PROVINCE OF BRITISH COLUMBIA
DEPARTMENT OF ATTORNEY-GENERAL

Provincial Game Commission

REPORT

For the Year Ended December 31st

1952

VICTORIA, B.C.
Printed by DON MCDIARMID, Printer to the Queen's Most Excellent Majesty.
1953

To His Honour CLARENCE WALLACE, C.B.E.,
Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to submit the Report of the Provincial Game Commission for the year ended December 31st, 1952.

R. W. BONNER,
Attorney-General.

Attorney-General's Department,
Victoria, B.C., July, 1953.

OFFICE OF THE GAME COMMISSION,
VANCOUVER, B.C., July 1st, 1953.

Honourable R. W. Bonner, Q.C.,
Attorney-General, Victoria, B.C.

SIR,—We have the honour to submit herewith our Report for the year ended December 31st, 1952.

We have the honour to be,
Sir,
Your obedient servants,
JAMES G. CUNNINGHAM,
FRANK R. BUTLER,
Game Commissioners.

TABLE OF CONTENTS

Reports— PAGE

Game Commission 7
Officer Commanding "A" Division 11
Officer Commanding "B" Division 14
Officer Commanding "C" Division 18
Officer Commanding "D" Division 24
Summary of Reports of Game Wardens in "E" Division 28
Report of Fisheries Management Division—Chief Fisheries Biologist Dr. P. A. Larkin 30
Report of Game Management Division—Chief Game Biologist Dr. J. Hatter 38
Report of Predator-control Branch—Supervisor of Predator-control G. A. West 43

Statistical Reports—

Comparative Statistical Statement of Revenue, etc., 1913–52, Inclusive 46
Summary of Total Revenue Derived from Sale of Various Licences, Collections, etc., during Year 1952 47
Revenue—Sale of Resident Firearms Licences 48
Revenue—Sale of Deer, Moose-Elk, Goat, and Pheasant (Game) Tags 49
Revenue—Sale of Resident Anglers', Guides', Free Farmers', and Prospectors' Firearms Licences 50
Revenue—Sale of Non-resident Firearms and Outfitters' Licences 51
Revenue—Sale of Non-resident Anglers' Licences 52
Revenue—Sale of Fur-traders', Taxidermists', and Tanners' Licences and Royalty on Fur 53
Comparative Statement of Revenue from Fur Trade, 1921–52, Inclusive 54
Comparative Statement Showing Pelts of Fur-bearing Animals on Which Royalty Has Been Collected, 1921–52, Inclusive 55
Statement of Kind of Pelts of Fur-bearing Animals on Which Royalty Was Collected during Year 1952 56
List of Confiscated Fur, 1952, and Revenue from Sale of Confiscated Fur
List of Confiscated Firearms, 1952, and Revenue from Sale of Confiscated Firearms 57
Bounties Paid, 1952 59
Comparative Statement of Bounties Paid from 1922 to 1952, Inclusive 60
Revenue—Big-game Trophy Fees Paid by Non-resident Hunters, 1952 60
Prosecutions, 1952 61
Hunting and Fishing Accidents, 1952 63
Statement—Trout Liberations, 1952 64
Statement—Returns from Holders of Special (Trapping) Firearms Licences, Season 1951–52 76
Statement—Game-bird Liberations, 1952 77
Statement—Returns of Game-bird Farmers, 1952 78
Statement—Miscellaneous Receipts 78
List of Resident Guides and Non-resident Outfitters, 1952 79
Personnel of Game Commission as at December 31st, 1952 88

TABLE OF CONTENTS

Reports—

Page

Game Commission 7
Officer Commanding "A" Division 11
Officer Commanding "B" Division 14
Officer Commanding "C" Division 18
Officer Commanding "D" Division 24
Summary of Reports of Game Wardens in "E" Division 28
Report of Fisheries Management Division—Chief Fisheries Biologist Dr. P. A. Larkin 30
Report of Game Management Division—Chief Game Biologist Dr. I. Hatter 38
Report of Predator-control Branch—Supervisor of Predator-control G. A. West 43

Statistical Reports—

Comparative Statistical Statement of Revenue, etc., 1913–52, Inclusive 46
Summary of Total Revenue Derived from Sale of Various Licences, Collections, etc., during Year 1952 47
Revenue—Sale of Resident Firearms Licences 48
Revenue—Sale of Deer, Moose, Elk, Goat, and Pheasant (Game) Tags 49
Revenue—Sale of Resident Anglers', Guides', Free Farmers', and Prospectors' Firearms Licences 50
Revenue—Sale of Non-resident Firearms and Outfitters' Licences 51
Revenue—Sale of Non-resident Anglers' Licences 52
Revenue—Sale of Furs, Trapping, Tanners' Licences and Royalty on Fur 53
Comparative Statement of Revenue from Fur Trade, 1921–52, Inclusive 54
Comparative Statement Showing Pelts of Fur-bearing Animals on Which Royalty Has Been Collected, 1921–52, Inclusive 55
Statement of Kind of Pelts of Fur-bearing Animals on Which Royalty Was Collected during Year 1952 56
List of Confiscated Furs, 1952, and Revenue from Sale of Confiscated Furs 57
List of Confiscated Firearms, 1952, and Revenue from Sale of Confiscated Firearms 59
Bounties Paid, 1952 60
Comparative Statement of Bounties Paid from 1922 to 1952, Inclusive 60
Revenue—Big-game Trophy Fees Paid by Non-resident Hunters, 1952 61
Prosecutions, 1952 63
Hunting and Fishing Accidents, 1952 64
Statement—Trout Liberations, 1952 76
Statement—Refunds from Holders of Special (Trapping) Firearms Licences, Season 1951–52 77
Statement—Game-bird Liberations, 1952 78
Statement—Returns of Game-bird Farmers, 1952 78
Statement—Miscellaneous Receipts 79
List of Resident Guides and Non-resident Outfitters, 1952 88
Personnel of Game Commission as at December 31st, 1952 88

Report of the Provincial Game Commission, 1952

The year under review, in so far as revenue is concerned, has been a successful one in spite of considerable loss of revenue from the non-resident trade through the outbreak amongst cattle of foot-and-mouth disease in a small portion of the Province of Saskatchewan which resulted in an embargo on the importation of the meat of most species of big game into the United States.

The total revenue derived from the sale of non-resident angling and game licences and trophy fees for the calendar year 1952 amounted to $212,699, as against $363,809 for the previous year, showing a loss of $151,110. There was an over-all increase in revenue derived under the "Game Act" from the all-time high for 1951 of approximately $10,719.05 in spite of the reduction in the number of non-resident hunters. The revenue derived from resident hunters and fishermen showed an increase of $143,058 over the previous year. The total revenue of the Department amounted to $941,439.70, as against $930,720.65 for the previous year. The increased revenue from the resident trade resulted from the increased cost of various resident licences and game-tags recommended by the organized sportsmen at the Provincial Game Convention in 1951.

Particulars covering sale of hunting and angling licences are set out hereunder:—

Kind of Licence	Licences Issued	Revenue
Non-resident angling licences	27,641	$165,620.00
Non-resident firearms licences	1,172	26,714.00
Resident angling licences	87,457	146,931.00
Resident firearms licences	80,403	397,630.00
Totals	196,673	$736,895,00

Other miscellaneous revenue, such as the sale of game-tags, trophy fees, sale of fur-traders' and guides' licences, fur royalties, etc., amounted to $203,877.70.

The decrease in non-resident trophy-fee payments was approximately $93,290, or a total of $20,365 in 1952 as against $113,655 in 1951. It is anticipated that this picture will be changed during the fall of 1953, provided that there will be no further outbreaks of foot-and-mouth disease in Canada.

Considerable progress has been made in scientific studies of wildlife during the year. Several major investigations in regard to game birds, big game, and sport-fishery problems were conducted. These investigations included studies on pheasants, liberations of chukar partridge, study of California bighorn sheep in the Churn Creek area, a continuation of the moose survey throughout the Cariboo District, and in respect to deer on Vancouver Island.

As a result of the moose investigations and a strong recommendation from our game biologists, a short open season of six days on cow moose in certain areas was allowed. This action, however, brought strong protests and criticism from some quarters. This criticism was to be expected as the opening of a season on the female species of any member of the deer family was a departure from past policies. Your Game Commission's policy in the past has been toward protection of the females of any member of the deer family unless it was necessary to reduce the herd or stand of game in any particular area for cause such as over-population and damage to agricultural interests. However, a more thorough knowledge of the situation brought about through scientific investigations, and in co-operation with the sportsmen and guides who are now becoming aware of the need of maintaining a proper balance of game in keeping with the available food-supply, has to some extent lessened the criticism. At the present time the guides in the areas that were provided with a cow-moose season are co-operating very fully with our game biologists, with the object in view of the safe management of game in those areas.

Pollution of some of our lakes and streams by mining and other interests, as well as an ever-increasing number of applications for water rights in some of our more accessible and popular fishing areas, continues to be a major problem; so much so that we have found it necessary to employ one permanent biologist with a part-time assistant to carry out necessary investigations. This important assignment is under the direction of Fishery Biologist R. McMynn. The total number of new applications for water use handled by this branch for the year was 906.

The operation of all fish-hatcheries and all phases of the fish-cultural operations has been placed under the very able supervision of Dr. Peter A. Larkin. It is expected that this co-ordination of fishery operations will greatly improve the efficiency of the Branch.

A change in the supervision of our Predatory-animal Control Branch has taken place since our last Report. The former Supervisor of Predator-control, W. Winston Mair, has been appointed to the position of Chief of the Canadian Wildlife Service at Ottawa. His work with this Commission has been taken over by Game Biologist G. A. West, a graduate of the University of British Columbia. The work of this Branch has increased considerably during the past year. Systematic poisoning of predatory animals, principally wolves and coyotes throughout the interior and northern sections of the Province, has been most successful. In fact, we anticipate recommendations in the very near future from certain Farmers' Institutes and branches of the cattle industry to modify our activities in areas where the control of predators has been so successful. This is the goal that the Department is attempting to reach. It is expected that the recommendations may be for cancellation of bounty payments during the winter months, when we are most actively engaged in poisoning operations.

During the past winter some 800 predatory-animal poison-stations were in operation, the majority of which were highly successful. It is anticipated that this programme will be stepped up in the more remote areas of the Province next fall. The poisoning programme, or our activities of predatory-animal control in the northern sections of the Province where there are a large number of registered trap-lines held in the names of Indians, was fully appreciated by the Department of Indian Affairs; so much so that financial assistance was received, enabling the chartering of aircraft to assist in our activities in the vicinity of these Indian trap-lines.

The cougar situation throughout the Province and more particularly on Vancouver Island has been the cause of considerable concern and expense to the Department. The fact that we have had three instances of attacks by cougar on residents of the Island in recent years, one of which resulted in the death of a child, has resulted in many more complaints than usual. Many of these complaints have originated on the west coast of Vancouver Island, where transportation facilities are difficult and necessitate considerable use of aircraft. Many of the complaints, however, have turned out to be baseless, but failure to investigate one complaint that may result in an attack on some human would leave us open to much criticism, and consequently all must be investigated. The control of cougar necessitates the use of highly trained and valuable dogs, and the casualties among these dogs have been very high.

The game-checking station at Cache Creek was again in operation during the fall hunting season. The results obtained through this operation have been very valuable from a game-management standpoint, as well as a source of information to all parties passing through the station to the hunting-grounds.

The total amount of game checked through Cache Creek was down considerably from the previous year owing to the drop in non-resident hunters, and further through the abnormally fine open fall. The game did not come down to their usual fall haunts until long after the close of all game seasons. In fact, some of the usual game wintering-grounds were little used this past winter.

The following is a summary of results from the Cache Creek Checking-station:—

Game Killed by Resident and Non-resident Hunters Checked through Cache Creek

Species of Game	Resident Hunters	Non-resident Hunters	Totals
Black bear	54	11	65
Grizzly bear	8	11	19
Deer	694	3	697
Caribou	.....	4	4
Moose	1,235	32	1,267
Mountain-goat	10	28	38
Mountain-sheep	5	4	9
Ducks	6,582	552	7,134
Geese	425	38	463
Pheasants	123	.....	123
Grouse	10,293	727	11,020
Fish	4,613	5,807	10,420
Coyotes	106	.....	106
	24,148	7,217	31,365
Prosecutions	41	9	50
Fines	$535.00	$90.00	$625.00
Trophy fees	.....	.....	$2,610.00

A total of 12,200 hunters passed through Cache Creek, of which 11,606 were residents of the Province and 594 non-residents.

Checking-stations such as Cache Creek not only supply us with much desired information, but are very popular from the standpoint of cattle interests; so much so that we are in receipt of resolutions from those same interests for the establishing of checks on the Hope–Princeton Highway and the vicinity of Elko in the East Kootenay. While checking-stations at these points would be beneficial to all concerned, the operation costs would be great, and our finances will not permit these operations at this time.

The popularity of the area of the Province lying north of Cache Creek through its variety of game draws more and more coastal sportsmen into that district, and tremendous improvements on the roads leading into all sections of the Central and Northern Interior have played no small part in drawing the sportsmen into these areas from all parts of the Province and the United States.

The Sixth Annual Provincial Game Convention was held at Vernon this year on the occasion of that city's diamond jubilee. This Convention proved to be the most successful one held so far, and the success was due to the excellent arrangements and co-operation of the Vernon and District Fish and Game Protective Association. The Convention was well attended. It was the first time that this meeting has been held in the Interior, but the success of the meeting indicates the desirability of holding the Annual Provincial Game Convention in different large centres each year.

UPLAND GAME BIRDS

The 1952 season on pheasants showed an upward trend in population of birds both on the Coast and in the Interior, especially in the vicinity of North Okanagan and that portion of the Okanagan Valley south of Okanagan Falls. Partridge and quail are also becoming very numerous in the southern part of the Okanagan in the vicinity of Oliver and Osoyoos.

During the year, plantings of chukar partridge were made in the Interior in the vicinity of Vaseaux Lake, Tranquille, and Ashcroft, the total of which amounted to 668 birds. The introduction of this species of game bird has been successful in the State of Washington, and care is being taken to carry on our liberations in the same type of habitat that proved most successful in the State mentioned.

The peak on the cycle on grouse appears to have been reached, and populations are on the downward trend, although there were fair numbers of birds in most areas. Prairie-chicken and sharp-tailed grouse and blue grouse were numerous, but the ruffed and Franklin's grouse were found in reduced numbers.

MIGRATORY GAME BIRDS

The past season was a very poor one for the hunting of migratory birds, at least in so far as the hunter was concerned. Birds were plentiful along the coast, but climatic conditions were favourable to the birds and not conducive to good duck-hunting. Actually, the good duck-hunting days did not amount to more than seven or eight. The same conditions prevailed in the Interior. We were finally favoured with a seventy-day season on ducks in certain areas, but this concession was not granted until considerable correspondence had taken place with the Canadian Wildlife Service at Ottawa, and only after it was learned that the Pacific Flyway States had been granted a seventy-day season.

BIG GAME

The fall hunting season of 1952 generally was disappointing. Exceptionally mild weather prevailed over the whole of the Province until well after the close of all hunting seasons, with the result that big-game animals did not reach their usual wintering-grounds or popular hunting areas until well after the end of the year. The harvest of all big game was exceptionally light, in spite of the fact that a heavier take of deer was anticipated. Populations of deer are definitely on the increase, and it may be necessary to provide an open season on the females of the species in some areas in order to prevent damage to agricultural interests.

The population of moose in the Cariboo-Lillooet areas has decreased, particularly in areas west of the Fraser River, owing to depletion of proper and suitable food through over-browsing, and it is doubtful if we will ever see the populations of moose back to the numbers we had in the late 1940's. The short six-day experimental open season on cow moose that was allowed at the end of November in certain parts of the Cariboo, Lillooet, and Kamloops Electoral Districts, recommended by our game biologists, caused a great amount of criticism, especially in view of the apparent decrease in moose populations. But owing to the exceptionally mild late season, lack of non-resident hunters, and the shortness of the season, only 351 cow moose were checked through Cache Creek. This number naturally did not include the local kill, which would probably reach another 450 animals, making an estimated total of 800 cows harvested. The harvesting of this number would not materially affect the over-all population of moose in the areas open to hunting.

Moose are steadily spreading south of the Thompson River, and in some sections are in fair numbers. A scientific survey of this new population and new area is anticipated, and it is just possible that additional moose-hunting territory will be available in the very near future. It is not expected that this new area will ever produce large populations as in the Cariboo District, owing to lack of the quantity of browse suitable for moose; hence the advisability of controlling populations before they become too large.

GAME-LAWS ENFORCEMENT

Enforcement of the "Game Act," the Migratory Birds Regulation, and the Special Fishery Regulations for the Province of British Columbia is still a very important phase of proper game management. With increasing populations and better roads leading into more remote hunting and fishing areas, the problem of enforcement and protection of this natural resource increases.

The total number of prosecutions for the year under the aforementioned Acts and regulations amounts to 1,504, with a total of $25,755 in fines. The following is a summary of the prosecutions under the various Acts and regulations:—

"Game Act": 1,244 prosecutions and $22,184 in fines.

Special Fishery Regulations: 178 prosecutions and $1,886 in fines.

"Migratory Birds Convention Act" and Regulations: 82 prosecutions and $1,685 in fines.

A more detailed analysis of prosecutions will be found later on in this Report.

GAME-FISH CULTURE

The year 1952 saw important changes and improvements in our Fish-cultural Branch. Dr. Peter A. Larkin, Chief Fisheries Biologist, has taken over all phases of trout-hatchery management along with other scientific responsibilities. This means that such work as collection of trout-eggs, restocking programmes, temporary and permanent trout-hatcheries, lake and stream investigations and improvement work, pollutions, etc., now come under Dr. Larkin's supervision. It is felt that this arrangement will result in improved efficiency and economy in operations.

HUNTING ACCIDENTS

Later on in this Report will be found a detailed statement of hunting accidents for the year, which shows that there were twenty-seven accidents, seven of which resulted in death. Of the total accidents, five covered cases of being mistaken for a deer or moose, three of which died; five caused by taking loaded firearms from a boat or automobile, one of which died; and eight were self-inflicted, two of which died. The number of hunting accidents remains fairly consistent from year to year. In every instance where careless handling of firearms has been the cause of an accident, the licence held by the person responsible has either been cancelled or suspended.

ACKNOWLEDGMENTS

We have taken every opportunity to attend conventions and meetings of such organizations as the Cattlemen, Farmers' Institutes, Game Associations and Zone Organizations, Guides' and Trappers' Associations, as well as a great number of service clubs and schools, where our educational films have been shown at every opportunity. Your Commission fully appreciates the excellent co-operation received from these organizations as well as the personnel of all the Provincial and Federal governmental departments with whom we come in contact in our game-management work.

"A" DIVISION (VANCOUVER ISLAND, THE GULF ISLANDS, AND THE MAINLAND COAST FROM TOBA INLET NORTH TO CAPE CAUTION, INCLUDING THE ISLANDS ADJACENT TO THE EAST COAST OF VANCOUVER ISLAND NORTH OF CAMPBELL RIVER).

By G. C. Stevenson, Officer Commanding

I have the honour to submit my annual report covering game and fish conditions in "A" Division for the year ended December 31st, 1952.

Big Game

Wapiti (Elk).—This animal, though indigenous to Vancouver Island, shows little sign of increasing in any appreciable numbers. In those parts where elk are found, they appear to concentrate year after year in the same locality, and there is very little evidence of them extending their habitat. It is my opinion that elk were never very plentiful on Vancouver Island, and though their range may have been somewhat wider before extensive human settlement, I doubt their numbers being ever great. When the biological survey being conducted by the Game Commission is completed, a better understanding of the situation may result.

Deer.—There was a marked improvement in the deer population during the past year due in large measure to a moderate winter. In certain areas on Vancouver Island, such as Mohan Lake and Camp 5 in the Sayward District, these animals could be said to be plentiful. In the more settled districts where heavy hunting pressure is exerted, the deer have become almost nocturnal in their habits, and this would account for the

poor hunting success. Hunters encounter much evidence of deer, but not the animals themselves.

Certain of the Gulf Islands show good deer populations, especially Saltspring Island, where hunting proved exceptionally good during the past season.

Many parts of South Vancouver Island that once contained large stands of deer are now practically devoid of these animals. This situation is difficult to account for, as food conditions have had ample time to recover from any over-browsing. In this connection I refer to large areas such as McGee Swamp, Highland District, Malahat, and Leechtown.

Owing to heavy hunting pressure in confined areas, deer are becoming more and more wary each year, and hunters should expect greater difficulty in bagging their game.

Black or Brown Bear.—These animals are plentiful, but the brown variety is seldom encountered. A few of them are to be seen at the headwaters of the Adams and Salmon Rivers.

Grizzly Bear.—These animals are not found on Vancouver Island, but on the upper reaches of Bute, Toba, and Knight Inlets they are fairly plentiful.

Fur-bearing Animals

Beaver are increasing all over Vancouver Island, and control measures have had to be adopted in several areas in order to protect property. Racoon have become a menace to poultry-farmers owing to their increasing numbers. Mink and marten are plentiful, and in some places muskrat are increasing. Squirrel and weasel are found in moderate numbers, but they are not plentiful.

Upland Game Birds

Blue Grouse.—These birds continue to maintain a heavy population on Vancouver Island and some of the adjacent islands of the gulf group. The harvest of these birds during the past hunting season was slightly in excess of the preceding year. There is difficulty in telling when these birds commence leaving their breeding-grounds and disperse elsewhere. Usually when the birds are ready for harvest, fire conditions prevent the opening of the season, and by the time the fire-hazard is passed, the birds have commenced to leave. A full harvest is not possible under these conditions, but the situation is unavoidable unless weather conditions should be favourable at the time.

Willow Grouse.—This species is showing definite signs of an increase and should continue to do so, as the controlled bag is proving very effective. Very limited numbers were taken by hunters, and all indications point to an increase in these birds.

California Quail.—These birds fluctuate in numbers from year to year and hunting has very little bearing on the population, as few are ever shot. The incidence of large fields of yellow broom has a marked bearing on their survival through the winter, as heavy snow takes a severe toll of their numbers unless they have the shelter of the broom. There are fair numbers of these birds on the southern portion of the Island.

Pheasants.—The pheasant population on Vancouver Island requires considerable study, especially where restocking with farm-raised birds is concerned. The basic stock remains sound, and in areas where hunting is prohibited these birds multiply considerably, but where their numbers are reduced by hunting, and restocking is adopted, the difference does not appear to be filled adequately. I would suggest that pheasant-farmers be required to feed their birds a hard-grain diet for at least two weeks prior to submitting them for acceptance by the Department. In this way, birds would survive more easily in stubble fields, where their diet would be mostly whole grain and seeds.

Liberations of young pheasants were made in the Saanich, Duncan, Cowichan, Nanaimo, Alberni, Comox, and Courtenay areas. Farmer-hunting relationship during the past season was very amicable.

Migratory Game Birds

Ducks and Geese.—These birds have been plentiful in this district during the past year, but the hunter's scope is greatly restricted through various causes prevailing in the southern portion of Vancouver Island. These restrictions are mostly due to sanctuaries, municipal by-laws, and private property. The west coast provides exceptionally good duck and goose shooting, but accessibility is restricted to the few. A general survey in this Division indicates migratory waterfowl are plentiful, and various sanctuaries show large populations.

Predator-control

There were 268 cougars and 6 wolves destroyed in this Division during the past year. So far no appreciable increase in cougar-kills has been noticed under the current bonus-bounty system, but it may require a little time for hunters to train additional dogs, etc., in order to produce results. In the meantime the bonus system seems to be an effective answer to the clamour for higher cougar bounties.

Many calls from remote settlements for help in destroying cougars kept Departmental hunters continually on the move, as the safety of the public cannot be ignored. This form of predator destruction—apart from the expense involved—interferes greatly with planned control in selected areas.

Timber-wolves cannot be said to be numerous, but small pockets of these animals are encountered in widely spread parts of Vancouver Island. Many exaggerated reports of their numbers are quoted from time to time, but few are trapped or shot. The six wolves presented for bounty during the past year practically all came from the Nanaimo and Cowichan areas.

Game Protection

There were 165 informations laid under the " Game Act " and Fisheries Regulations for various infractions; 164 convictions were obtained. An improvement in late shooting of migratory game birds was noted.

Game Propagation

The question of game propagation is receiving considerable study by Departmental biologists. Before an effective formula for propagation (this especially applies to upland game birds) can be carried out, the question of supply and quality, together with survival rate, requires considerable research. Added to this is the attitude of Agricultural Associations to the liberation of birds on their lands. It is more and more necessary for Gun Clubs and Game Associations to educate their members so that a harmonious understanding can be achieved between farmers and hunters.

Game Reserves

Strathcona Park, Shaw Creek, Bald Mountain, Elk Lake, Elk Falls, China Creek, and Miracle Beach are very effective reserves, with one or two of lesser extent that are really Class "A" parks covered under section 11 (2) of the " Game Act." The Shaw Creek reserve contains a considerable stand of elk.

Fur Trade

Much of the fur shipped from this Division is the product of fur-farms, but a good volume of wild fur is taken by trappers who ship direct to the Mainland.

Trap-lines

Registration of trap-lines and the measures adopted to control beaver are outstanding features of game management in this Province. A perusal of fur records will show a consistent supply of fur which shows no sign of diminishing. Very few of the

public realize the infinite amount of work and care that goes into the maintenance of a smoothly working trap-line registration system where detail in geographic problems and a very close check on catches has to be maintained at all times.

Registration of Guides

Guiding in this Division—with a few exceptions—is mostly confined to fishing in the Campbell River and Comox regions.

Special Patrols

No special patrols were carried out during the past year. Many of the west coast patrols, though carried out in remote sectors, were routine in nature and could not be classified as special.

Hunting Accidents

There were eight hunting accidents in this Division during the past year, four of which were fatal. In all cases the evidence shows carelessness and a disregard to the ordinary precautions necessary in handling firearms and hunting with companions. For detailed information covering the accidents, *see* report " Hunting and Fishing Accidents, 1952."

Game-fish Culture

Successful liberations of Kamloops and cut-throat fingerlings were made throughout this Division during the spring and fall. Cut-throat fingerlings released were of an exceptionally good size. In all, about 192,300 were planted in lakes and streams, with several thousand retained for experimental purposes.

Summary and General Remarks

The hunting success experienced by sportsmen during the past season showed a higher ratio than the previous year, and checking-stations were able to establish definite figures showing increased bags of deer and grouse. Very dry weather at the opening of the hunting season invariably has the effect of lessening the take of deer at the commencement, but hunters are usually successful at a later date. It must be remembered, as stated previously in this report, that deer on Vancouver Island are becoming more and more cautious each year as hunting pressure grows, and the halcyon days when a hunter could bag his old limit of three deer on the first day are gone.

Blue-grouse shooting was uniformly good, and ducks and geese were numerous even though fine weather kept them from the fields until almost the close of the season. Fishing has been good throughout the Island and is proving one of the major lures to tourists.

Good co-operation is maintained among the various Game Associations in this Division, and all problems have been settled amicably. The Royal Canadian Mounted Police in this Division have been most co-operative and, when requested, have at all times provided personnel to carry out checks on roads and boats for transportation. I wish to take this opportunity of expressing my gratitude to them. To the Game Wardens, predator-hunters, and personnel of the Puntledge Park Trout Hatchery, I wish to extend my sincere thanks for the able way in which they have carried out their duties to the Commission during the past year.

"B" DIVISION (KOOTENAY AND BOUNDARY DISTRICTS)

By C. F. Kearns, Officer Commanding

I beg to submit herewith my annual report for the year ending December 31st, 1952.

Big Game

Moose.—The stand of moose in the East Kootenay, while not heavy, appears to be stabilized, with a slow penetration to outside areas. The main stand is in the Rocky Mountain section, but they are in good numbers on the southern slope of the Selkirks and are occasionally in the East Kootenay. An open season in the Cranbrook district resulted in the taking of a few mature bulls.

Wapiti (Elk).—These animals are well distributed in the East Kootenay, and a short open season was allowed in the Creston district. A fair band of elk is now present at the top end of Kootenay Lake from a planting a few years ago, and a short open season should soon be considered there. The elk situation near Princeton and Penticton is being closely studied by the biological staff.

Caribou.—These animals are thinly distributed in the Selkirk Mountains adjacent to the Arrow and Kootenay Lakes. The short open season seems satisfactory, although only a handful of caribou are bagged, due to their high ranging habits. Caribou-hunting in the Kootenays is a vigorous sport.

Mountain-goat.—These animals are well distributed throughout the district and plentiful in the East and West Kootenays. The noticeable decline in the number of mountain-goat recorded previously still continues to be puzzling. Cougars, coyotes, eagles, and disease are all suspected, although our recent severe winters are probably the main adverse factor. However, the situation is not yet too alarming.

Mountain-sheep (Bighorn).—These animals are again in fair numbers after the epidemic several years ago, and it is hoped that they will continue their present satisfactory rate of increase.

Mule Deer.—It is pleasing to report that the present winter, 1952–53, has been unusually mild and that all deer have wintered very well. Examination of deer-kills—predatory or on the highways—during the months of February and March indicated that deer were in as good shape as in the hunting season—an unusual and gratifying condition. It is hoped that this favourable situation may partly compensate for our losses in the harsh winters we have had so recently.

White-tailed Deer.—The above remarks also apply.

Grizzly Bear.—These animals are well distributed but not plentiful. It may be a matter of regret that grizzly bear seem to be on the way out in this section of the Province where they can be so readily hunted in the spring. Already there is a current feeling among the sportsmen that the elimination of spring hunting might be a prudent conservation measure.

Black and Brown Bear.—These animals are well distributed and are plentiful.

Fur-bearing Animals

The prevailing low price of fur still continues to discourage trappers, although very few of them have given up their registered trap-lines. It is to be hoped that the price of fur will appreciate, as the increasing number of beavers as well as lynx and bobcats are causing us some concern. Game Wardens have been energetic in live-trapping beaver whose dams are flooding highways or railways and moving them to more suitable sites.

The prevalence of deer-kills by both bobcats and lynx has been rather surprising this past winter or two. The trappers formerly kept these animals under control when the prices were better, but now these predatory wild cats are too numerous and too active.

Upland Game Birds

Blue Grouse.—These birds were well distributed and very plentiful during the past season in the Boundary, Similkameen, and West Kootenay; also fair numbers in the East Kootenay.

Ruffed (Willow) Grouse.—These birds are well distributed and presumably on the same cyclical uptrend as the willow grouse.

Franklin's Grouse.—These birds are well distributed and presumably on the same cyclical uptrend as the willow grouse.

Sharp-tailed Grouse.—Several successive open seasons in the Columbia district do not seem to have changed their numbers, and they now appear to be well established and extending their range to portions of the East Kootenay, where they were quite plentiful half a century ago.

Ptarmigan.—These are alpine birds and are hunted very little. Most hunters regard them as a curio, and due to their trusting nature there is little inducement to bag them.

Pheasants.—The pheasant situation appears more encouraging than for some years, and there is every prospect of improved shooting for the future. While we have as yet no satisfactory explanation for the universal decline of pheasants a few years ago, it does seem as if this phase or cycle is now over and the good shooting of ten years ago may return.

European Partridge.—These birds are present but not numerous in the Creston, Grand Forks, and Penticton-Oliver districts.

Quail.—These birds are fairly numerous in the Penticton-Oliver-Summerland areas.

Canada Geese.—These birds wintered in good numbers in the Creston district. Practically all waters were open throughout the winter, and the usual concentrations were not apparent. It was not necessary to feed any migratory game birds as we usually do.

Ducks.—The main nesting areas for ducks are in the Windermere and Golden districts along the Columbia River sloughs and in the vicinity of Creston and Osoyoos. Many ducks stayed all winter due to mild weather.

Coots.—These birds are plentiful everywhere in this Division, but they are not hunted.

Wilson's Snipe.—These birds are migratory and present for only a few days each fall.

Swans.—Occasional.

Predatory Animals and Noxious Birds

Predators destroyed by game personnel during the calendar year totalled 83 cougars, 13 bobcats, 11 bear, 28 ownerless dogs, and 71 wild house-cats. It is difficult to estimate the total number of coyotes destroyed by means of poison baits, but a conservative estimate would indicate a large number of them were eliminated and there is a definite shortage where we have used poison. Several instances of this kind attest the efficiency of carefully placed poison baits for coyote-control.

The above summary is not intended to conflict with the detailed report of the Supervisor of Predator-control, but is merely to emphasize the active interest taken in the predator campaign by the entire field staff of this Division.

Game Protection

There were 173 prosecutions for infractions of the "Game Act," the Special Fisheries Regulations for British Columbia, and the "Migratory Birds Convention Act," which resulted in 169 convictions and 4 dismissals.

Game Propagation

No pheasant-stockings were made during the year, although a planting of chukar partridge was made in the Oliver district.

Game Reserves

The Elk River Reserve, comprising the upper watershed of the Elk and Bull Rivers, and also the White River, is the most important one, as it is situated in the heart of the

big-game country. Game-bird sanctuaries at Nelson and Vaseaux Lake, south of Penticton, are also beneficial, and their establishment continues to meet with general approval. Deer sanctuaries at Elko and on the Kettle River are located on winter yarding-grounds and serve as a haven should unusual conditions occur during the open season when deer might be too easily taken.

Fur Trade

Most of the fur in this Division is handled by local resident fur-traders or sent to traders in Vancouver. Very little fur is exported locally from the Province by trappers.

Registration of Trap-lines

Although fur prices continue to be very low, the value of trap-lines is such that very few of them become vacant. Most trappers are confident that the price of furs will improve ultimately.

Registration of Guides

The embargo against the export of meat last year practically eliminated the non-resident hunting in this Division. The odd party was taken out, but in general the guides had their slackest hunting season since the early war years.

Special Patrols

We have no special patrols other than routine ones made during the year on horseback, on foot, and with row-boats in the course of general duties. During the winter many trips on foot by personnel hunting cougars have resulted in prosecutions for illegal hunting and are productive of much reliable information about the winter game situation.

Hunting Accidents

There were three hunting accidents in this Division during the year, one of which was fatal. For detailed information covering the accidents, *see* report "Hunting and Fishing Accidents, 1952."

Summary and General Remarks

For the first time in several years it is pleasing to be able to summarize game conditions for the past year without striking a sour note. The closing winter months of 1952 were average; that is, the snow was not unduly deep nor was the weather unduly cold and all game got off to a good start in the spring. The summer was warm and fairly dry and merged so unobstrusively into the winter that the hunting season was over before winter had even started. The bag of all wild game was light, and much fear was expressed that our game animals were gone. This was a mistake, of course; they were simply not concentrated on the lower levels as they usually are in the late fall months.

We were favoured with the sort of winter that occurs three or four times in a century. The last similar winter was in 1925–26, although, if anything, this past winter was even milder. We had no snow to mention and no cold weather. The deer were on much of their summer range all winter, and their usual concentration on the winter feeding-grounds was missing, although in some customary places they did bunch up enough so that we could get a reasonable estimate of their stand. It is worth recording that deer were in as good condition during the months of January and February as they normally are in the hunting season. This means that our winter carry-over will be very high, the fawns will have a good start in life, and there is every reason to believe that next season's hunting should be good.

The usual cordial co-operation was received from the organized sportsmen during the year, and the assistance from both the Department of Public Works and the Forest Service in many instances is gratefully acknowledged.

Fishery Supervisor C. H. (Jimmy) Robinson, who is retiring March 31st, 1953, has completed fifteen years' service with the Game Department in addition to nineteen years previously with the Federal Department of Fisheries. It is an understatement to say that Mr. Robinson will be missed both in "B" and "C" Game Divisions. His careful attention to detail, his first-hand knowledge of all field problems, and his remarkable co-operation with the organized sportsmen's groups will leave a considerable gap in our Interior set-up. This is a day of new things, but Jimmy Robinson has done somewhat more than his share in maintaining the efficiency and prestige of our sport-fish programme in the Central and Southern Interior areas of British Columbia.

"C" DIVISION (KAMLOOPS, YALE, OKANAGAN, CARIBOO, CHILCOTIN, AND SQUAMISH DISTRICTS)

By R. M. Robertson, Officer Commanding

I have the honour to submit herewith my annual report on game conditions in "C" Game Division during the year ended December 31st, 1952.

Big Game

Moose.—The present open winter of 1952–53, with very little snow up to March 15th, 1953, was responsible for the unprecedented lack of big-game movement from the higher elevations to the more impoverished food-supply at lower levels. The rainfall record in the Kamloops district alone was 50 per cent below normal. The Thompson River gauge for the watershed at Kamloops has reached at the moment of writing, March 15th, 1953, a record low.

Hunters everywhere were keenly disappointed at the lack of good hunting at lower elevations, and the question was repeatedly asked, "Where are the moose?" The answer so commonly heard was that big game still remained either far back or higher up on the more inaccessible slopes. Some reports from hunters living in regions described as more remote revealed the fact that moose, even in those regions, were extremely scarce or non-existent.

The simple fundamentals of scarce food-supply, or even lack of the required nutrient for big-game sustenance, were due to conditions entirely out of human control. These conditions are just as cyclic as the rising sun, except that the memory of longer cyclic changes are non-existent in the public mind. The original causes of much of our meteorological phenomena on which big game has to depend for its sustenance is still very obscure to the world of science. Biologists have told us that we are faced with a diminishing food-supply for moose due to overcrowding ranges. A problem as simple as this could be intelligently handled by any farmer having live stock. The logical conclusion would be to reduce the herd to conform with the food-supply available. We have to contend with the ups and downs of the growth cycle, with its years of abundance and scarcity plus its nutrient content or lack of it. It is indeed possible for animals to starve on full bellies at the end of several dry and dull years. The entire problem of game management and its biotic relationship is to a large extent beyond the understanding of the layman. One cannot judge the quality of a regional food-supply by one range alone. Scientific examination has been made by the small staff of biologists whom we have at present to prove that there is sufficient evidence, relatively speaking, of a lack of nutrients and quantity of winter moose-feed, and, based on the amount of scientific information we have at hand, we are due for a jolt unless sensible action is taken. The alternative of sensible action is to take the advice of the hunter who hunts on the range for several days a year or even the trapper or guide (and there are hundreds) who try to judge the over-all picture from what happens on his trap-line or guiding area. Reasonable consideration for the other fellow's view-point is a basic fundamental of democracy, but in

the final analysis the preservation and conservation of wildlife resources must rest with the recommendations of the biologist and the co-operation of the sportsmen and wildlife enthusiasts. Old customs die hard. There is considerable room for education along more scientific lines. In a report published in the Canadian Journal of Research, October, 1950, by Professor Ian McTaggart Cowan and associates, they quote one authority "setting a higher protein level for a satisfactory diet," and state "feeding of domestic livestock a 12% protein diet is considered the minimum for a maintenance ration." On this basis, and according to Professor Cowan's findings, all the browse growth consumed by moose during the winter would be rated as deficient. Whether moose can live on a lower-quality nutrient is a subject for further research.

The year just past was a disastrous one for the Province. Foot-and-mouth disease in Saskatchewan barred the export of domestic cattle and game. In one sense it was a blessing in disguise in so far as exploitation of big-game resources was concerned. Our American friends who had planned a trip to this Province to hunt but did not come because of the embargo were not disappointed when they learned of the poor returns obtained by our resident hunters. The non-resident hunters who did come to this Province in 1952 practically ignored the taking of moose and deer because of the embargo. Only thirty-two moose were taken by non-resident hunters during the open season in the Cariboo and Chilcotin areas.

In the Merritt district the movement of moose proceeded slowly southward; a few were seen around the Mud and Alleyene Lakes areas. Reports from Clinton mention the poor food-supply and the prediction of another winter kill of moose. A few moose have been reported in the Bolean Lake country in the Falkland district near Vernon. Other reports from various Detachments, especially Kamloops, drew attention to the failing food-supply. The new growth of palatable willow around Kamloops is spindly and sparse; practically all the shoots are less than 8 inches long and less than one-quarter of an inch in diameter, which is truly indicative of the dry year. As a moose consumes 60 pounds of willow and other growth per day, one can only conclude that a wider browsing and diminishing of the year's growth will follow. Areas to the south of the Thompson River in the Kamloops and Merritt districts should be watched, and an open season on moose should not be delayed any longer than is necessary. This applies also to the north-west portion of the Salmon Arm Electoral District, where favourable reports of moose penetration are continually being received. The kill of moose in Wells Gray Park was also disappointing. Guides reported a poor season. A survey by aircraft this winter will reveal to some extent how we stand in comparison with previous years.

Tick infestation is reported in the area north of Quesnel River and east of the Fraser. A good calf-crop was reported last spring from the Quesnel Detachment. Three or four moose wintered near the airport at Quesnel, making the landing of aeroplanes hazardous. I wish to endorse the recommendation coming from the Quesnel Detachment that opening the season on both sexes at the same time tends to make the hunters careless. Hunters reported that bullets struck perilously close to them because of this fact. This precaution of opening the season on only one sex at a time was an opinion expressed and followed around 1932. Twenty years later it seems to have been forgotten.

What has been said of moose and its food-supply applies to a large extent to other browsing ungulates.

Deer.—The kill for the year past was extremely disappointing. In some areas in the Kamloops district the carcasses of deer were examined, and many were inclined to be suffering from malnutrition. The records of the frozen-food locker plant at Kamloops showed a 75-per-cent reduction in deer storage over that of the previous year.

Caribou.—One comment from the Quesnel Detachment is worth mentioning in connection with this species. Trappers report that caribou have, as a rule, a fair calf-crop in spring, but in the fall no calf tracks are seen. Whether this is due to predators or

some other cause is difficult to determine. The situation calls for a winter study similar to that being carried out by L. Sugden on mountain-sheep in the Churn Creek basin.

Mountain-sheep.—The seven days' open season on mountain-sheep at Squilax netted a total of five big-horn rams. For the first few days this area was hunted heavily, but due to the hot weather the results were disappointing. There are approximately 100 animals in this area. In the Shorts Creek district near Vernon very few sheep were seen.

Ewes were observed along the lake-shore all summer, which is a most unusual occurrence. Deterioration of food-supply, coupled with a very dry season and encroachment of forest-growth on sheep ranges, is one reason for no increase. In the Churn Creek basin there is no appreciable increase in numbers of mountain-sheep. This statement is characteristic of nearly all mountain-sheep areas. The Squam Bay area should remain closed for the protection of the very small band established there. In the Lillooet district a very small kill of mountain-sheep was reported.

Mountain-goat.—There are limited numbers around the Bowron Lake Game Reserve, but their numbers are not increasing. In the Lillooet district a slight increase is noted in the Cayoose and Texas Creeks areas.

Very few goats were taken from the Mount Robson district. A total of twenty-eight goats was taken by non-resident hunters through the Cache Creek Checking-station during the open season.

Fur-bearing Animals

A report from the Quesnel Detachment states that 108 beaver were taken. This is no indication of the potential catch, since the price factor plays a very large part in trappers' activities. Prices are not good at present, and there is little incentive to trap. From an area (Quesnel Detachment) of 7,000 square miles, only 34 fisher were taken. Also trapped were 82 marten and 131 mink. Squirrels took top place, with a total of 8,078 pelts. Indian trap-lines produced some fur, but we have no record of the total catch. Private-property trappers were also fairly active.

A most unusual sight in the Quesnel Detachment is to see lynx run across the roads in broad daylight. The low price for this variety of fur is partly responsible for the increase plus the upward trend of the snowshoe rabbit. One cannot compel trappers to spend much of their time on a trap-line under the present poor prices. The actual catch, even in higher-priced years, is far below the productive potential.

Upland Game Birds

After the disastrous disappearance of pheasants nearly two years ago, there is evidence of a decidedly strong come-back in numbers everywhere. Sportsmen with good hunting-dogs had little trouble getting their limit, although conditions were not up to the standard of former years. Vernon, as usual, retained its top position with a high pheasant population. Several counts taken in small fields in the Vernon area showed a relatively higher percentage of pheasants than was seen in any other Detachment.

In the Quesnel Detachment, willow and Franklin's grouse were numerous, but not as plentiful as in the previous year. The survival rate for 1953 will be an interesting feature in view of the expected cyclic decline. There are, no doubt, regional boundaries involved here.

The numbers of blue grouse taken in all Detachments are considerably less than those of other species. The fact that they take to the higher ranges as the season opens and that limited numbers of hunters follow them gives no indication of their increase or decrease.

Willow and Franklin's grouse are, in so far as the kill is concerned, more truly indicative of the upward and downward trends, since they are largely birds of the roadside. The Cariboo and Chilcotin, which are described geologically as the " great interior

plateau," may be, to some extent, outside the category of "higher ranges." Willow and Franklin's grouse were still very much in evidence, particularly willow, with a relative decrease in Franklin's. Sharp-tailed grouse are not native to the hills of this Province, but thrive better on the grain-fields and cattle ranges. Their numbers are very limited.

The 11,606 resident hunters visiting the Cariboo took 6,582 ducks, 425 geese, and 10,293 grouse.

Migratory Game Birds

The hunting of waterfowl was in line with other species of game. Spring migration was a normal occurrence, showing neither increase nor decrease. The mild weather kept the ducks on higher ranges, and no influx to lower waters took place until very late in the season. The hunting was poor everywhere. Migration in fall was long delayed and of a desultory nature. There is no such phenomenon as migration of clockwork precision in fall. In the north, advancing winter plays a part, with adult birds leading the way south.

Predatory Animals and Noxious Birds

For detailed information covering vermin killed by the Game Wardens in this Division, please refer to the "Statement of Vermin Destroyed by Game Wardens."

In a check-up of bounties paid on predators during the year 1952 in this Division, it was observed that more bounties were paid in areas where poisoning operations were carried out. It is possible that pelts may have been picked up by hunters on ranges where poison was used.

Game Protection

There were 442 prosecutions and convictions recorded in this Division during the year. With an astonishing increase in construction of logging-roads, the 300-per-cent increase in hunters carried their hunting activities farther afield. There is little use trying to cover such a vast network of roads with the present totally inadequate staff of Wardens. Prevention of violations when dealing with slower traffic was the order of the day many years ago under the then existing road system, but with the enormous development of our timber resources to which greater access has been provided, one could not begin to cover all the roads in the manner followed before the war. While enforcement of our game laws and regulations is a very necessary part of our duty, the integration of our work with the biological study of our game resources should take more prominence.

Through the road blocks carried out by the Game Wardens, statistical information useful to the biologists was obtained. At the Cache Creek Checking-station the kill and other valuable information were also recorded. Unfortunately, the decrease in non-resident hunters left a gap in our yearly statistics. Assistance of a limited nature, where possible, was rendered to fishery and game biologists and predatory-animal hunters.

Game Propagation

There were 308 chukar partridges and 1,392 pheasants liberated throughout this Division during the year. The Department of Indian Affairs, under the supervision of Fur Supervisor Robin Kendall, was given permission to take nuisance beavers for liberation on Indian trap-lines.

Game Reserves

Other than the Bowron Lake sanctuary, from which we take approximately fifteen beavers per year, no programme of development has been contemplated. There are areas in the Division in which no hunting has been allowed for years. It would indeed be interesting to know the results of a survey of the game resources within their boundaries and to assess their real value to our Province. Since conditions, as far as we know,

are static, little information of material value can be supplied. The Thompson River sanctuary immediately opposite the City of Kamloops is a bright spot as a waterfowl sanctuary.

Fur Trade

This business is in a comparative state of depression. Agents in the Interior invariably pass all furs into Coastal outlets. There is little to report under this heading.

Registration of Trap-lines

After a long period of effort to get individual Indian trap-lines registered, a great deal of progress has been made, particularly in the Quesnel Detachment. Arrangements were made with Robin Kendall, Fur Supervisor for the Department of Indian Affairs, to set things in motion and have the Indians and Agents and the local Game Wardens meet for the purpose of drawing a map of trap-line boundaries, many of which date back to the old tribal days. Previously, nearly all Indian trappers were confined to large blocks of territory where Indians agreed among themselves to respect each other's trapping rights. While this, in a measure, was satisfactory to the Indians, it did not provide us with a check system as to where many Indians were obtaining their pelts. To obtain a closer check, it was decided to change from the large tribal block to the individual trap-line, much the same as that of the white trapper. This work was ably carried out in detail by Game Warden H. J. Lorance, of the Quesnel Detachment, aided by Mr. Kendall and others. The Williams Lake and Vernon Detachments and Canim Lake Reserve have been completed. The Alexis Creek Detachment Indian blocks will be on the agenda for action shortly.

Special Patrols

A special patrol was made by Game Warden H. J. Lorance, accompanied by R.C.M.P. Constable George Hackin, who was engaged on police duty, and Robin Kendall, Fur Supervisor for the Department of Indian Affairs, to the Nazko-Kluskus Frontier Cattle Company area to draw up individual Indian trap-lines boundaries based largely on old historical family records. The patrol was made by car to Nazko, pack and saddle horse to the area occupied by the Frontier Cattle Company, and return to Nazko, thence by car to Quesnel. This patrol was undertaken from May 28th to June 12th, 1952. Mileage covered on the patrol was: By car, 175 miles, and by horse, 230 miles.

Hunting Accidents

Four hunting accidents occurred in this Division during the hunting season. For detailed information covering the accidents, please refer to statement "Hunting and Fishing Accidents, 1952."

Registration of Guides

The system of individual guiding areas, a great many of which overlapped, was abolished in this Division. There was no guarantee of individual hunting rights of a permanent nature. To prevent any suggestion of monopoly, each Detachment having moose and other big-game animals within its boundaries was divided into blocks of from 300 to 500 square miles each. This meant that most of the guides operating within the new boundaries were neighbours well known to each other. In carrying out the scheme, greater harmony among guides prevailed, and, by mutual understanding, guides invariably confined their hunting activities to their favourite hunting-grounds in an area where greater elbow room was provided. The scheme met with the approval of the guides, and I feel sure that when our American friends return after the foot-and-mouth disease embargo is lifted, they will appreciate the greater freedom of hunting movement over the newly formed areas of increased size.

SUMMARY

The past year, without a shadow of a doubt, from a hunter's point of view, was the poorest in the history of the Game Branch. Foot-and-mouth disease, now happily eliminated, was a destructive factor due to the embargo placed on the importation of big game into the United States. Greater stress should be placed on the importance of encouraging Prairie sportsmen to come to British Columbia to maintain the cropping of big-game ranges already overstocked. These deplorable results, both for big game and waterfowl, apart from the embargo, were due to conditions entirely out of human control. Scientific game management avails little if weather conditions are against any suggestion of normal movement of big game or waterfowl. The elements cannot be controlled, nor can the ups and downs or cyclic increases and decreases be switched to suit our purpose. We are the recipients of what nature hands out to us, but much can be learned from a scientific understanding of natural phenomena and knowing what to expect, and when to expect it, and how to deal with the effect of its occurrence. The suggestion, after limited scientific investigation, that moose-food during winter is deficient in protein content, relatively speaking, is worth further investigation. The question to be answered is whether moose can thrive on a low winter protein diet. Over-browsing is prevalent, except in areas of unpalatable swamp willow and other growth of a similar nature.

Our pheasant population has not fully recovered from its phenomenal overnight disappearance of two years ago. There are, however, signs everywhere of a strong come-back. The expected cyclic decrease of grouse has not yet become fully apparent. After the past hunting season, large numbers were still left, although a decrease is reported in some sections. Investigation of cause and effect in relation to a multiplicity of varying conditions both in the flora and fauna of British Columbia is impossible to attain with the limited staff of biologists we have at present. There seems to be little realization and appreciation of the enormity of the task simply because the hunter with a gun does not understand the problems arising out of adverse conditions beyond human control.

The wolf during the past three or four years has, relatively speaking, almost disappeared. The wolf is not here to accomplish the leveling-off of a surplus of moose unable to obtain full nourishment or quantity from its wintering-grounds. Our biologists and observing Game Wardens have drawn our attention to conditions affecting the food-supply and the effect in the form of annual die-offs. The brutal fact is that hunters do not like to hear the news. The whole of our natural resources must be scientifically and adequately managed from a biological and administrative view-point. We have a duty to perform for the benefit of future generations, and that duty should be carried out fearlessly. It is poor game management to increase certain species of big game to the point where they have to be winter-fed. We have been warned in the past by American authorities to keep our game resources as natural as possible. One hunter at a Game Association meeting summed up his knowledge of game management problems when he said, "What do I know about game conditions in this Province as compared to biologists who are spending six days a week studying game and its welfare?" Human judgment is not always infallible in the face of fluctuating conditions.

The revised guiding system of group areas to replace the individual guiding areas formerly established furnishes greater security for the guide and his family. It has been very well received by the guides generally. American hunters will welcome the greater elbow room afforded during their annual hunt, which many look forward to as the finest vacation ever.

In the fur-bearing world, prices were at a very low ebb. Trappers sought other employment of a more lucrative nature. This may be all to the good. I do not think that we have even remotely approached the fur potential. The forthcoming appearance of television is something for the biologist and the Game Warden to pleasantly contem-

plate. Its educational value is enormous. Visual education for the younger generation toward a better understanding of our wildlife resources has indeed a bright future.

To the Forest Service Parks Branch officials at Kamloops, and to officers of the Royal Canadian Mounted Police, officials of the Water Rights Branch, and Wardens of the Division, my thanks are gratefully extended for the very valuable assistance rendered and duty performed during the year. In conclusion and after completing thirty-three years with the Game Department, I would like to pay my respects to officials of the various Government departments in the Interior and especially in the Kamloops district for the splendid support and courtesy extended over the years. It is a record to which I look back with many happy memories of services rendered by Government officials in their effort to serve the public of British Columbia to the best of their ability.

"D" DIVISION (ATLIN, SKEENA, OMINECA, PRINCE RUPERT, FORT GEORGE, PEACE RIVER, AND YUKON BOUNDARY DISTRICTS)

By W. A. H. Gill, Officer Commanding

I beg to submit herewith my annual report covering game conditions in "D" Division for the year ended December 31st, 1952.

Big-game Animals

Moose.—These animals are plentiful throughout the Division, except along the coast and in the Fort Nelson area. In the spring of 1952 there was still 2 feet of snow with a heavy crust, which condition made moose easy prey for wolves and coyotes. This condition lasted for two weeks and was so severe that the moose were hardly able to move around enough to obtain sufficient food.

Moose ticks were scarce in 1952, but it was noticed that a great number of moose taken during the hunting season had tapeworms. As tapeworms are not dangerous to human beings when the meat is cooked, and since they apparently do not destroy the moose, they are not considered too great a menace.

In 1952 a great number of moose were taken by the local sportmen during the first two weeks of the season. After this, however, due to the mild fall, the moose moved back to the higher levels and few were taken.

A considerable number of poison baits were set out in order to destroy wolves in the more heavily populated moose wintering-grounds, with splendid results.

Deer.—These animals are still fairly scarce, except in the Queen Charlotte Islands, where a continuous open season has been in effect for the past several years.

Increases in the deer population have been noted in the Burns Lake and Prince George areas. I might say that, while setting out poison for predators, particular attention has been paid to the deer wintering-grounds.

Caribou.—These animals are slowly decreasing in numbers, but they may still be found in fairly large numbers in the Cold Fish Lake area and in the area between Fort St. John and Fort Nelson.

Black and Brown Bear.—These are not nearly as plentiful as in past years, and it is felt that the bear population has been sufficiently reduced by our Predator-control Branch to where they are no longer a major menace to domestic stock and game.

Grizzly Bear.—These big-game animals are plentiful and could stand to be hunted much more heavily than they are at present.

Mountain-sheep.—Mountain-sheep are still found in large numbers north of the 56th parallel, but the white sheep (*Ovis dahl*) are scarce.

Mountain-goat.—These animals are plentiful wherever the terrain is suitable. In this Division, few are taken by the sportsmen.

Wapiti (Elk).—Elk are very scarce in this Division; a few bands are reported in the Wapiti River, Moberly Lake, Germansen Lake, and Tête Jaune areas. We hope to

be able to release some elk in the Butcher Flats area west of Bednesti Lake in the Fort George District.

Fur-bearing Animals

Marten.—These splendid fur-bearers are steadily increasing, and no doubt this is greatly due to the low prices being paid by fur-traders.

Beaver.—These animals are plentiful, and old-time white trappers report that as far back as they can remember beaver are far more numerous now than at any time in the past.

Due to the Indian practice of taking as many beaver as possible at each colony, some of the Indian trap-lines are still understocked. However, I feel that this practice is being gradually overcome through the efforts of Robin Kendall, Fur Supervisor for the Department of Indian Affairs.

Fox.—Due to the fact that there is no market for fox-pelts, trappers have stopped trapping these fur-bearers, and consequently they are becoming plentiful.

Mink.—An increase has been noted in the mink population, but due to the pelts of these animals being in good demand, the trappers are taking more than in past years.

Fisher.—These animals are steadily increasing, but because of the uncertain fur market, they are not being trapped to a great extent.

Lynx.—Lynx are very plentiful; this, no doubt, is due to the abundance of rabbits, and due to the fact that they are not being heavily trapped because of low fur prices.

All other fur-bearers are holding their own. However, it is believed that squirrels are decreasing slightly in some areas. They are still being heavily trapped, as prices are fairly good.

Upland Game Birds

Pheasants.—The Smithers Rod and Gun Club was supplied with twenty adult pheasants. These birds were kept in pens, and the eggs obtained from them were hatched. Toward fall, some of the birds were released. Out of the twenty birds received from the Game Commission, one was dead on arrival and three were badly injured. Fourteen of the original birds are still alive, and ten birds raised by this active club appear to be quite healthy. The club still has two pens of pheasants which are being kept for breeders for the spring of 1953. They plan to incubate all eggs obtained and to release the birds in the fall.

Some of the pheasants released in the Vanderhoof and Dawson Creek areas are still alive, but no increase has been noted.

Willow Grouse.—A slight decrease in willow grouse in certain areas was noticed. However, it would appear that they are still plentiful and a good season for 1953 can be expected.

Blue Grouse.—These birds are scarce in this Division and are seldom seen.

Franklin's Grouse.—Franklin's grouse (fool hens) are still scarce and have shown no increase since 1949.

Prairie-chicken (Sharp-tailed Grouse).—Prairie-chicken are plentiful in all the farming districts in this Division. As many as 100 birds have been flushed in one flock. I believe a longer season should be put into effect in order to spread these birds out and decrease their numbers before some disease destroys them.

Migratory Game Birds

Ducks and Geese.—Very poor duck-hunting was experienced in most areas in this Division. Because of a mild fall the birds did not arrive as early as usual. When the migration started, the birds passed right on through owing to a sudden storm and the lateness of the season.

Local ducks and geese showed a slight increase.

Destruction of Vermin

Timber-wolves and Coyotes.—An extensive coyote and wolf poisoning programme has been carried out in and around the farming areas. Horses have been obtained in all farming communities, and 1,080 poison stations have been set out.

Considerable work has been undertaken in putting out poison stations in localities where heavy concentrations of wolves are known to be destroying game animals. All this work and the results obtained are reported to the Supervisor of Predator-control, G. A. West, and, therefore, I would refer you to his report on the subject.

I wish to thank all farmers and loggers who donated the twenty-nine horses used in our poisoning operations, and also others who so generously assisted us in this worth-while effort.

Cougars.—These predators are increasing slightly, but not in sufficient numbers to warrant the employment of predatory-animal hunters or keeping trained dogs in this Division to hunt cougars.

Magpies.—Magpies are steadily increasing and are being hunted more extensively by game personnel.

Eagles.—Numerous reports have been received from trappers in connection with eagles killing muskrats. These birds seem to be increasing.

Game Protection

As stated in previous Annual Reports, a Department-owned aircraft is definitely needed. With the ever-increasing use of aircraft by sportsmen in this vast Division, it is impossible to check them when they are permitted to land on lakes which are hundreds of miles inland and which are impossible to reach by road or by any other means of transportation at our disposal. Such aircraft could be used almost continuously in this Division alone.

A considerable increase in population in this Division has occurred. Many permanent residents have moved into the district, as well as a number of transients, the majority of whom are employed by the Aluminum Company of Canada or by the Columbia Cellulose Company plant at Prince Rupert. The opening of the John Hart Highway has also been responsible to some degree for the increase. As a result of this great influx in population, a large increase in the number of prosecutions has occurred. Two hundred and fifty-two convictions were obtained during the period from January 1st to December 31st, 1952.

A new Detachment has been opened at Terrace. This was necessary because of the great increase in population in that area. This increase is caused mainly through the Columbia Cellulose Company logging operations and the construction of the highway and railway from Terrace to Kitimat.

Because of the unexpected development in the Atlin district, it is felt that a Game Detachment will be necessary there in the near future.

Game Propagation

Pheasants.—Twenty adult pheasants were donated to the Bulkley Valley Rod and Gun Club at Smithers. These birds were placed in suitable pens pending favourable weather, and as the birds were still laying, a number of eggs were gathered and hatched, with the result that ten additional birds were raised. In December of this year, fourteen of the original birds were still alive and all of the ten young birds survived.

The Bulkley Valley Rod and Gun Club still has two pens of these birds in captivity and will hatch all eggs obtained, and any young birds raised will be liberated in the fall in the Smithers area.

Elk.—It is hoped that the request submitted by the Prince George Rod and Gun Club for the liberation of elk at Butcher Flats will be given favourable consideration.

Beaver.—Beaver liberated in this Division have all become well established in suitable areas. All trappers who obtained beaver from the Department for propagation purposes are very pleased with the results.

Game Reserves

There are only three small game reserves in this Division. These are located around towns and are more for the protection of the public than for game.

The Nechako Bird Sanctuary at Vanderhoof has resulted in providing far better field shooting for local sportsmen. Now that the Aluminum Company of Canada has shut off the flow of water in the Nechako River with the Kenney Dam, it is not known whether or not this sanctuary will be inhabited by migratory birds as in the past unless considerable work is done on the river-bed in order to hold back sufficient water for the protection of ducks and geese resting on this sanctuary.

It is hoped that a migratory game-bird sanctuary will be established at Buckhorn Lake (Buckthorn Lake) in the vicinity of Prince George for the purpose of making a resting-place for ducks and geese and thereby providing better sport for the local residents.

Fur Trade

Due to the low price being paid for raw furs, trappers have not been as actively trapping their lines as in the past.

Registration of Trap-lines

Very few complaints are received. However, because of the newer maps being brought out from time to time, a great deal of work is involved in changing registrations and relocating the trapper's registered areas in conformity with the new maps.

Game Warden J. A. McCabe, of Fort Nelson, has completed registering almost all the outstanding registrations in the Fort Nelson area. He is greatly handicapped in this work because most of his Detachment can be reached only by dog team. Many patrols have to be made, and many trappers must be interviewed before a trap-line registration can be completed.

Registration of Guides

This system is working very satisfactorily. Complaints are no longer received from guides or visiting sportsmen, as was the case in the past when guides were not restricted to certain areas.

Special Patrols

Five special patrols were made in 1952. Game Wardens J. A. McCabe and B. Villeneuve made a special patrol to Hay Lakes, Alberta, in February, 1952. The patrol lasted for thirty-one days, and a distance of 720 miles was covered by dog team and 133 miles by car. This patrol was undertaken for the purpose of checking Alberta Indian trappers who are trapping in British Columbia and to observe the beaver population. Extremely severe weather was encountered on this patrol, and the hardships endured by these Game Wardens have shown them to be a credit to the Department.

In June, 1952, a special patrol was made by aircraft to Hay Lakes, Alberta, in company with Game Wardens J. A. McCabe and B. Villeneuve, and Fur Supervisor for Indian Affairs Branch, R. Kendall, and myself for the purpose of holding a joint meeting with the Indian Affairs Branch and the Alberta and British Columbia Game Branch representatives in order to clear up points of dispute regarding Alberta Indians trapping in British Columbia and to make recommendations for better fur conservation.

In June, 1952, Game Wardens McCabe and Villeneuve made a special patrol by river-boat to Fort Liard, Northwest Territories, in order to check fur-buyers' books and

interview enforcement officers for the Northwest Territories. A distance of 400 miles was travelled by boat.

Two patrols were made to Haynes, Alaska, during the months of September and October by Game Wardens J. Stewart, of Lower Post, and J. A. McCabe, of Fort Nelson. These special patrols were made for the purpose of checking hunters. On these patrols 4,722 miles were covered by car.

Hunting Accidents

There were two hunting accidents in this Division during the year, one of which was fatal. For detailed information covering the accidents, *see* report "Hunting and Fishing Accidents, 1952."

Game-fish Culture

Coarse-fish traps in Beaverly and St. George Creeks, one of which flows into and the other out of West Lake, were operated continuously during the coarse-fish run.

A trap was also operated in Cluculz Creek at the outlet of Cluculz Lake. Fish tox was used in Beaverly, St. George, Cluculz, Norman, Deep, and Sucker Creeks. Samples of fish were weighed at each operation, and it is estimated that approximately 34 tons of coarse fish were destroyed in all. Less than 100 trout were destroyed in these operations.

Several lake surveys were carried out in this Division by the Scientific Branch, who, no doubt, will be submitting a detailed report on their findings and also on the number of fry and eggs planted.

I wish to thank the Bulkley Valley and Prince George Rod and Gun Clubs for their splendid work in connection with fish-culture.

Summary and General Remarks on Game and Fish

I feel that the game and fish in this Division are in a satisfactory condition. However, I would like to stress the need for more suitable equipment for the use of Game Wardens and predator-hunters in combating the timber-wolves and for carrying out checking in remote areas we are unable to reach at present.

I wish to thank all Game Wardens and office staff for their splendid co-operation.

SUMMARY OF REPORTS SUBMITTED BY GAME WARDENS IN "E" DIVISION (MAINLAND COAST NORTH TO TOBA INLET AND LOWER MAINLAND AS FAR INLAND AS NORTH BEND).

Big Game

Deer (Coast or Columbian).—Fairly numerous throughout the whole Division.

Elk (Wapiti).—The herd of wapiti in the McNab Creek area, Howe Sound, appears to have reached its peak in numbers because of lack of suitable browse.

Black or Brown Bear.—Notwithstanding a continuous open hunting season being in effect on these animals, very few have been taken, and reports of damage have been increasing.

Grizzly Bear.—At the heads of Loughborough Inlet, Phillips Arm, Frederick Arm, Bute and Toba Inlets, grizzly bear are fairly plentiful. As access to these regions is somewhat difficult, they are not hunted to any great extent.

Mountain-goat.—These animals are in fair numbers at the headwaters of Coquitlam, Alouette, Stave, Davis, Harrison, and Chehalis Lakes, as well as in sections of the Chilliwack district.

Fur-bearing Animals

Due to the downward trend in the fur market, fur-bearers have not been as heavily trapped as in the past, and consequently a general increase has been noted in all fur-

bearing animals, especially racoon and beaver. However, in the Alert Bay Game Detachment, due to a lengthy strike of fishermen, trapping was carried on more extensively than in the past.

Upland Game Birds

Grouse (Blue and Willow or Ruffed).—In this Division blue grouse in most sections are not plentiful, but willow or ruffed grouse seem to be increasing slightly in some portions.

California Quail and Hungarian Partridge.—These birds are found only in a few sections of the Lower Mainland, where they are not very plentiful.

Pheasants.—Hunting of this wonderful game bird provides enjoyment to large numbers of hunters residing in the fairly heavily populated areas of the Lower Mainland; so much so that it has become a very difficult problem to provide sufficient birds to satisfy this large number of hunters, especially in a fairly restricted hunting area which in recent years has become more restricted through increased population.

The Delta region is probably the most heavily hunted, with good to fair sport being obtainable in the areas on the north and south sides of the Fraser River as far east as Rosedale.

During the 1952 open season, fair bags of pheasants were secured, and reports indicate that there were more birds present than during the 1951 season.

Migratory Game Birds

Ducks and Canada Geese.—Climatic conditions prevented any great amount of hunting, although birds were more numerous than in the past years. Fair bags of ducks were frequently secured off the mouth of the Fraser River.

During the summer a greater number of resident ducks were to be noticed in many sections of the Division.

Black Brant.—In the Boundary Bay area, the principal hunting territory for brant, birds were not very plentiful during the open season, but after the season expired, large concentrations of brant were to be observed.

Snow Geese.—As in the case of brant, these birds were far more plentiful after the hunting season had finished than during the period when shooting was permitted.

Band-tailed Pigeons.—These birds were to be found in scattered numbers throughout the Division and were probably more numerous on the Lower Mainland in sections frequented by pigeons each year.

Wilson's Snipe.—While not very plentiful, they are not hunted to any great extent.

Predatory Animals and Noxious Birds

Cougar, red fox, bob-cat, and racoon, along with black bear, have been responsible for numerous complaints of damage, and many of these animals were destroyed during the year. Crows and big-horned and snow owls are the principal noxious birds to be found in the Division, but their numbers are being kept down through constant shooting.

Domestic dogs and cats have been responsible for the destruction of game and domestic animals and birds. A number of reports of dogs running deer have been received and attended to with considerable success.

Game Protection

Attention is drawn to the statement of prosecutions found in another portion of this Report.

Game Propagation

The policy of purchasing and releasing pheasants in suitable habitat has continued, and, from returns received, many of these released birds were brought to bag during the open season.

Game Reserves

The existing game reserves in the Division have been constantly patrolled, and these areas have provided rest and a haven for migratory waterfowl especially.

Fur Trade

Reduction in fur prices has been very noticeable, and, as a result, trapping has not been carried on as extensively as in past years.

Registration of Trap-lines

Through this system of trap-line control the registered trapper is afforded protection, and there would appear to be very little doubt that this system has been responsible for a regulated fur harvest each year.

Registration of Guides

As this Division cannot be classed as a good big-game country, there have been very few guides operating in the area.

Special Patrols

Many patrols have been made during the year, but none of these can be classed as special patrols.

Hunting Accidents

See statement on "Hunting Accidents."

Game-fish Culture

A great many lakes and streams have received plantings of trout from the Smiths Falls Hatchery at Cultus Lake. For further particulars, attention is drawn to the distribution statement which is to be found in another portion of this Report.

Summary

All Game Wardens in the Division express appreciation for assistance rendered by personnel of other Government departments, Game Associations, farmers and sportsmen in general.

ANNUAL REPORT OF THE FISHERIES MANAGEMENT DIVISION

By Dr. P. A. Larkin, Chief Fisheries Biologist

In 1952 the Fisheries Management Division began its first year of operations as an integrated unit. Estimates for the Hatchery Branch and Scientific Fisheries Branch were combined, both Branches coming under the direction of the writer, and the administration of all of the fisheries work was reorganized. The fisheries work is now set up under four divisions, each in charge of a permanent staff fisheries biologist; namely, Protection, Management, Research, and Hatcheries. Each Branch has an assistant fisheries biologist. While this organization is not completely consistent with modern concepts of fish-cultural practice, it is an expedient arrangement which, while it reflects current problems and past practices, nevertheless has proven exceptionally suitable to handling the accelerating fisheries work of the Department. The staff of the Division was increased by the appointment of six permanent men in 1952 as a part of the programme of expansion. The new appointments were mostly recruited from former temporary staff, and in consequence all of the new men have done exceptional work in their first year with the Department. The following annual reports of the four

Divisions in the Fisheries Branch clearly indicate that 1952 was a year of considerable accomplishment.

Hatchery Division

The statements of trout liberations from Departmental hatcheries indicate the bustling activity characteristic of the hatchery staff. Some striking changes were made in the hatchery work in 1952. Loon Creek Hatchery, for the first time, raised advanced fry for planting in Cariboo lakes. This programme was successful and will be accelerated and improved in 1953. Summerland Hatchery acquired five new rearing-ponds which were used in large part for raising fingerlings for planting in Shuswap Lake. Cut-throat brood stock at Smiths Falls Hatchery produced sufficient eggs to allow a switch over to cut-throat rearing at both Smiths Falls and Puntledge Park Hatcheries. However, difficulties in obtaining condemned liver and spleen for trout-food at the hatcheries as a consequence of foot-and-mouth disease embargo put a crimp in an otherwise successful year of operation. A large fraction of the trout at the Summerland Hatchery had to be released in December and January as a necessary economy; there was a heavy loss at the Smiths Falls Hatchery because of dietary deficiencies, and all hatcheries had to do a resourceful job of manipulating stocks of trout-food in the emergency.

Substantial improvements were made in the permanent installations of all of the hatcheries during the year.

Hatchery Biological Experiments

By I. Barrett, Division Fishery Biologist

Further experiments on the effects of starvation on various aspects of the physiology of the Kamloops trout were conducted at the Summerland Trout Hatchery from October, 1952, to March, 1953. These experiments were a continuation and extension of those which had been run during the winter of 1951–52 at the same hatchery.

The study involved an investigation of the following physiological aspects of starvation: Activity (cruising speed); tolerance to high temperatures; respiration (carbon dioxide-oxygen relation); active metabolism; total fat content; total water content; hæmoglobin content of blood; protein content of blood serum; and growth rate. The fish used were of two age-groups—17 to 20 months old and 8 to 10 months old. These formed the basis for a duplicate set of experiments over the six-month course of the current investigation.

Although the analysis of the data is incomplete, some generally indicative results and trends of the research can be seen. There is a drop in the cruising speed (swimming ability) of starved trout, although this drop is not directly proportioned to the length of time that the fish have been starved. Starved Kamloops trout are more sensitive to high temperatures than are unstarved ones. A greater percentage of starved fish die, and die sooner, than do control trout held in the same lethal-temperature bath. In the respiration work it has been shown that starved fish are less able to extract oxygen from water in the presence of carbon dioxide than are well-fed trout at an intermediate range of carbon-dioxide content. Above and below this range there is no apparent difference of effect of carbon dioxide on either starved or unstarved trout. There is some indication that trout unfed for long periods require more oxygen than their unstarved counterparts to do the same amount of work. However, the data on this point require further analysis.

The total fat content of the starved fish drops steadily until after 100 days of starvation; there is almost no fat left in the body. A slight increase in the water content of the starved fish indicates a possibility of a disruption in osmotic balance and in salt content. Both the blood hæmoglobin and the serum protein content vary greatly within the control Kamloops trout due to a variety of factors and therefore present little possibility of determining changes due to inanition. In addition, there is a general loss of

weight (possibly complicated by an intake of water) and a drop in growth rate with prolonged starvation.

A general pattern readily emerges from these findings. When trout are starved, they lose weight and start to use their own body fats and tissue proteins to maintain life. Their osmotic balance is upset. Vitamin, mineral, and hormonal relationships are disrupted. The starved fish become excitable, compared to well-fed trout. In other words, the fish are subject to a number of internal stresses, initially induced by starvation. When these fish are exposed to additional external experimental stresses—swift currents, high temperatures, high carbon-dioxide dosages, and induced work—they cannot respond to these stresses as well as well-fed fish. These results and their obvious implications may be applied (with reservation) to some hatchery practices and to some problems of population dynamics.

Protection Division

By R. G. McMynn, Division Fishery Biologist

Activities of the Protection Division during the year 1952–53 are briefly outlined in the following report. These activities appear to fall most conveniently into four categories—Water Licences, Pollutions, Obstructions, and Research.

Water Licences.—The submission by the Comptroller of Water Rights of all water-licence applications, renewals, and extensions to the Game Commission for their clearance and approval has again proven to be a most valuable service. Our early notification of all proposed industrial and mining developments which plan to utilize water enables us to evaluate such projects in the light of their anticipated effects on the game and sport-fish resources of the area. In many cases, recommendations for the protection of the wildlife resources have been made and acted upon.

A new system of processing and filing all water-licence applications was initiated during the latter part of 1952. This system, incorporating printed forms, is proving to be most effective in the handling of the many applications which are received each month.

Last year 906 water-licence applications, renewals, or extensions were investigated by Game Department personnel. The following breakdown indicates the number of applications studied in each division during the year 1952–53:—

	Applications
"A" Division	180
"B" Division	267
"C" Division	248
"D" Division	40
"E" Division	171
Total	906

Pollutions.—A number of stream pollutions (or potential stream pollutions) were investigated by the Game Department in 1952–53, and in most cases successful abatement was achieved.

Mining activities, especially in the Kootenay Districts, were responsible for a number of investigations (competently dealt with by Fishery Supervisor Robinson). Although mine tailings usually do not contain chemical substances which are directly harmful to fish, the silting problem often destroys trout spawning-grounds as well as the food organisms upon which fish normally thrive. Rather than outlining details of each investigation (available in the files), the numerous pollution studies are summarized in the following breakdown:—

(1) Mining pollutions:—

(*a*) Abatement plans completed:—

Highland Belle, base metal, Kettle River.

Kootenay Belle, base metal, Kaslo Creek.

Mastodon mine, base metal, Mastodon Creek.
Estella mine, base metal, Wasa Lake.
Hudson Bay mine, base metal, Sheep Creek.
Jackson Basin, base metal, Kaslo Creek.
Blue Belle, base metal, Kootenay Lake.
Deeks-McBride, gravel-washing, McKay Creek.
Deeks-McBride, gravel-washing, Capilano River.
Capilano Crushing Company, gravel-crushing, Capilano River.
Canadian Exploration, base metal, Salmon River.

(*b*) Pending:—
Ainsworth Base Metals, base metal, Woodbury Creek.
Canadian Exploration, tungsten, Salmon River.
Sheep Creek Gold Mines, base metal, Healy Creek.

(2) Other pollutions:—

(*a*) Abatement completed:—
Marysville Fertilizer Plant, gypsum, St. Mary River.
Canadian Pacific Railway, oil pollution, Coquitlam River.
Cowichan River, sewage chlorination.

(*b*) Pending:—
Canada Packers, vegetable-cannery, Atchelitz Creek.
Cawston Cannery, vegetable-cannery, Lowe Brook Slough.
Fraser Valley Milk Producers, milk wastes, Luckakuck River.
Celanese Corporation, pulp and paper, Arrow Lakes.
Slaughter-house, Luckakuck River.

As a result of the Province's present industrial boom, 1952 produced a number of obstruction problems, chiefly in the form of dams. In order that sport-fish interests might be protected, many of these projects were investigated and reported upon. In the following projects, protection of the sport-fish resource was achieved through the construction of fish-ladders, the clearing of reservoirs or the regulation of water spillage to provide minimum flow:—

Springbank Dehydration Company, irrigation, control of spillage.
Hicks Lake, recommendation of dam-removal.
Lardeau River, log-driving, strong objection by Game Department—results still pending.
Harmac Pulp-mill, water storage at Fourth Nanaimo Lake, reservoir-clearing and fish-ladder.
One Mile Creek, irrigation-dam, fish-ladder.
Small River, irrigation-dam, fish-ladder (now being constructed by Federal Fisheries Department).
Theodosia River, river diversion, provision of minimum flow.
Buttle Lake, proposed storage, public hearings.
Rainy River, water storage, provision of minimum flow.
Spillimacheen River, power and water storage, reservoir-clearing recommended (pending development).
Coquihalla River, oil pipe-line, alternate route suggested and will be followed.
Violamac Mines, Wilson Creek, power-dam, reservoir-clearing recommended.
St. Mary Lake, outlet-clearing recommended.

General.—In addition to the above investigations, a number of other duties were carried out by the Protection Division during the year 1952. These can be briefly summarized as follows:—

(1) Scale readings of all cut-throat trout scale samples submitted by anglers from the Lower Mainland.
(2) Poisoning of Goodacre Lake in Victoria.

(3) Preparation for publication of a paper entitled " The Effects on Sport Fish of Present and Future Water Utilization on the Campbell River Drainage System."
(4) Lake surveys of Stave Lake, Alouette Lake, and St. Mary Lake.
(5) An intensive investigation of Salmon River (Langley area). The interim report follows.

Salmon River.—Many streams on the Lower Mainland and Vancouver Island have had their drainage-basins largely denuded of forest-cover by the increasing utilization of land for agriculture. Many small diversions take water from these streams for domestic or irrigation purposes. These land- and water-use practices tend to increase the rate of run-off, lower the water-table, and reduce minimal summer stream-flows to the detriment of fish populations.

The Salmon River in Langley Township is a good example of the above trends, and a continuing investigation has been carried out on this stream since July, 1952. The purposes of the investigation are to evaluate the stream as a spawning and rearing area, to estimate the effects of land use, and to formulate remedial measures if possible.

It has been found that the stream is a substantial spawning and rearing area for cohoe salmon and sea-run cut-throat trout, with large areas of excellent spawning-gravel, cover, and food production in the upper reaches. The mature trout provide a fair sport-fishery when on their spawning migrations to the river.

Although the stream-banks are largely untouched in the upper reaches, the surrounding land in the drainage area has been increasingly used for agriculture. This has resulted in more rapid drainage, with attendant violent fluctuations in stream-flow. Winter floods scour the bottom in the lower reaches and remove all fish-food organisms temporarily. Food production in the upper reaches is high throughout the year. Actual diversion of water for domestic and irrigation purposes does not constitute a significant reduction in flow, but the generally decreased water-holding capacity of the drainage area has probably resulted in reduction of fish habitat during the dry summer months.

As no natural storage areas are available in the headwater region of Salmon River, little can be done to conserve water in the face of increasing agricultural expansion. The remaining brush and forest-cover along the stream-banks could well be left untouched to provide shade, cover, and to prevent erosion.

Management Division

By S. B. Smith, Division Fishery Biologist

With the appointment of G. E. Stringer as Assistant Fisheries Management Biologist in May, 1952, it was possible to plan for considerably broader field operations in 1952–53. However, since Mr. Stringer was not available to this Division until August, the major portion of field activities in the Fisheries Management Division took place in August and September.

The period from April 1st to August 1st was occupied mainly with completion of research dealing with methods of calculating fish lengths from scales and with variations in growth of trout in Paul Lake. It is planned to gather some further complementary data during the coming summer, and the research should be in a sufficient state of preparedness to make possible submission for publication by November or December, 1953.

Routine laboratory work, scale-readings (from samples submitted by anglers), investigations of the Vedder and Seymour Rivers, together with some time devoted to planning and setting up routine recording systems for data pertinent to this Division, occupied most of the month of July. In addition, two field-trips to the E. C. Manning Provincial Park were carried out to assist in establishment of an extensive creel-census programme for the lakes in the park.

Activities in August were confined mainly to investigation of fish reclamations and transfers. Extensive field-trials were carried out with an electrical fish attractor, with which it was hoped that large numbers of fish could be captured in the period of low water when they had become stranded, particularly below irrigation diversions. The electrical equipment was tried out in five localities (Alouette River, Loon Creek, Upper Paul Creek, Quilchena Creek, and Aberdeen Creek). It is with regret to say that encouraging results were not obtained, and that future possibilities of reclaiming stranded fish with the type of equipment presently available do not appear too hopeful.

Also in August a modified Oneida trap-net was used for investigation of the possibility of transferring large numbers of small fish from over-populated lakes to waters where they might provide additional sport-fishing. It was particularly hoped that fish in the length range 6 to 8 inches might be trapped and transferred to lakes containing coarse fish, in the expectation that survival of the transferred fish would be sufficient to provide an important adjunct to hatchery liberations in those waters. For the lakes which were investigated, it was found that the effort required to operate the trap-net (in terms of wages for two men) was not compensated by the returns in the number of fish captured. However, the possibility has not been discounted that lack of success was due to hot summer weather (and lack of movement of fish into the shallow zones where the nets were operated) or that more suitable lakes could have been chosen.

Investigation was made of the opportunities for introductions of bass to waters unsuitable for the production of trout. Bass were trapped in Shannon Lake near Westbank, in the Okanagan Lake area, and transferred to Yellow Lake near Keremeos. Results of this initial transfer will not be known for at least two years, but ease of capturing bass has led to planning for trapping and transfer of this species in 1953 from Shannon Lake to Garcia Lake in the vicinity of Merritt. This and other proposed transfers of bass will be observed closely in subsequent years.

One major fish reclamation was carried out during the first week in September. In company with members of the Vernon Rod and Gun Club, approximately 5,000 fish, 6 to 8 inches in length, were salvaged from the outlets of Aberdeen and Haddo Lakes in the Lumby area. These fish were transferred by tank-truck to Kalamalka Lake near Vernon. It is planned to carry out the above reclamation project three times during the summer of 1953.

Preliminary organization of an anglers' survey was completed in October, 1952, and a questionnaire form was drawn up. The purpose of the survey by questionnaire was pointed toward assessment of the economics and distribution of the British Columbia sport-fishery. It was not found possible to carry out the survey in the fiscal year of 1953, but it is planned to complete this work in early 1954. Analysis of the Manning Park creel-census data was completed and forwarded to the British Columbia Forest Service, Parks and Recreation Division, in January, 1953. The programme proved to be highly successful, and recommendations regarding management of the sport-fishery in Manning Park are outlined in detail in the report.

Over 400 resort operators were circularized in January, 1953, requesting assistance in gathering catch statistics on the lakes and streams where resort businesses are operating. To date, response has been gratifying, with more than 150 operators signifying their willingness to co-operate. Record-books and cards have been sent to all those who have replied, and it is expected that eventually over 200 resort operators will give assistance. Game Wardens will assist with the resort operators' fishing records, and it is hoped that most of those operators keeping records for the British Columbia Game Department will be contacted personally this summer.

Record-books similar to those supplied to resort operators have been printed and will be made available to Game Wardens for the summer fishing season in 1953. These latter record-books will enable Game Wardens to gather catch data from anglers during the course of their routine patrol activities.

It is felt that catch data supplied by Game Wardens and resort operators, together with results of the proposed anglers' survey by questionnaire, will make possible the first comprehensive evaluation of the sport-fishery of the Province. Completion of this work will be given every attention, in the hope that publication will be possible by February or March, 1954.

A comprehensive review of the literature pertaining to aquatic-weed control by chemical treatment was carried out during the past two months. It has been submitted in report form to the British Columbia Department of Agriculture and the British Columbia Game Commission.

Fishing records gathered at the British Columbia Game Department checking-station at Cache Creek, covering the period 1949 to 1952, inclusive, are in the final stages of preparation. A report covering analysis of these data will be available shortly.

Activities presently are centred on the compilation of pertinent field information on lakes and streams which support sport-fishing. Record-cards have been printed and will list all available data regarding management of the various areas. Liberations of trout for the period 1948–52 and for subsequent years will also be recorded on these cards. It is hoped that as the file becomes more complete, it will provide the means of facile inventory of management problems and activities, and will aid greatly in future planning in this Division.

Time spent on routine analyses, laboratory work, scale-readings, and similar work has not been stressed, although it has occupied, in some months, a considerable portion of the time available. If previously discussed plans materilize for transfer of G. E. Stringer to a position as regional biologist, it is suggested that consideration be given to the appointment of a technician for this Division in 1954.

In conclusion, it may be stated that much of the success of work accomplished in this Division in the past twelve months can be attributed to the continuing enthusiasm and energy of G. E. Stringer as Assistant Fisheries Management Biologist.

Research Division

Lake Surveys

By T. G. Northcote, Assistant Fishery Biologist

In termination of a general limnological survey of British Columbia inland waters initiated in 1949, investigations were carried out largely in the Princeton-Merritt area, Kootenay, Cariboo, and Northern Districts of the Province in 1952: Six lakes in the area between Princeton and Merritt (Garcia, Marquette, Corbett, Courtney, Glimpse, and Harmon); eleven lakes in the Kootenay District (Christina, Wilgress, Jewel, Hanson, Premier, Kiakho, Rosen, North Star, Surveyor's, Grave, and Lillian); twenty-three lakes in the Cariboo (Pavilion, Loon, Eighty-three Mile, Watch, Fawn, Horse, Sheridan, Bridge, Crystal, Twin, Lac des Roches, Canim, Clearwater, Lac la Hache, Dempsey, Felker, Chimney, Spain, Loomis, Onion, One-eye, Sapeye, and Tatlayoko); fifteen lakes in the Northern District (Dragon, Bouchie, Ness, West, Graveyard, Cluculz, Oliver, Prudhomme, Rainbow, Chapman, Dennis, Kathlyn, Hart, Azouzetta, and Charlie); Tunkwa Lake near Kamloops; Gallagher Lake near Oliver; and St. Mary Lake on Saltspring Island. Fifty-eight lakes in all were surveyed by crews between May and October.

Compilation and analysis of data from these and previous years' investigations has proceeded during the remainder of 1952 and spring of 1953. Data on file include map of lake giving depth contours, calculation of surface area and length of shore-line, notes on drainage and spawning areas, vertical distribution of temperature and dissolved oxygen, penetration of light, chemical analysis of lake-water, qualitative and quantitative abundance of plankton, ocurrence of bottom flora and fauna, age determinations of trout, and stomach-content analysis of all species of fish present. These data are integrated to give indication of lake productivity which may be used to guide future management policies for the lakes.

Kokanee in Kootenay Lake

By E. H. Vernon, Assistant Fishery Biologist

A study of kokanee in Kootenay Lake was initiated to determine if these fish exist as separate small populations, each spawning in a separate stream, or whether the spawning run to any one stream may be regarded merely as a part of a general interbreeding lake population.

In August and September of 1951 some 1,200 kokanee were collected from eight streams in Kootenay Lake. During the winter of 1951–52 some preliminary studies were carried out to explore techniques of analysis of these data. About 200 further specimens were collected from three streams in September, 1952.

Preliminary investigation of the data indicated that kokanee in Kootenay Lake were broadly separable into three groups:—

(*a*) South-end fish, spawning in Cultus, Midge, Sanca, and Goat Creeks, averaging approximately 18.5 centimetres and 55 grams, and predominantly 3 years old at maturity.

(*b*) North-end fish, spawning in Meadow Creek and Lardeau River, averaging approximately 21.5 centimetres and 105 grams, and maturing at 4 years of age.

(*c*) West Arm fish, spawning in Kokanee and Redfish Creeks, averaging approximately 24.5 centimetres and 155 grams, and maturing at 3 years of age.

Because of these apparent groupings, samples of fifty-two fish were taken from Cultus Creek in the south end, Kokanee Creek in the West Arm, and Lardeau River in the north end. Measurable morphological features of these three groups were compared. No absolue differences were found, but statistical differences in lateral-line scale count, vertebræ count, gill-raker count, and pyloric cæca count indicate that these three groups are separate populations.

These three groups were also compared on the basis of body proportions. The relations to fork length of head length, eye diameter, and peduncle length were compared. Here again no absolute differences were found and the statistical differences were not as clear-cut, but again suggest that these three groups are separate populations.

Further work is now being directed toward comparison of fish from different creeks in each of the three main areas noted above. Fish collected in 1952 will also be compared with those of 1951 to evaluate differences between years as well as between areas.

Kamloops-trout Growth-studies

By S. B. Smith, Division Fishery Biologist

The growth of scales of rainbow (Kamloops) trout from the time of first scale formation was investigated. A method for the calculation of fish lengths at ages previous to capture was developed. Use of the above method of calculation of fish lengths made possible the study in more detail of the growth of Paul Lake trout.

It was found that in Paul Lake the intense sport-fishery was selective of faster-growing fish in all year-classes available to the fishery. Samples drawn at random from the anglers' catches in this case could not be considered as representative with respect to growth rate. In some years significant differences in the mean lengths of spawning and non-spawning fish were found to obtain, suggesting a possible relationship between growth rate and attainment of sexual maturity.

A major change in lake ecology was detectable from comparisons of growth rates over the period 1946–51. During this time, growth of Paul Lake trout fluctuated until 1948, from which year onward it became more variable and declined steadily. Introduction of the redside lake shiner (*Richardsonius balteatus* Richardson) possibly in 1945,

increase in numbers of that species, and eventual competition with trout for food was suggested as the reason for the decline in growth rates of the trout.

Much of the data and conclusions drawn from the above research are directly applicable to fishery management problems of the British Columbia Game Department.

SUMMARY OF ACTIVITIES OF THE GAME MANAGEMENT AND RESEARCH BRANCH

By Dr. J. Hatter, Chief Game Biologist

Introduction

In looking back over 1952 and the activities of the newly formed Game Management Branch it is apparent that some significant progress has been made. For the first time in the history of the Province a short season on cow moose was declared in order to partially alleviate the over-population of moose in many of the Interior districts. Anyone familiar with the management of big game will realize that initial seasons on the female sex are attended by much criticism and opposition. This usually stems from minority groups and individuals who do not understand the dynamics of wild ungulate populations and the need to control them, if possible, in balance with the safe carrying capacity of the winter range. It was revealing, however, to observe the manner in which the majority of our sportsmen accepted the decisions of the Game Department without critical comment.

Sayward Forest on Vancouver Island was reopened to deer-hunting after three years of closure, and some valuable information was gathered relative to the welfare of deer on this highly productive area.

The introduced Rocky Mountain bighorn sheep at Squilax were opened to hunting for the first time in many years. Here also we gained some information on hunter success and, even more important, the response of hunters to special seasons of this type.

Plans were laid and approved for a marked change in the existing policy of liberating pheasants. All major releases in the future will be composed of adult hens in March, prior to the breeding season, and cock birds liberated during the month of September. There will be no further releases of juvenile birds in midsummer. Under the old system, hen pheasants were exposed to the adversities of the winter season before any benefits could be obtained from the production of young.

The above constitute a few major advances made during 1952, and I hope they mark the preliminary steps in realizing greater harvests from our game populations, many of which show characteristics of only light cropping in the past. A more liberal approach to the harvest of big game would seem to be a healthy one, particularly in light of intensified predator-control and past irruptions of game species followed by periodic declines.

Management

Big Game

Moose.—Examination of winter ranges in the early spring constituted one of the most important phases of our moose-study. Inspections were made in the following districts: Bridge Lake, Eagan Lake, Green Lake, Vidette, Beaver Valley, Big Creek, and Meadow Lake.

In almost all instances continued over-use and depletion of the palatable winter foods was found to exist. In several areas noticeable browsing was found present on secondary browse species, and even unpalatable forms, such as lodgepole pine and soopolallie (*Shepherdia canadensis*), showed signs of browsing.

Due to the United States embargo resulting from the outbreak of foot-and-mouth disease, few non-resident moose-hunters visited the Province in 1952. This situation, combined with unusually difficult hunting conditions, reduced the moose-kill recorded at Cache Creek from 2,270 in 1951 to 1,260 in 1952 (latter including 351 cow moose).

During the either-sex moose season during the last week of November, 351 cow moose were checked through Cache Creek. Uteri were collected from thirteen females over the age of 18 months. Of this number, twelve were pregnant but only one carried a twin pregnancy. The fertility rate based even on this small sample may well reflect poverty conditions during the winter months. A marked contrast was found to exist in the fertility of the Cache Creek sample and the sample of forty-odd uteri from Wells Gray Park where approximately one-third of the adult cows carried twin fœti. The winter range in Wells Gray Park still furnishes an abundance of palatable forage species, a condition undoubtedly responsible for the high rate of increase observed in the moose population.

Experimental use of two types of aircraft, one a De Haviland Beaver and the other a Cessna 170 with wide flaps, showed the latter to be preferable for use in taking a census of moose. Cost per hour of flying the Cessna 170 was half that of the larger aircraft.

Bighorn Sheep.—The Squilax band of introduced bighorns was opened to shooting for one week at the beginning of the deer season in September. Five rams were recorded killed.

An intensive study of native California bighorn sheep was commenced in Churn Creek basin. Lawson Sugden spent from November to June in the basin, where a cabin was constructed for his convenience. No results of the study are available at this time, except that cougar predation has appeared as an important limiting factor on the winter range. Further work will be extended to the lambing-grounds and to the summer range. The Wildlife Management Institute has contributed $500 to partially finance the summer work. We are most grateful to this organization for its assistance in this important project.

Periodic inspections were made of the Vaseaux Lake and Ashnola bands of bighorn. A census was also taken of the band of sheep near Riske Creek, and future plans for harvesting or removal studied.

Elk.—An aerial survey of the elk herd at Princeton was undertaken on February 12th, 1953. A total of sixty-seven animals was counted. Work on this population has become of routine nature and periodic studies will be carried out by E. W. Taylor.

Deer.—Investigation and research on deer has constituted the most important single activity of D. J. Robinson, game management biologist on Vancouver Island. An interim report on the deer of Sayward Forest has been completed, and at the time of writing is in the process of being mimeographed for distribution to sportsmen and Department personnel.

A state of over-population is now manifest over much of the Sayward Forest and an either-sex season is highly advisable.

The deer harvest in the Interior was greatly reduced last year due to unfavourable hunting conditions during the dry fall. Due to the light snowfall, few deer entered the lower winter ranges even as late as February, and many sportsmen believed the deer to have suffered a die-off, but in April when the green grass appeared, mule deer entered the open ranges in large numbers. It is remarkable how alarmed people may become when they fail to see deer in midwinter and how they fail to take into account climatic conditions.

Upland Game Birds

Pheasants.—The Department's policy with respect to the purchase and liberation of pheasants, as previously mentioned, underwent a major revision during the past year. In future, releases will consist of adult hens in March and cock birds during the summer months, and has been designed to yield greater benefit from moneys expended on pheasant liberations. Loss of juvenile hens between release and the breeding season almost a year later has been great. Likewise, the return of banded juvenile cocks to the hunter's

bag has not been too encouraging. Under the new plan it should be possible to obtain some production from sexually mature hens released just prior to the breeding season. Cock birds released in September will also be exposed to fewer hazards before they contribute to the kill one month later.

Chukar Partridges.—The release of chukar partridges has been continued. Liberations were made at Vaseaux Lake, Keremeos, and also near Ashcroft at the mouth of the Bonaparte River. The birds have seemingly done well during the mild winter, and on a number of occasions they have been seen at considerable distances from the place of release. So far, however, there is no absolute proof that past releases have resulted in any natural production. All released birds have been banded.

Blue Grouse.—Blue-grouse shooting was superlative in many Interior localities last fall. Good sport was also enjoyed on Vancouver Island, where a good harvest was experienced before the birds migrated out of reach of the majority of hunters.

Ruffed Grouse.—The birds were still reasonably plentiful in most Interior districts, but in localities where they have been most plentiful over the past two seasons they are now apparently lower in numbers. For example, at Bridge Lake a marked decline was evident, whereas in some localities not believed to be optimum, reports were received of the "best yet" populations. There is thus the suggestion that the ruffed-grouse decline, now due, is not taking place uniformly, but rather the crash is occurring first in those localities where the highest populations were first reached.

Fur-bearing Animals

Beaver.—Eleven beavers were trapped in the Courtenay area and transported to the Queen Charlotte Islands, where they were released at Yakoun Lake and on the Tlell River. This is the second release since 1949.

Waterfowl

The five-year duck-banding programme initiated in 1948 was concluded last summer. The three-man field party under the leadership of Glen Smith realized a successful catch of over 3,000 waterfowl.

Quarterly presentation of the Pacific Flyway Report has continued as in previous years.

It has been most difficult to integrate waterfowl studies with work on resident species, especially big game. During the spring migration the assessment of browsing intensity on moose winter ranges has made it extremely difficult to obtain reliable information on waterfowl populations passing through the Interior.

The Hunter Sample

The hunter sample this year was varied from the preceding two years. Instead of a straight "one in fifteen" and "one in twelve" contact of licensed hunters of 1950 and 1951 respectively, it involved the selection of every tenth ordinary firearms licence and every fifth general firearms licence, extra-general firearms and special firearms licence. In the Vancouver and New Westminster agencies, all licence types were subjected to a straight "one in ten" sampling.

The initial hunter sample for the 1952–53 season had a potential coverage of 12.03 per cent of the Provincial hunting population. The returned portion of the sample gave a 5.35-per-cent coverage, which is considered adequate to give accurate trends in the game harvests.

Summary of the 1952 Harvest of Major Game Species

	Ducks	Grouse	Pheasants	Deer
Vancouver Island	68,136	61,124	6,347	6,533
Mainland Coast	135,324	12,884	24,792	2,234
Interior	100,073	201,927	15,329	5,825
Kootenays	25,707	39,789	1,551	2,967
Peace River	10,543	25,889	--------	--------
Totals	339,783	341,613	48,019	17,559

	Moose
South of Quesnel	3,889
North of Quesnel	1,898
Kootenays	423
Peace River	632
Total	6,842

Special Survey of Pheasant-hunters

The survey of the 1952 pheasant season was conducted in the manner of that first held in 1951, hence comparisons of trends between the years may be made with reliability.

Hunter response to the recent mailed questionnaire was only 37.8 per cent, a decline from the 53.9-per-cent return obtained from those contacted in 1951. The number of licensed pheasant-hunters increased from 16,672 in 1951 to 19,159 in 1952, a gain of 14.9 per cent for the Province as a whole. Vancouver Island and the Queen Charlotte Islands were the only major regions showing a lessening of hunter numbers in 1952.

The distribution of regional relative hunting pressure throughout the recent season did not change greatly from that of the previous year. Hunting pressure on Vancouver Island was apparently less intense than in 1951, while in certain areas of the Interior and Kootenay Districts marked increases were noted. The Lower Mainland was still the most heavily gunned region and received over 71 per cent of the hunting pressure of the Province. The Okanagan, Vancouver Island, Kamloops-Cariboo, and Kootenay Districts followed in that order, bearing 15.5, 7.6, 4.0, and 1.5 per cent of the total hunting intensity respectively. In all regions, over 80 per cent of the hunters confined their pheasant-hunting activities to the general area in which they were resident.

Individual hunting success averaged 2.8 cocks per man per season in 1952, as compared to 2.6 in 1951. This improved Provincial average was due in large measure to more successful hunting in the Okanagan and Lower Mainland Districts (Table I).

In spite of what appeared to be a rather quiet opening in some areas, the season kill of pheasants for 1952 was in excess of that of the previous year by 29.3 per cent. As estimated, 48,551 cocks were harvested in British Columbia during the 1952 season. Vancouver Island and Queen Charlotte Islands were the only major regions in which the total bag was below that of 1951; all other districts showed increased kills in 1952. The Okanagan area in particular appeared to enjoy very good hunting compared to that found in other sections. When the ratio of kill to hunting pressure is considered for this district and measured against that for other parts of the Province, it would appear very definitely that the pheasant population in certain sections of the Okanagan is still being relatively underharvested.

During 1952 a total of 8,895 cocks was released throughout the Province. Of this number, 8,709 were banded birds. Band recoveries reported in the sample survey indicate that 33.9 per cent compares fairly closely with the four-year mean of 31.0 per cent return estimated for cocks liberated on the Delta study area.

Table I.—Harvest Data and Estimates for the 1951 and 1952 Pheasant Seasons

Regions of Hunter Residence and Areas Hunted	Average Number of Birds per Hunter per Season		Estimated Number of Cocks Harvested		Banded Cocks as a Percentage of the Regional Sample Kill, 1952
	1951	1952	1951	1952	
Saanich-Victoria	2.25	1.93	1,447	1,534	3.06
Cowichan-Duncan	3.31	2.71	1,114	733	2.65
Nanaimo	2.01	1.37	691	309	3.69
Alberni	1.67	2.12	269	280	6.39
Courtenay-Cumberland	2.18	2.15	851	782	4.62
Agassiz	2.34	1.50	341	96	13.35
Chilliwack	2.92	2.91	2,733	3,113	11.91
Mission	1.96	2.82	1,146	1,862	16.39
Sumas	.....	.....	1,511	1,616	11.11
Matsqui-Abbotsford	2.43	3.96	1,446	2,657	9.27
Pitt Meadows-Coquitlam	3.29	3.25	2,342	3,708	12.09
Surrey-Langley	2.67	3.13	4,335	5,263	1.71
Delta	3.47	3.26	5,962	6,419	8.76
Lulu Island	3.30	2.00	2,793	2,911	7.80
Vancouver-New Westminster	2.19	2.54	299	712	10.71
Keremeos-Cawston	2.51	3.03	448	713	1.89
Oliver-Osoyoos	2.83	4.03	916	1,221	2.32
Penticton	3.23	3.86	393	765	10.05
Summerland	1.87	2.06	166	316	4.17
Peachland-Westbank	3.00	3.43	84	166	No release
Kelowna	3.18	3.92	1,803	3,388	No release
Vernon	4.17	4.16	3,645	5,117	No release
Armstrong	3.25	3.90	603	706	No release
Enderby	2.17	2.56	59	171	3.69
Salmon Arm	2.61	3.18	539	1,063	2.58
Grindrod	2.77	3.00	41	68	No release
Falkland-Westwold	2.35	2.62	180	141	No release
Ashcroft	2.66	2.71	50	107	
Savona			47	245	8.25
Kamloops	2.80	2.61	869	1,427	
Cache Creek			55	7	
Merritt	1.50	2.27	34	104	11.78
Grand Forks	2.78	2.13	159	196	No recovery reported
Creston			.....	613	2.17
Queen Charlotte Islands	2.90	1.50	123	22	No release
Totals and averages	2.66	2.81	37,522[1]	48,551	5.06

[1] Eleven birds shot on Saltspring Island not shown.

Opinions have been voiced to the effect that pheasant-hunting would soon decline were it not for the annual stocking of farm-raised birds. Such arguments are hardly tenable when the proportion of released to wild cocks bagged is examined (Table I). In 1951 it was estimated that the planted birds contributed only 7.2 per cent of the total harvest. On the basis of the more extensive 1952 sample, this group comprised only 5.06 per cent of the Provincial pheasant-kill.

Public Relations

Greater effort has been to distribute reports and results of investigations and research to enforcement personnel and to Rod and Gun Clubs. In the past year numerous such reports have been especially prepared for the consumption of Game Wardens and sportsmen's organizations.

It is felt that this activity is vital in the absence of a Departmental news-letter or publication. Several of the circulars dealt with the problems of harvesting big game and especially the need to embark on either-sex season on moose and deer.

The members of the Management Division have availed themselves of opportunities to address conferences and sportsmen's meetings on various topics connected with the management of wildlife. Although it is often difficult at the time to see just what is accomplished in this phase of our work, it is now beginning to appear that it is having the desired effects in gaining public support and interest in game-management practices.

PREDATOR-CONTROL BRANCH

G. A. WEST, SUPERVISOR OF PREDATOR-CONTROL

The destruction of noxious mammals and birds was up considerably in the Province during 1952. This upswing was partly because of increased co-operation and effort by the Game Wardens and predatory-animal hunters. However, much of the increase was probably because of increased predator populations in some areas and the introduction of hunters into other regions.

Generally speaking, it is felt that we are holding our own against, or have control of, the larger and more important predators. Traps, coyote-getters, hounds (in the case of cougars), and rifles were the main weapons in eliminating predators in specific complaints, but poison was the most important mass killer of predators.

The principal predators and their relationships can be broken down and presented as follows:—

Bears.—These animals caused a multitude of complaints from every major settled and (or) grazed area in the Province. A total of 189 bears (182 blacks and 7 grizzlies) was destroyed by the Department to alleviate the damage or nuisance caused by bears. The lower coastal area was probably troubled more than any other comparable district, but there was little damage other than to fruit-trees, garbage-cans, etc. The density in some areas was considerable; 52 bears, of which 29 were killed by Department personnel, were destroyed in North Vancouver.

In the Interior regions, bears caused damage to orchards, bee-hives, and, in some instances, live stock. One hundred and twenty-three bears were destroyed in these areas.

Cougars.—Cougars were again numerous in 1952. Although bounty and Departmental kills (465 and 111 respectively) were slightly lower than in 1951, it might be said that the unusual weather experienced during the fall and early winter months was partially responsible for the lower number taken. Under ordinary circumstances the kill probably would have been larger than the number shown for 1952.

The registered bonus cougar-hunters on Vancouver Island have accounted for 59 of a total of 243 cougars presented for bounty. This total represents an additional $1,180 in paid bounties but also represents a very substantial saving in time. The time-saving enables the predatory-animal hunters in the Department to be available for the long patrols to the west coast and for area hunting. These patrols are very expensive and often yield small returns because of the difficulties encountered, but they are necessary evils and are unavoidable under the present circumstances.

At this point I should like to point out that the Game Wardens and predatory-animal hunters in "B" Division have completed a very fine job of hunting and killing cougars during the past year.

Coyotes.—On the whole, coyotes were under control. Only in isolated instances were coyotes more than a nuisance in areas that are treated annually with poison stations. However, Williams Lake and district were very well populated with coyotes during the summer. The increase came mainly through large litters, and this is thought to have a direct connection with the game die-off in the area during the spring of 1952. Predatory-animal Hunter Mortensen did very well against the increase, with 216 coyotes accounted for and many more dead of poison.

It is anticipated that the new areas opened to control will be reduced in their populations of coyotes and the predation kept to a minimum. However, at the present time, Predatory-animal Hunters Fletcher (Smithers) and Ellis (Dawson Creek) have just begun their operations, and consequently it is early for any definite conclusions.

Coyotes may well become a problem in the Lower Fraser Valley in the future, especially on the north side of the river. A total of twelve, nine more than in 1951, was destroyed by Game Warden Cliffe and Predatory-animal Hunter Hillen.

Just as a matter of interest it might be mentioned here that Assistant Supervisor E. H. Samann reports that the removal of coyotes from the ranges in the Kamloops region had no apparent effect on the small-mammal populations. This conclusion was the result of three years of trapping small mammals on predetermined areas.

Foxes.—Foxes have ceased to be a major menace in many parts of the Fraser Valley. A total of 216 was destroyed during the year in this area by the Game Wardens, and the predatory-animal hunter, Mr. Hillen, tallied 158 foxes, and probably many more were destroyed but these carcasses were never found. At any rate, many of the poultry-farmers have extended their thanks to the personnel responsible for the decrease in the fox population.

Predatory-animal Hunter A. M. Hames used coyote-getters with telling effects against the foxes at Wolf Lake and Tsolum River on Vancouver Island. He has received favourable reports that indicate the population of foxes was reduced considerably.

Wolves.—Wolves were of major importance in the northern sections of the Province and were a source of concern. Thanks to Inspector W. A. H. Gill, "D" Division Game Wardens and Predatory-animal Hunter M. Warren, the numbers were reduced substantially. The probable number of wolves destroyed during the year is unknown, but the minimum was 195 destroyed in "D" Division and 18 destroyed in "C" Division.

Poison appeared to be the only method to effect mass killing of wolves, and thus it was on this premise that the operations were based. The conventional capsules were used extensively, but it was believed that 1080 baits, well placed, would be just as effective. At present, experiments with 1080 are being carried out by Inspector Gill and Predatory-animal Hunter Warren.

As more territory becomes accessible to the predatory-animal hunters for control purposes, it is felt that the wolf populations of the northern portions of the Province will be reduced to the point where they can be controlled to a definite degree.

Sundry Predators.—Some of the smaller predators such as bobcats and racoons caused considerable trouble in the Fraser Valley and Vancouver Island. Racoons were responsible for a good portion of the damage to poultry stocks on Vancouver Island, and both of the above species were troublesome in the Fraser Valley. However, by the use of traps and hounds, Department personnel reduced the populations of these predators, and losses of poultry were kept to a minimum.

For details concerning the major and minor predators *see* table following, which gives the numbers for 1951 and 1952 of each species destroyed in each Division.

There were 442 complaints received and investigated by Department personnel in the control of predators during 1952. This represents an increase of 128 or 41 per cent. This need not necessarily indicate an increase in predators, but rather an increased availability of personnel to handle complaints.

The poisoning programme undertaken by the Predator-control Branch, with the very able assistance of many of the Game Wardens, was a successful undertaking. A total of 366 poison baits was placed. Although no figures of destroyed predators were available, the success was measured by the decrease in predation or by the absence of predators.

Broadly speaking, poison baits were operating in the following areas:—

(1) Peace River—only a few stations.
(2) Smithers-Prince George.
(3) McBride.
(4) Williams Lake-Chezacut.
(5) Empire Valley-Seventy Mile.
(6) Kamloops-Merritt.
(7) Okanagan-Princeton.
(8) North Thompson River.
(9) Nelson-Castlegar.
(10) Creston-Cranbrook-Canal Flats.

Plans for 1953 include the above areas on a wider scale plus new areas. It is anticipated that, by using aircraft, areas not poisoned to any degree before will be thoroughly covered with poison baits placed in the appropriate locations. This will include flights over the Bonaparte Plateau, Horsefly Lake, and the Chilcotin in addition to the areas to be poisoned in the north.

Various localities on the Lower Mainland and on Vancouver Island will receive treatment to combat the complaints of wolves.

Investigations will be made during the spring and early summer months in the vicinity of Kitimat, Bella Coola, and possibly the Itcha Mountains near Anahim Lake in efforts to determine the predator situation in these areas. If warranted, a system of control will be instituted if at all possible.

At this point I would like to thank all members of the Department for the splendid co-operation shown during the past year. My special thanks to those Game Wardens who have aided the Predator-control Branch by placing poison baits and being responsible for them in their Detachments. In doing this they have been of tremendous help.

Vermin Destroyed, 1951 and 1952

Species	Divisions										Total	
	"A"		"B"		"C"		"D"		"E"			
	1952	1951	1952	1951	1952	1951	1952	1951	1952	1951	1952	1951
Bear	3	1	12	3	58	40	65	44	51	3	189	91
Bobcat	.....	.....	13	2	17	7	1	1	23	2	54	12
Cat (wild)	115	82	76	56	178	202	53	39	366	240	788	619
Cougar	25	40	79	60	5	14	.....	.....	2	3	111	117
Coyote	.....	.....	44	40	367	316	236	187	12	3	659	546
Dog (wild)	74	61	27	26	55	56	10	10	94	24	260	177
Fox	2	.....	.....	.....	2	2	9	3	216	26	229	31
Groundhog	.....	.....	.....	53	72	150	.....	1	.....	3	72	207
Racoon	62	40	1	.....	.....	.....	3	1	81	36	147	77
Skunk	.....	.....	1	.....	7	2	.....	1	48	15	56	18
Wolf	1	.....	.....	.....	18	14	195	93	2	.....	216	107
Wolverine	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	.....
Totals	282	224	253	240	779	803	573	380	895	355	2,782	2,002
Crow	59	59	211	238	985	1,087	265	188	1,289	712	2,809	2,284
Eagle	1	4	36	20	29	38	52	24	20	21	138	107
Hawk	28	15	37	29	120	159	71	33	108	64	364	300
Owl	1	2	15	12	67	59	68	27	14	9	165	109
Magpie	.....	.....	121	54	511	580	15	22	8	5	655	661
Merganser	6	3	7	25	16	22	.....	1	70	56	99	107
Raven	29	25	58	52	129	164	83	99	90	41	389	381
Starling	.....	.....	.....	.....	.....	.....	.....	.....	6	7	6	7
Totals	124	108	485	430	1,857	2,109	554	394	1,605	915	4,625	3,956
Grand totals	406	332	738	670	2,636	2,912	1,127	774	2,500	1,270	7,407	5,958

STATISTICAL STATEMENTS

Comparative Statistics, 1913 to 1952, Inclusive

Calendar Year	Prosecutions					Revenue Derived from Sale of Game Licences and Fees	Revenue Derived from Fur Trade
	Informations Laid	Convictions	Cases Dismissed	Firearms Confiscated	Fines Imposed		
1913	188	181	7	-----	$4,417.50	$109,600.80	-----
1914	294	273	21	-----	5,050.00	92,034.20	-----
1915	279	258	21	-----	4,097.50	72,974.25	-----
1916	127	110	17	-----	2,050.00	66,186.97	-----
1917	111	97	14	-----	1,763.50	65,487.50	-----
1918	194	167	17	5	3,341.00	75,537.00	-----
1919	267	242	25	36	6,024.50	116,135.00	-----
1920	293	266	27	46	6,073.00	132,296.50	$5,291.39
1921	329	312	17	74	6,455.00	114,842.00	24,595.80
1922	359	317	42	44	7,275.00	127,111.50	51,093.89
1923	309	280	29	24	5,676.50	121,639.50	60,594.18
1924	317	283	34	24	4,758.00	125,505.50	56,356.68
1925	296	279	17	43	5,825.00	123,950.50	56,287.78
1926	483	439	44	39	7,454.00	135,843.50	62,535.13
1927	518	469	49	47	10,480.50	139,814.00	71,324.96
1928	439	406	33	29	7,283.50	140,014.75	58,823.07
1929	602	569	33	54	9,008.00	142,028.22	47,329.89
1930	678	636	32	33	9,572.75	147,660.00	45,161.11
1931	676	625	51	40	8,645.00	137,233.31	46,091.08
1932	538	497	41	37	5,493.50	141,269.55	40,363.79
1933	498	474	24	22	3,531.00	135,876.94	44,167.48
1934	477	454	23	4	5,227.82	149,955.11	47,102.81
1935	454	438	16	19	4,399.50	148,689.64	49,831.95
1936	451	436	15	14	3,965.00	157,647.30	52,196.50
1937	585	552	33	20	5,332.50	177,771.33	53,697.48
1938	613	574	39	42	5,729.50	192,024.07	44,963.87
1939	547	526	21	21	4,776.50	193,170.53	49,187.00
1940	440	419	21	18	5,197.00	188,605.20	68,466.33
1941	446	430	16	9	4,977.50	213,267.67	63,125.30
1942	409	392	17	27	5,079.50	205,451.71	68,475.07
1943	356	342	14	18	5,554.50	207,661.72	58,354.03
1944	379	372	7	8	5,570.50	238,902.36	70,363.23
1945	652	632	20	30	8,381.50	352,228.85	104,250.95
1946	819	798	21	39	10,921.00	502,555.25	107,357.72
1947	895	878	17	56	11,837.50	597,529.30	99,344.14
1948	1,142	1,117	25	74	17,537.00	610,383.56	73,392.08
1949	1,115	1,099	16	86	18,148.50	656,997.38	61,543.26
1950	1,359	1,337	22	69	22,923.00	706,591.06	71,335.44
1951	1,489	1,468	21	83	24,087.50	830,178.59	76,454.56
1952	1,504	1,476	28	87	25,755.00	856,971.22	58,713.48
Totals	21,927	20,920	987	1,321	$319,675.57	$9,649,623.34	$1,948,171.43

Summary of Total Revenue Derived from Sale of Various Licences, Collections, etc., January 1st to December 31st, 1952

Revenue derived from—	
Sale of resident firearms licences	$398,012.00
Sale of deer, moose-elk, goat, and pheasant tags	88,983.00
Sale of resident anglers', guides', and prospectors' firearms licences	154,936.00
Sale of non-resident firearms licences and outfitters' licences	26,964.00
Sale of non-resident anglers' licences	165,620.00
Sale of fur-traders', taxidermists', and tanners' licences, and royalty on fur	58,713.48
Sale of confiscated and surrendered fur	307.20
Sale of confiscated firearms	234.07
Sale of big-game trophy fees from non-residents	20,365.00
Prosecutions—fines imposed under the "Game Act"	25,755.00
Miscellaneous revenue	1,549.95
Total	$941,439.70

Statement of Resident Firearms Licences, January 1st to December 31st, 1952

Government Agency	O.F.L.				G.F.L.				Extra-G.F.L.		S.F.L.		Extra-S.F.L.		Duplicates		Total
	$3		$4		$6		$7										
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
Alberni	15	$45.00	1,648	$6,592.00			66	$462.00	4	$48.00	68	$680.00			12	$6.00	$7,833.00
Ashcroft	2	6.00	212	848.00			102	714.00	3	36.00					5	2.50	1,606.50
Atlin	1	3.00	16	64.00			37	259.00	1	12.00	17	170.00					508.00
Barkerville			105	420.00			75	525.00	15	180.00	19	190.00			1	.50	1,315.50
Burns Lake	11	33.00	474	1,896.00	6	$36.00	832	5,824.00	15	180.00	154	1,540.00	7	$17.50	2	1.00	9,527.50
Clinton	110	330.00	494	1,976.00	132	792.00	494	3,458.00	3	36.00	126	1,260.00			2	1.00	7,853.00
Courtenay	10	30.00	3,290	13,160.00			75	525.00	9	108.00	145	1,450.00	16	40.00	42	21.00	15,334.00
Cranbrook	1	3.00	964	3,856.00	1	6.00	1,581	11,067.00	20	240.00	40	400.00			30	15.00	15,587.00
Creston	3	9.00	635	2,540.00			291	2,037.00	2	24.00	24	240.00			7	3.50	4,853.50
Cumberland	81	243.00			16	66.00					14	140.00	16	40.00	3	1.50	490.50
Duncan	2	6.00	1,381	5,524.00			45	315.00	1	12.00	22	220.00			10	5.00	6,082.00
Fernie	14	42.00	328	1,312.00	1	6.00	660	4,620.00	26	312.00	58	580.00			16	8.00	6,880.00
Golden	3	9.00	329	1,316.00			542	3,794.00	18	216.00	83	830.00			9	4.50	6,169.50
Grand Forks	1	3.00	373	1,492.00			26	182.00	2	24.00	23	230.00			3	1.50	1,932.50
Greenwood			350	1,400.00			24	168.00	1	12.00					1	.50	1,580.50
Kamloops	47	141.00	2,118	8,472.00	22	132.00	1,071	7,497.00	26	312.00	148	1,480.00			32	16.00	18,050.00
Kaslo			127	508.00			46	322.00	6	72.00	5	50.00			1	.50	952.50
Kelowna	4	12.00	1,693	6,772.00	1	6.00	414	2,898.00	3	36.00	18	180.00			31	15.50	9,919.50
Lillooet			358	1,432.00			165	1,155.00	22	264.00	39	390.00			7	3.50	3,244.50
Merritt	2	6.00	472	1,888.00			83	581.00	6	72.00	34	340.00	2	5.00	11	5.50	2,897.50
Nanaimo	13	39.00	2,216	8,864.00			123	861.00	3	36.00	18	180.00			30	15.00	9,995.00
Nelson	13	39.00	1,201	4,804.00	8	42.00	353	2,471.00	12	144.00	101	1,010.00			13	6.50	8,516.50
New Denver	1	3.00	363	1,452.00			78	546.00			3	30.00			5	2.50	2,033.50
New Westminster	131	393.00	8,301	33,204.00	17	102.00	2,515	17,605.00	19	228.00	224	2,240.00			56	28.00	53,800.00
Oliver	1	3.00	682	2,728.00			121	847.00	5	60.00					8	4.00	3,642.00
Penticton	40	120.00	1,754	7,016.00	2	12.00	368	2,576.00	22	264.00	19	190.00			15	7.50	10,185.50
Pouce Coupe	13	39.00	992	3,968.00	1	6.00	1,379	9,653.00	19	228.00	355	3,550.00	17	42.50	17	8.50	17,495.00
Powell River	34	102.00	590	2,360.00			27	189.00	17	204.00	29	290.00			6	3.00	3,148.00
Prince George	126	378.00	1,003	4,012.00	115	690.00	1,847	12,930.00	90	1,080.00	192	1,920.00			41	20.50	21,030.50
Prince Rupert	67	201.00	1,287	5,148.00			823	5,761.00	57	684.00	249	2,490.00	35	87.50	20	10.00	14,381.50
Princeton	8	24.00	925	3,700.00	1	6.00	171	1,197.00	5	60.00	25	250.00			5	2.50	5,239.50
Quesnel	6	18.00	776	3,104.00			703	4,921.00	4	48.00	94	940.00			10	5.00	9,036.00
Revelstoke	2	6.00	252	1,008.00			163	1,141.00	2	24.00	48	480.00			5	2.50	2,661.50
Rossland	6	18.00	1,414	5,656.00	1	6.00	366	2,562.00	37	444.00	14	140.00			15	7.50	8,833.50
Salmon Arm			768	3,072.00			351	2,457.00			51	510.00			8	4.00	6,043.00
Smithers			319	1,276.00	7	42.00	429	3,003.00	19	228.00	67	670.00	65	162.50	2	1.00	5,382.50
Vancouver	467	1,401.00	9,473	37,892.00	77	456.00	2,715	18,024.00	97	1,153.00	154	1,432.00			186	93.00	60,451.00
Vernon	30	90.00	1,991	7,964.00	10	60.00	643	4,501.00	5	60.00	41	410.00			27	13.50	13,098.50
Victoria	27	81.00	3,976	15,904.00			164	1,148.00	16	192.00	28	280.00			52	26.00	17,631.00
Williams Lake	8	24.00	705	2,820.00			553	3,871.00	41	492.00	249	2,490.00			18	9.00	9,706.00
Totals	1,300	$3,900.00	54,355	$217,420.00	418	$2,466.00	20,521	$142,667.00	653	$7,825.00	2,998	$29,872.00	158	$395.00	764	$382.00	$404,927.00
Less refunds																	6,915.00
Total																	$398,012.00

Revenue Derived from the Sale of Deer, Moose-Elk, Goat, and Pheasant Tags, January 1st to December 31st, 1952

Government Agency	Deer Tags				Moose-Elk Tags				Goat Tags				Pheasant Tags		Total
	25¢		50¢		$1		$2		$1		$2				
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
Alberni	3	$0.75	2,291	$1,145.50	----	----	61	$122.00	----	----	2	$4.00	152	$76.00	$1,348.25
Ashcroft	----	----	230	115.00	----	----	96	192.00	----	----	2	4.00	52	26.00	337.00
Atlin	----	----	----	----	----	----	34	68.00	----	----	2	4.00	----	----	72.00
Barkerville	----	----	146	73.00	----	----	78	156.00	4	$4.00	----	----	----	----	233.00
Burns Lake	24	6.00	693	346.50	72	$72.00	830	1,660.00	4	4.00	10	20.00	----	----	2,108.50
Clinton	315	78.75	723	361.50	251	251.00	584	1,168.00	----	----	7	14.00	----	----	1,873.25
Courtenay	16	4.00	4,373	2,186.50	----	----	----	----	----	----	1	2.00	502	251.00	2,443.50
Cranbrook	----	----	2,470	1,235.00	----	----	1,662	3,324.00	----	----	503	1,006.00	----	----	5,565.00
Creston	----	----	784	392.00	----	----	240	480.00	----	----	41	82.00	297	148.50	1,102.50
Cumberland	94	23.50	----	----	----	----	----	----	2	2.00	----	----	55	27.50	53.00
Duncan	1	.25	1,670	835.00	----	----	42	84.00	----	----	----	----	318	159.00	1,078.25
Fernie	10	2.50	1,031	515.50	3	3.00	721	1,442.00	----	----	183	366.00	----	----	2,329.00
Golden	----	----	873	436.50	25	25.00	610	1,220.00	----	----	260	520.00	----	----	2,201.50
Grand Forks	----	----	367	183.50	----	----	18	36.00	----	----	2	4.00	120	60.00	283.50
Greenwood	----	----	345	172.50	----	----	16	32.00	----	----	----	----	14	7.00	211.50
Kamloops	92	23.00	2,897	1,448.50	26	26.00	1,159	2,318.00	----	----	36	72.00	740	370.00	4,257.50
Kaslo	----	----	160	80.00	----	----	21	42.00	----	----	27	54.00	----	----	176.00
Kelowna	2	.50	1,693	846.50	4	4.00	375	750.00	----	----	----	----	1,104	552.00	2,153.00
Lillooet	----	----	487	243.50	----	----	114	228.00	----	----	77	154.00	----	----	625.50
Merritt	----	----	383	191.50	----	----	62	124.00	----	----	2	4.00	65	32.50	352.00
Nanaimo	----	----	3,233	1,616.50	----	----	105	210.00	----	----	6	12.00	349	174.50	2,013.00
Nelson	101	25.25	1,354	677.00	10	10.00	241	482.00	2	2.00	108	216.00	9	4.50	1,416.75
New Denver	----	----	398	199.00	----	----	12	24.00	----	----	43	86.00	----	----	309.00
New Westminster	187	46.75	7,379	3,689.50	60	60.00	2,410	4,820.00	----	----	59	118.00	7,411	3,705.50	12,439.75
Oliver	7	1.75	753	376.50	5	5.00	134	268.00	----	----	5	10.00	257	128.50	789.75
Penticton	64	16.00	1,678	839.00	8	8.00	337	674.00	----	----	6	12.00	631	315.50	1,864.50
Pouce Coupe	----	----	2,007	1,003.50	1	1.00	1,513	3,026.00	5	5.00	131	262.00	----	----	4,297.50
Powell River	37	9.25	749	374.50	----	----	14	28.00	----	----	9	18.00	----	----	429.75
Prince George	180	45.00	2,056	1,028.00	47	47.00	2,058	4,116.00	2	2.00	105	210.00	----	----	5,448.00
Prince Rupert	62	15.50	2,244	1,122.00	----	----	683	1,366.00	----	----	186	372.00	17	8.50	2,884.00
Princeton	----	----	979	489.50	----	----	139	278.00	----	----	6	12.00	75	37.50	817.00
Quesnel	4	1.00	1,325	662.50	----	----	734	1,468.00	----	----	----	----	----	----	2,131.50
Revelstoke	1	.25	293	146.50	----	----	126	252.00	----	----	33	66.00	50	25.00	489.75
Rossland	9	2.25	1,507	753.50	10	10.00	262	524.00	1	1.00	42	84.00	38	19.00	1,393.75
Salmon Arm	3	.75	947	473.50	2	2.00	300	600.00	----	----	5	10.00	341	170.50	1,256.75
Smithers	----	----	420	210.00	11	11.00	396	792.00	----	----	87	174.00	----	----	1,187.00
Vancouver	376	94.00	8,333	4,166.50	68	68.00	2,663	5,326.00	----	----	98	196.00	6,447	3,223.50	13,074.00
Vernon	----	----	2,222	1,111.00	----	----	584	1,168.00	----	----	33	66.00	1,514	757.00	3,102.00
Victoria	40	10.00	4,655	2,327.50	----	----	143	286.00	----	----	4	8.00	1,031	515.50	3,147.00
Williams Lake	10	2.50	1,124	562.00	9	9.00	619	1,238.00	----	----	37	74.00	9	4.50	1,890.00
Totals	1,638	$409.50	65,272	$32,636.00	612	$612.00	20,196	$40,392.00	20	$20.00	2,158	$4,316.00	21,598	$10,799.00	$89,184.50
Less refunds	----	----	----	----	----	----	----	----	----	----	----	----	----	----	201.50
Total	----	----	----	----	----	----	----	----	----	----	----	----	----	----	$88,983.00

Revenue Derived from Sale of Resident Anglers', Guides', Free Farmers', and Prospectors' Firearms Licences, January 1st to December 31st, 1952

Government Agency	Anglers				Guides		Free Farmers	Prospectors		Total
	$1		$2							
	No.	Amount	No.	Amount	No.	Amount	No.	No.	Amount	
Alberni	671	$671.00	1,104	$2,208.00	2	$15.00	8	3	$1.00	$2,895.00
Ashcroft	89	89.00	284	568.00	----	----	5	13	----	657.00
Atlin	7	7.00	65	130.00	5	45.00	----	7	----	182.00
Barkerville	----	----	170	340.00	4	45.00	----	29	----	385.00
Burns Lake	6	6.00	1,358	2,716.00	59	565.00	26	35	----	3,287.00
Clinton	70	70.00	806	1,612.00	137	1,550.00	12	11	----	3,232.00
Courtenay	253	253.00	2,059	4,118.00	11	110.00	30	10	1.00	4,482.00
Cranbrook	382	382.00	2,285	4,570.00	15	130.00	37	29	----	5,082.00
Creston	236	236.00	820	1,640.00	6	60.00	26	14	----	1,936.00
Cumberland	1,230	1,230.00	----	----	----	----	----	----	----	1,230.00
Duncan	749	749.00	592	1,184.00	7	65.00	71	----	----	1,998.00
Fernie	717	717.00	702	1,404.00	33	330.00	4	1	----	2,451.00
Golden	11	11.00	709	1,418.00	43	490.00	20	9	----	1,919.00
Grand Forks	192	192.00	284	568.00	2	20.00	15	5	----	780.00
Greenwood	138	138.00	218	436.00	----	----	14	1	----	574.00
Kamloops	1,066	1,066.00	2,749	5,498.00	62	665.00	83	24	1.00	7,230.00
Kaslo	85	85.00	291	582.00	----	----	6	18	----	667.00
Kelowna	912	912.00	1,871	3,742.00	----	----	55	9	3.00	4,657.00
Lillooet	*153*	*153.00*	*462*	*924.00*	*18*	*135.00*	----	37	2.00	1,214.00
Merritt	174	174.00	478	956.00	----	----	----	1	1.00	1,131.00
Nanaimo	1,948	1,948.00	1,078	2,156.00	----	----	83	10	----	4,104.00
Nelson	783	783.00	2,165	4,330.00	6	60.00	14	39	----	5,173.00
New Denver	169	169.00	507	1,014.00	----	----	3	12	----	1,183.00
New Westminster	5,369	5,369.00	9,471	18,942.00	1	10.00	106	55	5.00	24,326.00
Oliver	182	182.00	478	956.00	----	----	1	5	----	1,138.00
Penticton	778	778.00	1,822	3,644.00	2	20.00	16	8	1.00	4,443.00
Pouce Coupe	18	18.00	1,292	2,584.00	98	855.00	66	29	2.00	3,459.00
Powell River	716	716.00	552	1,104.00	----	----	10	1	----	1,820.00
Prince George	341	341.00	1,888	3,776.00	46	435.00	53	35	----	4,552.00
Prince Rupert	588	588.00	1,784	3,568.00	20	225.00	5	48	----	4,381.00
Princeton	344	344.00	1,167	2,334.00	6	60.00	8	39	----	2,738.00
Quesnel	12	12.00	899	1,798.00	19	220.00	41	47	1.00	2,031.00
Revelstoke	107	107.00	486	972.00	4	55.00	9	24	----	1,134.00
Rossland	468	468.00	2,261	4,522.00	2	20.00	3	20	----	5,010.00
Salmon Arm	351	351.00	1,187	2,374.00	14	155.00	70	5	----	2,880.00
Smithers	31	31.00	732	1,464.00	6	60.00	39	39	----	1,555.00
Vancouver	4,947	4,947.00	10,275	20,550.00	2	10.00	2	145	5.00	25,512.00
Vernon	735	735.00	1,726	3,452.00	2	20.00	209	26	----	4,207.00
Victoria	2,810	2,810.00	1,730	3,460.00	1	10.00	60	18	----	6,280.00
Williams Lake	101	101.00	711	1,422.00	147	1,530.00	24	44	12.00	3,065.00
Totals	27,939	$27,939.00	59,518	$119,036.00	780	$7,970.00	1,234	905	$35.00	$154,980.00
Less refunds	----	----	----	----	----	----	----	----	----	44.00
Total	----	----	----	----	----	----	----	----	----	$154,936.00

REVENUE DERIVED FROM SALE OF NON-RESIDENT FIREARMS AND OUTFITTERS' LICENCES, JANUARY 1ST TO DECEMBER 31ST, 1952

Government Agency	General Firearms Licences		General Firearms Licences (Alternative)		General Firearms Licences (Special)		Ordinary Firearms Licences		Outfitters' Licences		Total
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
Ashcroft	---	---	---	---	1	$15.00	---	---	---	---	$15.00
Atlin	---	---	---	---	---	---	5	$15.00	---	---	15.00
Barkerville	5	$125.00	---	---	---	---	---	---	---	---	125.00
Burns Lake	7	175.00	---	---	---	---	---	---	---	---	175.00
Clinton	57	1,425.00	---	---	3	45.00	---	---	---	---	1,470.00
Courtenay	10	250.00	---	---	1	15.00	---	---	---	---	265.00
Cranbrook	78	1,950.00	---	---	4	60.00	2	6.00	---	---	2,016.00
Creston	22	550.00	---	---	---	---	---	---	---	---	550.00
Duncan	1	25.00	---	---	---	---	---	---	---	---	25.00
Fernie	56	1,400.00	---	---	8	120.00	1	3.00	1	$50.00	1,573.00
Golden	40	1,000.00	---	---	5	75.00	6	18.00	---	---	1,093.00
Grand Forks	---	---	---	---	---	---	1	3.00	---	---	3.00
Greenwood	---	---	---	---	2	30.00	---	---	---	---	30.00
Kamloops	27	675.00	---	---	3	45.00	6	18.00	---	---	738.00
Kelowna	7	175.00	---	---	---	---	---	---	---	---	175.00
Lillooet	2	50.00	---	---	---	---	---	---	---	---	50.00
Merritt	2	50.00	---	---	2	30.00	---	---	---	---	80.00
Nanaimo	4	100.00	---	---	---	---	---	---	---	---	100.00
Nelson	---	---	---	---	1	15.00	1	3.00	---	---	18.00
New Westminster	305	7,625.00	1	$50.00	2	30.00	3	9.00	---	---	7,714.00
Oliver	89	2,225.00	---	---	---	---	---	---	---	---	2,225.00
Penticton	16	400.00	---	---	1	15.00	---	---	---	---	415.00
Pouce Coupe	103	2,575.00	---	---	15	225.00	41	123.00	3	150.00	3.073.00
Prince George	34	850.00	---	---	13	195.00	1	3.00	1	50.00	1,098.00
Prince Rupert	19	475.00	---	---	1	15.00	---	---	---	---	490.00
Princeton	2	50.00	---	---	---	---	---	---	---	---	50.00
Quesnel	---	---	---	---	---	---	1	3.00	---	---	3.00
Revelstoke	3	75.00	---	---	---	---	---	---	---	---	75.00
Rossland	8	200.00	---	---	1	15.00	---	---	---	---	215.00
Salmon Arm	1	25.00	---	---	---	---	---	---	---	---	25.00
Smithers	2	50.00	---	---	---	---	---	---	---	---	50.00
Vancouver	85	2,125.00	---	---	6	90.00	15	45.00	---	---	2,260.00
Victoria	7	175.00	---	---	---	---	---	---	---	---	175.00
Williams Lake	25	625.00	---	---	2	30.00	---	---	---	---	655.00
Totals	1,017	$25,425.00	1	$50.00	71	$1,065.00	83	$249.00	5	$250.00	$27,039.00
Less refunds	---	---	---	---	---	---	---	---	---	---	75.00
Total	---	---	---	---	---	---	---	---	---	---	$26,964.00

Revenue Derived from the Sale of Non-resident Anglers' Licences, January 1st to December 31st, 1952

Government Agency	Anglers' Licences (Other than Canadian)		$3.50 Anglers' Licences (Canadian)		$5 Anglers' Licences (Canadian)		Anglers' Licences (Minor)		Total
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
Alberni	122	$854.00			11	$55.00	6	$6.00	$915.00
Ashcroft	24	168.00			1	5.00	12	12.00	185.00
Atlin	16	112.00			18	90.00			202.00
Barkerville	12	84.00					1	1.00	85.00
Burns Lake	93	651.00			43	215.00	7	7.00	873.00
Clinton	299	2,093.00	2	$7.00	18	90.00	86	86.00	2,276.00
Courtenay	616	4,312.00	3	10.50	34	170.00	100	100.00	4,592.50
Cranbrook	587	4,109.00	1	3.50	107	535.00	104	104.00	4,751.50
Creston	608	4,256.00			108	540.00	114	114.00	4,910.00
Cumberland	16	112.00	10	35.00					147.00
Duncan	39	273.00	7	24.50	4	20.00	2	2.00	319.50
Fernie	158	1,106.00	229	801.50	567	2,835.00	54	54.00	4,796.50
Golden	119	833.00			437	2,185.00	92	92.00	3,110.00
Grand Forks	366	2,562.00			2	10.00	37	37.00	2,609.00
Greenwood	64	448.00					7	7.00	455.00
Kamloops	834	5,838.00			58	290.00	157	157.00	6,285.00
Kaslo	116	812.00			6	30.00	12	12.00	854.00
Kelowna	1,290	9,030.00			37	185.00	249	249.00	9,464.00
Lillooet	18	126.00			3	15.00	3	3.00	144.00
Merritt	91	637.00			2	10.00	17	17.00	664.00
Nanaimo	178	1,246.00	1	3.50	21	105.00	12	12.00	1,366.50
Nelson	539	3,773.00			79	395.00	60	60.00	4,228.00
New Denver	11	77.00			9	45.00			122.00
New Westminster	9,532	66,724.00	7	24.50	80	400.00	1,780	1,780.00	68,928.50
Oliver	2,040	14,280.00			11	55.00	312	312.00	14,647.00
Penticton	438	3,066.00	1	3.50	32	160.00	70	70.00	3,299.50
Pouce Coupe	272	1,904.00			416	2,080.00	55	55.00	4,039.00
Powell River	75	525.00	1	3.50			1	1.00	529.50
Prince George	84	588.00	1	3.50	30	150.00	6	6.00	747.50
Prince Rupert	70	490.00			9	45.00	9	9.00	544.00
Princeton	135	945.00			11	55.00	34	34.00	1,034.00
Quesnel	32	224.00			7	35.00	2	2.00	261.00
Revelstoke	67	469.00			14	70.00	5	5.00	544.00
Rossland	344	2,408.00			16	80.00	39	39.00	2,527.00
Salmon Arm	795	5,565.00	1	3.50	66	330.00	83	83.00	5,981.50
Smithers	8	56.00			5	25.00			81.00
Vancouver	611	4,277.00	19	66.50	37	185.00	61	61.00	4,589.50
Vernon	286	2,002.00			15	75.00	51	51.00	2,128.00
Victoria	232	1,624.00	6	21.00	16	80.00	29	29.00	1,754.00
Williams Lake	102	714.00			7	35.00	7	7.00	756.00
Totals	21,339	$149,373.00	289	$1,011.50	2,337	$11,685.00	3,676	$3,676.00	$165,745.50
Less refunds									125.50
Total									$165,620.00

REVENUE DERIVED FROM SALE OF FUR-TRADERS', TAXIDERMISTS', AND TANNERS' LICENCES, AND ROYALTY ON FUR, JANUARY 1ST TO DECEMBER 31ST, 1952

Government Agency	Resident Fur-traders' Licences		Resident Fur-traders' Licences (Transient)		Royalty or Tax on Fur		Taxidermists' or Tanners' Licences		Total
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
Alberni	----	----------	---	----------	2	$3.50	---	----------	$3.50
Atlin	2	$50.00	---	----------	12	72.49	---	----------	122.49
Barkerville	----	----------	---	----------	1	1.50	---	----------	1.50
Burns Lake	10	250.00	---	----------	22	939.06	---	----------	1,189.06
Clinton	----	----------	---	----------	5	46.94	---	----------	46.94
Cranbrook	----	----------	1	$100.00	1	.25	---	----------	100.25
Courtenay	1	25.00	---	----------	----	----------	---	----------	25.00
Fernie	----	----------	---	----------	2	26.70	---	----------	26.70
Golden	1	25.00	---	----------	1	1.50	---	----------	26.50
Kamloops	----	----------	---	----------	4	11.25	---	----------	11.25
Kelowna	----	----------	---	----------	2	11.60	---	----------	11.60
Lillooet	2	50.00	---	----------	1	9.00	---	----------	59.00
Merritt	3	75.00	---	----------	----	----------	---	----------	75.00
Nanaimo	----	----------	---	----------	----	----------	1	$2.00	2.00
Nelson	----	----------	4	400.00	8	12.22	1	2.00	414.22
New Westminster	----	----------	---	----------	6	41.70	---	----------	41.70
Penticton	1	25.00	---	----------	----	----------	---	----------	25.00
Pouce Coupe	19	475.00	2	200.00	306	11,074.83	4	8.00	11,757.83
Prince George	3	75.00	1	100.00	50	4,091.14	1	2.00	4,268.14
Prince Rupert	7	175.00	---	----------	55	2,030.37	---	----------	2,205.37
Quesnel	2	50.00	2	200.00	4	141.75	---	----------	391.75
Revelstoke	----	----------	---	----------	2	6.00	---	----------	6.00
Smithers	3	75.00	---	----------	35	1,314.46	2	4.00	1,393.46
Vancouver	34	850.00	7	700.00	149	34,315.72	5	10.00	35,875.72
Vernon	----	----------	---	----------	1	1.50	---	----------	1.50
Victoria	----	----------	---	----------	11	99.50	2	4.00	103.50
Williams Lake	18	450.00	1	100.00	2	3.50	---	----------	553.50
Totals	106	$2,650.00	18	$1,800.00	682	$54,256.48	16	$32.00	$58,738.48
Less refunds	----	----------	---	----------	----	----------	---	----------	25.00
Total	----	----------	---	----------	----	----------	---	----------	$58,713.48

Total Collections from Fur Trade, 1921 to 1952, Inclusive

Year	Fur Royalty or Tax	Fur-traders', Tanners', and Taxidermists' Licences	Total
1921	$24,595.80	$6,195.00	$30,790.80
1922	51,093.89	6,365.00	57,458.89
1923	60,594.18	6,930.00	67,524.18
1924	56,356.68	6,090.00	62,446.68
1925	48,737.78	7,550.00	56,287.78
1926	56,045.13	6,490.00	62,535.13
1927	61,629.96	9,695.00	71,324.96
1928	51,563.07	7,260.00	58,823.07
1929	40,769.89	6,560.00	47,329.89
1930	40,431.11	4,730.00	45,161.11
1931	41,056.08	4,925.00	45,981.08
1932	36,253.79	4,110.00	40,363.79
1933	39,592.48	4,575.00	44,167.48
1934	42,697.81	4,405.00	47,102.81
1935	44,986.95	4,845.00	49,831.95
1936	46,186.50	6,010.00	52,196.50
1937	47,257.48	6,440.00	53,697.48
1938	39,423.87	5,540.00	44,963.87
1939	44,238.00	4,949.00	49,187.00
1940	62,745.33	5,721.00	68,466.33
1941	56,755.30	6,370.00	63,125.30
1942	63,176.07	5,299.00	68,475.07
1943	52,122.03	6,232.00	58,354.03
1944	63,412.23	6,951.00	70,363.23
1945	93,793.40	10,559.00	104,352.40
1946	98,766.72	8,591.00	107,357.72
1947	92,637.14	6,707.00	99,344.14
1948	66,939.08	6,453.00	73,392.08
1949	56,563.26	4,980.00	61,543.26
1950	65,205.44	6,255.00	71,460.44
1951	70,799.56	5,655.00	76,454.56
1952	54,256.48	4,457.00	58,713.48
Totals	$1,770,682.49	$197,894.00	$1,968,576.49

Comparative Statement Showing Pelts of Fur-bearing Animals on Which Royalty Has Been Collected during the Period 1921 to 1952, Inclusive

Calendar Year	Number and Kind of Pelts on Which Royalty Has Been Collected																				Amount of Royalty Collected
	Bear	Badger	Beaver	Fisher	Fox, Silver	Fox, Cross	Fox, Red	Fox, Blue (Farmed)	Fox, Black	Fox, Platinum (Farmed)	Lynx	Marten	Mink	Muskrat	Otter	Racoon	Skunk	Squirrel	Weasel	Wolverine	
1921	2,489	.....	473	711	62	259	297	.....	.....	.....	1,240	11,128	10,693	75,185	666	2,651	361	.....	26,285	329	$24,595.80
1922	2,127	.....	26,359	536	88	356	443	.....	.....	.....	1,855	12,181	18,932	139,232	915	6,069	715	.....	24,603	298	51,093.89
1923	1,397	.....	32,212	575	114	422	650	.....	.....	.....	2,666	10,043	19,276	127,846	832	5,204	813	.....	37,408	216	60,594.18
1924	1,339	.....	24,619	627	210	920	1,281	.....	.....	.....	4,830	11,780	20,201	91,599	769	4,595	681	.....	29,878	251	56,356.68
1925	1,199	.....	18,231	524	248	1,145	1,592	.....	.....	.....	6,488	7,535	18,795	67,331	713	4,959	802	.....	25,210	208	48,737.78
1926	1,505	.....	18,478	1,038	419	2,226	2,881	.....	.....	.....	8,250	9,920	24,158	48,426	783	5,120	798	.....	30,952	325	56,045.13
1927	1,529	.....	24,418	1,149	674	2,342	2,590	.....	.....	.....	6,385	11,008	16,548	63,884	1,068	7,488	1,132	.....	38,337	502	61,629.96
1928	1,735	.....	20,662	887	573	910	1,031	.....	.....	.....	4,397	11,610	11,968	65,130	981	7,141	1,114	.....	46,782	487	51,563.07
1929	1,165	.....	14,787	749	226	1,056	1,028	.....	.....	.....	2,583	11,265	8,226	52,696	856	5,271	725	.....	67,619	323	40,769.89
1930	1,105	.....	17,137	681	150	601	579	.....	.....	.....	1,584	9,172	8,995	84,500	838	3,790	837	.....	62,630	354	40,431.11
1931	641	.....	18,123	663	267	532	539	.....	.....	.....	1,599	8,066	10,528	106,920	807	3,171	543	.....	42,893	206	41,056.08
1932	592	.....	12,624	558	917	583	644	102	.....	.....	1,273	8,750	12,977	100,509	662	3,555	640	.....	48,357	236	36,253.79
1933	281	.....	11,741	602	2,174	714	972	342	.....	.....	2,064	11,433	17,066	91,230	723	2,891	513	.....	43,321	233	39,592.48
1934	254	.....	10,826	709	2,769	1,249	1,532	232	.....	.....	3,543	9,747	21,408	127,111	770	2,419	562	.....	43,666	207	42,697.81
1935	118	.....	13,593	721	2,696	1,698	2,413	287	.....	.....	3,661	8,979	21,453	107,339	573	1,983	353	.....	34,910	227	44,986.95
1936	141	.....	14,269	760	2,910	2,165	2,662	336	.....	.....	3,507	10,071	20,362	91,591	754	2,856	408	.....	36,307	267	46,186.50
1937	472	.....	15,932	676	3,693	1,626	1,827	530	.....	.....	2,751	9,849	18,030	70,166	824	2,972	391	.....	48,043	279	47,257.48
1938	405	.....	15,291	502	3,016	672	840	560	.....	.....	1,582	8,461	20,146	76,516	596	2,278	475	.....	44,159	215	39,423.87
1939	456	.....	18,748	538	3,312	552	628	472	.....	.....	1,125	9,038	27,579	85,553	667	2,107	329	62,797	50,197	191	44,238.00
1940	200	.....	20,652	558	2,772	605	733	553	.....	.....	1,226	9,678	37,986	117,506	749	1,798	424	589,355	71,580	213	62,745.33
1941	94	.....	21,107	585	2,144	597	863	265	.....	.....	1,295	9,200	20,675	116,722	706	2,648	313	400,938	32,949	246	56,755.30
1942	92	44	18,266	1,289	2,351	1,083	1,447	354	.....	.....	1,373	8,351	43,424	89,759	485	2,125	477	672,415	57,299	196	63,176.07
1943	151	28	17,257	446	2,130	1,696	2,612	274	.....	.....	1,520	6,540	30,408	93,931	417	3,170	321	475,859	52,114	128	52,122.03
1944	234	21	18,147	685	1,902	3,234	4,688	223	2	1	2,419	11,077	39,307	88,182	721	3,546	582	379,299	32,236	209	63,412.23
1945	189	34	23,968	788	1,560	3,156	5,696	602	1	.....	3,235	11,345	35,805	88,146	685	3,238	427	471,854	34,239	260	93,793.40
1946	230	13	22,899	782	1,570	1,549	3,030	221	.....	.....	2,046	11,604	37,693	65,573	844	3,019	286	621,969	52,811	272	98,766.72
1947	209	15	20,427	814	1,599	790	993	707	.....	47	1,992	11,971	41,275	60,433	724	2,647	142	553,812	52,492	164	92,637.14
1948	173	3	15,892	731	296	327	374	22	.....	5	1,194	7,798	33,451	73,432	653	1,796	31	345,444	28,135	209	66,939.08
1949	159	.....	15,120	482	39	114	165	.....	.....	.....	580	5,950	9,249	80,678	450	1,577	11	351,598	20,769	182	56,563.26
1950	136	.....	14,822	572	39	105	120	.....	.....	.....	848	7,454	14,311	103,890	657	594	9	349,152	36,270	158	65,205.44
1951	58	.....	12,769	846	54	164	211	.....	.....	.....	1,153	12,453	17,958	86,794	807	595	4	357,733	31,402	287	70,808.06
1952	83	1	11,073	543	28	84	107	.....	.....	.....	910	7,364	13,194	53,328	548	499	13	479,139	15,911	185	54,256.48
Totals	20,958	159	560,922	22,327	41,002	33,532	45,468	6,082	3	53	81,174	310,821	702,077	2,791,138	23,243	103,772	15,232	6,111,364	1,299,764	8,063	$1,770,690.99

NOTE.—Royalty first put into effect in July, 1921.

Particulars of Various Pelts of Fur-bearing Animals on Which Royalty Has Been Paid, January 1st to December 31st, 1952

Government Agency	Number and Kind of Pelts on Which Royalty Has Been Paid																
	Badger	Bear	Beaver	Fisher	Fox, Silver	Fox, Cross	Fox, Red	Lynx	Marten	Mink	Muskrat	Otter	Racoon	Skunk	Squirrel	Weasel	Wolverine
Alberni										7							
Atlin							3	14		9	24	3			1,752	18	5
Barkerville					1												
Burns Lake		1	205	33	2	8	3	27	116	181	546	11			7,023	350	4
Clinton				5				7		30					262	62	
Cranbrook		1															
Fernie							2		11	1						7	
Golden								1									
Kamloops					1	2	2		3								
Kelowna											105				40	3	
Lillooet									6								
Nelson					1			2	4	1	12				1		
New Westminster							2		4	3	327						
Pouce Coupe		36	3,484	142	12	44	68	481	1,237	790	1,912	13		1	99,609	2,331	37
Prince George		3	1,466	45		12	7	95	441	502	2,443	9			20,137	546	22
Prince Rupert		3	530	47	2			46	475	395	112	17			4,901	174	30
Quesnel			28	1		1	1	16		16	487	1			690		
Revelstoke									4								
Smithers			73	30	2	2	2	39	418	193	180	11			12,708	703	4
Vancouver	1	27	5,285	240	7	15	14	182	4,639	10,902	47,180	480	492	12	332,016	11,717	82
Vernon									1								
Victoria		12					3		5	164		3	7				
Williams Lake			2														1
Totals	1	83	11,073	543	28	84	107	910	7,364	13,194	53,328	548	499	13	479,139	15,911	185

LIST OF FUR CONFISCATED UNDER "GAME ACT," JANUARY 1ST TO DECEMBER 31ST, 1952

Date of Confiscation	Confiscated from—	Confiscated at—	Kind of Fur Confiscated									
			Bobcat	Beaver	Red Fox	Lynx	Marten	Mink	Muskrat	Otter	Weasel	Squirrel
Feb. 19	Ben W. Lubie	Hope	3	—	—	—	2	—	—	—	—	4
„ 21	Chas. M. Ward	Hope	—	—	—	—	—	1	—	—	—	—
„ 29	Frank Maki	Giscome	—	—	—	—	—	—	—	—	—	4
Mar. 6	H. Driedger	Danskin	—	—	—	—	—	—	—	—	1	7
„ 12	Norman White	Campbell River	—	—	—	—	—	—	76	—	—	—
„ 19	Milton G. Arinson	Armstrong	—	—	—	—	—	—	—	—	—	7
„ 21	A. F. George	Fort Nelson	—	—	—	—	—	—	—	—	—	21
Apr. 2	*Fur found by Game Warden* C. E. Estlin	Courtenay	—	3	—	—	—	—	—	—	—	—
„ 17	Daniel Pinski	Oliver	—	2	—	—	—	—	—	—	—	—
„ 17	F. E. Pinski	Oliver	—	1	—	—	—	—	—	—	—	—
„ 17	Frank Marsell	Keremeos	—	—	—	—	—	1	—	—	—	—
„ 24	Edwin M. Chase	Manning, Alta.	—	—	1	1	8	2	—	1	2	140
„ 28	William Reno	Prince George	—	—	—	—	—	—	—	—	—	35
May 15	Wayne Reimer	Mara	1	—	—	—	—	—	—	—	2	4
„ 15	J. W. McPherson	Fort Fraser	—	—	—	—	—	—	—	—	—	36
„ 15	Fred Carpenter	Prince George	—	—	—	—	—	—	—	—	—	60
„ 19	L. Woolridge	Notch Hill	—	—	—	—	—	—	—	—	1	10
June 4	Beal Carlick	Lower Post	—	—	—	—	3	—	—	—	1	2
July 17	Moise Murdock	Fort St. James	—	2	—	—	—	—	—	—	—	—
Dec. 3	H. J. Newfeld	Sardis	—	—	—	—	—	—	9	—	—	—
„ 3	Victor Skalk	Glenbank	—	—	—	—	3	—	—	—	—	1
	Totals		4	8	1	1	16	4	85	1	7	331

NOTE.—The sum of $307.20 was received during 1952 from the sale of confiscated and surrendered fur.

LIST OF FIREARMS CONFISCATED UNDER "GAME ACT," JANUARY 1ST TO DECEMBER 31ST, 1952

Date of Confiscation	Confiscated from—	Confiscated at—	Kind of Firearms Confiscated	
			Rifles	Shotguns
Jan. 9	Blair Davidson	Sandspit	1	—
„ 10	C. F. Hendry	Fort Nelson	1	—
„ 23	Henry Martens	Sardis	—	1
„ 26	H. B. Gobin	Port Coquitlam	—	1
„ 31	R. P. Berrigan	Vancouver	1	—
„ 31	Hans Rutter	Penny	1	—
„ 31	D. Hruhes	Penny	1	—
Mar. 11	D. McNaughton	Colwood	1	—
„ 11	William Bartsoff	Kimberley	1	—
„ 11	N. Fast	Kelowna	1	—
„ 11	A. Leitz	Kelowna	1	—
„ 11	S. J. Kanton	Spanaway, Wash.	2	—
„ 11	Allen Crist	Darrington, Wash.	1	—
„ 11	A. McDonald	Steveston	1	—
„ 11	S. Niedjalski	Steveston	1	—
„ 11	J. Kravjanski	Penny	1	—
„ 12	John Peters	Sardis	1	—
„ 12	John Hoffas	New Westminster	1	—
Apr. 24	John Berndt	Michel	—	1
„ 24	Donald Stubbs	Dawson Creek	1	—
„ 24	D. Kerrelek	Dawson Creek	1	—
„ 24	Edwin M. Chase	Manning, Alta.	2	—
„ 24	R. L. Jenkins	Cobble Hill	1	—
„ 24	William Andreychuk	Mission	1	—
„ 24	Alfred Iason	Rosedale	1	—
„ 24	David Hall and Donald Shaw	Oyster Bay	1	—
„ 24	F. M. Gentry	Mission	1	—
„ 24	Robert McDonald	Victoria	1	—
„ 25	J. A. Camarta	Hedley	1	—
„ 28	William Reno	Prince George	1	—

List of Firearms Confiscated under "Game Act," January 1st to December 31st, 1952—*Continued*

Date of Confiscation	Confiscated from—	Confiscated at—	Kind of Firearms Confiscated	
			Rifles	Shotguns
May 15	M. R. C. Haller	Telkwa	1	---
,, 19	P. Bevargia		1	---
,, 19	P. Gurdallo		1	---
,, 23	C. Kerr	Big Lake	1	---
,, 23	M. Smith	Burns Lake	1	---
,, 23	Roy Lummingdal	Masset	---	1
June 4	William Nespick	Canyon	1	---
,, 12	A. Fisher	Fairmont	1	---
,, 17	Edward Balaski	Prince George	1	---
,, 17	Alcide Fillion	Prince George	1	---
July 5	Gerhard Furano	Tabor Creek	1	---
,, 16	Lee Ying	Ruskin	1	---
,, 16	William Vogel	Enderby	1	---
Aug. 19	R. L. Stewart	Queen Charlotte City	1	---
,, 19	Tassin Berkey, DeWild, Francis, and McAdams	Ladysmith	1	---
,, 19	T. A. Martin	Gordon Head Army Camp	---	1
,, 19	Robert Petty	Vancouver	1	---
,, 19	Robert Woods	Vancouver	1	---
,, 19	F. H. Archer	Windermere	1	---
,, 19	D. R. MacDonald	Calgary, Alta.	1	---
,, 19	B. M. Archer	Windermere	1	---
Sept. 10	Lenzie Nash	Spenard, Alaska	1	---
,, 10	George Kimpton	San Francisco, Calif.	---	1
Oct. 8	Robert Warner	Chilliwack	1	---
,, 8	James Hotchkiss	Victoria	1	---
,, 8	W. M. Parker	Dawson Creek	1	---
,, 8	Allan Paulding	Powell River	1	---
,, 8	R. Hale	Vancouver	1	---
Nov. 21	L. M. Schram	Olalla	1	---
,, 21	Thomas D. Johnson	Fresno, Calif.	1	---
,, 21	Hans Gichann	Williams Lake	1	---
,, 21	Frank Jinkins	Vancouver	1	---
,, 21	A. Jenkins	Vancouver	1	---
,, 21	L. A. Lutz	Vancouver	1	---
,, 21	C. Pierce	Bloedel	1	---
,, 21	K. Gill	Mission	2	---
,, 21	William Ballantyne	Victoria	1	---
,, 21	J. P. Gunderson	Saltair	1	---
,, 21	John Stevens	New Westminster	1	---
,, 21	Garry Johnson	Vancouver	1	---
,, 21	L. Scheffer	Prince George	1	---
,, 21	John Dow	New Westminster	1	---
,, 21	R. Hupfau	Nickel Plate	1	---
,, 21	E. Sienkiewick	Penny	1	---
,, 21	Robert B. Biggan	Prince Rupert	1	---
,, 21	John Ewart	Sardis	1	---
,, 28	J. G. Wally	Lulu Island	---	1
Dec. 3	W. H. Lembke	Fort Nelson	---	1
,, 3	Luciano Sabu	Ashcroft	---	1
,, 3	Mario Sabu	Ashcroft	---	1
,, 4	C. S. Henry	Vancouver	1	---
,, 4	P. Dohn	Kamloops	---	1
,, 4	John Dow	New Westminster	1	---
,, 10	R. I. Smith	Prince George	---	1
	Totals		75	12

Note.—The sum of $234.07 was received during 1952 from the sale of confiscated firearms.

BOUNTIES PAID DURING THE YEAR ENDED DECEMBER 31ST, 1952

Government Agency	Wolves		Cougar		Coyote, $4	Total
	$40	$25	Bounty, $20	Bonus, $20		
Alberni	-----	-----	47	6	-----	$1,060.00
Atlin	-----	3	-----	-----	11	119.00
Barkerville	-----	-----	-----	-----	5	20.00
Burns Lake	-----	210	3	-----	381	6,834.00
Clinton	9	-----	6	-----	404	2,096.00
Courtenay	-----	-----	85	32	-----	2,340.00
Cranbrook	-----	-----	18	-----	190	1,120.00
Cumberland	-----	-----	27	-----	-----	540.00
Duncan	-----	1	23	8	-----	645.00
Fernie	-----	-----	2	-----	44	216.00
Golden	-----	2	14	-----	119	806.00
Grand Forks	-----	-----	8	-----	42	328.00
Kamloops	8	-----	25	-----	365	2,280.00
Kaslo	-----	-----	-----	-----	12	48.00
Kelowna	-----	-----	5	-----	91	464.00
Lillooet	8	-----	6	-----	86	784.00
Merritt	-----	-----	6	-----	457	1,948.00
Nanaimo	-----	4	22	2	1	584.00
Nelson	-----	1	11	-----	120	725.00
New Westminster	-----	-----	2	-----	11	84.00
Penticton	-----	-----	3	-----	77	368.00
Pouce Coupe	-----	148	2	-----	409	5,376.00
Powell River	-----	-----	5	-----	-----	100.00
Prince George	-----	184	1	-----	324	5,916.00
Prince Rupert	-----	94	1	-----	32	2,498.00
Princeton	-----	-----	2	-----	81	364.00
Quesnel	7	-----	8	-----	133	972.00
Revelstoke	-----	1	1	-----	13	97.00
Rossland	-----	-----	-----	-----	21	84.00
Smithers	-----	25	-----	-----	94	1,001.00
Salmon Arm	-----	-----	6	-----	72	408.00
Vancouver	-----	2	24	-----	35	670.00
Victoria	-----	-----	39	11	1	1,004.00
Vernon	-----	-----	10	-----	164	856.00
Williams Lake	21	-----	53	-----	974	5,796.00
Totals	53	675	465	59	4,769	$48,551.00

Comparative Statement of Bounties Paid from 1922 to 1952, Inclusive

Calendar Year	Wolves	Cougars	Coyotes	Crows	Magpies	Eagles	Owls	Amount
1922	303	372	1,092	53,443	2,246	7,095	17,625	$60,494.80
1923	162	195	1,687	.....	70	20	172	14,840.00
1924	195	173	5,175	172	.....	89	.....	20,398.40
1925	291	137	7,276	.....	.....	.....	.....	24,397.00
1926	336	183	14,070	5,770	.....	.....	.....	41,077.00
1927	344	372	20,192	10,046	2,487	.....	.....	65,377.95
1928	452	444	3,672	.....	.....	.....	1,025	50,709.25
1929	411	530	1,881	.....	.....	.....	1,389	42,122.00
1930	312	491	1,544	.....	.....	.....	403	36,090.25
1931	310	701	2,864	.....	3,427	.....	1	42,036.15
1932	.....	8	.....	.....	.....	.....	.....	80.00
1933	1	628	.....	.....	.....	.....	.....	6,285.00
1934	221	572	.....	.....	.....	.....	.....	6,825.00
1935	561	430	1,877	.....	.....	.....	.....	12,374.00
1936	837	599	1,950	.....	.....	.....	.....	20,350.00
1937	828	423	1,400	.....	.....	.....	.....	19,540.00
1938	915	384	2,094	.....	.....	.....	.....	21,018.00
1939	1,159	366	1,971	.....	.....	.....	.....	26,399.00
1940	1,659	285	2,038	.....	.....	.....	.....	23,131.00
1941	1,002	196	1,924	.....	.....	.....	.....	16,868.00
1942	1,039	261	1,546	.....	.....	.....	.....	17,397.00
1943	1,017	265	1,221	.....	.....	.....	.....	16,587.00
1944	1,321	301	1,259	.....	.....	.....	.....	20,243.00
1945	1,202	472	5,506	.....	.....	.....	.....	46,627.00
1946	932	461	2,720	.....	.....	.....	.....	22,392.00
1947	1,102	519	2,976	.....	.....	.....	.....	36,386.00
1948	1,156	725	3,911	.....	.....	.....	.....	58,344.00
1949	1,180	524	6,847	.....	.....	.....	.....	70,501.00
1950	991	395	9,822	.....	.....	.....	.....	73,688.00
1951	753	488	5,202	.....	.....	.....	.....	51,133.00
1952	728	524	4,769	.....	.....	.....	.....	48,551.00
Totals	21,720	12,424	118,486	69,431	8,230	7,204	20,615	$1,012,261.80

Big-game Trophy Fees Paid by Non-residents, January 1st to December 31st, 1952

Government Agency	Species									Amount
	Bear, Grizzly	Bear, Black or Brown	Caribou	Deer, Coast	Deer, Mule or White-tailed	Mountain-goat	Mountain-sheep	Moose	Wapiti (Elk)	
Ashcroft	4	9	2	.....	6	15	1	29	.....	$2,610.00
Atlin	3	4	5	.....	.....	2	7	.....	.....	435.00
Burns Lake	.....	3	.....	.....	.....	.....	.....	3	.....	195.00
Cranbrook	3	6	.....	.....	.....	23	1	1	3	1,015.00
Courtenay	.....	.....	.....	3	.....	.....	.....	.....	.....	45.00
Fernie	6	5	.....	.....	1	22	6	6	14	2,260.00
Golden	15	5	.....	.....	6	27	3	9	9	2,740.00
Kamloops	.....	5	.....	.....	.....	.....	.....	.....	.....	35.00
Lillooet	.....	1	.....	.....	1	2	1	.....	.....	130.00
Nanaimo	.....	1	.....	.....	.....	.....	.....	.....	.....	5.00
Nelson	2	.....	.....	.....	.....	.....	.....	.....	.....	100.00
New Westminster	7	8	.....	.....	3	7	2	3	.....	920.00
Oliver	2	4	.....	.....	18	3	.....	6	.....	985.00
Penticton	.....	1	.....	.....	.....	.....	.....	.....	.....	5.00
Pouce Coupe	18	22	43	.....	2	49	42	25	.....	5,065.00
Prince George	9	17	7	.....	.....	15	6	9	.....	1,580.00
Prince Rupert	2	1	.....	.....	3	9	.....	.....	.....	350.00
Revelstoke	1	.....	.....	.....	.....	.....	.....	.....	.....	50.00
Rossland	2	3	.....	.....	.....	.....	.....	.....	.....	115.00
Vancouver	2	5	.....	8	6	6	2	7	.....	1,050.00
Williams Lake	2	2	.....	.....	2	12	.....	6	.....	820.00
Totals	78	102	57	11	48	192	71	104	26	$20,510.00
Less refunds	.....	.....	.....	.....	.....	.....	.....	.....	.....	145.00
Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	$20,365.00

PROSECUTIONS (PROVINCIAL GAME DIVISIONS), JANUARY 1ST TO DECEMBER 31ST, 1952

Description of Offence	Divisions (*See* Foot-note) "A"	"B"	"C"	"D"	"E"	Dismissals	Convictions	Total No. of Informations Laid	Fines or Penalties Imposed
Game Animals									
Allowing dogs to run or hunt deer	5	----	----	----	----	----	5	5	$135.00
Buying or selling game animals illegally	----	----	2	----	----	----	2	2	50.00
Exceeding bag-limit on game animals	----	----	1	1	----	----	2	2	125.00
Hunting or killing game animals with rim-fire shells or metal-cased bullets	----	2	----	2	1	----	5	5	50.00
Hunting, killing, or possession of game animals under 1 year of age	1	7	5	----	----	----	13	13	405.00
Hunting, killing, or possession of game animals during close season	13	13	8	12	1	2	47	49	1,665.00
Hunting, killing, or possession of game animals of female sex	----	----	11	16	1	----	28	28	2,175.00
Pit-lamping or hunting game animals at night	3	1	1	2	----	3	7	10	2,250.00
Possession of game animals on premises of logging camp	----	----	4	3	----	----	7	7	540.00
Possession of untagged moose, elk, or deer	3	2	4	3	1	1	13	14	170.00
Possession of game animals from which evidence of sex removed	1	2	3	----	1	----	7	7	130.00
Firearms									
Carrying firearms on a game reserve	----	3	----	1	----	----	4	4	55.00
Carrying loaded firearms or discharging same from automobile	18	19	97	47	18	1	199	200	1,756.00
Carrying or possession of unplugged shotgun	4	----	9	4	4	----	21	21	240.00
Discharging firearms on or across highway	----	----	1	1	9	----	11	11	105.00
Minors carrying firearms unaccompanied by an adult	9	----	5	----	7	----	21	21	83.50
Non-residents in possession of unsealed firearms	----	----	----	11	----	----	11	11	120.00
Fur Trade and Trapping									
Baiting traps with game meat	----	----	----	1	----	----	1	1	50.00
Destroying beaver houses	----	----	1	----	----	----	1	1	25.00
Failing to make returns on trapping licence	----	----	1	----	----	----	1	1	10.00
Fur-trader failing to keep proper record-book	----	----	----	1	----	1	1	2	----
Interfering or trapping on another person's trap-line	----	1	1	11	2	4	15	19	625.00
Possession of untagged beaver-pelts	----	2	----	2	----	2	4	6	55.00
Possession of unprime pelts	----	----	----	1	----	----	1	1	10.00
Trading in pelts without a licence	----	----	4	----	----	----	4	4	130.00
Trapping or carrying traps without a licence	1	3	8	3	4	----	19	19	375.00
Trapping during close season	----	----	1	2	1	----	4	4	60.00
Trader or trapper evading payment of royalty	----	----	----	1	----	----	1	1	50.00
Licences									
Non-residents carrying firearms without a licence	6	3	12	14	5	----	40	40	1,850.00
Non-residents angling without a licence	3	11	20	10	5	----	49	49	495.00
Residents carrying firearms without a licence	32	27	91	49	74	2	273	275	3,167.00
Residents angling without a licence	30	14	61	36	125	----	266	266	2,632.50
Migratory Game Birds									
Exceeding bag-limit or possession-limit	----	----	----	1	----	----	1	1	150.00
Hunting migratory game birds from power-boat	3	----	----	----	----	----	3	3	30.00
Hunting migratory game birds during prohibited hours	6	8	----	----	30	1	44	45	1,080.00
Hunting migratory game birds with a rifle	3	1	1	2	----	1	7	8	80.00
Hunting migratory game birds in prohibited areas	----	----	----	----	5	----	5	5	50.00
Hunting, possession, or killing migratory game birds during close season	----	2	5	2	11	----	20	20	295.00
Upland Game Birds									
Allowing dogs to hunt game birds during prohibited time	----	----	1	----	2	1	3	4	30.00
Exceeding bag-limits on upland game birds	----	----	1	----	1	----	2	2	35.00
Hunting pheasants during prohibited hours or when snow on ground	----	----	2	----	1	----	3	3	20.00
Hunting, killing, or possession of upland game birds during close season	6	9	15	4	10	----	44	44	1,060.00
Possession of untagged pheasants	----	----	1	----	6	----	7	7	70.00
Possession of upland game birds with plumage removed	----	1	2	----	----	----	3	3	20.00

PROSECUTIONS (PROVINCIAL GAME DIVISIONS), JANUARY 1ST TO DECEMBER 31ST, 1952—*Continued*

Description of Offence	Divisions (*See* Foot-note) "A"	"B"	"C"	"D"	"E"	Dismissals	Convictions	Total No. of Informations Laid	Fines or Penalties Imposed
Special Fishery Regulations									
Angling for trout during close season	----	1	3	----	60	----	64	64	$508.50
Allowing sawdust to pollute river	----	----	1	----	----	----	1	1	20.00
Exceeding bag or possession limit on trout	----	8	2	1	1	----	12	12	155.00
Jigging, molesting, or taking fish on spawning-grounds	2	2	3	----	2	1	9	10	135.00
Possession of or using fish-roe in prohibited area	9	11	----	----	4	----	24	24	425.00
Taking or possession of undersized trout	----	12	3	----	8	2	23	25	275.00
Using more than one line or rod	2	----	17	----	5	1	24	25	240.00
Using gear designed to catch more than one fish	----	5	----	----	11	----	16	16	117.50
Unlawfully selling trout	----	----	----	----	1	----	1	1	10.00
Miscellaneous									
Cold-storage operator failing to keep record-books	----	----	----	----	1	----	1	1	10.00
Giving false information to Game Warden to obtain licence or obstruction	1	3	4	5	7	2	20	22	210.00
Guide failing to make return of hunting trip or failing to complete the form on reverse side of a non-resident licence	----	----	13	----	----	----	13	13	140.00
Guiding without a permit or licence	1	----	8	1	----	----	10	10	460.00
Guide failing to report violations of "Game Act"	----	----	1	----	----	----	1	1	50.00
Killing big game while acting as guide	----	----	1	----	----	----	1	1	50.00
Keeping live game animals in captivity without a permit	----	----	----	1	----	1	1	2	25.00
Non-resident hunting big-game animals without a guide	----	----	2	1	----	----	3	3	60.00
Operating a cold-storage plant without a licence or permit	----	----	----	----	1	----	1	1	10.00
Trespassing on private property	3	----	5	----	18	2	26	28	345.00
Totals	165	173	442	252	444	28	1,476	1,504	$25,755.00

Gaol Sentences

Killing game animals of the female sex—3, total of six months.

Trapping fur-bearing animals during close season—1, five days.

Giving false information—1, thirty days.

NOTE.—"A" Division: Vancouver Island area and part of Mainland. "B" Division: Kootenay and Boundary areas. "C" Division: Kamloops, Yale, Okanagan, Cariboo, and Lillooet areas. "D" Division: Atlin, Skeena, Omineca, Fort George, Peace River, and Yukon Boundary areas. "E" Division: Vancouver, Coast, and Lower Mainland areas.

HUNTING AND FISHING ACCIDENTS, 1952

Date	Name of Wounded Person	Name of Person Responsible for Accident	District	Cause of Accident	Nature of Injuries	Result of Injuries
Feb. 11	John Marshall	Self	Blueberry	Careless handling of a .22 rifle	Hit in foot	Not serious.
„ 17	Charles E. Quirt	Self	Bute Inlet	Careless handling of a .22 rifle	Struck in knee	Not serious.
„ 24	Albert Pelkey, Jr.	A. Nelson	Saanich	Removing loaded shotgun from automobile	Pellets in right arm	Not serious.
May 13	Frank Nishii	Joe Yarmish	Steveston	Careless handling of a .22 rifle	Bullet wound in arm	Not serious.
Sept. 30	Wm. J. Branch	R. J. Branch	Miocene	Careless handling of a .22 rifle	Thumb and abdomen wounds	Serious.
Oct. 5	Edward K. Wood	Robt. J. Wood	Saltspring Island	Mistaken for deer	Bullet travelled through most of body, lodging near heart	Died.
„ 9	Howard Manley	Ben Hatfield	Alexis Creek	Careless handling of a shotgun	Hit in right shoulder	Not serious.
„ 11	Stanley Turner	Self	Kelowna	Careless handling of a rifle	Hit in left foot	Not serious.
„ 12	Walter Jamieson	John Dawes	Saltspring Island	Careless handling of rifle while unloading same	Struck in knee	Serious.
„ 13	Gerald Fraser	Self	Dawson Creek	Accidental discharge of rifle	Hit in body	Died.
„ 18	G. F. Hanson	A. Napier	Ladner	Careless handling of a shotgun	Pellets in head and neck	Not serious.
„ 18	Floyd Somerville	A. Napier	Ladner	Careless handling of a shotgun	Pellets in head and neck	Not serious.
„ 18	Alex. Stables	Self	Pitt Meadows	Careless handling of a shotgun	Struck in arm	Not serious.
„ 19	Herbert Ellis	W. J. T. Morrow, Jr.	Delta	Shooting at a low-flying pheasant	Pellets in face, arms, and chest	Not serious.
„ 19	Joe Grigoletto	Self	Alberni	Removing loaded shotgun from boat	Severe wound in right side	Died.
„ 22	Seymour Tidamore	Self	Vanderhoof	Careless handling of a shotgun	Pellets in left side of face	Not serious.
„ 26	Westley E. Pepper	G. Pawloski	Surrey	Careless handling of a shotgun	Pellets in face, hand, and wrist	Not serious.
Nov. 3	Albert R. Webb	Frederick R. Street	Courtenay	Mistaken for deer	Bullet struck through lungs	Died.
„ 9	B. C. Duller	Patrick Dickson	100-Mile House	Careless handling of a rifle	Struck in stomach	Died.
„ 15	Daniel Pettigrew	Self	Sea Island	Removing loaded shotgun from automobile	Pellets in left arm	Not serious.
„ 16	George Kost	Lawrence Trainor	Ryan (Cranbrook)	Careless handling of a rifle	Wounded in left thigh	Died.
„ 23	Frank G. Albo	Raymond R. Albo	Fernie	Careless handling of a .22 rifle	Hit in elbow	Not serious.
„ 27	Richard Lake	Peter G. Lake	Saltspring Island	Mistaken for deer	Hit in head	Died.
„ 27	Norman Trasolini	Reginald Miller	Soda Creek	Mistaken for deer	Horse ridden by Trasolini killed; no injury to Trasolini	Not serious.
„ 27	Peter Kelly	Robert Kelly	Big Creek	Mistaken for a moose	Hit in upper part of right leg	Not serious.
Dec. 2	Gordon Thorne	Ray James	Cowichan	Accidental discharge of shotgun in boat	Pellets in leg	Not serious.
„ 8	George Lewis	Frank Inrig	Quadra Island	Carrying loaded shotgun in automobile	Pellets in ribs and arm	Not serious.

NOTE.—In every case where carelessness proven, the firearms licence of the person responsible was cancelled under the provisions of the "Game Act."

Summary of Game-fish Culture Distributions, Showing Eggs, Fry, and Fingerlings, 1952

Kind of Game Fish	Eggs	Fry	Fingerlings
Cut-throat trout	472,310	364,270	104,000
Eastern brook trout	----------	10,000	127,949
Kamloops trout	4,390,580	4,294,634	1,145,732
Kokanee trout	865,000	75,440	----------
Totals	5,727,890	4,744,344	1,377,681

Summary of Game-fish Eggs, Fry, and Fingerlings at Departmental Hatcheries, December 31st, 1952

Hatchery	Cut-throat Eggs or Fry	Eastern Brook Eggs or Fry	Kamloops Fingerlings or Fry
Nelson	----------	298,400	200,095
Puntledge Park	12,690	----------	----------
Smith Falls	3,447	----------	96,580
Summerland	----------	----------	300,589
Totals	16,137	298,400	597,264

Summary

Eggs	5,727,890
Fry	4,744,344
Fingerlings	1,377,681
Total distributions	11,849,915
On hand at hatcheries, December 31st, 1952	911,801
Total	12,761,716

GAME-FISH CULTURE BRANCH—SUMMARY OF TROUT PLANTINGS, 1952

HATCHERY OR STATION (Particulars of Plantings or Liberations)	KIND OF FISH OR EGGS												
	Cut-throat			Eastern Brook			Kamloops			Kokanee		Hatcheries	
	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Eggs	Fry or Fingerlings
VANCOUVER ISLAND													
Puntledge Park Hatchery													
Beck Lake			5,000										
Blind Lake									2,000				
Boomerang Lake			2,000										
Cameron Lake			5,200						20,000				
Crabtree Lake (E. G. Bernard)									500				
Dog Lake									8,000				
Dog and Loon Lakes									1,278				
Dunsmuir Collieries power-house pipe-line									500				
Garrett Lake									150				
Kidney, Boomerang, and Round Lakes			8,400										
Long Lake									14,000				
Loon Lake									6,000				
Nanaimo Lake									2,000				
Quamichan Lake			5,000						3,000				
Rogers Lake			5,000						3,000				
Shawnigan Lake			9,800						68,500				
Thetis Lake			5,000										
Unknown lake			500										
Westwood Lake									15,000				
Wolf Lake			3,000										
Power-house flume (Federal Fisheries Research Group)									7,200				
Major G. R. Davidson (private sale)			100										
Totals			49,000						151,128				
LOWER MAINLAND													
Smiths Falls Hatchery													
Alexandra Lodge Lake									25				
Capilano River									54				
Cultus Lake	55,000								51,033				
Deer Lake (Harrison Lake)									3,000				
Deer Lake (Ioco)									8,000				
Elsie Lake									2,000				
Hicks Lake									3,000				
Kawkawa Lake			55,000										
Lake of the Woods									7,000				

GAME-FISH CULTURE BRANCH—SUMMARY OF TROUT PLANTINGS, 1952—*Continued*

HATCHERY OR STATION (Particulars of Plantings or Liberations)	KIND OF FISH OR EGGS												
	Cut-throat			Eastern Brook			Kamloops			Kokanee		Hatcheries	
	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Eggs	Fry or Fingerlings
LOWER MAINLAND—*Continued*													
Smiths Falls Hatchery—Continued													
H. Bell-Irving (private sale)									300				
V. Golden (private sale)									2,000				
I. Lindberg (private sale)							20,000						
H. Peppar (private sale)									2,000				
O. Wells (private sale)									1,000				
Puntledge Park Hatchery												100,000[1]	
Summerland Hatchery													100,000[2]
Totals	55,000		55,000				20,000		79,412			100,000[1]	100,000[2]
OKANAGAN DISTRICT													
Lloyd's Creek Hatchery													
Agate Bay								40,000					
Andy Lake								10,000					
Arthur Lake								20,000					
Aylmer Lake								10,000					
Black Lake								10,000					
Blind Bay								25,000					
Blue River							130,000						
Bolean Creek							10,000						
Caverhill Lake							60,000						
Devick Lake								10,000					
Dutch Lake								40,000					
Eagle Bay								20,000					
Eagle River							50,000						
East Barriere Lake							50,000						
Ernest Lake								10,000					
Genier Lake								10,000					
Hardcastle Lake								20,000					
Harper Lake								30,000					
Hyas Lake								30,000					
Kamloops Lake								90,000					
Knouff Lake								100,000					
Lac la Jeune								80,000					
Lucerne Lake							30,000						
McConnell Lake								20,000					
Monte Lake								40,000					

Mount Robson (Kinney Lake)							10,000						
Palmer Creek							220,000						
Paul Lake								300,000					
Pemberton Lake								5,000					
Pinantan Lake								75,000					
Pinaus Lake							60,000						
Ross Creek							25,000						
Salmon River							50,000						
Scotch Creek							175,000						
Spanish Lake								5,000					
Stake Lake								15,000					
Tahell Lakes (East and West)							10,000						
Tunkwa Lake								100,000					
Woods Lake								10,000					
Bulkley Valley Rod and Gun Club							70,000						
Prince George Rod and Gun Club							150,000						
Vanderhoof Rod and Gun Club							120,000						
France							2,000						
S. Hull (private sale)								3,000					
D. C. Wilson (private sale)								10,000					
Loon Creek Hatchery												670,000[2]	
Smiths Falls Hatchery												15,000[2]	
Totals							1,222,000	1,138,000				685,000[2]	
Penask Lake Hatchery													
Boss Lake								10,000					
Corbett Lake								10,000					
Cowan Lake								5,000					
Crater Lake								10,000					
Davis Lake								7,500					
Garcia Lake								20,000					
Glimpse Lake							15,000	10,000					
Harmon Lake								10,000					
Harvey Hall Lakes								15,000					
Hornet Lake								10,000					
Island Lake								5,000					
Jackson Lake								5,000					
Loosemore Lake								10,000					
Ludwig Lake								15,000					
Moore Creek							190,000						
Nicola Lake								20,000					
Penask Creek								5,000					
Peterhope Lake								30,000					
Stoney Lake								10,000					
Thalia Lake								10,000					
Trout Lake								7,500					
Kamloops Incorporated, Redding, Calif.							300,000						
Oregon State Game Department							500,000						
Washington State Game Department							500,000						

[1] Cut-throat. [2] Kamloops.

GAME-FISH CULTURE BRANCH—SUMMARY OF TROUT PLANTINGS, 1952—*Continued*

HATCHERY OR STATION (Particulars of Plantings or Liberations)	KIND OF FISH OR EGGS												
	Cut-throat			Eastern Brook			Kamloops			Kokanee		Hatcheries	
	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Eggs	Fry or Fingerlings
OKANAGAN DISTRICT—*Continued*													
Penask Lake Hatchery—Continued													
Cranbrook Hatchery												400,000[2]	
Lloyd's Creek Hatchery												900,000[2]	
Nelson Hatchery												500,000[2]	
Puntledge Park Hatchery												100,000[2]	
Totals							1,505,000	225,000				1,900,000[2]	
Kelowna Rearing-ponds													
Kalamalka Lake									2,310				
Woods Lake									16,680				
Totals									18,990				
Beaver Lake Hatchery													
Alex Mountain Creek							90,000						
Barb Lake								10,000					
Bear Lake								15,000					
Beaver Creek								10,000					
Beaver Lake							100,000						
Brown Lake								5,000					
Cultus Lake								10,000					
Crooked Lake								45,000					
Dee Creek							100,000						
Dee Lake								55,000					
Dorsan Lake								15,000					
Echo Lake								40,000					
Hidden Lake								15,000					
Island Lake								10,000					
Lassie Lake								10,000					
Lost Lake								5,000					
McCullough Lake								30,000					
Mabel Lake							150,000						
Mara Lake							100,000						
North Lake								10,000					
Pats Lake								10,000					
Rod and Deer Lakes								5,000					
Round Lake								50,000					
South Lake								5,000					
Sugar Lake							75,000						

Swan Lake								40,000					
Twin Lakes								12,000					
Wilma Lake								5,000					
Cranbrook Hatchery												200,000[2]	
Nelson Hatchery												461,000[2]	
Revelstoke Hatchery												100,000[2]	
Summerland Hatchery												972,000[2]	
Kelowna rearing-ponds								276,000					
Totals							615,000	688,000				1,733,000[2]	
Summerland Hatchery													
Agar Lake								5,000					
Allandale Lake									4,000				
Allison Lake									10,000				
Alleyne Lake									5,000				
Bardolph Lake									4,000				
Bear Lake									15,000				
Blue Lake								2,000					
Boundary Lake								2,000					
Chain Lake								5,000					
Clearwater Lake								10,000					
Coquihalla Lake									6,000				
Cribbing Lake									5,000				
Deer Lake									10,000				
Dry Lake								5,000					
Fish (Dakre) Lake						10,000							
Garnet Valley Dam									5,000				
Glen Lake								10,000					
Island Lake								5,000					
Jewel Lake									20,000				
Kalamalka Lake									10,000				
Kentucky Lake									5,000				
Kettle River								9,000	1,000				
Kipoola Lake								10,000					
Laird Lake									5,000				
Larkin Lake									5,000				
Link Lake								5,000					
Mabel Lake									10,000				
Madden Lake						5,000			5,000				
Maloney Lake									10,000				
Martin Lake						2,500							
Mill Creek						5,000							
Missezula Lake									20,000				
Munro Lake								5,000					
Murray Lake									2,500				
Okanagan Lake									88,500				
Osoyoos Lake									15,000				
Osprey Lake								5,000					
Otter Lake									10,000				
Peachland Dam Lake								10,000					

[2] Kamloops.

GAME-FISH CULTURE BRANCH—SUMMARY OF TROUT PLANTINGS, 1952—*Continued*

HATCHERY OR STATION (Particulars of Plantings or Liberations)	KIND OF FISH OR EGGS												
	Cut-throat			Eastern Brook			Kamloops			Kokanee		Hatcheries	
	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Eggs	Fry or Fingerlings
OKANAGAN DISTRICT—*Continued*													
Summerland Hatchery—Continued													
Pillar Lake	----	----	----	----	----	----	----	----	13,000	----	----	----	----
Procter Lake	----	----	----	----	----	----	----	----	1,500	----	----	----	----
Richter Lake	----	----	----	----	----	----	----	----	20,000	----	----	----	----
Round Lake	----	----	----	----	----	----	----	----	5,000	----	----	----	----
Sawmill Lake	----	----	----	----	----	----	----	----	10,000	----	----	----	----
Shuswap Lake	----	----	----	----	----	----	----	----	52,500	----	----	----	----
Silver Lake	----	----	----	----	----	----	----	5,000	----	----	----	----	----
Similkameen River	----	----	----	----	----	----	----	20,000	----	----	----	----	----
Similkameen River (Cawston)	----	----	----	----	----	----	----	20,000	----	----	----	----	----
Similkameen River (Copper Mountain)	----	----	----	----	----	----	----	20,000	----	----	----	----	----
Similkameen River (nursery waters)	----	----	----	----	----	----	----	----	2,000	----	----	----	----
Skaha Lake	----	----	----	----	----	----	----	----	47,884	----	----	----	----
Summit Lake	----	----	----	----	----	----	----	----	5,000	----	----	----	----
Swan Lake	----	----	----	----	----	----	----	----	10,000	----	----	----	----
Taylor Lake	----	----	----	----	----	----	----	5,000	----	----	----	----	----
Teepee Lakes	----	----	----	----	----	----	----	10,000	----	----	----	----	----
Tulameen River	----	----	----	----	----	----	----	20,000	----	----	----	----	----
Twin Lakes	----	----	----	----	----	10,000	----	----	----	----	----	----	----
Vernon Lake	----	----	----	----	----	15,449	----	----	----	----	----	----	----
Westmere Lake	----	----	----	----	----	----	----	10,000	----	----	----	----	----
Wilgress Lake	----	----	----	----	----	----	----	----	7,500	----	----	----	----
Wolf Lake	----	----	----	----	----	----	----	2,000	----	----	----	----	----
Cranbrook Hatchery	----	----	----	----	----	----	----	----	----	----	----	252,808[2]	----
Gerrard Hatchery	----	----	----	----	----	----	----	----	----	----	----	281,988[2]	----
Nelson Hatchery	----	----	----	----	----	----	----	----	----	----	----	219,173[2]	----
Guernsey's ponds	----	----	----	----	----	----	----	----	1,000	----	----	----	----
Vernon rearing-ponds	----	----	----	----	----	----	----	62,000	----	----	----	----	----
E. N. Freding (private sale)	----	----	----	----	----	----	----	----	2,000	----	----	----	----
F. Robb (private sale)	----	----	----	----	----	----	----	----	1,000	----	----	----	----
B. Walker (private sale)	----	----	----	----	----	----	----	1,000	----	----	----	----	----
Totals	----	----	----	----	----	47,949	----	263,000	449,384	----	----	753,969[2]	----
KOOTENAY DISTRICT													
Nelson Hatchery													
Akokli (Goat) Creek	----	----	----	----	----	----	----	----	----	30,000	----	----	----
Arrow Lake (Upper)	----	----	----	----	----	----	----	----	25,000	----	----	----	----
Arrow Lake (Lower)	----	----	----	----	----	----	----	----	54,374	----	----	----	----

Baynes Lake						8,000							
Beaver Creek (Fruitvale)						10,000							
Big Sheep Creek (Rossland)						10,000							
Bonanza Creek										50,000			
Boundary Creek							15,000						
Boundary Lake (Salmo)						15,000							
Boundary Lake						4,000							
Box Lake								30,000					
Canim Lake										50,000			
Catherine Lake									5,000				
Christina Lake									45,225				
Columbia River (Pass Creek)									20,000				
Columbia River (above Trail)									26,500				
Cottonwood Lake								5,000					
Crawford Creek										30,000			
Echo Lake (Creighton Valley)											10,000		
Erie Lake						10,000							
Goat Creek							30,000						
Goat River							30,000			30,000			
Granby River								15,000					
Hill Creek							15,000						
Horse Lake										50,000			
Hutchison Creek							80,000						
Kettle River (West Fork)							30,000						
Koch Creek							20,000						
Kokanee Creek										30,000			
Kootenay Lake (Crawford Bay)									30,000				
Kootenay Lake (Sanca Bay)									10,000				
Kootenay Lake (Queens Bay)									4,038				
Kootenay Lake (Queens Bay to Kaslo Bay)									25,000				
Kootenay Lake (West Arm)									25,000		53,940		
Kootenay Lake (Lockhart Creek)											10,000		
Kootenay River (Slocan Pool)									5,000				
Kootenay River (Corra Linn)									5,000				
Kootenay River (Corra Linn-Sunshine Bay)									10,000				
Kootenay River (Sunshine Bay)									10,000				
Kootenay River (above Brilliant Dam)									25,000				
Lac la Hache										40,000			
La France Creek										20,000			
Lemon Creek (First South Fork)								10,000					
Lockhart Creek										20,000			
McKenzie Creek							15,000						
Mosquito Lake								17,000					
Meadow Creek					5,000								
Nakusp Creek							20,000						
Nine Mile Creek										20,000			
Palmer Bar Creek					5,000								
Porcupine Creek								5,000					
Redfish Creek										20,000			

[2] Kamloops.

GAME-FISH CULTURE BRANCH—SUMMARY OF TROUT PLANTINGS, 1952—*Continued*

Hatchery or Station (Particulars of Plantings or Liberations)	Kind of Fish or Eggs												
	Cut-throat			Eastern Brook			Kamloops			Kokanee		Hatcheries	
	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Eggs	Fry or Fingerlings
KOOTENAY DISTRICT—*Continued*													
Nelson Hatchery—Continued													
Rock Creek							15,000						
Salmon River (North Fork)								10,000					
Salmon River (South Fork)								10,000					
Salmon River (nursery waters)								20,000					
Shea Creek							33,200						
Sheep Creek (upper reaches)								5,000					
Silver Spring Lake											1,500		
Sitkum Creek										20,000			
Six Mile Lakes								15,000					
Slate Creek Lake								10,000					
Slocan Lake									50,000				
Slocan River									35,000				
Snowshoe Lake									5,000				
Stoney (Hahas) Lake						10,000							
Sugar Lake										50,000			
Summit Lake									10,000				
Tie Lake						8,000							
Watson Creek							10,000						
Whatshan Lakes							80,000						
Wildhorse Creek						5,000							
Williamson Lake								5,000					
Wilson Lakes (2)							40,000	3,000					
Woods Lake								3,000		50,000			
Xenia Lake								10,000					
Federated Sportsmen, Redding, Calif.										200,000			
A. H. Peppar (private sale)										10,000			
Summerland Hatchery												50,000[3]	
Totals					10,000	80,000	433,200	173,000	425,137	720,000	75,440	50,000[3]	
Gerrard Hatchery													
American Creek								12,000					
Benson Creek								12,000					
Boulder Creek								12,000					
Duncan Lakes (South Bay)								15,000					
Horsefly Creek								18,000					
Lardeau River								88,640					
Lardeau River (log-jam)								38,000					
Lardeau River (Gerrard Bridge)								18,000					

Meadow Creek										115,000			
Rapid Creek								18,000					
Staubert Lake							30,000			30,000			
Nelson Hatchery												740,000[4]	
Totals							30,000	231,640		145,000		740,000[4]	
Cranbrook Hatchery													
Bark Shanty Lake	34,720												
Bartholomews Lake		7,500											
Blackwater Lakes								28,730					
Bush Lakes							50,000						
Cartwright Lake								10,000					
Cedar Lake								10,000					
Columbia Lake							95,380						
Deer Lake								30,000					
Dunbar, Twin, and Bott Lakes	39,590												
Echo Lake								13,845					
Edwards Lake							20,000						
Elk River	203,000												
Fish Lake		31,480											
Fish Lake (above Munroe Lake)		5,840											
Garbutts Lake							30,000						
Goat River	40,000												
Grave Lake								25,000					
Hall Lakes		2,495											
Horseshoe Lake								20,000					
Jeffery Lake		10,000											
Johnson Lake								7,500					
Kokanee Creek	20,000												
La France Creek	20,000												
Lavingdon Creek		10,000											
Lead Queen Lake		5,000											
Lillian Lake								15,000					
Long Lake								10,000					
Loon Lake								12,000					
Lunds Lake								7,500					
McBains Lake								15,000					
Manistee Lake								15,000					
Michel Creek		30,000											
Mirror Lake								10,000					
Monroe Lake		25,260											
Moose Island Lake		10,000											
Moyie Lake (backwater)		25,320											
Moyie Lake (Lower)								20,000					
Moyie Lake (Upper)								20,000					
Moyie Lake (Peavine Creek)								5,000					
Moyie Lake									5,681				
Moyie River		22,140											
Moyie River (below lakes)								35,950					
New Lake								9,560					

[3] Eastern brook. [4] Kokanee.

Game-fish Culture Branch—Summary of Trout Plantings, 1952—*Continued*

Hatchery or Station (Particulars of Plantings or Liberations)	Kind of Fish or Eggs												
	Cut-throat			Eastern Brook			Kamloops			Kokanee		Hatcheries	
	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Finger-lings	Eggs	Fry	Eggs	Fry or Fingerlings
Kootenay District—*Continued*													
Cranbrook Hatchery—Continued													
North Star Lake								8,000					
Paddy Ryan Lakes								10,000					
Pickering Lake								5,000					
Premier Lake								45,000					
Quartz Lake									8,000				
Roche Lake								12,000					
Sand Lakes (Big and Little)		20,000											
Seven Mile Lake		5,000											
Silver Springs Lake								2,000					
Skookumchuck River		20,000											
Smith Lake								30,000					
St. Mary Lake		61,525											
St. Mary River	60,000												
Summit Lake								15,000					
Surveyor Lake								10,000					
Tamarac Lake								12,000					
Twin Lakes								10,000	8,000				
Windermere Lake		5,000					50,000						
Windermere Creek							50,000						
Wiseman Lake		10,000											
Revelstoke Hatchery												50,460[1]	
Fernie Rearing-ponds		10,000											
Matthew Creek rearing-ponds		9,680											
Totals	417,310	326,240					295,380	479,085	21,681			50,460[1]	
Revelstoke Hatchery													
Beaver Lake								3,000					
Begbie Lake								4,000					
Butterball Lake								3,000					
Five Mile Lake								8,000					
Griffin Lake		8,250						18,000					
Illecillewaet River								5,000					
Jordan River		4,000											
McIntosh Creek								5,000					
South Pass Creek		3,000											
Summit Lake		2,000						5,000					
Three Valley Lake		12,000						27,984					
Victor Lake		8,780						10,000					
Williamson Lake								2,925					
Totals		38,030						91,909					

CARIBOO DISTRICT													
Loon Creek Hatchery													
Alta Lake							30,000						
Beaverdam Lake								15,000					
Big Bar Lake								40,000					
Big Gun Lake								25,000					
Bridge Lake								100,000					
Canim Lake								100,000					
Cheakamus River							30,000						
Chimney Lake								10,000					
Crown Lake								10,000					
Crystal Lake								50,000					
Deka Lake								15,000					
Eagan Lake								30,000					
Fawn Lake								20,000					
George Lake								10,000					
Hathaway Lake								15,000					
Horse Lake								100,000					
Kelly Lake								20,000					
Kwotlenemo Lake							20,000						
Lac des Roches								30,000					
Lac la Hache								50,000					
Little Mamquam River							25,000						
McLeese Lake								20,000					
Machete Creek							30,000						
Milburn Lake								10,000					
Montana Lake								20,000					
Morgan and Seymour Lakes							40,000						
Mowich Lake								10,000					
Nita Lake							20,000						
Pavilion Lake								25,000					
Puntchesakut Lake								20,000					
Rose Lake								20,000					
Sheridan Lake								30,000					
Spout Lake								20,000					
Spring Lake								20,000					
Timothy Lake								30,000					
Ten Mile Lake								20,000					
Turquoise Lake								10,000					
Twin Lakes								25,000					
Tyaughton Lake							25,000						
Vidette Lake								10,000					
Watch Creek							50,000						
Williams Lake								75,000					
Lloyd's Creek Hatchery												770,000[2]	
Totals							270,000	1,005,000				770,000[2]	

[1] Cut-throat. [2] Kamloops.

RETURNS FROM 2,450 HOLDERS OF SPECIAL FIREARMS LICENCES, SHOWING BIG GAME, FUR-BEARING ANIMALS, AND PREDATORY ANIMALS KILLED, SEASON 1951–52

Big Game

Bear	463	Mountain-goat	35
Caribou	16	Mountain-sheep	10
Deer	560	Wapiti (elk)	36
Moose	412		

Fur-bearing Animals

Beaver	7,105	Otter	386
Fisher	499	Racoon	593
Fox	546	Skunk	197
Lynx	1,316	Squirrel	217,105
Marten	7,436	Weasel	16,623
Mink	6,328	Wildcat	116
Muskrat	28,013	Wolverine	148

Predatory Animals

Cougar	112	Wolves	236
Coyote	1,438		

SUMMARY OF LIBERATION OF GAME BIRDS, 1952

Area	Pheasants	Chukar Partridges
Vancouver Island—		
Alberni	150	-----
Courtenay	475	-----
Cowichan	462	-----
Nanaimo-Parksville	300	-----
Victoria (North and South Saanich)	950	-----
Totals	2,337	-----
Lower Mainland—		
Agassiz	252	-----
Chilliwack	1,082	-----
Delta	2,981	-----
Essondale	2	-----
Lulu Island	1,216	-----
Langley	643	-----
Matsqui	1,473	-----
Mission (Hatzic and Nicomen Island)	1,370	-----
Pitt Meadows	1,855	-----
Sumas Prairie	1,565	-----
Surrey	1,468	-----
Totals	13,907	-----
Interior—		
Ashcroft	-----	200
Cache Creek	149	-----
Creston	300	-----
Enderby	100	-----
Grand Forks	200	-----
Kamloops	437	108
Keremeos	200	-----
Lillooet	106	-----
Merritt	200	-----
Oliver	200	360
Penticton	200	-----
Salmon Arm	400	-----
Summerland	200	-----
Smithers	20	-----
Totals	2,712	668

NOTE.—Total cost covering purchase of all game birds listed was $38,265.50.

Statement of Game-bird Farmers, 1952

Number and Kind of Birds on Hand as at January 1st, 1952

Pheasants	4,192	Ducks	45
Quail	5	Partridges	307

Number and Kind of Birds Raised, 1952

Pheasants	24,956	Partridges	815
Quail	2		

Number and Kind of Birds Purchased, 1952

Pheasants	344

Number and Kind of Birds Sold, 1952

Pheasants	20,561	Partridges	692
Quail	3		

Number and Kind of Birds Killed, 1952

Pheasants	2,997	Ducks	31
Quail	2		

Number and Kind of Birds on Hand as at December 31st, 1952

Pheasants	5,934	Ducks	14
Quail	2	Partridges	430

Note.—During the year 1952 there were 106 licensed game-bird farmers in the Province, but during the year 1952 seventeen of these farmers discontinued business. There were two *nil* returns. Game-bird bands sold to licensed game-bird farmers during the year 1952 amounted to $238.70 (2,387 bands at 10 cents each).

Miscellaneous Revenue, 1952

Sale of Lists to Various Licence-holders, etc.

112 Game Convention minutes at 75 cents per copy	$84.00
2,387 game-bird bands at 10 cents each	238.70
235 trap-line transfer fees at $2.50 each	587.50
Proceeds, sale of trout-eggs	235.50
Proceeds, sale of live fur-bearing animals	70.00
Proceeds, permits to export game meat	70.00
Proceeds, fee for tagging deer and moose hides	182.50
Proceeds, sale of three fur-traders' lists	4.50
Proceeds, sale of live cougar	77.25

LIST OF GUIDES AND NON-RESIDENT OUTFITTERS, 1952

Definition of Guide Licence Classifications

A First-class Guide shall be one who has acted as a guide in the Province for a period of at least three years in the ten years immediately preceding his application for a guide's licence, and who has suitable equipment for outfitting any person desiring to hunt game.

A Second-class Guide shall be one who has acted as a guide in the Province for a period of at least three years in the ten years immediately preceding his application for a guide's licence, but who cannot qualify as a First-class Guide.

An Assistant Guide shall be one who cannot qualify as either a First-class or Second-class Guide, and shall be entitled to act as a guide in the hunting of game birds or in angling for trout, and after securing a permit so to do from the Game Commission, when employed by or under the supervision of a First- or Second-class Guide, to guide big-game hunters.

Vancouver Island and Mainland Coast North to North End of Vancouver Island

Name and Address of Guide	Class of Licence
Alsdorf, William, Campbell River	2nd
Brimacombe, Herbert, Stuart Island	2nd
Flesher, Eric Reed, Phillips Arm	2nd
Hancock, Joseph, Lake Cowichan	1st
Hancock, Arthur C., Lake Cowichan	1st
Kay-Nichols, Cæsar, Sayward	2nd
Marshall, Donald, Campbell River	2nd
Robertson, George R., 2329 Blanshard St., Victoria	2nd
Vanstone, James, Campbell River	2nd
Stanton, James, Minstrel Island	1st
Smith, Calvin, Box 550, Courtenay	2nd
Williamson, David, Campbell River	2nd
Wilson, Jack, Sproat Lake	2nd

Mainland Coast (Stewart South, Including Bella Coola)

Name and Address of Guide	Class of Licence
Brynildsen, Guy Alger, Bella Coola	2nd
Bugnella, Angelo, Stewart	2nd
Letho, John, Stewart	2nd
Mack, Clayton, Bella Coola	1st
Moody, David, Bella Coola	2nd
Nygaard, Martin, Bella Coola	1st
Siwallace, Andrew Stephen, Bella Coola	2nd
Skuce, Herb, Ocean Falls	1st

Adams Lake-Salmon Arm-Revelstoke-Vernon Areas

Name and Address of Guide	Class of Licence
Cullis, Herbert W., Taft	2nd
Dawson, V. N., Adams Lake	2nd
DeSimone, Samuel H., Revelstoke	1st
Engler, John, Lumby	2nd
Haestfield, Francis N., Chase	2nd
Hansen, Chase E., Cherryville	2nd
Hansen, Lee, Kamloops	1st
Hansen, Lee, Salmon Arm	1st
Harrison, Bryan R., Adams Lake	1st
Harrison, Robert Owen, Adams Lake	1st
Laforme, George W., Revelstoke	1st
May, Arthur William, Celista	2nd
Robertson, Douglas G., Squilax	2nd
Small, Roy, Trout Lake	1st
Wader, Loyd, Sicamous	2nd

Cassiar District (Atlin-Telegraph Creek District)

Name and Address of Guide	Class of Licence
Ball, George, Telegraph Creek	1st
Carlick, Tom, Telegraph Creek	2nd
Carlick, Walter, Telegraph Creek	2nd
Clever, Gene B., Bennett	2nd
Dennis, Alex., Telegraph Creek	2nd
Dennis, John Greyke, Telegraph Creek	1st
Edzerza, George, Atlin	1st
Frank, Benny, Telegraph Creek	2nd
Jack, Alex., Telegraph Creek	2nd
Jack, Henry Taku, Atlin	2nd
Mutts, Alix, Telegraph Creek	2nd
Nelson, William H., Telegraph Creek	2nd
Nole, Bill, Telegraph Creek	2nd
Nyman, Robert, Atlin	2nd
Lashovts, Frank Pete, Telegraph Creek	2nd
Williams, Jack, Atlin	2nd
Asp, Phillip, Lower Post	2nd

West Kootenay (Including Nelson-Creston, Kootenay Lake, and Lardeau)

Name and Address of Guide	Class of Licence
Cummings, Arnold, Boswell	2nd
Danet, Seldom, Ferguson	1st
Drummond, James, Burton	2nd
Fletcher, Jaye R., Nelson	2nd
Horswill, Robert, Robson	2nd
Koch, Charles A., Sanca	2nd
MacNicol, J. W., Johnson's Landing	2nd
Marshall, Clark A., Burton	2nd
Newbrand, Emil, Box 109, Nakusp	2nd
Oliver, George J., Gray Creek	2nd
O'Neil, Richard, Sirdar	2nd
Rodgers, James L., Creston	1st
Schwartzenhauer, Carl, Deer Park	2nd

Boundary Districts (Grand Forks West to Princeton, Including Kettle Valley and Ashnola)

Name and Address of Guide	Class of Licence
Bradshaw, George A., Westbridge	2nd
Clark, Herbert G., Keremeos	1st
Gold, Robie Booth, Bankier	2nd
Holding, Richard, Princeton	2nd
Lewis, James W., Princeton	1st
Manion, William B., Tulameen	2nd
Wright, Brian (Pat), Princeton	2nd
Hall, D. Elmer, Westbridge	2nd

Kamloops District (Savona-North Thompson-Clearwater)

Name and Address of Guide	Class of Licence
Blackman, William, Valemount	2nd
Blair, Percy, Little Fort	2nd
Boule, James, Savona	1st
Brousseau, Cliff, Savona	1st
Brown, Starr Alfred, Little Fort	2nd
Burdett, Mrs. Loretta, Savona	2nd
Burdett, George, Savona	1st
Carter, Cecil, Black Pool	2nd
Comeau, William R., Savona	1st
Cooper, Norman T., Savona	2nd
Cooper, Phillip, Westsyde	1st
Ellis, Bux., Battle St., Kamloops	1st
Farquharson, James, Kamloops	2nd
Fennell, A. C., Chu Chua	2nd
Grant, Gordon, McLure	1st
Hagen, Harry, Barriere	2nd
Helset, Ted, Clearwater	1st
Hogue, John, Clearwater	2nd
Hoover, Eldred, Black Pines	1st
Humphrey, A. C., Knutsford	2nd
Johnson, Stan, Black Pool	2nd
King, Mervin L., East Black Pool	2nd
Korsvick, George, Valemount	2nd
Lafave, John, Louis Creek	1st
Latremouille, Joseph, Little Fort	1st
Lean, Theodore B., R.R. 1, Clearwater	1st
Lloyd, William, Criss Creek	2nd
Loveway, Thomas, Little Fort	2nd
Ludtke, Charles D., Clearwater	2nd
Ludtke, Laurence, Clearwater	1st
McDiarmid, Garfield, Clearwater	1st
Marriott, Robert, Heffley Creek	2nd
Murray, George E., Savona	1st
Nelson, Gerald, Kamloops (Black Pines)	2nd
Peel, Murrill A., Pritchard	1st
Rainer, Karl, Darfield	2nd
Sand, Martin J., Vavenby	2nd
Scott, Duncan, Barriere	1st
Small, Reg, Clearwater	1st
Thacker, George, Walhachin	1st
Turner, John, Criss Creek	2nd
Tuson, Clifford, Savona	1st
Whittaker, John, Lac la Jeune, Kamloops	2nd
Wilson, Donald, Vinsulla	2nd

Peace River District and Lower Post

Name and Address of Guide	Class of Licence
Anderson, Edward, Dawson Creek	2nd
Anderson, Stewart, Box 534, Dawson Creek	1st
Artemenko, William, Fort St. John	2nd
Beattie, Donald, Hudson Hope	2nd
Beattie, Robert, Gold Bar	2nd
Belcourt, Clarence, Big Slough (near Hazelmere P.O., Alta.)	2nd
Gelcourt, Maglorie, Big Slough (near Hazelmere P.O., Alta.)	2nd
Brown, Wesley J., Mile 175, Fort St. John	1st
Calliou, John, Kelly Lake (Goodfare P.O., Alta.)	2nd
Calliou, Sam, Moberly Lake	2nd
Callison, E. O., Mile 422, Alaska Highway	1st
Callison, Dennis W., Fort Nelson	1st
Cameron, Patrick, Moberly Lake	1st
Cameron, Ralph, Moberly Lake	2nd
Cooke, Frank Edward, Fellers Heights	2nd
Courvoisier, Henry C., Fort Nelson	1st
Dalziel, George C. F., Lower Post	2nd
Davidson, J. O., Muddy River	1st
Dhenin, Rene G., Fort St. John	1st
Durney, Milo, East Pine	1st
Elden, Otto, Little Prairie	2nd
Fleet, Delbert J., Fort St. John	2nd
Garbitt, Theophile S., Moberly Lake	1st
Golata, Frank W., Dawson Creek	1st
Hambler, Albert, Kelly Lake (Goodfare P.O., Alta.)	2nd
Hambler, Joe, Kelly Lake (Goodfare P.O., Alta.)	1st
Johnston, Freddie, Teslin Lake, Y.T.	2nd
Kruger, William, Hudson Hope	2nd
Larson, Albin O., Fort Nelson	1st
Letendre, James, Kelly Lake (Goodfare P.O., Alta.)	2nd
Letendre, Roland, Kelly Lake (Goodfare P.O., Alta.)	2nd
Longhurst, William James, Fort St. John (Mile 147)	1st

Peace River District and Lower Post—Continued

Name and Address of Guide	Class of Licence
McDonald, Charlie, Fort Nelson	2nd
McGarvey, Morris M., Taylor	1st
MacLean, Arthur J., Fort St. John	1st
McLean, William, Little Prairie	1st
Mould, Tom, Muncho Lake	1st
Neilson, Gordon, Fort Nelson	2nd
Neilson, Gordon R., Fort Nelson	2nd
O'Dahl, Joel, Fort Nelson	1st
Paquette, Morris, Moberly Lake	1st
Peck, Donald R., Mile 200, Trutch	1st
Peterson, A. H., Fort Nelson	1st
Pitts, Ray W., Fort St. John	2nd
Powell, Gary J., Hudson Hope	2nd
Ross, James A., Mile 147, Fort St. John	1st
Rutledge, Leo, Hudson Hope	1st
Thomas, John, Arras	2nd
Varley, Jim, Coal River	2nd
Wawyandie, Paul, Kelly Lake (near Goodfare P.O., Alta.)	2nd
Watson, James H., Fort St. John	2nd

Prince George District "A" (Prince George East to Jasper)

Name and Address of Guide	Class of Licence
Bergammer, Joe, Fort McLeod	2nd
Boyko, Wm., Finlay Forks	2nd
Brooks, George, South Fort George	1st
Cannon, Walter L., Sinclair Mills	2nd
Corless (Jr.), Richard F., Prince George	1st
Gaugh, Allen H., Prince George	1st
Hale, Stanley, Dome Creek	2nd
Hargreaves, Roy F., Mount Robson	1st
Henry, Gordon K., Box 225, Prince George	1st
Henry, Walter J., Prince George	1st
Hooker, James B., Dome Creek	1st
Jensen, Arne, Dome Creek	2nd
Jensen, Ernest H., Dome Creek	1st
Johnson, Howard T., South Fort George	2nd
Johnson, John H., South Fort George	2nd
Mintz, Arthur J., Tête Jaune	2nd
Monroe, Everett A., McBride	2nd
Neighbour, Hersch, Tête Jaune	1st
Sande, Walter J., Sinclair Mills	1st
Simmons, Herbert, Box 1973, Prince George	1st
Witter, Henry L., Box 165, Prince George	2nd
Zlotucha, Antoni, Prince George	2nd

Prince George District " B " (Prince George West to Terrace)

Name and Address of Guide	Class of Licence
Bennett, Vernon, Southbank	2nd
Braaten, Edwin, Southbank	2nd
Campbell, Theodor Blair, Hazelton	2nd
Cooke, Ted, Vanderhoof	2nd
Cowan (Jr.), Hugh S., Clemretta	2nd
Davidson, Charlie B., Vanderhoof	1st
Donald, Jimmy, Burns Lake	2nd
Fletcher, Allen Eugene, Smithers	2nd
Foote, Charles H., Fraser Lake	2nd
Gilliland, Donald W., Germansen Landing	2nd
Grainger, Barry, Noralee	2nd
Harrison, Alford J., Burns Lake	2nd
Haugen, Karl, Manson Creek	2nd
Henson, Frank E., Marilla	1st
Hipp, Anthony J., Terrace	2nd
Johnson, George Martin, Vanderhoof	2nd
Knox, John, Ootsa Lake	1st
Kohse, Louis, Vanderhoof	2nd
Loback, Wesley L., Marilla	1st
Lord, Walter H., Tchesinkut Lake	2nd
Loss, Helmar Frederick, Topley	2nd
McConachie, H. R., Fort St. James	1st
McNeill, Clifford, Ootsa Lake	1st
McNeill, John W., Ootsa Lake	1st
Meier, John, Vanderhoof	2nd
Menard, Gerard, Nithi River	2nd
Moran, Thomas E., Vanderhoof	2nd
Morgan, James E., Ootsa Lake	1st
Munger, Francis W. R., Box 24, Houston	2nd
Murray, Ronald W., Fort St. James	2nd
Nelson, George, Vanderhoof	1st
Nelson, John N., Clemretta	1st
Pease, Clarence A., Nithi River	1st
Plowman, Clarence, Endako	2nd
Prince, Alex., Fort St. James	2nd
Prince, Teddy, Fort St. James	2nd
Rowland, Edward F., Decker Lake	2nd
Seyforth, Joe, Fort St. James	2nd
Shea, James B., Telkwa	1st
Smith, Craig H., Fort St. James	1st
Smith, Richard H., Fort St. James	2nd
Towrond, Peter N., Noralee	2nd
Van Tine, Edward, Ootsa Lake	1st
Vanzanten, James H., Francois Lake	2nd
Walker, Thomas A., Fort St. James	1st
Wheeler, William H., Burns Lake	2nd
Winsor, William J., Isle Pierre	2nd

Cariboo District "A" (100-Mile House South, Including Ashcroft)

Name and Address of Guide	Class of Licence
Baker, James A., Clinton	2nd
Baker, J. C., Clinton	1st
Cleveland, R. C., Bridge Lake	1st
Chabara, Anna, 70-Mile House	2nd
Cleveland, J. G., Bridge Lake	1st
Cleveland, L. C., Bridge Lake	1st
Cleveland, Weston, Eagan Lake	1st
Coldwell, H. W., Jesmond	1st
Collins, M. A., Cache Creek	1st
Dougherty, Charles A., Ashcroft	1st
Dougherty, E. G., Clinton	1st
Dyer, Guy H., 70-mile House	2nd
Eden, Donald D., 70-Mile House	2nd
Eden, R. B., 70-Mile House	2nd
Faessler (Jr.), C. J., Fawn P.O.	1st
Fenton, Henry, Big Bar Creek	2nd
Fenton, Walter, Big Bar Creek	1st
Flaherty, R. J., Fawn	1st
Forde, H. D. W., Clinton	2nd
Fowler, Norman A., Loon Lake	2nd
Gaines, Clinton, Fawn	2nd
Gammie, Bert, 70-Mile House	1st
Graf, Mike, R.R. 1, Fawn	1st
Grid, Percy, 70-Mile House	2nd
Grinder, Louise, Clinton	2nd
Grypuik, Sam, Cache Creek	2nd
Hansen, John F., Bridge Lake	1st
Hansen, Wesley B., Bridge Lake	2nd
Higgins, Ed, Fawn P.O.	1st
Higgins, K. E., Fawn	2nd
Higgins, M., Bridge Lake	1st
Hodges, E. W., R.R. 1, Fawn	1st
Horn, Walter A., 70-Mile House	2nd
Huckvale, J., Fawn	1st
Hunter, Mickey, Ashcroft	2nd
Hutchison, D. B., 70-Mile House	2nd
Johnson, Claude, Bridge Lake	1st
Johnson, J. A., 100-Mile House	2nd
King, C. J., R.R. 1, Fawn	2nd
King, Gordon B., R.R. 1, Fawn	2nd
Knauf, H. G., Fawn	2nd
Larson, J. O., Bridge Lake	1st
Larson, K. J., Fawn	2nd
Leavitt, F. W., R.R. 1, Fawn	1st
LeBourdais, Joe, Clinton	2nd
Levick, J. S., R.R. 1, Fawn	1st
Lewis, Victor, Dog Creek	2nd
Long, C. H., Fawn P.O.	2nd
Loring, Ed, Clinton	2nd
MacLean, D., Fawn	2nd
McMahon, Jesse C., 70-Mile House	1st
McNeil, B. S., Fawn P.O.	1st
McNeil, H. M., Fawn P.O.	1st
Mathewson, A. E., Ashcroft	2nd
Matier, J. H., Clinton	1st
Mooring, A. R., Fawn	1st
Nordgren, Jonas, Fawn P.O.	2nd
Olafson, H. J., R.R. 1, Fawn	2nd
Parent, S. J., Fawn	2nd
Park, A. H., 70-Mile House	2nd
Park, Jack P., 70-Mile House	2nd
Parkes, G. L., 70-Mile House	2nd
Perault, Joe, Jesmond	2nd
Petrie, Donald, Bridge Lake	1st
Pigeon, C. L., Clinton	1st
Pigeon, J. R., Clinton	1st
Pigeon, Norman, Clinton	2nd
Pollard, Harold, Clinton	1st
Powell, H. J., Fawn P.O.	1st
Powell, T. G., Fawn	1st
Reinertson, R. J., 100-Mile House	1st
Reynolds, A. J., Jesmond	1st
Reynolds, H. D., Jesmond	1st
Roberts, R. V., Fawn P.O.	1st
Scheepbower, J. A., 70-Mile House	2nd
Scheepbower, John C., 70-Mile House	2nd
Scheepbower, William, 70-Mile House	2nd
Scott, Douglas, 100-Mile House	1st
Sedman, John E., R.R. 1, Fawn	2nd
Siebert, John, Jesmond	1st
Singleton, Fred, Fawn P.O.	2nd
Thomason, D. M., Bridge Lake	1st
Thorsteinson (Jr.), C., Fawn	2nd
Umphrey, S. T., Fawn P.O.	2nd
Van Horlick, Buster, Clinton	2nd
Vequeray, R. J., Jesmond	1st
Walsh, F. C., 70-Mile House	2nd
Watkins, Bud, Cache Creek	2nd
Whitley, W. P., 70-Mile House	2nd
Wilkinson, Thomas H., Fawn	2nd
Winteringham, Frank, Fawn	2nd
Womack, C. B., Fawn	1st
Young, William, Clinton	2nd
Bayne, A. H., Canim Lake	1st
Bessette, Arthur, Ashcroft	2nd
Dean, J. C., R.R. 1, Fawn	2nd
Grinder, Walter, Jesmond	1st
Higginbottom, A. H., Jesmond	1st
Houseman, J. J. 100-Mile House	2nd
Lehman, Bert, Lillooet	2nd
Vecqueray, A. E., Clinton	2nd

Cariboo District "B" (100-Mile House North to Marguerite and Williams Lake, East of Fraser River)

Name and Address of Guide	Class of Licence
Abram, A. E., Lac la Hache	2nd
Archie, Charlie, Buffalo Creek	1st
Archie, George, Canim Lake	1st
Archie, Jacob, Canim Lake	1st
Ash, Chris, Big Lake	2nd
Asserlind, H. C., Keithley Creek	2nd
Atkins, Daniel, Horsefly	2nd
Barrett, Stan, Horsefly	2nd
Bob, Edward, Canim Lake	1st
Bobb, E. R., Marguerite	2nd
Bowe, Alfred, Williams Lake	2nd
Bryce, Jack, Big Lake	2nd
Christopher, David, Canim Lake	2nd
Decker, English, Canim Lake	2nd
Dick, Mathew, Alkali Lake	2nd
Eagle, Clifford B., Lac la Hache	1st
Gibbons, M. L., Williams Lake	1st
Goetjen, Charles E., Horsefly	1st
Graham, James W., Horsefly	2nd
Graham, John, Horsefly	2nd
Greenlee, E. L., Canim Lake	1st
Gunn, J. M., Horsefly	1st
Hamilton, G. G., Williams Lake	2nd
Hamilton, H. M., Lac la Hache	1st
Hamilton, Pete, Williams Lake	2nd
Hamilton, Roy M., Williams Lake	2nd
Hamilton, Thomas, Williams Lake	2nd
Hockley, George, Horsefly	1st
Hooker, F. C., Horsefly	1st
Hooker, S. B., Horsefly	1st
Hooker, Frederick P., Horsefly	1st
Hubbard, I. H., Horsefly	1st
Jacobsen, John, Big Lake	2nd
Jenner, Ernest, Horsefly	2nd
Johnson, Zale A., Clinton	1st
Jones, Fred, Horsefly	1st
Jones, Lawrence, Horsefly	1st
Kelly, James A., Soda Creek	2nd
Krebs, L. B., Lac la Hache	2nd
McBurney, Aubrey, Keithley Creek	2nd
McDougall, Robert, Big Lake	1st
Michel, Sam, Williams Lake	2nd
Morgan, Bud, Likely	1st
Morris, D. L., Forest Grove	1st
Nicol, Shelley, Horsefly	1st
Oak, Ernest, Horsefly	2nd
Paxton, H. E., Macalister	2nd
Pinkney, Robert, Canim Lake	1st
Racher, W. J., Horsefly	1st
Robertson, William, Macalister	2nd
Roper, Alf, Canim Lake	1st
Sharp, William, Ochiltree	2nd
Vaness, John, Horsefly	1st
Walters, Glen, Horsefly	1st
Webster, Alister, Horsefly	2nd
Walters, Leonard, Horsefly	1st
Wiggins, Wiley, Miocene	2nd
Williams, Aubrey, Horsefly	1st
Williams, Mrs. Thelma, Horsefly	2nd
Wotzke, Herbert, Williams Lake	2nd
Wynstra, Jack, Horsefly	2nd

Cariboo District "C" (Quesnel-Barkerville, North from Marguerite)

Name and Address of Guide	Class of Licence
Allen, George H., Quesnel	1st
Armstrong, Wilfred, Quesnel	2nd
Cochran, James Dean, Barkerville	1st
Coldwell, Harry B., Punchaw	1st
Harrington, Alex. G., Quesnel	1st
Knudson, Leonard E., Box 841, Quesnel	2nd
Laurent, Louie, Quesnel (Nazko)	2nd
Lavoie, George Chas., Batnuni Lake	2nd
Martin, George, Wells	2nd
Miller, Issac Edward, Punchaw	1st
Moffat, Ronald H., R.R. 1, Quesnel	1st
McKort, Irvin James, R.R. 1, Alexandria	2nd
O'Leary, Arthur, Quesnel	1st
Orr, William M., Chilliwack	2nd
Quanstrom, Carl, Quesnel	2nd
Rawling, Arden L., Quesnel	2nd
Sorum, Erick, Quesnel	2nd
Tibbles, Fred C., Quesnel	1st

Cariboo District "D" (Chilcotin District, Cariboo West of Fraser River)

Name and Address of Guide	Class of Licence
Blatchford, John A., Alexis Creek	1st
Bliss, Bill, Alexis Creek	1st
Bryant, Alfred, Anahim Lake	1st
Bullion, Jimmie, Hanceville	2nd
Buttler, Leonard, Tatla Lake	2nd
Camille, Francis, Dog Creek	1st
Capoose, Oggie, Anahim Lake	2nd
Christy, Frank, Pavilion	2nd
Clayton, John H., Anahim Lake	2nd
Church, R. H., Big Creek	1st
Christy, Thomas, Moha	2nd
Collier, Eric, Meldrum Creek	2nd
Cunningham, C. B., Bralorne	1st
Dester, Batiste, Kleena Kleene	1st
Dorsey, Lester, Anahim Lake	1st
Edwards, Ralph A., Hagensborg	2nd
Elkins, Joe, Alexis Creek	2nd
Elkins, Thomas, Alexis Creek	1st
Erickson, Carl B., Anahim Lake	2nd
Garner, Thomas, Alexis Creek	2nd
Hance, Grover, Hanceville	1st
Hansen, Fred, Kleena Kleene	1st
Haynes, Harry, Alexis Creek	1st
Haynes, Kenneth W., Tatlayoko Lake	1st
Henderson, John, Tatlayoko Lake	1st
Henry, Cecil, Hanceville	1st
Henry, Eagle Lake, Alexis Creek	1st
Holte, Andy, Anahim Lake	1st
Holte, Thomas, Anahim Lake	2nd
Holtry, Lewis, Anahim Lake	2nd
Hudson, E. R., Kleena Kleene	2nd
Hugo, Mark, Hanceville	1st

Cariboo District " D " (Chilcotin District, Cariboo West of Fraser River)—Continued

Name and Address of Guide	Class of Licence
Jack, Johnny, Alexis Creek	2nd
Johnson, T. W., Riske Creek	1st
Johnson, Vic, Riske Creek	2nd
Knolls, Alvis, Redstone	2nd
LeLievre, Lind, Penticton	1st
McKill, Clarence, Kleena Kleene	1st
Mack, Maxine, Alexis Creek	2nd
Maindley, John, Alexis Creek	2nd
Maxted, William, Big Creek	1st
Moore, K. B., Tatlayoko Lake	2nd
Mullens, B. A., Tatla Lake	2nd
Mulvahill, R., Redstone	1st
Mulvahill, William, Redstone	2nd
Nicholson, Donald R., Tatla Lake	2nd
Nicholson, Terrence, Tatla Lake	2nd
O'Keefe, W., Bridge Lake	1st
Osterlund, Ed, Moha	2nd
Paxton, Alex., Alexis Creek	1st
Paxton, Ann, Alexis Creek	2nd
Oleman, Patrick, Shalalth	2nd
Petal, Henry, Alexis Creek	2nd
Rafferty, A. T., Riske Creek	2nd
Robson, Bert, Atnarko	2nd
Rosette, Augustine, Gang Ranch	1st
Ross, Eddie, Redstone	2nd
Ross, Peter, Redstone	2nd
Schuk, Edward, Tatlayoko Lake	2nd
Squinas, Thomas, Anahim Lake	1st
Stephenson, Donald, Alexis Creek	2nd
Sulin, Willie, Anahim Lake	2nd
Ulm, Roy C., Soda Creek	2nd
Watson, Arthur, Alexis Creek	2nd
Watt, Bruce, Big Creek	2nd
Wilson, David F., Tatla Lake	1st
Weir, Donald J., Alexis Creek	1st
Wilson, Dave, Tatla Lake	1st
Wilson, Thomas J., Big Creek	2nd
Witte, Duane, Hanceville	1st
Witte, Frank, Big Creek	1st
Woods, Billy, Hanceville	1st
Yoxall, Alfred, Alexis Creek	2nd

East Kootenay "A" (Cranbrook-Invermere-Golden Districts)

Name and Address of Guide	Class of Licence
Anderson, Charles D., Windermere	1st
Asimont, Horst, Invermere	2nd
Bjorn, Henry Manning, Fort Steele	2nd
Brewer, Carl, Invermere	2nd
Buckman, Alan, Fort Steele	2nd
Cloarec, Leon Jean, Cranbrook	2nd
Cooper, Albert B., Invermere	2nd
Drysdale, Alistair James, Skookumchuck	2nd
Dubois, Vaughn, Windermere	1st
Goodwin, Elwood, Edgewater	1st
Gould, Percy, Canal Flats	1st
Hanson, Tyvegert, Wilmer	1st
Harrison, William, Edgewater	1st
Hogan, Charles A., Harrogate	1st
Jimmy, Joe, Windermere	2nd
Johnston, Alex., Invermere	2nd
Kain, Isador, Wilmer	2nd
King, Norman, Golden	1st
Lindborg, Alex., Golden	1st
McClain, J. I., Spillimacheen	1st
McIntosh, Ewen M., Athalmer	2nd
McKay, Gordon, Invermere	1st
Mitchell, Robert A., Brisco	2nd
Morris, Edward, Golden	2nd
Nicol, Arthur Henry, Fort Steele	1st
Nixon, Walter, Invermere	1st
Pommier, Emile, Skookumchuck	2nd
Rauch, Harold, McMurdo	2nd
Richter, Frank, Invermere	1st
Sheek, Wesley P., Spillimacheen	2nd
Sykes, Harry, Spillimacheen	1st
Tegart, George, Edgewater	1st
Tegart, Hiram W., Brisco	1st
Thompson, Jack, Edgewater	2nd
Tegart, James, Brisco	1st
Thompson, James, Edgewater	1st
Thompson, Lioel, Edgewater	1st
Tyler, Graham, Invermere	2nd
White, James Freeman, Fort Steele	1st
Wolfenden, Winston, Brisco	1st

East Kootenay District " B " (Cranbrook East to Crowsnest, Including Fernie and Natal)

Name and Address of Guide	Class of Licence
Baker, Martin, Natal	1st
Baher, Mike (Mathias), Natal	1st
Barnes, Alfred, Fernie	1st
Barnes, James N., Fernie	1st
Cutts, Jack, Fernie	2nd
Dvorak, Frank, Fernie	1st
Dvorak, Wenzel, Fernie	2nd
Eftoda, Gordon, Natal	1st
Gravelle, Nick, Flagstone	2nd
Hammer, Andy, Wardner	2nd
Hicks, Phillip, Fernie	1st
Holley, Tom, Natal	2nd
Kubinec, Pete, Fernie	2nd
McGinnis, Earl, Natal	1st
McGuire, Albert, Flagstone	2nd
Porco, Albert, Box 289, Natal	1st
Philips, Frank, 1551 St. Andrew's Ave., North Vancouver	1st
Riddell, H. S., Wardner	2nd
Rosicky, Anton, Wardner	1st
Rothel, Malcom, Natal	1st
Travis, Frank, Natal	2nd
Washburn, L. F., Flathead	1st

Assistant Guides

Vancouver Island, Lower Mainland, and Mainland Coast

Durrant, Jesse, Campbell River.
Garner, Lloyd D. G., Cultus Lake.
Gillespie, G. K., Lake Cowichan.
Harford, H., 800 Bute St., Port Alberni.
Komo, Harry, Lake Cowichan.
McDonald, Leslie, Campbell River.
Stanwood, Larry, 145 Ninth Ave. E., Prince Rupert.

Revelstoke-Salmon Arm and Okanagan Districts

Beacott, Phil, Sicamous.
Davis, George E., P.O. Box 480, Revelstoke.
Graham, I. C., Sicamous.
Martin, Peter, Sicamous.
Wallis, Edward H., Revelstoke.
Young, A. H., Sicamous.

Grand Forks-Greenwood

Gold, R. B., Bankier.
Lawrence, George V., Hedley.

Kamloops District

Bagg, Melvin, Savona.
Hansen, Howard, Little Fort.
Harrop, Frank, Valleyview, Kamloops.
Humphrey, Frank, Knutsford.
McLean, Bob, Okanagan Falls.
McLean, Cliff, Black Pines.
Morton, Alf, Barriere.
Orum, Colin M., Mount Robson.
Peterson, Ross, Savona.
Phillips, Roy, Savona.
Ralston, Dave, Summerland.
Wagner, Martin, Battle St., Kamloops.
Wharton, Francis, Little Fort.

Peace River

Arhus, Carl, Fort Nelson.
Beattie, Robert H., Hudson Hope.
Belcourt, Francis, Mile 47, Fort St. John.
Belcourt, George, Little Prairie.
Bigfoot, Charlie, Mile 232, Fort Nelson.
Brady, Otto, Mile 147, Alaska Highway.
Brown, John, Fort St. John.
Calliou, Joe, Little Prairie.
Calliou, Peter, Fort St. John.
Cardinal, Alex., Moberly Lake.
Courvoisier, Lawrence, Bear Flat.
Courtepatte, Alfred, Kelly Lake (Goodfare P.O., Alta.).
Couterille, Prince, Moberly Lake.
Cryman, George, Moberly Lake.
Davis, Albert, Moberly Lake.
Davis, Angus, Moberly Lake.
Desjarlais, Louis, Moberly Lake.
Dopp, Bruce David, Fort St. John.
Forfar, Craig, Lower Post.
Frank, Ernest, Lower Post.
Gauthier, Eugene, Kelly Lake (Goodfare P.O., Alta.).
Gauthier, John, Moberly Lake.
Gauthier, Alexis, Moberly Lake.
Gladu, Fred, Kelly Lake (Goodfare P.O., Alta.).
Goodrich, Gordon, Pouce Coupe.
Gray, George D., Kelly Lake (Goodfare P.O., Alta.).
Hambler, George, Kelly Lake (Goodfare P.O., Alta.).
Jackson, Bobbie, Teslin Lake.
McGarvey, George M., Hudson Hope.
McGuire, Colum, Rolla.
Madison, Noel, Pouce Coupe.
Major, Donat A., Fort St. John.
Millar, W. E., Fort St. John.
Mitchelle, Gabriel, Moberly Lake.
Napoleon, Felix, Moberly Lake.
Napoleon, Tom, Moberly Lake.
Nichols, Frank C., Little Prairie.
Peck, O. Keith, Hudson Hope.
Peck, Vernon L., Hudson Hope.
Powell, Jack K., Fort St. John.
Rissling, Peter, Dawson Creek.
Ross, Lynn, Mile 147, Alaska Highway.
Ross, Donald G., Fort St. John.
Southwick, Harvey, Fort St. John.
Southwick, Tullie O., Fort Nelson.
St. Pierre, Sam, Trutch.
Thomas, Albert N., McLeod Lake.
Trea, Joe, Taylor.
Vince, Robert G., Fort St. John.
Watson, Gordon Edmond, Fort St. John.

Cassiar

Quock, Charles, Telegraph Creek.
Ward, Jimmie Joseph, Atlin.

Prince George District "A"

Boyko, William, Finlay Forks.
Hall, Cyril, Box 1369, Prince George.
Key, Robert, Prince George.
Marsh, Henry, McBride.
Olson, John V., Box 1369, Prince George.
Sait, Fred, McBride.
Van Somer, Art, Fort Ware.
Witter, Wilbert H., Box 165, Prince George.
Zlot, Mike, Box 792, Prince George.
Zlot, Martha, Prince George.

Prince George Dictrict "B"

Anderson, Duncan M., Babini.
Bhornstad, J., Fort St. James.
Brumblay, Fred, Germansen Landing.
Charlie, Michel, Marilla.
Christie, E. D., Southbank.
Cornell, James, Fort St. James.
Easter, Cal, Fort St. James.
Foote, Charles W., Fraser Lake.
Harrison, William James, Burns Lake.
Hoff, William M., Chief Lake.
Hughes, Rolland, Vanderhoof.
Isadore, T., Fort McLeod.
Keys, Stewart, Vanderhoof.
Lord, Roy, Tchesinkut Lake.
Lord, Samuel, Burns Lake.
Mattess, August, Fort St. James.
Melville, Kennedy, McLeod Lake.
Plowman, Enid A., Endako.
Quilty, James, Nadina River.
Sackner, Stewart, Vanderhoof.
Van Tine, Douglas L., Ootsa Lake.
Van Tine, James, Ootsa Lake.

Cariboo District "A"

Abbs, R., Fawn.
Alexander, Richard, Shalalth.
Black, J. P., Bridge Lake.
Boyd, Jack, 70-Mile House.
Chappell, T. S., Cache Creek.
Dahlgren, C., Bridge Lake.
Duncan, Peter, Clinton.
Duncan, T. W. G., 100-Mile House.
Felix, John, Shalalth.
Flaherty, R. W., Fawn.
Francis, E. G., 70-Mile House.
Gaelick, W., Fawn.
Grandberg, Norman, Fawn.
Hadwick, Al, 70-Mile House.
Heigh, Arthur M., Pavilion.
Higgins, Elmer, Bridge Lake.
Hogg, G. W., 70-Mile House.
Johnson, Wayne C., Bridge Lake.
Keir, James D., Bralorne.
Kelley, C. E., Fawn.
Kent, W. R., Lytton.
Knauf, E. C., Fawn.
Krinke, Paul, Bridge River.
Lowes, J. H., Canim Lake.
MacInnis, John, Barkerville.
Peters, Benjamin, Shalalth.
Peters, Jacob, Shalalth.
Reinertson, J., 70-Mile House.
Schwartz, Thomas, Bralorne.
Shields, Freddie, Shalalth.
Shulldes, B., Jesmond.

Cariboo District "B"

Ogden, Lawrence, Lac la Hache.
Ogden, Pete, Lac la Hache.
Waite, Ronald G., Williams Lake.

Cariboo District "C"

Anderson, Alvin P., Quesnel.
Wilkinson, Hugh John, Punchaw.

Cariboo District "D"

Auchinachie, James, Alexis Creek.
Betal, Tony, Alexis Creek.
Blatchford, Bob, Alexis Creek.
Bonner, James, Big Creek.
Boy, Billy, Alexis Creek.
Bullion, Sammy, Alexis Creek.
Buttler, Lee, Tatla Lake.
Cahoose, Gus, Anahim Lake.
Chell, Otto, Alexis Creek.
Deaur, Buck, Hanceville.
Elkins, P., Anahim Lake.
French, Robert, Redstone.
Grambush, Donald, Anahim Lake.
Gregg, Frank, Kleena Kleene.
Holte, James, Anahim Lake.
Lucyk, Peter, Alexis Creek.
Lulua, Tommy, Alexis Creek.
Moore, Gerry, Alexis Creek.
Pinter, Andy, Hanceville.
Quilt, Jack, Hanceville.
Quilt, Johnny, Hanceville.
Rosette, Alex., Gang Ranch.
Rosette, Raymond, Gang Ranch.
Sammy, Eugene, Alexis Creek.
Sing, Isaac, Anahim Lake.
Snow, C. B., Summer Land.
Squinas, Harry, Anahim Lake.
Thompson, C. A., Anahim Lake.
Timothy, Dominic, Kleena Kleene.
Timothy, Isador, Kleena Kleene.
Turner, George, Hanceville.
Turner, Timothy, Kleena Kleene.
Ulm, Roy C., Soda Creek.
Warde, Don, Soda Creek.
Wier, Donald A., Alexis Creek.
Wilson, Gordon, Anahim Lake.

Nelson-Creston

Blackmore, Robert C., New Denver.
Cummings, Ray, Boswell.

Kootenay District "A"

Alexander, Michael, Spillimacheen.
Barbour, J. A., Wilmer.
Dendy, Dennis, Edgewater.
Dorion, Douglas, Golden.
Goodwin, Dave, Invermere.
Hynes, Ben, Spillimacheen.
King, Ronald, Golden.
Nixon, Arthur J., Invermere.
Pommier, Louis Emile, Cranbrook.
Smith, Mrs. J. M., Fort Steele.
Smith, Dennis, Fort Steele.
Wells, John, Athalmer.

Kootenay District "B"

Baker, Fred, Natal.
Bennet, John, Natal.
Bush, William, Ta Ta Creek.
Cunliffe, John, Fernie.
Gravelle, Alex., Flagstone.
Letcher, George, Fernie.
Logan, Mrs. Doris May, Wardner.
McFarlane, Kenneth, Natal.
McKenzie, Fergus, Fernie.
Peters, Donald, Fernie.
Rosicky, Andrew, Wardner.
Sharpe, Gerald, General Delivery, Oliver.
Singleton, John, Fernie.
Waytula, Ogie, Natal.
Whiting. Renal, Natal.
Wormington, Samuel Frank, Box 535, Kimberley.

NON-RESIDENT OUTFITTERS

Beloud, Ben, Mile 1,016, via Whitehorse, Y.T.
McCullough, Henry, Wambley, Alta.
Ray, Jack, Hinton Trail, Alta.
Russell, Andy, Twin Butte, Alta.
Sunderman, Kelly, Hythe, Alta.

PERSONNEL OF GAME COMMISSION AS AT DECEMBER 31ST, 1952

Attorney-General (Minister)	Hon. R. W. Bonner, Q.C.	Victoria.
Game Commission (members)	James G. Cunningham	Vancouver.
	Frank R. Butler	Vancouver.

SCIENTIFIC BRANCH

Scientific Advisers	Dr. W. A. Clemens	Vancouver.
	Dr. Ian McTaggart Cowan	Vancouver.
Chief Game Biologist	Dr. J. Hatter	Vancouver.
Regional Game Biologist	E. Taylor	Vancouver.
Regional Game Biologist	P. W. Martin	Kamloops.
Regional Game Biologist	D. J. Robinson	Nanaimo.
Chief Fisheries Biologist	Dr. P. A. Larkin	Vancouver.
Division Fishery Biologist	C. C. Lindsey	Vancouver.
Division Fishery Biologist	R. G. McMynn	Vancouver.
Division Fishery Biologist	S. B. Smith	Vancouver.
Assistant Fishery Biologist	I. Barrett	Vancouver.
Assistant Fishery Biologist	T. G. Northcote	Vancouver.
Assistant Fishery Biologist	G. E. Stringer	Vancouver.
Assistant Fishery Biologist	E. H. Vernon	Vancouver.
Assistant Fishery Biologist	F. Maher	Vancouver.
Technical Hatchery Officer	D. R. Hurn	Vancouver.
Stenographer	Miss M. Jurkela	Vancouver.

GAME-FISH CULTURE BRANCH

Fishery Supervisor	C. H. Robinson	Nelson.
Fishery Officer	E. Hunter	Nelson.
Fishery Officer	R. A. McRae	Nelson.
Hatchery Officer	J. J. Phelps	Nelson.
Fishery Officer	F. S. Pells	Cultus Lake.
Fishery Officer	F. H. Martin	Cultus Lake.
Hatchery Officer	J. C. Lyons	Cultus Lake.
Fishery Officer	J. D. Inverarity	Courtenay.
Hatchery Officer	G. Law	Courtenay.
Hatchery Officer	N. W. Green	Summerland.
Fishery Officer	A. A. Higgs	Summerland.
Hatchery Officer	E. R. Inglis	Summerland.

HEADQUARTERS

Chief Clerk	H. D. Simpson	Vancouver.
Intermediate Clerk	J. McLellan	Vancouver.
Intermediate Clerk	Miss. I. Lawson	Vancouver.
Clerk	W. Fowkes	Vancouver.
Secretarial Stenographer	Miss J. Smith	Vancouver.
Clerk-Stenographer	Mrs. M. Drinkwater	Vancouver.
Clerk-Stenographer	Miss E. P. Golder	Vancouver.
Clerk-Stenographer	Miss A. Lenagan	Vancouver.
Clerk-Stenographer	Miss R. McKay	Vancouver.
Clerk-Stenographer	Miss A. Sien	Vancouver.
Clerk-Stenographer	Mrs. J. Whitfield	Vancouver.

"A" DIVISION (VANCOUVER ISLAND AND PORTIONS OF LOWER MAINLAND)

Inspector	G. C. Stevenson	Victoria.
Intermediate Clerk	D. Keirs	Victoria.
Stenographer	Miss J. Bull	Victoria.
Game Warden	J. W. Jones	Royal Oak.
Game Warden	R. W. Sinclair	Victoria.
Game Warden	W. S. Webb	Alberni.
Game Warden	R. S. Hayes	Campbell River.
Game Warden	C. E. Estlin	Courtenay.
Game Warden	F. P. Weir	Duncan.
Corporal Game Warden	O. Mottishaw	Nanaimo.
Game Warden	F. H. Greenfield	Nanaimo.

"B" Division (Kootenay and Boundary Districts)

Inspector	C. F. Kearns	Nelson.
Clerk-Stenographer	Miss A. L. Burton	Nelson.
Game Warden	R. A. Rutherglen	Nelson.
Game Warden	P. D. Ewart	Castlegar.
Game Warden	J. W. Bayley	Cranbrook.
Game Warden	R. R. Farquharson	Cranbrook.
Game Warden	B. Rauch	Creston.
Game Warden	J. J. Osman	Fernie.
Game Warden	W. A. McKay	Golden.
Corporal Game Warden	A. F. Sinclair	Grand Forks.
Game Warden	J. V. Mackill	Invermere.
Game Warden	A. Monks	Penticton.
Game Warden	A. F. Gill	Princeton.

"C" Division (Kamloops, Yale, Okanagan, and Cariboo Districts)

Inspector	R. M. Robertson	Kamloops.
Stenographer	Miss S. D. Noble	Kamloops.
Game Warden	J. P. C. Atwood	Kamloops.
Game Warden	H. Tyler	Kamloops.
Game Warden	W. T. Ward	Kamloops.
Game Warden	K. R. Walmsley	Alexis Creek.
Game Warden	W. I. Fenton	Clinton.
Game Warden	D. D. Ellis	Kelowna.
Game Warden	R. S. Welsman	Lillooet.
Game Warden	E. M. Martin	Merritt.
Game Warden	H. J. Lorance	Quesnel.
Game Warden	G. A. Lines	Revelstoke.
Game Warden	D. Cameron	Salmon Arm.
Game Warden	A. S. Frisby	Vernon.
Game Warden	E. Holmes	Wells.
Game Warden	L. Jobin	Williams Lake.

"D" Division (Atlin, Skeena, Omineca, Fort George, Peace River, and Yukon Boundary Districts)

Inspector	W. A. H. Gill	Prince George.
Clerk	R. J. Guay	Prince George.
Stenographer	Mrs. E. Brown	Prince George.
Game Warden	A. J. Jank	Prince George.
Game Warden	L. I. Olson	Prince George.
Game Warden	W. H. Richmond	Burns Lake.
Game Warden	J. A. McCabe	Fort Nelson.
Game Warden	B. Villeneuve	Fort Nelson.
Game Warden	H. O. Jamieson	Fort St. John.
Game Warden	J. Dowsett	Lower Post.
Game Warden	J. M. Hicks	McBride.
Game Warden	G. Taylor	Pouce Coupe.
Corporal Game Warden	E. Martin	Prince Rupert.
Game Warden	C. J. Walker	Prince Rupert.
Clerk-Stenographer	Miss U. V. Raymond	Prince Rupert.
Game Warden	L. J. Cox	Smithers.
Game Warden	J. D. Williams	Terrace.
Game Warden	L. G. Smith	Vanderhoof.

"E" Division (Vancouver, Coast, and Lower Fraser Valley District)

Corporal Game Warden	L. R. C. Lane	Vancouver.
Game Warden	R. S. King	Vancouver.
Game Warden	R. K. Leighton	Vancouver.
Game Warden	F. R. Lobb	Vancouver.
Game Warden	H. D. Mulligan	Vancouver.
Game Warden	H. L. Rose	Vancouver.
Corporal Game Warden	W. J. Mason	Alert Bay.
Game Warden	D. A. MacKinlay	Alert Bay.
Game Warden	A. J. Butler	Chilliwack.
Game Warden	H. P. Hughes	Cloverdale.
Game Warden	W. H. Cameron	Ladner.
Game Warden	P. M. Cliffe	Mission.
Game Warden	F. Urquhart	Port Coquitlam.
Game Warden	B. E. Wilson	Powell River.

PREDATOR-CONTROL

Supervisor of Predator-control	G. A. West	Vancouver.
Assistant Supervisor of Predator-control	E. H. Samann	Kamloops.
Predatory-animal Hunter	J. Dewar	Nanaimo.
Predatory-animal Hunter	W. J. Hillen	Abbotsford.
Predatory-animal Hunter	G. Haskell	Cranbrook.
Predatory-animal Hunter	M. Morigeau	Fairmont.
Predatory-animal Hunter	A. M. Hames	Merville.
Predatory-animal Hunter	C. G. Ellis	Pouce Coupe.
Predatory-animal Hunter	M. W. Warren	Prince George.
Predatory-animal Hunter	A. E. Fletcher	Smithers.
Predatory-animal Hunter	M. Mortensen	Williams Lake.
Predatory-animal Hunter	N. Lingford	Kamloops.

VICTORIA, B.C.
Printed by DON MCDIARMID, Printer to the Queen's Most Excellent Majesty.
1953

1,200-753-4665