

REPORT OF THE PRESIDENT
OF THE UNIVERSITY OF BRITISH COLUMBIA
FOR THE ACADEMIC YEAR ENDED
AUGUST 31, 1943

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REPORT OF THE PRESIDENT

To the Board of Governors and
the Senate of
The University of British Columbia.

Gentlemen:

I have the honour to submit the following report on the work of the University for the academic year ended August 31st, 1943. The annual reports of the Deans of the Faculties and of certain other administrative officers are included herein, as is also a list of publications by members of the staff.

I INTRODUCTION:

The year under review had much in common with those immediately preceding it. Profound changes brought about by the war were everywhere in evidence. Those changes manifested themselves in many ways: in the increase in the number of members of the staff who were granted leave of absence; in the greater difficulty in obtaining qualified instructors to take the place of those on leave; in the number of pre-war researches restricted or temporarily discontinued; in the increase in researches directly related to war problems; in the discontinuance of certain courses because of insufficient registration or of inability on the part of the University to replace instructors on leave; in the greater specialization offered male students taking military training; in the response of the women students to the programme of war work; in the rapid rise in the cost of equipment, supplies and operating expense; in the increase in the wage rate for all forms of labour, skilled and unskilled; in the general restiveness due to the frequent changes in government regulations, and in the fuller realization on the part of staff and students of the difficulties involved in the struggle in which the United Nations are engaged.

II GENERAL:

Teaching Staff:

The numbers of members on the teaching staff for the academic year 1942-43, exclusive of those on leave of absence, were as follows:

Deans of Faculties.....	3
Professors.....	41
Associate Professors.....	26
Assistant Professors.....	31
Lecturers.....	9
Assistant Director of Physical Education.....	1
Instructors.....	13
Honorary Lecturers.....	13
Part-time Lecturers.....	25
Assistants.....	99

TOTAL..... 261

New Appointments:

Ralph Duncan James, M.A.(Brit.Col.), Ph.D.(Chicago), F.R.S.C.,
Professor in the Department of Mathematics.

Miss Dorothy P. Lefebvre, B.H.Sc.(Sask.), M.S.(Iowa State College),
Associate Professor and Acting-Head of the Department of Home
Economics.

Miss Marjorie J. Smith, A.B.(Minn.), A.M.(Chicago), Associate
Professor in charge of Social Work in the Department of
Economics, Political Science and Sociology.

Miss Stella Beil, B.S., M.S.(Kansas State College), Assistant
Professor in the Department of Home Economics.

Charles Vynor Brooke, B.A.(Queen's), A.M., Ph.D.(Harvard),
Assistant Professor of Spanish in the Department of Modern
Languages.

Miss Mary C. Gleason, B.A.(Vassar College), M.S.S.(Smith School
of Psychiatric Social Work), Assistant Professor of Social
Work in the Department of Economics, Political Science and
Sociology.

Miss Harriet Evelyn Mallory, R.N., B.Sc.(Teachers College,
Columbia), Special Lecturer in the Department of Nursing and
Health.

Miss Ethel Harris, A.B.(Columbia), M.A.(Toronto), D.Lett.
(Paris), Lecturer in the Department of Modern Languages.

Lionel A. Cox, M.A.(Brit.Col.), Lecturer in the Department of
Chemistry.

Lorne R. Kersey, B.A.Sc.(Brit.Col.), Instructor in the Department
of Mechanical and Electrical Engineering.

Promotions:

C. E. Dolman, M.R.C.S.(England), M.B., B.S., M.R.C.P., D.P.H.,
Ph.D.(London), from Professor and Acting-Head to Professor and
Head of the Department of Nursing and Health.

Frank A. Forward, B.A.Sc.(Toronto), M.Aust.I.M.M., from Associate
Professor to Professor of Metallurgy in the Department of
Mining and Metallurgy.

Walter H. Gage, M.A.(Brit.Col.), from Associate Professor to
Professor in the Department of Mathematics.

- S. C. Morgan, B.Sc.(Queen's), M.Sc.(Alberta), M.S.(Calif.Inst. of Tech.), from Associate Professor to Professor of Electrical Engineering in the Department of Mechanical and Electrical Engineering.
- J. Fred Muir, B.Sc.(Manitoba), from Associate Professor to Professor in the Department of Civil Engineering.
- Miss Isabel MacInnes, M.A.(Queen's), Ph.D.(California), from Associate Professor to Professor of German in the Department of Modern Languages.
- John Allardyce, M.A.(Brit.Col.), Ph.D.(McGill), F.A.A.A.S., from Assistant Professor to Associate Professor in the Department of Biology and Botany.
- W. B. Coulthard, B.Sc.(London), M.A.I.E.E., A.M.I.E.E., from Assistant Professor to Associate Professor of Electrical Engineering in the Department of Mechanical and Electrical Engineering.
- Miss Harriet Evelyn Mallory, R.N., B.Sc.(Teachers College, Columbia), from Special Lecturer to Associate Professor in the Department of Nursing and Health.
- Joseph E. Morsh, B.A.(Brit.Col.), Ph.D.(Johns Hopkins), from Assistant Professor to Associate Professor in the Department of Philosophy and Psychology.
- W. O. Richmond, B.A.Sc.(Brit.Col.), M.S.(Pittsburg), Mem.A.S.M.E., from Assistant Professor to Associate Professor of Mechanical Engineering in the Department of Mechanical and Electrical Engineering.
- Harold D. Smith, M.A.(Brit.Col.), Ph.D.(Toronto), from Assistant Professor to Associate Professor in the Department of Physics.
- Alexander P. Maslow, A.M.(Michigan), Ph.D.(Columbia), from Lecturer to Associate Professor in the Department of Philosophy and Psychology.
- Jacob Biely, M.S.A.(Brit.Col.), M.S.(Kansas State College), from Instructor to Assistant Professor in the Department of Poultry Husbandry.
- John H. Creighton, M.A.(Toronto), from Lecturer to Assistant Professor in the Department of English.
- N. F. Gordon Davis, B.A.(Manitoba), M.A.(Brit.Col.), Ph.D.(Princeton), from Instructor to Assistant Professor in the Department of Geology and Geography.
- S. A. Jennings, M.A., Ph.D.(Toronto), from Lecturer to Assistant Professor in the Department of Mathematics.
- Miss Margaret E. Kerr, R.N., B.A.Sc.(Brit.Col.), M.A.(Columbia), from Instructor to Assistant Professor in the Department of Nursing and Health.
- Thomas G. Wright, B.F.(Penn.State), M.F.(Duke), M.C.S.F.E., M.S.A.F., from Lecturer to Assistant Professor in the Department of Forestry.
- G. Philip V. Akrigg, M.A.(Brit.Col.), A.M.(California), from Assistant to Instructor in the Department of English.
- Miss Lois Campbell, M.S.A.(Brit.Col.), from Assistant to Instructor in the Department of Dairying.
- Maurice Van Vliet, M.S.(Oregon), from Instructor in Physical Education for Men to Assistant Director of Physical Education.
- Miss Margaret G. Morrison, B.A.(Brit.Col.), from Assistant in the Registrar's Office to Assistant Registrar.

Leaves of Absence.

Dr. George M. Weir, Professor and Head of the Department of Education, for the duration of the war.
 Mr. Henry F. Angus, Professor and Head of the Department of Economics, Political Science and Sociology, for a period of one year as from September 1st, 1942.
 Dr. Hector J. MacLeod, Professor and Head, Department of Mechanical and Electrical Engineering, for half-time, for a period of one year as from April 1st, 1942.
 Mr. John E. Liersch, Professor and Head of the Department of Forestry, for a period of one year as from January 23rd, 1943.
 Dr. Thomas G. Henderson, Associate Professor in the Department of Philosophy and Psychology, for a period of one year as from July 1st, 1942.
 Dr. Arthur M. Crooker, Assistant Professor in the Department of Physics, for a period of one year as from August 31st, 1942.
 Dr. Kenneth C. Mann, Assistant Professor in the Department of Physics, for a period of one year as from August 31st, 1942.
 Dr. George M. Volkoff, Assistant Professor in the Department of Physics from February 15th to September 15th, 1943.
 Mr. Patrick C. F. Guthrie, Instructor in the Department of Classics, for a period of one year as from May 15th, 1943.
 Mr. Robert T. McKenzie, Assistant to the Director, Department of University Extension, from May 1st, 1943 to March 31st, 1944.

Appointments Necessitated by Leaves of Absence:

R. Keith Brown, B.A. (Brit. Col.), Lecturer in the Department of Physics during the absence of Dr. G. M. Volkoff.
 Alexander P. Maslow, A.M. (Michigan), Ph.D. (California), Lecturer in the Department of Philosophy and Psychology during the absence of Dr. Thomas G. Henderson.
 William Petrie, B.A. (Brit. Col.), A.M. (Harvard), Lecturer in the Department of Physics during the absence of Dr. K. C. Mann.

Resignations:

Ralph Hull, M.A. (Brit. Col.), Ph.D. (Chicago), Professor in the Department of Mathematics.
 John D. Leslie, B.A., M.A. Sc. (Brit. Col.), Instructor in the Department of Chemistry.
 D. Gordon B. Mathias, M.A. (Brit. Col.), Instructor in the Department of Bacteriology and Preventive Medicine.

Re-appointment following Attainment of Retirement Age:

Mr. Abram Lighthall, B.Sc. (McGill), Associate Professor in the Department of Civil Engineering, who reached the age of retirement on April 1st, 1943, was re-appointed as from March 31st, 1943 to May 31st, 1944.

Re-appointments to the Board of Governors:

Mr. William G. Murrin and Mr. Edward H. Barton were re-appointed by the Lieutenant-Governor-in-Council as members of the Board of Governors for a period of six years as from August 27th, 1943.

Election of Representative of Senate on the Board of Governors:

On February 17th, 1943, Dr. John F. Walker was elected as a representative of the Senate on the Board of Governors for a period of three years.

Obituaries:

Judge Joseph N. Ellis:

The announcement of the death of Judge Joseph N. Ellis recalled to the minds of many the valued services which he, as a former member of the Board of Governors, had rendered to the University over an extended period. For four years during the first term of his appointment, Judge Ellis was Honorary Secretary of the Board of Governors. In 1933 he was re-appointed as a member of the Board for a term of six years but retired in 1935.

Mr. J. Newton Harvey:

During the year another member who had served the University long and faithfully passed away in the person of Mr. J. Newton Harvey. Appointed a member of Senate by the Lieutenant-Governor-in-Council, Mr. Harvey served in this capacity for many years with marked acceptance.

Mr. Ernest G. Matheson:

It was with regret that the University noted the passing of a former Associate Professor in the Department of Civil Engineering, Mr. Ernest G. Matheson, who had rendered valued service to the University from its inception until the time of his retirement in 1935.

Dr. N. F. Gordon Davis:

By the untimely passing of Dr. N. F. Gordon Davis, Assistant Professor in the Department of Geology and Geography, the University suffered a distinct loss. From the time of his appointment to the staff in 1935, Dr. Davis' contributions to the Department, particularly in Geography, were outstanding, while his personal qualities greatly endeared him to his colleagues and students.

Appointment of Members of Staff to Dominion Councils and Boards:

Dr. Gordon M. Shrum was appointed to the National Research Council for a period of three years. Dr. Shrum succeeded Dr. Robert H. Clark who had served on the Council for six years.

Succeeding Dr. Andrew H. Hutchinson, Dr. Wilbert A. Clemens was appointed to the Fisheries Research Board of Canada for a five-year period.

III THE YEAR WITHIN THE UNIVERSITY:

Important Expansions and Changes in the Curriculum:

During the year the Department of Home Economics was re-established, the teaching of Spanish was resumed, and the courses in Social Work were strengthened. At the same time certain other Arts and Science courses were discontinued because of the University's inability to provide instructors or because of insufficient enrolment.

Strong representations were made by outside organizations during this period for the establishment of three new units of instruction, namely, a School or Faculty of Pharmacy, a Department of Physical Education, and a Department of Physical Medicine.

Regulations Governing Limitation of Attendance Waived:

For the session 1943-44, the regulations with respect to limitation of attendance as passed by the Board of Governors on January 28th, 1938, including the regulations in regard to Nursing and Health and the Teacher Training Course, were again waived for a year.

Academic Credit granted for Graduate Work done under the National Research Council:

During the session the suggestion was made by the National Research Council that the University grant academic credit for approved work done by graduate students under the auspices of the Council. The Faculties and Senate approved of the proposal submitted by the Council on the understanding that each case would be considered on its merits.

Directed Reading Courses:

Mention should be made of the two Directed Reading Courses which were offered during the session - English 16 and

History 4. Interest in this type of course continues to be well sustained, more particularly among teachers in the Province. The highly satisfactory results obtained from year to year are due to two main factors, namely, the painstaking work of the instructors in the preparation of study material, bulletins and references, and the earnest application of the students themselves.

Appointment of a Committee of the Board of Governors to Select a Successor to the President:

Early in 1943 the President drew the attention of the Board of Governors to his approaching superannuation and gave his reasons for wishing to retire on the date on which this became effective, namely, January 20th, 1944.

Upon receipt of the President's communication, the Chancellor appointed a Committee to consider the question of selecting a successor to the President and to report to the Board the names of eligible and available men who might be free to assume the duties of the Presidency early in the coming year.

Increase in Salaries to Members of the Professorial Staff:

Before drafting the budget for 1943-44, the President was authorized by the Board of Governors to make recommendations for salary increases to members of the professorial staff where such increases were most deserving even though such action necessitated making reductions in certain major items in the budget. While the increases granted were made without respect to rank, the majority were given to members of the staff who were associate professors or assistant professors.

Payment of Annuity Premiums for Employees in the Armed Forces:

By resolution of the Board of Governors, the University undertook to continue payment of the usual University annuity premiums for members of the staff who enlist for active service with the armed forces, provided that the individual member continues to make his own contributions towards the superannuation plan.

Cost of Living Bonus:

A cost of living bonus to all monthly employees of the University whose wages, plus the bonus, did not exceed \$2,100.00 per annum, was made effective at the beginning of the 1942-43 fiscal year. Later, this maximum was raised to \$3,000.00.

Campus maintenance employees and farm employees, not being eligible for the cost of living bonus, were given a substantial increase in rates of pay.

Acknowledgment of Gifts and Grants:

Each year the principal gifts received by the University are listed in the Calendar for the period covered by that issue. Any gifts not so acknowledged are usually mentioned in the report of the Dean under whose jurisdiction such gifts or grants are administered.

Within recent years increasingly generous grants have been received from individuals, from corporations and from Dominion and Provincial Governments. These gifts are made for many purposes such as prizes, scholarships, bursaries, grants towards researches, equipment for laboratories, books for the Library or material for the Museum. Some of these benefactions are in the form of endowments; others are renewable for a period of years or are given annually at the pleasure of the donors.

Dominion-Provincial Bursaries:

During the year, the administration of the Dominion-Provincial Bursaries entailed a very great deal of work on the part of the Committee on Prizes, Scholarships and Bursaries. The reports of this Committee covered the administration and award of Youth Training Bursaries, War Service Bursaries and National Selective Service Bursaries.

Following the termination of the three-year schedule for student aid under the Youth Training Bursaries, the grant was renewed by the Dominion and Provincial Governments for the session 1942-43. The War Service Bursaries were awarded on the same terms as in the previous year. In the fall of 1942, the Dominion Department of Labour established the National Selective Service Bursaries to encourage students of high scholastic standing in scientific subjects to enter the universities. From this fund, \$12,000.00 was granted to the University of British Columbia, and for its administration a special committee was appointed composed of the Superintendent of Education, a representative of the War Emergency Training Programme, a representative of the National Selective Service and two members of the University staff. The amount of the grant from each of the above-mentioned sources, and the sum awarded under each heading to students at the University of British Columbia, are as follows:

	Total Grant	Amount Awarded to Students at the Univer- sity of British Columbia
Youth Training Bursaries	\$5,000.00	\$3,800.00
War Service Bursaries	20,000.00	7,050.00
National Selective Service Bursaries	12,000.00	11,395.00
	<u>\$37,000.00</u>	<u>\$22,245.00</u>

Research Projects Financed by the University:

Numerous research projects which had been agreed upon by the President and the Deans of the Faculties were continued or initiated during the year. Some of these investigations were undertaken by single individuals, others necessitated joint action on the part of one or more departments within a given faculty, while a few involved work in more than one faculty.

The researches undertaken under this heading and chargeable to a special item in the University budget were as follows:

The Purification of Staphylococcus Food-Poisoning Toxin; Gas Gangrene Toxins; Genetics of Economic Plants; Factors Affecting the Basal Metabolic Rate; B. C. Coal and Shale; Superactive Charcoal; Surface Reactions of Minerals in Flotation; Reduction of Native Ores; Glass Wool and Related Products; Strategic Metals; Application of Raman Effect to Problems in Oil Industry; Parasites and Diseases of the Columbia Black-tailed Deer; Natural Foods of Trout; Clams and other Bivalves; Relation of Vitamins to the Nutrition of Trout; Induction Heat Treatment; Causes of Raspberry Failure; British Columbia Fish Oils; Activators for Enzymes; Surface Taint in Butter; Problems Associated with Meat Quality; Vitamin B Complex; Cheese Ripening; Auto-sexing of Cambar and Redbar; Poultry and Egg Production; A Preliminary Study of the Economic Evolution in the Okanagan Valley.*

Report of the Library Committee:

In accordance with long-established practice, the report of the Library Committee was issued as a separate and sent to members of the Senate and of the Board of Governors. The period covered by this report coincides with that of the fiscal year of the University, namely, April 1st, 1942 to March 31st, 1943. Of the many matters dealt with in this report, the following are among those of general interest:

The increase in book prices, exchange rates and war taxes, combined with a restricted field for purchase and a stationary book appropriation fund, resulted in fewer volumes being acquired by purchase than in pre-war years. However, as the result of gifts and accessions received from outside sources, the actual number of accessions compared very favorably with that of previous years.

The sharp decline in circulation which was emphasized in the report was directly attributable to the smaller registration in the Summer Session, to the closing of the University for a

fortnight due to the fuel shortage, and to the demands made upon the students' time by military training for men and war work for women.

Students taking Directed Reading Courses and those registered in Evening Classes made extensive use of the Library, while, under the Department of University Extension, members of study groups and drama groups in all parts of the Province increased the circulation by many thousands of volumes. Because of insufficient carrel accommodation, permanent permits for access to the stackrooms were restricted to senior students. Whenever space was available, after the requirements of the more advanced students had been met, carrel privileges were extended to members of other years who had greatest need for special accommodation.

In the Reference Department, a gratifying beginning was made in the organization of the large map collection which had been assembled during recent years but which, because the material had not been mounted or catalogued, had not been used to any considerable extent.

The number of government documents issued has been very materially reduced since 1939 and a great many valuable series have been discontinued for the duration of the war. Under these conditions the Library considered itself particularly fortunate that the King's Printer for the Government of British Columbia had been directed to forward, free of charge to the University, two copies of every publication printed in the Government Printing Office.

The number of cards added to the Library of Congress Depository Catalogue during the twelve-month period was 77,614. Fortunately, the problem of providing filing space for this rapidly growing catalogue was solved through the Library subscribing for photolithographic reproductions of the entire catalogue as they are issued. Thus in a few years the original filing system will be superseded by the newer and much more compact one.

As a precaution against the possible loss of valuable books by bombing, many of the rarer volumes were stored in the vault or in specially constructed compartments in the basement. This also served to relieve, to a limited extent, the acute congestion in the stackrooms.

Museum of Anthropology:

The appointment of a curator and the engaging of part-time student assistants made it possible to keep the Museum of Anthropology open for visitors and students every afternoon during the summer months and from three to four hours per day during the session. Owing to the small number who visited the museum the educational effect was limited. The

committee in charge felt, however, that by proper classification, careful labelling, judicious selection of material, and periodic changing of exhibits, the attendance would increase and the time which visitors would spend in viewing the exhibits would be extended.

With this end in view, the curator and his assistants spent the greater part of their time in cataloguing the collections, in segregating the extraneous material, and in classifying and labelling the balance according to ethnic groups.

One of the chief reasons for the unattractiveness of the museum in recent years was the fact that, owing to the almost complete lack of storage space, the exhibits lost much of their effectiveness through acute overcrowding. With the installation of storage drawers beneath the cases, this condition has been greatly improved. As a result, the selection of suitable material is now possible, the periodical changing of exhibits becomes practicable, and the effectiveness of the exhibits is correspondingly enhanced.

Extension of the Arboretum:

During the year a tract of 2.23 acres was added to the existing Botanical Gardens and Arboretum. The addition of this acreage brings the total area for these purposes up to that originally recommended by the Commission of internationally-recognized landscape architects which was responsible for drafting, in broad outline, the general landscape design for the campus.

Forest Reserve Area Acquired by the University:

Under date of March 5th, 1943, a letter was received from the Hon. A. Wells Gray, Minister of Lands, in which he stated that under authority of Order-in-Council No. 249, which had been approved on March 1st, 1943, approximately 10,105 acres had been excluded from the limits of Garibaldi Park for forestry demonstration purposes and authority given for the issuance of a lease to the University of British Columbia for a period of twenty-one years at a nominal rental of \$1.00 per annum.

The acquisition of this conveniently-situated and exceptionally representative tract of forest land is a most valuable asset for the University and more particularly for the Department of Forestry. In selecting this area the University enjoyed the active co-operation of the Hon. the Minister of Lands, the Chief Forester, and the other members of the Provincial Forestry staff, all of whom were as desirous as were the University representatives themselves that the most suitable, accessible area available be placed at the disposal of the University for the study of the many problems which present themselves to those engaged in the forest industry in this Province.

Increased Work in the Offices of the Bursar and of the Registrar:

During recent years the duties and responsibilities of the Bursar have increased greatly. In addition to the normal expansion in business transactions resulting from the growth of the University, there have been added the work involved in monthly income tax deductions from the salaries of the staff as required by the Dominion Government; the statement of these deductions as prepared for each member of the staff; the deductions, from the source, of contributions by the staff to the various forms of the war effort; the payment of cost of living bonuses with their frequent changes in rates; the carrying out of Ration Board and Priority Rating Regulations; the marked increase in the number of scholarships and bursaries; the numerous research projects sponsored by the Dominion and Provincial Governments and by business organizations, and the financial administration of special academic and non-academic courses of instruction conducted in co-operation with the Department of National Defence.

In the Registrar's Office the volume of work is likewise increasing much more rapidly than a comparative study of the undergraduate registration would indicate. To the usual duties pertaining to this office, the war has added many new responsibilities of which the following are particularly deserving of mention: Frequent reports to the Mobilization Board and to each of the three Armed Services; monthly reports on all returned men attending under the Post-Discharge Re-establishment Order P.C. 7633; compiling information regarding science students and graduates for the Wartime Bureau of Technical Personnel; special registrations in connection with postponements from military service; registration and records of men in the Number 2 Canadian Army University Course and in other special wartime courses; general administration of the Canadian Legion Correspondence Courses; the keeping of records of all students and graduates who enter some branch of the Armed Services, and the conducting of correspondence regarding those who have become casualties or been awarded decorations.

In both of these administrative offices the increased work has been cheerfully undertaken without a corresponding increase in staff.

Need for Increased Accommodation:

The need for increased accommodation, so frequently stressed in previous reports by the President, is still unmet. During the year a committee of Senate prepared a detailed statement of the University's present and immediate future requirements in this respect. While attention was directed particularly to the urgent need for more lecture room, laboratory and office space so necessary to relieve congestion and to increase efficiency in instruction, a strong case was made for

enlarging the library and gymnasium, and for erecting a museum and student residences.

Although no definite recommendations were made with respect to the order of importance of the buildings and extensions required, the certainty that heavy post-war demands would be made on the University was emphasized, as was also the fact that block plans, together with estimates of costs for new buildings and for extensions to existing ones, should be prepared immediately. This would afford opportunity for the different faculties and departments to determine accurately what their requirements were and so would enable the architects, in consultation with the administration, to plan the new buildings and extensions most efficiently and economically.

In this connection the following excerpts have been taken from a memorandum which the Board of Governors requested the President to prepare, following the receipt of a letter from the Chairman of the Sub-Committee on Construction Projects, Advisory Committee on Reconstruction, Ottawa, in which he asked for a statement showing the University's immediate building requirements:

"Some years ago it was felt that the building most needed was one which would provide the necessary lecture room and office accommodation for the Faculty of Arts and Science. Later, it became evident that the most serious bottlenecks in the University were in the Departments of Chemistry and Physics. This condition still persists and, in my opinion, until congestion is relieved in these departments, the effectiveness of many courses in the University will continue to be seriously impaired.

"Judging from certain of the requests received from Ottawa and Victoria for information respecting the need for increased building accommodation, one might conclude that the addition of one or two buildings would meet the University's immediate requirements. This, however, indicates a lack of knowledge of the real situation. For many years nearly every building on the campus has been congested beyond the limit of efficiency. Not only are a number of new buildings urgently needed but many of the existing buildings should be enlarged. For example, the newly created Department of Home Economics has no laboratories; and the recent expansions in Social Service have made demands on space which could only be met, temporarily, by assigning offices previously occupied by professors now on leave of absence and by converting a part of the Brock Memorial Building into classrooms. Then, too, there is need for other

buildings which would greatly increase the effectiveness of the University's work. In this category I would place residences for men and for women, a President's residence, and the first unit of a museum.

"The above general statement of needs relates only to the most pressing physical necessities of the University as it is today and as it will be for a brief tomorrow. It has been my oft-expressed opinion that for years the efficiency of the University has been seriously impaired by reason of inadequate accommodation. If I have been justified in my contention, as I believe I have been, the University will fail in increasing measure to meet the normal demands which will be made upon it in the next few years if it does not begin immediately to plan, and to give effect to, a building programme which will be adequate, not only for normal growth and expansion, but also sufficiently extensive to meet the unprecedented demands which will certainly be made upon it following the conclusion of hostilities. "

IV THE UNIVERSITY IN WARTIME:

Military Training on the Campus:

The year witnessed a number of important changes in the organization of compulsory military training for all physically-fit male students in the University. Prior to 1942-43, all able-bodied men were required to take the prescribed training in the Canadian Officers' Training Corps; but, during the period under review, two new units were established, namely, the University Naval Training Division and a Squadron of the University Air Training Corps. The creation of these divisions was not designed to provide alternative training in competition with that given in the C.O.T.C. but, rather, to offer specialized instruction for those men who had definitely decided to enlist in the Navy or in the Air Force.

The organization of these new units under a capable, unified command, the grading of the parade ground, the provision of a uniform for every man, and the addition of much necessary equipment not previously obtainable, resulted in greatly increased interest and efficiency.

During the summer of 1943 a substantial addition was made to the Armoury. Although reference was made in previous reports to the erection of this splendid building, the method employed in financing it is so unusual as to be deserving of further mention. Without outside financial assistance of any kind, governmental or otherwise, the University now has a

thoroughly modern Armoury, completely furnished, the gift of the officers and men of the C.O.T.C. who, over a period of fifteen years, voluntarily waived their pay allowance that this end might be achieved.

Military Enlistments:

Notwithstanding the strong recommendation of the Department of Labour that University students continue their studies until after graduation, six hundred members of the C.O.T.C. volunteered and were accepted for Active Service. Of these, 160 joined the Navy, 235 the Army, and 205 the Air Force.

War Work Programme for Undergraduate Women:

At the request of the Women's Undergraduate Society, a compulsory war work programme for undergraduate women was instituted at the opening of the session. The time required to complete the prescribed assignments was the equivalent of two hours each week for the academic year. The response was most gratifying and interest was well maintained throughout the entire period.

Special Wartime Courses:

The extent to which the University is regarded as the body which should participate actively in the giving of instruction to individuals and groups of widely differing scholastic attainments is well illustrated by the requests which were received from military authorities who are interested in the special training of prospective officer material, of technicians, and of returned men who have not the necessary academic qualifications to enter the University. In response to these requests the following special courses were offered during the year:

- Pre-Aircrew Training for Enlisted Personnel of the R.C.A.F.
- Number 2 Canadian Army University Course
- Canadian Legion Correspondence Courses
- Course in Personnel Administration
- Short Course in Discussion Group Techniques for Navy, Army and Air Force Educational Officers.

These courses differed widely in their nature and content. For some of them university credit will not be granted; for others limited credit will be allowed. It was agreed that special consideration would be given to demobilized men and women who entered the University under the Post-Discharge Re-establishment Order, P.C. 7633.

V CONCLUSION:

While the work of the year was carried on under the stress of wartime conditions, there were numerous trends and courses of action, both within and without the University, which were most significant and encouraging. One of the more important of these was the consistent policy of the Dominion Government with respect to the place of undergraduate students of military age. Another policy of almost equal importance, when considered in relation to its effect upon the University, was the decision of the government to give financial assistance to enable students whose University courses had been interrupted to continue their studies upon their discharge from the armed services. These definite commitments on the part of the government, and other contemplated ones affecting students who had not matriculated at the time of enlisting, indicate something of the greatly increased responsibilities which will devolve upon the University even before general demobilization becomes effective.

The governing bodies of the University clearly perceive that the adoption of these policies by the Dominion Government is indicative of a trend which has special significance for the University, not only in relation to existing faculties but also with respect to the establishment of those oft-proposed faculties and departments which have been considered for many years and for the constitution of which more than one favorable resolution has been recorded in the minutes of the Faculties and of the Senate.

Respectfully submitted,

LEONARD S. KLINCK,

President.

Vancouver, British Columbia
June 12, 1944.

REPORT OF THE REGISTRAR

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Registration

	<u>Men</u>	<u>Women</u>	<u>Total</u>	
<u>Faculty of Arts and Science</u>				
First Year.....	429	210	639	
Second Year.....	298	153	451	
Third Year.....	159	126	285	
Fourth Year.....	128	116	244	
Graduates.....	72	24	96	
Social Work.....	2	27	29	
Teacher Training Course.....	8	26	34	
Directed Reading Courses.....	54	31	85	
Less Double Registration (D.R.C.)...	-10	- 4	-14	
<u>Faculty of Applied Science</u>				
Second Year.....	196	--	196	
Third Year.....	130	--	130	
Fourth Year.....	94	1	95	
Fifth Year.....	94	--	94	
Graduates.....	7	--	7	
<u>Faculty of Applied Science (Nursing)</u>				
Second Year.....	--	12	12	
Third Year.....	--	24	24	
Fourth Year.....	--	9	9	
Fifth Year.....	--	11	11	
Sixth Year.....	--	13	13	
Public Health Nursing.....	--	25	25	
Teaching and Supervision.....	--	4	4	98
<u>Faculty of Agriculture</u>				
First Year.....	34	11	45	
Second Year.....	22	4	26	
Third Year.....	25	3	28	
Fourth Year.....	23	4	27	
Graduates.....	9	3	12	
Occupational Course.....	2	--	2	140
<u>TOTAL</u>				2609
Evening Class in Botany	13	14	27	
Summer Session (1943)	183	146	329	
(Faculty of Arts and Science)				

Nationalities of Students (exclusive of students taking the Teacher Training Course, Social Work, Directed Reading Course, Public Health Nursing, and Teaching and Supervision (Nursing):
(Racial Origins)

British 2027; American 54; Chinese 49; Swedish 26; Hebrew 25;
Norwegian 24; Greek 15; Polish 15; Ukranian 12; Italian 11;
Russian 10; others 178. TOTAL 2446

Geographical Distribution of Students:

From Vancouver and vicinity.....	1573
From Victoria.....	121
From New Westminster.....	134
From other Provincial points.....	670
From points in Canada outside British Columbia....	99
From other Countries.....	12
	<u>TOTAL</u> <u>2609</u>

Occupations of Parents (exclusive of students taking the Teacher Training Course, Social Work, Directed Reading Course, Public Health Nursing, and Teaching and Supervision (Nursing):

Accountant 41; Army 31; Banker 28; Barrister 43; Carpenter 33;
Civil Servant 54; Clergyman 29; Clerk 20; Dentist 19; Doctor 51;
Druggist 14; Electrician 16; Engineer 133; Farmer 74; Insurance 35;
Lumberman 28; Machinist 17; Manager 59; Manufacturer 17;
Merchant 90; Professor 14; Salesman 63; Superintendent 16;
Teacher 45; others 1476. TOTAL 2446

Location of Graduates:

<u>Number in,-</u>	
Vancouver.....	2920
Other parts of British Columbia.....	1790
Other parts of Canada.....	542
British Isles.....	56
United States of America.....	293
Other Countries.....	44
Number deceased.....	152
Number whose address is unknown.....	759
	<u>TOTAL</u> <u>6404</u>

Comparative Statement of Registration
Sessions 1933-34 to 1942-43

<u>Session</u>	<u>Arts and Science</u>	<u>Applied Science</u>	<u>Nursing</u>	<u>Agricul- ture</u>	<u>Teacher Training Course</u>	<u>Total Winter Session</u>	<u>Summer Session</u>	<u>Short Courses</u>	<u>Grand Total</u>
1933-34	1147	287	48	63	61	1606	370	124	2100
1934-35	1238	320	57	71	66	1652	377	165	2294
1935-36	1337	336	68	80	62	1883	464	278	2625
1936-37	1499	366	47	95	42	2049	566	306	2921
1937-38	1590	416	50	100	67	2223	650	279	3152
1938-39	1634	419	59	117	57	2286	659	290	3235
1939-40	1664	434	65	139	69	2371	715	253	3339
1940-41	1724	466	60	166	71	2487	587	206	3280
1941-42	1763	488	63	155	68	2537	457	184	3178
1942-43	1744	522	98	140	34	2538	329	98	2965

Comparative Statement of Degrees Conferred
Sessions 1933-34 to 1942-43

<u>Year</u>	<u>M.A.</u>	<u>B.A.</u>	<u>B.Com.</u>	<u>B.Ed.</u>	<u>M.A.Sc.</u>	<u>B.A.Sc.</u>	<u>B.S.F.</u>	<u>B.A.Sc. Nursing</u>	<u>M.S.A.</u>	<u>B.S.A.</u>	<u>Total</u>	<u>Grand Total</u>
1933	19	215	22	-	8	44	-	7	4	12	331	3212
	4	46	5	-	3	5	-	-	-	1	64	3276
1934	11	204	31	-	3	37	-	5	4	12	307	3583
	6	36	5	-	1	5	-	-	1	3	57	3640
1935	14	196	23	-	8	57	-	13	2	19	332	3972
	12	45	5	-	-	5	-	-	-	1	68	4040
1936	15	175	21	-	6	50	-	7	5	16	295	4335
	10	38	1	-	2	3	-	-	3	2	59	4394
1937	21	190	28	-	4	48	-	2	7	14	314	4708
	9	54	8	-	-	6	-	1	1	1	80	4788
1938	20	204	31	-	6	56	-	7	3	19	346	5134
	10	53	3	-	2	4	-	-	-	5	77	5211
1939	19	217	22	-	7	71	-	8	4	22	370	5581
	5	63	6	-	-	9	-	-	1	2	86	5667
1940	30	212	37	-	4	71	-	13	3	18	388	6055
	6	62	1	-	-	1	-	-	1	3	74	6129
1941	21	189	26	-	7	81	1	8	2	19	354	6483
	8	73	9	-	1	-	-	-	3	-	94	6577
1942	14	170	52	-	9	82	3	6	2	26	364	6941
	12	51	1	3	-	2	-	-	2	5	76	7017
1943	13	167	31	2	3	92	2	12	3	25	350	7367

Comparative Statement of Diplomas Issued
Sessions 1933-34 to 1942-43

<u>Year</u>	<u>Teacher Training</u>	<u>Public Health Nursing</u>	<u>Social Work</u>	<u>Occupational Course in Agriculture</u>	<u>Totals</u>
1933	58	13	4	-	75
	-	1	5	-	6
1934	61	10	-	-	71
	3	-	3	-	6
1935	65	15	3	3	86
	1	-	7	-	8
1936	60	15	-	-	75
	-	-	12	-	12
1937	39	16	-	4	59
	1	5	19	-	25
1938	65	18	1	3	87
	-	2	15	-	17
1939	54	14	2	4	74
	1	1	24	-	26
1940	66	12	3	5	86
	2	-	23	-	25
1941	68	9	1	2	80
	-	-	22	-	22
1942	59	10	4	4	77
	-	1	17	-	18
1943	28	27	2		57

Scholarships, Prizes, Fellowships and Bursaries Awarded to Graduates

During the year many scholarships, prizes, fellowships and bursaries have been won by graduates of the University. The following list does not include awards which have been made by the Senate of the University of British Columbia.

Name	Award	Value	Subject	Where Tenable
Aldous, John	Scholarship in Physiology	\$900	Physiology	University of Toronto
Beaton, Mary	Teaching Assistantship	\$750	Psychology	University of California
Browning, George V.	National Research Council Studentship	\$650	Explosives	University of Toronto (was not taken up)
Buckland, Donald C.	Award in Forest Pathology	\$1200	Forest Pathology	Yale University
Buckland, Donald C.	Teaching Fellowship	\$500	Forestry	Yale School of Forestry
Clark, Robert M.	University Scholarship	\$1000	Economics	Harvard University
Cox, Ethel Jane	Teaching Fellowship	\$750	Accounting	University of California, Berkeley
Fell, J. Michael G.	Teaching Fellowship (Assistantship)	\$750	Physics	University of California, Berkeley
Fowle, C. David	Research Prize (Am. Assoc. for the Advancement of Science and B.C. Academy of Science)	\$25	Zoology	University of British Columbia
Frith, Monica M.	Commonwealth Fund Scholar- ship	\$1500	Public Health	University of Michigan
Gardner, Joseph A. F.	National Research Council Fellowship	\$750	Chemistry	Cellulose Research Laboratories, McGill
Goranson, Ewald S.	Award in Physiology	\$900	Physiology	University of Toronto
Grant, John D.	Teaching Fellowship	\$600	English	University of Toronto
Hawkes, Arthur S.	National Research Council Studentship	\$650	Chemistry	McGill University
Hedde, Rognvald D.	National Research Council Studentship	\$650	Chemistry	Cellulose Research Laboratories, McGill
Hughes, Rev. Norah	Fellowship	\$700	Theology	University of Chicago
Loucks, J. Isabel	Commonwealth Fund Scholar- ship	\$1500	Public Health	Johns Hopkins University

Name	Award	Value	Subject	Where Tenable
Marcuse, Mrs. Katherine	Fellowship	\$600	English	Brown University (was not taken up)
Mitchell, Leonard	National Research Council Fellowship	\$750	Chemistry	Cellulose Research Laboratories, McGill
MacKenzie, Dorothy	Canadian Nurses Associ- ation Bursary	\$400	Public Health	McGill University
Rattenbury, John	Research Prize (Am. Assoc. for the Advancement of Science and B.C. Academy of Science	\$25	Zoology	University of British Columbia
Thompson, Robert M.	National Research Council Fellowship	\$750	Mineralogy	University of British Columbia
Waddell, David	Award in Physiology	\$800	Physiology	University of Toronto
Winram, Edna E.	Assistantship	\$750	Accounting	University of California, Berkeley

NOTE: In many cases these scholarships and fellowships carry with them free tuition or exemption from fees (or travelling expenses) in addition to their monetary value.

Value of scholarships, fellowships and bursaries won by our graduates in other Universities and in Institutes in 1943 \$17,850.00

Total value of scholarships, fellowships and bursaries won by our graduates in other Universities and in Institutes since the first awards were made in 1917 \$737,359.00

Respectfully submitted,

CHARLES B. WOOD,

Registrar.

REPORT OF THE DEAN OF THE FACULTY
OF ARTS AND SCIENCE

Departmental and Individual Reports.

In order to obtain full information concerning the activities of the Faculty, I requested all the members, if they chose, to submit through the Heads of the Departments statements as to the work carried on during the year. The following is a summary compiled from departmental and individual reports.

Department of Bacteriology and Preventive Medicine.

There was a slight drop in the enrolment in several of the courses given in the Department, which helped to relieve what would have been an otherwise difficult situation, created by the resignation of Mr. D. G. B. Mathias as Instructor during the course of the academic year.

As in the past, both staff and students in the Department gave considerable time to research activities.

Dr. C. E. Dolman's chief research interest remained the staphylococcus toxins. He was assisted by Miss C. L. Aszkanazy, an Honours B.A. candidate, in work relating to the beta-toxin, who made her findings the subject of her B.A. thesis. In addition, Dr. Dolman was extensively engaged during the year in problems relating to bacterial food poisoning. Strains isolated from suspected foods in England had been forwarded to him by the Director of the Emergency Public Health Laboratory Service for an opinion as to the likelihood that they had been responsible for food poisoning outbreaks. Some very important conclusions were reached bearing upon the specificity of the kitten test for staphylococcus entero-toxin, which was first devised in these laboratories. Evidence was also obtained pointing to the fact that most of the "toxin" types of bacterial food poisoning outbreaks were probably due to staphylococci, and not to any other of the micro-organisms often suspected. This work entailed the use of human volunteers, as well as cats, for experimental animals. At times it proved easier to obtain the human volunteers than the cats, a fact which speaks very highly for the co-operative spirit displayed by staff and students in the Department, and which it is a pleasure to acknowledge at this point.

Early in November, at the request of Doctor R. D. Defries, Director of Connaught Laboratories and the School of Hygiene, Dr. Dolman visited San Francisco, to obtain an insight into the methods of production of plague vaccine, and an opinion as to the desirability of undertaking this work in Canada, whether at Vancouver or in Toronto. The assistance given in this connection by Dr. K. F. Meyer, Director of the Hooper Foundation, and his colleagues, was greatly appreciated, and led to the decision that sufficient plague vaccine could be made in the United States to supply all Canadian needs, and that local accommodation facilities were not such as to justify our undertaking this hazardous venture. During the course of his visit to San Francisco Dr. Dolman was invited to address the Northern California Pasteur Society on the subject of "Bacterial Food Poisoning."

Dr. Dolman also attended the annual Christmas Meeting of the Laboratory Section of the Canadian Public Health Association, held at Toronto, where he presented a paper on "Food Poisoning," and also (jointly with Dr. L. E. Ranta) another paper entitled "Observations on Cholera Vaccine."

Three years ago it was found in this laboratory that the proportions of the different toxins produced by Clostridium welchii could be varied, depending upon the nature of the medium employed for its growth. A more exact knowledge of this fact appeared of importance, both theoretically and in view of the fact that toxins from this organism are used for the production of toxoids and antitoxins. Work was commenced by Dr. D. C. B. Duff in 1942-43, and its expansion during the summer was made possible by a research grant. Mr. Charles Claridge, B.A., was employed as assistant.

So far it has been found that Cl. welchii will grow satisfactorily in an otherwise vitamin-free medium whose vitamins are supplied by small amounts of a yeast extract. On this simple medium growth is abundant, hemolytic toxin is produced in moderate amounts, and no measurable lethal toxin is elaborated. This finding therefore confirms the previous work along the same lines.

The work in progress at the moment consists in the division of the yeast extract into fractions containing one, or a small number, of the many growth factors known to be present in yeast. The effect of these fractions, alone and in combination, upon growth and toxin production of Cl. welchii, is now being studied.

During the academic term Miss Ann Clemens, under Dr. Duff's direction, did a very creditable piece of investigation for her B.A. thesis, entitled "A Study of Some in vitro Characteristics of Sulfonamide Activity with Particular Reference to Mode of Action."

Dr. L. E. Ranta continued to give at least half of his time to research activities under Connaught Laboratories auspices. As in previous years, his work was chiefly connected with testing the immunizing potency of batches of cholera vaccine prepared in Toronto, samples of which were shipped to Western Division before release. During the year a great improvement was devised in the method of testing the antigenic potency of these vaccines by mouse protection methods. A report of this work will eventually be published. Dr. Ranta also sought to determine the minimum nutritive requirements of the cholera vibrio, and in this direction also some interesting results were obtained.

Department of Biology and Botany.

Dr. A. H. Hutchinson carried on confidential research, with significant results, and submitted reports to the proper bodies. Papers in progress are:

A Bio-climatic study of the distribution of trees in British Columbia (with R. W. Pillsbury).

A new scale to be used in the polygonal graphing of data of two-dimensional value.

A statistical study of ovule development and seed production in Medicago (Alfalfa) (with Mary Murphy).

The polyploid condition (chromosomal) of Medicago (Alfalfa) hybrids, having commercial importance (with Helen Farley and Mary Murphy).

Dr. Hutchinson is a member of several organizations and committees, the most important of which are the following: Member of the High School Leaving and Matriculation Examination Board; the Committee on Accredited Schools; Secretary of the University Council on Athletics and Physical Education, and Chairman of the President's Committee on Physical Education. After eighteen years membership he retired from the Fisheries Research Board of Canada, (formerly the Biological Board of Canada) and the Pacific Executive of the same body. He retired also from the Scientific Advisory Council of the International Pacific Salmon Fisheries Commission, after membership from the time of its inception.

Dr. Frank Dickson had charge of the courses in Plant Pathology and Physiology and primary responsibility for the basic course, Biology 1. His researches were on saltations in certain fungi, induced by changes in temperature, hydrogen ion and light conditions (with Mary Mulvin).

Mr. John Davidson has been in charge of the evening class in Botany for more than twenty seasons. The membership in this class ranged from twenty to fifty. He is examiner in Botany for the British Columbia Pharmaceutical Association.

During the winter session 1942-43 and the summer of 1943 Dr. John Allardye directed a study of the inter-relationships of the hormone thyroxine and the vitamins thiamine, riboflavin and pyridoxine made possible through the University Research Grant and further contributions from the Departments of Biology and Botany and of Zoology. The problem is now completed and in course of preparation for publication. A brief summary of the work follows.

The Antithyrogenic Effect of Thiamine, Riboflavin and Pyridoxine After Induced Hyperthyroidism.

During the past thirty years enthusiastic claims appeared from time to time for therapeutic use in alleviating hyperthyroidism but most of these were disputed. The two methods usually adopted in cases of hyperthyroidism were partial olation or in milder cases the use of compounds of iodine. To reduce risk in the former treatment it is often necessary to apply the latter first. However, the iodine treatment may lose its beneficial effect before the hyperthyroid condition is sufficiently reduced.

In the last ten years a good deal of attention was directed to the role of the B vitamins in counteracting weight loss, diminished food intake and anorexia.

The basal metabolic rate was used as an index of the activity of the thyroid gland in the past. Provided certain conditions, such as the length of fasting and environmental temperature are properly adjusted and other influencing factors controlled, it can still serve in this capacity.

The apparatus, previously reported as having been constructed in our laboratories, was used with considerable success in determining basal metabolic rates of our albino rats after inducing hyperthyroidism and then treating with thiamine, riboflavin and pyridoxine.

Each of these vitamins showed some antithyrogenic activity with riboflavin being very effective in both the lowering of the basal metabolic rate and in the restoration of weight lost.

Honours Course in Genetics.

Through the appointment of Miss Ruth E. Fields the value of the general course in Biology has been augmented, and an honours course in Biology and Botany (Genetics Option) made possible. Other departments, particularly Agronomy, Animal Husbandry, Poultry Husbandry and Zoology, have co-operated in the work in Genetics. Miss Fields' researches have been on "Crossover mutations in *Drosophila* (fruit fly) induced by temperature and by radiations of six to ten meter wavelength."

Prospective Developments of the Department.

The work and contributions of this Department to branches of Applied Biological Sciences have been augmented by war conditions and it is anticipated that the rehabilitation period will greatly increase the requirement of Biological and Botanical instruction and research. The number of premedical students has reached a high level. It is anticipated that the newly organized Department of Home Economics will be closely related to Biological Science. The development of Forestry in post-war years is expected to require further facilities and staff for the course Biology, Forestry Option. Already a number of outstanding students have graduated in this field and scholarships have been awarded from leading universities.

Additional Facilities required.

Several reports, previously submitted, have demonstrated the crowded conditions under which this Department has operated for more than fifteen years. More facilities are urgently required to provide for the present student demand and it is safe to predict that the demand of post-war developments will present an unsurmountable problem unless plans are made in anticipation of these movements. The first accepted plan of this University featured a "Biological Building." It is urgently requested that early consideration be given to rehabilitation projects which are essentially Biological; and to the Applied Biological Sciences, as Medicine, Pharmacy, Forestry, Fisheries and Agriculture which are fundamentally constructive at all times, consequently needed the more, now and in the immediate future.

Practically all researches carried on in this Department during the year have been for one or other of the Armed Services, hence no details are permitted regarding the investigations, or the results obtained. These investigations have been largely upon the making of new explosives or improved methods for manufacturing already known explosives. One of the products upon which work was done during the last three years is now in commercial production at Shawinigan Falls, Quebec. Other problems have been on the production of new, low-boiling, toxic, organic fluorine compounds; reagents for counter-acting certain war gases at room temperature; a study of hygroscopic smoke reagents; the explosive limits of certain war gases.

The Department of National Defence, through the National Research Council, gave a grant of \$5,500 to the Department of Chemistry for this work during the fiscal year 1942-43. A part of this appropriation was used to employ eight graduate students during the summer months to work on these problems. The research experience thus gained will be credited towards their Master's degree.

Since the members of the staff of the Department are not permitted to publish any of the results of these war investigations, publications from the Department have almost ceased.

Dr. M. J. Marshall and Dr. R. H. Clark attended the meetings of the Royal Society of Canada at Hamilton. Dr. Marshall presented a paper on "The Potentials of Metal Electrodes in Circuits of High Resistance."

Dr. Clark attended during the year three meetings of the Directors of the National Research Council and was Chairman of the "Review Committee" for the fiscal year 1942-43. The function of this Committee is to evaluate as far as possible the accomplishments of the National Research Council for the year and to make recommendations to the Director for the work of the coming year.

Department of Classics.

In addition to the articles listed under Publications, Dr. O. J. Todd has a review and an article in the hands of the printers and Mr. L. A. MacKay has in progress a study of the composition of Homer's Iliad and of a new method of teaching Beginners' Latin.

Department of Commerce.

Owing to war restrictions and conditions no radical changes were attempted. The numbers of students enrolled in the various courses were practically the same as for the previous year. The start of the session was to some extent handicapped by the absence of Professor E. H. Morrow who, because of sickness, did not return to his classes until the middle of October. This meant a slight curtailment of the ground covered in some of the courses. The situation was aggravated by the shut-down due to fuel shortage.

A somewhat noticeable trend was an increase in the number of students enrolled for the Double Degree in Commerce and Forestry

During the session field visits were made to the Summer Iron Works, Ltd., the Alaska Pine Company, Ltd., and the Safeway Stores Limited.

The following visitors lectured on the topics stated:

Industrial Management.

E. G. McDonagh - Hudson's Bay Company.
A. C. Kennedy - H. R. Macmillan Export Company Ltd.

Marketing.

George T. Cunningham	-	Cunningham Drug Stores Ltd.
John C. Putt and E. Hawes	-	Hudson's Bay Company.
F. W. Benwell	-	Federated Welfare Agency.
T. R. Farrell	-	Woodward Stores Limited.
Ivor Crimp	-	Safeway Stores Limited.
John Dixon	-	David Spencer Limited.
J. S. Thompson	-	The W. H. Malkin Company Ltd.
W. G. Gibson	-	National Cellulose Limited, Toronto.

Department of Economics, Political Science and Sociology.

Professor H. F. Angus continued on leave with the Department of External Affairs at Ottawa and the Dean carried on Departmental affairs at Vancouver. No courses in Government were offered. This is a great handicap but unavoidable as it appears that all the available men qualified to give Government have been commandeered by the Government.

Owing to the scarcity of, and need for, social workers in the Province, arrangements were made to speed-up the course in Social Work so that by a proper selection of undergraduate work a candidate would be able to qualify for the Diploma of Social Work in one summer after graduation instead of one Winter Session and one Summer Session as formerly.

The work of the course was strengthened for 1943 by the appointment of an Associate Professor of Social Work.

The Department was honoured in that one of its honour students, Robert M. Clark, was awarded a Fellowship in Economics in Harvard.

Dr. C. W. Topping continued his research on the family and on the urban community. He is a member of various organizations chief among them being the Executive of the Canadian Political Science Association and the Editorial Advisory Board of the Canadian Journal of Economics and Political Science.

Staff.

The staff of this Department consisted of two men only, as the vacancy occasioned by the resignation of Dr. D. H. Russell was not filled. However, the burden of supervising practice-teaching was considerably lightened by the reduction in the enrolment in the Teacher Training Course. Also, the Department was so fortunate as to enlist the services of Mr. C. B. Wood for one of the courses formerly given by Dr. Russell. It was a pleasure to welcome Mr. Wood back to the work of the Department.

The experience of the year has shown that as long as the enrolment in the Teacher Training Course is small the work of the Department can be handled satisfactorily with the present reduced staff. After the war, however, a considerable increase in the enrolment of the Teacher Training Course is inevitable, and this will make necessary the appointment of an additional member of the staff.

The Teacher Training Course.

A change in the certification regulations of the Provincial Department of Education made unnecessary the giving of elementary-school methods and practice. This made possible the starting earlier of lectures in secondary-school methods. The number of these lectures was increased. The former elementary-school practice was replaced by additional practice in the junior high school.

The closing of the city's schools in January on account of bad weather made necessary the reduction by one week of the senior high school practice.

Saturday Morning Classes.

The Department's practice of offering on Saturday mornings classes for the teachers of the Lower Mainland was continued, Education 25 and 33 being offered. The enrolment in these classes continues to increase.

Education 16.

At the beginning of the fall term, a new reading course, Education 16, was offered. Each student enrolled studied methods of teaching in two of the six subject-matter fields for which outlines had been prepared. The supervision of this course entailed a heavy burden of reading papers. In this connection, the Department wishes to acknowledge with many thanks the courteous and tireless assistance of Professor A. C. Cooke of the Department of History.

The course has been made available to persons in the Armed Forces.

Activities of Staff

Dr. F. T. Tyler and Dr. M. A. Cameron have undertaken a small study of the scoring of the true-false test. Dr. Tyler continued his work on concept development and is making an investigation of the Terman-McNemar test.

Dr. Tyler was retained, for a portion of the summer of 1943, by the Provincial Department of Forestry to study the problem of personnel selection.

Department of English

As the report of this Department is brief and cannot be improved upon either in style or succinctness, it is quoted in toto.

"The freshman class was unusually and unexpectedly large. And, in consequence, the enrolment in many of the separate sections was larger than it should have been. As in my former reports, I again record the conviction that, to do effective work, these sections should not be much larger than thirty. But, in view of the circumstances, I think that the work of the First Year was perhaps more satisfactory than could have been expected or even than usual.

As for the Second, Third and Fourth Years, there is nothing of specific importance to report. The regular courses were all given in the usual fashion. It is my impression that the student grades were slightly more satisfactory than usual.

It may be proper to note here that, during the year, Dr. W. L. MacDonald continued work on his study of Pope, and Dr. F. E. L. Priestley got his book on Godwin ready for publication.

Professor E. Morrison's load in Applied Science is still far too heavy, though it was somewhat relieved by the assistance of Mr. G. P. Akrigg with the students in Agriculture. In this course Mr. Akrigg did particularly good work. And it is a great satisfaction to note that Dr. Morrison's work has at last won warm recognition from the Faculty and students in Applied Science.

I should like to make two notes looking forward to the coming year. One is of immediate and pressing importance: the new Army Course No. 2 will put a considerable additional strain upon the Department during the session 1943-44, since it seems impossible to get competent instruction except from the members of the Department who already have a full load of work to cope with. The second concerns a general revision of the Arts curriculum: it seems to me that steps should be taken, immediately, leading to that end. Probably no definite and complete plans for the future can now be made. But I think it is important that the Faculty should be considering the matter as soon as possible. "

The great majority of the students in Geology are in the Faculty of Applied Science. This arises from the fact that all prospective students of Geology are urged by the Department to enter the Applied Science Faculty so that upon graduation they would be eligible to become members of the Association of Professional Engineers of the Province of British Columbia. The courses in Arts and Science and in Applied Science, however, are, with very slight exceptions, identical.

Geography 1 was modified to include a two-hour laboratory period covering minerals, rocks and fossils. Geography 4 attracted noteworthy attention with its emphasis upon Geomorphology (formerly known as Physiography).

Reference is made elsewhere in this report to the sudden and regrettable death of Dr. Gordon Davis.

The staff of the department were engaged individually in various lines of researches.

Dr. M. Y. Williams presented to the Royal Society of Canada, by title, a synopsis of the Stratigraphy and Paleontology of Hong Kong, thereby assuring the publication of part of the work of Dr. R. W. Brock, Dr. S. J. Schofield, Dr. W. L. Uglow and himself, so long delayed by tragic events. He also undertook for the Geological Society of America, a revision of the Silurian of Arctic America, originally undertaken by the late Dr. E. M. Kindle. During the summer of 1943 he was engaged on a geological reconnaissance of 360 miles of the Alaskan Highway from Fort Nelson to Watson Lake. The work is being carried out by the Geological Survey of Canada as a part of the International program of the Northwest Planning Commission.

Dr. C. O. Swanson and Dr. H. C. Gunning were engaged as geologists by the Consolidated Mining and Smelting Company of Canada, investigating ore deposits in East Kootenay, and some problems of the ores of the Sullivan Mine.

Dr. Gunning, in addition, investigated occurrences of vanadium near Campbell River.

Dr. H. V. Warren and Dr. Gordon Davis continued scientific prospecting for strategic minerals - a work carried on with considerable success in 1942. (It was while engaged in this work that Dr. Davis died very suddenly.) Dr. Warren carried on his investigations of various ores by means of special analysis and microscopic examination of polished surfaces. More details of his work may be found under Special Researches.

Department of History.

The effects of the Second World War became increasingly evident during the session 1942-43. After twenty-one years of most valuable service in the Department of History, Professor F. H. Soward left temporarily for the Department of External Affairs in Ottawa.

Enrolment in the ordinary undergraduate lecture courses has been somewhat reduced. None the less it was found possible to carry on all courses listed in the Calendar with the exception of the M.A. Seminar in British Columbia History. Dr. Sylvia L. Thrupp gave a Directed Reading Course in History 4 (Medieval History) to a class of forty-nine students. She prepared an excellent set of notes, copies of which will be submitted with her report on the Directed Reading Course.

Researches and Activities.

During the session 1942-43 Dr. W. N. Sage continued his researches on the requirements for the M.A. degree in Canadian universities. On October 31, 1942, he read a paper at the annual meeting of the Canadian Social Science Research Council at Toronto entitled "A preliminary report on the requirements for the M.A. degree in Canadian universities." Portions of this report were later mimeographed and sent to the various Canadian universities. As a result of numerous valuable comments and suggestions received, the memorandum was revised and presented at the May meeting of the Canadian Social Science Research Council held at McMaster University, Hamilton, Ontario, on May 20-21, 1943. The Council asked Dr. Sage to continue his investigations and to report at the autumn meeting.

Early in June Dr. Sage spent several days in Ottawa pursuing his investigations in British Columbia history, concentrating on the correspondence which passed between Sir John A. Macdonald and Sir Joseph Trutch from 1872 to 1878. In July he spent some time in the Provincial Archives at Victoria investigating the files of the Daily Standard and Daily Colonist, 1872-1874. While in Hamilton he attended the annual meetings or conventions of the following organizations: The Canadian Social Science Research Council, The Canadian Institute of International Affairs, The Canadian Historical Association, The Canadian Political Science Association, The Royal Society of Canada.

At the annual meeting of the Canadian Historical Association Dr. Sage was elected Vice-President for the year 1943-44. During the past year he was Vice-Chairman and Acting-Chairman of the Vancouver Branch of the Canadian Institute of International Affairs.

Professor F. H. Soward was one of the Canadian delegates to the Mont Tremblant Conference of the Institute of Pacific Relations in December, 1942. He was appointed Chairman of the Regional Round Table on China and won great praise for his handling of this difficult task. He also attended in March 1943 a special conference of the Pacific Coast Branch of the Social Science Research Council (U.S.A.).

As in previous years he assisted in editing the section on Canada for the standard reference work, Political Handbook of the World, 1943.

He also completed a chapter on "Canada's Policy in the Post-War World," a volume on Reconstruction to be published by the Canadian Institute of International Affairs, and a volume "Twenty-five Troubled Years, 1918-43" to be published by the Oxford University Press in the autumn of 1943.

Mr. A. C. Cooke continued his collection of material on Robert Montgomery Martin, Empire historian. Through the kindness of Dr. W. K. Lamb, the Library acquired additional out-of-print books by Martin.

An experiment in the preparation and use of graphical material and large-scale maps for instructional purposes was conducted.

Dr. Sylvia L. Thrupp made considerable progress towards completing her book on social classes in medieval London. The Social Science Research Council gave her a grant to help meet final typing expenses. The detailed annotation required in a work of this kind makes preparation of a final draft a difficult and exacting business.

She also prepared a Guide for M.A. students in History. It is hoped to expand this into a small book on the writing of local history.

Department of Mathematics.

While there was an increase in the numbers in the lower years in Arts and Science and in Applied Science, there was a falling off in graduate work. For the first time in a great many years there were no graduates taking their M.A. with a major in Mathematics. No doubt many students capable of doing advanced work in Mathematics turned to fields more directly applicable to the war effort.

On account of the heavy duties devolving upon the Head of the Department as the Dean of the Faculty, most of the administrative work of the Department was handled by Professor Walter H. Gage.

During the year Dr. Ralph Hull and Professor Gage served on a committee appointed by the Provincial Department of Education to consider and revise the High School curriculum in Mathematics.

The researches as submitted in the individual reports consisted of work on Arithmetical Identities of the Liouville Type by Professor Gage and two papers by the Head of the Department on a four- and a five-body problem.

Department of Modern Languages.

A course in Beginners' Spanish was authorized for the session 1943-44

In German, the enrolment continued to increase owing chiefly to the demands of students in Science and in Applied Science. There was a further compensating decline in French classes, where the important factor of the achievement of Freshmen entrants from British Columbia High Schools, to which reference was made in the reports for 1940-41 and 1941-42, continued to exert a depressing influence. It is the experience of all those engaged in teaching this subject that the students now entering the University are unprepared for University work.

The causes were correctly analysed in the report on achievement submitted with the departmental report for 1940-41; this analysis was submitted to the Department of Education at the time, and has not been contradicted. It is a further contributing factor that in a great many cases the Freshmen have had their language studies interrupted before University entrance by a period of twelve months.

Prospects in Language in Education.

The recently published Report of the United Nations Education Conference held in London contains important pointers on Language in post-war education. This report, which has been formally presented to the Governments of the United Nations, advocates English and French as the prime auxiliary languages to be taught in the schools of all countries represented; in English-speaking countries, it is recommended that French be the chief language taught. (Tines Educational Supplement, 3 July, 1943.)

Graduates.

A former student, Mr. Alfred E. Carter, B.A. and Gold Medallist (1938), after receiving the degree of M.A. at McGill University for a brilliant thesis on Baudelaire and his critics, was appointed Lecturer in French at Bishop's University. Mr. W.T.E. Kennett, B.A. (1932), Ph.D. (Princeton), joined the staff of the Department of External Affairs. Dr. Deborah A. K. Aish, M.A. (1936), D.Litt. (Paris), published another study of Mallarmé: - LeRève de Stéphane Mallarmé (Publications of the Modern Language Association of America, lvi, 874-84). Mr. Donald Baker, B.A. (1940), M.A. (1941), published a dictionary of Italian words and phrases for the use of the U.S. forces. Miss Patricia Gathercole, B.A. (1941), M.A. (1942), was awarded a Scholarship by the University of California and commenced studies leading to the Ph.D. degree; Professor C. E. Borden, who spent the summer at Berkeley, reports that her abilities have already brought recognition there.

Research Work.

Professors A. F. B. Clark and D. O. Evans continued their work for the Critical Bibliography of French Literature. Professor C. E. Borden spent the summer at the University of California, preparing for publication a book on Lossing and Johann Elias Schlegel. Work in progress includes an edition of Racine's plays by Dr. Clark for the Editions de l'Arbre series and a study of Symbolism by Dr. Evans.

Miss Janet T. Groig contributed articles to the B.C. Teacher dealing with the study of French; also an article on Central British Columbia to the Family Herald and Weekly Star. A paper on "The Life and Works of Louis Hémon" is in preparation.

Dr. Dorothy Dallas continued her research on "The Marais as a Literary and Scientific Centre of Paris in the 17th Century" - a study begun in the Bibliothèque de la Ville de Paris in the summer of 1939. This research adds valuable background to French 3a Literature of the Age of Louis XIV of which Dr. Dallas had charge.

Department of Philosophy and Psychology.

A new course, Philosophy 20, Philosophy of Mind, was offered for the first time as an Honours and Graduate Seminar. Another new course in the field of Philosophy and Mathematics is contemplated, viz., Mathematical Logic. It is suggested that this course be given by a member of the Department of Mathematics.

Researches in progress in the Department are as follows:

Professor J. A. Irving.

(a) Began work on an article which will re-examine the contemporary theory of ethical relativity in the light of empirical evidence and the comparative method.

(b) Continued work on a chapter for a forthcoming volume entitled, Resistance to Social Change, being prepared under the auspices of the Committee for the Psychological Study of Social Issues, American Psychological Association. This chapter deals with the philosophical aspects of resistance to social change.

Continued work on a book on Symbolism.

Dr. J. E. Morsh

With Harley Abbott: Eidetic Imagery.

Dr. F. T. Tyler.

(a) Statistical Analysis of the Terman-McNemar Tests of Mental Ability.

With Dr. J. E. Morsh: Studies of Concept Formation.

(c) With Dr. M. A. Cameron: Directions for administering true-false tests.

Dr. A. P. Maslow.

An investigation of the History of Art, including the technical analysis of works of art, as an aid to the teaching of Aesthetics.

Professional Activities.

Professor J. A. Irving.

Continued, for the year 1943, as (1) President of the Pacific Conference on the Teaching of Philosophy; (2) a Director on the Executive of the Canadian Psychological Association; (3) an Editor of the Bulletin of the Canadian Psychological Association.

Dr. F. T. Tyler.

(a) Retained by the Forest Branch of the Provincial Government, Victoria, B.C., to do research on personnel selection.

(b) Served as Consulting Psychologist for Mr. F.A. Fraser, of Bloodel, Stewart and Welch, in connection with the introduction of tests as an aid in personnel selection.

Academic appointments secured by Graduates.

(a) William M. Sibley, who graduated in 1939 with First Class Honours in Philosophy and Psychology, and who received his M.A. in Philosophy in 1940, has been appointed to the position of Lecturer in Philosophy at Queen's University.

(b) Oliver Lacey, who graduated in 1938, has been appointed to the position of Instructor in Psychology at Woman's College, University of North Carolina.

Department of Physics.

During the 1942-43 session, the number of students enrolled in courses in Physics constituted an all-time record for the Department.

Three members of the teaching staff and the instrument-maker are on leave of absence for war work. Dr. A. M. Crooker is in charge of the design of optical instruments at Research Enterprises, Ltd., in Toronto. Dr. Kenneth C. Mann is in charge of a unit at the National Research Council which is carrying on research and development work on radio location equipment. Dr. George Volkoff is engaged on a secret project for the National Research Council. He is working in Montreal with a selected group of outstanding scientific men from Great Britain, United States and Canada. Mr. William Fraser is with the United Kingdom Inspection Board.

The large increase in the number of students in the junior years at a time when three members of the teaching staff are on leave of absence has made it necessary to reduce the number of graduate courses offered. However, by substituting related courses in Mathematics and Electrical Engineering, it has been possible to continue offering work for the M.A. degree.

The research work of the Department suffered not only from the absence of members of the staff, but also because the ablest graduates were required for war research at the National Research Council and in industry. Those who did register for graduate work were so urgently needed as part-time demonstrators that they were able to give very little time to research. It is hoped that this is only a temporary situation, otherwise it would be extremely serious.

Dr. H. D. Smith continued his investigations of the molecular structure of a series of normal paraffin hydrocarbons, which are among the most important petroleum derivatives occurring in lubricating oils. Raman spectra of very pure octadecane and docosane, two members of the series, were obtained and the fundamental frequencies of vibration of their molecules were determined.

The results of this research were presented at the recent meeting of the Royal Society of Canada at Hamilton, Ontario. A paper

dealing with these investigations also was included in the programme of the A.A.A.S. meeting scheduled for Corvallis, Oregon on June 16th, 1943.

Mr. William Petrie investigated the Stark Effect of Helium in B-Type Stars. This interesting problem in Astrophysics was carried on conjointly with the Astrophysical Observatory at Victoria.

At the meeting of the American Astronomical Society, December 1942, he presented a paper on "Calibration of the King Intensity Scale."

At the meeting of the American Astronomical Society, June 1943, and again at the Royal Society of Canada, May 1943, he gave a paper on "The Temperature Gradient of the Solar Chromosphere."

He completed his Doctorate Dissertation - "A Study of the 1936 Eclipse Chromospheric Intensities, and the Derivation of Line Strengths."

During the year the Department was called upon to undertake tests and minor investigations for provincial and federal government departments, various industries, and the British Columbia War Metals Research Board.

The Head of the Department was appointed a member of the National Research Council, Ottawa.

Department of Zoology.

Increases in the fundamental courses in Zoology necessitated additional laboratory sections as well as material and equipment.

Dr. W. A. Clemens was appointed a member of the Research Board of Canada. His researches during the year were as follows:

(1) Study of the sockeye salmon data collected annually by the Provincial Fisheries Department.

(2) A review and summary of the sockeye data 1913 to 1941 inclusive.

Natural foods of the trout of British Columbia.

(4) Age determinations of halibut for the International Fisheries Commission.

(5) Account of the marine fishes of British Columbia (with G. V. Wilby).

(6) Account of the Bivalve Mollusca of British Columbia (with R. W. Pillsbury).

(7) Check-list of the fresh water fauna and flora of British Columbia (with G. J. Spencer).

The following comment of Mr. G. J. Spencer is of interest:

"Owing to tension of war, the attitude of most of the students in my classes was more earnest than usual and their application markedly more serious: on the other hand some students went to the other extreme and their marks were correspondingly low. The number of those taking pre-medical subjects was above the average and some of them included the worst failures. In Animal Histology, laboratory room Applied Science 215 was again taxed to the utmost and I was forced to request several students to select another course or to postpone this one until spring 1944."

The usual large number of enquiries was received by Mr. Spencer from all over the Province, concerning insects of economic importance; the portion of these enquiries from Vancouver provides a good cross-section of insect troubles in homes, from year to year. Correspondence was also carried on with various systematists in North America in connection with the identification of insects of British Columbia.

Mr. Spencer spent the months of June, July and August in the Dominion Entomological Branch Laboratory at Kamloops, writing up records of past years on grasshopper research. One field trip of nearly 1000 miles was taken the end of June, to inspect the main grasshopper areas of the Province. During the absences of the officer in charge, the laboratory was in his care, involving written and oral replies to enquiries concerning insects. Laboratory experiments were conducted on the control of wireworms which are becoming a pest of major importance in the Province. There appears to be promise in the use of sodium silico fluoride incorporated into baits buried at six and ten feet intervals, for attracting and killing these insects in small areas of valuable crops such as victory gardens and fields grown for seed.

The only opportunity for collecting occurred on Sunday afternoons when some 2000 insects were collected and labelled for the University. A special field study was made of wasps' nests to extend the systematic work done on these insects over a period of years. All the species likely to occur in the Province, two black and ten yellow, are on hand in quantity and will be written up this winter. There is a plague of wasps in British Columbia this year and their nests in orchards are proving a serious handicap in picking.

The type of researches which Mr. Spencer has been writing up is shown in the Technical Report of the Kamloops laboratory. Copies are filed at Ottawa and in the three prairie provinces. The work constitutes the most thorough field experiments in baits for grasshoppers, yet performed. In 1942 one year's reports were written up; this past summer two years' work was summarized. This writing-up is long overdue but it is impossible to do concentrated field work in summer and to write up the records in winter along with a heavy teaching schedule at the University.

The department museum collections have continued to increase rapidly and the problem of storage space is pressing.

Most generous and helpful co-operation was received from the Provincial Museum, the Provincial Game Department, the Provincial Fisheries Department, the Fisheries Research Board and the Dominion Division of Entomology, as well as from many individuals.

Directed Reading Courses.

There were two Directed Reading Courses during the year, namely,

English 16, Romantic Poetry 1780-1830
Dr. Dorothy Blakey.

History 4, Mediaeval Europe 500-1300
Dr. Sylvia L. Thrupp.

The arrangement of the Directed Reading Courses and the appointment of the instructors in the spring of 1942 enabled considerable time to be spent during the following summer on the organization of the courses and the preparation of the preliminary bulletins, so that students keen enough to register at the end of the Summer Session could be interviewed and supplied with material immediately. The early appointments also made it possible for the Library to order books well in advance so as to have them available when needed by the students.

English 16.

The aim of the course, as stated by the instructor, was to enable a student not only to acquire an intelligent appreciation of facts and their relations but to become aware, unconsciously, that the reading of a poem is not merely an intellectual exercise but an individual experience, involving emotions and attitudes which may even affect the practical conduct of life. The general idea throughout the course, therefore, was to bring the student directly and inescapably into contact with the poems themselves and not with historical surveys of facts concerning poems and poets; to stimulate personal reflection; and to train a student neither to offer nor to accept critical judgments without considering the evidence of the text itself.

Twenty-four bulletins were prepared totalling over 120 pages of mimeographed material. Outside reading consisted of a minimum of nine books of criticism, each of which was selected from a group of similar titles available for circulation. There were five assignments consisting of sample notes on five poems, a factual and objective test on the life and works of the five major poets, a book report, and two essays, one short essay requiring no reference books, and one three thousand word essay involving the use of outside material. All assignments were marked and annotated in detail by the instructor, and this personal criticism was much appreciated by the students. All the students were teachers, one student being, in addition, a member of the Provincial Legislature. The results, as usual, were exceptionally good.

The general objectives might be listed as follows:

To prevent the work degenerating into mechanical cramming.

To train students to read critically, distinguishing between established fact and mere opinion.

To teach them to use original source material instead of relying always on textbook summaries.

To stimulate interest in the interrelationship between political and social problems, in the hope of helping them to integrate courses in history, economics, political science and sociology.

Seventeen bulletins totalling about sixty pages were mimeographed and distributed. The first six bulletins were introductory giving a complete outline of the content of the course, the problems on which students were to focus attention, the required readings and the dates of assignments. The remaining eleven bulletins were distributed at intervals giving advice on readings, criticisms on work submitted and outline analyses of the broad problems most likely to be misunderstood. Almost all the students showed, during the progress of the course, marked improvement in critical ability and in the power of grasping historical situations even although most of them were under enhanced pressure in their ordinary occupations, due to wartime conditions. The examination results were uniformly good, the median of the marks being 105.

Both the instructors in the Directed Reading Courses give high praise to Miss Vera Bell and Miss Eva Morley for carrying a heavy clerical load with accuracy and unfailing efficiency; to Miss Doreen Woodford and to Miss Norah Gibson who were in charge of the mail service of books loaned to students; and finally to Dr. W. K. Lamb for his advice and assistance in facilitating the early ordering of books. The Dean wishes to record his appreciation of the splendid way in which all connected with these courses carry out their duties so efficiently from year to year.

Department of Home Economics.

This is not a report of work done in a department but an announcement of the formation of a new department. After a period of consideration extending well over twenty years, and after one unsuccessful attempt in 1931-32, the University has at last launched the much desired Department of Home Economics upon lines bespeaking vigour and longevity. Arrangements were made to begin in September 1943 courses covering the first two years towards a degree. Through the generosity of the Vancouver School Board, the laboratory work will be conducted at the King Edward High School.

Special Researches.

As in previous years certain research projects were carried out under special grants from the Board of Governors. Reports on those projects that were under my supervision are listed below. The reports were submitted for the fiscal year 1942-43.

The favourable results previously obtained in the immunization of mice against Brucella abortus by means of a series of injections of heat-killed vaccine were again obtained on a larger scale, using several hundreds of mice in the experiments. Mice treated with a series of intraperitoneal injections of the heat-killed vaccine resisted to almost 100% several minimal lethal doses of virulent living Brucella abortus. Other groups of mice immunized with "Brucellin," a culture filtrate, failed to show any comparable degree of protection. This entirely supports the findings of the previous year, when mice were also used, and is contrary to the reports of other workers as to the respective efficacy of heat-killed vaccine and "Brucellin" in human beings with undulant fever. The usefulness of the synthetic medium which was referred to in former reports was confirmed. Two or three human cases of undulant fever were treated with the heat-killed vaccine, with apparently favourable results.

The Mechanism of the immunity induced in mice by these immunization procedures was studied and found to be related to some extent to an enhanced phagocytic power of the white blood cells of the immunized animals. However, it would appear that other factors than this were involved in the protection conferred by the vaccine.

Genetics of Economic Plants. Dr. A. H. Hutchinson.

Researches have been conducted for several years and a number of papers have been published, others are in progress. Two papers are in progress, "Genetics of Medicago (Alfalfa)" and another on "Genetics of Abies (Balsam Fir)." One or more of these should be completed during the early summer. The problem of student assistants for regular class work and time spent on demands arising from special conditions of the times have delayed these papers somewhat. It is hoped that this delay will not preclude the continuance of these important investigations.

The Effect of Hormones and of Radiant Energy on Growth.
Dr. John Allardyce.

Progress with this problem has permitted the preparation and publication of a paper entitled "Effects of Visible Radiations upon Albino Rats" which appeared in The American Journal of Physiology in November, 1942.

Apparatus built in this laboratory for determining basal metabolic rates has been used to establish normals for albino rats. This has involved the determination of the effects on metabolic rates of sex, age, temperature and the length of time since this last feeding. The hormone thyroxine is known to have a stimulating effect on both growth and metabolism. However, the effect produced by feeding desiccated thyroid can not always be accounted for by the thyroxine content. Our first experiments in feeding desiccated thyroid indicated the presence of a depressant rather than a stimulant for the metabolic rate when fed in small single doses. Subsequent research accounted for this in the finding of the need to carry out the determination at a critical temperature, 30°C. and at a definite

time following feeding. This rather high critical temperature, which is equivalent to 86°F., has necessitated some changes of facilities for obtaining and maintaining this temperature. These are in the process of making. The work on this problem will be carried on to the end of June when it is hoped a full report can be made.

B. C. Coal and Shale.

Dr. W. F. Seyer.

During 1942-43 little actual work was done on this problem. The money allotted was used for the purchase of instruments required for control work. Since there is in British Columbia much coal with a high bituminous content, the investigation is to be directed largely to this field. The rate at which our oil reserves are dwindling makes investigations along these lines increasingly urgent.

The temperatures involved will be quite high, hence, it is necessary to have temperature control instruments of a special nature.

Superactive Charcoal.

Dr. M. J. Marshall, Mr. George V. Browning.

The work on the mode of decomposition of oxygen chemisorbed on activated charcoal was completed.

The manner in which a surface complex breaks up is of great interest to investigators in the field of combustion. At the higher temperatures at which most combustion experiments have been conducted the majority of investigators have come to the conclusion that the surface complex breaks up into equal amounts of CO₂ and CO and attempts have been made to draw from this relationship certain conclusions regarding the chemical composition of the surface complex.

It is evident from our results that the effective composition of the surface complex is not fixed but depends on the amount of oxygen which can get to the surface, and this in turn depends on the temperature at which the combustion is proceeding.

Because of the fact that combustion will only proceed at elevated temperatures, the surface oxygen concentration during combustion never reaches the high value attained experimentally, with the result that the ratio of CO₂ to CO is fixed at some intermediate value, which happens to be approximately 1:1. So it must be concluded from the results that the theoretical significance, which has been ascribed to this constant ratio by combustion investigators, is not justified.

Surface Reactions of Minerals in Flotation. Dr. W. Ure.

Further investigation in this field was postponed as the major attention of the Department of Chemistry was devoted to research problems on Explosives. The apparatus purchased for the researches on flotation was, in the main, applicable to the investigations on explosives.

Reduction of Native Ores. Dr. J. Allen Harris.

Two new methods for the quantitative determination of tin in small amounts were developed and their accuracy checked spectroscopically.

The work on Organo-metallic compounds, originally undertaken with a view to ascertaining the possibility of separating the less common but strategically important metals, has, at the request of the War Department, been diverted to an effort to find a method for the production of specific organo-metallic compounds.

Strategic Metals.

Dr. Harry V. Warren.

The results of this work have been gratifying. After consultation with the Directors of the British Columbia War Metals Research Board it was decided that there should be a concentrated effort on a search for tin. Over five hundred samples were examined spectroscopically. Tin was found to be present in minute amounts in many ores. In four mines which are working at the present time, tin was found in amounts worthy of thorough investigation. After consultation with the officials of the British Columbia War Metals Research Board, the Consolidated Mining and Smelting Company - who would smelt any concentrates should they be obtained - it was decided to carry on this work immediately and it will be undertaken by Mr. R. M. Thompson under Dr. Warren's direction, with the advice and assistance of Mr. J. M. Cummings, who is in charge of Ore Dressing for the British Columbia War Metals Research Board.

In addition to this work which was carried on by Mr. D. Carlisle and Mr. R. M. Thompson, our students in Geology 9 and Geology 24 have worked on problems of value to the mining industry of the province. These have dealt with such interesting problems as the tungsten at the Emerald Mine, the antimony minerals in the Tatlayoko Gold Mines, the Bonanza Basin and Sullivan Mines, the complex ores of the J. and L. Mine, and the mode of occurrence of tin and cadmium in the ores of several British Columbia mines.

Another worrying problem has been finally solved. The Little Gem Mine, which carries gold and cobalt, has provided trouble in that the metallurgical results in endeavours to recover the cobalt have shown considerable variation. This has been found to be the result of two rare cobalt minerals present in the ore. One of these minerals has never been reported in Canada before, although it is now suspected that it is present in other ores.

All in all the work of the year was most gratifying in that mineralogy was shown once again to have a valuable place both in finding metals of value and in aiding in the problems involved in their subsequent recovery. Dr. Warren pays tribute to the grand work done by his two assistants, Mr. R. M. Thompson and Mr. D. Carlisle and to the co-operation and assistance received from Dr. G. M. Shrum and the Physics Department of the University of British Columbia in connection with the use of the Hilger spectrograph, from Professor F. A. Forward and his assistants in the British Columbia War Metals Research Board, from Mr. Philip Freeland and his staff of the British Columbia Department of Mines and also from Mr. F. Woodside and his assistants in the British Columbia Chamber of Mines.

Application of Raman Effect to Problems in Oil Industry.

Dr. H. D. Smith.

With the aid of the new D-78 Hilger spectrograph and D-70 Spectrographic camera, obtained in January, 1942, with the aid of a special research grant, work on the Raman project went ahead during the

past year at an increased pace with results of value being obtained.

A new phase of the work was undertaken one year ago, namely, the study of the molecular structure and the characteristic frequencies of vibration of some of the normal paraffin hydrocarbons.

The compounds investigated were long chain hydrocarbons of the form C_nH_{2n+2} running from $C_{14}H_{30}$ to $C_{34}H_{70}$. Included in this series are some of the most important petroleum derivatives occurring in waxes and lubricating oils. Although huge quantities of these compounds exist in petroleum, it is very difficult to obtain any member of the series in a pure state. For this reason, very little was known concerning the exact molecular structure of these compounds and the magnitudes of the vibrational frequencies of the component atoms. A Raman investigation of these paraffins appeared highly desirable.

Recently, Dr. W. F. Seyer succeeded in producing quantities of most members of this series in a very pure state. It is hoped that a thorough study of the Raman spectra of the whole series can be made. To date, excellent Raman spectrograms have been obtained for eicosane and docosane, $C_{18}H_{38}$ and $C_{22}H_{46}$. A measurement of the Raman frequency shifts has yielded new fundamental frequencies of vibration of these molecules. Due to difficulties caused by fluorescence in the case of docosane, it was necessary to construct an all-quartz apparatus and to use $\lambda 2536$ A of the mercury arc spectrum as the incident radiation.

The Raman research programme is being enlarged to include work on Dr. W. F. Seyer's B.C. Coal and Shale project.

Parasites and Diseases of the Columbian Black-tailed Deer.
Dr. Ian McTaggart Cowan.

During the year 1942-43 the greater part of the research grant allotted to the above project was expended on equipment essential to the effective prosecution of the study.

At the same time, in co-operation with the Provincial Game Commission, the field work and incidental laboratory examinations contributory to the main project have been carried further.

During the year field studies conducted on southern Vancouver Island contributed to existing knowledge on the normal internal protozoan fauna of this host and thus laid the ground for studies on changes of this fauna associated with disease conditions. In the late winter and early spring several field trips were made to Gambier Island, at the request of the Game Commission, to investigate an epidemic disease that is causing widespread losses among the game herds. This investigation is still in progress. Tentative identification of the disease has been made and it remains to confirm this and to enquire into the possibility of remedial measures being applied.

A report on one phase of the investigation has been prepared

This is in press at the time of writing and will appear in an early issue of the Canadian Journal of Research.

Foods and Feeding of Trout in Hatcheries.

Dr. W. A. Clemens, Mr. T. Bridge.

Two investigations were carried out during the summers of 1941 and 1942 by Mr. T. Bridge.

The first shows that (a) for trout fry 50% of the beef liver in the diet may be replaced by 33% canned salmon, 10% rice polishings, 5% brewer's yeast and 2% sodium chloride; (b) for trout fingerlings beef liver may be entirely replaced by a diet of 50% beef spleen, 33% canned salmon, 10% rice polishings, 5% brewer's yeast and 2% mineral mixture.

The standard beef liver diet costs 14 cents per pound while the above substitute diets cost 8 cents and 2 cents respectively.

The second report deals with certain phases of an investigation on the growth and anti-anemic factors in the nutrition of trout. Evidence is presented to indicate that the above factors are distinct and both must be supplied in trout diets.

Natural Foods of Trout in British Columbia.

Dr. W. A. Clemens, Mr. G. J. Spencer.

This investigation followed two lines: (a) the preparation of a list of the fresh water plants and animals of British Columbia, (b) the examination of the stomach contents of over 350 specimens of trout taken in the Province.

The first part was a joint project by Dr. W. A. Clemens and Mr. G. J. Spencer. The first draft of the list is now complete. Many of the sections have been checked by specialists in the respective groups and a few remain to be scrutinized. The report will be completed early in 1943 and will be of value for reference whenever studies of fish food supplies are undertaken.

The second part is being carried out by Dr. Clemens and consists of:

- (a) the examination of several hundred stomachs;
- (b) a summary of the information concerning the natural foods of trout in British Columbia;
- (c) calculations to determine the proportions of protein, fat, carbo-hydrate and ash in the natural foods. It is hoped to have this report completed during the summer of 1943.

Clams and Other Bivalves. Dr. W. A. Clemens, Mr. R. W. Pillsbury.

This investigation was planned under two divisions: (a) a systematic review of the bivalve species occurring along the British Columbia coast, (b) a study of the reproductive cycle of one or two commercial clams.

In connection with the systematic review, a preliminary manuscript dealing with 150 species with drawings of fifteen species has been completed.

Work on the second section has not progressed because of the lack of a qualified student assistant.

Economic Position of the Pheasant in the Okanagan.

Dr. Ian McTaggart Cowan.

This study, begun in the latter part of 1941, was brought to completion in 1942. A report was prepared and submitted to the Provincial Game Commission by whom it will be published at an early date.

A small residuum from the funds allotted to this study was, by permission, transferred to an investigation into the life history of the sooty grouse. This is one of the most important game birds occurring in our Province and one demanding study to the end that adequate management programmes can be formulated. This study has been actively conducted by Mr. C. D. Fowle throughout the 1942-43 session and satisfactory progress has been made. It is unfortunate that Mr. Fowle's departure for military service will necessitate temporary abandonment of the project.

The special researches under the Department of Chemistry which are not referred to above had to be abandoned on account of investigations on explosives.

Usefulness of Trade Tests in the Selection of Industrial Workers.

Dr. J. E. Morsh.

A preliminary inquiry at Boeings and The Dominion Bridge Company indicated that under present conditions it would be difficult to carry on a testing programme in any industry actively engaged in the war effort. In the first place, it would be virtually impossible to take the men from their jobs for the time required to administer the tests; secondly, due to the extreme labour shortage, selection and placement procedure were at a minimum in these industries and thirdly, the labour turnover was so rapid that there could be no follow-up and hence any tests administered would have no predictive value.

It was then thought that the best procedure would be to administer tests to technical school students who would shortly enter industrial work. Principal J. G. Sinclair and Vice-Principal E. M. White of the Vancouver Technical School signified their interest in the work and co-operated to the fullest extent in the organization and administration of tests to approximately 225 of their students in grades X, XI, and XII.

The following tests were administered:

A. Standardized Group Tests.

1. The Otis Quick Scoring Test of Mental Ability.
2. The California Test of Mental Maturity.
3. The Detroit Mechanical Aptitude Test.

B. Standardized Individual Performance Tests.

1. The Purdue Peg Board.
2. The O'Connor Tweezer Dexterity Test.
3. The Minnesota Rate of Manipulation Test.

C. Unstandardized Trade Tests prepared by Principal J.G. Sinclair and staff.

- | | |
|----------------|-----------------|
| 1. Electrical | 4. Welding |
| 2. Sheet metal | 5. Machine Shop |
| 3. Draughting | 6. Motors |

The tests were administered by members of the staff of the Vancouver Technical School and students doing advanced work at the University of British Columbia. Scoring, tabulation and statistical analysis were done by selected University students who had been well trained in this work. Analysis of the results is still in progress.

With the co-operation of Boeings and other industrial plants and the staff of the Vancouver Technical School, it is proposed to conduct a follow-up survey, approximately one year hence in order that the predictive value of the tests used may be definitely determined.

Hydroids.

Emeritus Professor C. McLean Fraser.

A grant from the Board of Governors was made to cover the cost of getting drawings done to illustrate Dr. Fraser's handbook on "Hydroids from the Atlantic coast of North America."

After much of Dr. Fraser's time and attention for a year and eight months had been given to the preparation of this handbook, it was completed in May. The rest of the time was taken up in preparing four shorter papers for publication. Three of these have appeared in print and the fourth is in proof.

The handbook is being published by the University of Toronto Press. The National Research Council is sponsoring the publication and is meeting the cost, \$2,500.00. In 1937 the Council sponsored the publication of "Hydroids of the Pacific Coast of Canada and the United States," and this is a companion volume.

The necessity for the preparation of such a handbook lies in the fact that most of the numerous papers that have been published in this field are long since out of print, not available for purchase, and the copies that do exist are scattered in many of the libraries on the continent. Unless one wished to spend a life time on the group, the difficulties of obtaining satisfactory literature cannot be met. With this handbook, which has all the information available for this area, anyone familiar with this group of animals can identify almost any specimen he may obtain along the Atlantic coast. If he wishes to go to original sources, he can find a reference to all of these.

The handbook is an attempt to describe and figure every authentic hydroid species that has been reported from the Atlantic coast of North America (426 of them), to give page reference to every

paper that has recorded each species, and to give all the published distribution records of each species. Keys have been prepared to use throughout to speed up the identification of species.

When published, the general text of the paper will cover approximately 400 pages. The 94 full-page plates with the explanation of these will add nearly another 200 pages, so that the whole volume will contain about 600 pages.

The greatest original contribution provided is the list of new distribution records. There are nearly 1200 of these, almost one-third of the total number for the coast.

In the 94 plates there are 1033 separate figures. Miss Marian McCrea made all of the new drawings required (except those made natural size, which were made by Dr. Fraser himself), probably about one-third of the whole number, and she made a creditable job of it. As she is a graduate in Art, she did them with much greater speed than any other illustrator Dr. Fraser has had, and in consequence, the grant was far from being all used.

A statement would naturally be expected to the effect that this book constitutes Dr. Fraser's final effort, but such is not the case. He is still (September, 1943) regularly and faithfully in his office and his scientific investigations are pursued, not with less vigour but with more continuity as he is no longer "troubled" with lectures and committee meetings, at all of which he was always present and on time.

Dr. Gordon Davis (deceased).

In the sudden death of Dr. N. F. G. Davis on June 5th, the University lost a man whose virtues and abilities were becoming known to a widening circle of students and colleagues. Always ready with advice, always sympathetic and understanding, more and more students came to call on him in order to discuss their problems. His quiet humour, his experience and sound good sense, made him a colleague who can ill be spared and can never be replaced.

Conclusion.

During the year the Dean gave many public addresses, particularly in the city.

In the fall term, however, upon the invitation of the Executive of the Canadian Clubs of Canada, he spent two weeks on a speaking tour through Alberta and Saskatchewan. The original plan was to include Winnipeg, Fort William, Port Arthur but time would not permit a more extended tour.

He served on a confidential committee appointed by the National Research Council and gave two reports at meetings held in Ottawa in December and in May. While attending the December meeting

he represented the University at the Universities Conference and was a member of the committee which drew up the resolution finally adopted by the Conference opposing the proposed curtailment of the teaching of the humanities during the war. While in the East in the spring he attended the Royal Society of Canada and also represented the University at the ceremonies in connection with the dedication of the buildings of the University of Montreal.

In his relationship with the Provincial Department of Education, the Dean has been a member of the Matriculation Board for over twenty-two years and of the Accrediting Board since its inception. He is President of the Vancouver Canadian Club and Chairman of the British Columbia Regional Committee of the Unemployment Insurance Commission appointed by the Federal Department of Labour.

In conclusion the Dean wishes to express his great appreciation for the cordial co-operation of the Faculty and his warm thanks particularly to those members who not only carry on their own work with zeal and efficiency but are sufficiently interested in the larger work of the University to give faithful attendance at committee and Faculty meetings.

Respectfully submitted,

DANIEL BUCHANAN

Dean,
Faculty of Arts and Science.

OF APPLIED SCIENCE

Registration in the Faculty showed a marked increase over that of any previous session and notwithstanding inadequacies in accommodation, staff, and equipment, academic standards were well maintained. Instructors in all departments report commendable diligence on the part of the students. Increasing numbers of graduates are enlisting in the technical branches of the armed services while the demand for trained engineers to fill positions in the war industries remains firm. The Wartime Bureau of Technical Personnel renewed its appeal for increased enrolment in courses that have a definite bearing on the war effort. There was also an increased demand on the time of the teaching staff for professional services, and throughout the session or in the summer vacation practically every member of the staff gave valuable technical assistance to one or more wartime industries.

Many of the researches mentioned in previous reports were continued and the installation of new equipment permitted extensions and additions to the investigational programmes of most departments. The research work in the Department of Mining and Metallurgy was stimulated by the Department's association with the British Columbia War Metals Research Board. The pilot mill installed by the Board was used by members of the teaching staff in collaboration with the staff of the Board in the treatment of experimental lots of tungsten, nickel and antimony ores and in the beneficiation of a low-grade tungsten concentrate on a commercial basis. Other items of equipment installed by the Board furnished facilities for the joint staffs to investigate a wider range of metallurgical problems. The arrangement between the Board and the Department provides opportunities for the discovery of research metallurgical talent in the University classes and enables these students to pursue research studies after graduation.

An important addition to the Department's equipment is the $7\frac{1}{2}$ K.W. Lepel high-frequency induction unit installed towards the close of the session. This modern unit can produce temperatures as high as 2000 degrees Centigrade and its automatic features permit rapid localized heating of metal parts with precise control. It will be useful for instructional purposes in demonstrating the application of high-frequency currents to the heat-treating, welding, brazing and hardening of the component parts of guns, aeroplanes, motor vehicles, ships and other materials of construction. The metallographic microscope ordered in November, 1941, was delivered in June, 1943, and was installed in the re-constructed dark room in the laboratory. It has already provided valuable assistance in the observation of etched metal specimens. In collaboration with the B.C. War Metals Research Board two hydrogen reduction furnaces were built for the purpose of preparing powdered metals. As an aid in the fundamental research on S-curves a constant temperature furnace was built

employing electronic control and a special timer. The Department's assistants and mechanic constructed a Jominy end-quench testing apparatus. Other minor items include two small resistance furnaces with variable temperatures for heat-treating, Orsat gas analysis apparatus, nichrome pots, trays and other containers for heat-treating operations, calorimeter, and several small resistance furnaces specially designed for the heating and volatilization of metal salts.

During the year, fundamental investigations of the possible treatment methods for refractory arsenical ores and the determination of the heat of formation of arsenopyrite were carried out by members of the Department and undergraduate students under the title of "Arsenic Research". Due to manufacturing conditions it was not possible to obtain the necessary equipment to complete the research, but the information obtained in the course of the studies made was sufficient to work out the preliminary features of an attractive treatment for a refractory arsenical ore. The investigation of the determination of heat of formation of arsenopyrite is being continued.

A large number of metallographic investigations was made in collaboration with the B.C. War Metals Research Board and assistance was given to many manufacturing companies working on war materials.

Mr. J. M. Cummings, M.A.Sc., Mining Engineer in the Provincial Department of Mines, and one of our own graduates, took over the work in Ore Dressing for the second term owing to the absence of Professor George A. Gillies on sick-leave. His lectures and laboratory demonstrations were eminently satisfactory and I wish to thank him for his contribution, also Dr. J. F. Walker, Deputy Minister of Mines, who made the arrangements for the transfer.

A D-slide valve steam engine and a Crossly Diesel engine were installed in the Mechanical Engineering Laboratory during the session, the former presented by The Consolidated Mining and Smelting Company of Canada Limited, Trail, B.C., and the latter by the Dominion Engineering Company Limited, through Mr. A. C. R. Yuill, Special Representative of this Company at Vancouver. These gifts are highly appreciated.

The equipment of the Electrical Engineering Laboratory was also considerably increased by the addition of apparatus formerly used in the Royal Canadian Air Force Radio Mechanics courses. There is an urgent need for additional space to accommodate the rapidly expanding Electrical Communication (Radio) laboratory. Instruction in this important subject is being emphasized at the request of the Armed Forces and the emphasis will be continued after the war. A laboratory specially designed for the purpose would relieve the congestion in the present laboratory.

An important forward step was made in the Department of Forestry by the acquisition of the new University Forest. In March 1943 arrangements with the Provincial Government were completed whereby the University was given a lease for a period of 21 years,

subject to further renewal, of a large area of forest land for forest demonstration and research purposes. The tract, comprising 10,106 acres, is located between Hancoy and Pitt Lake. It can be reached in about an hour and a half by car from the University. From the standpoint of accessibility, compactness, variation of topographic, soil and forest conditions, together with variety of species and age classes, it should provide excellent facilities for field work in cruising, mensuration, silviculture, logging engineering, forest management and research. Unfortunately it will not be possible to develop the property to any appreciable extent until after the war, but a small start has been made in getting acquainted with conditions in the area.

No new research projects were initiated in this Department during the year but measurement, thinning, pruning, and planting were continued by members of the staff. Nursery stock is somewhat below par due to the failure of the 1942 Douglas fir seed crop but a sufficient number of two-year old and older trees is available to continue the reforestation programme during the next two years after which period another crop of young trees may be expected. A two-acre plot has been planted with cascara trees.

In the Department of Nursing and Health there was increased enrolment, that in the final year being almost double the average annual enrolment in previous years. The restoration of the course in Teaching and Supervision was made possible by the appointment of Miss Evelyn Mallory, B.Sc., as lecturer in the Department. Refresher courses in Industrial Hygiene and in Hospital Administration were given in the spring under the joint auspices of the Department and the Registered Nurses' Association of British Columbia. The lecture topics, the contacting of visiting lecturers and some of the actual lecturing were the responsibility of the staff of the Department while the Registered Nurses' Association undertook the publicity connected with the courses and handled all matters concerning registration. It is believed that these two refresher courses were accepted by the individuals and groups concerned as a most significant contribution by the Department to post-graduate teaching facilities in the fields indicated.

Members of the Nursing staff continued the important supervision of field work and of hospital training with marked success. A course of lectures was given to the whole senior class at the Vancouver General Hospital on "Community Health and Social Needs". Various individual lectures which had been given by officials of local organizations were increased in number and grouped into a one-unit course of seventeen lectures entitled "Public Health Organization".

The year was marked by the retirement of Miss Grace Fairley from the position of Director of Nursing of the Vancouver General Hospital School of Nursing. Miss Fairley had long proved a staunch friend of the Department of Nursing and Health at the University and her retirement at a time when she was no less capable than ever of making valuable contributions to the nursing profession represents a serious loss.

On March 31st, Mr. A. Lighthall, B.Sc., Associate Professor of Civil Engineering, reached the age of retirement. The Board of Governors extended his term to May 31st in order that the work under his direction should not be interrupted in mid-term. Mr. Lighthall joined the staff as field assistant and assistant in 1920 and during his long term of service he gave unsparingly of his time and energy in providing superior instruction to the succeeding generations of students that passed through his classes. These students and his colleagues join in wishing him many more years of health and happiness. I am happy to report that the Board of Governors re-appointed him Associate Professor for the academic year 1943-44.

With deep regret I record the passing of Mr. E. G. Matheson, B.A.Sc., formerly Associate Professor of Civil Engineering. Mr. Matheson was greatly beloved by his former students, his colleagues and the members of the Engineering profession.

It is a pleasure for me to acknowledge my grateful appreciation of the co-operation of the governing bodies, the teaching staff and the students throughout the session.

Respectfully submitted,

JOHN N. FINLAYSON,

Dean,
Faculty of Applied Science.

REPORT OF THE DEAN OF THE FACULTY

OF AGRICULTURE

The year just passed has been largely one of pressures from various sources. There has been marked pressure on the time of the instructional staff because of inadequate classroom and laboratory accommodation, and also by reason of the ever-increasing demands which were made upon the Faculty for outside assistance to all branches of Agriculture. This increased demand upon the teaching staff resulted in a corresponding pressure upon the clerical staff, while military activities imposed a heavy additional load upon the students.

In my judgment, the time has come when comprehensive and all-inclusive steps must be taken to clarify, in the minds of the Provincial and Dominion Governments, some important facts with regard to the Faculty of Agriculture in the University.

General expansion of all facilities is essential. The needs of the Faculty cannot be met by a single additional building. All departments have outgrown the spaces allotted to them. The number and size of the facilities must be increased. Assuming that most of the undergraduates who have enlisted for active service will, at some later time, be re-registering in the Faculty, it is reasonable to expect that a minimum of two hundred students will be enrolled in the near future. The buildings and equipment of the Faculty were designed for one hundred students. All laboratories in Dairying, Agronomy, Horticulture, Plant Nutrition and Animal Pathology are very limited in size. There is no work room in Poultry Husbandry, no Agricultural Pavilion for class work in Animal Husbandry, and no storage space in the Dairy Barn. These are but examples of the inadequacy of the buildings and equipment in the Faculty. The idea of expansion must be kept constantly before us, and action must be taken very shortly if a rapidly developing situation is to be properly met.

A third clerical assistant has been employed for the greater part of the academic year, and even this addition has little more than made it possible to handle reasonably efficiently the rapidly increasing office demands. As nearly as can be estimated, seven thousand five hundred pieces of mail have gone out during the year. This number does not include inter-departmental or inter-faculty correspondence and records.

Department of Agricultural Economics.

A gift of \$3,000.00 from the Safeway Stores Limited, \$200.00 from the Poultry Producers' Association and a grant of \$200.00 by the University, have made possible a study entitled "Poultry and Egg Production Research". This work is proceeding satisfactorily with about one hundred poultry farmers co-operating.

A grant of \$300.00 from the University Research Fund was used to make "A Preliminary Study of Economic Evolution in the

Okanagan Valley." Some progress has been made on this study.

Department of Agronomy.

The following were the main activities, other than teaching, carried out by this department during the year:

Alfalfa.

At the time of the preparation of last year's Report, the expectation was expressed that alfalfa seed (Rhizoma) might be available from the multiplication blocks for distribution in 1943-44. Unfortunately, weather conditions have been such that very little, if any, seed is likely to be available this season. The attempt to produce foundation stock seed in sufficient quantity for general distribution is being continued.

Soil Samples.

The usual number of soil samples have been sent in for examination. These have been reported on as expeditiously as possible, but some difficulty has been experienced in obtaining the necessary qualified student laboratory assistance. There is a very definite need for a suitable soil laboratory where this type of work can be done promptly.

Potato Index Studies.

The Potato Index Studies were continued during the year with the White Rose variety, the object being to obtain disease-free seed which could be multiplied and later used as foundation stock from which to produce seed for export to the United States. During the year these studies were financed by Mr. W. J. LoSage of the Clark Fruit Company.

Co-operative Projects with the Provincial Department of Agriculture.

Seed Work.

In accordance with the agreement with the Provincial Department of Agriculture, the following amounts of seed were grown and shipped to the order of the Provincial Department:

	lbs.
Dawson's Golden Chaff Wheat	604
Kharkov Wheat	1,144
Jones' Fife Wheat	924
Red Bobs Wheat	826
Ridit Wheat	660
Victory Oats	3,300
Eagle Oats	1,064
Alaska Oats	595
Storm Rye	608
Prolific Rye	732
Olli Barley	1,057
Redwing Flax	232
Fibre Flax	443
Yellow Intermediate Mangel	31
Bangholm Swede	16

The work with fibre flax has been continued as a foundation seed project. By general agreement with the flax growers and the Provincial and Dominion Departments of Agriculture, the Department of Agronomy is undertaking to maintain and multiply a pure stock of the leading fibre variety.

The Department of Animal Husbandry.

Meat Quality.

The general activities of the Department, including studies in meat quality with beef, lambs and swine, have been continued. A part of this work, especially with beef cattle and sheep, was sponsored by the Swift Canadian Company Limited, and the Brackman-Ker Milling Company Limited.

Tuberculosis-free Herd.

For some years the University herd has been accredited as a Tuberculosis-free herd under certificate No. 7495. During the year the herd was again tested by the Federal inspectors and the certificate renewed, testifying that all animals are free of the disease.

Bang's Disease.

Under the policy of Bang's Disease control which was begun on May 1st, 1940, we are maintaining an infected herd and practising calfhooed vaccination. Immunizing the young stock is practised in the hope of ultimately eliminating the disease, as the older cattle are gradually replaced by young stock within the herd.

Since May 1st, 1940, a total of fifty-three animals have been vaccinated against the disease. Of these, thirty-three head were vaccinated as calves under eight months of age. Up to September 1st, 1943, eight of these thirty-three head had calved. Seven were normal calvings and one an abortion. Three abortions have occurred within the herd during the year, two of which have been from mature cows which were known to be infected previous to commencement of the vaccination policy.

At the date of the last blood test there were twenty-six head of fully negative animals. Of these, eighteen were vaccinated, two were non-vaccinated, six were calves to be vaccinated later, and thirty-two head were designated as infected animals of which seven were vaccinated as calves and have failed to become fully negative. Of this last-mentioned group, four are designated as suspicious and three as positive. No animals have been disposed of because of Bang's disease. The entire herd is handled as one unit, which makes a very definite test of the preventative value of the vaccination programme.

Pullorum Disease Work

During the year, 296,000 blood tests of poultry have been made on 283,000 birds. Post-mortems and laboratory diagnostic

tests have been made on approximately sixty birds to establish the efficiency of the blood tests. Five flocks were found, during the year, to give false pullorum positive tests. Considerable investigational work was done at the laboratory on birds obtained from these flocks. This study provided the material for an undergraduate essay in the Department. Further work on the problem will be continued this coming year.

Fowl Vaccination Work.

During the year the Animal Pathologist was asked by the Provincial Department of Agriculture to take charge of a policy of vaccinating poultry to control and prevent Fowl Pox and Fowl Laryngotracheitis. This policy was established temporarily as a means of determining the extent of the two diseases in the poultry flocks of British Columbia, and to demonstrate the possible advantages or disadvantages of using live virus vaccines in their control and prevention.

During September to December, 1942, approximately 4,000 birds were vaccinated for Fowl Pox and 3,600 for Laryngotracheitis. Investigation and diagnosis trials conducted by the laboratory indicated the two diseases to be quite widespread and generally common in the Fraser Valley and Lower Mainland. Both diseases have been found to be general in poultry flocks throughout the area. Laryngotracheitis, in most instances, has been of a low grade infection and in nearly all cases accompanied by roup, bronchitis and head colds as secondary invaders. Whether or not vaccination to prevent the primary disease will also eliminate the other conditions is not known but will be kept under study during the fall and winter.

Changes in Farm Area and Loss of Land.

The lack of more producing acres is a serious handicap to the work of the Department. It is hoped that the part of the farm area taken over temporarily by the Department of Agronomy will soon be returned and included in the farm unit or additional land cleared to take its place. Pasture and hay producing areas are particularly needed. The temporary cancellation of the land clearing policy, and the increasing needs of the Department of Agronomy for experimental crop production, have caused a long stable feed policy to be carried out, especially in the dairy barn. This is a more expensive method of production than is ordinarily practised.

Dairy Cattle Classification Work.

Both the Canadian Jersey Cattle Club and the Canadian Ayrshire Association have instituted policies of herd classification and Professor H. M. King has been appointed as the official classifier for each of these Associations for Western Canada. To date, thirteen herds have been classified throughout the Province of British Columbia and arrangements are being made for others. The Ayrshire classification work is newer and the only herd so far classified in this Province is the one owned by The University of

British Columbia. Obviously this classification could not be made by a representative of the University and so arrangements were made with the Canadian Ayrshire Association that Mr. William Hunter of Ottawa would be appointed to serve as classifier for the University herd. This work was completed on August 9th with very satisfactory results. Six of the animals in the herd were classified as excellent, fourteen very good, eight good plus and two good; none were classified fair or poor. This gave the herd an average type rating of 86.5% which is excelled at the present time by only one herd in Canada.

The Department of Dairying.

The general work of this Department has been carried on as usual. The Medosweet Dairy Products Limited ceased operations in the University Dairy on September 15th, 1942, thus enabling the Department of Dairying to conduct certain laboratory work under its direct control. The cessation of operations by the Medosweet Dairy Limited automatically cancelled the lease between the University and the company.

Laboratory Accommodation.

The adequate provision of laboratory accommodation continues to be the major problem of this Department. Additional space is the only solution to the problem.

Many of the difficulties under which the Department labored in the giving of instruction in the practical courses in Dairying have disappeared with the taking over of direct control of the work offered in the Dairy. However, the educational facilities of the Department for the training of students in the technological side of the dairy industry are limited through lack of adequate plant and equipment, and it is hoped that arrangements may be made so that the educational needs of the industry are more satisfactorily met.

Research.

Work has been intensively pursued on problems concerned with cheese-making in the North Okanagan Valley. The Department continues to enjoy the whole-hearted co-operation of the industry and has been able to render considerable assistance, resulting in an improvement in the quality of the cheese produced in the area.

The Armstrong Cheese Co-operative Association during the year 1942 produced a higher percentage of high-scoring, first quality cheese than any other factory in Canada. Along with other agencies the Department has played its part in making this achievement possible. During the summer of 1943, under a grant from the Research Fund of the University, work was carried on at the factory in Armstrong.

Work on Surface Taint in butter has been continued with results of benefit to the industry.

In all this work the Department has continued to enjoy the active co-operation of the Provincial and Dominion Departments of Agriculture.

Studies on the Microbiological Methods for the determination of members of the Vitamin B complex have been initiated. During the past year the Department has carried out determinations on the vitamin contents of foods for the Committee on Food Analysis of the Canadian Council on Nutrition. The Department was one of seven laboratories in Canada selected for this study of methods for the determination of the B-vitamins. The results of this work have been published in the Report of the Committee on Food Analysis, March 29th, 1943.

Greater Vancouver Water District Board.

Pending the completion and equipping of their own laboratories, the Greater Vancouver Water District Board continued to use the facilities of the Department for urgent work concerned with the Vancouver water supply during the period September 1st to December 31st, 1942. The arrangements under which this work was continued were similar to those reported upon in last year's Annual Report. All materials placed at the disposal of the Board have since been replaced.

Dr. E. A. Cleveland, Chief Commissioner of the Board, has expressed to the Department his appreciation and thanks for the courtesies extended.

The Department of Horticulture.

It is with regret that I have to report that Mr. Frank Garnish, Lessee of the Horticultural Grounds and Green House, has been in very poor health throughout the year. This illness, coupled with the general shortage of labour, has made it impossible at times to do all the work which urgently required attention in this Department. The situation has given both Mr. Garnish and Dr. A. F. Barss very real concern.

Vegetable Seed Trials.

For the seventh consecutive year, the Department of Horticulture has conducted a series of vegetable seed trials. This work was commenced in 1937 as a co-operative project between the Plant Products Division, Production Service of the Dominion Department of Agriculture, and the University of British Columbia.

Mr. F. E. Buck was again placed in charge of the field work, using student labour entirely. A comprehensive report is to be forwarded to Ottawa later on, as is done every year.

In this year's trials there were some 250 samples of seeds on test. In addition to general supervision as provided by Dr. Barss, the Department supplied the necessary land (2 acres), the labour for fitting the area and all materials used, including

animal manure (50 yards), commercial fertilizer (1000 lbs.), spray materials, stakes and labels. The labour costs were cared for by a special grant from the Dominion Department of Agriculture (\$600.00), supplemented by contributions of \$300.00 from other sources as follows:

British Columbia Seed Growers' Association	\$125.00
Provincial Department of Agriculture	125.00
Wm. Rennie Seeds Limited (Vancouver)	25.00
The Brackman-Ker Milling Co. (Now Westminster)	25.00
	<hr/>
	\$300.00

This vegetable seed testing work is proving of distinct value and should be even more important with the greatly increased call for Canadian grown seeds, due to the war having created an extremely heavy demand, at home and abroad, for vegetable seeds grown in Canada.

Foundation Seed Work.

During the 1940 season a start had been made to re-establish the elite seed work with vegetables which had been under way for several years, but which had of necessity been discontinued for a time. Financial assistance provided by the Agricultural Marketing Bureau, Vancouver, made it possible to start selections for foundation stock on five different vegetables, namely, cabbage, parsley, chard, dill, and broad beans.

Although separate funds to support this work were not available during the season just closing, the selection work already started was continued in a modified way, using student labour for the actual work involved.

Raspberry Research.

A special report has been prepared on this project. Two paragraphs, the first from this report and the second from the Report on Plant Nutrition, read as follows:

"Ammonium phosphate plus muriate of potash is the best fertilizer treatment for raspberries on light sandy loam soils. The phosphate in the form of ammonium phosphate seems to be taken in more readily by the plant than does the phosphate from superphosphate."

"The best methods of fertilizing raspberries have been established. Total yield of fruit is the best index of health and vigour of the canes. The sugar index is a good indication of food value of the raspberry as is also the vitamin C index. The sugar content and vitamin C content are usually closely correlated. The food value of the raspberry can be varied by changing the fertilizer treatments."

The Safeway Vegetable Food Research Project.

A full report on this project is on file. The following paragraphs from the report are of interest:

"Soil type, locality and fertilizer treatments all have a definite effect on food values of vegetables in coastal British Columbia. Their effect on the keeping quality of the product is also pronounced.

"The consistently high food value of vegetables as a result of a liberal application of potash in the fertilizer, regardless of soil type and locality, is of interest and gives this element a unique position if we are seeking the highest food values and keeping qualities in our produce.

"Nitrogen, while it must be maintained at a certain level in the soil, causes undesirable effects such as poor keeping quality and low vitamin C value if it is increased above this level. This optimum level varies for each soil type.

"The past season's investigations in regard to the use of the micro-elements - boron, copper, manganese and zinc as fertilizing materials - have revealed that they can play an important role in vegetable growing in coastal British Columbia. While in some cases the result of their application may not be obvious enough to cause a big increase in yield, or their deficiencies in the soil may not be pronounced enough to produce a visible malnutritional symptom, nevertheless, the benefits derived from their application may be none the less real. These benefits can be reflected in increased storage quality, sugar content, vitamin content or in a mineral increase of the product. Soil types differ in their response to these micro-elements as do different crops."

The Department of Poultry Husbandry.

The work of this Department has been carried on as usual. A general improvement is noticeable in the quality of the birds and the general care and tidiness of the Poultry Plant. This is due to the fact that the Poultry Plant is directly under the management of Professor E. A. Lloyd and because Mr. C. Pearce, the foreman, has done exceptionally fine work.

Record of Performance Testing.

The stock that was taken over in the fall of 1941 from the lessees, as stated in last year's report, was limited in number and more or less untested. It was hoped that by careful selection in breeding, a reduction in the incidence of disease might be expected immediately. Apparently, however, the deterioration in resistance to disease had become more serious than had been foreseen, as factors responsible for lack of resistance in the stock appear to have been accumulating. With the exception of the Rhode Island Reds, where the mortality is around twenty per cent. which is fairly close to normal, mortality has risen to as high as forty per cent. in the first year of production in the White Leghorns and Barred Plymouth Rocks. Thus, mortality has again taken a similar toll to that of 1930-31 when paralysis first appeared in the University flock. For a period of twelve years prior to that time, the flock had been remarkably free from disease. Since then,

however, the mortality has tended to be relatively high, ranging from fifteen to thirty per cent. in the different breeds and becoming more severe in the later years of the lease of the poultry farm. The higher mortality in the University flock is similar to that found in many, but not all, breeders' flocks in the Province. This condition is sufficiently serious in many flocks to give real concern to poultrymen and to challenge investigation. The mortality in the University flock is due to similar causes and conditions to that obtaining in many private commercial flocks in the Province, as the specimens coming in to the University laboratory for post-mortem examinations indicate.

The necessity of keeping, on the University farm, units of all of the important commercial breeds complicates the problem of management.

The increase in the incidence of such diseases as the "paralysis complex," ovarian and kidney breakdown, and the differences found in the resistance and susceptibility to these diseases in different breeds and families, suggest urgent need of conducting more extensive progeny tests to determine differences and to propagate the more resistant lines. This involves the pedigreeing, rearing and trapping of more birds in order to have sufficient numbers of individuals and families to provide adequate data for interpretation. Accordingly, a large increase, to include the pedigree hatching of some 2,300 individual wing-banded chicks, was attained in this spring's hatching. From these hatches some large and representative families of pullets should be available for trap-nesting this fall.

Environmental conditions were more satisfactory this year as the result of better weather and the re-arrangement of brooder houses on fresh, green range. More frequent moving of young stock has been adopted as a safeguard against disease. Unfortunately these operations have been somewhat curtailed by the difficulty of getting material for new range shelters and hurdles.

A new Breed.

For many years, and until very recently in this Province, White Leghorns, Barred Plymouth Rocks and Rhode Island Reds have led all other breeds in commercial importance. The development of New Hampshires as a commercial breed and their distribution over the North American Continent has been one of the most remarkable movements in modern poultry culture. From a position of comparative obscurity a few years ago, they have increased in popularity so quickly in the past three years that they have already supplanted the other breeds on many farms, and are in greater demand than any of the other breeds at the present time. The New Hampshires are a general purpose breed, of moderate size, light red or buff in colour. They appear to have been bred and selected on the bases of early feathering, rapid maturity, early sexual maturity, brown eggs, large egg size, good winter egg production, exceptional vigor, resistance to disease and high hatchability. Offsetting these good characteristics, most strains are inclined to be broody, and average production is somewhat lower than that of

pedigreed bred-to-lay strains of Barred Plymouth Rocks and Rhode Island Reds. However, their good qualities are so evident as to challenge attention, and their apparent vigor alone justifies their adoption by many. In order to demonstrate the breed to students, a unit has been introduced and is being compared in rate of growth, meat quality and egg production with units of Barred Plymouth Rocks, and what are perhaps their greatest rivals, the Rhode Island Reds, from which they have sprung.

Research.

Dual Purpose Poultry.

The process of weighing, grading and classifying of feather growth in all Barred Plymouth Rock and Rhode Island Red chicks at eight, ten, twelve, sixteen and twenty weeks of age has been continued this year. The percentages of pullets measuring up to the A Meat standard run considerably higher than those of the cockerels in each of the two breeds. The increase in the percentage of cockerels of the higher meat grades suggests a continuation of the plan for improvement insofar as is consistent with maintenance of egg production, vigor and body size of bird. No positive correlations have yet been established between egg production and these other factors, but there may be a tendency in this type of selection to breed to a smaller, more compact type that might be considered too fine. Some references have already been made by the Government Inspectors to the effect that the U.B.C. Barred Plymouth Rocks are becoming too fine in the bone. Some difficulty has already been encountered in too early maturity and lack of size in eggs. This problem is being carefully studied.

Auto-sexing Cambars.

The improvement of the auto-sexing breed, the Gold Cambars, has proceeded along two main lines,- first, the introduction of fresh blood from the Barred Plymouth Rocks to improve meat and egg production, and, second, selection in the breed to secure earlier maturity and large egg size. High meat quality as indicated by low-set bodies, plump breast, white meat, early feathering and maturity, shows up in the early broiler, fryer and light roasting chickens of this breed. Egg production has been bred up until it is now only slightly lower than that of the Leghorns, Barred Plymouth Rocks and Rhode Island Reds.

Poultry Nutrition.

(a) Some progress has been made in a study entitled "The Nutritive Value of Canned and Offal Salmon".

(b) Investigations into the use of Copra Meal as a poultry feed have been continued.

(c) Because of the importance of dried eggs(egg powder), a study entitled "The Riboflavin Content of Fresh and Dried Hens' Eggs" has been undertaken. This is being done by Mr. Jacob Biely with student help.

(d) Excellent progress has been made by Mr. Biely on two University Researches entitled "Vitamin B Complex" and "Fish Oil Research." These are reported on briefly in the annual statement prepared by the Head of the Department of Poultry Husbandry.

Respectfully submitted,

F. M. CLEMENT,

Dean,
Faculty of Agriculture.

REPORT OF THE DEAN OF WOMEN

The opening of each wartime session has shown University life increasingly affected by war conditions. A marked sign of this in the 1942-43 session was the introduction for the first time of a compulsory war work plan for women students. The plan was introduced at the request of the Women's Undergraduate Society which wished a programme drawn up somewhat paralleling the compulsory military duty required of the men. Shortage of accommodation and other reasons limited the programme offered to two hours a week for each undergraduate woman student. Within these limits, excellent work was done. Each woman student spent one hour in Keep-Fit classes organized by the Instructor in Physical Education for Women. The second hour was spent either in training for possible war emergency or doing Red Cross Work. Through the generous co-operation of members of the Faculty, courses were offered in First Aid, Home Nursing, Motor Mechanics, Map Reading and Day Nursery. In previous years, the students had contributed Red Cross Sewing and Knitting to the Faculty Women's Unit. Realizing the increased contribution which would result from the compulsory plan, this year the students set aside a second room in the Brock Memorial Building for Red Cross Work and established themselves as a separate branch of the Red Cross Society under the name of the "University Unit." Under the joint leadership of Dr. Joyce Hallamore and Mrs. F. H. Soward, the girls produced work of such high quality that it earned the special commendation of the Central Committee of the Red Cross Society. The students deeply regret that the departure of Mrs. Soward for Ottawa will deprive them next year of her unflagging energy and skill in organization.

Administering the Compulsory War Work Plan placed a heavy additional load on the Dean of Women's Office. Fortunately one previous obligation was removed; wartime restrictions made it impossible for the office to assume responsibility for securing vacation employment for the students since this was taken over by the Government Employment Bureau. The office, however, continued to care for some part-time employment, especially the flourishing industry of "baby tending" which had sprung up as a result of the maid shortage.

Entertainment during the year was necessarily restricted by wartime conditions. For the first time, it was impossible this year to entertain the graduating class of women in convocation week. During the year, the Dean of Women's room in the Brock Memorial Building was again used to entertain small groups of out of town students. Serving light refreshments at noon made it possible to entertain the girls without infringing too much on rationed goods or incurring the criticism of serving refreshments at the tea hour. The students very much appreciated meeting the women members of Faculty who were invited at these times. Many of the problems relating to the new plan for Compulsory War Work were also solved in this room, which has proved invaluable for the holding of informal meetings.

The Dean of Women's Office continued its interest in the Girl's Co-operative House. The girls in the house again profited greatly from the community life and continued to maintain a high standard of scholarship. This year, they once more held open house for the Faculty Women's Association which had again expressed its interest in them, this time by a shower and a gift of money to the Dean of Women's Office which was spent, at the girls' request, in dishes.

Phrateres, under able leadership, continued to do good work in looking after lonely students on the campus. The Sororities also co-operated very willingly all year in assisting with student problems which were referred to them by this office. I was pleased, moreover, to accept an invitation extended by the University of Washington to take part in a Panhellenic conference at Victoria in the spring.

A special problem this year related to the evacuated Japanese students. Several of these continued to keep in touch with the office which did everything possible to facilitate the transfer of those who wished to study at other Universities. This year, too, marked the last and graduating year of the blind woman student whose special problems had necessarily taken much office time during the past four years. It is a pleasure to report that she graduated with second class standing.

The usual problems of student counselling, somewhat complicated by the new conditions resulting from the war, occupied most of the office time. Moreover housing inspection has required more time of late, since the housing shortage has sent us further afield in the search for student accommodation.

Respectfully submitted,

M. DOROTHY MAWDSLEY,

Dean of Women.

REPORT OF THE DIRECTOR OF THESUMMER SESSION

The twenty-fourth Summer Session of the University opened on June 28th and closed on August 13th, 1943.

The following table analyzes the enrolment and compares it with that of the preceding three years.

	<u>1943</u>	<u>1942</u>	<u>1941</u>
Partial	5	3	4
First Year	37	35	40
Second Year	96	95	173
Third Year	61	46	62
Fourth Year	77	65	59
Graduates	53	76	118
Auditors	<u>7</u>	<u>2</u>	<u>4</u>
	336	<u>322</u>	460

In addition, the usual courses in Social Work enrolled seventeen students. Hence, the regular decrease in enrolment which has hampered the activities of the Summer Session since 1939 has been halted.

Decreasing enrolments have, of course, forced a curtailment in offering, as is shown by the following summary.

	<u>1943</u>	<u>1942</u>	<u>1941</u>
Full courses (3 units)	16	24	37
Half courses (1 1/2 or 1 1/4 units)	4	6	3
Reading courses	1	2	2

The result of a reduction in offering and no reduction in enrolment was a very satisfying distribution in registration among the courses offered. It was not necessary to cancel any courses because of very small enrolments.

The following tabulation shows the number and percentage of teachers in the Summer Session of 1943:

<u>Year</u>	<u>Enrolment</u>		<u>Teachers</u>	
	<u>Total</u>	<u>No.</u>	<u>%</u>	
First	37	7	19	
Second	96	51	53	
Third	61	24	40	
Fourth	77	28	35	
Graduates	53	45	85	
<u>Total</u>	<u>324</u>	<u>155</u>	<u>48</u>	

This high proportion of mature and serious students adds pleasure and satisfaction to lecturing in the Summer Session and results in a high degree of success in the examinations. Of the 310 students who wrote examinations, no less than 278, or 90%, passed in all subjects written.

In an effort to economize, the University, when initial plans were laid, invited only two members of the staffs of other universities to lecture at our Summer Session. Emergencies later increased this number to four, one from each of the Universities of Washington, Oregon, Alberta and Saskatchewan.

During the Session, the Department of University Extension arranged for a series of eight lectures on Music Appreciation by Dr. Ida Halpern. In consideration of a grant from the Summer Session budget and one from the Summer Session Students' Association, students were admitted free. It was also possible to make a contribution to the expense of a very enjoyable piano recital by Mr. Arthur Benjamin.

Respectfully submitted,

M. A. CAMERON,

Director, Summer Session.

UNIVERSITY EXTENSIONGeneral.

The chief development in the work of the Department of University Extension during the past year has occurred in the field of public information services and in programmes related to the war effort. There has been some decrease in public interest in certain of the more cultural courses and services offered, due no doubt to a general lack of leisure time. On the whole, however, there is evident throughout the Province a growing awareness of the need for adult educational programmes and an increased interest in the courses and material offered by the Department.

Study Group Programme.

Among all organizations interested in adult education, there is an increasing recognition of the value of the study group method, not only in the co-operative pooling of ideas, but also in providing opportunities for the development of independent thinking and for practice in concise expression of opinions.

With the completion this year of three new study group courses, entitled "Community Clinic--An Introduction to Sociology," "Music Appreciation" and "Art Appreciation," the Department now has available fourteen specially prepared study outlines. During the year, 185 groups in British Columbia registered for study courses, and many of the outlines have also been sent on request to organizations and individuals in other provinces. For example, the course in "Acting for Juniors" is now being used by the Department of Extension of the University of Saskatchewan and in the schools of that province, and is to be used by the Department of Adult Education at the University of Manitoba.

Evening Classes and Extension Lectures.

Again during the 1942-43 session, the response to the evening classes offered by the Department provides evidence of the desire on the part of the general public for educational courses -- for practical assistance, relaxation, or intellectual stimulation. The following list gives the courses offered and the attendance:

Current History:	Vancouver Class.....	106
	North Vancouver Class.....	45
Music Appreciation.....		60
Elementary Economics.....		24
Business English.....		33
General Botany.....		27
Gardening in Wartime.....		74
The Evolution of Welfare Services in Canada.....		105
Heat Treatment and Machining of Metals.....		113
Heat Treatment and Foundry Practice.....		52
Poultry Husbandry (New Westminster).....		23

The Department continued its policy of arranging lectures by members of faculty for organizations and groups in Vancouver and other centres throughout the Province. During the period under review, 316 lectures were given, with a total attendance of more than 28,000.

Library and Pamphlet Service.

The facilities of the Extension Library are widely used by registered borrowers in all parts of the Province, as well as by groups and individuals who are taking evening classes or study courses. A good selection of new books, particularly in the field of current affairs, has been added to the collection.

In order to make available, in some measure at least, the excellent material now being published in pamphlet form, the Department is building up a collection of pamphlets on a wide variety of subjects. Many of these are used in conjunction with evening classes or study group outlines; others are loaned or sold on request.

Drama and Radio.

During the past year, young people's groups have continued to be the most active in amateur theatre activities, and the Department has assisted them through its Play Lending Library, by personal interviews and through correspondence. Groups of war workers and other organizations in Vancouver also received assistance with their dramatic programmes.

This has been another satisfactory year for the Play Lending Library, which now includes 3840 plays and books on the theatre and radio. Total circulation was 4530, and 118 groups availed themselves of borrowing privileges. One increasingly popular feature has been the group play-reading service. Several copies each of certain plays are available for group reading so that groups unable to produce plays may plan programmes of dramatic readings.

In the spring of 1943 Miss Dorothy Somerset, instructor in dramatics, acted as adjudicator at the annual Vancouver Speech Arts Festival and the Kelowna Musical and Speech Festival, and also gave radio talks and lectures in Vancouver and centres in the interior of the Province.

In November of 1942 Miss Somerset attended the annual meeting of the National Theatre Conference in New York, as the guest of the Conference. Representatives of drama departments of the major American universities and directors of outstanding American non-commercial theatres met there to discuss matters of mutual interest. In August, 1943, the first Western Canada Theatre Conference was held at the Banff School of Fine Arts. Representatives from the four western provinces attended and a Conference organization similar to its American counterpart was set up. Miss Somerset was appointed to the Executive Committee.

Music.

In its second year, the Phonograph Record Loan Service has proved itself to be practicable and worthwhile in providing a wide variety of records for those who enjoy good music. The library, set up in co-operation with the University Committee in charge of the Carnegie Music Set, has been enlarged to include choral as well as orchestral records. Thirty-seven civilian and armed services groups have availed themselves of the opportunity thus provided. The circulation for the year was 1408 records.

A course in Music Appreciation, given by Dr. Ida Halpern, was included among the Evening Classes for the 1942-43 season. During the past summer the Department, in co-operation with the Director of the Summer Session and with the Summer Session Students' Association, offered a noon-hour course in Music Appreciation.

Visual Instruction Services.

There has been a striking increase in the demand for visual instruction material, especially from the armed services and from organizations engaged in war work and civilian defence. In many cases, programmes of films are selected by the Department and sent at regular intervals to various Navy, Army and Air Force stations. The many expressions of appreciation received testify to the value of these educational film programmes for service men.

Through purchases and donations the film library is steadily increasing in the number and variety of subjects. By serving as a depository for films from the National Film Society and co-operating with the National Film Board in the circulation of war information subjects, the Department has been able to make available an excellent collection of up-to-date documentary films.

During the past year, 825 organizations and individuals used films and film slides, representing about 425 towns and communities throughout the Province. Equipment was also supplied to several schools, organizations and individuals.

Film Circuits: In addition to the circuits which were operated in the Lower Mainland and Vancouver Island areas, and in the Okanagan Valley during the 1941-42 season, three more rural circuits were organized this year, in the West Kootenays, the East Kootenays and in the Prince Rupert-Prince George area. These circuits have been operated under difficulties caused by winter weather conditions and uncertain transportation. However, the fact that people in northern British Columbia are willing to travel from 10 to 25 miles in sub-zero weather to see the programmes is evidence that the films are answering a very real need. About 100 points were covered monthly by the five circuits, while the total average monthly attendance was about 18,000.

The films shown on the circuit programmes are of an educational and topical nature, many dealing with some phase of

Canada's war effort. A new feature this year has been the "discussion trailer," which illustrates how the films may be used as a basis for discussion.

In addition to the five rural circuits, three smaller auxiliary circuits are operated in outlying parts of the Province.

National Farm Radio Forum.

From November to the end of March, the Canadian Broadcasting Corporation, in co-operation with the Canadian Association for Adult Education and the Canadian Federation of Agriculture, again presented the weekly series of broadcasts known as the "National Farm Radio Forum." Supplementary literature, including the weekly newspaper, "Farm Forum Facts," was distributed by the Department of University Extension to groups and individuals on request. Due partly to the scattered nature of many of British Columbia's rural communities, the number of organized listening groups was comparatively small, but those who did meet for the broadcasts were very keenly interested and sent in regular reports on their discussions.

Educational Programme for British Columbia Fishermen.

The educational programme conducted by the Department under a grant from the Dominion Department of Fisheries has now completed its fourth year of operation. For many communities on the Pacific Coast, the past season marks significant advances in co-operative achievement. It is felt that the programme has made a valuable contribution in helping to provide the sound training in co-operative principles and practice so essential for the successful development of this type of enterprise.

During the year, assistance was given to 35 fishing communities, apart from those in the Vancouver and New Westminster areas. A new feature introduced this winter was the two to three-day regional conference, with a programme of lectures, films and discussions. Two of these were held, one at Sointula, the other at Prince Rupert. Both were very well attended by the fishermen in those areas and were regarded as highly successful. As in previous years, study material, pamphlets and films were used to good advantage wherever possible.

Course in Personnel Administration.

As a result of the success of the course in Personnel Administration organized by the Department of University Extension during the summer of 1942, the Federal Department of Labour requested that a second course be offered during 1943-44. Plans for this course include monthly sessions of two to three days' duration, with speakers drawn from Eastern Canada and the Western United States, as well as from local firms. The course is open to personnel workers, executives and others engaged in war industry. It is recognized that through participation in projects of this kind, the University can make a direct contribution to the harmony in industrial relations that is essential for the attainment of maximum production.

Radio Technicians and Pre-Aircrew Training.

Again this year, in co-operation with the Department of Physics, the Department of University Extension conducted classes in Radio Mechanics for enlisted personnel of the R.C.A.F. One seventeen weeks' course was given in the period from October, 1942, to February, 1943. In February, at the request of the Department of National Defense for Air, the Extension Department commenced two to five weeks' courses in Pre-Aircrew Training for the R.C.A.F. To the end of August, 1943, 15 courses have been held, with a total attendance of 440 men.

Public Relations: Co-operation with other Organizations.

The Department has continued its policy of aiding other organizations with their educational work, both in supplying study material and other assistance, and in arranging lecture programmes. Special instruction in the organization of club dramatic activities was given by Miss Dorothy Somerset at the Y.W.C.A. Regional Conference for Business and Industrial Girls' Clubs. Assistance was also given at the Annual Summer Conference of the Public Affairs Institute. Mr. R. T. McKenzie was in constant demand as a lecturer on topics dealing with current affairs. Special courses were arranged at the request of the Canadian Credit Men's Institute, the American Society for Metals, the North Vancouver Horticultural Society, and the Department of Economics, Political Science and Sociology in the University. Series of public lectures were arranged for the Alexandra Neighbourhood House, the Victoria Extension Association, and the B.C. Optometric Association. Co-operation and assistance has been given by the Department to several government agencies, including the Dominion Department of Labour, the National Film Board, the Wartime Prices and Trade Board, and the Canadian Broadcasting Corporation. The Canadian Legion War Services and other war service organizations have also received assistance at various times.

In addition, the Director has been actively associated with the following adult education organizations: Canadian Association for Adult Education; Canadian Youth Commission; The National Film Board of Canada; The Vancouver Institute; Adult Education Committee of the Vancouver Y.M.C.A.; Provincial Nutrition Committee; National Farm Radio Forum; Regional Committee, Canadian Legion Educational Services; National Committee on University Courses, Canadian Legion Educational Services.

Staff.

The Department has been particularly unfortunate in losing within the past year, four of its regular staff members: the Assistant to the Director obtained leave of absence in May to go on active service with the Army; the field worker in charge of the co-operative educational programme left in June to take a position with the Co-operative Union of Canada in Saskatchewan; the Assistant in charge of the Visual Instruction Division accepted a position in April as organizer and supervisor of industrial circuits in British Columbia for the National Film Board; and one of the senior stenographers moved to eastern Canada in June. This situation has made it necessary for the remaining members of the staff to assume increased

responsibilities, both in taking over new duties and in assisting and training new employees.

Acknowledgments.

The Director wishes to take this opportunity of recording his appreciation of the assistance and co-operation received from the President and the members of the governing bodies of the University, and from his colleagues on the Faculty. He expresses his thanks to the staff of the Department for their loyal and faithful service.

Respectfully submitted,

GORDON M. SHRUM,

Director of University Extension.

REPORT OF THE DIRECTOR OF THE UNIVERSITY HEALTH SERVICE

(SUMMARY)

The University Health Service is pleased to report a satisfactory year. New problems and extra duties have imposed undue strain at times on our resources but it is felt that the main functions of the Service have been successfully maintained.

The health of the students on the whole has been fairly satisfactory. An increase is noted in the number of communicable diseases reported. During the session 2,002 new conditions were diagnosed as compared to 1,178 for the preceding year. The increase was largely attributed to an increase in respiratory diseases of which influenza was most prominent. Altogether, 420 cases of influenza were noted as against 61 for the preceding year. Fortunately, the type of influenza encountered was not particularly serious as five cases only of pneumonia were reported. Early in October, 1942 one case of Poliomyelitis developed.

The control of Tuberculosis remains one of our chief functions. The annual tuberculin survey was augmented and included 904 individuals. Of these, 19.7% were positive. Chest X-rays were performed on 444 persons. Altogether, nine new cases of Tuberculosis were discovered and three students had to leave University during the year for hospital treatment and one other at the end of the year.

The number of medical examinations reached a new high. Altogether, 1,459 examinations were performed. Included in this number were 20 members of the cafeteria staff and 341 women students other than those in the first year. Our office agreed to examine all women students as part of the Compulsory Physical Education Programme recently introduced. The medical examiners of the Canadian Officers' Training Corps were responsible for the examination of new male students numbering 749. By agreement, the reports of these examinations were made available to our office. Examination quarters provided through the generosity of the Students' Council in the Brock Memorial Building were shared and our service completed certain laboratory tests required by the military. During the year, daily reports regarding male student visits to the office because of illness and recommendations thereon were referred to the Medical Officer in charge of the C.O.T.C. Sickness reports concerning female students were referred to the Instructor of Physical Education for Women.

Unfortunately this year we have been without the services of a Mental Hygienist. The war has interfered drastically with this programme which had developed during the two preceding years. It is hoped that when our staff is at full strength we shall be able to resume this most important service. The early recognition and correction of psychopathic tendencies among certain students is most important.

Student visits to the office have increased. A total of 12,377 visits were made, an increase of 17 per cent. over last year and an increase of 297 per cent. over visits made during the 1936-37 session. The limited office quarters available make the efficient handling of such a large group difficult. In spite of the difficulties it is felt that the students appreciate more and more the opportunity of approaching us on health problems.

A considerable number of immunizations against Communicable Diseases were performed during the year. Vaccinations against Smallpox numbered 192; 21 individuals were given Diphtheria Toxoid; 14 Scarlet Fever Toxin and 73 Typhoid Paratyphoid vaccine. Reinforcing doses of Toxoid were given in 22 instances and against Typhoid in 24. The office carried out certain laboratory tests such as urinalysis and blood examinations. Other procedures were referred to the Division of Laboratories, Provincial Board of Health.

Staff members of the Metropolitan Health Department assisted on occasion, particularly in the medical examination of new students. The Health Department gave 11 lectures and talks to various University groups, particularly the Social Service students and those taking Teacher Training. Many of these lectures were part of a series sponsored by the Department of Nursing and Health. For the first time a student of the Department of Nursing and Health took three weeks' field work with us.

A complete and detailed statistical report of activities and findings has been prepared of which this report is a summary.

The Health Service was maintained during the Summer Session 1943, with the Public Health Nurse in attendance. Altogether, 88 visits were made to the office and 47 first aid treatments were performed.

We wish to thank those groups who have assisted, particularly the Students' Council and Faculty Committee for providing examination quarters in the Fall; the Student Christian Movement for relinquishing their quarters during the X-ray examinations in November and March; the C.O.T.C. and Medical Examiners; the Provincial Board of Health and its various members; the Department of Nursing and Health and other staff members of the University who have co-operated wholeheartedly in helping us to carry on under rather unusual and difficult circumstances.

Respectfully submitted,

J. S. KITCHING,

Director, University Health Service.

REPORT OF THE ASSISTANT DIRECTOR
OF PHYSICAL EDUCATION

PHYSICAL EDUCATION FOR MEN

Military Training Requirement.

The past session included a programme of physical fitness as a part of the military requirement. Between 800 and 1000 men were given training one hour per week. This training was conducted with the help of student instructors and was given in twenty-three class periods each week.

Intramural Sports.

The largest intramural programme in the history of the University was enjoyed by the male students in 1942-43. Twenty-two teams made up of over 1000 men competed in ten different sports. It is estimated that an average of 150 men competed in some form of intramural sport each week.

Voluntary Classes.

With the exception of one class a week in boxing and tumbling, all voluntary classes were discontinued. This was necessary for two reasons: first, the facilities were no longer available because of military classes in physical training, and secondly, because of increased time table difficulties.

Recommendations.

It is interesting to note that a Bill for the Promotion of Physical Fitness of the People of Canada has been submitted by the Department of Pensions and National Health and adopted by the Dominion Government. In view of this fact and the need for local expansion as recognized by the Faculty, Senate, and Board of Governors, it is recommended that the present status and future growth of Physical Education at the University of British Columbia receive early consideration for the purpose of determining the policy in the development of Physical Education as a fully operative department of the University.

Respectfully submitted,

M. L. VAN VLIET,

Assistant Director of
Physical Education.

REPORT OF THE INSTRUCTOR IN
PHYSICAL EDUCATION FOR WOMEN

Registration

During the session 1942-43, each woman undergraduate on the campus who successfully passed her medical examination was required to take one hour a week of physical training as a part of the women's war work programme. Six hundred and thirty-two women students were registered in these classes.

Programme of Classes in War Work.

Archery: There were five classes for beginners with a total registration of 126.

Badminton: Of the five classes, two were for beginners and three were for tournament players. Ninety-nine students registered for this course.

Basket Ball: Eleven students, who comprised the University team, participated in this activity.

Folk Dancing: A course in theory and practice, suitable for teachers and recreation leaders, was given to a class of 34 students.

Grass Hockey: Two grass hockey teams, with 18 entrants, participated in this form of athletic activity.

Keep Fit: The course included various types of exercises, marching and games. Five classes, with a total of 191 students, were registered.

Play and Playground: This course included the theory of teaching and the practice of recreational leadership. Twenty-five students were registered.

Rhythms: Rhythmical activities, dances and drill were emphasized in this course. The several sections included 85 students.

Volley Ball: A group of 42 students was divided into elementary and advanced sections; both were taught volley ball technique; the advanced section had additional instruction and practice in coaching and refereeing.

Intramurals.

Tournaments were conducted in Volley Ball, Badminton, Archery and Ping Pong. Eight teams were entered, representing: First, Second, Third and Fourth Year, Arts and Science; Agriculture; Nursing and Health; Teacher Training Course; and Commerce. As a result of the war work programme these tournaments were less successful than in other years.

Teacher Training Course.

This course was arranged to conform with the requirements of the Physical Education curriculum of the schools in this Province.

Committees.

The Instructor in Physical Education for Women was a member of the Women's Athletic Directorate, the Stadium and Gymnasium Committee and the University Council on Athletics and Physical Education.

Assistants.

Part-time student assistants helped materially in conducting courses particularly in such duties as keeping attendance and health records, the supervision of equipment, and co-lateral instruction of classes in drill and sport activities.

While much valuable help is obtainable from student assistants the scope of their work is limited; and regularly appointed instructors are regarded as essential for the major part of courses in Physical Education.

The Outlook in Physical Education.

There is good reason to anticipate that Physical Education and Recreational Activities will receive enhanced evaluation after the war, and that the demand for teachers and leaders in these fields will continue to increase. It is hoped that the pioneer progress of the past years may form a basis for real advance in the future.

Respectfully submitted

GERTRUDE E. MOORE,

Instructor in Physical Education
for Women.

REPORT OF THE OFFICER COMMANDING
CANADIAN OFFICERS' TRAINING CORPS
THE UNIVERSITY OF BRITISH COLUMBIA CONTINGENT

1. General.

The 1942-43 training season of the U.B.C. Contingent, C.O.T.C. was probably the most successful in the history of the Unit. Many of the difficulties which resulted from the rapid expansion of the Contingent during the early years of the War had been overcome. For the first time since 1939 it was possible to provide each man with a uniform. There was also an increase in the number of rifles and other items of training equipment available. However, an even more important factor contributing towards the keenness and efficiency of the men in the Unit was the Armoury. The Contingent had graduated from a corner of a basement to a building which provided adequate accommodation for its activities. Each man attested into the Unit since 1928 had contributed towards the building funds and all had a feeling of pride and satisfaction in knowing that no other Contingent in Canada possesses a comparable building. The addition which was added this year provides adequate space not only for the C.O.T.C. but also for the newly formed University Naval Training Division and University Air Training Corps. Thus all the Service Training on the Campus is centralized in one building.

At the last parade for the year, 31st March, 1943, an inspection and demonstration of training was held in the Stadium. Major-General G. R. Pearkes, V.C., D.S.O., M.C., G.O.C.-in-C., Pacific Command, was present to take the salute during the march past. Many other senior officers were present at the demonstration including the C.O.P.C. and the A.O.C., Western Air Command.

Following the demonstration a banquet was held in the Hotel Vancouver to honour the members of the Corps who were leaving for Active Service. Over 400 officers and cadets attended.

Although all University students were still being urged by the Department of Labour to remain at their studies until after graduation, 600 members of the Unit volunteered and were accepted for Active Service. The enlistments were distributed among the three Services as follows:

Navy	-	160
Army	-	235
Air Force	-	205.

2. Establishment of Naval and Air Force Units.

The Board of Governors on March 29th, 1943, approved the establishment of a University Naval Training Division at the University. Lieut. H. M. McIlroy of the C.O.T.C. was appointed Temp. Lieut.-Commander and Officer Commanding the detachment. Arrangements were made for eighty-five cadets of the C.O.T.C. to take Naval training either at Esquimalt or Toronto in lieu of camp training.

After many disappointing delays an agreement was received from the Department of National Defence for Air and on June 28th, 1943, the Board of Governors approved the establishment of a squadron of the University Air Training Corps. Captain J. A. Harris of the C.O.T.C. was appointed A/Squadron Leader and Officer Commanding the squadron.

The Naval and Air Force training Units have not been organized to provide alternative training to that offered by the C.O.T.C. but to make available specialized training for students who have definitely decided to go on Active Service with these branches of the Service.

3. Training.

The strength of the Unit as at November 1st, 1942 was 1595 All Ranks divided into ten companies.

Each man in the Unit devoted at least six hours each week to military and physical training. Officers and N.C.O's. were required to attend at least one additional two hour parade per week. The greater part of the training was carried out on Wednesday and Saturday afternoons. However, evening parades were provided for men who were unable to attend during the day. The weekly one hour physical training periods were held in the University Gymnasium at hours to suit the convenience of the men.

A number of officers were prepared for theoretical and practical qualifying examinations.

4. Camp.

The Annual Camp was held at Vernon from 29th April to 12th May, 1943. The total camp strength was 599. Applications for leave from camp were accepted from students in Applied Science and from students in other Faculties whose homes were outside the Greater Vancouver Area. Leave was granted to 590 All Ranks. Since the Unit was responsible for the Administration and Training at the camp, much valuable experience was gained by the officers. Good weather, adequate training facilities and the enthusiastic co-operation of all ranks contributed to the success of the camp.

5. Staff.

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The authorized full-time staff consisted of two Officers and four Warrant Officers for training and one Officer, two non-commissioned officers and four clerks for administration. Major J.P.G.MacLeod, D.S.O., served as Chief Instructor. He was assisted by T/Capt. R.F.Osborne.

6. Parade Ground.

During the year the area immediately East and North of the Armoury was cleared and levelled for use as a Parade Ground. This made it possible to hold battalion parades -- a procedure which helped to improve the general discipline of the Contingent.

7. Discipline.

During the year there were no breaches of discipline and there were no men whose attendance at lectures and parades was unsatisfactory.

8. Acknowledgments.

The Commanding Officer wishes to record his thanks and appreciation for the assistance and co-operation afforded him by the Chancellor and the President of the University, the General Officer Commanding Pacific Command and his staff, the Officer Commanding 39th Reserve Brigade Group, The University Committee on Military Education and by All Ranks of the Contingent.

Respectfully submitted,

G. M. SHRUM,

(G. M. Shrum) M.M., Lt.-Col.,
Officer Commanding,
U.B.C. Contingent. C.O.T.C.

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