4,833	5,418	5,446	5,908
Black bear	121	158	96	116	146
Caribou	104	142	156	200	213
Elk	12	39	26	35	13
Bighorn sheep	56	44	70	48	54
Goat	112	122	169	136	137
Waterfowl	7,942	8,424	7,283	6,864	6,908
Grouse	12,000	6,188	3,215	4,065	5,928
Hunters checked	20,757	23,291	22,779	21,533	20,808

Surveys and Inventories

Big Game

Big-game distribution and abundance studies in the East Kootenay and Prince George regions were continued in 1965 in co-operation with the Canada Land Inventory programme of ARDA. This work was done under the supervision of Dr. P. J. Bandy, head of Game Management research, in co-operation with ARDA employees D. Blower and A. Brooks, who are attached to the Fish and Game Branch for the Canada Land Inventory project. Regional technical staff also contributed to this project.

Data from the Canada Land Inventory studies are mapped for computer analysis and become part of a national resource inventory.

Land Use

The continued growth and development of the Province in recent years have created demands for the use of lands which serve as habitat for wildlife. The impact of human development of resources has far-reaching consequences on wildlife resources, and the Game Management Division frequently co-operated with other agencies and departments of Government in mitigating wildlife resource losses resulting from other forms of land use. This aspect of game management becomes more important as the development of the Province continues, and will in time become a major activity of the game manager.

Waterfowl

Plans for the development of the Duck Lake area at Creston got under way in 1965 with the co-operation of the Canadian Wildlife Service, Ducks Unlimited, and the assistance of a refuge manager from the United States Fish and Wildlife Service. Proposals for development of these wetlands as production habitat and for public recreation will require careful study before development begins.

Private land at Hansen's Lagoon on the north-west coast of Vancouver Island was purchased this year by the Department of Recreation and Conservation to complete holdings in the area for waterfowl-management purposes. This area of coastal marsh is particularly attractive to thousands of migrant geese, along with large numbers of ducks and other waterfowl.

Studies of waterfowl populations on pot-holes in the Cariboo continued in 1965, contributing useful information regarding wetland management and waterfowl populations in British Columbia.

The announcement by the Federal Government this year of a national co-operative waterfowl programme should contribute to the welfare of this resource in

the Province in coming years. The plan envisages wetland developments, access programmes, and intensified research and management of the resource.

Game Management staff continued to co-operate in collecting data on waterfowl resources for the Pacific Flyway Council, and some further exploration of coastal waterfowl habitat has been done.

Research Division

Research Projects

The research programme has continued to expand into topics which are of importance to game management. Studies of the Columbia black-tailed deer on Vancouver Island include research on the production of deer food in relation to certain logging practices, the reproductive capacity of a deer population and the factors affecting reproduction, and a preliminary investigation of the parasite burden of one Vancouver Island deer population. Teeth removed from the jaws of hunter-killed deer, including known-age jaws recovered from previously tagged fawns, are also being examined to develop a more accurate technique of ageing deer. Studies of growth patterns of deer from four racial stocks were completed.

Studies of the bighorn sheep of British Columbia included a detailed analysis of the California bighorn sheep population in the Ashnola River area. This showed that cattle, deer, and sheep compete for food and that overstocking has severely reduced the productivity of the range.

A die-off of Rocky Mountain bighorn sheep using the Bull River range was investigated to determine the causes and their inter-relations. Poor range conditions coupled with a period of inclement weather, a pneumonic infection involving high lung-worm burdens, and a bacterial complication resulted in an almost total loss of this population. This research programme was expanded when it became obvious that the mortality factors had spread to adjacent ranges.

A more general study of the diseases and parasites of game birds and mammals has been continued. Carcasses and tissues sent in by hunters and by the Departmental staff have been examined for parasites and disease-producing organisms, thereby adding to the knowledge of factors affecting wildlife.

Public Relations

Numerous meetings of sportsmen groups, agricultural institutes, forestry associations, and other agencies were attended by Game Management staff during the year. Such meetings provide an opportunity to explain game-management concepts and practices to interested people, and serve a reciprocal benefit in exposing game managers to the interests and problems of others.

Talks were given to school and university classes, service clubs, scout, and similar organizations during the year, and Game Management staff participated in a number of radio and television programmes.

Personnel

The year 1965 saw several personnel changes in the Game Management Division. W. G. Smith assumed the full responsibilities as Chief, Game Management. To assist him and fill the vacancy created by P. W. Martin's " loan " to Uganda, K. R. D. Mundy was transferred from Prince George to Victoria. Mr. Mundy was the Regional Game Biologist for Northern British Columbia for two years prior to the transfer.

To fill the vacancy in the East Kootenay, Mr. R. A. Demarchi was transferred from Victoria to Cranbrook.

In February of 1965, Mr. E. W. Taylor resigned his position with the Branch. In July, Mr. B. R. Gates assumed the position of Regional Biologist for the Lower Mainland, replacing Mr. Taylor.

In August, Mr. D. A. McCaughran resigned his position as Regional Biologist for Vancouver Island. Mr. McCaughran is presently in Ithaca, New York, furthering his education.

Mr. R. H. P. Finegan joined the Branch in September, filling the vacancy of Headquarters Biologist.

Mr. D. Eastman joined the Branch as biologist supervising data collection at the Cache Creek checking-station.

Early in 1965, P. J. Bandy received his Ph.D. degree from the University of British Columbia, following the completion and publication of his doctoral thesis on deer nutrition.

FISHERIES MANAGEMENT

During the year ending December 31, 1965, continued growth was evident in utilization of the non-tidal sport fisheries, as evidenced in the sale of anglers' licences. The annual sale of anglers' licences for the five-year period 1961–1965 is summarized below.

Year	Anglers' Licences				Totals
	Resident	Non-resident Alien	Non-resident Canadian	Non-resident Minor	
1961	139,945	28,127	8,820	9,101	185,993
1962	144,090	30,555	10,997	11,293	196,935
1963	151,271	33,927	14,304	14,578	214,080
1964	154,672	35,500	13,998	15,955	220,125
1965*	163,996	38,527	14,510	16,405	233,438

* To December 1, 1965.

Emphasis in fisheries-management activities was concentrated on habitat protection, including pollutions and other industrial effects on water, on fish culture to provide a continuing supply of trout for stocking several hundred small lakes, and on research applicable to ecological requirements of sport fish, both in lakes and streams.

HABITAT PROTECTION

Pollution Control

All members of the Branch—Conservation Officers, Regional Biologists, and Headquarters personnel—devoted much effort to attempting to preserve fish habitat in the face of increasing industrial growth in British Columbia. Greatest emphasis was laid on logging pollutions, particularly in northern areas where logging companies are small and scattered and surveillance is difficult. A system of timber sale permit inspection has been extended from the Coast District to Nelson District and will shortly be instituted in Prince George, Williams Lake, and Kamloops Forest Districts. Mining activity was most extensive in the Vancouver Island, Kamloops, and Kootenay areas; potential pollutions from several mining mills were averted in these areas. A progressively more co-operative attitude by mining companies toward prevention of pollution by mining wastes was noted.

Other pollution investigations involved drilling for and production of petroleum products in the Fort St. John District. The frequency of these problems in recent years has prompted the Department of Mines and Petroleum Resources to include fish and game protective regulations in recently up-dated regulations governing the drilling of wells and the production and conservation of oil and natural gas. Chemical spray programmes for control of mosquitoes, rodents, wood-boring insects, and aquatic and terrestrial plants were investigated and restricted, where necessary, for protection of sport fish. Miscellaneous investigations involved coal mining and washing operations, gravel removal and washing, sewage disposal, poultry plant wastes, oil-waste disposal, copper-sulphate applications for swimmer's itch, and plating plant wastes.

Three long-term biological surveys of streams were begun to determine the effects of industrial and agricultural wastes. These are on Kootenay River, where a pulp-mill is proposed, St. Mary River where metals, chemicals, and fertilizers are produced, and Nicomekl and Serpentine Rivers in the centre of an extensive agricultural area.

A close association with the British Columbia Pollution-control Board has been established, allowing for consideration of fish, game, and recreation protective measures in all permits granted by the Board. In 1965, 37 permits were granted by the Board after review by this Branch.

Hydro-electric Surveys and Obstructions

An intensive investigation is under way with respect to the effects of Duncan Hydro dam on the Kootenay Lake sport fishery. The Kootenay Lake fishery in the north end of the lake depends almost entirely on fish which are hatched in the Duncan-Lardeau River system. Extremely large rainbow trout and Dolly Varden char up to 30 pounds in weight are dependent for their food supply on kokanee (landlocked sockeye salmon), which also spawn in the Duncan and Lardeau Rivers. Construction of Duncan dam will affect all these fish, and the following is a summary of investigations which have been undertaken in order to provide data for such fish protection as may be necessary.

Survey results in 1964 showed that a spawning run of 2,800,000 kokanee will be eliminated at the dam-site in Duncan River. The Duncan kokanee population represents 68 per cent of the 4,000,000 kokanee in the Duncan-Lardeau system. In order to provide the best possible protection for the Duncan fish, an alternative, artificial spawning channel will be required, but cannot be built until movements of spawning kokanee into the Duncan-Lardeau system are known in detail. In addition, the movement of fry out of the river system will be affected by release of stored water from Duncan dam, and this effect will also influence spawning-channel requirements.

River work in the autumn and winter of 1965 and in the spring of 1966 will be aimed at providing specific information on spawning requirements of kokanee in relation to time of entry to the river, size of gravel in spawning nests, velocity, depth and temperature of water in spawning areas, and best conditions for survival of eggs which incubate in the gravel beds during winter months. This information will be applied directly to spawning-channel design when required.

In addition to the Duncan River kokanee directly affected at and upstream of the Duncan dam-site, rainbow trout, Dolly Varden char, and kokanee in the remaining populations in Lardeau River will be affected by reduced flows and lower temperatures of Duncan River water entering Kootenay Lake. It is of extreme importance that the movements of all fish into and out of the Duncan-Lardeau

system be known in relation to the circulation of water in the north end of Kootenay Lake. Work on Kootenay Lake is therefore directed toward the movement of fish as related to currents in the lake and the effects of river flows on these currents.

The large rainbow trout and Dolly Varden char depend heavily on kokanee as a source of food. The number of kokanees produced in the tributary streams must be known before the size of any artificial facilities can be determined. A fish fence has been constructed near Marblehead, in the Lardeau River. This facility will serve two purposes: (1) to enumerate kokanee, Dolly Varden, and rainbow trout migrating upstream as adults in Lardeau River; (2) to divert and control the numbers of kokanee desired in the artificial channel.

Five biologists and four technicians presently are employed on the project, plus casual labour when required. Highly specialized scientific equipment is in use both in lake and river work, and an experienced hydrobiologist is in charge of the programme. A total of $165,000 has been made available for construction, equipment, research, and salaries for the 12-month period ending July 1, 1966. The Duncan River investigation is the largest field project ever attempted by the Fisheries Management Division of this Branch. In addition to providing immediate information for fish protection it will also result in an understanding of the predator-prey relationship of rainbow trout, Dolly Varden char, and kokanee, which will be invaluable in management of fish populations in other large lakes and hydro-electric reservoirs.

Trout Hatcheries

The Fish and Game Branch has three permanent hatcheries located at Abbotsford, Bull River (near Cranbrook), and Summerland, one summer station at Loon Creek (near Clinton), and four egg-collecting stations. Rainbow-trout eggs are collected at Beaver and Pennask Lakes (Okanagan), yellowstone cutthroat eggs at Kiakho Lake (Cranbrook), and kokanee eggs at Meadow Creek (Lardeau).

Species produced in 1965 included eastern brook, coastal and yellowstone cutthroat, and rainbow trout.

New Hatchery Facilities

The new hatchery at Bull River, called Kootenay Trout Hatchery, will be completed by mid-1966. Two hatcheries, one summer and one permanent, at Cranbrook and Nelson, have been closed as a consequence of the new construction.

Equipment

As anticipated in 1964, additional automatic feeding equipment was purchased in 1965, and at present all fry feeding is automatic. Feeding at all stages at Kootenay Hatchery will be fully automatic and it is expected that the outdoor feeder complement at the other two hatcheries will be completed in 1966. Use of this equipment means not only a saving in labour but increased production as well. Tests have shown that the growth rate of machine-fed fish is up to 50 per cent better than that of hand-fed fish.

A contract was let for construction of two 1,000-gallon fish-transporting tanks, and an improved aeration system involving use of pure oxygen will be incorporated in each unit.

Liberations and Egg Collections

In 1965, 256 lakes were stocked with 3,600,000 trout. These fish, varying in size from fry to yearlings, weighed 22,000 pounds and nearly all were liberated by truck. Normally a substantial number of lakes are stocked by plane but, because

of certain unavoidable losses in hatcheries and a consequent reduction in the fall planting programmes only 68 lakes (594,000 fish) were stocked from the air.

Total number of rainbow eggs collected was almost 7,000,000, less than required to meet the requirements of the fisheries management programme. Late in the year trapping facilities at Pennask Lake were increased and plans to improve the trap at Niskonlith Lake were finalized. Other sources will be developed in the next few years to ensure a completely adequate annual supply.

Hatchery Research

High rainbow-egg mortalities have caused increasing concern and in 1965 a study was organized by the Fisheries Research Division to investigate the egg-collecting process. This study will be continued.

Further work was carried out on liberating tank aeration systems, and as a result loading techniques have been altered. Higher survivals of planted trout are anticipated as a result of improved handling techniques and better equipment.

The key to the success of fish-stocking programmes is the degree of success at egg-collecting stations. If the supply of eggs is inadequate, plantings must be reduced. The demand for rainbow-trout eggs has greatly increased and steps have been taken to improve the sources of supply of eggs from wild trout.

Research is vital to fish culture and the inclusion of laboratory facilities at Kootenay Hatchery will provide an opportunity for additional research in both the applied and pure research fields. Despite the limited facilities at Summerland Hatchery, both types of research have been carried on each year and it is anticipated that this will continue. A fully equipped laboratory is planned as an integral part of each station.

Eight lakes of the more than 400 served by hatcheries require one-third of the total fish planted and as fishing pressure increases these and the other lakes stocked will require heavier plantings. Rearing facilities at Summerland Hatchery can be expanded when the water supply is increased and this can likely be achieved in 1966 or 1967. Water supply and space at Fraser Valley Hatchery is sufficient for increased production in the future.

Regional Activities

Regional activities involve investigations of pollutions and obstructions, inventory surveys of lakes and streams, fish plantings, sampling of fish populations and the water which supports them, and continuing evaluation of the utilization of the sport-fish resource. The regional summaries which follow only highlight a few of the activities for 1965.

Region I—Vancouver Island

Activities on Vancouver Island have consisted largely of increased attention to effects of logging on stream fish, together with intensive investigation of the fisheries on Cowichan and Qualicum Rivers. The Qualicum River fishery is predominantly concerned with steelhead trout and the investigation on that stream from January to March, 1965, was carried out in co-operation with the Department of Fisheries of Canada.

A comprehensive study was carried out for the second year in 1965 on Cowichan River. A detailed report is in preparation, involving the limnology of the river, the biology of steelhead, rainbow, cutthroat, and brown trout, and utilization by anglers of the river fish resources.

Region II—Lower Mainland

In the Lower Mainland region, strong emphasis in 1965 was placed on creel census programmes involving all Conservation Officer staff, both on lakes which are stocked with hatchery fish, and also on steelhead streams.

Extensive surveys were carried out on 11 lakes and their associated watersheds on the Sechelt Peninsula. Information gathered from the Sechelt area has resulted in stocking of five lakes with hatchery fish.

Basic research has been carried out on the effectiveness of daily bag-limits of fish on lakes. This research has made an important contribution to understanding of regulations as a means of managing small lake fisheries.

Regions III and IV—South Central Interior

Considerable attention has been devoted to investigation of trout transferred from Lardeau River, tributary to Kootenay Lake, to Niskonlith Lake, near Chase. These fish are slow in maturing and may provide high-quality angling in lakes of medium productivity levels.

During the autumn of 1965, *Mysis relicta* (opossum shrimp) were transferred from Kootenay Lake to Kalamalka Lake, near Vernon, and to Pinaus Lake, near Falkland. Introduction of this glacial relict from Waterton Lake to Kootenay Lake in 1950 has proven spectacularly successful. Introduction of *Mysis* to many deep, unproductive lakes in the Columbia drainage, such as Moyie, Arrow, Slocan, Whatshan, Christina, and Okanagan could result in marked increases in sport-fish production in those waters. Introduction of *Mysis* to sockeye-salmon producing waters is not planned because of possible unknown effects on sockeye populations.

Region V—Kootenays

For the first eight months of 1965, Region V was without a Fisheries Biologist because of the resignation of R. A. H. Sparrow. Activities during the last four months of 1965 centred mainly on monitoring of industrial effluent in Mark Creek and St. Mary River, near Kimberley, where mining and fertilizer-plant operations respectively have created serious pollutions. Monitoring of the two streams and of Kootenay River downstream (at and below Fort Steele) will continue.

Region VI—Cariboo

An extensive programme of lake surveys was carried out in the Cariboo region during the summer of 1965. Data from these surveys will provide the basis for future, more intensive management of sport fisheries in the area. Dragon Lake, near Quesnel, was rehabilitated in 1960 and restocked with trout in 1963. The lake was opened to fishing in April, 1965, with excellent catches resulting.

Green Lake, west of 100 Mile House on Highway No. 97, has been stocked with over 500,000 chinook (spring) salmon fingerlings since 1962. Anglers have caught chinook salmon up to 3 pounds in weight in Green Lake and a substantial number have been netted for growth and feeding studies.

A biological survey of Puntchesakut Lake was carried out concurrent with seismic explosions in the lake, set off by personnel of the Canada Department of Mines and Technical Surveys. The survey involved temperature series, oxygen determinations, plankton sampling, and sampling of fish with gill nets. The results will be published when analysed.

Regions VII and VIII—North of 54th Parallel

Activities in the northern half of the Province continued to be concentrated on control and abatement of industrial and logging pollutions, particularly with respect to rivers which produce steelhead trout. In most cases a satisfactory solution was found, but in a few instances prosecutions were entered and convictions registered under the *Fisheries Act*. A large number of obstructions at culverts on spawning streams was observed, and through co-operation of the Department of Highways and the Forest Service, these will be rectified.

A survey was carried out on the headwaters of the Parsnip River in connection with the possible diversion of McGregor River through Pacific, Portage, and Arctic Lakes into Parsnip River. In conjunction with a preliminary survey of the lower Parsnip River in 1964 and a full-scale investigation to be concluded in 1966, a report will be submitted with respect to the importance of these areas to the Peace River reservoir when it is filled by waters impounded by Portage Mountain dam.

RESEARCH

The continued growth of industry and the human population in British Columbia poses new problems in fishery management each year. New techniques are continually required to protect and maintain fish populations and their habitat. High quality research, both at the fundamental and applied levels, continues to be a productive investment in the sport fish resource and its future.

Primary Production Studies in Kootenay Lake

The marked depressant effect of high turbidity on summer algal production in the south arm of Kootenay Lake has been conclusively demonstrated in both field and laboratory incubation experiments. Studies will be continued throughout the winter to examine production in clear, nutrient-rich water entering the south end of the lake.

"Shrimp" (Mysis relicta) *Utilization by Kootenay Lake Fishes*

Analysis of feeding habits of kokanee, rainbow trout, Dolly Varden, and other species in Kootenay Lake is continuing in order to determine the impact of shrimp introduction on the growth rate of these fishes. A programme to evaluate success of introduction of this shrimp into other suitable lakes is under way.

Reservoir Research

Field studies on limnology, bottom fauna, and fish production in reservoirs on the Campbell River system have been completed, and analysis will continue on sport-fish growth-rates in these reservoirs. Further study on the effect of different clearing treatments on bottom-fauna production is being planned.

Hatchery Evaluation Programme

A preliminary report on hatchery evaluation was presented in 1964. Additional statistical analyses were performed on the data and the results are now ready for publication. As a consequence of some of the results of this study the hatcheries have now changed from the use of "domestic" stock to native wild stocks of rainbow trout. Because of this change, a second hatchery evaluation programme was designed using only native stocks. In preparation for this study, three lakes in the Princeton area were treated with rotenone to remove all fish life.

Aeration and Limnological Study of Marquette, Corbett, and Courtney Lakes

Experimental aeration and limnological investigations on Marquette, Corbett, and Courtney Lakes near Merritt have been concluded. These data are now being prepared for publication in a scientific journal. The details of operation and the practical application of artificial lake aeration were presented in a paper at the annual meeting of the Pacific Fisheries Biologists. A manuscript on the design and operation of a small lake-aeration unit is presently under preparation.

Oxygen and Mechanical Shock Experiments with Trout Eggs

An experiment was performed at the Summerland Hatchery to measure the oxygen demand of rainbow-trout eggs at four different temperatures and at several stages of development. In addition, a pilot experiment was conducted to test the effect of mechanical shock on the degree of mortality of trout eggs during transport from the stripping station to the hatchery.

Coastal Stream Research

An extensive series of experiments have been conducted on the behaviour of juvenile steelhead trout and coho salmon in an artificial stream aquarium at Courtenay. Although analysis of data has not yet been completed, a profound effect of temperature on the aggressive behaviour of the young fish has been clearly demonstrated and results corroborate earlier experiments where precise temperature control was not possible. The previous experiments have been completely analysed and published.

Several coastal streams have been studied, with particular emphasis on distribution of cutthroat and rainbow trout along the lengths of the stream and in their small tributaries. Collections indicate a marked difference in the type of stream habitat utilized by cutthroat and rainbow trout.

PUBLICATIONS AND REPORTS

Halsey, T. G.

1965. Autumnal and Over-winter Limnology of Three Eutrophic Lakes with Particular Reference to Experimental Circulation and Trout Mortality. M.Sc. thesis, Dept. of Zoology, U.B.C.

Hartman, G. F.

An Aquarium with Simulated Stream Flow. Trans. Amer. Fish. Soc., *94*(3): 274–276.

1965. The Role of Behaviour in the Ecology and Interaction of Underyearling Coho Salmon (*Oncorhynchus kisutch*) and Steelhead Trout (*Salmo gairdneri*). J. Fish. Res. Bd. Canada, *22*(4):1035–1081.

1965. Kokanee—Fish with a Future. Wildlife Rev., *3*(5):15–17.

Lorz, H. W., and Northcote, T. G.

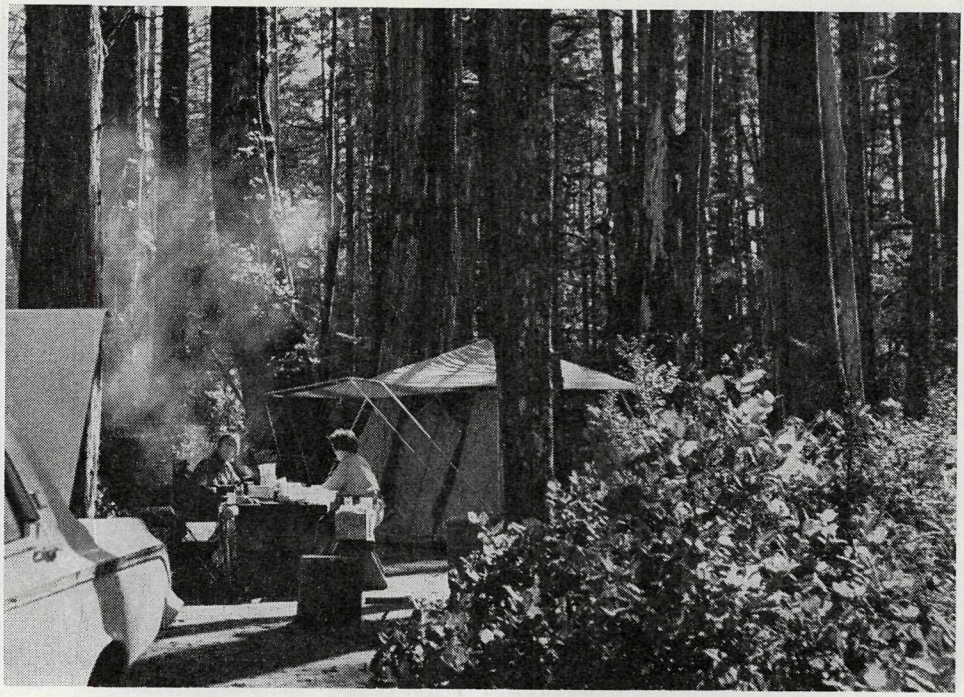
1965. Factors Affecting Stream Location and Timing and Intensity of Entry by Spawning Kokanee (*Oncorhynchus nerka*) into an Inlet of Nicola Lake, British Columbia. J. Fish. Res. Bd. Canada, *22*(3):665–687.

Northcote, T. G.

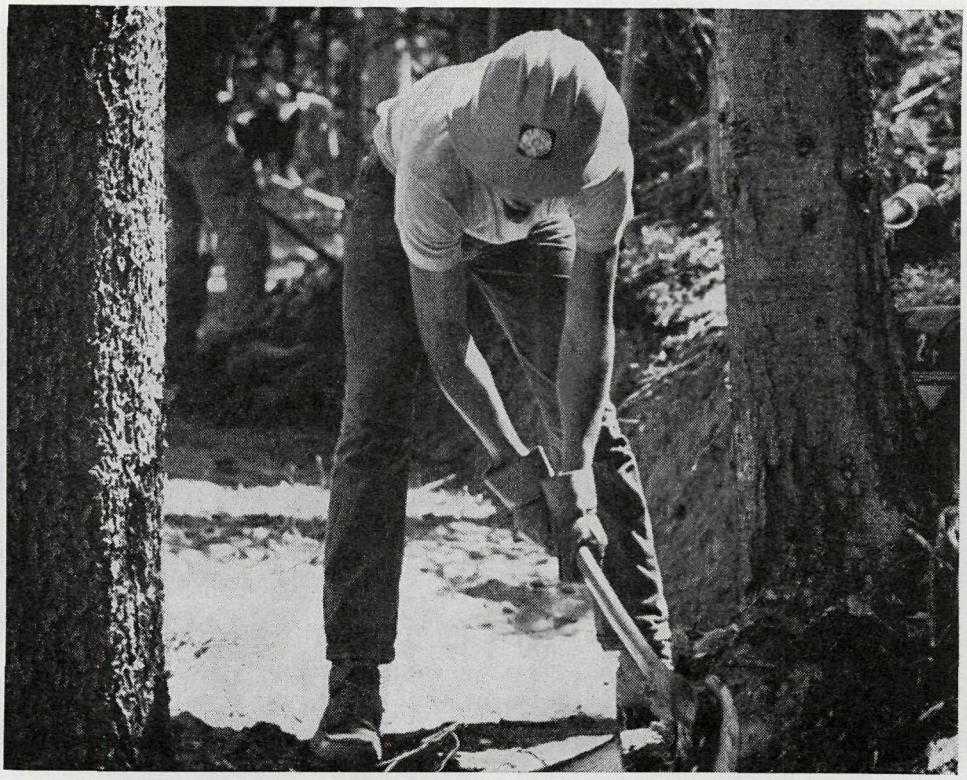
1965. Some Research Requirements in Freshwater Sport Fishing. Symposium on economic aspects of sport fishing. Federal Department of Fisheries, Ottawa, 23 pp.

PROVINCIAL PARKS BRANCH

BRITISH COLUMBIA
DEPARTMENT OF
RECREATION
AND
CONSERVATION



There has been a 220-per-cent increase in park use in 10 years.



In 1965 the Parks Branch placed emphasis on completion and improvement of existing parks.

PROVINCIAL PARKS BRANCH

H. G. McWILLIAMS, DIRECTOR

The year 1965 was an eventful one in the history of the Provincial Parks Branch. The Legislature passed a new *Park Act* which defines the purpose for which parks are established and increases their protection from all forms of alienation. The Act also introduced nature conservancy areas, a new classification for park land, which gives absolute protection to outstanding areas of scenic, faunal, and floral environment. Four nature conservancy areas, totalling 346,794 acres, have already been delineated in two major parks.

The Legislature also passed the new *Regional Park Act,* and Victoria, Saanich, Central Saanich, and Oak Bay municipalities, late in the year, formed the first Regional Park Board. Formation of this Board enables the Provincial Government and municipalities to co-operate in the acquisition and development of land required for outdoor recreation.

Park use during 1965 was a phenomenal 26.7 per cent increase over that of 1964. The increase represents one million more park visits than in 1964 and indicates that British Columbia is experiencing an explosion of recreational land use. A further indication of the upward trend in outdoor recreation is shown in the following table, which shows a 220 per cent increase in park use in 10 years:—

	1955	1960	1965
Total visits (millions)	1.5	3.1	4.8
Per capita visits	1.2	2.0	2.7

To clarify their duties and unify the efforts of all personnel, the Parks Branch policy statement was revised and approved for their guidance.

Although improvement work continued in many parks, emphasis was placed on development of facilities in Mount Seymour and Manning Parks.

MANAGEMENT

Early in the year, reorganization of Parks Branch divisions created the Management Division for more direct and efficient administration of an increasing number of management and maintenance tasks. This new Division now administers Public Information and Education, Interpretation, Maintenance and Operations Sections, and the Victoria general office. District Park Officers are now directly responsible to the Management Division administrator to facilitate maintenance and operation of parks now in use.

Maintenance and operation of parks was carried out by a staff varying from 50 during winter to 160 during the summer high-use season. Road and trail repairs, erection of signs, building repairs, refinishing of park furniture, upkeep of water and sewage systems, camp-site and picnic-site clean-ups, and the disposal of garbage are continuing tasks under the heading of management and operation of parks in use.

During 1965, a new system of camp-site security was introduced in several heavily used parks to control the activities of rowdies and vandals. Gates were installed and kept closed from midnight to 6 a.m. Auxiliary police and radio-telephone service was also used for the first time. These actions, plus the commendable co-operation of the R.C.M.P., markedly reduced the activities of hoodlums who have for the past two years made a sport of disturbing the normally tranquil atmosphere of parks.

PUBLIC INFORMATION AND EDUCATION

In keeping with the trend of the past several years, the amount of public inquiry correspondence increased by comparison with the previous year. The number of requests for illustrated talks dropped back to normal, or an average of one per fortnight, by comparison with 1964 when the average was one per week. The subject of all talks was parks, nature appreciation, and conservation, but about 20 per cent were of an instructional type requested by Girl Guides, Boy Scouts, and other youth organizations. Four special talks were given; two (illustrated) to British Columbia Government Travel Bureau Travel Counsellors to familiarize them with parks and parks facilities, one to the Annual Hospitality Conference in Vancouver, and one to the British Columbia Museums Association annual meeting in Kamloops. The Public Information Office also took part in the annual Parks Branch school by delivering a lecture on public information and public relations to Parks Branch field staff.

Several publications, including the map of Provincial parks on Vancouver Island, were revised and reprinted. A number of articles and news releases were written for various Canadian and United States publications. Several hundred black-and-white photographs were also supplied to a variety of publications and a special order of photos went to the British Columbia Department of Education to be used as cover pictures on study books. Work on the new Fraser Canyon-Okanagan parks map was completed and sent to the Queen's Printer for the production of proof copies.

In co-operation with a few local schools, a small experimental programme of supplying publications and photographs was carried out. As a result of the experiment, it was concluded that Parks Branch can assist schools by supplying nature-study material oriented to British Columbia.

Late in the year, the staff of the Public Information office was increased by one part-time clerk-typist, thus relieving the previous overload condition and greatly increasing the efficiency of correspondence movement and filing.

INTERPRETATION AND RESEARCH

During the year, park naturalists conducted interpretation programmes in nine parks—Manning, Miracle Beach, Mitlenatch Island, Shuswap Lake, Goldstream, Wickaninnish Beach, Ellison, Okanagan Lake, and Haynes Point. The programmes were new at the last four parks mentioned, and at the last three a new kind of programme was offered two days a week in each park by a park naturalist travelling on a regular schedule. Naturalists interpreted parks to over 150,000 people through nature houses, nature trails, guided walks, and outdoor talks. Additional interpretation was done through outdoor signs and displays.

Nature houses were visited by more than 64,000 people, mainly through July and August. Miracle Beach nature-house attendance set a nature-house record with a total of 28,000 visits.

Nature trails were maintained in Manning (3 trails), Miracle Beach, Shuswap Lake, Goldstream, Emory Creek, and Skihist Parks, and briefly in Crooked River Park where an experiment failed. They were used by an estimated 70,000 people.

Guided walks, most of them from one to two hours long, were offered on regular schedules in all nine parks having park naturalists. These were new ventures in Wickaninnish Beach, Shuswap Lake, Ellison, Okanagan Lake, and Haynes Point Parks. About 7,000 people were led on 413 walks, with the most patronage being in July and August.

Evening outdoor talks, offered in only Manning Park last year, were given in six additional parks this summer—Shuswap Lake, Wickaninnish Beach, Ellison, Okanagan Lake, Haynes Point, and Goldstream Parks. Only Manning Park had facilities to show slides. Other "theatres" were impromptu gatherings about a camp-fire. Naturalist staff talked to over 11,000 people, using about 15 titles on 236 talks.

Consistent with the policy of keeping nature houses fresh and interesting, 11 new indoor exhibits were planned, manufactured, and in place for the summer. A new programme of outdoor display signs at the entrances to parks was expanded from the two experimental displays of past years to a total of 12. As experiments suggested, these metal signs withstood vandalism and the weather quite satisfactorily. Five informative leaflets were reprinted, and one new one on ferns was produced.

A preliminary survey of damage to nature caused by park use was completed in Garibaldi Park after observations had been made of damage and successful repairs in parks outside the Province.

Plant and animal inventories for many parks are growing as time allows. Offshore from Wickaninnish Beach Park, on a small, rocky island known to be inhabited by sea lions and cormorants, a special discovery was made this year—the first nest of Brant's cormorant to be found in Canada. All former nesting records have been from south of Canadian waters.

YOUTH CREW PROGRAMME

For the 14th consecutive year, Youth Crews of 12 boys each were employed for park development and maintenance work. This year 135 boys worked in Garibaldi, Alice Lake, Ten Mile Lake, Moyie Lake, and Manning Parks.

LAND ACQUISITION

Passage of the new *Park Act* enabled the reclassification of Strathcona and Kokanee Glacier Parks from Class "A" to Class "B" and the establishment of nature conservancy areas over some 302,794 acres of Strathcona Park. It is anticipated that further nature conservancy areas will be established as soon as the necessary inventory work can be carried out.

Principal field projects undertaken during the year included an examination of the recreational potential of the Arrow Lakes flood-line, a general reconnaissance of the Haines cut-off and Atlin Lake, an aerial reconnaissance from Atlin Lake south and east of Kiniskan Lake and Caribou Hide, a trail reconnaissance from the Pasaytan River through to the Cathedral Lakes and the Ashnola River, and a boundary examination and analysis in Bowron Lakes Park.

Eleven new Class "A" parks, totalling 16,088 acres, and two Class "C" parks containing 432 acres, were established during the year. Boya Lake Park, containing approximately 11,360 acres, is the first park established on the Stewart–Cassiar Highway and is located some 54 miles south of the Alaska Highway. This park has one of the few warm water lakes in the Cassiar District and will eventually be developed as a multi-use park for that district. The establishment of Crooked River Park, 2,430 acres, on the Hart Highway, 45 miles north of Prince George, represents another milestone. This site was developed some years ago, but final clearance for the park was not forthcoming until mid-1965.

Additions totalling 98 acres were made to three Class "A" parks. Two Class "C" parks were extended to include a further 292 acres. An area of 12 acres was deleted from one Class "A" park.

We wish to acknowledge the assistance and co-operation of other Government departments in establishing recreational reserves over 97 areas, containing 17,095 acres. Twelve areas, containing 1,932 acres, were deleted from reserve status. To date, approximately 2,190 areas, containing 340,994 acres, have been reserved for recreational use.

DEVELOPMENT PLANS

During 1965, the Parks Branch continued to place emphasis on completion and improvement of existing parks rather than the development of new ones. Therefore, throughout the year, the Development Plans office was especially concerned with improving, beautifying, and expanding facilities in numerous small parks. In certain large parks, particularly Manning, Garibaldi, Kokanee Glacier, Bowron Lake, and Mount Robson, planners continued to deal with basic policy and over-all plans.

Planners carried out regional surveys to determine the requirements for revamping. For instance, they are looking ahead to the completion of Highway No. 16 from Jasper to Prince Rupert and the extra traffic to be carried by the forthcoming ferry service between Prince Rupert and Vancouver Island. In consideration of these projects, expansion of facilities was planned for Beaumont, Topley, Maclure Lake, Seeley Lake, Kleanza Creek, Lakelse Lake, and Prudhomme Lake Parks. Recreational requirements along the section of Highway No. 16 passing through Mount Robson Park were also the subject of a special planning report.

Similar regional surveys were made for parks in Prince George, Kamloops, Okanagan, and Kootenay Districts. Plans were produced for new or changed facilities at Kiskatinaw, Whiskers Point, Crooked River, Shuswap Lake, Loon Lake, Marble Canyon, Victor Lake, Monck, Bromley Rock, Okanagan Lake, Antlers Beach, Haynes Point, Ellison, and Wasa Lake Parks.

It is anticipated that thousands of Lower Mainland people will be looking for recreational opportunities along the scenic Squamish–Pemberton Highway, now under construction; therefore, a survey was carried out to determine the most suitable area for park development along that route and Nairn Falls, on Green River, was chosen. In the Port Hardy-Alert Bay area, a planning reconnaissance survey was made in anticipation of greater tourist travel in the northern portion of Vancouver Island.

Manning Park absorbed a large proportion of the planning staff's time. Last winter the slopes around Gibson Pass were studied intensively to locate the most suitable area for a ski development. A helicopter was used to gain a bird's-eye view of the topography. In the spring, plans were drawn up for ski-slopes, parking-lots, and a warming-hut. During the summer, supervision was given to the implementation of these plans. Other tasks in the park included the landscaping of Lightning Lakes Recreational Reservoir, improvements to Cambie camp-site, and a landscape plan for staff trailer-sites.

"Back country" reconnaissance of Garibaldi Park continued in 1965. The east side of Cheakamus River valley was selected for trail and road access to Cheakamus Lake. Fitzsimmons Creek valley was explored as an access route to Singing Pass. In both valleys, the Varsity Outdoor Club undertook to build trails under the supervision of the Parks Branch. The 2-mile trail in Cheakamus River valley was completed during October. It is hoped that this successful experiment in co-operative trail building will be the beginning of further work by volunteer groups.

A new map of the Black Tusk area was prepared for public distribution. Information notices were also prepared for the Rubble Creek and base camp entrances of the park.

In Bowron Lake Park, detailed field work resulted in the preparation of a report on current requirements, including a complete sign system around the circuit. Some of the camp-sites were found to be heavily worn as a result of a great increase in the number of canoeists. Plans were made to provide sufficient development of the camp-sites to obviate continued erosion.

The National Ski Team's use of Kokanee Glacier Park for the summer racing camp gave planning staff the problem of reconciling public use of the Slocan Chief Cabin with the team's adjacent tent village. An additional problem in this park was to find a location for a new mining road so that it would serve recreational as well as industrial needs. In Strathcona Park, a mining road along Buttle Lake had to be located so that damage to recreational values would be kept to a minimum.

Planning staff worked with enginering staff in selection and development of a new ski-slope on Mount Seymour. A twin tow will be installed to help serve the skiers who crowd Mount Seymour in ever-growing numbers.

As in other years, the mapping programme varied from basic to site planning. Garibaldi (Alouette Lake), Champion Lakes, Sheep Lake, and Ellison Parks were among the parks which received attention from the mappers.

Extension work showed no signs of decreasing during 1965. Planning assistance was given to Squamish, Duncan, Kelowna, and other centres. The developers of Forbidden Plateau were given assistance in the planning of their ski-area.

HISTORIC SITES

Barkerville Historic Park

Public patronage of Barkerville Historic Park was greater than ever during 1965. Approximately 127,000 visitor-days were recorded, and actual registration in the Museum visitors' book was 54,101.

Funds provided through the Provincial Secretary's Department were expended on programmes approved by the Barkerville Restoration Advisory Committee. In the restoration area, the Government Assay Building was reconstructed. Furnishing of the J. P. Taylor Drugstore continues with assistance from the B.C. Pharmaceutical Association, which is collecting old merchandise and other suitable display material and equipment. Equipment has been located for furnishing the Post Office-Telegraph Building. The front interior of the Barkerville Hotel has been renovated in preparation for accommodating the Root Beer Saloon, presently occupying inadequate space in the Nicol Hotel. Additions were made to the mechanical equipment in the Wake-up-Jake Café toward increasing the efficiency of the kitchen.

More than 80 people made generous donations of period pieces and display items. One noteworthy item, obtained on loan from Mr. W. F. Evans, of Vancouver, was the bullion scale, long used by the Hudson's Bay Company at its Barkerville store.

A staff parking-area, screened from the restoration area, has been constructed between the back street and Williams Creek. The large public parking-area near the museum was enlarged by moving surplus buildings. The fourth phase of the permanent water system gives fire protection to the museum. Plans were completed for extension of Government Hill camp-site, adding 60 camping-units to the 22 units presently available there.

A sound film of the Theatre Royal stage show was produced by the Photographic Branch. General revenue from the Theatre Royal, concessions, and staff-operated activities exceeded $60,000 this year.

Fort Steele Historic Park

Funds provided through the Provincial Secretary's Department were also expended on programmes approved by the Fort Steele Foundation. The second phase of a permanent water system, connected to an existing 20,000 gallon reservoir and pump, purchased from a local landowner, was completed under the direction of the Water Resources Branch.

The first phase of a two-story Regional Museum was completed, aimed at an official opening in 1967. A temporary museum display, produced in Victoria, was installed in the old N.W.M.P. Officers' Quarters building and attracted more than 20,000 visitors between mid-July and mid-September.

The first reconstruction of a period building was undertaken with the erection of the " Fort Steele Prospector " newspaper building. Considerable restoration and repairs were made to various buildings within the Composite Village. Roofs were replaced on the Government Building, Masonic Hall, Fort Steele Trading Company Warehouse, Customs Office-Post Office building, Catholic Church, United Church, and Anglican Vicarage. Considerable repairs were made to both interiors and exteriors of Windsor Hotel and the Fort Steele Trading Company Store.

A start was made on a landscaping programme by seeding 9 acres around the N.W.M.P. building, planting juniper shrubs fronting the palisade fence, and planting of a number of yellow pine seedlings around the perimeter of the Composite Village.

Growing public familiarity with the over-all project is evidenced by increasing acquisition, mainly by donation, of museum exhibit and building display items, equipment, and merchandise. A collector-curator was appointed to accelerate the collection of the wide assortment of necessary items. During the year, more than 170 individuals donated suitable period items for eventual use in the project. The acquisition of an 1895 British locomotive gave a start to the planning of a standard-gauge steam railroad for public use.

Stop-of-interest Plaques

One stop-of-interest plaque, " The First Highway," was erected overlooking the Peace River at Mile 34, Alaska Highway. Fifty-one of these plaques are now in place as the result of a programme begun during the Centennial year of 1958. In conjunction with the Centennial Historic Commemorations Committee, work has begun on the preparation of texts for 50 more stop-of-interest plaques, proposed for placement throughout the Province during the Centennial years 1966 and 1967. One local historic plaque, a smaller sign, drawing attention to " Granby's Slag Pile," was erected near Grand Forks.

Roadside Rest Areas

Under a continuing co-operative programme with the Department of Highways, 15 small rest areas were developed adjacent to main highways throughout the Province. Forty picnic tables, 6 toilet units, and 20 garbage gobblers were placed at this type of site this year.

ENGINEERING DIVISION

Development of two new camp-sites was started; one a completely new project at Moberly Lake, and the other at Lakelse Lake to replace the camp-site demolished by a landslide early in 1962. Most other projects were improvements to existing facilities and the majority of that work was done in Mount Seymour and Manning Parks.

Manning Park

In Manning Park, the recreational reservoir, including a boat dock, was completed after three years of work and will be in use during the 1966 season. A road was constructed to Gibson Pass ski-ing area and a twin ski-tow and warming-hut were installed.

Mount Seymour Park

Electrification of all facilities in Mount Seymour Park was completed, including the installation of an electric twin ski-tow. One mile of road was reconstructed as the beginning of complete reconstruction of the road from the park entrance to the main parking-area.

Water Systems

To provide a pure supply of potable water in difficult situations, wells have been drilled and pumps installed at Gabriola Sands, Montague Harbour, McLure Lake, and Rolley Lake Parks. Other work on the improvement of water supplies was carried out at Bridal Veil Falls, Champion Lakes, Ellison, Haynes Point, and Ten Mile Lake Parks. At Wickaninnish Beach Park, where it has been particularly difficult to find a source of good water, an extensive water survey was conducted.

Camp-sites and Picnic-sites

In addition to providing camp-sites in Moberly Lake and Lakelse Lake Parks, camp-sites were improved and enlarged in Kiskatinaw, Moyie Lake, and Morton Lake Parks. The picnic-sites at Bridal Veil Falls, Erie Creek, and Morton Lake Parks were new projects. Beaver Creek and Champion Lakes Parks picnic-sites were improved.

Access

In Bowron Lake Park the main access-road was improved and portage trails, which were previously extremely muddy, were given a corduroy surface.

The road to Rubble Creek parking-lot, and trails in that section of Garibaldi Park, were rerouted and improved. In the Diamond Head area of the same park, the road to Heather Ridge was also improved.

Completion of a road-building project in Wells Gray Park now enables the public to drive to Helmcken Falls, one of the many spectacular sights in that park.

Marine Parks

Because wooden mooring buoys used for the past several years proved unsatisfactory and expensive to maintain, they have been replaced in all marine parks by plastic buoys.

At Sidney Spit Marine Park, a new pier was built for the safety and convenience of the public.

Other Projects

The boat-launching area at Smith's Landing in Sproat Lake Park was improved, general maintenance work was done on Mount Robson Park headquarters buildings in Red Pass, and a service-area building was constructed in Wells Gray Park.

Design and Contract Preparation

The Design office was busy throughout the year preparing designs and contract specifications for a toilet and shelter building for the Gibson Pass ski-ing area of Manning Park, a shelter for improved protection of valuable petroglyphs in

Petroglyph Park at the southern outskirts of Nanaimo; a chlorination station to safeguard the water-supply for Mount Seymour Park; a permanent structure nature house for Shuswap Lake Park to replace the tent used there for the past three years on an experimental basis, buildings to house ski-tow machinery in Mount Seymour and Manning Parks, and a garage-workshop at Alouette Lake in the southern portion of Garibaldi Park.

Mapping and Road Surveys

To facilitate future park planning and development, mapping was carried on in Strathcona, Manning, Mount Seymour, Weaver Lake, and China Creek Parks.

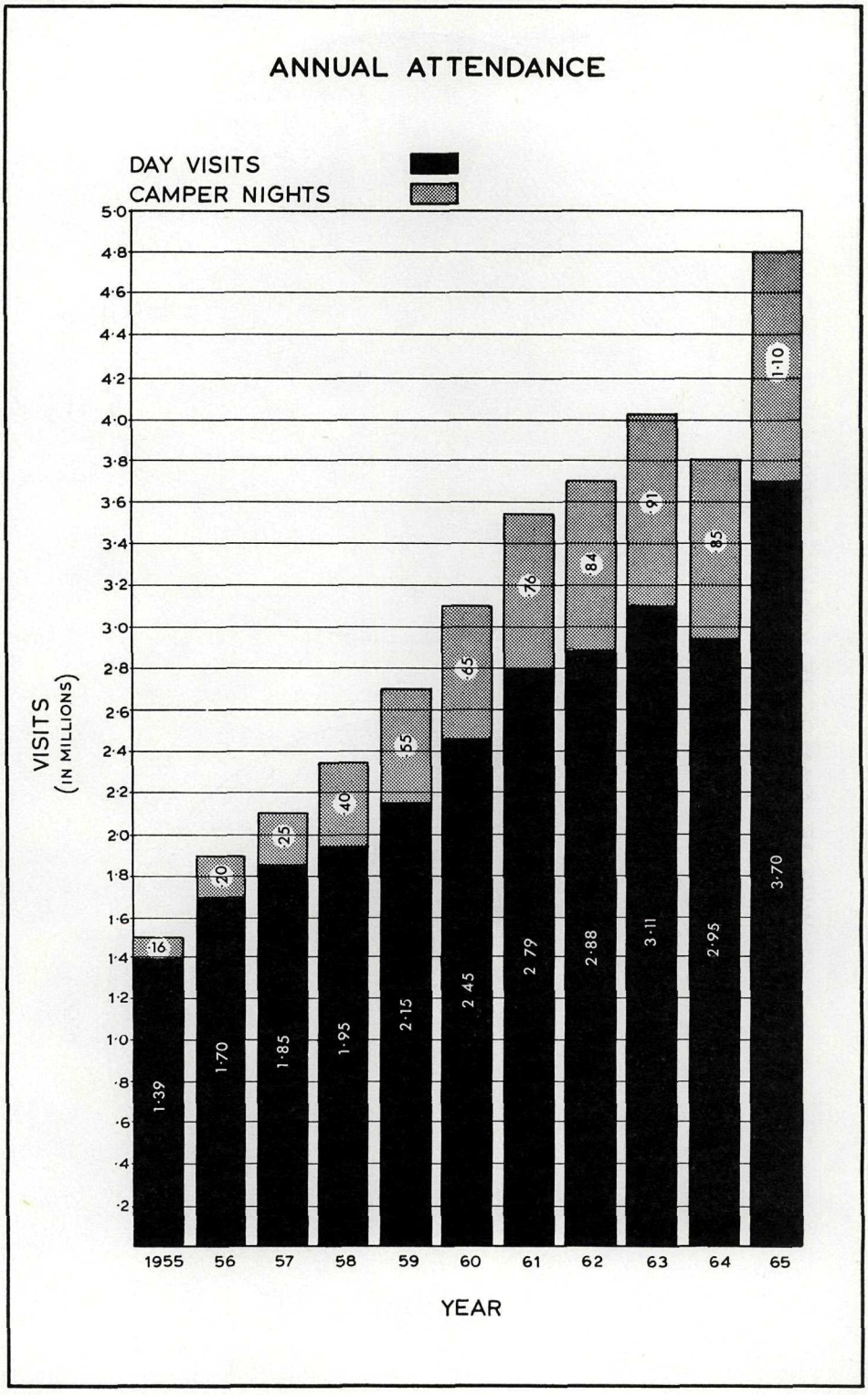
Road surveys, to determine possible future access routes, were undertaken in the Black Tusk, Diamond Head, and Alouette areas of Garibaldi Park.

Langford Workshop

Although there was only a slight increase in the production of camp-site and picnic-site furniture by comparison with 1964, there was a marked increase in the demand for, and the production of, special displays, signs, and plaques.

Parks Branch–Attorney-General's Programme

A labour force from the correction camps of the Attorney-General's Corrections Branch was used again this year with most satisfactory results. The inmates of these camps did maintenance work in Garibaldi and Wells Gray Parks and camp-site and picnic-site development work at Morton Lake.


ANNUAL ATTENDANCE
DAY VISITS
CAMPER NIGHTS
VISITS
(IN MILLIONS)
5·0
4·8
4·6
4·4
4·2
4·0
3·8
3·6
3·4
3·2
3·0
2·8
2·6
2·4
2·2
2·0
1·8
1·6
1·4
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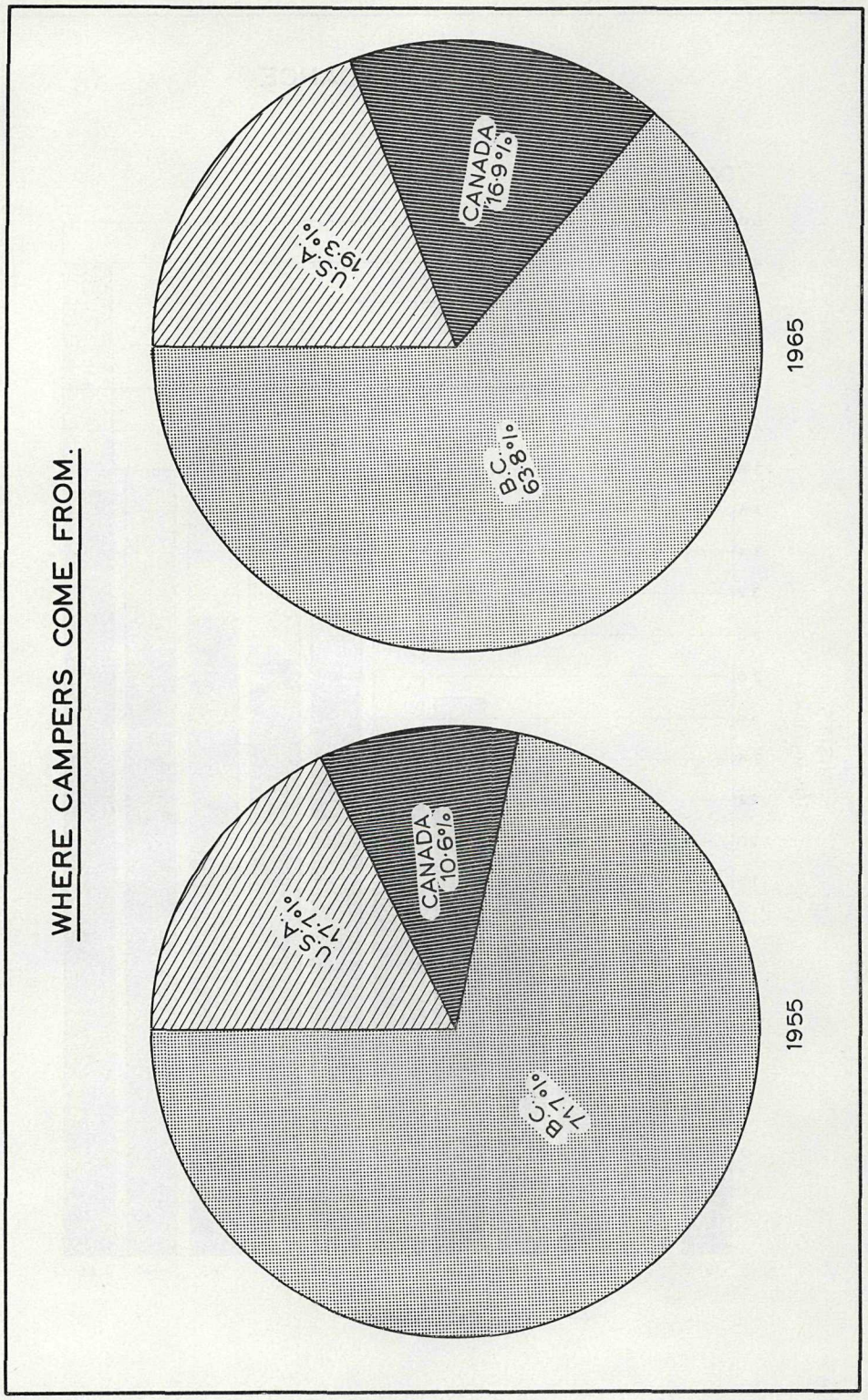
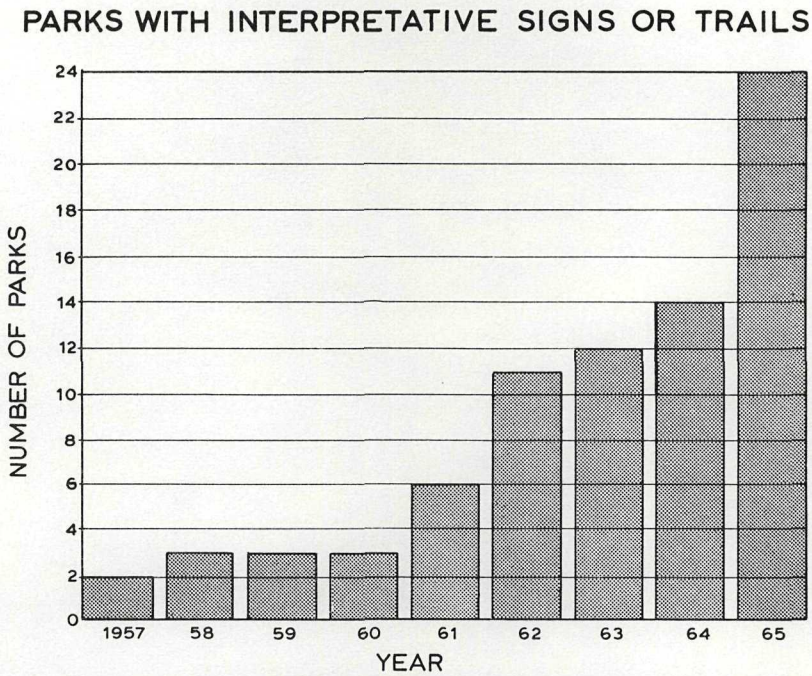
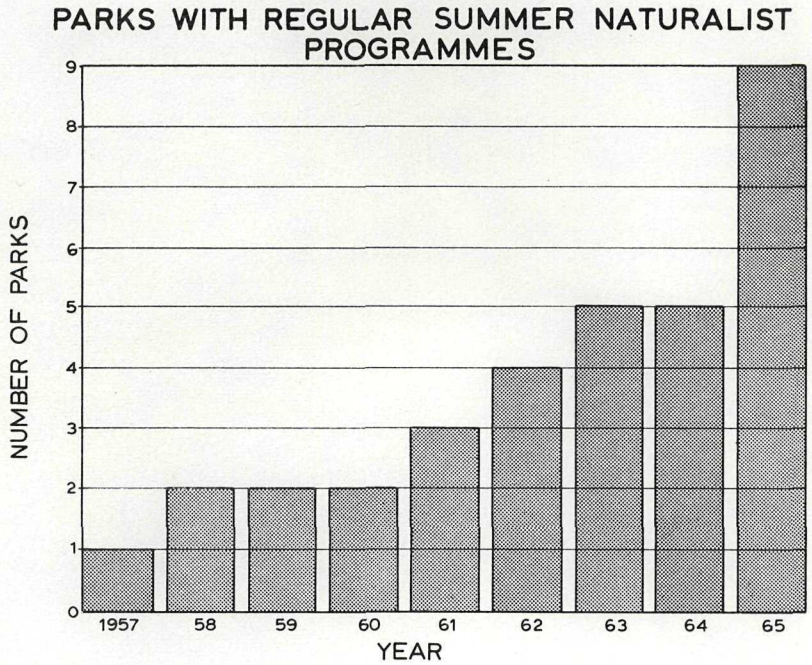
2·15
·65
2 45
·76
2 79
·84
2·88
·91
3·11
·85
2·95
1·10
3·70
1955
56
57
58
59
60
61
62
63
64
65
YEAR


WHERE CAMPERS COME FROM.
U.S.A. 17·7%
CANADA 10·6%
B.C. 71·7%
1955
U.S.A. 19·3%
CANADA 16·9%
B.C. 63·8%
1965


PARKS WITH INTERPRETATIVE SIGNS OR TRAILS
NUMBER OF PARKS
0
2
4
6
8
10
12
14
16
18
20
22
24
1957
58
59
60
61
62
63
64
65
YEAR

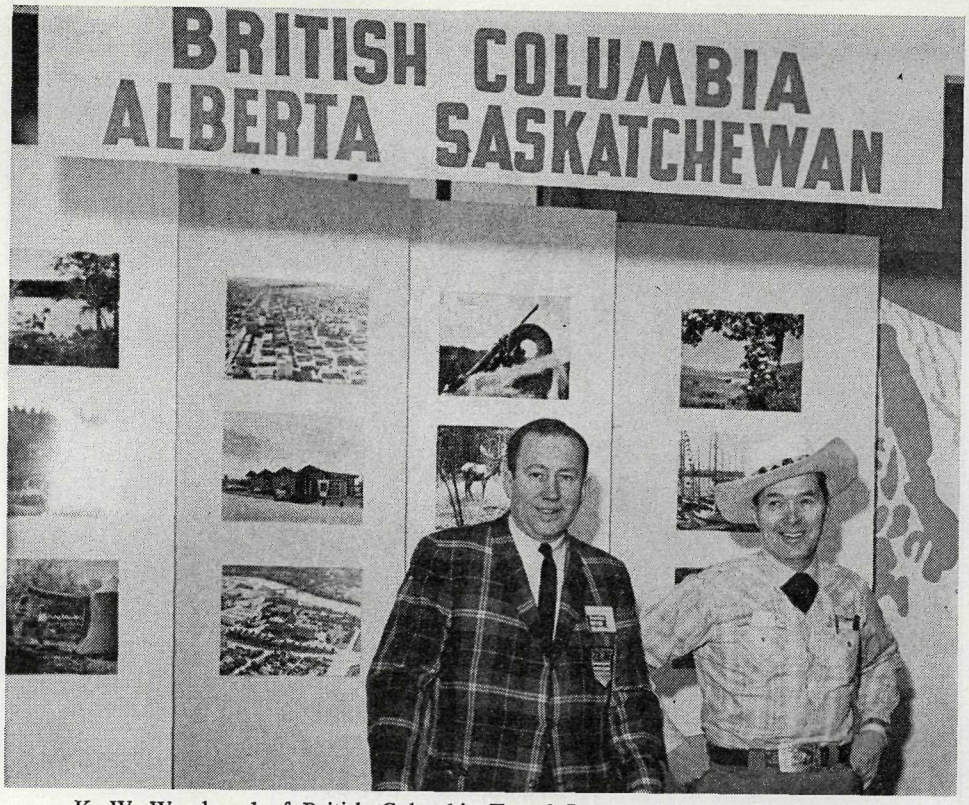

PARKS WITH REGULAR SUMMER NATURALIST PROGRAMMES
NUMBER OF PARKS
0
1
2
3
4
5
6
7
8
9
1957
58
59
60
61
62
63
64
65
YEAR

BRITISH COLUMBIA GOVERNMENT

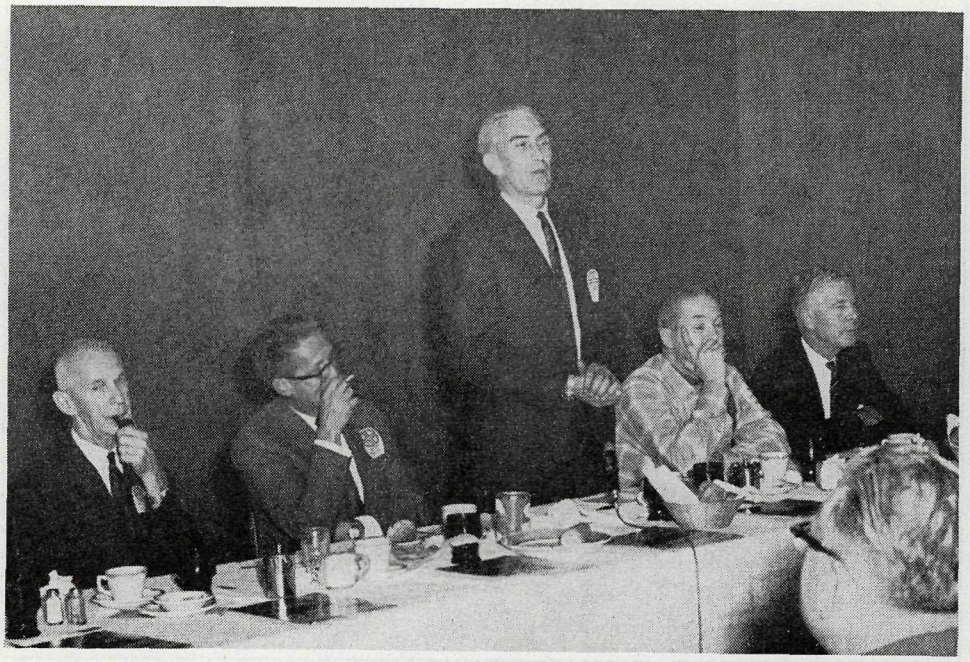
TRAVEL BUREAU

BRITISH COLUMBIA

DEPARTMENT OF RECREATION AND CONSERVATION



K. W. Woodward of British Columbia Travel Bureau, left, and Douglas Johnson, Manager, Calgary Visitors and Conventions Bureau, staff booth of three western Provinces at Canadian Sportsmen's Show in Toronto.



Hon. W. K. Kiernan, Minister of Recreation and Conservation, speaks at a luncheon of the Provincial Tourist Advisory Council in Kelowna.

BRITISH COLUMBIA GOVERNMENT TRAVEL BUREAU

R. L. COLBY, DIRECTOR

Value of Tourism to British Columbia during the Past Five Years

1961	$115,000,000
1962	145,000,000
1963	150,485,480
1964	183,936,000
1965	201,133,300

An estimated total of 5,157,058 tourists enriched British Columbia's tourist industry by some $201,133,300 during 1965.

Revenue from 2,059,609 United States residents entering the Province by car via the 49th parallel amounted to $82,384,360. A total of 533,795 arriving through Alberta, also by car, contributed $21,351,800, while 319,816 United States residents travelling by public carrier from the 49th parallel represented an investment of $12,792,640. Hence, 2,913,220 United States citizens visiting British Columbia by car, road, rail, sea, and air constitute tourist revenue of $116,528,800.

Canadians arriving in British Columbia by car numbered 1,728,936 and, with their contribution of $69,157,440, brought the totals to 4,642,156 out-of-Province visitors whose spending amounted to $185,686,240.

Added to this, the outlay of 514,902 British Columbia residents holidaying in their own Province in the amount of $15,447,060, constitutes a gross spending of $201,133,300 by 5,157,058 people, the highest amount and the highest number recorded so far in the history of the tourist industry in British Columbia.

PROMOTION

Four major promotional sport shows were attended by the staff of the Travel Bureau. They were:—

Chicago: Outdoor Travel and Boat Show, March 5–15.

Toronto: Canadian National Sportsmen's Show, March 12–20.

Seattle: Pacific Northwest Travel Show, March 19–28.

Winnipeg: Manitoba Holiday, Travel and Sports Show, April 14–17.

Our representatives were exposed to 750,000 people through the medium of these shows. British Columbia worked solely on a personal contact basis, using the literature we have at our disposal. Time was also spent at these travel shows inspecting other booths to allow us to plan our own exhibit to be used in further shows of this nature.

During 1965, numerous personal contacts were made in Manitoba, Alberta, and Washington. These were calls on automobile clubs and persons interested in directing travel to British Columbia. The Travel Bureau participated in television shows in Dayton, Ohio; Chicago; and Seattle, as well as radio interviews and press interviews.

A member of our staff participated in the Los Angeles Goodwill Tour known as the Vancouver Island Goodwill Tour, sponsored by the British Columbia Ferry

Authority. This 16-day Los Angeles tour used an 80-slide film presentation. This group undertook more than 100 speaking, television, and radio engagements which reached a wide segment of the travel public in Southern California.

In addition to these activities, many dinners and luncheons were arranged by this department, many conventions were organized, and information was provided to inexperienced operators.

The departmental display at Casa Loma, Toronto, was refurbished by the Travel Bureau and brought up to date where needed.

PUBLIC INFORMATION AND EDUCATION

A total of 410 stories sent out to editors in various parts of the world, including New Zealand and Hong Kong, received a high acceptance rate. Many of these stories were specially prepared. One was on the grizzly bear for the Financial Post, Toronto, and another on steelhead fishing for Fishing World, New York. In other cases the Public Information Officer worked with staff writers in preparation of special material, one instance being Maclean's magazine, Toronto.

The recent trend of publishing houses to have copy checked prior to actual publication increased during the year. Much time was devoted to this since in almost all cases a great deal of research was necessary. The Public Information Officer also worked closely with free-lance writers engaged on assignments on British Columbia. Considerable checking was done for the Canadian Government Travel Bureau, Ottawa. Programme copy was prepared for the Canadian Broadcasting Corporation, and a talk was given at Langley for the National Film Board's adult education series.

Narration for Photographic Branch film on the Okanagan was checked and the narration for "Land of the Overlanders" was written. Narration for another proposed film was also written.

Eight issues of the British Columbia Government News were prepared during 1965. One special issue was published for the Department of Health Services and Hospital Insurance on mental health, another for the Department of Lands, Forests, and Water Resources, and three special financial issues for the Department of Finance.

Several press releases and a special paper for the British Columbia Civil Service Commission were written during the year. Captions for the departmental P.N.E. display were prepared.

Copy was prepared for Bureau folders, including the booklet "Live, Work, and Play."

Extensive research was done on a slide presentation for Canadian National Railways. A write-up on "Valley of the Swans" was completed for Canadian Industries Limited, Montreal. Captions for departmental displays at Toronto and Winnipeg were prepared. A condensation of 1964 economic progress in British Columbia was completed for American Publishers Representatives, Toronto. Material and photographs were sent to the Agent-General, British Columbia House, England. Facts on British Columbia were sent to Marlin Firearms Company, Connecticut.

Copy for "Beautiful British Columbia" magazine was edited.

Several out-of-town trips with out-of-Province guests were completed. These included a trip to the Peace River power project with a British journalist; one to a Vancouver Island newsprint plant with the assistant editor, Irish Independent, Republic of Ireland; and another to Golden to conduct a free-lance writer on a British Columbia tour. Several other journalists and travel agents from England, United States, Canada, Germany, and Austria were assisted on travel tours. Visiting A.S.T.A. members were met. Prominent New Zealand broadcaster, Mr. Selwyn

Toogood, was escorted and assisted by live interviews with various people in government and civic employ.

Several meetings of the Publications Committee of the British Columbia Centennial Committee were attended in Vancouver and Victoria.

Altogether, the year resulted in still further harmony between publicity sources and this office. Correspondence increased tremendously, as did liaison with Government departments. The year-end result was gratifying, with the image of British Columbia carried far.

ACCOMMODATION AND CONVENTION SECTIONS

Accommodation Section

The most important phases of the activities of the Accommodation Counsellors of the British Columbia Government Travel Bureau in 1965 were inauguration of a new Government tourist-accommodation approval-system and compilation of a new format for the 1966 Tourist Accommodation Directory.

During January, approximately 6,000 copies of the 1965 Directory were mailed to tourist establishments in British Columbia and to many travel agents throughout the world. An entirely new system of tourist-accommodation approval was devised, and each tourist establishment was visited. This was done by Accommodation Counsellors who not only inspected tourist accommodation, but also discussed the operational problems with the operator and, in some cases, advised the operator on simpler and more efficient methods of operation. For the first time, virtually all tourist establishments were visited in one year in what has proved to be a most successful arrangement.

Convention Section

During 1965 convention promotion was increased and promotional calls on convention organizations were made in Chicago, Toronto, Seattle, and Vancouver. Personal contacts in these cities were in addition to our direct mail contacts and personal inquiries directed to this office.

To assist Chambers of Commerce to promote their own conventions, the 1965 list of British Columbia Conventions was compiled and distributed to the various Chamber of Commerce executives on a confidential basis. Our convention brochure, " British Columbia, a Memorable Land for Conventions," was distributed to persons requesting information on convention facilities. Convention mail inquiries increased during 1965, showing that our efforts are becoming known throughout the convention world. We have now completed three years of promotion in this field and, on reviewing the records of conventions for 1963, 1964, and 1965, it is interesting to note the average length of convention stay has increased. The number of conventions recorded has also increased steadily.

The estimated expenditures by delegates to conventions in British Columbia for 1963 were $3,274,150; for 1964, $3,334,200; and 1965, $5,549,250, showing a significant increase each year. The number of delegates attending in these three years was: 1963, 34,370; 1964, 41,370; and 1965, 54,880. The National Association of Convention Bureaux now states that a delegate attending a convention on the North American continent spends an average of $42.34 per day. Our figures are based on $35 per day per delegate. The number of conventions being held in British Columbia is definitely increasing, and this phase of the travel industry is making a large contribution to earnings in the over-all travel picture.

COUNSELLING SECTION

The Counselling Section of the British Columbia Government Travel Bureau experienced a busy year. With two permanent staff members and two temporary

members during the months when mail inquiries are at their peak (February–September), more than 137,818 mail inquiries were answered. A fairly large proportion of these inquiries came from referrals from other Provincial Government Departments, Canadian Government Travel Bureau, Victoria Visitors Bureau, and Vancouver Visitors Bureau. A new direct mail promotion completed by the Canadian Government Travel Bureau has started an upswing in the number of referrals from that source.

Requests for British Columbia literature from teachers and students ranged from 156 to 1,777 inquiries per month. All suitable literature was distributed in response to these inquiries as it is felt that teachers and students are prospective visitors to this Province.

The Counselling Section prepared many information booklets, bulletins, and current-events information used when answering inquiries. Assistance was given with the preparation of the Ski B.C. brochure, Industrial Tours, and the British Columbia Ferry Authority Sheet.

Assistance was given with familiarization tours of Canadian Government Travel Bureau personnel, travel counsellors from automobile associations and travel agencies, editors, and authors.

It should be noted that the Counselling Section was without the assistance of a Senior Travel Counsellor for nearly two months at a time of year when mail inquiries were at their peak. Without the outstanding co-operation of all staff members in this Section, the task of answering these inquiries would have been much more difficult.

ADVERTISING

The programme of advertising in American magazines and newspapers was continued. This included joint advertising with the States of Washington and Oregon in certain publications as in previous years. The advertising programme in Canadian magazines and newspapers was expanded with the assistance of a newly introduced Matching Grants Plan sponsored by the Canadian Government Travel Bureau. Under this programme, joint advertising in eastern Canada was carried out with the Provinces of Alberta and Saskatchewan in addition to our own promotions.

LITERATURE

Increasing demand for literature made it necessary to order 750,000 copies of our travel and camp-site map and also to increase our orders for the Tourist Accommodation Directory to 350,000 copies. Four hundred thousand copies were required of our general pictorial booklet entitled " Beautiful British Columbia, Canada." Many other relatively minor but very useful publications were issued, such as the Calendar of Events, Road Report, etc. One new publication was prepared which listed all industrial tours in the Province which are offered by industry to visitors. The booklet " Live, Work, and Play " was also completely updated and redesigned.

" BEAUTIFUL BRITISH COLUMBIA " MAGAZINE

The steady increase in the sales of subscriptions to " Beautiful British Columbia " magazine has continued. The average circulation per issue has now reached 145,000, largely as the result of the special Winter Issue promotion. Subscriptions have increased from 44,000 at the end of 1964 to 58,000 at the end of 1965. The wide acceptance of the magazine has proved it to be a most satisfactory promotional publication.

TOURIST INFORMATION CENTRES

The continued popularity of Tourist Information Centres in Vancouver and along major highway routes was indicated by increased numbers of stops made by visiting motorists, added visitor-days spent in British Columbia, and miles travelled by out-of-Province vacationers.

The Vancouver office, which was relocated at 652 Burrard Street on April 1, answered 35,196 inquiries by mail, telephone, or to travellers who called at the office. A considerable increase in mail inquiries was recorded, 7,416 being processed, of which 2,220 required detailed letters. The move to the new address was made without interruption of service through careful planning and excellent staff co-operation. Design of the centre is now of a type to allow visitors to help themselves to regional and Provincial literature. Studies done during the peak summer period proved this change popular, with a considerable percentage of callers browsing the racks. These visitors are not recorded in the annual totals, which could be adjusted upward by about 20 per cent if actual centre activity is to be assessed.

The Douglas Border-crossing Information Centre opened June 1, and at closing on September 12 had served 15,304 cars carrying 49,391 persons who planned to spend 78,899 days in British Columbia and travel 8,348,215 miles.

The Abbotsford Information Centre, located a few miles east of Abbotsford on the median of Highway No. 401, gave assistance to 45,388 persons in 14,697 cars. These vacation travellers indicated they would spend 119,698 visitor-days in British Columbia and travel 15,438,500 miles.

The trailer-housed centre located at the junction of Highways Nos. 1 and 97A at Sicamous, served 16,312 persons in 4,900 cars. These visitors indicated they would spend 41,213 days and travel 7,338,730 miles while in British Columbia.

At Cache Creek, a trailer centre was opened for the month of August and 2,246 cars stopped there. A total of 6,738 persons were given travel assistance and they indicated they would cover 2,119,200 miles while in the Province.

Banff was again a valuable location for a British Columbia information centre. Totals for this strategic outlet were: 9,952 persons in 3,463 cars, with plans to travel 4,358,800 miles in 29,143 days.

All centres were staffed with skilled counsellors, many of whom are employed by the British Columbia Government Travel Bureau during university vacation. This is felt to be a sound policy, in that it assures staffs of responsible young people, and at the same time assists them in financing their higher education.

MATCHING GRANTS

The Matching Grants Plan was again an excellent means of promoting the tourist industry in British Columbia. The 1965 amount allocated for this purpose was increased to $175,000 from $150,000 in 1964.

Allotments to the larger regions were used during the year. The Department continues to be pleased at the response of the smaller regions in the utilization of funds.

FIELD WORK AND LIAISON

The Director attended a Provincial Tourist Advisory Council meeting at Victoria in March, and another in Kelowna in September. The Provincial Tourist Advisory Council which was established in 1964 has completed its first year with the successful fall meeting held in Kelowna. This meeting was followed by a general meeting open to all people of the Province interested in the tourist industry.

The Director also attended the Annual Convention of the Canadian Tourist Association at Hamilton, Ontario, and the Federal-Provincial Tourist Conference at Ottawa in November. He was present at the opening of the new Canadian Government Travel Bureau Office, Los Angeles.

The firm of Transportation Consultants, Inc., was appointed to assist the work of the Travel Bureau and that of British Columbia House, San Francisco, in the greater Los Angeles area.

The Assistant Director visited Japan and Hong Kong in late February and in March as a member of the Federal Government Travel Trade Mission. He participated in various parts of the Province in "Project Hospitality," sponsored by the Canadian Tourist Association, the object of which was to upgrade the service industry to tourists.

A staff member attended a special promotion of the American Society of Travel Agents in Hong Kong. Promotional material was gathered and shipped to Hong Kong via Canadian Pacific Air Lines. Invitations were delivered to 3,500 A.S.T.A. delegates, as well as newspapers and A.S.T.A. officers. Signs were arranged in the lobby of the Hong Kong Hilton Hotel stating that the Beautiful British Columbia booth was open from noon to midnight in Room 401. During this period our British Columbia representative had an average of 159 persons per day visiting the display. These visits were part of the biggest travel sales force in the world—the travel agents.

Meetings were attended in connection with the Pacific Northwest Travel Association, and a travel editors' tour in the Province was conducted in co-operation with that organization.

The Bureau had one of its most outstanding years in relation to the contacting of out-of-Province travel writers, editors, travel counsellors, and others in the promotional field. More than 100 of these people were escorted through various parts of the Province and this resulted in a great deal of valuable publicity both on the American continent and abroad.

During the year, the Bureau continued its participation as a member of the Food Trade and Accommodation Industry Advisory Council and, as a subcommittee, known as the Hospitality Committee, in conjunction with the British Columbia Hotels Association, British Columbia Motels and Resorts Association, and the Department of Education, it embarked on a publicity and public-relations programme to upgrade the service industries and to create an interest among high-school graduates to take up the hospitality industry as a career.

SETTLEMENT

Through the co-operation of Provincial and Federal departments, the Travel Bureau assisted in servicing inquiries from many prospective settlers. Approximately 60 settlement inquiries per month were received from other Provinces, the United States, Europe, Australia, and Africa.

BRITISH COLUMBIA HOUSE, SAN FRANCISCO

In the recreational department, British Columbia House in 1965 exceeded all other years in the development of the tourist industry. The San Francisco office has developed a field of endeavour that has proved to be most productive. This was done in co-operation with transportation companies, travel organizations, and by reaching individual people. The approach was made through travel shows. Certain types of meetings are interested only in entertainment and have little value in developing travel. We will continue to use these meetings only as a secondary media as

time permits. Preference will be given to travel shows where British Columbia films are shown in California, the mid-Western States, the South and South-eastern States, in conjunction with transportation companies and travel organizations where audiences range from 500 to 1,000 and in many cases more than 2,000. At several of these meetings British Columbia is given the opportunity to give travel talks on tourism in its great variety of opportunities for holidays in British Columbia of the tourists' choice.

Work at the exhibitions continues to be of great value. In 1965, British Columbia House in six major fairs had a display that catered to a gate attendance of 3,025,988. In all, 335,000 pieces of literature were distributed at these fairs.

Personal contacts were maintained with automobile clubs, travel agents, wholesale travel agents, transportation companies, and tourist organizations throughout the year. Our regular mailing-list sent out over the year now exceeds 2,000, and is increasing every month. Agencies that do not have travel business to British Columbia have been deleted. These are offices of organizations dealing only with overseas travel or areas represented by foreign governments. Express and freight shipments of literature have exceeded all previous years.

In the United States, travel guides list 5,814 travel agencies, of which 904 are in California, 216 being in Los Angeles and 139 in San Francisco. There are also 153 wholesale travel agencies. Of the total number, approximately one-third are interested only in overseas business.

Film circulation continues, but more copies will be required to handle the business operating in and through British Columbia House. The Canada Film Board library is used where possible, though certain types of business must be contained within our own organization. This applies to programmes we become part of.

Senior citizens and other travel-minded people have organized clubs that have a membership of more than 456,000 in California. Some of these are brought together by transportation companies with whom British Columbia House works. Many also operate their own shows. These clubs have committees that invite organizations, such as British Columbia House, to show films and distribute literature. These groups avoid commercial companies as much as possible. Thus, British Columbia House, being a non-commercial organization, has been selected to make travel presentations, to participate in film lectures, and to plan vacation tours for these groups. This particular field has proved to be a tremendous source for encouraging tourists to travel to British Columbia.

British Columbia House, at the present time, covers in its development of travel the Pacific Coast States, all States west of the Mississippi River, as well as Minnesota, Wisconsin, Illinois, the city of Detroit, Michigan, and part of Indiana, Tennessee, Kentucky, Alabama, Georgia, Mississippi, and Florida. These areas have become very productive in the development of tourist traffic and are excellent sources of traffic developed from the travel shows put on in conjunction with transportation companies to which travel agents are invited.

On behalf of the Department of Highways, British Columbia House distributed films throughout the United States as far east as New York. The requests come from engineering firms, universities, and government agencies. Many of these requests develop inquiries for tourist information as well as industrial development in British Columbia.

In addition to the regular mailing-list, travel information is mailed in response to coupons used in newspaper advertising, inquiries received in the mail, and requests for literature from agencies. Inquiries on travel to British Columbia increase each year, particularly from families desirous to spend a holiday in our Province.

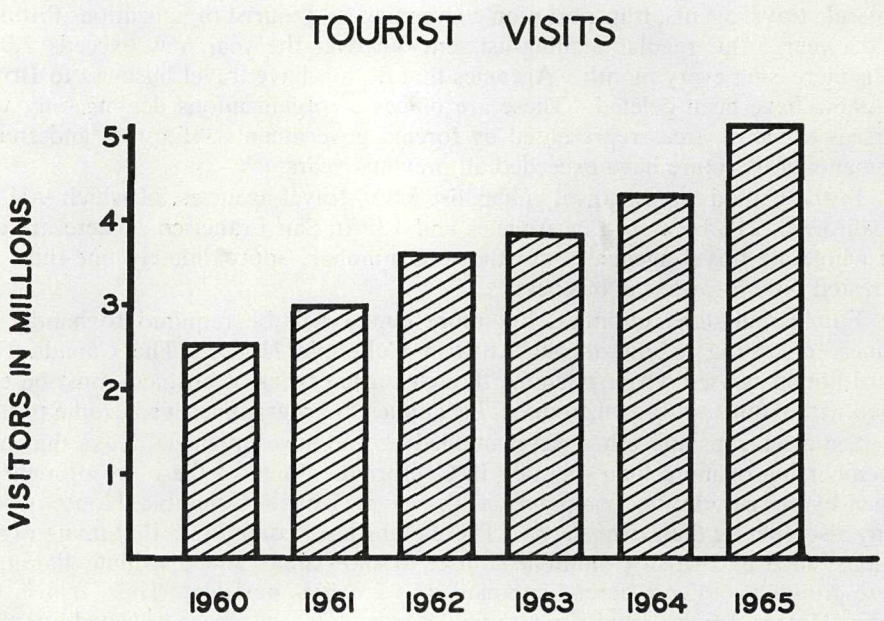
Interest in the new British Columbia Ferry Authority service to Prince Rupert has been very heavy, indicating the need for this service.

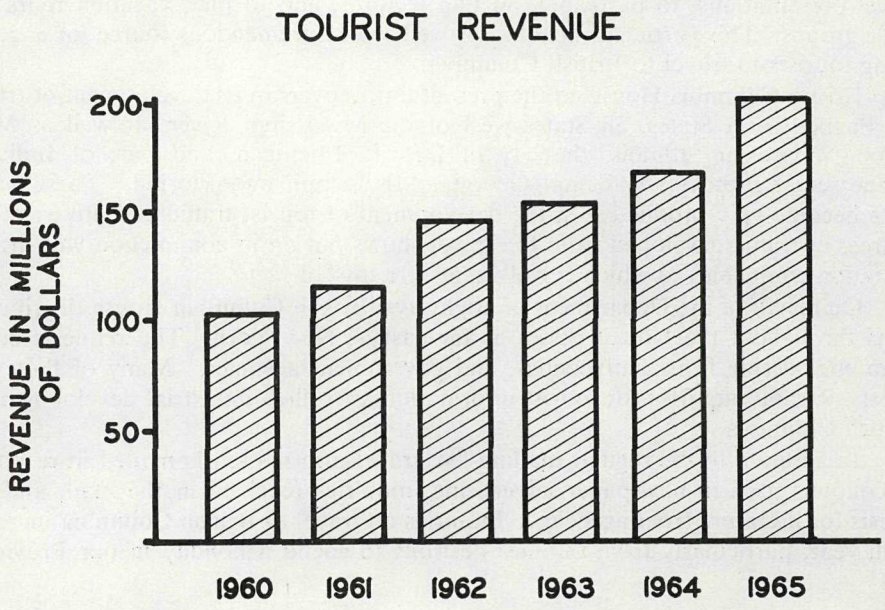
GENERAL

The Travel Section received a total of 137,818 inquiries by mail during the year in addition to an unrecorded number of counter and telephone inquiries.

A breakdown of the types of inquiries is as follows:—

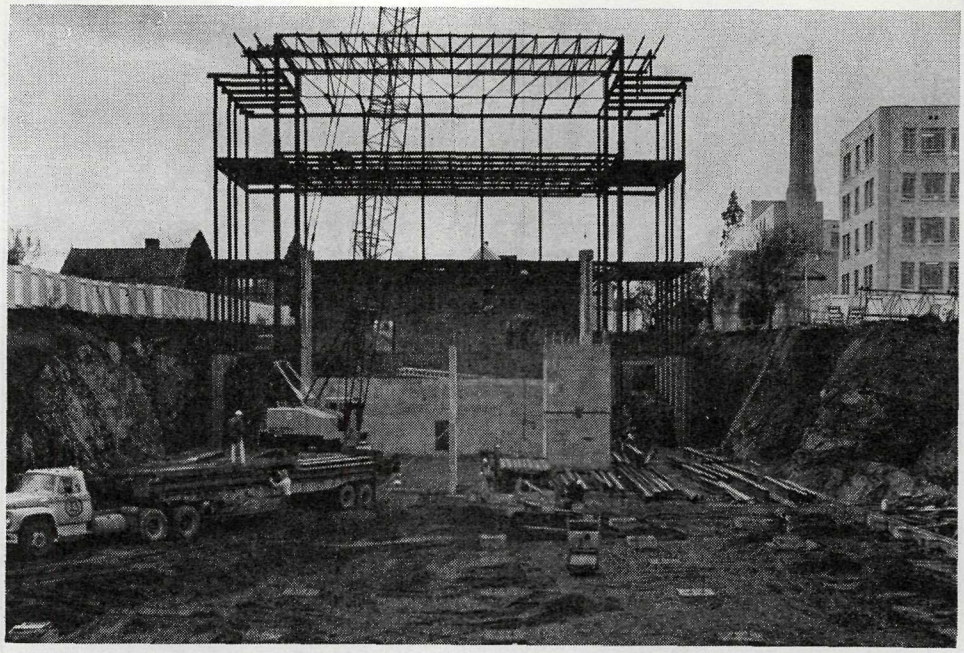
Mail inquiries (coupons, lists), receiving kits	125,594
Mail inquiries from teachers and students	11,504
Mail inquiries *re* settlement	720



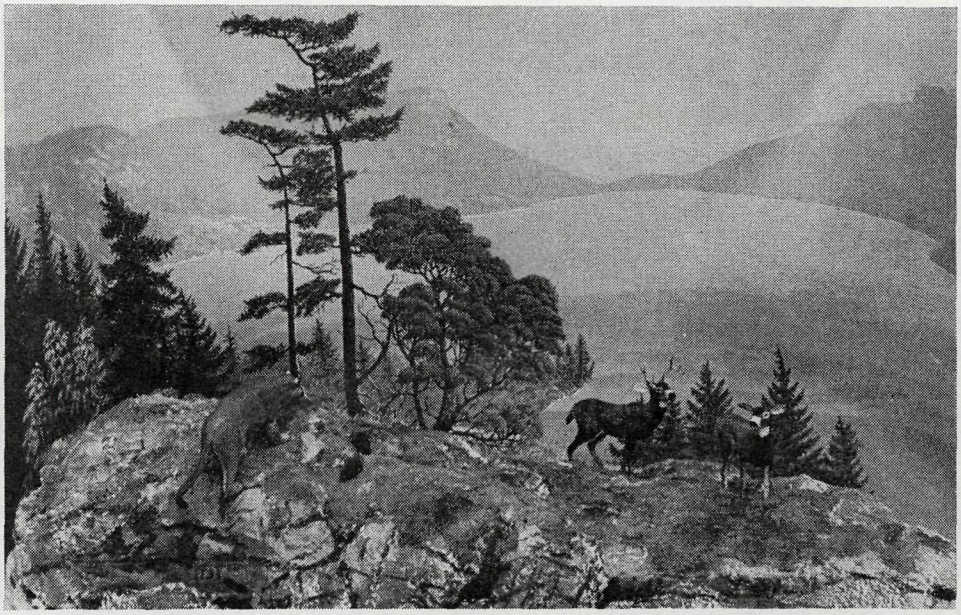


PROVINCIAL MUSEUM OF NATURAL HISTORY AND ANTHROPOLOGY

BRITISH COLUMBIA
DEPARTMENT OF
RECREATION
AND
CONSERVATION



Steel and concrete skeleton of new museum complex reached this stage at the end of 1965.



Model by F. L. Beebe of a proposed coastal diorama for the new museum building.

PROVINCIAL MUSEUM OF NATURAL HISTORY AND ANTHROPOLOGY

G. CLIFFORD CARL, DIRECTOR

Regular routines of museum operation were carried on throughout 1965 in the usual way, but pervading all was a new outlook as a result of the programme of planning and construction which dominated our activities.

PLANNING AND CONSTRUCTION PROGRAMME

When the decision was made in 1964 to construct a museum-archives building to commemorate the 1967 Centennal it was realized that timing was of utmost importance in order to meet the deadline. Public Works officials charged with the planning programme therefore drew up a work schedule which has been successfully followed to date with only minor changes.

The site chosen for the new structure is immediately north of the present Douglas Building, an area which has been used as a parking-lot for some years. This location has the advantage of being in close proximity to other Government buildings and convenient for use by the general public.

Early in the planning it was obvious that a single building could not be designed to provide the varied facilities and services required; a complex of three interconnected structures was therefore decided upon.

The largest is a four-floored rectangular building to house two large exhibit halls, a lecture theatre, classrooms, administration offices, lounges, and other public facilities. Workshops and storage areas will occupy most of the basement level.

The second structure is a tower designed to accommodate the scientific staff. It will contain offices, laboratories, storerooms, preparation rooms, and illustration studio. The design will permit the installation of mezzanine floors when additional space is required.

The third building is a low two-storied structure to house the archives and related services. It will contain the reference library, the microfilm bureau, a repography service, and facilities for displaying and storing maps, pictures, documents, and other two-dimensional material of historic value.

To harmonize with their surroundings and particularly to show a kinship with the Legislative Buildings, the new structures will be faced with stone from the same quarries and will repeat certain design elements which characterize the older buildings. The landscaping will feature courtyards at various levels in which will be located pieces of sculpture by British Columbia artists.

To make the best use of the limited time available, planning has been done in stages and contracts for each phase have been let. Excavation started on May 6 with a ground-breaking ceremony during which Honourable W. A. C. Bennett, Premier, set off the first blast. Other phases of construction were: July, first steel contract let; August, construction of foundations commenced; October, substructure of lecture theatre completed; November, first steel erected; December, final working drawings almost completed.

FIELD WORK

A number of visits to various parts of the Province were made this year mostly to collect specimens and information in connection with new exhibits being prepared

for the new building. The first of these was in May when several staff members spent a number of days in the Okanagan Valley in company with Mr. Clarence Tillenius, a noted artist-illustrator who has been engaged to create dioramas for the new museum building. The main purpose of the visit was to select a locale for a habitat group featuring the wildlife of the dry Interior and to make field sketches, preliminary collections, and a photographic record of a specific area. Mrs. Grace Bell, of Victoria, also assisted by making a taped record of typical natural sounds. Mr. Karl Spreitz, of the Photographic Branch, was responsible for photography.

In late May, Mr. C. J. Guiguet and Mr. F. L. Beebe collaborated with officials of the Fish and Game Branch in making a survey of the peregrine falcon population in the Queen Charlotte Islands, necessitated by increasing requests for permits to take birds for use in falconry.

In June, Mr. Wilson Duff visited Prince Rupert, Hazelton, Kitwanga, and other centres in this general area in connection with his various anthropological interests.

In mid-July Mr. Guiguet, Mr. Tillenius, and Mr. John Hermann-Blome, taxidermist, visited the Chilcotin country to collect specimens of bighorn sheep to be mounted for display in a habitat group being planned.

During part of August, Mr. Guiguet continued a long-term trapping programme designed to study the distribution of small mammals on coastal islands. Folger, Edward, King, and Seppings Islands were surveyed as well as a portion of Bamfield Peninsula.

In the latter part of August, Dr. Szczawinski worked in the Peace River district making a representative collection of plants in the neighbourhood of Hudson Hope as part of an over-all programme being carried on in the Province. The British Columbia Hydro and Power Authority were most helpful in providing accommodation, transportation, and other services.

At other times, Dr. Szczawinski made a number of short field visits to various parts of Vancouver Island, assisting various botanists in collecting research material.

In mid-September, Mr. Guiguet, Mr. Hermann-Blome, and wildlife artist Mr. Hugh Monahan, travelled to Tuya Lake, north-west of Dease Lake, to collect caribou and to make on-the-spot photographs, colour notes, and plant collections for a diorama featuring the wildlife of this portion of the Province.

In early November, Mr. Guiguet spent several days in the Columbia Valley north of Golden in an attempt to secure a moose suitable for display, but unfavourable weather conditions precluded success. Later, in December, he was able to collect a suitable animal north of Fort St. James with the aid of Mr. Tillenius and Conservation Officer Gordon Gosling, who were in the area gathering material for a habitat group.

Also during the summer months a considerable amount of field work was carried on by the Archæological Sites Advisory Board, mainly at Montague Harbour on Galiano Island, where an extensive "dig" was made. Although the Museum was not directly involved, Mr. Duff and Mr. Abbott assisted in several ways and paid several visits to the site during the season.

Thanks to a sum of money released by special warrant and administered by the Provincial Secretary's Department, we were able to begin purchasing historical material for both the Provincial Museum and Provincial Archives. For this purpose Mr. R. H. Nichols was appointed field agent. His itinerary this season passed through the East Kootenay area, Shuswap, Lytton, and parts of Vancouver Island. Several lots of valuable Indian material were obtained as well as series of old photographs and miscellaneous pioneer items.

PUBLICATIONS

The following publications have appeared in 1965:—

G. Clifford Carl.

Pelicans in British Columbia. Wildlife Review, Vol. 3, No. 7, pp. 12, 13.

The Amphibians of British Columbia. British Columbia Provincial Museum Handbook No. 2, pp. 1–63 (reissue).

Wilson Duff.

Thoughts on the Nootka Canoe. Report of the Provincial Museum for 1964, pp. 24–31.

The Indian History of British Columbia. Vol. 1, The Impact of the White Man. Anthropology in British Columbia, Memoir No. 5 (1964), pp. 1–117.

R. Y. Edwards.

Birds Seen in Active Pass, British Columbia. Report of the Provincial Museum for 1964, pp. 19–23.

J. Bristol Foster.

The Evolution of the Mammals of the Queen Charlotte Islands, British Columbia. Occasional Papers of the British Columbia Provincial Museum, No. 14, pp. 1–130 (December).

C. J. Guiguet (with I. McT. Cowan).

The Mammals of British Columbia. British Columbia Provincial Museum Handbook No. 11 (third edition, revised), pp. 1–414.

Josephine F. L. Hart.

Life History and Larval Development of *Cryptolithodes typicus* Brandt (Decapoda, Anomura) from British Columbia. Crustaceana, Vol. 8, Pt. 3, pp. 255–276.

A. F. Szczawinski.

Insectivorous Vascular Plants of British Columbia. Victoria Naturalist, Vol. 22, No. 3, pp 25–27.

Asclepias speciosa Torr. Milkweed, Silkweed. Victoria Naturalist, Vol. 22, No. 4, p. 37.

Several other publications are in various stages of preparation. Among them are Handbook No. 25, "The Lily Family (Liliaceæ) of British Columbia," by Dr. T. M. C. Taylor, and Volume 2 of the "Indian History of British Columbia," by Wilson Duff, scheduled for appearance in 1966.

At the 1965 annual meeting of the American Association for Conservation Information, the British Columbia Department of Recreation and Conservation entry of the Handbook Series was awarded second place for outstanding publications in the international field.

CURATORIAL ACTIVITIES

During the course of the year, several moves were made involving both curators and collections. Through the Department of Public Works, additional space was made available in the old "Mc and Mc Building," 1450 Government Street. Here, two offices, a display laboratory, a workshop, and storage areas were created to take care of our immediate needs. Totem poles, canoes, furniture, and other historical and biological materials were moved in and restoration work was commenced on those destined for display.

A second shift involved moving the illustration studio and preparation room from quarters occupied since the early 1930's to a reconditioned dwelling at 609 Superior Street. Included in the transfer were skeletons and unrelated boxes of

several whales, fish specimens, fossils, shells, and publications. Some historical collections, and archæological materials, including human remains, were also moved into storage areas in this newly occupied building.

In May, Dr. A. F. Szczawinski, Curator of Botany, attended the founding meeting of the Canadian Botanical Association in Ottawa and was elected Regional Director of the Association for a two-year term. Dr. Szczawinski has also been active in making preliminary arrangements for the world congress of botanists to be held in Tokyo in 1966.

RESEARCH

Further collecting was carried on by Mr. Guiguet in the Barkley Sound area as reported elsewhere as part of a long-range study of the distribution and evolutionary history of the small mammals of British Columbia, particularly insular forms.

A major research project in the field of botany was launched by Dr. A. F. Szczawinski and Dr. T. M. C. Taylor (former head of the Department of Botany, University of British Columbia), who are collaborating on a study leading to a publication on the flora of British Columbia.

Work on the archæological material collected at the Pedder Bay site in 1964 has been carried on by Mr. Abbott and will eventually lead to a publication on this important midden.

Throughout the year the Museum has continued to loan research material to other institutions or specialists and has carried on an active exchange of plant specimens with herbaria in Canada, the United States, and Europe.

THUNDERBIRD PARK

The carving programme in Thunderbird Park has been carried on by Henry Hunt and Eugene (Tony) Hunt as usual with but a few interruptions occasioned by sickness. Except for a few accessories which are to be added later, the two poles destined for erection on the campus of the University of Victoria were completed and delivered in June. These are a copy of a 50-foot Nass River pole obtained from the City of Prince Rupert and a replica of a 55-foot pole acquired from Kitwancool in 1962.

Work was then started on a replica of the 40-foot Haida pole, known as the Weeping Women of Tanu, and this reached about the half-way mark by the end of the year.

Besides these larger projects the carvers were called upon to produce several smaller poles, some for the Museum collection and some for official gifts. Among the latter was an Indian-style box by Tony Hunt used at an international conference of travel agents at Hong Kong.

Several poles and canoes were moved from the Indian house to the new workshop at 1450 Government Street, where they were cleaned, repaired, and stored.

STAFF CHANGES

The Museum staff suffered a serious loss when Mr. Wilson Duff left to accept a teaching post at the University of British Columbia. During his 15 years of service, Mr. Duff accomplished a great deal in furthering the Museum's interest in the filed of anthropology. He was instrumental in bringing the late Chief Mungo Martin to Victoria in 1952 and directed the carving programme in Thunderbird Park. He founded the Museum's publication series in anthropology and directed the Province's archæological programme since 1960, when it was initiated under a new Act. For two years he was president of the British Columbia Museum's Association and is currently a member of the Indian Advisory Committee. His experience in all phases

of the museum field was of great help in the initial planning stages of the new building. His fellow staff members wish him well in his new post.

Following Mr. Duff's departure, Mr. Don Abbott was made Acting Curator of Anthropology.

In September, Mr. Erik Thorn joined our staff as Chief of the Display Division. His varied experience in designing and installing exhibits in museums, both in Europe and in Canada, will be invaluable in directing the preparation of a display programme for the new building.

Other recent appointees are: Mr. John Smyly as technician; Mr. Michael Miller as student-taxidermist; Mr. Robert H. Nichols as field agent and Mr. John Sendey as assistant (both in co-operation with the Provincial Archives); and Mr. Peter Macnair as assistant in anthropology.

On a part-time basis, early in the year Mr. R. York Edwards, Park Interpretation Officer of the Provincial Parks Branch, was loaned to us to help organize the display programme in its formative stages. His assistance at this critical time was greatly appreciated.

EXTENSION

Throughout the year, staff members gave a number of illustrated talks to various groups and a few presentations of a more formal type were presented to learned societies. Museum personnel also took part in several sessions of career counselling arranged by local service clubs through the National Employment Service.

In early spring the Director presented a series of wildlife and conservation lectures in various centres across Canada, east as far as Quebec City, under the combined auspices of the Canadian Audubon Society, the National Audubon Society, and local conservation groups.

DISPLAY PROGRAMME

In addition to the activities already outlined in connection with collecting of display materials, considerable time was devoted to planning the exhibit halls, particularly in the natural history division, and some progress has been made.

The major undertaking in this division is the planning, construction, and installation of a series of dioramas or habitat groups, which, together with accessory exhibits, will give an over-all picture of the natural history of the Province when completed. The first phase, planned for installation in 1967, involves four large dioramas, as follows:—

Coastal Region.—Featuring blacktail deer and cougar in oak-arbutus habitat in fall overlooking the Gulf Islands.

Dry Interior.—Featuring bighorn sheep in spring above Vaseux Lake, Okanagan Valley.

Sub-alpine Plateau.—Featuring caribou in summer in the Tuya Lake area.

Northern Interior.—Featuring moose in black spruce habitat in winter near Pink Mountain.

Mr. Frank L. Beebe of the Museum staff is undertaking the direction and installation of the first-named diorama, Mr. Clarence Tillenius and Mr. Hugh Monahan, both noted wildlife artists with considerable museum experience, have been engaged to direct and install the remaining three planned at this time. Mr. John Hermann-Blome has been invited to do the taxidermy of the large mammals, and Mr. A. J. Braun will prepare some of the birds and other accessory mounts.

In all cases, field-sketches, colour-notes, and photographs have been obtained during on-the-spot visits, and a scale model has been constructed of one.

A scale model of both exhibit floors has also been prepared and a general floor plan has been agreed upon. Work is proceeding on the layout details for the human history division.

In May we obtained space in the old "Mc and Mc Building," 1450 Government Street, where a display studio, workshop, and storage space were prepared. Here, totem poles, canoes, and other objects from scattered sources were gathered together and restoration work was commenced. By the end of the year many had been repaired and readied for display.

ATTENDANCE

The following attendance figures for 1965 are estimates based upon sample counts at irregular intervals:—

January	4,900	August	71,500
February	6,900	September	19,000
March	6,600	October	3,900
April	10,000	November	2,800
May	13,000	December	1,500
June	15,300		
July	36,600	Total	190,000

Compared with the total estimated attendance of 161,700 for the previous year, the number of visitors this year has shown an increase of about 18 per cent, the highest on record except for the year 1962, when tourism was phenomenally boosted by the World's Fair in Seattle.

Again this year the Museum remained open until 9 p.m. each evening, except Sunday, during the summer months, as an extra service to visitors to the city.

As a point of interest, a tally was made of the number of children compared with the number of adult visitors on a typical day in late summer. The proportion was roughly 10 to 13, which was surprisingly high and pointed up the need of planning exhibits to cater to juniors as well as seniors.

OBITUARIES

We regretfully record here the passing of several persons who have been associated in some way with the Provincial Museum or with its interests.

Dr. John R. Dymond, distinguished ichthyologist, scholar, and teacher, an authority on the fishes of Canada and former Director of the Royal Ontario Museum (January 31st.)

Dr. Albert O. Hayes, structural geologist and teacher, past president of the Victoria Natural History Society. (February 1st.)

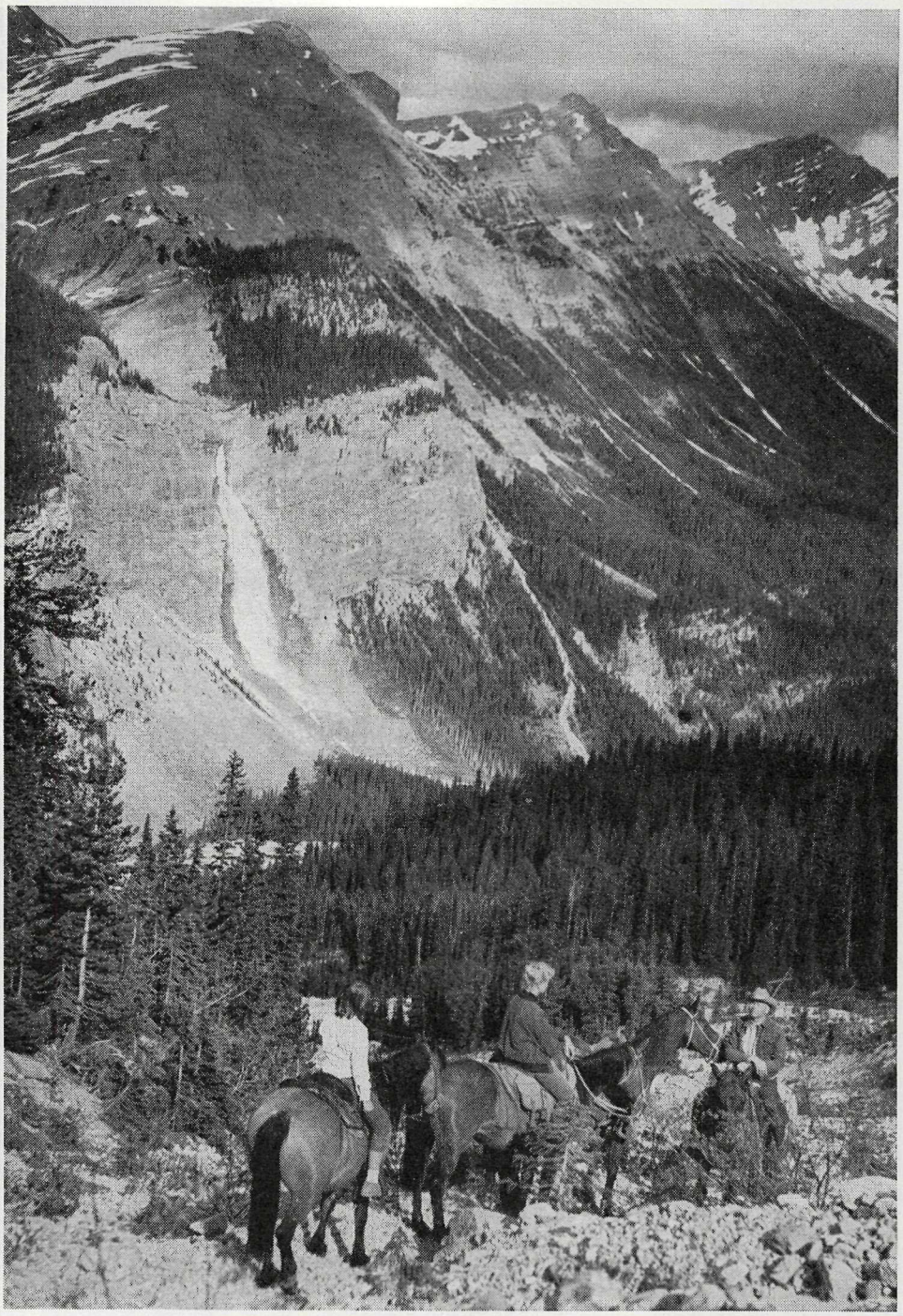
Rev. A. C. Mackie, an amateur naturalist who became an authority on the Pacific rattlesnake in British Columbia. (February 3rd.)

Mr. Phillip M. Monckton, land surveyor, amateur naturalist and nature photographer, past president of the Victoria Natural History Society. (October 4th.)

Mr. Arthur E. Pickford, former land surveyor and amateur anthropologist, a member of the Museum staff from 1944 to 1948, during which time he completed material on British Columbia Indians as a basis for the "Heritage Series" published by the Department of Education. (November 24th.)

PHOTOGRAPHIC BRANCH

BRITISH COLUMBIA
DEPARTMENT OF
RECREATION
AND
CONSERVATION



Scenes like this in the East Kootenay are included in a new motion picture taken along the route of the Trans-Canada Highway in British Columbia.

PHOTOGRAPHIC BRANCH

F. W. E. ROUND, DIRECTOR

The year 1965 saw many changes in the operation of the Photographic Branch, the most important being the appointment of Mr. F. W. E. Round as Director at the end of June.

Two additional still photographers were employed on a temporary basis from June to September to meet the extensive summer shooting assignments.

Many special assignments were completed for other Government departments for promotional and record purposes. These included progress of the construction of the new Museum complex, ferry construction and terminals for the British Columbia Ferry Authority, and special promotional items for the British Columbia Centennial Committee, the Travel Bureau, and the Fish and Game Branch. Each month, services were made available to the Civil Defence Department at the Keating Cross Road headquarters, for a full record of each graduating class.

The 25-year awards presentations were covered in Victoria and Vancouver. Hospitals and schools were photographed throughout the Province, and extensive interior shots were taken of these institutions. Colour slides were taken for use on promotional tours and at conventions. The response to these has been gratifying.

Once again field trips were plagued by adverse weather conditions, and excessive smoke from forest fires and slash burning became a problem during the latter part of the shooting season. As in the past years, assignments for "Beautiful British Columbia" magazine constituted the major part of the work of the still photographers. They travelled in excess of 30,000 miles, covering the Province from the United States border to the Northwest Territories.

Despite adverse shooting conditions, more than 1,800 colour prints and negatives have been added to the Photographic Branch files.

MOTION PICTURES

The motion picture "Land of the Overlanders," filmed in Region E, was completed during the year and six prints have been placed in the Branch library. This film has been approved by the Canadian Government Travel Film Evaluation Committee and it is expected to be in circulation in the United States early in the new year.

A short educational film, titled "Launching Your Liferaft," was made for the British Columbia Ferry Authority, explaining the step-by-step procedure for getting a liferaft safely on the water.

Another production, "Barkerville or Bust," depicts the famous goldrush town of Barkerville through the medium of the stage show in the Theatre Royal. Recently completed, this film will be available for screening early in the new year.

A new production, tentatively known as "East 1, West 1," covering the recreational aspects of the Trans-Canada Highway from east of the Rockies to the Pacific Ocean, will be released in early 1966.

The outstanding wildlife film, "Valley of the Swans," continued to fulfil our predictions of last year and has received to date a total of seven trophies and awards.

MOTION-PICTURE DISTRIBUTION

Non-theatrical screenings of British Columbia Government motion pictures showed a steady increase in the United States and Great Britain through the distri-

bution facilities of the Canadian Government Travel Film Libraries. Screenings totalled more than 22,000, with an audience in excess of 1,150,000 persons.

Distribution was further augmented during the year when this Branch supplied 178 prints of our films to the Canadian Government Travel Film Library, who also purchased an additional 178 prints. The impact of this further 356 prints in circulation should show a marked increase in exposure of our films to audiences outside of Canada through this medium. In addition, 30 new prints were placed with the television programme of the same library.

The inventory of the Photographic Branch Film Library was increased by the addition of 45 new prints of our productions. There were 3,163 showings of films directed from our Branch library, with an audience of 472,068.

TELEVISION

Television screenings in the United States increased by 20 per cent over 1964 to more than 500 showings, with one in five being telecast in colour.

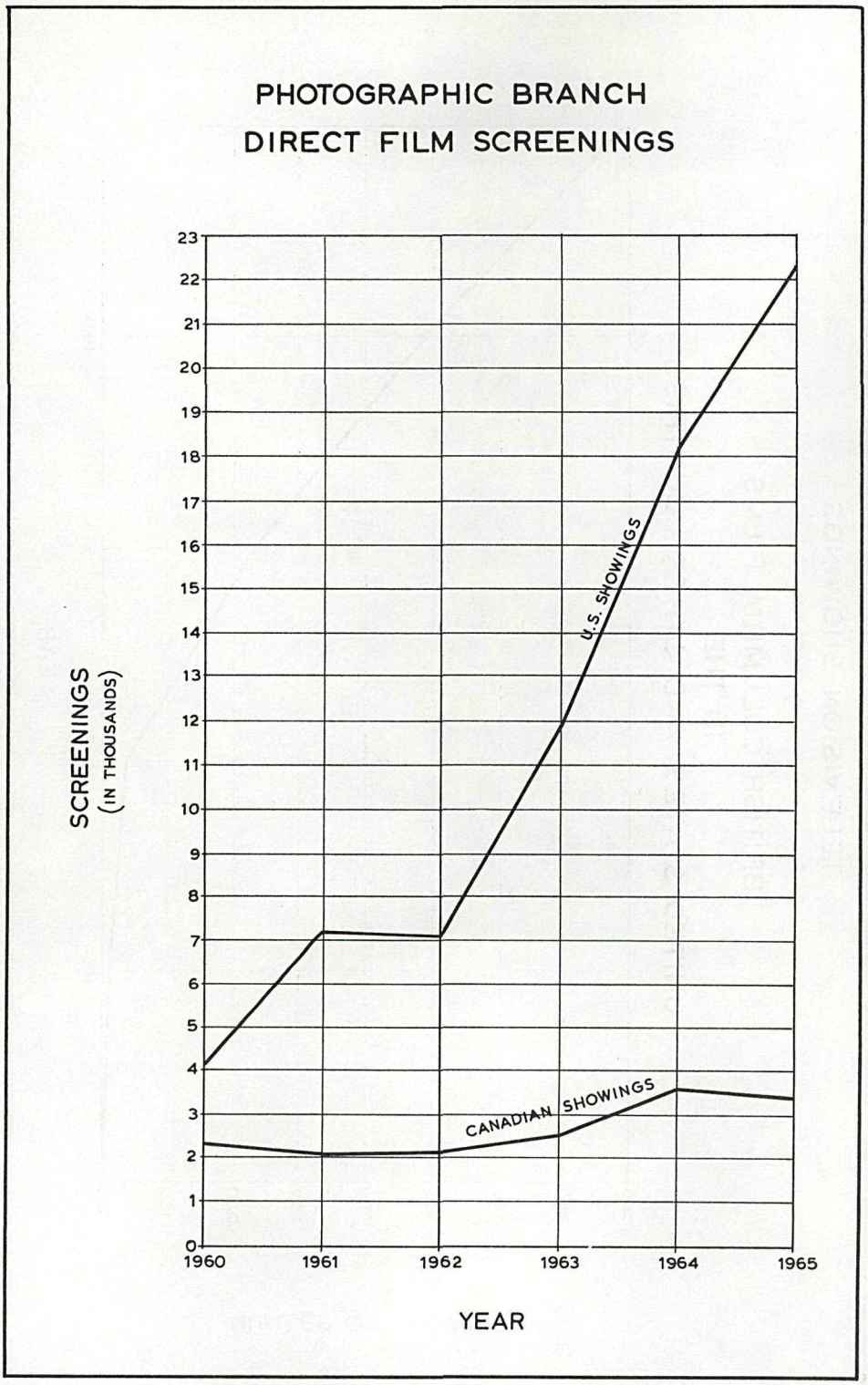
A total of 35 television showings was directed from the Branch library to all Canadian Provinces and the Yukon Territory.

DARKROOM PRODUCTION

This phase of the Branch operations showed a marked increase in production over the 1964 figures, and requests from writers for our photographs increase yearly. A total of 16,924 prints was made, of which 6,394 were sent out to illustrate stories and articles on British Columbia. A further 2,443 negatives were produced and 54 portraits were taken in the Branch studio.

GENERAL

Travelling by land, sea, and air, photographers and cameramen of the Branch covered more than 60,000 miles throughout the Province for motion-picture footage, slides, and photographs. There were 81 showings of departmental films in the Branch theatre, and 14 special outside shows were projected at important functions by our staff projectionist.


PHOTOGRAPHIC BRANCH
DIRECT FILM SCREENINGS
SCREENINGS
(IN THOUSANDS)
23
22
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14
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U.S. SHOWINGS
CANADIAN SHOWINGS
1960
1961
1962
1963
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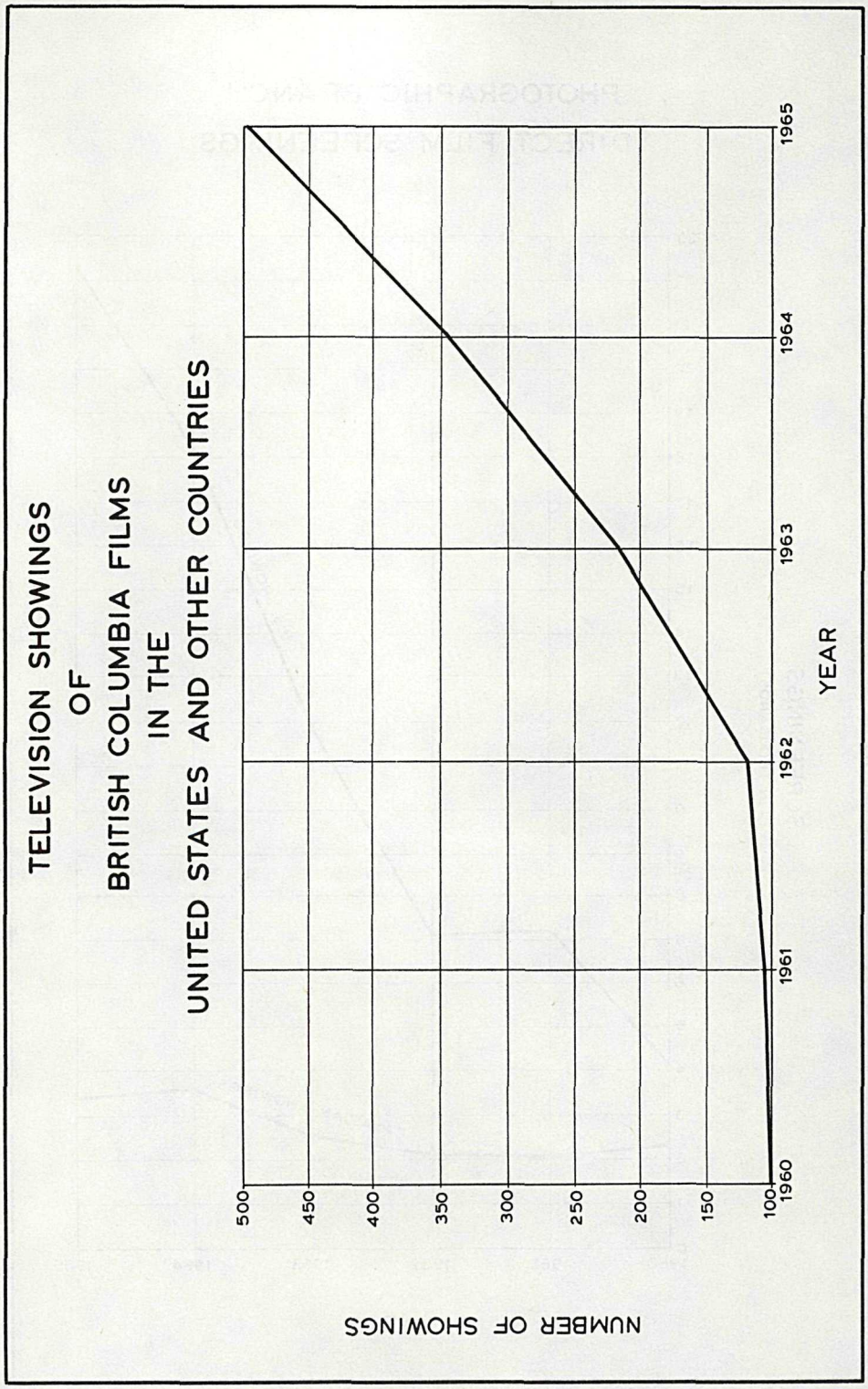
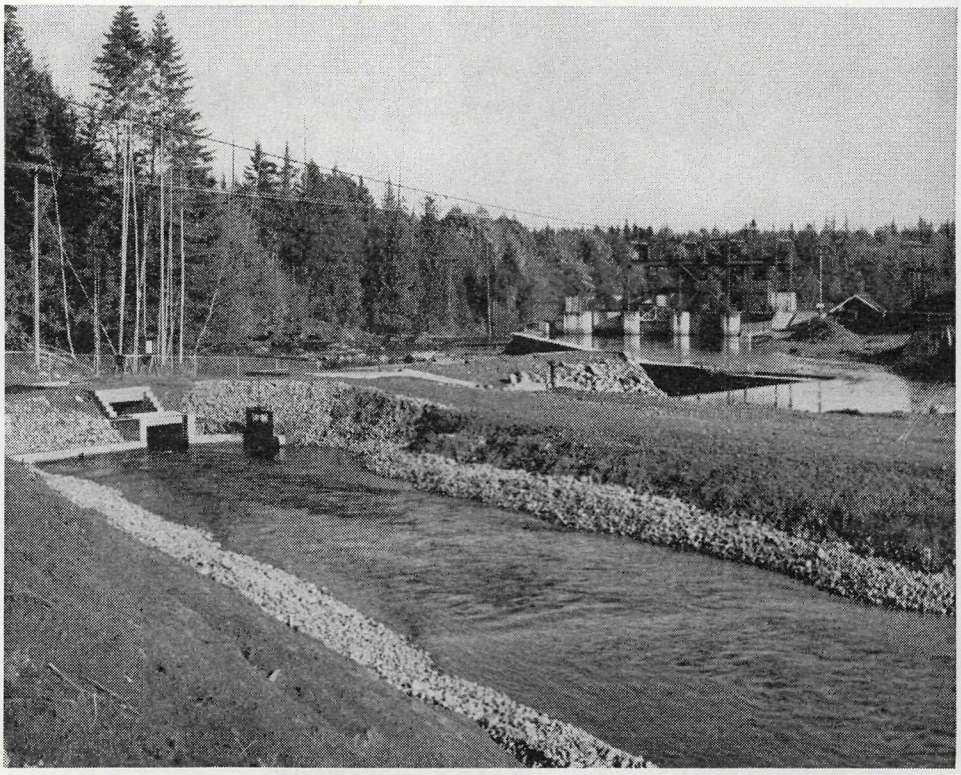
1965
YEAR


TELEVISION SHOWINGS
OF
BRITISH COLUMBIA FILMS
IN THE
UNITED STATES AND OTHER COUNTRIES
NUMBER OF SHOWINGS
500
450
400
350
300
250
200
150
100
1960
1961
1962
1963
1964
1965
YEAR

COMMERCIAL FISHERIES BRANCH

BRITISH COLUMBIA
DEPARTMENT OF
RECREATION
AND
CONSERVATION

Native Indians harvesting oysters near Tofino, Vancouver Island.



Artificial spawning channel for chinook salmon and steelhead trout, Puntledge River, Vancouver Island.

COMMERCIAL FISHERIES BRANCH

R. G. McMynn, Director

GENERAL

The year 1965 was an interesting and productive year for the Commercial Fisheries Branch. The appointment of an Inspector of Fisheries, Mr. A. G. Karop, and a Director, Mr. R. G. McMynn, meant that the Province could once again more fully participate in the development and management of the diverse commercial fisheries of British Columbia.

During the year a great deal of emphasis was placed on an evaluation of the pollution-endangered shellfish industry and means are being developed to foster these potentially important fisheries, particularly the Pacific oyster. Considerable effort and time was devoted to the establishment and maintenance of strong and effective liaison between the Canada Department of Fisheries and the several Provincial Departments that manage those natural resources which can affect the production and management of salmon and shellfish.

The semi-annual Federal-Provincial British Columbia Fisheries Committee meetings have continued to provide an effective vehicle for joint discussion and resolution by senior fishery officials of the various problems related to the fishery industry.

Total Marketed Value of Fish

1960	$52,300,000
1961	77,900,000
1962	94,700,000
1963	76,000,000
1964	92,100,000

Number of Licensed Boats

1960	8,623
1961	8,856
1962	9,143
1963	9,745
1964	9,343

Number of Licensed Fishermen

1960	14,191
1961	15,660
1962	15,060
1963	15,370

Value of Gear

1960	$8,535,000
1961	8,946,000
1962	9,946,000
1963	10,096,000
1964	10,711,000

The canned-salmon pack for 1965 was 912,796 cases, 342,512 fewer than the 1964 pack of 1,255,308 cases. This is the smallest pack since 1960, when 633,501 cases were canned.

Record production by trollers on the west coast of Vancouver Island helped to boost the record-breaking coho fishery in 1965. Coho provided the only bright spot in the salmon harvest for this year, with a catch of over 3,000,000 fish. The pink salmon catch, which has provided the bulk of the canned pack for several seasons, was disappointing this year and the pack of 287,662 cases was down from the previous year by 176,306 cases. The chum salmon fishery could only be described as a disaster and net fishing for chums was finished for the year on September 18th, when the Canada Department of Fisheries had to close the entire coast for this fishery.

Drought conditions in Northern British Columbia, caused by a prolonged dry spell, dried up many rain-fed rearing streams. The depletion of young salmon due

to these conditions will adversely affect future runs in this area. During the fall, on the other hand, torrential rainstorms in many coastal areas created flood conditions which scoured many streams, thus destroying much of the salmon spawn deposited in these streams. The 1965 conditions will undoubtedly have serious effects on many 1967 and 1968 salmon runs.

BRITISH COLUMBIA FISH-CANNING INDUSTRY

Twenty-two salmon canneries were licensed to operate in the Province by this Branch. The locations were as follows: Queen Charlotte Islands, 1; Skeena River, 7; Central Area 1; Vancouver Island, 1; Fraser River and Lower Mainland, 11. This year saw one previously licensed cannery, Crest, not operating. Two canneries not licensed last year, W. Babcock Co. Ltd. and Klemtu, raised the total.

COMPARATIVE PACK BY SPECIES (48-POUND CASES)

	1964	1965
Sockeye	343,276	245,794
Spring	9,033	18,886
Steelhead	1,211	841
Blueback	36,392	21,188
Coho	167,883	273,219
Pink	463,968	287,662
Chum	229,855	65,206

HALIBUT FISHERY

The International Pacific Halibut Commission was set up under treaty between Canada and the United States for the protection and rehabilitation of the halibut fishery. For the purpose of regulation, the Pacific Coast is divided into a number of areas. The 1965 regulation areas were as follows:—

Area 1—South of Willapa Bay.
Area 2—Willapa Bay to Cape Spencer.
Area 3A—Cape Spencer to Shumagin Islands.
Area 3B South—Shumagin Islands to Cape Wrangell, Attu Island, not including Bering Sea.
Area 3B North-east—In Bering Sea east of 175° W. longitude.
Area 3B North Triangle—In Bering Sea.

Halibuting opened in the Bearing Sea on March 25th and off the British Columbia coast on May 1st. Landings by British Columbia halibut fishermen were more than 1 million pounds less than in 1964, but American catches increased by almost 4½ million pounds. Although the American catch was up it was still lower than the total British Columbia catch.

Halibut landings at Canadian ports for 1965 were 29,479,000 pounds, the second lowest since before World War II, but showed an increase of 3,870,000 pounds over 1964.

HERRING FISHERY

In 1965, during November, herring fishermen were again on strike. The union demanded $20.48 per ton, plus holiday-pay of 4 per cent of gross earnings on herring, company contributions of 3.2 per cent of herring income to a union-operated pension fund, and an increase from 10 cents to 20 cents per ton in company contributions to the welfare fund.

The strike was settled and herring fishermen returned to their fishing in December after agreement had been reached on a price of $17.40 per ton to the fishermen, plus 20 cents per ton to be paid by the companies to the welfare fund. Once again it is unfortunate that a strike tied up fishing during November when the herring quality is better than it is in December.

Last available reports for 1965 show herring-meal production of 21,018 tons and herring-oil production of 3,058,309 imperial gallons.

WHALING

The catch of 865 was 15 whales fewer than last year's total and included more sperm and fewer finbacks than in 1964. The catch was comprised of the following species, with last year's catch in parentheses: 18 humpbacks (10), 83 finbacks (140), 604 sei (613), 9 blue (12), and 151 sperm (105).

Fears are being expressed that uncontrolled killing of whales in the North Pacific will deplete the whale population to such an extent that it will soon become uneconomical to pursue this fishery. Almost 50 per cent of the meat produced this year was used in Japan for human consumption.

PACIFIC OYSTER BREEDING

The summer of 1965, while in general regarded as a warm summer, was not too favourable for oyster breeding except in Pendrell Sound. This was due to the fact that periods of warm weather were interspersed with short periods of rain and south-east winds which rapidly destroyed the temperature build-up in most areas. Pendrell Sound is an exception in that the hydrography and physiography provide buffers that prevent sharp water temperature drops during unfavourable weather.

In Ladysmith Harbour, water temperatures barely reached 68° F. at any time. However, in the first week in July there was an excellent spawning which produced straight-hinged larvæ abundant enough to indicate a commercial spatfall, providing larval survival was moderate. Poor weather, however, starting on July 7th, caused considerable mortality and there were few larvæ left by July 9th. No further spawnings were observed. Modest but barely commercial spatting occurred right at the head of the harbour.

In Pendrell Sound a spawning occurred on July 4th, about the same time as the one at Ladysmith. The number of larvæ indicated a commercial spatfall would begin about July 19th. Larvæ of all sizes continued to occur in the plankton until mid-August.

Initial setting began on July 19th, gained impetus on July 20th, and was heavy from then on for several days, but some setting occurred continuously until near the end of August. By July 21st the spatfall had reached an average of nearly 100 spat per shell in the upper sound. The total spatfall for the summer averaged over 1,000 spat per shell.

About 70,000 shellstrings were exposed, but loss through misadventure and storms reduced the production to about 60,000 strings, of which at least 50,000 were exported to the United States.

As a result of changed conditions in the Japanese oyster-seed export business there is now a potential for at least a half million dollar seed industry in Pendrell Sound, and this would be only a small proportion of the amount of seed the area is capable of producing.

CUSTOM CANNERIES

Three canneries designed to custom-can sport-caught salmon operated during the summer and fall of 1965. These were located at Brentwood, Nanaimo, and Quadra Island. Production figures were not completed at time of writing, but the total will be in the order of some 35,000 pounds or about 700 cases of salmon.

REVIEW OF FISHERIES PRODUCTION, 1964

The total marketed value of the fisheries of British Columbia for 1964 amounted to $92,100,000, $16,100,000 more than in 1963.

Several factors contributed to this increase in value, notably a canned salmon pack of 1,255,308 cases, 52,037 more than 1963. In addition, herring production at 252,643 tons was second only to the record year of 1963, and the average unit wholesale price of halibut increased 2.9 cents per pound over the 1963 price.

As marketed, the principal species were salmon with a value of $63,103,000, herring with a value of $11,561,000, and halibut with a marketed value of $8,056,000.

The landed value of the 1964 halibut catch was $6,270,000, as compared to $5,721,000 in 1963.

In 1963 the marketed value of shellfish amounted to $2,588,000. The value of the clam production was $190,000; oyster production, $647,000; crab production, $1,439,000; and shrimp production, $312,000.

VESSELS AND BOATS

The number and value of boats used in the 1964 commercial fishery included 1,516 boats in the 10-ton-and-over class and 7,827 in the under 10-ton group and valued at $76,611,000. There were 402 more fishing-boats operating in coastal waters than in 1963.

GEAR AND EQUIPMENT

The 1964 inventory of fishing-gear included 9,923 salmon gill-nets, 524 salmon seine-nets, 122 herring purse seine-nets, 115 herring gill-nets, and 32 herring trawl-nets, with a total value of $7,157,000. Wire, cotton, and nylon trolling-lines were valued at $502,000.

SALMON-CANNERY OPERATIONS

The Commercial Fisheries Branch licensed 21 salmon canneries to operate in 1964, three fewer than in 1963. The operating canneries in 1964 were located as follows: Queen Charlotte Islands, 1; Skeena River, 7; Central Area, 1; Vancouver Island, 1; Fraser River and Lower Mainland, 11.

The total canned-salmon pack for British Columbia, according to the annual returns submitted to this Branch by canners licensed to operate in 1964, amounted to 1,255,318 cases, 52,047 more than the 1963 pack but still below the 1955–63 average of 1,330,211 cases. With a value of $43,676,000, the 1964 pack was worth $9,213,000 more than the previous year's figure.

SOCKEYE SALMON

The 1964 sockeye pack was 343,358 cases. The wholesale value of sockeye production increased to $18,100,000, compared to $8,500,000 in 1963. Most of this increase resulted from increased prices of the canned pack.

Pink Salmon

The pink pack of 464,107 cases was valued at $12,141,618. Two million pounds of pink were taken in the Bella Coola area, where a scarcity had been predicted after two years of extreme abundance.

Coho and Blueback Salmon

The 1964 coho and blueback pack was greater than in 1963 and totalled 204,732 cases. The total value of coho sales reached record proportions and totalled $16,400,000 or $4,200,000 more than in 1963. The value of the canned product represented 50 per cent of this total.

Chum Salmon

The chum pack of 232,722 cases was nearly double that reported for 1963. Canneries packed all the chum salmon they could get through the summer because fall runs of this species were expected to be small; however, fall runs were excellent and the chum pack was the best in six years.

Chinook

The troll fleet this year accounted for two-thirds of the catch of chinook, worth $5,500,000 and making it the most valuable chinook catch on record. Chinook accounted for 10.4 per cent of total salmon landings and the canned pack of 9,127 cases was worth $224,146.

Steelhead

The 1964 steelhead-trout pack amounted to 1,262 cases, 490 more than the 1963 pack of 772 cases. Although steelhead are not salmon, some are canned each year, principally those caught incidental to fishing other species.

OTHER CANNERIES

Shellfish Canneries.—In 1964, 10 of the 14 shellfish canneries licensed to operate in British Columbia produced the following pack: Clams, 13,766 cases; crabs, 18,447 cases; abalone, 685 cases; shrimps, 2,036 pounds (vacuum-packed and frozen).

Tuna-fish Canneries.—Three tuna-fish caneries were licensed to operate in 1964 and produced 248,196 cases of canned tuna.

Specialty Products.—Fifteen plants produced the following: Fish stix (cod), 334,806 pounds; fish cakes (ling-cod), 105,000 pounds; fish and chips (cod and halibut), 1,645,384 pounds; oyster cocktail in 6-ounce jars, 50 gallons; oysters smoked and packed in jars, 4,727 cases of 24 4-ounce jars; oysters smoked and canned, 200 cases; oyster stew, 7,978 cases of 24/10-ounce cans; barbecued smelts, 2,600 pounds; pickled herring, 7,667 cases, 1,200 25-pound barrels, and 950 50-pound barrels; smoked canned salmon, 5½ 48-pound cases; creamed salmon with peas, 10,560 cases of 12/15-ounce cans; fish spreads, 46,228 cases of 24/2½-ounce cans.

FISH-CURING

Fourteen smoke-houses processed the following: Herring (kippers, 86,551 pounds; bloaters, 6,270 pounds); cod, 703,195 pounds; salmon, 511,167 pounds; eels, 3,000 pounds; mackerel, 3,000 pounds; sturgeon, 100 pounds.

Dry-salted Herring

In 1964, 210 green tons of herring worth $6,319 were salted and 168 salted tons worth $19,320 were packed in boxes.

Mild-cured Salmon

All four plants licensed to mild-cure salmon in 1964 operated and produced 610 tierces, with a total weight of 5,020 hundredweight. In 1963, four plants operated and produced 428 tierces, with a total weight of 3,530 hundredweight.

FISH ROE

Four firms reported the following production for 1964: 9,000 cases of 24/3-ounce tins, 1,350 cases of 24/7-ounce tins, 225 cases of 6/1-gallon tins, 3,129 cases weighing 80,701 pounds, 24,869 pounds used for salmon-egg caviar, and 435,000 pounds processed for sport-fishing bait.

HALIBUT

There was a drop in the 1964 landings of 3,500,000 pounds from the record year of 1963. The Canadian fleet once more dominated this fishery by taking 56 per cent of the total catch. Landings amounted to 33,600,000 pounds, but prices were better, averaging 24.55 cents, compared to 22.06 cents in the previous year. The marketed value of halibut landed in British Columbia ports was $8,056,000, which was slightly higher than in 1963.

FISH OIL AND MEAL

In 1964, a four-week strike in the herring fishery in October and November was the only work-stoppage in the fishing industry. Landings for the year amounted to 252,643 tons, worth $6,167,000.

There were 10 herring-reduction plants licensed to operate in 1964 and these plants produced a total of 47,936 tons of meal and 5,295,443 gallons of oil. Total value of all herring products was $11,561,000.

Fish-liver Reduction (Cod, Dogfish, Halibut).—Three plants were licensed in 1964; two of them operated, processing 312,736 pounds of fish livers and producing 1,278,802 million U.S.P. units of Vitamin A. In 1963 two plants processed 156,367 pounds of fish livers and produced 938,135 million U.S.P. units of Vitamin A.

Fish-offal Reduction.—During the 1964 season, eight plants were licensed to operate and produced 1,292 tons of meal and 279,452 gallons of oil. In 1963, nine plants produced 1,464 tons of meal and 403,309 gallons of oil.

STATISTICAL TABLES

TABLE I.—LICENCES ISSUED AND REVENUE COLLECTED, 1961 TO 1965, INCLUSIVE

Licence	1961		1962		1963		1964		1965	
	Number	Revenue	Number	Revenue	Number	Revenue	Number	Revenue	Number	Revenue
Salmon cannery	23	$4,600	21	$4,200	24	$4,800	21	$4,200	22	$4,400
Herring cannery	2	200	----	----------	----	----------	1	100	----	----------
Herring reduction	6	600	9	900	13	1,300	9	900	12	1,200
Tierced salmon	5	500	6	600	5	500	4	400	5	500
Fish cold storage	18	1,800	20	2,000	19	1,900	20	2,000	21	2,100
Fish-processing	19	19	21	21	38	38	45	45	54	54
Shellfish cannery	9	9	8	8	13	13	14	14	9	9
Tuna-fish cannery	3	3	2	2	4	4	3	3	3	3
Fish-offal reduction	8	8	9	9	9	9	8	8	9	9
Fish-liver reduction	3	3	3	3	3	3	3	3	3	3
Whale reduction	----	----------	1	100	1	100	1	100	1	100
Herring dry-saltery	----	----------	----	----------	2	200	1	100	----	----------
Fish-buyers	434	10,850	448	11,200	447	11,175	403	10,075	404	10,100
Pickled-herring plant	----	----------	----	----------	----	----------	1	100	----	----------
General receipts	----	----------	----	----------	----	----------	3	60	5	72
Totals	530	$18,592	548	$19,043	578	$20,042	537	$18,108	551	$18,625

TABLE II.—SPECIES AND VALUE OF FISH CAUGHT IN BRITISH COLUMBIA, 1960 TO 1964, INCLUSIVE

	1960	1961	1962	1963	1964
Salmon	$35,963,000	$57,314,000	$69,763,000	$48,960,000	$63,103,000
Herring	3,450,000	8,207,000	8,492,000	11,695,000	11,561,000
Halibut	6,534,000	7,099,000	9,312,000	7,993,000	8,056,000
Crabs and shrimps	1,729,000	1,511,000	1,415,000	1,573,000	1,751,000
Ling-cod	593,000	551,000	544,000	492,000	549,000
Grey cod	647,000	487,000	405,000	705,000	1,160,000
Oysters	406,000	480,000	608,000	781,000	647,000
Sole	795,000	552,000	584,000	643,000	662,000
Black cod	253,000	147,000	173,000	162,000	273,000
Clams	535,000	324,000	448,000	340,000	190,000
Livers and viscera	126,000	122,000	58,000	57,000	55,000
Miscellaneous	1,228,000	1,092,000	2,876,000	2,599,000	4,110,000
Totals	$52,259,000	$77,886,000	$94,673,000	$76,000,000	$92,117,000

TABLE III.—STATEMENT SHOWING THE QUANTITY OF HERRING PRODUCTS PRODUCED IN BRITISH COLUMBIA, 1959 TO 1965, INCLUSIVE

Season	Canned	Dry-salted	Meal	Oil
	Cases	Tons	Tons	Gal.
1959/60	----------	----------	32,559	4,249,801
1960/61	9,074	----------	31,203	2,966,547
1961/62	19,102	----------	40,746	4,751,082
1962/63	892	206.35	41,299	40,243,000 lb.
1963/64	----------	562.3	53,271	50,037,000 lb.
1964/65[1]	----------	210.64	46,071	44,902,000 lb.

[1] To November, 1965.

Table IV.—Statement Showing the Quantity of Meal, Oil, and Vitamin A Produced from Sources Other than Herring, 1958 to 1965, Inclusive

Season	From Whales		Oil from Fish Livers	From Other Sources	
	Meal	Oil		Meal and Fertilizer	Oil
	Tons	Gal.	Units[1]	Tons	Gal.
1958/59	4,226	908,482	1,821,994	2,318	272,223
1959/60	4,058	940,455	3,474,267	1,140	110,977
1960/61	------	------	2,258,748	2,099	62,983
1961/62	------	------	3,228,748	1,157	127,580
1962/63	2,661	639,060	575,337	1,704	167,349
1963/64	3,060	707,596	938,135	1,464	403,309
1964/65	3,398	663,200	1,272,815	1,292	279,452

[1] Million U.S.P. units of Vitamin A.
The above figures are for the season October to March 31st annually.

Table V.—British Columbia Salmon Pack, 1960 to 1964, Inclusive, Showing Areas Where Canned

(48-pound cases.)

These tables supplied by courtesy of the Canadian Department of Fisheries in Vancouver.

1960

Species	Area		Total
	District Nos. 1 and 3	District No. 2	
Sockeye	172,505	54,339	226,844
Red spring	1,113½	458½	1,572
Pink spring	1,436	1,056	2,492
White spring	1,151½	700	1,851½
Steelhead	339½	164½	504
Blueback	23,345	----------	23,345
Coho	41,194½	26,965	68,159½
Pink	52,689½	166,874½	219,564
Chum	47,081	39,737½	86,818½
Totals	340,855½	290,295	631,150½

TABLE V.—BRITISH COLUMBIA SALMON PACK, 1960 TO 1964, INCLUSIVE, SHOWING AREAS WHERE CANNED—*Continued*

1961

Species	Area		Total
	Districts Nos. 1 and 3	District No. 2	
Sockeye	239,667	158,538	398,205
Red spring	1,735	412	2,147
Pink spring	2,678	1,022½	3,700½
White spring	1,471	602½	2,073½
Steelhead	587½	391	978½
Blueback	12,527½	.....	12,527½
Coho	153,994	74,857½	228,851½
Pink	286,544½	374,745½	661,290
Chum	28,994	66,391	95,385
Totals	728,198½	676,960	1,405,158½

1962

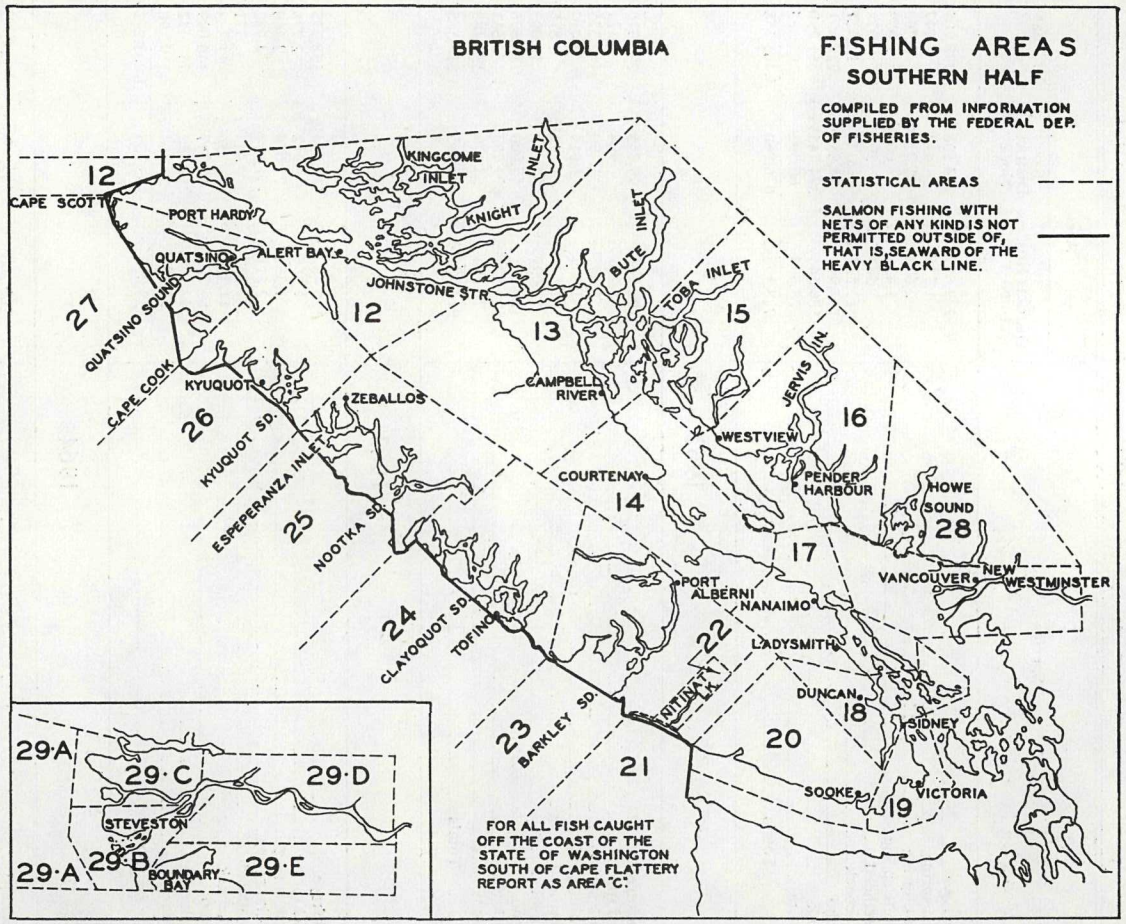
Sockeye	198,001	99,715½	297,716½
Red spring	1,217½	904	2,121½
Pink spring	1,145½	1,190	2,335½
White spring	1,698½	1,019	2,717½
Steelhead	520½	294½	815
Blueback	12,097	.....	12,097
Coho	120,038	55,600	175,638
Pink	508,878½	679,783	1,188,661½
Chum	70,304	64,179	134,483
Totals	913,900½	902,685	1,816,585½

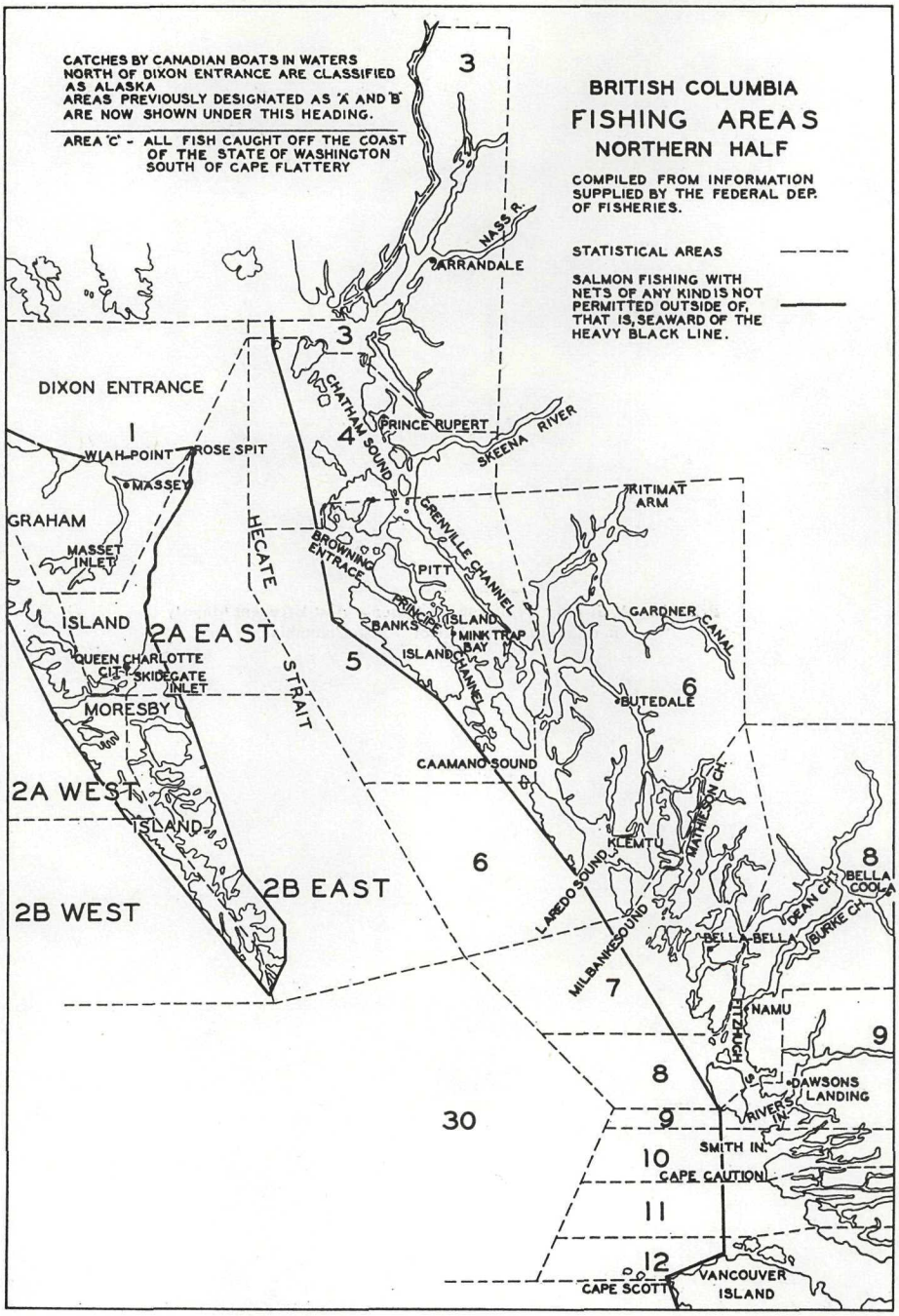
1963

Sockeye	125,480½	32,894½	158,375
Red spring	1,866	912	2,778
Pink spring	1,362	1,078	2,440
White spring	2,811	1,971	4,782
Steelhead	330	441½	771½
Blueback	11,329	54½	11,383½
Coho	89,252	56,847	146,099
Pink	542,700½	214,752	757,452½
Chum	62,905½	56,284½	119,190
Totals	838,036	365,235	1,203,271½

1964

Sockeye	200,203	143,155½	343,358½
Red spring	1,823	777	2,600
Pink spring	953½	2,076½	3,030
White spring	1,906	1,591½	3,497½
Steelhead	438	824	1,262
Blueback	36,259	.....	36,259
Coho	90,665	77,808½	168,473½
Pink	140,475½	323,631	464,106½
Chum	76,990	155,731½	232,721½
Totals	549,713	705,595½	1,255,308½


BRITISH COLUMBIA
FISHING AREAS
SOUTHERN HALF
COMPILED FROM INFORMATION SUPPLIED BY THE FEDERAL DEP. OF FISHERIES.
STATISTICAL AREAS
SALMON FISHING WITH NETS OF ANY KIND IS NOT PERMITTED OUTSIDE OF, THAT IS, SEAWARD OF THE HEAVY BLACK LINE.
12
CAPE SCOTT
PORT HARDY
QUATSINO
ALERT BAY
KINGCOME INLET
KNIGHT INLET
JOHNSTONE STR.
BUTE INLET
TOBA INLET
27
QUATSINO SOUND
CAPE COOK
KYUQUOT
26
KYUQUOT SD.
ESPEPERANZA INLET
ZEBALLOS
25
NOOTKA SD.
13
CAMPBELL RIVER
15
JERVIS IN.
16
WESTVIEW
PENDER HARBOUR
HOWE SOUND
28
COURTENAY
14
17
VANCOUVER
NEW WESTMINSTER
PORT ALBERNI
NANAIMO
24
CLAYOQUOT SD.
TOFINO
22
LADYSMITH
DUNCAN
18
SIDNEY
23
BARKLEY SD.
21
20
SOOKE
19
VICTORIA
29·A
29·C
29·D
STEVESTON
29·B
29·E
BOUNDARY BAY
FOR ALL FISH CAUGHT OFF THE COAST OF THE STATE OF WASHINGTON SOUTH OF CAPE FLATTERY REPORT AS AREA "C".


CATCHES BY CANADIAN BOATS IN WATERS NORTH OF DIXON ENTRANCE ARE CLASSIFIED AS ALASKA
AREAS PREVIOUSLY DESIGNATED AS 'A' AND 'B' ARE NOW SHOWN UNDER THIS HEADING.
AREA 'C' - ALL FISH CAUGHT OFF THE COAST OF THE STATE OF WASHINGTON SOUTH OF CAPE FLATTERY
BRITISH COLUMBIA
FISHING AREAS
NORTHERN HALF
COMPILED FROM INFORMATION SUPPLIED BY THE FEDERAL DEP. OF FISHERIES.
STATISTICAL AREAS
SALMON FISHING WITH NETS OF ANY KIND IS NOT PERMITTED OUTSIDE OF, THAT IS, SEAWARD OF THE HEAVY BLACK LINE.
DIXON ENTRANCE
WIAH POINT
ROSE SPIT
MASSEY
GRAHAM
MASSET INLET
ISLAND
2A EAST
QUEEN CHARLOTTE CITY
SKIDEGATE INLET
MORESBY
2A WEST
ISLAND
2B EAST
2B WEST
HECATE STRAIT
NASS R.
ARRANDALE
CHATHAM SOUND
PRINCE RUPERT
SKEENA RIVER
BROWNING ENTRANCE
GRENVILLE CHANNEL
PITT
PRINCE ISLAND
BANKS ISLAND
MINK TRAP BAY
CHANNEL
RITIMAT ARM
GARDNER CANAL
BUTEDALE
CAAMANO SOUND
KLEMTU
MATHESON CH.
LAREDO SOUND
MILBANKE SOUND
BELLA COOLA
OCEAN CH.
BURKE CH.
BELLA BELLA
NAMU
FITZHUGH
DAWSONS LANDING
RIVERS IN.
SMITH IN.
CAPE CAUTION
CAPE SCOTT
VANCOUVER ISLAND
1
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