

**REPORT OF THE PRESIDENT OF THE
UNIVERSITY OF BRITISH COLUMBIA
FOR THE ACADEMIC YEAR ENDED
AUGUST 31, 1945**

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REPORT OF THE PRESIDENT

1.

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, 1945. 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 period under review in this report saw the sudden and unexpected termination of the war both in Europe and in the Pacific. Happy though this event was, it nevertheless brought with it many serious problems for Canadian universities now confronted with the task of accommodating thousands of veteran students.

During the war years many members of the teaching staff of the University were enlisted for military or government service. Those who remained were called upon to carry many extra teaching and administrative burdens. In addition, several older Faculty members who had been due for retirement were asked to remain on duty for the emergency period.

The increased enrollment during the past term has also seriously over-taxed existing facilities which were originally designed for a maximum enrollment of 2,500 students.

Throughout the war the enrollment remained at a fairly even level of about 2,400, but in the period covered by this report, due largely to the addition of several hundred veterans who have been discharged because of casualties, the student body increased to almost 3,000, the highest on record. Special lectures, beginning in January and

May, were inaugurated for these young men and women, and their academic record so far has more than justified the efforts made on their behalf.

The comparatively small number of veteran students who registered in the Spring of this year was apparently only a slight indication of the tremendous influx of ex-service personnel we will be called upon to serve in the year to come. It is evident that the University will be allowed no easy transition to a post-war basis of operation.

It has been most heartening to receive the official sanction of the Provincial Government and the Board of Governors in our attempts to meet the needs of all veteran students who want and are qualified for courses in higher education. Unfortunately, in meeting the present emergency, we will not have time to put to use the \$5,000,000 grant so generously allocated to us by the Provincial Government for new permanent buildings. We must prepare, at very short notice, some type of temporary accommodation.

In this connection, I am pleased to report that we have been able to secure, through the co-operation of the Army and War Assets Corporation, a goodly number of army huts which have already been brought to the campus to serve as lecture rooms, laboratories and living accommodation. We will need a great many of these huts and we will need them in a hurry.

Many of the members of our teaching staff who have been absent on wartime service have indicated their intention of returning to us in September. We have been fortunate also in securing the services of a number of senior men and women from other universities and schools. In addition, we have brought onto the staff as junior instructors and assistants a great many recent graduates and senior students who have agreed to help us in the coming term.

I would like, here, to pay tribute to the men and women of the teaching staff and administration who have carried such heavy burdens for such a long period of time. Without their unselfish efforts, their cheerfulness, and their willingness to work long hours, we could not have carried on during these difficult years. My gratitude goes as well to the students themselves, who have throughout demonstrated a spirit of the very highest order.

G E N E R A L

T E A C H I N G S T A F F

The numbers of members on the teaching staff for the Session 1944-45, exclusive of those on leave of absence, were as follows:

Deans of Faculties _____	4
Assistant to the Dean, Faculty of Arts and Science _____	1
Professors _____	49
Associate Professors _____	31
Assistant Professors _____	26
Special Lecturer _____	1
Lecturers _____	9
Director of Physical Education - Men _____	1
Associate Director of Physical Education - Men _____	1
Instructors (including regular and special sessions) _____	11
Honorary Lecturers _____	4
Part-time Lecturers _____	36
Assistants (including regular and special sessions) _____	113
T O T A L	287

N E W A P P O I N T M E N T S

- * CURTIS, GEORGE FREDERICK, LL.B. (Sask.), B.A., B.C.L.(Oxon.),
Dean of the Faculty of Law and Professor of Law.
- * CHANT, S.N.F., M.A.(Toronto), Professor and Head of the Department of Philosophy and Psychology.
- * CROUCH, LESLIE GRIEL RAYMOND, B.Sc.(Victoria, Australia),
M.Sc.(Utah), Professor of Mining Engineering in the Department of Mining and Metallurgy.
- * HOAR, W. S., B.A.(N.B.), M.A.(West), Ph.D. (Boston Univ.Med.),
Professor of Zoology and Fisheries in the Department of Zoology.
- * ALLEN, GEORGE S., M.A.Sc. (Brit.Col.), Ph.D.(Calif.), Associate
Professor in the Department of Forestry.
- * DeJONG, S.H., B.A.Sc.(Man), M.A.Sc.(Toronto), D.L.S., Associate
Professor in the Department of Civil Engineering.
- * HESLOP, WILFRID GIBSON, B.A.Sc.(Toronto), Associate Professor in
the Department of Civil Engineering.

- * HUME, ROBERT A., LL.B.(Stanford), Ph.D.(Cornell), Associate Professor in the Department of English.
- * SAMIS, C. S., M.Sc.(Manitoba), Ph.D.(London), Associate Professor of Metallurgy in the Department of Mining and Metallurgy.
- * TAYLOR, JAMES C., B.A.(Western Ontario), C.A., Associate Professor in the Department of Commerce.
- * WORT, D.J., M.Sc.(Sask.), Ph.D.(Chicago), Associate Professor in the Department of Biology and Botany.
- AISH, MISS DEBORAH A.K., M.A.(Brit.Col.), D.Lett.(Univ. of Paris), Assistant Professor of French in the Department of Modern Languages.
- * JOHNSON, MISS MARGARET C., B.A.(Brit.Col.), M.S.W.(Washington Univ), Assistant Professor in the Department of Social Work.
- * PARKER, JACK HORACE, M.A.(Toronto), Ph.D.(Toronto), Assistant Professor of Spanish in the Department of Modern Languages.
- WOLFE, WILLIAM, B.A.Sc.(Brit.Col.), M.Sc.(Case School of Applied Science), Assistant Professor of Mechanical Engineering in the Department of Mechanical and Electrical Engineering.
- * THOMAS, MISS ELIZABETH V., A.B.(Wesleyan College), M.S.(New York School of Social Work), Special Lecturer in Group Work in the Department of Social Work.
- * HUMPHREY, MISS RUTH, B.A.(Mt.Allison), M.A.(Oxon.), Instructor in the Department of English.
- * OSBORNE, ROBERT FREER, B.A.(Brit.Col.), T.T.C.Diploma (Brit.Col.) Director of Physical Education, Men.
- * WHITTLE, H. DOUGLAS, B.A.(Man.), B-P.H.E.(Toronto), Associate Director of Physical Education, Men.
- GAGE, WALTER H., M.A.(Brit.Col.), Assistant to the Dean, Faculty of Arts and Science.
- SAGER, ARTHUR H., B.A.(Brit.Col.), Assistant in the Department of University Extension and in the President's Office.
- RENNEY, ARTHUR, B.S.A.(Brit.Col.), M.S.A.(University of California), Assistant, Agriculture, in the Department of University Extension.
- * Appointments effective as from July 1st, 1945.

P R O M O T I O N S

FORWARD, FRANK A., B.A.Sc.(Toronto), M.C.I.M., Mem.A.I.M.E., M.Aust.I.M.M., from Professor of Metallurgy to Professor and Head of the Department of Mining and Metallurgy.

SMITH, MISS MARJORIE J., A.B.(Minn.), A.M.(Chicago), from Associate Professor to Professor and Head of the Department of Social Work.

COWAN, IAN McTAGGART, B.A.(Brit.Col.), Ph.D.(California), from Assistant Professor to Professor in the Department of Zoology.

HARRIS, GEORGE H., B.S.A.(Brit.Col.) M.S.(Oregon State College), Ph.D.(California), from Associate Professor to Professor in the Department of Horticulture.

- * KNAPP, F. MALCOLM, B.S.F.(Syracuse), M.S.F.(Wash.), M.C.S.F.E., M.S.A.F., from Associate Professor to Professor in the Department of Forestry.

MAWDSLEY, MISS M. DOROTHY, B.A.(McGill), M.A.(Brit.Col.), Ph.D.(Chicago), from Associate Professor to Professor in the Department of English.

SPENCER, G.J., B.S.A.(Toronto), M.S.(Illinois), from Associate Professor to Professor in the Department of Zoology.

VERNON, F.W., B.Sc.Eng.(London), Wh.Sch., A.M.I.Mech.E., A.F.R.A.S., from Professor of Mechanical Engineering to Professor of Mechanical Engineering and Lecturer in Aeronautical Engineering in the Department of Mechanical and Electrical Engineering.

WARREN, H.V., B.A., B.A.Sc.(Brit.Col.), B.Sc., D.Phil.(Oxon.), Associate Inst.M.M., F.G.S.A., F.R.S.C., from Associate Professor to Professor in the Department of Geology and Geography.

- * CREIGHTON, JOHN H., M.A.(Toronto), from Assistant Professor to Associate Professor in the Department of English.
- * CROOKER, A.M., B.A.(McMaster), M.A., PhD.(Toronto), from Assistant Professor to Associate Professor in the Department of Physics.
- * HRENNIKOFF, ALEXANDER, Grad., Inst. of Communication Engineering, Moscow, Russia, M.A.Sc.(Brit.Col.), Sc.D.(Mass.Inst. of Technology), Assoc. M.Am.Soc.C.E. from Assistant Professor to Associate Professor in the Department of Civil Engineering.

* Promotions as from July 1st, 1945.

LEWIS, HUNTER CAMPBELL, M.A.(Brit.Col.), from Assistant Professor to Associate Professor in the Department of English.

McILROY, H. M., M.Sc.(Queen's), from Assistant Professor to Associate Professor of Mechanical Engineering in the Department of Mechanical and Electrical Engineering.

- * MANN, KENNETH C., B.A.(Sask.), Ph.D.(Toronto), from Assistant Professor to Associate Professor in the Department of Physics.

MORRISON, EDMUND, B.A.(Brit.Col.), A.M., Ph.D.(California), from Assistant Professor to Associate Professor in the Department of English.

- * PEEBLES, ARCHIE, B.A.Sc., B.A.(Brit.Col.), M.Sc.(Iowa State College), M.E.I.C., Assoc.M.Am.Soc.C.E., from Assistant Professor to Associate Professor in the Department of Civil Engineering.

- * PRETIOUS, EDWARD S., B.A.Sc.(Brit.Col.), M.Sc.(Iowa State College), Assoc.M.Am.Soc.C.E., from Assistant Professor to Associate Professor in the Department of Civil Engineering.

SMITH, MRS. DOROTHY BLAKEY, M.A.(Brit.Col.), M.A.(Toronto), Ph.D.(London), from Assistant Professor to Associate Professor in the Department of English.

AKRIGG, G. PHILIP V., M.A.(Brit.Col.), Ph.D.(California), from Instructor to Assistant Professor in the Department of English.

FIELDS, MISS RUTH E., B.A.(Brit.Col.), M.A.(California), from Instructor to Assistant Professor in the Department of Biology and Botany.

- * KERSEY, LORNE R., B.A.Sc.(Brit.Col.) from Instructor to Assistant Professor of Electrical Engineering in the Department of Mechanical and Electrical Engineering.

THRUPP, MISS SYLVIA, M.A.(Brit.Col.), Ph.D.(London), F.R.Hist.S., from Instructor to Assistant Professor in the Department of History

MacLEOD, ROBERT A., M.A.(Brit.Col.), from Assistant to Instructor in the Department of Chemistry.

MUNDELL, PERCY M., M.A.(Brit.Col.) from Assistant to Instructor in the Department of Chemistry.

- * Promotions as from July 1st, 1945.

NYGARD, H.O.V., B.A.(Brit.Col.), from Assistant to Instructor in the Department of English.

TODD, MISS MARJORIE D., M.A.(Brit.Col.), from Assistant to Instructor in the Department of Bacteriology and Preventive Medicine.

KIEVELL, MISS MYRTLE, B.A.(Brit.Col.), from Clerk of Records in the Registrar's Office to Assistant Registrar.

L E A V E S O F A B S E N C E

ANGUS, HENRY F., Professor and Head of the Department of Economics, Political Science and Sociology, for a period of one year as from September 1st, 1944.

LIERSCH, J. E., Professor and Head of the Department of Forestry, for the period January 23rd, 1945 to September 1st, 1945.

MacLEOD, DR. HECTOR J., Professor and Head of the Department of Mechanical and Electrical Engineering, half-time, for the period April 1st, 1944 to February 1st, 1945.

CAMERON, DR. MAXWELL A., Professor in the Department of Education, from January 1st, 1945 to August 31st, 1945.

* JAMES, DR. RALPH D., Professor in the Department of Mathematics, for a period of one year as from September 1st, 1944.
(Dr. James' leave of absence rescinded as from July 1st, 1945.)

SOWARD, F.H., Professor in the Department of History, for a period of one year as from September 1st, 1944.

HENDERSON, DR. THOMAS G., Associate Professor in the Department of Philosophy and Psychology for a period of one year as from July 1st, 1944.

MORSH, DR. JOSEPH E. Associate Professor in the Department of Philosophy and Psychology, for a period of one year as from September 30th, 1944.

* CROOKER, DR. A.M., Assistant Professor in the Department of Physics, for the period September 1st, 1944 to July 1st, 1945.

* MANN, DR. KENNETH C., Assistant Professor in the Department of Physics, from September 1st, 1944 to July 1st, 1945.

THRUPP, DR. SYLVIA, Assistant Professor in the Department of History, for a period of one year as from September 1st, 1944.
(Dr. Thrupp resigned as from July 1st, 1945.)

TYLER, DR. F.T., Assistant Professor in the Departments of Education and Philosophy and Psychology, for a period of one year as from September 1st, 1944.

VOLKOFF, DR. GEORGE M., Assistant Professor in the Department of Physics, from September 1st, 1944 to July 1st, 1945; extended for one year as from July 1st, 1945.

WRIGHT, THOMAS G., Assistant Professor in the Department of Forestry, for a period of one year as from October 1st, 1944.

GUTHRIE, P.C.F., Instructor in the Department of Classics, for a period of one year as from May 15th, 1945.

MCKENZIE, Robert T., Assistant to the Director of University Extension, for a period of one year as from March 31st, 1945.

* Members of staff returned from leaves of absence July 1st, 1945.

APPOINTMENTS NECESSITATED BY LEAVES OF ABSENCE

MASLOW, ALEXANDER P. A.B., A.M. (Michigan), Ph.D. (California), Associate Professor in the Department of Philosophy and Psychology during the absence of Dr. Thomas G. Henderson.

OLESON, T. J., M.A. (Manitoba), Lecturer in the Department of History, replacing Dr. Sylvia Thrupp, on leave of absence.

ORMSBY, MISS MARGARET A., M.A. (Brit. Col.), Ph.D. (Bryn Mawr), Lecturer in the Department of History during the absence of Professor F.H. Soward.

PETRIE, WILLIAM, B.A. (Brit. Col.), A.M., Ph.D. (Harvard), Lecturer in the Department of Physics during the absence of Dr. Kenneth C. Mann.

SPROTT, EDGAR R., B.A., B.Com.(Queen's), B.S.F.(Brit.Col.), Lecturer in the Department of Forestry, during the absence of Mr. T. G. Wright.

WATSON, J.H.L., B.A.(McMaster), M.A., Ph.D.(Toronto), Lecturer in the Department of Physics, during the absence of Dr. George M. Volkoff.

R E S I G N A T I O N S

IRVING, JOHN ALLAN, M.A.(Toronto), M.A.(Cambridge), Professor and Head of the Department of Philosophy and Psychology.

THRUPP, MISS SYLVIA, M.A.(Brit.Col.), Ph.D.(London), F.R.Hist.S., Assistant Professor in the Department of History.

HENDERSON, MISS MARY E., R.N., B.A.Sc.(Brit.Col.), Cert. P.H.N. (Toronto), Instructor in the Department of Nursing and Health.

VAN VLIET, MAURICE L., M.S.(Oregon), Associate Director of Physical Education.

MOORE, MISS GERTRUDE E., Instructor in Physical Education for Women.

R E T I R A L

GREIG, MISS JANET T., B.A., M.A.(Officier d'Academie) Assistant Professor of French, in the Department of Modern Languages, retired November 1st, 1944.

RE-APPOINTMENTS FOLLOWING ATTAINMENT OF RETIREMENT AGE

TURNBULL, J.M., B.A.Sc.(McGill), M.C.I.M., M.Inst.Met., Professor and Head of the Department of Mining and Metallurgy, who reached age of retirement on July 1st, 1944, was again re-appointed as from July 1st, 1945 to August 31st, 1945.

DAVIDSON, JOHN, F.L.S., F.B.S.E., Associate Professor in the Department of Biology and Botany, who reached age of retirement on August 6th, 1945, was re-appointed to June 30th, 1946.

LIGHTHALL, A., B.Sc.(McGill), Associate Professor in the Department of Civil Engineering, who reached age of retirement on April 1st, 1943, was again re-appointed as from May 31st, 1945 to August 31st, 1945.

BUCK, Frank E., B.S.A.(McGill), Lecturer in the Department of Horticulture, was again re-appointed as from April 1st, 1945 to June 30th, 1946.

APPOINTMENT OF PROFESSORS EMERITI

The title of Professor Emeritus of Geology was conferred on Dr. S. J. Schofield; and the title of Professor Emeritus of Philosophy and Psychology was conferred on Dr. H.T.J. Coleman.

RE-APPOINTMENTS TO THE BOARD OF GOVERNORS

The Honourable Denis Murphy and Mr. Joseph B. Clearihue were re-appointed as members of the Board of Governors for a period of six years as from August 27th, 1945.

ELECTION OF REPRESENTATIVES OF SENATE ON THE BOARD OF GOVERNORS

On August 25th, 1944, Mr. Arthur E. Lord and Mr. H. T. Logan were re-elected as representatives of Senate on the Board of Governors.

HONORARY DEGREES CONFERRED

At the Autumn Congregation on October 25th, 1944, the Honorary Degree of Doctor of Laws was conferred on the following:

His Excellency Liu Shih Shun,
Chinese Ambassador to Canada.

His Excellency Ray Atherton,
American Ambassador to Canada.

The Right Honourable Malcolm MacDonald,
British High Commissioner to Canada
("in absentia")

Major-General G. R. Pearkes,
Commander-in-Chief of the Pacific Command.

At the Spring Congregation, on May 10th, 1945, the Honorary Degree of Doctor of Laws was conferred on:

His Excellency
The Right Honourable the Earle of Athlone,
Governor-General of Canada.

N O T I C E O F A P P O I N T M E N T S

Dr. H. V. Warren, Professor in the Department of Geology and Geography, and Dr. V. J. Okulitch, Assistant Professor in the Department of Geology and Geography, were made Fellows of the Royal Society of Canada.

Dr. M. Y. Williams, Professor and Head of the Department of Geology and Geography was granted Honorary Membership in the Professional Institute of the Civil Service of Canada.

O B I T U A R I E S

MR. ROBIE L. REID

Dr. Reid was a man of varied public interests and activities; but none lay closer to his heart than the University. For twenty-nine years he was the University Solicitor and for twenty-two years a member of the Board of Governors. Even before the institution opened its doors he had determined to gather and some day give to it a comprehensive library of Canadiana. The bequest of his magnificent collection, which has few rivals in its field, has fulfilled this intent, and has provided resources for coming generations of historians. Dr. Reid's scholarly achievements have been attested by the bestowal of various distinctions; in the realm of human relations, many have cause to remember his ability to see beyond purely administrative matters, his friendly understanding of problems affecting both staff and students, his personal interest and kindness.

MR. GEORGE E. ROBINSON

Mr. George Edward Robinson never asked or desired anything at the hands of a recorder, though few men have deserved more. Of honour for himself he might say, in a phrase of his favourite Roman poet, that it meant little more than the strewing of handfuls of dust.

But this province should remember him as one of a small band of men who, half a century ago, brought order and dignity into the confusion of the schools; and this University owes him gratitude for carrying a heavy share of its burden in days of peril. He takes his place in a long and noble line of school-masters who are described, in lines he knew well and loved, as

"Zealous, beneficent, firm . . .
Helpers and friends of mankind."

MR. JOHN RIDINGTON

From his appointment in December, 1914, to his retirement in August, 1940, Mr. John Ridington devoted his gifts of energy and enthusiasm to the service of the University at its central point; and during that time he became a leading figure in the local and international councils of his fellows. He greatly assisted the University in obtaining its library building--the first of its kind in western Canada; he secured for his institution valuable collections of Art; and through his efforts it was made a depository of the Library of Congress. He will not lack monument while our Library stands.

MISS MARY L. BOLLERT

Miss Mary Louise Bollert was appointed as the first Dean of Women in the University. She held that title for twenty years, and for many of those years was a member of Senate. The University is profoundly sensible of the official service which she performed with such grace and dignity; and a great number will gratefully remember her many unrecorded deeds of kindness.

III

ESTABLISHMENT OF THE FACULTY OF LAW

In September of the 1945-46 Session the long-awaited Faculty of Law will become a reality at the University. The Board of Governors and the Senate have already approved the establishment of such a course, and have recommended the appointment of Professor George F. Curtis, Professor of Law at Dalhousie University, as Dean of the new Faculty, and Mr. Frederick Read, formerly of the Manitoba Law School, as Associate Professor of Law.

The establishment of the Faculty of Law has been made possible by the generous support of the Provincial Government and the co-operation of the Vancouver Law Society. A joint committee of the Law Society and the University is now at work on the formation of a five-year course leading to the degree of LL.B. and a six-year course leading to the double degree of B.A., LL.B.

Respectfully submitted,

NORMAN A. M. MacKENZIE,
President.

Vancouver, B. C.,
June 20th, 1946.

REPORT OF THE REGISTRAR

REGISTRATION

FACULTY OF ARTS AND SCIENCE

REGULAR SESSION	MEN	WOMEN	TOTAL	
First Year_____	416	270	686	
First Year Home Economics_____	-	56	<u>56</u>	742
Second Year_____	221	191	412	
Second Year Commerce_____	48	21	69	
Second Year Home Economics_____	-	46	<u>46</u>	527
Third Year_____	142	127	269	
Third Year Commerce_____	28	10	38	
Third Year Home Economics_____	-	16	<u>16</u>	323
Fourth Year_____	105	106	211	
Fourth Year Commerce_____	29	16	<u>45</u>	256
Graduates_____	87	28		115
Social Work				
Special Course_____	1	23	24	
Diploma Course_____	4	23	<u>27</u>	51
Teacher Training Course_____	10	10		20
Directed Reading Courses_____	63	38	101	
Less Double Registrations (D.R.C.) <u>-11</u>	<u>-11</u>	<u>-6</u>	<u>-17</u>	<u>84</u> 2118
	1143	975		
SECOND TERM Special Session				
All Years_____	133	2		135

FACULTY OF APPLIED SCIENCE

REGULAR SESSION			
Second Year_____	176	2	178
Third Year_____	130	-	130
Fourth Year_____	121	-	121
Fifth Year_____	106	-	106
Graduates_____	<u>8</u>		<u>8</u> 543
	541	2	
SECOND TERM Special Session			
All Years_____	3		3

FACULTY OF APPLIED SCIENCE continued

NURSING Regular Session	MEN	WOMEN	TOTAL
Second Year	-	20	20
Third Year	-	12	12
Fourth Year	-	14	14
Fifth Year	-	23	23
Sixth Year	-	8	8
Certificate Course	-	<u>35</u>	<u>35</u>
		112	112

FACULTY OF AGRICULTURE

REGULAR SESSION			
First Year	36	10	46
Second Year	23	7	30
Third Year	15	5	20
Fourth Year	19	6	25
Graduates	11	4	15
Occupational	<u>3</u>	<u>-</u>	<u>3</u>
	107	32	139

SECOND TERM Special Sessions

All Years	8	8
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TOTALS	1935	1123	3058
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Summer Session 1944	222	219	441
Botany Evening Class 1944-45	9	20	29

NATIONALITIES OF STUDENTS 1944-1945 (Racial Origins)

NOTE This list does not include Teacher Training, Directed Reading Course, Public Health Nursing, and Teaching and Supervision (Nursing) students.

REGULAR SESSION

American	66
Armenian	2
Austrian	5
British	240
Belgian	5
Bulgarian	1
Canadian	786
Chinese	55
Danes	7
Dutch	10
English	547
Estonian	2
Finnish	8
French	13
French Canadian	10
German	13
Greek	11
Hebrew	15
Hindu	2
Icelandic	8
Irish	173
Italian	16
Latvian	1
Norwegian	21
Polish	16
Russian	18
Scotch	341
Swedish	28
Swiss	4
Syrian	2
Ukrainians	13
Welsh	28
Yugoslavian	6
Unspecified	223
T O T A L	2696

SECOND TERM Special Sessions

American	2
British	13
Canadian	34
English	41
German	2
Greek	2
Hebrew	2
Irish	10
Norwegian	1
Russian	1
Scotch	25
Swedish	2
Welsh	2
Unspecified	10
T O T A L	147

- GEOGRAPHICAL DISTRIBUTION OF STUDENTS

(over)

G E O G R A P H I C A L D I S T R I B U T I O N O F S T U D E N T S

1944-1945

● REGULAR SESSION

Vancouver 1673

FROM POINTS IN BRITISH COLUMBIA OUTSIDE OF VANCOUVER

Abbotsford	9	Duncan	13	Lumby	1	Revelstoke	6
Agassiz	1	Eburne	20	Lynnman P. O.	1	Reondel	1
Alberni	20	Edgewood	1	Maillardville	2	Rossland	8
Aldergrove	2	Enderby	1	Marysville	2	Royston	1
Alert Bay	1	Essondale	2	Matsqui	4	Saanichton	3
Allenby	1	Falleland	1	Merritt	6	Salmo	3
Argenta	1	Fanny Bay	1	Michel	2	Salmon Arm	3
Armstrong	4	Fernie	2	Milner	6	Sardis	5
Atlin	1	Fife	1	Mission City	11	Savona	1
Baldonnet	1	Fort Fraser	1	Monte Lake	1	Sea Island	1
Barriere	1	Fort Langley	1	Mt. Lehman	2	Shermon P.O.	1
Bella Bella	1	Fort St. James	1	Nanaimo	33	Shoreacres	1
Bella Coola	1	Fraser Mills	1	Naramata	1	Sidney	4
Bloedel	1	Galena	2	Nelson	17	Sardis	1
Boston Bay	1	Galiano Island	1	New Denver	1	Slocan (South)	2
Brackendale	1	Ganges	1	Nicola	2	Smithers	4
Bradner	1	Garden Bay	1	North Bend	1	Sointula	2
Bralorne	1	Gibson's Landing	2	Northfield	1	Sooke	1
Brighouse	6	Golden	1	New Westminster	187	Squamish	3
Brilliant	1	Grand Forks	6	North Vancouver	49	Steveston	8
Britannia Beach	15	Grantham's Ldg.	1	Ocean Falls	9	Stewart	1
Buena Vista	2	Greenwood	1	Okanagan Centre	1	Summerland	2
Canal Flats	1	Haney	1	Okanagan Landing	1	West Summerland	2

Canoe	1	Hatzic	1	Okanagan Mission	1	Terrace	1
Capilano	1	Hazelton	2	Oliver	10	Thrums	1
Cawston	1	Headquarters	1	Osoyoos	1	Trail	18
Cecil Lake	1	Hedley	1	Oyama	3	Vernon	15
Cee Pee Cee	1	Hilliers	1	Parksville	2	Victoria	156
Chapman Camp	3	Hollyburn	14	Peachland	1	Ucluelet	1
Chase	1	Hope	2	Pender Island	1	Webster's	
Chemainus	2	Hornby Island	1	Penticton	24	Corner	1
Chilcotin	1	Horsefly	1	Pt. Alice	4	Wellington	1
Chilliwack	17	Huntingdon	1	Pt. Coquitlam	7	Wells	2
Clayburn	2	Invermere	2	Pt. Hammond	3	Westbank	2
Cloverdale	13	Ioco	3	Pioneer	1	Westview	1
Coalmont	1	Kaleden	1	Pt. Moody	2	W. Vancouver	20
Comox	2	Kaslo	1	Powell River	19	White Rock	12
Copper Mountain	1	Kamloops	21	Prince George	8	Whonock	2
Courtenay	11	Kelowna	15	Prince Rupert	17	Williams Lake	1
Cowichan Lake	4	Keremeos	2	Premier	1	Wistaria	1
Cowichan Station	3	Kimberley	21	Princeton	1	Wynndel	2
Cranberry Lake	1	Kolisilale	1	Qualicum Beach	2	Yenow	1
Cranbrook	8	Kootenay Lake	1	Queen's Bay	1	Youbou	2
Creston	3	Ladner	9	Quesnel	4		
Cultus Lake	2	Ladysmith	9	Quilchena	1		
Cumberland	1	Langford P. O.	1	Radium Hot Springs	1		
Dawson Creek	4	Langley Prairie	7	Redonda Bay	1		
Denman Island	1	Lillooet	1	Robert's Creek	3	T O T A L	1107

• SECOND TERM Special Sessions

Vancouver 87

FROM POINTS IN BRITISH COLUMBIA OUTSIDE OF VANCOUVER

Armstrong	1	Greenwood	1	North Vancouver	3	Sardis	2
Burnaby	1	Headquarters	1	Parksville	1	Sherman	1
Chilliwack	4	Hope	1	Peachland	1	Stewart	1
Cobble Hill	1	Kamloops	2	Penticton	4	Summerland	1
Comox	2	Kelowna	2	Powell River	1	Victoria	5
Copper Mountain	1	Milner	1	Quesnel	1	West Van.	1
Courtenay	1	Nelson	1	Rock Creek	1	Westview	1
Fernie	1	New Westminster	10	Royal Oak	1	Yarrow	1

T O T A L 57

FROM POINTS IN CANADA OUTSIDE BRITISH COLUMBIA

• REGULAR SESSION

Alberta	60	Quebec	5
Manitoba	9	Saskatchewan	31
N.W.T.	1	Yukon Territories	6
Ontario	10		
		T O T A L	122

• SECOND TERM Special Sessions

Ontario	1	Saskatchewan	1
		T O T A L	2

FROM OTHER COUNTRIES

• REGULAR SESSION

China	1	England	2
United States	7		
		T O T A L	10

• SECOND TERM Special Sessions

United States	1	T O T A L	1
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T O T A L S

REGULAR SESSION	2912
SECOND TERM Special Sessions	147

• OCCUPATION OF PARENTS

(over)

O C C U P A T I O N O F P A R E N T S

9 4 4 1 9 4 5

• R E G U L A R S E S S I O N

Deceased 286
Retired 157
Unspecified 200

NOTE This list does not include Teacher
Training, Directed Reading Course, Public
Health Nursing, and Teaching and Supervision
(Nursing) students.

Accountant	56	Decorator	18	Lawyer	28	Purchasing agent	19
Adjuster	2	Dental technician	3	Layout man	1	Radio services	3
Agents	32	Dentist	19	Librarian	1	Railway workers	3
Agriculturist	8	Druggist	8	Livestock dealer	7	Rancher	55
Aircraft	5	Electrician	23	Logging	13	Ration officer	20
Air Force	12	Engineers	136	Lumbermen	37	Real estate	3
Architect	6	Excise Officer	3	Managers	102	Research	16
Army	52	Executive	9	Manufacturers	13	Roadmaster	2
Assessor	5	Exporter	4	Machinists	24	Salesmen	1
Banker	23	Factory worker	10	Magistrate	1	Sawmill employee	64
Baker	17	Farmer	93	Meat packer	1	Scaleman	7
Barber	13	Financier	2	Mechanic	23	Secretary	3
B.C.E.R.	14	Firemen	12	Merchant	103	Shipbuilder	7
Barrister	11	Fishermen	15	Metallurgist	4	Shipwright	5
Blacksmith	5	Foremen	21	Mill worker	19	Shipyard worker	11
Boilermaker	4	Forester	5	Miner	20	Ship's officer	8
Bookkeeper	13	Fruit grower	15	Moulder	4	Shoemaker	3
Boom man	3	Fuel dealer	1	Musician	4	Stage driver	8
Broker	7	Funeral director	1	Navy	15	Steel worker	1
Business	45	Furrier	1	Nipper	1	Surveyor	13
Butcher	12	Garagemen	4	Optometrist	6	Supervisor	8
Buyer	2	Glovemaker	3	Orderly	2	Superintendents	6
Cabinet maker	8	Grocer	16	Pensioner	9	Tailor	20
Carpenter	41	Guard	3	Photographer	2	Tanner	6
Cashier	1	Hoistman	1	Physician	56	Teacher	2
Chef	6	Hotelman	5	Physiotherapist	4	Telegrapher	38

Chemist	6	Horticulturist	2	Plumber	3	Telephone	4
Civic employee	41	Inspectors	25	Police	10	Transfer owner	6
Clergyman	33	Insurance men	23	Postmaster	4	Treasurer	10
Clerks	43	Journalists	9	Postman	13	Truck driver	9
Contractor	43	Jewellers	5	Principal	2	Watchmaker	5
Controller	5	Judge	7	Printer	13	Welder	4
Customs Officer	6	Labourer	32	Professor	7	Wholesale	
Diaryman	1	Landlord	1	Proprietor	9	distributor	7

T O T A L 2696

• SECOND TERM Special Sessions

Retired	9
Deceased	12
Unspecified	13

Accountant	4	Contractor	1	Janitor	1	Real estate	4
Agents	1	Customs officer	1	Labourer	1	Railway	3
Air Force	4	Decorator	1	Lumbermen	4	Rancher	2
Army	5	Distributor	1	Machinist	3	Salesmen	2
Barber	1	Electrician	1	Manager	3	Sawyer	1
Broker	1	Engineers	10	Manufacturer	1	Shipyards worker	2
Builder	1	Exporter	2	Merchant	4	Steel worker	1
Bursar	1	Farmer	6	Metallurgist	1	Supervisor	1
Business	7	Fishermen	1	Musician	1	Teacher	2
Carpenter	1	Fruit rancher	2	Physician	6	Telegraph operator	1
Civic employee	1	Grocer	3	Principal	1	Waiter	1
Clergymen	1	Inspector	1	Professor	1	Watchmaker	1
Clerks	4	Insurance	2	Proprietor	1		

T O T A L 147

LOCATION OF GRADUATES

NUMBER IN:

Vancouver	3223
Other parts of British Columbia	1764
Other parts of Canada	582
British Isles	61
United States of America	290
Other Countries	52
NUMBER DECEASED	213
NUMBER WHOSE ADDRESS IS UNKOWN	1138

T O T A L	7323
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(This count does not include Original
Members of Convocation.)

C O M P A R A T I V E S T A T E M E N T O F R E G I S T R A T I O N

SESSIONS 1935 - 1936 to 1944 - 1945

SESSION	ARTS & SCIENCE	APPLIED SCIENCE	NUR- SING	AGRI- CULTURE	SOCIAL WORK	TEACHER TRAINING COURSE	TOTAL WINTER SESSION	SUMMER SESSION	SHORT COURSES	GRAND TOTAL
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
1943 44	1709	515	67	113		26	2430	441	131	3002
1944 45	2098	546	112	147	51	20	2974	861	113	3948

COMPARATIVE STATEMENT OF DEGREES CONFERRED
SESSIONS 1935 - 1936 to 1944 - 1945

YEAR	M.A.	B.A.	B.Com.	B.Ed.	M.A.Sc.	B.A.Sc.	B.S.F.	B.A.Sc. Nursing	M.S.A.	B.S.A.	TOTAL	GRAND TOTAL
1935	14	196	23		8	57	-	13	2	19	332	3972
October	12	45	5		-	5	-	-	-	1	68	4040
1936	15	175	21	-	6	50	-	7	5	16	295	4335
October	10	38	1	-	2	3	-	-	3	2	59	4394
1937	21	190	28	-	4	48	-	2	7	14	314	4708
October	9	54	8	-	-	6	-	1	1	1	80	4788
1938	20	204	31		6	56	-	7	3	19	346	5134
October	10	53	3		2	4	-	-	-	5	77	5211
1939	19	217	22	-	7	71	-	8	4	22	370	5581
October	5	63	6	-	-	9	-	-	1	2	86	5667
1940	30	212	37	-	4	71	-	13	3	18	388	6055
October	6	62	1	-	-	1	-	-	1	3	74	6129
1941	21	189	26	-	7	81	1	8	2	19	354	6483
October	8	73	9	-	1	-	-	-	3	-	94	6577
1942	14	170	52	-	9	82	3	6	2	26	364	6941
October	12	51	1	3	-	2	-	-	2	5	76	7017
1943	13	167	31	2	3	92	2	12	3	25	350	7367
October	8	51	1	3	-	1	-	-	1	4	69	7436
1944	6	163	37	1	7	87	3	9	1	24	338	7774
October	1	45	4	7	-	1	1	1	-	3	63	7837
1945	10	189	43	4		97	3	8	2	19	375	8212

C O M P A R A T I V E S T A T E M E N T O F D I P L O M A S I S S U E D
SESSIONS 1935 - 1936 to 1944 - 1945

YEAR	TEACHER TRAINING	PUBLIC HEALTH NURSING	SOCIAL WORK	OCCUPATIONAL COURSE IN AGRICULTURE	TOTALS
1935	65	15	3	3	86
October	1	-	7	-	8
1936	60	15	-	-	75
October	-	-	12	-	12
1937	39	16	-	4	59
October	1	5	19	-	25
1938	65	18	1	3	87
October	-	2	15	-	17
1939	54	14	2	4	74
October	1	1	24	-	26
1940	66	12	3	5	86
October	2	-	23	-	25
1941	68	9	1	2	80
October	-	-	22	-	22
1942	59	10	4	4	77
October	-	1	17	-	18
1943	28	27	2	-	57
October	-	-	12	-	12
1944	24	29	8	-	61
October	1 (June)	1	24	-	26
1945	21	32	1	3	57

HONORARY DEGREES CONFERRED

YEAR	LL.D.	D.Sc. (Honoris Causa)
1930	1	
1931	-	
1932	2	
1933	8	
1934	1	
1935	2	
1936	6	
1937	1	
1938	5	
1939	3	
1940	1	
1941	-	
1942	4	
1943	-	
1944 October	4	1
<hr/>		
TOTAL	38	1
Previous Years	8	
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GRAND TOTAL 47

- SCHOLARSHIPS, PRIZES, FELLOWSHIPS AND BURSARIES
AWARDED TO GRADUATES, 1945 (over)

SCHOLARSHIPS, PRIZES, FELLOWSHIPS AND BURSARIES AWARDED TO GRADUATES 1945

During the year many scholarships, 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:

Ainsworth, Allan H.	Rhodes Scholarship	\$1780		Oxford University
Akrigg, G.P.V.	Folger Fellowship	\$2500	English	
Bartholomew, G.	National Research Council Studentship	\$750	Physics	McGill University
Bell, R. E.	National Research Council Studentship	\$750	Physics	McGill University
Blissett, William	Fellowship	Unknown	English	University of Toronto
Carbert, Leslie W.	Scholarship	\$1000	Economics	Columbia University
Creighton, Kenneth D.	Assistantship	\$1025	Economics	University of California
Clark, Robert	Teaching Fellowship	Unknown		Harvard University
Detwiller, Lloyd	Assistantship	\$1250	Economics	University of California
English, Edward	Assistantship	\$1025	Economics	University of California
English, Henry	Assistantship	Unknown	Economics	University of California
Fieldhouse, Roger	Assistantship	\$1125	Economics	University of California

Forster, John H.	Research Assistantship	\$1800	Physics	Purdue University
Hammersley, Donald W.	Scholarship	\$ 750	Physics	University of Washington
Harvey, James W.	Assistantship	\$1025	Economics	University of California
Hobden, Lloyd H.	French Government Scholarship	\$1000	French	University of Paris
Hood, James A.	French Government Scholarship	\$1000	French	University of Paris
Ivey, D. G.	Research Assistantship	\$1800	Physics	Notre Dame University
Johnson, A. C.	Research Assistantship	\$1800	Physics	Purdue University
McLeod, R. R.	Research Assistantship	\$1800	Physics	Purdue University
Newton, Theodore Duddell	National Research Council Pre-Doctoral Fellowship	\$1800	Physics	
Ostle, Bernard	Scholarship	\$ 600	Economics	University of Minnesota
Pepper, Thomas	National Research Council Studentship	\$ 750	Physics	McGill University
Pronger, Lester J.	French Government Scholarship	\$1000	French	University of Paris
Prowd, Lawrence	Teaching Fellowship	Unknown	Economics	University of California
Smith, Marjorie	Assistantship	\$1025	Economics	University of California

SCHOLARSHIPS, PRIZES, FELLOWSHIPS AND BURSARIES AWARDED TO GRADUATES 1945 continued

Smith, Wilma	Teaching Fellowship	\$1125	Statistics	University of California
Stanier, Roger Y.	Guggenheim Fellowship	\$2500	Bacteriology	
Stead, Gordon	Assistantship	\$1025	Economics	University of California
Turner, David, B.	American Wildlife Institute Fellowship	\$1500	Wildlife Survey	
Wilson, Atholl	Teaching Fellowship	\$ 625	Mathematics	University of Toronto

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 during the 1945-46 Session _____ \$ 34,130.00

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 _____ \$781,939.00

Respectfully submitted,

CHARLES B. WOOD,
Registrar.

THE DEAN OF THE FACULTY OF ARTS AND SCIENCE

The following report on the work of the Faculty of Arts and Science for the academic year 1944-45 has been compiled from the reports of the Heads of the various departments.

DEPARTMENT OF BACTERIOLOGY AND PREVENTIVE MEDICINE

Enrolment for courses given in this Department set a new high record. More important than the inefficient teaching of proper laboratory technique, which inevitably results from overcrowding, is the danger from infection through faulty technique on the part of careless students. There is also the unfortunate necessity of having to reject applications for space and opportunities to carry out research projects.

As in the past, the Department, the Connaught Laboratories (Western Division) and the Provincial Laboratories co-operated closely with the Department in research projects. The following summary by the Head of the Department indicates some of the research carried on during the year:

Dr. D.C.B. Duff maintained his interest in the conditions favouring the toxin production of Clostridium welchii (one of the gas gangrene organisms). Under a special National Research Council grant Miss Frances Airey, B.A., was engaged as Research Assistant, beginning in June. Various techniques for precipitating and concentrating Cl. welchii toxins have been tried out on filtrates from several strains. During the summer months Miss Dorothy Barton, B.A., was employed under the grant from the Board of Governors, and under Dr. Duff's direction was able to confirm previous findings, that the amino-acids cystine and tyrosine and glutamic acid are essential sources of nitrogen for the growth of Cl. welchii.

Dr. L. E. Ranta, who is employed for approximately half his time by Connaught Laboratories, directed a research problem into the mechanism underlying enhancement of virulence of various micro-organisms, particularly V. cholerae, through addition of mucin to the cultures. Miss Margaret Calam, B.A., assisted Dr. Ranta in this work, and wrote her thesis on this project. Dr. Ranta also spent considerable time on developing the Salmonella Typing Centre which is maintained by Connaught Laboratories (Western Division) as the only centre in Canada to which, under international agreement, Salmonella cultures from Canadian sources should be sent for identification.

Dr. C. E. Dolman continued investigations into the staphylococcal toxins, with particular emphasis upon the food poisoning factor. During the year, very valuable help was received in this field from Mr. W.G.B. Casselman, M.A., who was assigned a special grant made to Dr. Dolman for this purpose. Mr. Casselman combined his research activities under this grant with duties as Class Assistant, and proved extremely useful in many ways in the Department. A particularly promising development was the adaptation of the technique known as "fractional electrol transport" to the separation of the food poisoning factor from staphylococcal filtrates containing multiple toxic metabolites. Unfortunately, this work had to be interrupted just as it reached a crucial stage, owing to Mr. Casselman's entering the Faculty of Medicine at the University of Toronto, but it is hoped that the project can be resumed next summer. Meanwhile Miss Juanita Wood, B.A., who was also employed under a National Research Council grant, worked during the summer, and will continue to do so during the coming year, in the same field of research.

A special grant from the Board of Governors was assigned to Miss Margaret Calam, who worked during the summer months on the effect upon staphylococcus alpha, beta, and enterotoxin production of various metallic and other ions in the nutrient media.

Miss Juanita Wood carried out a research project for her Honours B.A. degree, under Dr. Dolman's direction, which merits special comment, since it had to do with a very rare type of botulism. This type of food poisoning involved three deaths in a family at Nanaimo, and was due to consumption of infected home-canned salmon. Only two previous outbreaks of botulism had been recorded in Canada, and the particular type of organism involved in this instance had never before been identified in this country, and only on some four or five occasions elsewhere in the world. In co-operation with the Provincial Laboratories, Miss Wood investigated the properties of this Type "E" Clostridium botulism, and it is intended to carry on with this research in the coming year.

Doctors Ranta and Dolman, as in the past, gave various lectures on different topics to lay and professional bodies. Dr. Duff attended the Laboratory Section meeting of the Canadian Public Health Association in December, where he presented a paper entitled "Some Nutritional Requirements of Clostridium perfringens". Dr. Duff continued as Consulting Pathologist to the Fisheries Research Board of Canada, and Dr. Dolman as Consulting Bacteriologist to the Vancouver General Hospital. Dr. Dolman was a member of the Editorial Committee of the American Public Health Association concerned with the revision of the textbook "Standard Methods for the Examination of Dairy Products".

DEPARTMENT OF BIOLOGY AND BOTANY

During the year under review, this department, in co-operation with the Department of Agronomy, and with the aid of a special research grant, continued its study of the Genetics of Alfalfa Hybrids. Under the British Columbia Industrial and Scientific Research Council, members of the Department also conducted an extensive investigation of the agar-producing Red Algae and the Algin-producing Brown Algae of this coast. According to the report of the Head of the Department, there is evidence that the basis of a marine plant industry is being developed. Jointly with the Forestry Department, and with the support of the Forestry Committee of the British Columbia Research Council, the Department conducted investigations, still continuing on forest sites and silvicultural problems at the University Forest, southern portion of Garibaldi Park.

Members of the Department, with students, also conducted research, the results of which will later be published, on a variety of topics, including the following: The Polygonal Graphing of Ecological Factors for the Forests of British Columbia, (R. W. Pillsbury and A. H. Hutchinson); The Alfalfa-Hybrids-Inheritance of the factors for seed production, pollen and ovule development, weight and spread (Catherine Eek and A. H. Hutchinson); Studies on the Alternaria Early Blight in Potatoes (N. S. Wright and F. Dickson); Comparative Study of the Anthracnose Diseases of Sycamore Willow (P. Salisbury and F. Dickson); Variations in Pathogenicity of Saltations in Cultures of *Colletotricum phomoides* (Caroline Johnson and F. Dickson); The verticillium Wilt of the Barberry (Mary Dennis and F. Dickson); Vitamins in Fish Foods (J. Rattenbury under Dr. J. Allardyce and Dr. W. A. Clemens, and supported by a grant from the Dominion Research Council); The Study of New Mutations in *Drosophila melanogaster* (Ruth Fields and Kathleen Cole); X-Ray Effects on Growth, Reproduction and Chemical Composition of Certain Plants (D. J. Wort); Seed Setting in Beets as Influenced by Cold Treatment of Germinated Seed (D. J. Wort).

Gifts to the Department, which are gratefully acknowledge, include a set of coloured wood carvings of mushrooms, donated by Mr. J. Koerner; a set of books and pamphlets on wood destroying fungi, donated by Mrs. Irene Stewart; and a scholarship and a prize for high standing and research in marine botany, donated by Mr. and Mrs. D. Armstead.

Dr. Hutchinson served as Chairman of the special committee on Marine Plants of Economic Importance, and as a member of the Forestry Committee of the British Columbia Industrial and Scientific Research

Council. Dr. J. Allardyce was President of the British Columbia Academy of Sciences; and Professor Davidson acted as Chairman of the Provincial Advisory Committee on Medicinal Plants, Examiner in Botany for the British Columbia Pharmaceutical Association, and member of the executive of the Vancouver Natural History Society.

Dr. Hutchinson was a member of several University Committees. He was Chairman of the Physical Education Committee, Secretary of the University Council on Athletics and Physical Education, and a member of the Provincial Committee on Accredited Schools. Dr. Dickson was a member of the Men's Athletic Directorate, and Dr. Allardyce served on the executive of the Alumni Association and the Newcomers' Organization Committee.

During the year Dr. D. J. Wort and Dr. T.M.C. Taylor were appointed to the Department.

DEPARTMENT OF CHEMISTRY

The British Columbia Industrial and Scientific Research Council has installed extensive equipment in the Department to investigate the possibility of economically converting certain British Columbia soft woods into hard wood. This equipment consists of a vacuum-pressure tank for the impregnation of the wood with chemicals which can then be polymerized into plastics under heat and pressure; a Girdler, No. 8, short-wave heating unit and an Elmes hydraulic press have been installed for this purpose.

This investigation is at present being confined to the possibility of making a product which can compete with oak for flooring. Every species of wood, and every thickness calls for investigation not only as to the pressure and time required for impregnation, but also for the exact temperature, pressure and time required for the polymerization of the various plastic forming chemicals. Although it is anticipated that this will be a long-term undertaking, some results of promise have already been attained. The chief difficulty anticipated is one of cost.

The National Research Council and the Polymer Corporation of Sarnia, have asked the Department to co-operate with them on problems of polymerization in connection with synthetic rubber production. The equipment and chemicals necessary for these investigations will be financed by the National Research Council.

Dr. M.J. Marshall has developed for the National Research Council a green signal flare, utilizing a new principle. This flare is better in colour than any of its predecessors and less sensitive in transportation and storage. Dr. Marshall and his students are continuing the study of the properties of superactive charcoal, and renewing the work, interrupted by the war, on the micro-analysis of gases. Results of the last mentioned work were reported in the form of a paper entitled, "A Method for the Micro-Analysis of Gases", to the Royal Society of Canada. Dr. Marshall is continuing his study of the causes of metal corrosion in aqueous media.

Dr. Marshall was elected to the Council of the Canadian Institute of Chemistry, which was formed this year by the amalgamation of all the chemical societies in Canada. He attended the annual meeting at Quebec in June. Dr. Marshall has also been elected Chairman of the Vancouver Section of the Institute.

Work on the action of cationic collectors in the flotation of silica has been resumed by Dr. W. Ure. Quaternary ammonium pyridinium chloride, trimethylcetyl ammonium bromide and laurylamine hydrochloride were used as cationic collectors, in which the active groups are in the positive radical. Silica is readily collected by such reagents and selective flotation of silica and various silicates may thereby be effected. The mechanism of the process is being studied.

Dr. Ure is also investigating the use of free radicals in catalytic processes. The reaction of these radicals on methane is being studied, with the object of inducing unsaturation and polymerization as steps in the production of a liquid fuel from the gas.

A study of the mechanism of smoke production from chlorosulphonic acid, which Dr. Ure was making for the National Research Council, was completed and reported to the Council.

Dr. Harris and his students have carried out investigations in the analytical field. Particular attention was paid to the volumetric determination of cerium in acid solutions and the quantitative determination of small quantities of tin in ores. The use of organic reagents for the separation of several of the less common, but industrially important metals, is being carefully studied.

Dr. J. G. Hooley has been studying the rate at which metallic hydroxides dissolved in various solvents attack fused and crystalline silica. He is also investigating the preparation of 'foam' glass from powdered glass. Successful samples have been made. Similar work using slag is under way.

DEPARTMENT OF CLASSICS ---

It is a pleasure to report that Professor Louis A. MacKay was honoured by the award of a Guggenheim Fellowship. Professor MacKay has been granted leave of absence for the session 1945-46.

Mr. Patrick Guthrie continued on leave of absence for service with the armed services.

DEPARTMENT OF COMMERCE ---

After the noticeable drop in 1943-44, registration in Commerce showed a definite increase, although, as a result of the war, the absence of male students in the upper years was evident.

During the session, a start was made in establishing the advanced course in Cost Accounting (Commerce 3), and in reviving the course in Foreign Trade Practices and Policies (Commerce 13). Experience showed that these courses, originally planned as half-year courses, require full academic year status. It is interesting to note that, in two cases, student reports dealing with practical phases of cost accounting were adopted as manuals by the firms concerned.

This year the Commerce Club became an organization within the Undergraduate Society. The annual graduation banquet, at which Senator J.W. deB. Farris was the chief speaker, was attended by 375 guests.

The Department is grateful for the assistance given by visiting lecturers in the classes in Industrial Management and Marketing, and for the field trips made possible by the co-operation of various industrial concerns.

DEPARTMENT OF ECONOMICS, POLITICAL SCIENCE AND SOCIOLOGY ---

The Head of the Department, Professor H. F. Angus, who had been with the Department of External Affairs, Ottawa, was still on continued leave of absence during the session. Although it was not possible to offer the courses given by Professor Angus, the Department was fortunate in obtaining the services of President Norman A. M. MacKenzie, who conducted a course in International Law

Courses in Economics showed increased enrolment. The large classes placed heavy burdens on the instructors. In Statistics, inadequacy of equipment and accommodation raised additional problems.

Courses in Social Work, which had been under the direction of Dr. Topping from 1929 - 1943, were organized into a separate Department. Miss Marjorie J. Smith became Head of the new Department of Social Work, and her assistants were transferred to the new Department.

During the year the Department continued with its correspondence courses for service personnel. Economics 1 and Economics 4 were given by Dr. Crumb and Economics 6 by Professor Drummond. Mimeographed courses were sent through the Veterans' Organization, the Canadian Legion, to prisoners of war overseas and to other military personnel.

Dr. Topping was responsible for the work in Sociology. For the year under review, he continued his study of the Canadian Family, a progress report on which appeared in the August number of the official journal of the National Conference of Family Relations. A signal honour was conferred on Dr. Topping, when he was elected President of the Pacific Northwest Conference on Family Relations in the spring of 1945.

Professor Drummond prepared three briefs for the Commission of Inquiry, Forest Resources of British Columbia. These were presented in public hearing during January and February 1945.

Dr. Crumb gave a series of lectures throughout the winter in the Normal School, Vancouver, on "Money and Banking".

As usual, members of the Department were called upon for many outside lectures.

DEPARTMENT OF EDUCATION

After a prolonged leave of absence, the Head of the Department, Dr. G. M. Weir, resumed his duties at the University on September 1, 1944. On the other hand, Dr. F. T. Tyler, who was loaned to the Naval Services, was absent from the University during the entire academic year; and Dr. M. A. Cameron, who was invited to conduct a study of educational finance on behalf of the Provincial Government, was absent from January 1, 1945. Dr. Cameron's work in School Administration and Law was carried on by the Head of the Department. Mr. A. R. Lord, Principal of the Vancouver Normal School, assisted in conducting the Saturday morning classes for teachers resident in the Lower Mainland.

A new course in Educational Sociology (Education 40), with special reference to post-war educational problems, was offered for the first time during the Summer Session, 1945. This course was given by the Head of the Department.

DEPARTMENT OF ENGLISH

In comparison with the corresponding class of the previous year, the First-Year Class in Arts and Agriculture was greatly increased in number, the registration being approximately 750. To give instruction to these students, 13 sections were set up, with an average enrolment of close to 60. Dr. G. G. Sedgewick, the Head of the Department has been pointing out year after year, it is utterly impossible to give anything like respectable teaching to elementary classes as large as these. They should not number more than 35. Unhappily, the situation grows worse as returned men keep flocking back to the University. Besides, it is increasingly difficult to get competent instructors to handle first-year classes. All senior members of the staff do their share of the work--all they can (and more) without neglecting their other duties. It is true that the young Honour Graduates who have been appointed as assistants from year to year have, in general, acquitted themselves as admirably as they could possibly be expected to do; but it is unfair to the Freshmen to put them in charge of instructors who are getting initial training themselves as well as teaching others. Probably the only permanent solution of the problem is to set up a corps of qualified instructors of junior college level who will be given secure and dignified places on the staff.

The Second-Year Class (English 2) is also becoming more and more unwieldy; and the fact that they cannot be given any further exercise in writing remains a grave defect in the curriculum. The solution suggested for the Freshmen may apply to the Sophomores as well.

The work of the Upper Classes proceeded as usual. It very much needs expansion and enrichment. Little change, except a grievous reduction in the years of depression, has been made or could have been made in the last twenty years. Further, the Department is unable, at present, to make more satisfactory provision for candidates for the M.A. degree.

To complete this record of shortcoming, I have to report that English 3 and 4 in Applied Science are still unprovided with a sufficient number of instructors. In spite of a major addition lately made to the English staff in those courses, the burden imposed upon the instructors is still ludicrously heavy.

From January to May 1945, from May to July, and again in the Summer Session, the Department set up classes in English 1 and 2, and in one senior class, for returned men. No special consideration was given to these men in order "to get them through", nor did they expect it. And I am glad to say that their performance was satisfactory beyond all expectation: the number of failures was almost incredibly small.

During the year, Robert Hume, A.M. of Stanford and Ph.D. of Cornell was appointed Associate Professor of English.

DEPARTMENT OF GEOLOGY AND GEOGRAPHY

This year there was an upward trend in the registration for Geology 1 and 2. In the senior classes the increase was only slight, due perhaps to the subsidy offered by the Government to students in other branches of engineering.

Geography 1 was given for the first time as a full three unit laboratory science. It was evident from results that a number of students selected it in the hope that it would be easy. Consequently the number of failures was large.

The higher courses in Geography were not well attended, probably because of the lack of sufficient courses for full honours in Geography and the difficulty of obtaining employment for graduates. In view of the increasing importance of this subject in the high school curriculum, it is hoped that these difficulties may be overcome, perhaps by co-ordination with some outlet in Commerce.

Dr. C. O. Swanson continued his work as consulting geologist for the Consolidated Mining and Smelting Co. This occupied his time before and after the teaching year.

Dr. H. C. Gunning continued consulting work in association with Dr. Swanson for the Consolidated Mining and Smelting Company until April 30th, after which he carried out geological investigations on mineral deposits for the International Mining Corporation (Canada) Ltd.

Dr. H. V. Warren was engaged in scientific prospecting during the summer, and in mineral investigation during the college term.

Dr. V. J. Okulitch worked up old courses in Geography to a new state of efficiency and planned new courses. He lectured on Russia for evening extension courses and gave Geography 4 in the Summer Session.

His research included:

- the identification, description and illustration of a collection of Cambrian fossils from Mexico for the United States National Museum.
- the preparation of a paper on the Cellular tissue in Cambrian sponges, for the Journal of Palaeontology, and
- the mounting of the cast of a Devonian fossil arthrodire Dinichthys manitobensis for our Geological Museum.

During the summer a month was spent in the Salmo Area of British Columbia studying the stratigraphy and ore deposits in the vicinity of Pend-d'Oreille River.

Dr. M. Y. Williams, the Head of the Department, compiled a report on his summer's work for the Phillips Petroleum Company and prepared for publication a report on the Crown Colony of Hong Kong. This was read by title at the May meeting of the Royal Society of Canada. Administrative work occupied a considerable amount of time, in addition to the regular teaching load. His summer was mostly given over to convalescence after an operation on June 12th.

The temporary members of the staff included Mrs. G. O'Brien, as lecturer in Geography during the winter term and Mr. Thomas Weir, as lecturer in Geography during the Summer Session. Mrs. O'Brien is a graduate of the University of London and has lectured in the Department previously. Mr. Weir was granted his Master's degree in Geography in August by the University of Syracuse, New York State. Both gave excellent service.

The Student Assistants were John DeLeen, E. F. Roots and A. G. Jones. All three did their work in an able and satisfactory manner.

J. Donnan has made himself indispensable as a laboratory technician and has done much class work assisting in relation to mechanical operations. His technical skill in making rock sections is recognized by the Department of Mines, Victoria, and other Institutions for whom he has done work.

The Department was honored by the election of Dr. Okulitch as a Fellow of the B. C. Academy of Sciences, and of Drs. Warren and Okulitch to Fellowship in the Royal Society of Canada. The latter award is all the more gratifying in view of the fact that in all of Canada only three members were elected to Section 4.

Dr. Williams was elected as honorary member of the Professional Institute of the Civil Service of Canada on the occasion of its Silver Jubilee, in recognition of his having served as Second President of the Institute.

DEPARTMENT OF HISTORY

Professor F. H. Soward continued on leave with the Department of External Affairs, Ottawa, where he is in charge of the Latin-American Section.

Dr. Sylvia Thrupp, also on leave resigned to take a post at the University of Chicago. The work of this well-known scholar and writer has attracted wide attention, and the loss of her services will be keenly felt. Her colleagues wish her all success at Chicago.

During the session Professor A. C. Cooke, who was in charge of the directed reading course, Historyll(b), "The Development and Problems of the British Colonial Empire", wrote and circulated an exceedingly valuable set of notes for the course. These notes, now in mimeographed form, may well serve as the basis for a printed syllabus for a valuable course.

Professor Cooke also took charge of the examination work under the High Schools and University Matriculation Board at Victoria during the summers of 1944 and 1945.

Dr. Margaret Ormsby and Mr. T. J. Oleson acted as substitutes for Professors Soward and Thrupp, and did much to lighten the load in the Department. Dr. Ormsby and Mr. Oleson also gave instruction to ex-service personnel in the Special Winter and Special Spring Sessions respectively.

In May, Dr. W. N. Sage attended the annual meeting of the Historic Sites and Monuments Board of Canada at Ottawa. In Kingston he attended the sessions of the Social Science Research Council, the Royal Society of Canada, the Canadian Historical Association, the Canadian Political Science Association and the Canadian Institute of International Affairs. Dr. Sage continued as Chairman of the Committee on Graduate Training of the Canadian Social Science Research Council. On May 24th, at Kingston, he delivered the Presidential address to the Canadian Historical Association on the subject "Where Stands Canadian History?". This address will appear in the Report of the Association for 1945.

The following quotation from the report of the Head of the Department is of interest:

"The time has now come for the Department of History to expand and to undertake instruction in new fields and to strengthen the work in the older fields. This will require appointment of at least two new professors, viz:

A Professor of the Culture and History of the Far East, including Russia in Asia; and a Professor of Canadian History who can undertake research and graduate work."

In addition there is the problem of Latin America. If Professor Soward is prepared to offer instruction in that field, especially in the diplomatic history of Latin America, the need will not be so pressing, but this university cannot afford longer to neglect Latin American history and culture.

Our graduate work is rapidly increasing. At present it is merely 'tacked on' to our ordinary work but it is becoming an ever-increasing burden, especially on myself. The number of M.A. students is constantly increasing and with the return of the service men and women we are being absolutely swamped. No really satisfactory work can be accomplished under present conditions. Time must be found for graduate courses and more graduate seminars, and members of the teaching staff should have their burdens readjusted so that they can co-operate in this. In all new appointments the training of the candidates and their ability to do graduate work should be most carefully considered."

DEPARTMENT OF HOME ECONOMICS

During the session 1944-45, three years of the four-year course leading to the degree of Bachelor of Home Economics were offered. New courses included: Household Equipment and Furnishings, Economics of the Household, Experimental Cookery, Advanced Nutrition and Dietetics.

The number of students in Home Economics increased from 60 to 117. This increase placed a heavy strain on laboratory facilities. This strain was partially relieved by the co-operation of the Department of Dairying, which provided laboratory space for clothing, art, textiles, and for storing equipment. Through the generosity of the Vancouver School Board, laboratory space in the King Edward High School was again made available.

At the request of the Surrey Farmers' Institute, members of this Department and the Department of Nursing and Health gave an evening extension course to women of the Surrey District. During the month of July, Miss Lefebvre and Miss Black co-operated with the Dominion Department of Agriculture by speaking to groups of women in central British Columbia and on Vancouver Island at various Agriculture field days..

In April, 1945, Miss Black was a delegate from Vancouver to the Pacific Northwest Family Life Conference held in Spokane. She is an executive member of this Conference, and was also chosen President of the Vancouver Home Economics Association. Miss Lefebvre became President-elect of the Lower Mainland Dietetic Association.

DEPARTMENT OF MATHEMATICS

In the year under review, registration in the lower years was very heavy, and members of the staff had a greatly increased burden of teaching and marking. The influx of students from the armed forces indicates that in the near future there will also be a heavy increase in the upper years.

The Department was without the services of Dr. R.D. James, who was granted leave to join the Operations Analysis Division, United States Army Air Forces. From September 1944 to January 1945, Dr. James was Analyst with Headquarters, 3rd Air Force, at Tampa, Florida, and from February 1945 to June 1945, was gunnery consultant at Headquarters, 8th Air Force, in England.

In July 1944, Dr. F.S. Nowlan was elected a Governor of the Mathematical Association of America, to represent North and South Dakota, Montana, Idaho, Oregon, Washington, and Canada west of the Great Lakes. While at the business meeting held in Chicago in November 1944, he proposed the formation of a Pacific Northwest Section of the Association to include Oregon, Washington, Idaho, and British Columbia. A committee which he named, and of which he was a member, drew up bylaws, and the Pacific Northwest Section was formally recognized.

In June 1945, Dr. D.C. Murdoch and Dr. F.S. Nowlan attended the Canadian Mathematical Congress in Montreal. The former presented a paper entitled "Secondary School Mathematics from the University Point of View" and the latter a paper entitled "University Programmes for Ex-service Personnel; a Summary." Dr. Nowlan was also made chairman of the newly created committee of the Congress on Prizes, Scholarships and Fellowships, and a member of the executive. Dr. S.A. Jennings and Professor W.H. Gage, who were also invited to speak, were unable to attend.

Dr. James continued as member of the Council of the American Mathematical Society for the second of a three-year term.

Dr. James, Dr. Jennings and Dr. Murdoch collaborated with the staff of the "Mathematical Reviews" and, during the year, reviewed various research papers.

During the year, Dr. Nowlan began and completed a new text on Analytic Geometry to be published soon by McGraw-Hill Book Company. His manuscript on College Algebra, consisting of twenty-five chapters, was also accepted for publication by the same company.

Dr. Jennings continued investigation of the properties of groups associated with nilpotent rings, restricted Lie Algebras, and p-groups. Preliminary studies were made on the extension of Jacobson's definition of the radical as the join of quasi-regular left ideals to non-associative systems.

Professor Gage continued his investigation of formulas of the Liouville type, and of generalizations of Uspensky's formulas involving incomplete functions.

Dr. Jennings served as a member of the Faculty Committee on Student Affairs, and Professor Gage as Chairman of the Newcomers' Organization Committee, Chairman of the Scholarship Committee, Chairman of the Senate Committee on Pharmacy, and member of the executive of the B. C. Academy of Sciences.

In May 1945, a committee consisting of members of Faculty, representatives of the Department of Education, and representatives of the High School Teachers was appointed to consider revision in Mathematics requirements for University Entrance. This committee, under the Chairmanship of Professor Gage, has not yet made its final report. Dr. Nowlan and Dr. Jennings also serve on the committee.

Dr. D. Buchanan continued to serve on a confidential committee appointed by the National Research Council. At a meeting of the Royal Society in the spring he presented a paper entitled "A Six-Body Problem", the results of research during the year. He also addressed the Seattle Junior and Senior High School Mathematics teachers in March 1944. Other addresses given by the Dean are listed elsewhere in the report.

DEPARTMENT OF MODERN LANGUAGES

To all who know France, and not to teachers of French only, this was the memorable year of her liberation. The resumption of normal relations has been slow, but His Excellency the French Ambassador, who paid an official visit to the University in July, brought the welcome news of the renewal of the French Government scholarships which for many years before the war gave such an impetus to French studies at this and other Canadian universities. Two of these will now be awarded each year to graduates of the University of British Columbia, instead of one as formerly. The Ambassador expressed the intention of his government to implement the recommendations of the Report of the United Nations Education Conference concerning world educational exchange, and its desire to establish reciprocal arrangements in the first place with Canada for the extension of youth-travel and student-teacher exchange to the widest possible field, a purpose which calls for every co-operation in the interests of cultivating in young people an international outlook.

The four students of French who attended the 1945 Summer School of the University of Western Ontario held at Trois Pistoles, Quebec, fully maintained the reputation gained for the University by their predecessors, three of them returning with book-prizes, while the silver cup offered to the leading English-speaking student of the year was won by Miss Aline Roulston.

Mr. Alfred E. Carter, B.A. (1938), M.A.(McGill), was appointed Assistant Professor of French at the University of Saskatchewan. He published in the Toronto Quarterly (April, 1945) an article on 'Francois Mauriac and the Classical Tradition.'

Lieut. Lester J. Pronger, B.A. (1940) published in Rome an article on Stendhal (details not available). It is expected that he will become the authority in this country on Stendhal; he neglected no opportunity during four years overseas of getting to know eminent Stendhalians in France and Italy.

Mr. William T.E. Kennett, B.A. (1932), Ph D.(Princeton), was appointed Assistant Professor of French at Victoria College, Toronto

Miss Madeleine B. Ellis, M.A. (1937), Ph.D.(Toronto) was appointed Assistant Professor of French at the University of Manitoba.

Miss Joan Yvonne Dangelzer, B.A. (1935), D`es L (Paris) was appointed leading woman announcer on the English circuit at C.B.C. Montreal.

Miss Gwladys Downes, M.A. (1941), following three years of brilliant work with the National Research Council, goes to Trinity College, Toronto, as house-mistress, and resumes studies for the Ph.D.

The services of the large group of University of British Columbia graduates in French and German engaged during the war by the Department of External Affairs and the National Research Council have brought the University many laurels at Ottawa.

Dr. Charles E. Borden spent the summer at the University of California, preparing a study of Lessing. Dr. Evans completed a work in French on Social Romanticism.

Dr. Evans was appointed by McGill University external examiner for the M.A. degree.

DEPARTMENT OF PHILOSOPHY AND PSYCHOLOGY

During the year two members of the Department were given leave of absence to undertake important war duties. Dr. J.E. Morsh was appointed (as a civilian) to the Directorate of Operational Research (Army); and Dr. F.T. Tyler, with the rank of Lieutenant-Commander, to the post of Assistant Director of Personnel Selection (Navy).

In July, Dr. Thomas G. Henderson, who was appointed to the staff in 1942, and has been on leave with the armed forces, took up his position in the Department.

Professor J.A. Irving was awarded a grant of approximately \$2100 by the Canadian Social Science Research Council to enable him to write a book on the social philosophy and social psychology of the Social Credit Movement in Alberta. Field Research in Alberta was begun in June, 1945. The project is being financed by the Rockefeller Foundation.

In June, Professor Irving resigned to accept an appointment at Victoria College, Toronto. His colleagues at the University wish to record their appreciation of his contributions to the University and their best wishes for success in his new position.

DEPARTMENT OF PHYSICS

During the session three members of the teaching staff were on leave of absence for important scientific research work related to the war effort.

Dr. A.M. Crooker was granted leave of absence early in 1941 to join the staff of Research Enterprises Limited as Chief Physicist in charge of optical design. Because of the severe bombing of British industries in 1940, it was decided to establish certain key armament industries in Canada.

Research Enterprises was a crown company organized to manufacture (a) radar equipment (b) optical fire control instruments. In addition to his work in optical design, Dr. Crooker did work on quality control, specification of engineering tolerances and performance specification for instruments. In March, 1945, Dr. Crooker was sent to Europe to investigate enemy manufacturing facilities for optical fire control equipment. Later he was seconded to General Eisenhower's Headquarters as a member of the Scientific Intelligence Advisory Sub-Committee. Still later he served with the Allied Control Commission.

Dr. K.C. Mann was granted leave of absence in May, 1941, to join the research staff of the Radio Branch of the National Research Council where he supervised the development and construction of an all-purpose radar set for the Canadian Navy. He also assisted in the design of a special-purpose compact radar set for the British Admiralty. In 1943 he spent some time in England demonstrating the latter set to the Admiralty. Dr. Mann also served as production engineer for radar equipment and as British Admiralty Representative at Research Enterprises Limited.

Dr. George Volkoff is directing the theoretical and mathematical work at the Montreal Laboratories of the National Research Council. An important part of the scientific work on the Atomic Bomb is being carried on in Canada at the Montreal Laboratories as a joint undertaking between the United Kingdom and Canada. The work of this laboratory is closely co-ordinated with the research activity in this field in the United States. As Head of the Theoretical Division, Dr. Volkoff has been in charge of the design of the plant for the production of atomic bomb materials now under construction at Petawawa, Ontario.

The spectacular developments in Physics and Engineering immediately before and during the war were responsible for a very large increase in the number of students enrolled in both the junior and senior courses in Physics. The absence of three senior members of the

teaching staff at the same time would have affected the teaching very seriously if the Department had not been fortunate in obtaining some very competent high school teachers and younger physicists as sessional lecturers. In this connection the work of Mr. R.E.G. Langton, who has been on leave of absence from the Haney School Board for the past four years, and of Dr. William Petrie, who has recently been appointed to the staff of the University of Manitoba, is especially worthy of note.

The research work of the Department has been somewhat curtailed by lack of staff and space. However, Dr. H.D. Smith continued his investigations of the physical properties of various synthetic rubbers. Some of the results obtained were given in a paper entitled "Thermal Conductivity of Rubber", presented at the May, 1945, meeting of the Royal Society of Canada. A grant of \$3520.00 has been received from the National Research Council Committee on Synthetic Rubber Research for further work in this field during the 1945-46 session.

Dr. William Petrie made special studies of the colour temperatures of the Wolf-Rayet stars and of the light scattering from small metallic particles. Some of the results were embodied in a paper entitled "The Problem of Theoretical and Observational Line Strengths" presented at the Royal Society of Canada in May, 1945.

Dr. H.D. Smith represented the University of British Columbia on the U.S. Navy Eclipse Expedition to Bredenbury, Saskatchewan, at the time of the total solar eclipse on July 9th, 1945. He also spent some time at the Dominion Astrophysical Observatory, Victoria studying a problem in connection with interstellar matter.

Dr. A.E. Hennings has represented the Department on the University Entrance and Senior Matriculation Examination Board. He has also rendered invaluable assistance in preparing the plans for the new Physics Building.

Until August 22nd, 1945, Dr. G.M. Shrum served as Acting Director of the British Columbia Industrial and Scientific Research Council. It is a pleasure to record that the newly appointed Director of the Council, Dr. Stephen E. Maddigan, as well as the Head of the Physics Division, Dr. Alan C. Young, are graduates in Physics from the University of British Columbia.

DEPARTMENT OF SOCIAL WORK

Until April 1st, 1945, the Social Work Course was carried on as part of the Department of Economics, Political Science and Sociology. On April 1st, it was organized as a separate department, with Miss Marjorie J. Smith as Head.

In the fall of 1944, an application for membership in the American Association of Schools of Social Work was submitted. In March, 1945, the University was visited by Miss Leona Massoth, Executive Secretary of the Association. Approval has now been given. This approval gives provisional membership for two years, after which a re-inspection is made before full membership is granted. This application covers only the first year of a two year graduate curriculum in Social Work, so that it will be necessary to apply later for accrediting of an advanced programme leading to a Master's degree.

Much work has been done during the year with our field work agencies. Training for social work involves the practical clinical experience of working in a social agency under close supervision. The agencies depend to a considerable extent on the help we can give toward maintenance of standards and development of staff. About half our time is spent in this area, as the field work training our students get determines to a great degree how well theory is integrated with practice and how ready the student is to assume the full responsibility of a job. In the future, as agency standards improve, we can allow less time for this part of the work.

The Head of the Department conducted three institutes in the province during the year. In November 1944, a four-day seminar in elementary case work was held in Victoria where there was an enrolment of 35 workers from the Island, the Mainland and the State of Washington. This institute was sponsored by the Victoria chapter of the Canadian Association of Social Workers. In February, 1945, a four-day institute was conducted in Nelson for the benefit of rural provincial welfare workers and again for a similar group in Kamloops in April. Both of these seminars were given at the request of the Provincial Secretary's Department.

Extension lectures were given by both the Head of the Department and Miss Reebel, including a course in Counselling and a Child Care group in the Workers' Education Programme.

The Head of the Department took part in four radio broadcasts during the year. There were numerous speeches, addresses, and talks given by both members of the Department.

In January 1945, the Head of the Department attended a two-day session of the Committee of Canadian Schools of Social Work in Toronto and went on to Cleveland for the meetings of the American

Association of Schools of Social Work. The meetings in Toronto were devoted to a discussion of plans of training case aides for governmental agencies and to the preparation of a brief addressed to the National Department of Health and Welfare requesting a federal subsidy for Social Work training. The last information available seems to indicate that there is a possibility for such financial assistance.

Miss Smith was elected a member of the Case Work Section Committee of the National Conference of Social Work. Her papers given in the Spring of 1944 were published during the year in the proceedings of the Canadian Conference of Social Work and The National Conference of Social Work.

DEPARTMENT OF ZOOLOGY

In common with other departments, the Department found its facilities and equipment greatly taxed. An additional laboratory section had to be instituted in Zoology 1 and double sections arranged in Zoology 2, 5, 6. The Head of the Department states that with the increase in both undergraduate and graduate students, it is apparent that further additions to the staff are necessary.

During the year arrangements were completed for the use of Burnaby Lake as a study area for class and research work.

At the suggestion of the Head of the Department of Zoology, McGill University, Miss Joan Anderson carried out researches in fulfillment of requirements for the degree of Doctor of Philosophy, under the supervision of Dr. Clemens.

Under the supervision of Dr. Clemens three men on the staff of the International Sockeye Salmon Commission, and registered for the Master's degree, prepared theses based upon investigations being carried out for the Commission. Another research student, Miss Oillie Boyd, investigated tributaries of the Cowichan River as to their potentialities for salmon and trout production, and two others, Mr. J. Rattenbury and Mr. R.W. MacLeod, carried out certain studies of the vitamin contents of trout foods. This latter project was supported in part by the National Committee on Fish Culture.

Professor Spencer attended to the usual heavy flow of inquiries from citizens about insect attacks. From early June to the middle of September he was in camp on the cattle ranges of the north Kamloops area continuing his long-term work on grasshopper-cycles. In his own words "this year 1945 witnessed the peak and the beginning of the

decline of the most devastating outbreak of the lesser migratory locust, Melanoplus mexicanus mexicanus that the Province has ever experienced. Efforts were therefore concentrated on the study of the Sarcophagidae, parasitic 2-winged flies that bring about this decline; I have now reared and identified 14 species of these flies out of the total of 16 that have been recorded to date by all workers in North America, as parasites of grasshoppers. One, the most promising for laboratory propagation, was studied in some detail. There are two flies only of the Nemestrinidae in British Columbia. I have worked out the life cycle of one of them as an important parasite of one of our worst hoppers and this season established that the second is a parasite of mexicanus. These histories have not previously been worked out.

"I have now 17 schmitt boxes of Sarcophagidae representing 27 species. Since this work has been done for the Dominion Government, specimens of all species will be sent to Ottawa, but the bulk of the material comes to this University. I also collected this summer 7 schmitt boxes of insects of all orders for the Department.

"A series of field and household tests was carried out with the new insecticides DDT and 666, gammexane, the English product. The results are being submitted to Ottawa.

"I have pooled my collections of British Columbia wasps and hornets, and of bumble bees with Mr. Buckell of the Dominion Science Service, Kamloops: I had more wasps and he more bumble bees. Between us, they are now all named and only require checking by experts; they are classified to queens, workers and drones of each species. After representatives have been sent to the National Collection at Ottawa, most of the rest will come to this University; the collection consists of some 13 schmitt boxes of wasps and over 30 boxes of bumble bees: only in the far north will further collecting produce more species of bumble bees.

"Also of the Hymenoptera, my collections of Cuckoo flies (Chrysididae and Velvet ants (Mutillidae), both parasitic families, are fairly well representative of those that occur in this Province: I shall start identifying them this winter.

"The specialist in Hymenoptera at Ottawa has particularly requested to be allowed to work over the many families of parasitic forms in our collections; types of species new to science will be deposited in the National Collection and paratypes, in our Department."

In Dr. McTaggart Cowan's programme, curatorial work with the vertebrate collections in the Museum of Zoology took an important place in the year's activities. The collections have now reached a size where their cataloguing and organization must be completed in order that effective use can be made of them in the teaching and research activities of the Department. Dr. Cowan's report on this work is as follows:

The herpetology collection was catalogued in its entirety and is now represented by 738 specimens. A card index or reference catalogue has still to be prepared.

Three hundred and sixty-seven specimens of mammals were received and catalogued. In almost every instance the skull or entire skeleton was prepared as part of the specimen. The study collection of mammals now number 1212.

Two hundred and twenty-two specimens of birds were added to the study collections during the year. The catalogue of this Department now bears 828 entries. There are some 200 additional specimens of birds not as yet catalogued. These are part of a collection donated several years ago and many of them are poorly prepared and in need of remaking before they can be incorporated as a useful part of the study collection. During the year approximately 30 specimens from this collection were relaxed, remade and added to the study series. It is a pleasure to acknowledge the expert assistance of Mr. Kenneth Racey of Vancouver with this preparation. It is hoped that the forthcoming year will see further inroads into this work.

The greater part of the additions to both the bird and mammal collections was taken and prepared in the field by either myself or James Hatter, who served as Dr. Cowan's assistant during the summer and in addition did a considerable amount of volunteer work for the Department's collections.

As with the herpetology collection, the time has now come when it is essential to prepare reference catalogues in addition to the Department catalogues currently maintained, for the bird and mammal series.

During the summer of 1945 the Department received an important donation for the study collection of mammals. This consisted of 243 skulls, mostly of carnivores, from the Rocky Mountain region of western Alberta, the gift of Mr. Robert Peyto of Banff in memory of his father the late William Peyto, by whom the collection was assembled.

During the year approximately 120 specimens of birds and mammals were identified for institutions and private individuals.

Dr. Cowan served throughout the year as consultant in wildlife management to the National Parks Bureau. In connection with this he spent two weeks in December 1944, and three and a half months during the summer of 1945 in the Rocky Mountain Parks.

Here the major problems under study were associated with the management of the elk herds of Banff, Jasper, Kootenay and Waterton Parks; the diseases and parasites of the large game mammals; the position of coyotes and wolves in the ecology of the parks; and the removal, by live-trapping, of surplus beaver and marten populations in the parks for the purpose of restocking trapped out lands in northern Alberta.

Opportunity was taken to amass data on many other aspects of the fauna and flora of the Rocky Mountain region.

Research conducted during the year was largely associated with the investigation of decimating factors in the game herds in the Rocky Mountain Parks. Good progress was made but much more remains to be done. The investigation into the pathological conditions of the Columbian black-tailed deer was completed during the year and the results prepared for publication.

Dr. Cowan, in collaboration with J.A. Munro, carried forward his work on the 'Review of the Avifauna of British Columbia'. It is hoped to bring this to completion in the current year.

Preliminary work on a "Handbook of the Mammals of British Columbia" comprised the supervising of the preparation of illustrations and the drafting of keys to the Insectivora, Chiroptera and Microtines.

A fairly extensive paper on the Avifauna of Jasper National Park was prepared for the National Parks Bureau, as was a report upon the summer field work and a preliminary report upon parasites and diseases of the large game of the Rocky Mountain Parks.

As a member of the committee on reserved areas, of the Ecological Society of America, Dr. Cowan assembled data covering the Provincial and Dominion Parks and game reserves of British Columbia and western Alberta.

The work of the Head of the Department, Dr. W.A. Clemens, included the following:

During the year the account of the marine fishes of British Columbia was brought to a conclusion and has been submitted to the Fisheries Research Board for publication.

A portion of the materials obtained on the fishery survey of Teslin lake has been examined and a preliminary report submitted to the Provincial Fisheries Department for publication.

The annual report on the sockeye salmon runs to Rivers Inlet and the Skeena and Nass rivers has been submitted to the Provincial Fisheries Department for publication.

With Dr. G.C. Carl, work has been nearly completed on an account of the fresh water fishes of British Columbia.

With Professor G.J. Spencer, a check list of the fresh water organisms of the Province is being brought to completion.

A study of the natural food of the trout of British Columbia has been continued.

During the summer of 1945, Dr. Clemens assisted in a study of the possible cause of an odour and taste appearing in the city's water supply from Seymour Creek.

As representative of the University on the Fisheries Research Board, Dr. Clemens attended the annual meeting of the Board in January and meetings of the Executive Committee in May, both in Ottawa, as well as several sub-executive and committee meetings in Vancouver. He also continued as a member of the Marine Plant Committee and the Fisheries Technical Committee of the British Columbia Research Council. At the Royal Society meeting in Kingston in May, he presented two papers by Professor Spencer and one by himself.

In February, Dr. Cowan was given leave for one week to attend the Dominion-Provincial Wildlife Conference in Ottawa at the invitation of the National Parks Bureau. At the conferences a Committee was appointed to inquire into the training of personnel in the field of wildlife management. Dr. Cowan was appointed as one of its four members. During the year he was also appointed to the Committee on Education and Professional Standards of the American Wildlife Society.

Dr. Clemens, Professor Spencer, and Dr. Cowan each gave a number of public lectures to various organizations.

SPECIAL RESEARCHES

As in previous years certain research projects were carried on under special grants from the Board of Governors or other bodies. The following are summaries of reports submitted to the Dean of the Faculty of Arts and Science for the fiscal year 1944-45.

DEPARTMENT OF BACTERIOLOGY AND PREVENTIVE MEDICINE

● BACTERIAL FOOD POISONING Dr. C.E. Dolman

During the four summer months June to September of last year, Mr. Gordon Fierheller, B.A., was a full-time research assistant under a special research grant assigned to the above project. The main purpose of the investigation was to attempt to find a method of detecting and estimating staphylococcus enterotoxin (the food poisoning factor) without recourse to the use of cats or human volunteers. Previous work in this laboratory had established the separate identity of this food poisoning factor from other staphylococcal metabolites, and a method was found of producing the food poisoning substance on a synthetic medium without the complication of other toxic bacterial products being present.

Using this method of preparing the enterotoxin, rabbits were intensively immunized in order to produce a monovalent serum. Several difficulties were encountered owing to premature death of rabbits, and to the presence of small amounts of unwanted antigens in the material injected. However, towards the end of the summer, by using specially treated rabbit serum, a specific flocculating zone was demonstrated which appeared due to a union between enterotoxin and its antibody. Further work is required to determine the conditions under which a serum of high potency could be produced in larger quantities from appropriately immunized horses. If a suitable horse serum could be produced, this might be distributed as a standard serum for detection in the test-tube of staphylococcus enterotoxin. With the co-operation of Connaught Laboratories, a horse is now being immunized in Toronto, with a view to production of such a serum.

● GAS GANGRENE TOXIN Dr. D.C.B. Duff

Miss Ann M. Clemens, B.A., was employed as research assistant during the summer of 1944. The nutritional requirements of Clostridium welchii were further clarified, and an almost completely synthetic medium was developed, upon which the bacterium can maintain growth indefinitely. The medium consists of suitable salts, glucose as energy source, the amino-acids cystine, tyrosine, glutamic acid as nitrogen sources; essential growth factors are calcium pantothenate, pyridoxin, biotin, nicotine acid, and an unidentified factor present in fullers' earth eluate of yeast extract. The latter factor appears to be specific for Cl.welchii, since it is not replaceable by other substances known to be essential

for other members of the Clostridia. Its chemical identity has not yet been determined.

During work on the nitrogen requirements, an inhibitory action of certain combinations of amino acids was noted, such as has been previously reported for other microorganisms.

The work has been presented before the Laboratory Section, Canadian Public Health Association, at its December 1944 meeting in Toronto. Further work should be carried on as to the factor or factors responsible for toxin production.

Investigations carried on by Miss Dorothy Barton, B.A., and Miss Margaret Calam, B.A., under grants from the Board of Governors, are mentioned in the report of the Department.

DEPARTMENT OF BIOLOGY AND BOTANY

- VITAMIN-HORMONE RELATIONSHIPS Dr. J.A. Allardyce
No special research grant was made available in 1944-45, but through the funds of the Department of Biology and Botany research was continued on "Vitamin-Hormone Relationships" with particular reference to the effect of thiamine, riboflavin, niacin, pyridoxine, pantothenic acid and p-aminobenzoic acid along with thyroxine on the basal metabolic rate of Wistar rats.
- GENETICS OF ECONOMIC PLANTS Dr. A.H. Hutchinson
A paper on Factors of Seed Production in Medicago (Alfalfa) hybrids is being prepared for publication. This research which has continued for a number of years and from various angles now shows a very satisfactory co-relation of the several factors of seed production in this economic plant. Until recently the complexity of the problem concerning many factors has appeared almost impossible. It is a source of satisfaction to report progress.

Research is being conducted on the Genetics of Cone-Bearing Trees. This field of investigation has received recent attention as instanced by the establishment of projects at Ottawa and a Station in California. It is planned to give more emphasis to genetic research in this field as the work on Medicago approaches completion.

DEPARTMENT OF CHEMISTRY

● LIGNIN INVESTIGATIONS Dr. R.H. Clark

At the request of the Powell River Pulp and Paper Company, the Department of Chemistry has undertaken investigations as to the possible use of the lignin from their waste sulphite liquors.

The first investigation was on the possibility of using the lignin in the manufacture of lignin plastics. We have come to the conclusion, largely from the work done by the Howard Smith Paper Company of Ontario and by the Forest Products Laboratory of Wisconsin, that lignin produced by the calcium bisulphite process, such as is used at Powell River, is unsuited for the making of plastics. This process introduces sulphononic groups into the lignin, which renders the lignin unsuited for plastic manufacture.

Lignin from the sodium hydroxide process of paper manufacture, on the other hand, gives a material of considerable promise in the plastic field. Unfortunately the latter process is not adaptable at Powell River.

An investigation which has occupied our time this year has been on the possibility of obtaining phenols from the Powell River lignin. Many investigators have obtained varying yields of phenols, particularly pyrocatechol, by fusing the lignin with alkalis. Pyrocatechol gives excellent plastics of the Bakelite type and there would be a ready market for the product provided it could be produced at low enough cost.

The sulphononic groups introduced into lignin by the calcium bisulphite process of paper manufacture can be replaced, in part, by hydroxyl groups by alkali fusion to yield pyrocatechol. Various yields have been reported by many investigators, the yield depends, apparently upon the kind of wood used in the paper process.

The conversion of the lignin sulphonates into phenols by the fusion with alkalis, according to all investigators, calls for a large excess of alkali. The fusion has to be carried out in an inert atmosphere, in a steel container, the iron acting as a catalyst for the displacement process.

The yields of pyrocatechol which we have been able to obtain from the Powell River Paper Company lignin falls far short of having any commercial possibilities. Our yields are lower than some found by other investigators. No one, as yet, however,

has obtained results which would justify the process being used commercially, since the synthetic phenols can be manufactured at a considerably lower cost.

- **SUPERACTIVE CHARCOAL** Dr. M.J. Marshall
Measurements of the adsorption of chlorine on charcoal were continued. The new measurements support the hypothesis previously advanced that the chlorine is held to the carbon surface by chemical forces.

A new method for the micro-analysis of gases pumped off the charcoal has been developed.

The possibility of decomposing water at room temperature by superactive charcoal is being investigated. A positive result would have interesting theoretical consequences.

- **BRITISH COLUMBIA COAL AND SHALE** Dr. W.F. Seyer
Work this year has been largely on the solvent characteristics of binary solutions. An interesting discovery has been made in this connection. In the case of one binary mixture, a critical solution range has been found. Optimum concentrations for binary mixtures have been reported before. However, the optimum concentration in these cases rarely exceeded by more than 25% the extractive property of the single components. In our case, when in the critical concentration region, this property is enhanced as much as 500%. We are as yet unable to explain this type of reaction as it appears to be more than just a solution phenomenon.

This discovery has considerable industrial implications in that it is now possible to remove by solvent extraction all the volatile material from certain coals at atmospheric pressures and at about 190°C. Much work on coal extraction has already been done elsewhere, but in all these cases, pressures as high as 50 atmospheres have been used with temperature as high as 400°C. In our opinion, the fact that coal extraction can be carried out at low temperatures and pressures by the proper selection of solvent mixtures makes the process commercially feasible.

We have, so far, limited ourselves largely to the investigation of Hat Creek coal. The Hat Creek coal deposit is one of the largest in British Columbia. Its mining problems are difficult to solve because of the nature of the deposit and because of the high ash content of much of the coal. So far, half the

coal substance has been brought into solution and freed from the ash. With the help of Dr. Warren we have been able to show the presence of vanadium in the ash. The concentration is sufficiently high to make the recovery of this substance worthwhile commercially.

This extensive work has only been possible because the present owners of the coal deposit have themselves contributed over \$2200 in the form of wages to my assistants.

Publication of the results obtained is contemplated in the near future.

- REDUCTION OF NATIVE ORES Dr. J. Allen Harris
Work on the quantitative determination of small amounts of tin in ores was continued last year. New volumetric methods of analysis of molybdenum, tungsten and cerium were also tried out.

Excellent results have been obtained in the cases of tin and cerium.

- SURFACE REACTIONS OF MINERALS IN FLOTATION Dr. W. Ure
An investigation is being made of the mechanism of the flotation of silica by the use of cationic collectors, which are polar organic compounds containing a relatively large organic cation. The optimum conditions for the use of some of these collectors have been established, and methods of analysis worked out to enable adsorption measurements to be made. The work is being continued.
- GLASS WOOL Dr. J.G. Hooley
The purpose of this work is to prepare a rigid, porous insulating material from glass or slag. A sample of the best product obtained has been submitted.

DEPARTMENT OF GEOLOGY AND GEOGRAPHY

- STRATEGIC METALS Dr. H.V. Warren
Under the title of "Strategic Metals Research" several investigations have been concluded and the results published. The scope of these studies may be appreciated when it is stated that researches on zinc, tin, cobalt, and gold have all been completed, that one new mineral has been discovered, that six have been reported for the first time in Canada, and one for the second time in the world.

DEPARTMENT OF PHYSICS

- APPLICATION OF RAMAN EFFECT TO PROBLEMS IN OIL INDUSTRY
Dr. H.D. Smith

Further studies were made of the Raman spectra of cis and trans decalin and of several members of the series of saturated hydrocarbons of type C_nH_{2n+2}

Work was continued on the magneto-optical rotations of a number of petroleum derivatives and results of value were obtained.

DEPARTMENT OF ZOOLOGY

- PARASITES AND DISEASES OF THE COLUMBIAN BLACK-TAILED DEER
Dr. I. McTaggart-Cowan

During the period April 1944 to March 1945, prosecution of this study was confined primarily to its laboratory phases. University commitments and travel difficulties restricted the amount of field work possible.

Studies undertaken were: (1) Fecal examinations to determine the species of parasites present in the deer population on certain areas not previously investigated. (2) The investigation of tissue changes induced in the retropharyngeal pouches of deer as a result of the presence of deer nose-fly larvae. (3) The preparation of additional microscope slides illustrative of the normal and pathological histology of this deer. (4) The preparation of a series of microscope slides that will permit the determination of the course of development of cutaneous scent glands and the age at which they first become functional. The latter point is of considerable importance in connection with studies of predation upon fawn deer.

The general investigation of parasitism and disease in the black-tailed deer has now reached a point where publication of results is warranted. Preparation of this report is in progress.

- KEEPING DEER AND GAME BIRDS FROM DAMAGING CROPS Mr. C.D. Fowle
During the summer of 1944 a study of game damage to agricultural crops in the Duncan, Vancouver Island area was undertaken by Mr. C. David Fowle. The study was financed jointly by the University of British Columbia and the Provincial Game Commission and was under the direction of the Department of Zoology.

During the study the nature and extent of game damage on sample crop areas was determined and considerable data dealing with control measure was assembled. Many of the game damage complaints

were found to have a sociological rather than biological background and in this connection the field of farmer-sportsman relations was explored and suggestions made for mitigating existing frictions.

A comprehensive report containing the findings of this study and many suggestions for alleviating the existing game damage problem was prepared and has been published by the Provincial Game Commission.

- RELATION OF VITAMINS TO THE NUTRITION OF TROUT

VITAMINS IN FISH NUTRITION Mr. J.A. Rattenbury

During the year the construction of an improved and very sensitive photo-electric colorimeter fluorimeter was completed. With this instrument preliminary determination of Vitamin A, thiamine and riboflavin were made on fresh and refrigerated natural trout foods such as fresh water shrimps, crayfish, aquatic insects, grasshopper, snails and Kokanee. Vitamin A was practically absent except in the livers of Kokanee. Appreciable amounts of thiamine and riboflavin were present in nearly all of the materials.

- VITAMIN ASSAYS OF FOODS FED TO YOUNG TROUT IN A PROVINCIAL HATCHERY Mr. R.A. MacLeod

Samples of canned herring and frozen beef liver and beef spleen as fed to young trout were obtained and assayed for Vitamin A, thiamine and riboflavin. The photo-electric fluorimetric colorimeter as developed by Mr. J.A. Rattenbury was used.

The results show that canned and herring and frozen beef spleen do not contain significant amounts of the three vitamins while frozen beef liver is a fairly prolific source of all three.

- PRODUCTIVITY OF SALMON AND TROUT Miss Otille Boyd

SALMON AND TROUT PRODUCTION IN TWO STREAMS TRIBUTARY TO THE COWICHAN RIVER

A detailed study of the physico-chemical and biological conditions in these two streams has been made and the results are being analyzed. It is evident that for the salmon there is required much gravel bottom and good current for reproduction but little if anything in the way of food as the young salmon migrate to the Cowichan river in the early spring. For trout there are required pools, riffles, fair current and abundant food organisms if the streams are to support young trout over the summer period. It is apparent that optimum production of both salmon and trout cannot be maintained in the same stream.

DIRECTED READING COURSES

Two directed reading courses were offered during the year: English 13, by Professor F.G.C. Wood; and History 11(b), by Professor A.C. Cooke. Several departments also continued to offer courses for service personnel through the Canadian Legion.

SPECIAL SESSIONS

To help returning service men and women begin or resume their University studies, two special sessions were held. The first of these extended from the beginning of January to the end of April, and the second from the beginning of May to the end of June. By attending both sessions, or one of them and the summer session, ex-service personnel were able to complete the equivalent of a year's work. Courses offered by the Faculty of Arts and Science included Chemistry 1, Chemistry 2, Economics 1, English 1, English 2, Mathematics 1 and Mathematics 2 in the Special Winter Session; and Biology 2, Commerce 1, Economics 6, English 2, English 16, French 1, Beginners' German, History 4, Mathematics 1, Physics 1 and Zoology 1 in the Special Spring Session. Courses were also offered by the Faculty of Agriculture.

The standard attained by men and women registered in the special sessions was extremely high.

PROFESSOR GEORGE E. ROBINSON (deceased)

The death occurred on January 24, 1945, in Charlottetown, Prince Edward Island, of Professor George E. Robinson, who had been a member of the Faculty of the University from the beginning and also of the institutions which preceded it. As the first Registrar and the first Dean of Arts, he had much to do in setting the course of the University in its early years. Upon his retirement in 1932, he became the first Professor Emeritus. He was always a devoted friend of the University and an outstanding figure on the campus. His memory will be held in affectionate regard by all who knew him.

DEAN MARY L. BOLLERT (deceased)

In the passing, on July 31, 1945, of Miss Mary Louise Bollert, late Assistant Professor of English and Dean of Women, the University lost another valued friend. In 1921 Miss Bollert was appointed to her office as its first incumbent, and for twenty years thereafter she

fulfilled its duties with grace and dignity and devotion. Hundreds of our students gratefully remember her for unwearied performance of official tasks and even more gratefully for the help and sympathy which she gave them without measure, far exceeding obligation.

CONCLUSION

During the year the Dean gave many public addresses.

In the fall term, at the invitation of the Washington Education Association, he addressed audiences at Hoquiam, Centralia, and Vancouver (Washington). Under the auspices of the Pacific Northwest Conference of Arts and Science, he also spoke at Cheney and Pullman. In the spring term he addressed the Women's Canadian Club at Victoria and the English-Speaking Union at Seattle. In June he attended the Conference on Adult Education at Missoula.

The Dean also continued to serve as a member of the Matriculation Board and the Accrediting Board of the Provincial Department of Education.

In conclusion, the Dean wishes to thank the members of Faculty for their co-operation and assistance, and to express his appreciation of their successful efforts in meeting the many problems that have arisen in the course of the year.

Respectfully submitted,

DANIEL BUCHANAN,
Dean,
Faculty of Arts and Science.

REPORT OF

THE DEAN OF THE FACULTY OF APPLIED SCIENCE

In previous reports references were made to the increasing need for additional space and equipment. During the year under review the erection of a second storey in the Electrical Engineering building was commenced. Provision will thus be made for a laboratory devoted mainly to the study of electronics. The pressure in the present Electrical Laboratory will be greatly relieved and space obtained for one or two classes in other subjects.

A marked increase in attendance is especially noticeable in the Department of Electrical and Mechanical Engineering; 52 students registered for the fifth year in the Department and 60 students for the fourth year. In addition 4 Chemical and 6 Physics students took courses in the Department.

There is an increasing demand, especially from returned soldiers, for more highly specialized courses in such subjects as electronics and aeronautical engineering. Mr. F.W. Vernon, Professor of Mechanical Engineering, has been given the additional title of Lecturer in Aeronautical Engineering.

As in former years, nearly every member of the teaching staff in the Faculty of Applied Science gave valuable technical services to industrial firms, professional bodies and the general public.

In the Department of Civil Engineering, Dr. A. Hrennikoff was engaged in the structural designing of a pulp mill at Port Alberni with Bloedel, Stewart & Welch. Mr. J.F. Muir was employed in designing water works systems and sewage treatment plants for the R.C.A.F. Mr. A. Peebles worked in the draughting office of one of the Vancouver shipyards. He served as chairman of the Vancouver branch of the Engineering Institute of Canada. Mr. E.S. Pretious was in charge of surveys and hydraulic model studies for the International Pacific Salmon Fisheries Commission in connection with the Fraser River projects.

In the Department of Forestry, Mr. F.M. Knapp served as president of the Association of Professional Engineers of British Columbia. He was the British Columbia representative at the annual meeting of the Dominion Council of Professional Engineers held at Calgary in May, and also held meetings with the branch districts at Powell River, Trail and Kimberley during the summer months. He continued as secretary of the Forestry Advisory Committee of the British Columbia Industrial and Scientific Research Council. He also continued his part-time statistical work for Aero Timber Products Limited through-

out the year. Dr. B.G. Griffith was secretary-treasurer of the Vancouver section of the Canadian Society of Forest Engineers. During the summer he was engaged on an alder survey in the Squamish Valley and Sumas Mountain Districts with Mr. C.D. Schultz, Consulting Forest Engineer.

In the Department of Mechanical and Electrical Engineering, Dr. H.J. MacLeod was chairman of the Board of Examiners for the B. C. Association of Professional Engineers, while Mr. W.O. Richmond and Mr. H.M. McIlroy served as members of the Board. Mr. Richmond was chairman of the B.C. Chapter, American Society for Metals. During the past summer he was employed by the British Columbia Industrial and Scientific Research Council. Mr. S.C. Morgan was a member of the executive of the Vancouver branch of the American Institute of Electrical Engineers. During this past summer he took a special course in Lighting under arrangements made between the General Electric Company and the University. Mr. W.B. Coulthard was employed by the General Electric Company. Mr. McIlroy was again active in Navy work. Mr. D. Thomson was with the General Equipment Company engaged in heating, ventilating and refrigerator design and installations. Dr. H.J. MacLeod continued his work with the National Research Council on ship protection work with the Navy.

In the Department of Mining and Metallurgy, Mr. F.A. Forward was on the staff of the Freeport Sulphur Company at New York for the summer months.

In the Department of Nursing and Health, Miss E. Mallory served as president of the Registered Nurses' Association of British Columbia and also as honorary secretary of the Canadian Nurses' Association. Miss P. Capelle was convener of the section on Public Health Nursing Education of the Registered Nurses' Association of British Columbia. All members of the staff gave occasional lectures to lay and professional bodies during the year.

The contributions made by the members of the staffs of Chemical and Geological Engineering are listed in the report of the Dean of Arts and Science.

It is apparent that pressure of work in University and outside activities leaves little time for research. However, investigational studies were undertaken by the staff and students of some departments as noted in the statements by departmental heads.

The Department of Forestry was allotted a grant of \$2,000.00 by the British Columbia Industrial and Scientific Research Council for silvicultural research on the University Forest Reserve at Pitt Lake. Three young men have been engaged in a study of the basic factors

affecting regeneration of various tree species following logging operations. A survey of the 3000 acres of logged land in the Forest to determine the degree of regeneration, together with causes of failure or success, is part of the programme which will reach only the initial stages this year but is expected to be carried on for a number of years. A weather station has been established in the Forest, equipment for which, including rain gauge, maximum and minimum recording thermometers, etc. was permanently loaned by the Dominion Meteorological Service. Arrangements have been made to keep a continuous record of temperature, rainfall, etc. Over a period of years these weather data will prove extremely valuable. The project is under the direction of Professors Knapp and Hutchinson.

A half acre sample plot was established in 55-year old second growth one-quarter mile southwest of Blaney Lake for the purpose of studying growth rates and mortality in this age and site class. Permanent corners and boundaries were established and preliminary data collected.

Re-examination was made of the three alder plots in the Campus Forest and the data will be worked up during the coming winter. Thinning, pruning and planting studies were continued in the Campus Forest as a part of field or classroom work.

A 16-page illustrated brochure on the Forest Reserve was prepared by Mr. Kanpp for distribution among the forest industries. The purpose of the booklet is to inform the public of the great possibilities of the Forest Reserve and to stimulate financial aid in the construction of facilities at the Forest for research and student use.

The research work carried out by the Department of Mining and Metallurgy during the past year has been closely interwoven with the work of the British Columbia War Metals Research Board and with the Division of Mining and Metallurgy of the British Columbia Industrial and Scientific Research Council which succeeded the Research Board as of April 1st, 1945. The mutually beneficial relation between the Department and the Council which has continued throughout the year has proven of great value to both and there is every prospect that this value can be increased as time goes on.

The Department has contributed the use of its facilities and has further assisted in the research programme by permitting members of the staff to serve in technical and advisory capacities on projects operated by the Council. In return, many new items of equipment purchased by the Council, have been placed at the disposal of the Department for use in special fields of instruction, though the

most important contribution made by the Council is of a more intangible nature--I refer to the fact that the actual contact live, practical problems and the presence of the members of the Council staff in the Department laboratories have quickened the interest of the students in the courses in Metallurgy and have provided them an opportunity for the observation of Metallurgy in action that would not have been possible otherwise.

The extent of the research activity in the laboratories of the Department may be gauged by the expenditures made by the War Metals Research Board since 1942, as shown in the following table:

YEAR	AMOUNT EXPENDED	
1942-43	\$12,500.00	War Metals Research Board
1943-44	15,565.00	War Metals Research Board
1944-45	21,776.00	War Metals Research Board
1945-56 (Budget	32,925.00	Research Council

The investigation commenced under a former appropriation for "Arsenic Research" concerned with the "Determination of the Heat of Formation of Arsenopyrite" was continued on a limited scale during the year by Mr. B.H. Morrison. A paper was read at the annual Western Meeting of the Canadian Institute of Mining and Metallurgy in November, 1944, but was not published as the data were still incomplete. There is now a good prospect that the final data can be compiled and published within a few months' time.

It is especially noteworthy that the large majority of the projects undertaken by the Board (and Council) have been concerned with the metal fabrication (Physical Metallurgy) and that the apparent need for technical assistance in this branch of Metallurgy in British Columbia has amply justified the change in emphasis which has characterized the course in Metallurgy during the past five years.

In the Department of Civil Engineering increased emphasis is being placed on instruction in Soil Mechanics. During the year two pieces of apparatus were purchased: (1) Direct Shear Machine for determination of shear strength of soil and (2) Consolidation Apparatus for study of phenomenon of consolidation of clay.

In the Department of Nursing and Health the markedly increased enrolment of students in the final year courses, which has featured the war years, was maintained during the period under review. These increased enrolment figures, both for the final year and at the hospital, serve to emphasize the extent of the increasing demands being made upon the Department; and when considered in conjunction with the statements made below respecting staff shortages, should serve to indicate very clearly the difficulties which have been faced.

Many efforts have been made, through correspondence and by personal enquiries, to obtain a satisfactory Instructor to replace Miss Henderson, who left at the end of last year to join U.N.R.R.A. Unfortunately no person of suitable calibre, who was free to consider an appointment, could be located. The need for additions to the staff in the coming year is even more acute, and it is to be hoped that the return of many nurses from overseas service will eventually release, directly or indirectly, some person of suitable attainments for the overdue staff expansion. In the past four years the staff of the Department has almost completely changed, four members having left, one on superannuation, one to be married, one to become Editor and Business Manager of "The Canadian Nurse", and the other to join U.N.R.R.A. In their place we have two newcomers, Miss Mallory and Miss Capelle, who have done valiant work in carrying the exceptionally heavy burdens.

Owing to these staff shortages, it was necessary to omit some of the less essential courses offered by the Department. It is felt that these courses were eliminated without serious loss to the students, but a well-rounded curriculum will require their restoration as soon as possible.

As an outcome of numerous conferences between members of this Department and participating agencies, especially staffs of the Metropolitan Health Committee and the Provincial Board of Health, very satisfactory field work was provided for all students. The basic experience involved four weeks with the Metropolitan Health Committee and two or three weeks in a rural area, and was supplemented by additional experience with various other agencies, according to the needs and interests of the individual and the facilities available. Participating agencies included the Provincial Mental Hospital, the Psychiatric Clinic, the Division of Venereal Disease Control, and the Division of Tuberculosis Control. Our own shortage of staff made it impossible for the University to provide as much supervision of students during this period as in previous years. The burden on participating agencies was thus particularly heavy, and a special word of appreciation is due them for their splendid co-operation.

The facilities of the Schools of Nursing of both the Vancouver General and St. Paul's Hospitals were again made available for observation and practice in teaching and supervisory activities. The administrative and teaching staffs of both institutions were particularly co-operative, and without their help it would not have been possible to provide students with the required types of experience.

Miss Mallory has regrettably found it impossible to give as much time as heretofore to the students during their hospital years. However, in addition to conferring frequently with Miss Palliser, Director of the Vancouver General Hospital School of Nursing, and with members of her staff, she has interviewed each student twice during the year.

The programme of special courses which was instituted at the outset of the war on a voluntary basis had to be curtailed during the year. However, two classes in Home Nursing were operated by students enrolled in the Course in Teaching and Supervision, under Miss Mallory's direction; and this provided helpful experience for them.

Respectfully submitted,

JOHN N. FINLAYSON,
Dean,
Faculty of Applied Science.

REPORT

69.

THE DEAN OF THE FACULTY OF AGRICULTURE

This report has been compiled almost entirely from the extended departmental reports submitted to me by the Heads of Departments.

As was the case last year, the crying need in the Faculty of Agriculture is, first of all, for LABORATORIES and, secondly, for lecture rooms in general. At the present time laboratories are being used by two and three times the number of students they were built to accommodate, and senior and post graduate students in particular working on special problems are finding the situation difficult. During the summer we have had certain alterations of a makeshift nature made in the Agriculture Building, and we hope that the problem of working space may be alleviated to some small degree by this measure.

Each department is carrying on a great deal of extension work in co-operation with the Department of University Extension. In general, extension work carried on in co-operation with the Extension and other departments has not been mentioned in this report, except in one or two cases where the work undertaken was a new departure.

Also, I should state that omitted in this report is the list of the many and varied technical boards, committees, etc., in addition to the University boards and committees, upon which members of the Faculty of Agriculture serve from year to year; nor, except in a few instances, has mention been made of the multitude of exhibitions, fairs, meetings, etc., attended by these men.

DEPARTMENT OF AGRICULTURAL ECONOMICS

The Department of Agricultural Economics continued the general teaching work in undergraduate courses, and one post graduate student is expected to come up for the degree of Master of Science in Agriculture in October, 1945.

The Department co-operated with Mr. Walton Anderson and his staff in preparing for distribution a report on a research entitled 'A Preliminary Report of an Economic Survey of Farms in the Prince George and Vanderhoof Areas of British Columbia'. This was a summary of activities on farms in Central British Columbia. The copies were mimeographed and distributed from the University of British Columbia.

Mr. Eugene Woodward, as Assistant in the Department, working with the aid of a substantial gift from Safeway Stores Limited, completed a preliminary survey of selected poultry farms in the Lower Mainland. The report was well received. He also put under way a 'meat bird' survey. A number of poultry farmers have been keeping the necessary farm and flock records to make this study possible. A second report on the Economics of Poultry Farming in the Lower Mainland Area up to June 30th, 1945, is in the course of preparation.

DEPARTMENT OF AGRONOMY

The teaching activities of the Department of Agronomy continued as usual. One post graduate student came up for the degree of Master of Science in Agriculture in October, 1944.

LABORATORY SPACE

Here, again, the lack of laboratory space has been and is presenting enormous difficulties, the one soils laboratory being used for eleven different purposes, ranging from elementary physical studies of soils to the preparation of laboratory material for senior classes and the washing of glassware, etc.

RESEARCH WORK

- MAJOR SOIL TYPES OF CENTRAL INTERIOR. This study was continued with the assistance of Mr. Fred Cook, a Senior student who had been on soil survey during the summer of 1944. The work for the year was confined to a microbiological analysis of Pineview, Vanderhoof and Nulki clays.
- DISTRIBUTION OF TRACE ELEMENTS IN SOILS OF B. C. Some progress has been made during the year, although this study has so far been confined to boron. It is hoped that the graduate student whose enlistment interrupted the continuation of this study will be able to complete it, as far as boron is concerned, during the coming academic year.
- ACTINOMYCES. A fund of data has been accumulated by senior and graduate students in previous years, and it is hoped that this material may constitute, as soon as circumstances permit, the basis for a research paper.
- ALFALFA. Alfalfa studies have been continued in line with the Dominion-University agreement as of November 6th and 7th, 1944. Vegetative and progeny tests of 700 remaining plants of the F_4 generation have been started and strain tests of 'Rhizoma' have been laid out during the year at the Dominion Experimental Farm, Agassiz.

Twenty acres of land have been selected in the Salmon River Valley for seed production. This is an ideally isolated acreage, and an agreement covering its use will be submitted for approval of the Board of Governors.

With financial assistance from the British Columbia Industrial and Scientific Research Council, a study of female sterile plants in alfalfa was undertaken. The first step involved the selection of female sterile plants.

- NEUBAUER ASSAYS OF FRASER VALLEY SOILS. This project, made possible through financial assistance from the B. C. Industrial and Scientific Research Council, has been continued.
- PHYSIOGRAPHY AND CLIMATE. A great deal of time has been devoted by Dr. Brink to this study, and the data, when complete, should be a real contribution to our knowledge in regard to possible agricultural developments in the Province.

It should perhaps be stated here that time for research this year was curtailed to some degree by the fact that Dr. G.G. Moe and Dr. V.C. Brink both taught during the Inter-session.

DEPARTMENTAL ACTIVITIES

- CO-OPERATIVE SEED PROJECT. Under the agreement with the Provincial Department of Agriculture, the following amounts of seed were produced:

Eagle Oats _____	1,134	lbs.
Alaska Oats _____	430	"
Jones Fife No. 142 _____	220	"
Ridit Vernon _____	1,195	"
Victory Oats _____	3,840	"
Dawson's Golden Chaff No. 142 _____	1,333	"
Kharkov _____	521	"
Storm Rye _____	1,289	"
Red Bobs _____	696	"
Prolific Rye _____	868	"

In addition, a number of special stocks have been grown for seeding in years subsequent to 1945.

- POTATO IMPROVEMENT WORK. This study was continued in the greenhouse under our agreement with the Potato Inspection Branch of the Dominion Department of Agriculture, but the field plot work has not been continued.
- SOIL TESTING. Some 150 samples have been submitted for analysis, and we are informed that this service is a real aid to farmers and vegetable gardeners.

- HERBARIUM AND PLANT IDENTIFICATION. Hundreds of economic plants have been added to the herbarium of which some 350 specimens have been mounted during the year. Over 900 plant specimens have been identified for collectors.
- RANGE AND GRAZING. The study of and interest in the ranges of the Province has been maintained this year.
- STATISTICS. Dr. Brink has devoted appreciable time to statistical problems referred to him both by other Departments within the University and by sources outside.
- SOIL SURVEY. Preparatory to making a final soil survey report covering agricultural areas on the Canadian National Railway between Terrace and the Chilalco River and the Quesnel area between Kersley and Soda Creek, Dr. Laird, at the request of the Provincial Department of Agriculture, went on soil survey work during the summer. New territory was surveyed, and a review was made of soil types mapped during the three preceding years. While on this work Dr. Laird works as an employee of the Provincial Department of Agriculture.

DEPARTMENT OF ANIMAL HUSBANDRY

The general teaching activities of the Department of Animal Husbandry were carried on as usual. The number of students of post graduate grade has been markedly reduced during the war years; they are now, however, beginning to return.

HEALTH OF ANIMALS PROGRAMME CATTLE

- TUBERCULOSIS-FREE HERD. For some years our herd has been accredited as T.B.-free by the Health of Animals Branch, Dominion Department of Agriculture. The certificate stating that the herd is continuing free of the disease has been renewed this year.
- BANG'S DISEASE CONTROL AND ELIMINATION BY CALFHOOD VACCINATION. Under a policy started in May, 1940, by vaccination of all calves born into the herd, other than calves designated for disposal as veal, we are making an effort to immunize all young stock so that over a period of years these will replace the older infected cattle still maintained in the herd. It is hoped in this way to establish a Bang's disease-free herd from the original breeding stock.

During the year no animals have been disposed of because of Bang's disease, and the entire herd is being handled as one unit. Up to the time of writing, the vaccination programme is proving entirely satisfactory as a means of controlling the disease.

- HEMORRHAGIC SEPTICEMIA. One young cow was lost during the year from a disease condition that appeared to be hemorrhagic septicemia. However, while the organisms of this disease were recovered from the carcass upon post mortem, there is a possibility that they were not the primary cause of death.
- MASTITIS. Three clinical cases of Mastitis occurred during the year, two of which resulted in permanent damage to the individuals. Latent Mastitis appears to be present in the herd in rather high incidence.

HEALTH OF ANIMALS PROGRAMME SHEEP

A small band of lambs held on the Farm for research feeding purposes showed symptoms of shipping fever, but treatment was administered promptly with good results.

HEALTH OF ANIMALS PROGRAMME SWINE

Disease conditions were rather prevalent in the swine herd during the first half of the year, but the herd has since remained healthy.

LABORATORY CLINICAL WORK AND DIAGNOSIS

Animal carcasses and tissue specimens submitted to the laboratory for diagnosis have been more numerous this past year. Outbreaks of disease on two swine farms were investigated and the advised sanitary measures put into effect on the premises aided greatly in the control of the disease. During the year the volume of enquiries by mail has been very heavy. All have been answered and assistance has been given when possible.

PULLORUM DISEASE WORK

This work on the blood testing of poultry annually for the Provincial and Federal poultry inspection policies was continued, the older laboratory tube test method and the new whole blood field test method both being made available.

A number of men were taught the whole blood field test method in a six-day short course, and five men, placed in the field under the direction and supervision of the laboratory, completed tests on 249,749 birds. Laboratory testing work was somewhat easier with a reduced staff of five technicians. Laboratory tests were made on 236,099 birds, making a grand total of 485,848 tests.

During the year a total of 173 fowl and young chicks were submitted for pullorum investigation and diagnosis of disease.

VACCINATION WORK IN CONTROL OF POULTRY DISEASES

This work, assigned to the Animal Diseases Laboratory by the Provincial Department of Agriculture, has increased markedly since 1944. Laryngotracheitis disease has spread severely during the war years with the increased demand for high production of poultry products.

This year, the animal pathologist has driven more than 12,000 miles on work required by one or other of the above poultry services. The two services are self-supporting and are charged to the poultry farmers at as near cost as possible. During the year the gross collections made by the laboratory amounted to just over \$17,000.

AYRSHIRE LINEBREEDING PROGRAMME

The breeding programme initiated some years ago is being continued and is just beginning to reach a point where results can be assessed. One or two more 'cattle generations' should furnish the additional evidence needed for a more confident estimate of the value of the programme. To date, uniformity, type and production have improved, and no bad effects from inbreeding have been observed.

RESEARCH PROJECTS

- CALFHOOD VACCINATION. An investigational study of Calfhood Vaccination is being continued upon the college herd of cattle.
- MASTITIS. A Mastitis research project, under the auspices of the British Columbia Industrial and Scientific Research Council, has been organized and set up, investigational and laboratory work being divided jointly between the Departments of Animal Husbandry and Dairying.
- MEAT QUALITY. The investigation of problems associated with Meat Quality was continued, experimental materials consisting of steers, lambs and bacon hogs. The steer and lamb projects were made possible through the co-operation of Safeway Stores, Limited (Sponsors), Farm Markets Relations, Buckerfield's Limited, and the Pacific Meat Company Limited. Animals for the bacon hog experiment were obtained from the University, and the feed for them was supplied by the Brackman-Ker Milling Company Limited. The Alberta Meat Company Limited provided an annual student bursary to aid this work in 1944, and during the current year the Pacific Meat Company Limited has indicated its interest by offering annual bursary funds to the University.

CORRESPONDENCE COURSES WITH THE ARMED SERVICES

During the year Dr. Berry continued work as Instructor in the Correspondence Course "Livestock and Dairy Farming" for Armed Services personnel under the direction of the Canadian Legion Educational Services.

BREED ASSOCIATION WORK

Dr. Berry's duties in connection with the Breed Associations during the year have been as follows: Secretary-Treasurer of the B. C. Branch of the Holstein-Friesian Association of Canada, Director of the B. C. Ayrshire Breeders' Association, Member of the Joint Dairy Breeds Association of British Columbia.

RECORD OF PERFORMANCE

The Ayrshire herd was again continued in the Record of Performance under the Federal Government Plan. All the normal milking cows were tested for production and some very creditable records were made throughout the year.

SHOWING OF LIVESTOCK

With the expectation that Class A Fairs may resume operation in 1946, it is hoped that we shall be in a position to make a showing of livestock at the major provincial fairs. The Ayrshire herd is accredited (free of T.B.), and significant progress has been made with the eradication and control of Bang's disease, and there is hope that a disease-free "show-herd" can be selected. It is believed that, with the improvement of type and uniformity of the herd during the last few years, the exhibition of Ayrshires at provincial fairs will reflect credit on the University.

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.

UPKEEP OF BUILDINGS

The farm buildings have been kept in reasonable repair. Glass breakage and other depredations by young visitors are always an upkeep problem. Some loss, particularly of small machinery parts, always occurs from stealing, but an effort is made to keep these under lock and key when not in use. Some general painting and repair work has been done.

PROVINCIAL FEED STANDARDS BOARD

Few meetings of the Board were held during the year as no new publications were contemplated. During the year the Board has been of considerable assistance to authorities in Ottawa in matters dealing with regulation of the food trade. Professor H.M. King continued as Chairman and Dr. J.C. Berry as Editor.

DAIRY CATTLE CLASSIFICATION WORK

As official classifier of Jerseys for Western Canada and the Western States, Professor King attended the Classification Conference at Biltmore Farms, North Carolina, U.S.A., in November, 1944.

Dr. J.C. Berry, at the request of the Canadian Holstein-Friesian Association, has accepted the appointment as official classifier of Holsteins for British Columbia.

During the year approximately 2,000 head of purebred dairy cattle have been classified by members of the Department. In addition, a number of demonstrations on classification work have been given.

Our own herd of Ayrshires was first classified in July, 1943, and upon reclassification in July, 1945, our score was the highest of any of the institutional herds in Canada and is exceeded only by one other herd of comparable size.

DEPARTMENT OF DAIRYING

The teaching work of the Department of Dairying has been carried on as in previous years. This year, however, under the Department of University Extension and at the request of the Provincial Department of Agriculture, a four-day course for Provincial Dairy Inspectors and Veterinarians was held in the laboratories of the Department at the close of the University session.

LABORATORY SPACE

The adequate provision of laboratory accommodation continues to be the major problem of the Department. The lack of laboratory for instruction in the practical and technological aspects of the Dairy Industry seriously hampers the development of this phase of work in the training of students and in meeting the needs of the Industry in the Province.

RESEARCH PROJECTS

- Work has been continued on problems associated with the development of the CHEESE-MAKING Industry in the North Okanagan, major emphasis being placed in studies on the influence of antibiotic agents on the vitality of starters.
- Further progress has been made in studies on SURFACE TAINT and other related defects in BUTTER.
- Studies on the application of microbiological methods to determinations of the content of various members of the Vitamin B complex in Dairy Products have been continued.
- Studies on the Vitamin C content of milk and the influence thereon of varying production and processing techniques have been initiated.
- The Department has continued to provide accommodation to the best of its ability for the work of the British Columbia Industrial and Scientific Research Council on MASTITIS. Under Dr. Eagles' supervision, Miss Tamboline has been in charge of the laboratory during the past summer. Considerable progress has been made in this study which has as its objective the lessening of the incidence of Mastitis in Dairy Cattle throughout the Province.

PREPARATION AND SUPPLY OF ALKALINE SOLUTION TO DAIRY FACTORIES

At the request of the Dairy Commissioner of the Province, an arrangement has been made whereby the Department undertakes to supply standard alkali solution to dairies, creameries, and cheese factories throughout the Province who wish to avail themselves of the service. The Department of Dairying provides the standard solution and guarantees its normality. The Provincial Department of Agriculture has agreed to make funds available to the Department for the carrying out of this work. To date, nine firms are availing themselves of the service.

SUPPLIES AND EQUIPMENT

The requirements of the Department have not altered during the past year. The provision of adequate equipment for course work in Dairy Technology is a problem still awaiting solution.

FIELD AND SERVICE WORK

Calls for work of this nature continue to take up a considerable portion of the time of the members of the Department, particularly during the summer months.

TRAVEL

Dr. Eagles again attended the meetings of the Interior Dairymen's Association held in Vernon in April. In co-operation with the Provincial and Dominion Departments of Agriculture and with leaders of the Industry in the Lower Mainland, a short course of lectures and demonstrations extending over a two-day period was presented. This effort is greatly appreciated by those in the Interior who are not often able to come to the Coast.

DEPARTMENT OF HORTICULTURE

The teaching activities of the Department of Horticulture have been carried on as usual.

A short course of one week's duration for fruit and vegetable canners was held at the University in February, 1945. This was the first course of its kind ever to be held in Canada, and the attendance and interest in the course was excellent. This Department co-operated actively with the Department of University Extension and the Canned Foods Association of British Columbia in conducting the course.

During the year there have been no important changes in the policy of the Department. As in the past, the major emphasis has been given to the teaching of students and to such investigations as could be conducted largely as a phase of teaching, save for four projects (non-teaching) which are here indicated by title only.

- Vegetable Seed Trials (in co-operation with the Dominion Government) ninth year.
- Foundation Stocks of certain vegetable varieties (under an arrangement with the Canadian Seed Growers' Association).
- "Causes of Raspberry Failure" project (under a grant from the Board of Governors, this University).
- "Food Values of British Columbia Fruits and Vegetables and Factors which Affect Them" (under a grant from the British Columbia Industrial and Scientific Research Council).

HORTICULTURAL GROUNDS, GREENHOUSES, ETC.

For a number of years the Horticultural Area has been under lease to Mr. Frank Garnish, formerly foreman in Horticulture. The terms and spirit of the lease have been carried out after a fashion, although the arrangement is far from satisfactory in many ways. Mr. Garnish,

who has been ill during a good many previous years, has been much better in health during the current year. The Department has given what help it could during this difficult period, including the provision of fuel for the greenhouse. Three hundred dollars was voted for this purpose.

An arrangement which has again this year proved satisfactory to the Department and which has helped in keeping some areas from going back to the wild state, has been the turning over of all areas not in use to Mr. Young for the growing of green feed for his livestock.

RESEARCH

The following researches have been carried on in the plant nutrition section of the Department:

- EXPERIMENTS ON PROPAGATION OF CUTTINGS. A series of experiments was carried on to devise a better method of propagating Filbert nuts from cuttings.
- MICRO-ELEMENT STUDIES. An experiment was carried out to demonstrate the essential nature of the micro-elements, copper and zinc, to the normal development of lettuce.
- STUDIES IN NITROGEN FERTILIZER LEVELS. Studies have been carried on to ascertain whether an optimum level of soil nitrogen could be found for lettuce production.
- THE USE OF GROWTH STIMULANTS. The effect of growth stimulants on raspberries was studied.
- GRADUATE RESEARCH. Studies have been made on the causes of plant decline with a loss of vigour and yield.
- CHALMER'S RESEARCH PROJECT. This project was carried on to determine the value of a fish product fertilizer.
- NUTRITIONAL STUDIES AND HYDROPONICS. Hydroponic (soil-less growth) studies were again conducted during the year, some quite remarkable results being produced.
- RASPBERRY FAILURE RESEARCH PROJECT. A study was carried out, as in previous years, to determine causes of raspberry failure.
- FOOD VALUES OF BRITISH COLUMBIA FRUITS AND VEGETABLES. This research is under the auspices of the British Columbia Industrial and Scientific Research Council, and the results of a two-year study on the health value of British Columbia fruits and vegetables will be prepared on the conclusion of this year's work and the final report submitted on its completion.

VEGETABLE SEED TRIALS

For the ninth consecutive year the Department conducted a series of vegetable seed trials as a co-operative project between the Plant Products Division, Production Service of the Dominion Department of Agriculture, and the University.

During the present season this work was considerably expanded at the request of the Dominion and Provincial Departments of Agriculture and of the seed growers themselves.

In this year's trials there were some 1,200 samples of seeds on test. The labour costs were cared for by special grants or contributions made for that purpose as follows:

The Dominion Department of Agriculture	\$1,000.00
The Provincial Department of Agriculture	500.00
The B. C. Co-operative Seed Association	500.00
The Brackman-Ker Milling Company (New Westminster)	100.00
Buckerfield's Limited (Vancouver)	50.00
	<hr/>
	\$2,150.00

This vegetable seed testing work has been of considerable value in the national effort to provide large quantities of high grade seeds for other countries, as well as for Canada itself. The work also fits in with the development of the vegetable seed industry of the Province which in the present year is expected to have a value to the grower of over one million dollars.

SERVICE WORK

A great deal of service and correspondence work has been done during the year. Soil and plant tissue tests have been made in great numbers to diagnose plant nutritional troubles in the field and greenhouse, as well as problems in mushroom growing. A great deal of information has been given by various members of the Department in response to enquiries regarding "Victory" garden troubles.

TECHNICAL BOARDS, COMMITTEES, ETC.

Dr. Barss continued as Vice-Chairman on the Provincial Vegetable Seed Committee. In June he attended a three-day session at Guelph, Ontario, as a member of the Horticulture Plant Breeders' Committee of the Canadian Seed Growers' Association.

Dr. Harris served as Chairman of the Technical Advisory Committee on Agriculture for the British Columbia Industrial and Scientific Research Council.

Professor Buck has been very active again this year, not only in planning for the University Campus, but also on the Town Planning Commission of Vancouver.

DEPARTMENT OF POULTRY HUSBANDRY

The teaching activities of the Department of Poultry Husbandry have continued as usual. One post graduate student came up for the degree of Master of Science in Agriculture in October, 1944.

A short course of particular note was put on by the Surrey Farmers' Co-operative Association. More than one hundred farmers in the Cloverdale district attended the lectures throughout an eight-week period. Taking all factors into consideration, and particularly in view of the fact that all of the attendants were commercial poultry farmers, this was probably the most successful short course of its kind in the history of the University.

THE POULTRY PLANT

- RANGE AND PASTURE. Substantial benefits are now accruing in the rearing of young stock as the birds enjoy improved range conditions. The cost of rearing hens has been reduced, and a greater protection of birds against infestation from parasites in the soil has been secured.
- RANGE EQUIPMENT. While materials have been lacking for the construction of hurdles, maximum use has been made of those we have to facilitate the system of colony breeding and rearing.
- BUILDINGS AND EQUIPMENT. Plans are now being made for the new poultry service building as a part of the greater University building programme. The extraordinary demand for dressed poultry since the war has necessitated the installation of a modern feather-picking machine, which will be used to demonstrate modern methods to the students.
- POULTRY STOCK.
 - (a) GENERAL INCREASE FOR WAR PURPOSES. It is a matter of satisfaction to be able to report that the increase in flock size made to meet the demand both for food and for breeding stock was made possible by the existence of more certified breeding birds from a successful year in Record of Performance and also through the development of new breeds.

The use of the new incubator units, which have given substantially better hatches, has been invaluable in bringing increased production per unit.

(b) HEALTH OF FLOCK. Due to a greater inherent resistance to disease and more efficient use of range, as well as the destruction of wild dogs in the adjacent woods, the mortality figures have been reduced this year.

(c) BREEDS. In addition to the regular commercial breeds (Barred Rocks, Reds and White Leghorns) already established, foundation units in New Hampshires and White Plymouth Rocks have been established in the past year, and sufficient pullets from outstanding lines have been reared to make entries into Record of Performance this fall.

(d) RECORD OF PERFORMANCE. Fortunately, the increase in flock size mentioned above coincided with the time when Progeny Test regulations in R.O.P. requiring larger families came into effect. Last year the demand for R.O.P. breeding cockerels was much greater than the supply. This year it is even greater, and it is expected that several hundred approved R.O.P. sires will be drawn from the University flock.

RESEARCH PROJECTS

- PURE BREEDS. Since the mode of inheritance of early fast feathering has been clarified the technique of establishing this character in the previous slow feathering Reds has been a matter of straightforward procedure.
- AUTO-SEXING BREEDS. A more accurate method of sexing the Redbars and Salmonbars by the classification of differences in colour pattern is being studied. Accuracy to date has not consistently exceeded 85% in the Redbars and 70% in the Salmonbars, whereas 90% is generally stipulated as a minimum in commercial standards.

When these breeds have been improved in the required characters and bred to a uniform standard, they, along with the Gold Cambar, will provide the three types of auto-sexing, early-feathering chickens to supply the market demand.

- POULTRY MORTALITY. A preliminary survey of mortality in commercial poultry flocks in the Fraser Valley and Vancouver Island was conducted last year, and a report was submitted to the British Columbia Industrial and Scientific Research Council by Professor Biely. Further data have been secured from the Poultry Farm Survey conducted by Mr. Woodward under the direction of the Dean. A comprehensive questionnaire covering interacting environmental and management factors has been prepared as a basis for a detailed study of the health conditions on poultry farms. In order to make

further preparatory tests fundamental to a practical approach to the problem, two breeding pens of carefully selected Leghorns and a case of Barred Plymouth Rock hatching eggs were imported onto the Farm for comparison of results. A certain amount of data is available to date, and more will be available at the end of the year which should give some valuable leads to promising channels for investigation.

NUTRITION

- **POULTRY FEEDING PROJECT.** In last year's report reference was made to the Poultry Feeding Project which was sponsored by the Surrey Co-operative Association, Cloverdale, and the Provincial Department of Agriculture, Victoria. The object was to compare rations with and without yellow corn with wheat as the only source of grain and with several grains and grain by-products. Work has continued on this study during the past year, and when the project is completed a detailed report will be prepared for the sponsors of the project and then released for publication.
- **VITAMIN B RESEARCH.** The search for the most suitable combination of protein and vitamin supplements which would need to be added to wheat to make it a complete feed for growing chicks has been continued. The results show that the most critical vitamin in our basal ration, i.e., in the presence of sufficient vitamins A and D, is riboflavin. Experiments are in progress to determine the relative supplementary value of pure synthetic sources of the various vitamins with a number of natural by-products of the fermentation and fish industries. This laboratory was among the first to establish the value of stickwater, and a preliminary report on the product was published in a recent issue of POULTRY SCIENCE.
- **RIBOFLAVIN CONTENT OF EGGS.** Taking advantage of the fact that eight different rations were fed to eight groups of laying birds, it seemed advisable to secure information regarding the riboflavin content of eggs produced by hens fed the respective rations. The riboflavin content of the eggs was found to be equal to that found in eggs produced by hens kept on commercial rations.
- **RIBOFLAVIN CONTENT OF LIVERS AND ASH CONTENT OF TIBIA.** In order to assess the adequacy of the experimental rations fed to growing chicks, studies were made of "carry over" of certain vitamins from the feed to the chick. For purposes of this study two vitamins were selected, riboflavin and vitamin D, the former stored mainly in the liver, and the latter affecting the amount of mineral matter deposited in the skeletons of the chicks.

The various rations were shown to be adequate in riboflavin and the vitamin D was shown to produce normal calcification in every lot of chicks.

- EFFECT OF DIET ON HATCHABILITY. In order to ascertain the completeness of rations fed in the Poultry Feeding Product, fertile eggs from the eight groups of birds were gathered for hatchability tests. Remarkably high hatchability was secured from all the lots.
- FISH OILS RESEARCH (VITAMINS A AND D). As in the past, the research work in Fish Oils was carried out in co-operation with Dr. William Chalmers of Western Chemical Industries Limited and was mainly concerned with the industrial aspect of fish oil production for poultry feeding.
- VITAMIN A CONTENT OF EGGS. In conjunction with the Poultry Feeding Project it seemed advisable to determine the vitamin A content of eggs produced by hens fed eight different rations. In the main, it was shown that the vitamin A stored in eggs is proportional to the vitamin A content of the feed.

In general, the nutritional work listed above has been based on:

- Laboratory work, involving chemical analyses, microbiological assays and other laboratory techniques, and
- Feeding tests with day-old chicks varying from three to eight weeks' duration (in the case of the Poultry Feeding Project--18 months).

SERVICE WORK

The total approximate number of birds brought in for post mortem examination was 1,040, which is about two and one-half times the normal number.

Respectfully submitted,

F. M. CLEMENT,
Dean,
Faculty of Agriculture.

REPORT OF THE DEAN OF WOMEN

The outstanding difficulty of the 1944-45 Session continued to be the housing problem. The situation remained difficult all year. Many of the boarding houses which previously housed students are now renting their rooms to tenants who are more remunerative since they stay for the full year instead of merely for the seven or eight months of the academic session. The result is that students are now largely dependent for accommodation on the good will of citizens who have offered their homes to them in response to the University request for housing. Such homes take only one or two students to a house since they are obviously not designed as boarding houses. Moreover, they are scattered all over the city. Visiting the homes required to house the students who needed accommodation for the 1944-45 session was, therefore, a lengthy duty. Moreover, since boarding students was not the main interest of the householder, a change in plans or perhaps the fact that the family became tired of the additional labour of caring for someone else, caused a continual movement amongst the students. There was never a time when the listed accommodation appeared to get ahead of the demands made upon it, and attempts to solve the recurring housing problem taxed the office all year.

Once more, the Women's Compulsory War Work Plan was administered from the Dean of Women's Office. Although the students continued to co-operate very faithfully, the routine of administration took considerable time. With the lessening of imminent danger in the Pacific region, certain courses were dropped and the students paid increased attention to the work of the Red Cross Rooms. For the second year Dr. Blakey-Smith assisted Mrs. J.F. Muir in organizing this part of the work and once again the Provincial Red Cross expressed its appreciation of the high quality of the work submitted. Classes in First Aid, Home Nursing, Typing and Community Service were continued as in the previous year. Dr. Thrupp has been on leave of absence from the University, and in her absence Dr. Hallamore has been ably assisted in her work with the Red Cross Corps by Miss Nora Neilson of the Faculty of Agriculture. At the second inspection of the Corps, Chancellor Hamber and Dr. MacKenzie, accompanied Mrs. de Satge to the reviewing stand in the Armouries.

The University Chapter of Phrateres showed a marked increase in numbers during the year. The Association is useful in fostering friendly relations among girls on the campus and is of particular value because of the help it offers to new arrivals, particularly Freshettes. The rapid growth of the group necessitated a complete review of its organization and, with the aid of the Dean of Women's Office, numerous meetings were held and plans laid which should enable the organization to function successfully for some time.

A similar increase was noted in the numbers seeking admission to sororities. In fact, such large numbers wished to join that the facilities of the office were heavily taxed during the rushing period. The Jewish women on the Campus organized themselves into a new sorority during the year, taking temporarily the name of Sigma Iota Pi while they considered affiliation with an international chapter. It is a pleasure to report that the group has been successfully launched and has been received by the other sororities with the greatest friendliness.

The office as usual showed a lively interest in student enterprises carried on by both the Women's Undergraduate Society and by the Women's Athletic Association. The officers of each of these groups kept the Dean of Women's Office informed of their activities and at various informal meetings many problems were discussed. The Girls' Honour Society also held several meetings during the year to which the Dean of Women and the Clubs' Honorary Officers, Dr. MacInnis and Dr. Hallamore, were invited.

The campus social calendar has become increasingly heavy as registration has grown, and various aspects of such a programme necessarily fall on the Dean of Women's Office. An attempt was made again this year to invite all out-of-town women students to informal teas. The labour problem made it impossible to use the Dean of Women's Room in the Brock for this purpose but, with the co-operation of student officers, several teas were held in the Women's Common Room. Such gatherings are of value in enabling the Dean to meet students who, if they later need her help, would probably be less afraid of seeking it.

Besides these varied activities, which are sufficiently important to explain the attention they receive from the Dean of Women's Office, there are the innumerable little things which take a great deal of time as well--very vital to student happiness though probably quite petty when considered individually. These are manifold and impossible to recapitulate here.

Respectfully submitted,

M. DOROTHY MAWDSLEY ,
Dean of Women.

TO THE LIBRARY COMMITTEE OF THE SENATE

REID BEQUEST

In July the Library received the greater part of the magnificent collection of Canadiana bequeathed to it by Dr. Robie L. Keid, K.C., who died in February, 1945. Dr. Reid himself estimated that his entire library consisted of 9,000 books and 4,000 pamphlets. Probably as many as 11,000 of the total of 13,000 items either relate in one way or another to Canada, or were written by Canadian authors. All but a few of these are included in the gift to the University.

Terms of the bequest provide that the books shall be shelved with those of his life-long friend Judge Howay, whose historical library was bequeathed to the University in 1943, and the two together are to form "The F.W. Howay and R.L. Reid Collection of Canadiana."

Contrary to the general impression, the two libraries do not duplicate one another to any appreciable extent. Judge Howay's Library was acquired primarily for purposes of his personal research; it contains a wealth of material, but this is concentrated within a relatively narrow field. The historical portion of Dr. Reid's library is much broader in scope. While it includes a fine collection of material relating to British Columbia, most of the other eight provinces are almost as well represented. Moreover, the library is by no means confined to history. The collection of Canadian fiction and poetry runs to thousands of titles, major emphasis as one would expect, being placed on western writers.

The sheer bulk and variety of the material included in the bequest is so considerable that some time must pass before it can all be sorted, catalogued, and made available to inquirers.

THE A.M. POUND COLLECTION

In the spring of 1945 the Library received a further notable gift of Canadiana, when the three daughters of the late A.M. Pound presented to the University the collection of Canadian fiction and poetry gathered by their father. This consists in all of some 1,100 items. Scores of the volumes included are autographed, and there are a few manuscripts. Mr. Pound knew both Bliss Carman and Sir Charles G.D. Roberts well, and his library includes dozens of their books. Most of these are autographed, and many carry inscriptions of more than ordinary interest.

The choicer items in Mr. Pound's library will be shelved in the Howay-Reid Collection. Other volumes will be added to the general library. A special book-plate, to be placed in all Mr. Pound's books, is now being designed.

Thanks to years of enthusiastic and discriminating book-collecting on the part of three friends--Judge Howay, Dr. Reid, and Mr. Pound--the University now possesses one of the most important and comprehensive libraries of Canadiana to be found anywhere in the Dominion.

OTHER GIFTS AND BEQUESTS

Gifts received by the Library during the seventeen months under review were unusually numerous and valuable.

Dr. L.S. Klinck, retiring President of the University, gave to the Library no less than 769 books, 600 pamphlets, and about 1000 periodical items. This gift was made on the understanding that the Library was free to dispose of material it did not require--a condition that was greatly appreciated in view of the crowded state of the stackroom. The books included a number of interesting autographed presentation copies, and many titles in the field of general literature that were a welcome addition to the Library's all-too-small store of general reading.

Mr. Harold Daly, K.C., of Ottawa, was kind enough to take an interest in the incomplete state of the Library's file of the CANADIAN PARLIAMENTARY GUIDE, and in the course of the year presented more than a score of the volumes required to complete the set. Dr. Olive Sadler gave to the Library a number of interesting books and pamphlets from the library of the late Dr. Wilfrid Sadler. They included early copies of several of William Marshall's RURAL ECONOMY series, and the 1768 edition of Arthur Young's FARMER'S LETTERS TO THE PEOPLE OF ENGLAND. Mr. Hal Griffin, editor of THE PEOPLE, presented a bound file of the paper for 1942 and 1943. While the Librarian was in New York in June, 1944, he was privileged to go through certain sections of the duplicate files of the New York Public Library, and to select material that he would like to secure by purchase or exchange. Substantial runs of the ARCHITECTURAL RECORD, ARCHITECTURAL REVIEW, REPORT of the New York Zoological Society, and BULLETIN of the Metropolitan Museum of Art were made available in this way. Mr. Leonard Miller presented an interesting group of books and magazines dealing with aeronautics, including several volumes of the AIR ANNUAL OF THE BRITISH EMPIRE. Mr. H.R. MacMillan gave the Library 15 volumes dealing with Japan, and 4 volumes of the OSEBERGFUNDIT, one of the

outstanding archaeological sets published in Scandinavia. A collection of 26 gramophone records was received from Mr. and Mrs. Lawren Harris, and formed a most welcome addition to the Carnegie Music Set. Other records were presented by Dr. G.G. Sedgewick. Mrs. Humbird, of Chemainus, gave the Library her complete set of Life. Mr. Gordon Scott presented a valuable collection of 9 volumes of the DEBATES of the House of Assembly and Legislative Council of Nova Scotia, and the House of Assembly of New Brunswick, dating as far back as 1852. These came from the library of his father, the late S.D. Scott, who served for many years on the Board of Governors of the University.

Another interesting gift was a bequest from the late Moses B. Cotsworth, consisting of about 350 books, together with a collection of pamphlets, photographs, etc. The more important items refer either to calendar reform or to calculating tables, two subjects upon which Mr. Cotsworth was an authority known all over the world.

From Mr. Donald Stalker, of Port Hammond, came a fine set of Voltaire, in 43 volumes. Miss Janet Grieg presented a collection of contemporary French works in the original Paris editions, and a most comprehensive collection of pamphlets, souvenir programmes, badges, etc., relating to the celebration of the tercentenary of the voyage of Jacques Cartier, in 1934. Dr. Basil Mathews, of Union College, presented five magnificent volumes on Japanese art, privately printed for the members of the Japan Print Society. The Vancouver Auxiliary B'nai B'rith very kindly secured for the Library the new edition of the UNIVERSAL JEWISH ENCYCLOPAEDIA. Miss Verna Smith, acting for the estate of her father, the late Arthur Smith, gave to the University a comprehensive collection of English law reports, covering the years 1866 to 1913. Mr. Walter Hardwick was the most important of several donors who added extensively to the Library's file of the ILLUSTRATED LONDON NEWS. Mr. William Dorbils sent a number of interesting items of Canadiana with the request that they be added to the Howay-Reid Collection and expressed the intention of continuing this practice in future.

Valuable gifts of medical books and periodicals were received from Dr. W.A. Whitelaw, Dr. P.A. McLennan, Dr. H.W. Riggs, Mrs. H.L. Bailey, and the Library of the Vancouver Medical Association.

It is unfortunately impracticable to list every gift received, but no list of donors should omit the names of Mr. J. Duff, of Sidney; Mr. Igor Diakonoff; Mr. C.E. Webb; Mr. Maurice Carmichael, of Victoria; Mrs. A.J. Doull, of Vernon; Mr. Paul H.D. Parizeau, of Victoria; the Vancouver Public Library, the University of Oregon Library;

and the Library of the University of Western Ontario; Mr. T. Dowbar; Mr. W.T. Lane; Mr. A.W.L. Tickle; Miss Kate McQueen, and Mr. Dal Grauer. Members of the teaching staff have once again been most generous, and a special word of thanks is due Dr. Lemuel Robertson, Dr. O.J. Todd, Dr. MacLean Fraser, Prof. George Spencer, Dr. I.M. Cowan, Prof. A.C. Cooke, Prof. Hunter Lewis, and Dr. W.N. Sage.

THE BOOK COLLECTION

A total of 4,258 volumes were accessioned in the regular series during the financial year 1944-45, and an additional 991 volumes of the Howay Collection were accessioned in a special series, making a total of 5,249 volumes in all. A further 1,975 volumes were accessioned in the period April to August, 1945, making a grand total of 7,224 volumes for the whole period under review. Actually this was only a fraction of the books received by the Library, but the Cataloguing Department found it impossible to deal with the flood of new material that poured in. At least 15,000 items were received during the sixteen months, and the total number of books in the Library on September 1, 1945, was certainly well in excess of 160,000

STAFF ADDITIONS

For several years past conditions in the Library have been such that any further appreciable increase in the demands made upon the staff would necessitate additional help in all departments. The Howay and Reid bequests on the one hand, and on the other the huge increase in registration that was obviously going to take place in the autumn of 1945, finally made a whole series of additions to the staff essential.

The Cataloguing Department, overwhelmed at the moment, will receive some relief on November 1, when an additional trained assistant and another stenographer will join the staff. A trained assistant was added to the Circulation Department on October 1, and the Reference Department will receive similar assistance on November 1. On September 1, a Stackroom Attendant was added to the staff, and although for administrative purposes he is classified as a member of the Periodicals Department, he will be of great assistance to the Circulation Department as well. The problem of stackroom control and discipline, which the design of the building makes one of extreme difficulty, should be solved to a great extent by this full-time attendant. Finally, a clerical assistant has been added to the badly overworked Periodicals Department. On November 1, 1945, it is expected that the Library staff will consist of 21 full-time employees plus

one half-time clerical assistant, and a number of student assistants. In all probability at least two additional persons, one a trained librarian, will be required in 1946.

C I R C U L A T I O N ---

Circulation, which has declined sharply for several years, increased in 1944-45 as compared with 1943-44. It is interesting to note that this increase was entirely in general reading. Use of "reserve" books remained at a relatively low level, for reasons which were outlined at some length in the Librarian's last report.

Special services given by the Library to various outside groups were in increased demand in 1944-45. Study groups, evening course students, and others registered with the Department of University Extension borrowed 4,787 volumes, and 125 drama groups borrowed 4,747 plays during the year. Total circulation through the department was thus 9,534, as compared with 7,129 the previous year, an increase of 35 per cent.

M I S S I N G B O O K S ---

The number of books found to be missing at the time of the annual inventory in May, 1944, was 396, of which 107 were recovered in the next few months. As these figures corresponded closely with those for the previous year, it was hoped that book losses were at last being held within more reasonable bounds. Unfortunately the inventory in May, 1945, revealed that 572 volumes were missing, and although 113 of these were recovered in the next few weeks, the total of 459 volumes still missing was disconcertingly high. Fortunately, there is every reason to hope that losses on this scale will not be repeated. As registration increased appreciably in 1944-45, but no additions were made to the staff, stackroom control was more difficult than ever; and it seems clear that this lack of control, and the carelessness it encouraged, were chiefly responsible for the heavy book losses. The addition of a stackroom attendant to the staff should greatly reduce this loss.

R E N T A L C O L L E C T I O N ---

A small rental collection was added to the Circulation Department in October, 1944. The capital sum required was provided from special funds placed at the disposal of the Board of Governors by two donors, and allocated to the Library. The 30 books on hand when service

commenced increased to 60 during the year, but under present conditions it is difficult to secure any great number of suitable titles. In more normal times it should be possible to build up a live and interesting collection of, say 150 volumes. Meanwhile the collection is paying its way, and the experiment may be regarded as a success. Rental rates are three cents per day, with a minimum charge of five cents.

REFERENCE DEPARTMENT

The Reference Department has had an extremely busy year, and for much of the time had to carry on with even less help than usual. Student assistants were very difficult to obtain in the spring of 1944, and budget limitations made it impossible to replace them by a full-time clerical assistant until July. The situation was complicated further by the demands made upon the department during the Inter-session (May-June, 1945), and by the large 1945 Summer School. During the winter session it is impossible to keep up with the steady flow of documents and miscellaneous publications that pour in, and the department has always depended upon the between-session slack months to bring its files up-to-date. Now that the slack season is vanishing, the problem of arrears is becoming most pressing, particularly as routine desk duties are now so exacting that it is difficult even to supervise properly the work of the clerical assistant. Fortunately a third trained librarian will be added to the staff on November 1, and this should give at least a measure of relief.

In spite of all difficulties, the displays in the two showcases in the main hallway were changed weekly throughout the year. The effort involved is very considerable, but the interest taken in the exhibits is so marked that it is well repaid. Many friends of the Library loaned material for these displays, and a special word of thanks is due Mrs. Edward Lipsett for the generosity with which she made her art treasures available. The showcases were also in great demand by student societies. As usual, student hobbies were exhibited from time to time, the subjects varying from fly-tying to wood carving and ship models.

Work on the map collection has been brought practically to a standstill, owing to lack of time. As the collection is not yet in sufficiently good condition to make quick service possible, it is not advertised; but inquiries from the department of agriculture, geology, history, geography, and commerce, as well as many casual requests, show how great a service it could render if it were ready for use. Map work is and always must be time-consuming, but the

department's considered opinion is that the investment would prove well worthwhile.

The Head of the Reference Department continued to give instruction to special groups in the bibliography of their subject fields, and in the use of the Library. Classes assisted in this way included Agriculture 1, Civil Engineering 4, the 4th and 5th year students in Forestry Engineering, 4 groups in Public Health Nursing, the Geology Seminar, 4 groups in Social Work, and Chemistry 19. Miss Henderson, of the Cataloguing Department, spoke to a Physical Education class.

INTERLIBRARY LOANS

The number of loans arranged continues to increase. In 1941-42 the total was 178; the following year it was 185, and in 1943-44 it rose to 222. In the latter year 122 volumes were borrowed and 100 loaned. In 1944-45 the number of volumes borrowed was 137, while 130 were loaned, making a total of 267. During the period April 1 - August 31, 1945, another 113 loans were arranged (48 volumes borrowed; 65 volumes loaned). Many of the 380 loans made in the last sixteen months have involved much correspondence, and widespread searching. Fortunately the Library is able to make full use of the facilities offered by the Pacific Northwest Bibliographic Center, in Seattle, and much time and effort can be saved by using its locating services. It is noteworthy that the number of books loaned has exceeded the number borrowed--the totals being 195 and 185 respectively.

GOVERNMENT DOCUMENTS

Shortage of help has greatly hampered work on documents, but important progress was nevertheless made in rearranging the document stackroom. This room, formerly a part of the women's common room, is only partially shelved as yet, but in December, 1944, all duplicated Canadian documents were moved to it. The addition of more shelving made it possible to move in all duplicate United States documents in May, 1945. As soon as shelving is available all uncatalogued documents will follow. In other words, eventually the Library's entire document collection except those catalogued (which will, of course, be left in the main stackroom), will be in one room.

THE LIBRARY CATALOGUES ---

All books acquired by purchase have been catalogued and placed on the shelves. Some 415 volumes of the Howay Collection have been dealt with, but the increase in routine duties has brought the work practically to a standstill. When an additional trained librarian is added to the department, it is intended that one cataloguer should devote her full time to the Canadiana Collection. Even so it will require two or three years to deal with the thousands of books and pamphlets now awaiting attention.

The number of cards added to the Library of Congress Depository Catalogue continues to increase, but the filing has been kept up-to-date. There are now 251,923 cards in the card file that supplements the printed catalogue, the final volumes of which should be received within a few months. A move is now afoot to print the monthly supplements, which would be cumulated into annual, and eventually into five-year volumes, after the fashion of the CUMULATIVE BOOK INDEX. If the plan is carried out, it will relieve the Cataloguing Department of a vast amount of tedious and exacting clerical work.

PERIODICALS ---

Though conditions in the periodical world continue to be most difficult, noteworthy progress has been made in this department during the last seventeen months, thanks in part to the special fund made available to the Library by the Board of Governors. A list of new files acquired, files to which substantial additions have been made, and new subscriptions placed, would run to no less than 98 titles. The important new sets purchased number 26 in all.

The Library is constantly on the lookout for individual issues, odd volumes, and runs of volumes required to complete its files, and substantial additions were made in this way to more than a score of sets. Our file of the BULLETIN of the American Geographical Society is now practically completed; the PROCEEDINGS of the American Society of International Law now lacks only two volumes; and AUK lacks only the half-dozen very rare and expensive first volumes; the BULLETIN DES RECHERCHES HISTORIQUES lacks only the rare first volume; the file of HARPER'S MAGAZINE is at last complete; several of the depression-years volumes of NOTES AND QUERIES have been secured, practically completing the very long file; while the last gap has been filled in the files

of the HARVARD BUSINESS REVIEW, the PROCEEDINGS of the Institute of World Affairs, and the JOURNAL of the London Mathematical Society. As these titles indicate, no department or faculty has been favoured in these purchases, and if it were possible to include the complete list, this fact would be even more evident.

A number of important but incomplete files acquired by gift have been added to substantially or completed during the period under review. A run of the AMERICAN JOURNAL OF PHYSICS, presented by Dr. A.E. Hennings, has been completed to date. The file of the ARCHITECTURAL RECORD presented by the New York Public Library is now complete from v. 1, 1891, to date. The file of the EDUCATIONAL RECORD, given in part by the Library of the University of Chicago, and partly by the University of Oregon Library, now lacks only two issues. Judge Howay's valuable run of the MARINER'S MIRROR has been added to, and now lacks only the rare early years. A file of the BULLETIN of the Metropolitan Museum of Art, presented by the New York Public Library, has been completed to date.

Thirty-three new subscriptions were placed in 1944-45. Many of these continue long sets acquired by purchase or gift; others were required by new teaching departments; some place on the Library's subscription list publications hitherto received from individuals as gifts; a few are new and promising periodicals that it is wise to acquire before their early numbers become rare and expensive.

PERIODICAL PROBLEMS _____

The war continued to complicate the life of the Periodicals Librarian. In many cases the quality of paper used deteriorated still further; in other cases margins became narrower. To safeguard the long-term value of its files, the Library subscribed to the rag-paper edition of both the NEW REPUBLIC and the NATION.

Many periodicals had obviously only the most tenuous grip on life, owing to the war, but actual deaths were surprisingly few. WHEAT STUDIES came to an end with volume 20; MEDICAL CARE ceased publication at the end of volume 4; both were important journals. On the other hand, the CORNHILL, after lapsing at the start of the war, has been revived and will apparently soon be published monthly as before. The Canadian Government has lifted its ban on the general distribution of the LABOUR MONTHLY, and the Library has both renewed its subscription and received the back numbers that were denied to it during the war years.

The Library has been admitted to membership in the rather exclusive English Bibliographical Society, and hopes soon to complete its file of the Society's publications. In passing, it may be noted that, wherever possible, it would seem to be wiser to have the Library's subscriptions and memberships entered in the name of the institution, or of the Librarian, rather than in that of a member of the Faculty.

B I N D I N G

No change in binding prices was made in the financial year 1944-45, and the Library received remarkable value for the money expended. A total of 1233 new volumes were bound, at an average cost of only \$1.85, as compared with an average cost of \$1.88 the year before, and \$1.91 in 1942-43. Paper-covered volumes bound totalled 71; books rebound or extensively repaired numbered 105. Another 55 volumes of documents were bound in the special stiff paper covers developed by the King's Printer, in Victoria. Long sets dealt with included a dozen of the new periodical files noted elsewhere in this report.

In May, 1945, Mr. H.W. Brooks, who had been the Library's binder for ten or eleven years, was compelled by ill health to retire and dispose of his business. This presented a most serious problem, as, owing to the shortage of labour, none of the other firms in the city was particularly anxious to take the contract. Moreover, Mr. Brooks has always been so generous in his dealings with the University that it was certain that any new contract would call for the payment of appreciably higher prices. After a difficult period of great uncertainty, Mr. Brooks himself negotiated an agreement with Mr. M.I. Sochasky, who has taken over the premises and business of Brooks & Son, including the Library's binding contract. The quality of the work done is quite satisfactory, and in view of the general rise in costs, the new price schedule is fair and reasonable.

In conclusion, a word of thanks and appreciation is due Mr. Brooks, both for the care and efficiency with which he did the Library's binding for many years, and for his kindness in negotiating the terms of the contract given to his successor.

G R A M O P H O N E R E C O R D S

The record loan service continues to be very popular. Circulation in 1944-45 was slightly less than in 1943-44, but if anything this drop was welcomed by the hard-pressed Library staff. The service consumes a great deal of time, as records must be handled and checked

much more carefully than books, and for this reason it has never been advertised or pushed to any extent.

The Extension Department served no less than 110 registered listening groups during the year; Army and Air Force stations, which received packages of recordings regularly, continued to be the most appreciative borrowers-by-mail.

The service is administered by the Committee in charge of the Carnegie Music Set (of which the Librarian is Chairman), and further particulars will be found in that Committee's report to the President.

NEW BUILDING

Much time and thought have been devoted to the plans for a wing to the existing building. Outline sketches were first prepared; these were then discussed in detail with the staff, and modified in accordance with the many excellent suggestions made. The plans were next submitted to a draftsman, and carried to the blue-print stage. These prints were again discussed in detail, and further modifications made. It is noteworthy, however, that no fundamental change has been made in the general plan, and there is every reason to believe that a wing based upon the prints now available would prove to be a comfortable and efficient building.

It may be recalled that the plan, which was described in the last report, provides for a wing to be added to the north end of the present building, instead of the south end, as intended formerly, and that the main axis of this wing will be east and west, instead of north and south. When the second wing is added, this will complete a U-shaped building, with a large stackroom in the centre, where it will be immediately adjacent to every large room in the three units of the Library.

Two points related to the building programme should be emphasized. In the first place, it seems clear that if the Library is to meet the demands that will be made upon it in the next few years it will have to have two new wings as soon as possible, and not merely the single wing now contemplated. The addition of new faculties, and new departments in the old faculties, together with a student registration that may well reach and remain at 6,000 or more for several years, will all sharply increase pressure on the Library, and it is simply impossible to give anything approaching satisfactory service unless adequate space is available.

Secondly, the disintegrating effect of overcrowding on the Library's organization is easily lost sight of. At the moment, for example, it is most difficult to maintain the efficiency of existing services, let alone add new ones. Under these conditions some departments inevitably come to the conclusion that they would be better off with libraries of their own; and if they happen to secure new buildings before the Library is enlarged, the Library will find it extremely difficult to prove to them that this is not so.

C O N C L U S I O N

The Librarian is once again deeply grateful for the assistance, courtesy, and co-operation that he has received from the Library Staff, the Library Committee, and the Faculty and Administration of the University. So far as the staff is concerned, one can only repeat and emphasize the statement that they have continued to carry on with unabated enthusiasm despite the fact that every member is, by any ordinary standard, much overworked. The Library Committee continues to grant to the Librarian a freedom of action that he greatly appreciates. To our new President, Dr. N.A.M. MacKenzie, the Library owes a special debt for the time and attention he has contrived to give to the consideration of its problems during the first exceptionally busy year in British Columbia. Librarian and Library Staff alike are confident that their interests, and those of the department in which they service, will receive careful and imaginative consideration in the period of expansion upon which the University has now entered.

Respectfully submitted,

W. KAYE LAMB,
Librarian.

REPORT

99.

OF THE DIRECTOR OF THE SUMMER SESSION

The twenty-sixth Summer Session, which extended from July 3rd to August 17th, 1945, opened with a registration almost double that of the previous year. Enrolment figures for the last three Sessions are as follows:

	1945	1944	1943
Partial	-	15	5
First Year	260	53	37
Second Year	278	145	96
Third Year	132	59	61
Fourth Year	81	64	77
Graduates	110	105	53
Auditors	17	8	7
	878	449	336

An additional 20 students were enrolled in Social Work Courses.

It is hardly necessary to add that the increase in registration was largely due to the attendance of ex-service personnel, men and women whom the University was glad to welcome back or receive for the first time.

In the twenty-sixth Summer Session the University offered 31 full (3 unit) courses and 4 half ($1\frac{1}{2}$ unit) courses, as compared with 19 full and 4 half courses in 1944. Because of the large registration, it proved necessary to divide several of the classes, such as English 1, Chemistry 1, and Physics 1, into sections. In this respect, the Session bore some resemblance to the regular Winter Sessions (prior to 1945-46).

Visiting instructors included Dr. Donald A. Piatt, Professor of Philosophy, University of California at Los Angeles; Dr. Melville Jacobs, Assistant Professor of Anthropology, University of Washington; Dr. A.R.M. Lower, Professor of History, United College, University of Manitoba; Dr. George A. Davidson, Neuro-psychiatrist, Shaughnessy Military Hospital; Mr. O.J. Thomas, Inspector of Schools, Vancouver; Mr. A.J. Dodd, Counsellor, Lord Byng High School; Mr. B.E. Wales, Kitsilano High School; and Mr. Jack Grant, recently appointed to the staff of the Department of English, University of New Brunswick.

Among the special features of the Summer Session were the interesting noon-hour recitals by prominent Vancouver artists, arranged by the Students' Association; and two series of noon-hour lectures, on art and music appreciation respectively, arranged by the Department of Extension in co-operation with the Summer Session and Summer Session Students' Association. Through the kindness of the Department of Extension, students were also invited to attend lectures and discussions of the International Workshop. Perhaps the most pleasant event, however, took place during the latter part of the term, when staff and students were guests of the University at an afternoon reception held in the main lounge of the Brock Building.

Considerable satisfaction was expressed by the students at the action of the Board of Governors in adjusting fees to the level of those of the regular session.

The Director wishes to thank the President, Dean Buchanan, members of the Faculty, and the Administrative staffs for their generous advice and help. He also wishes to record his gratitude to the executive of the Students' Association for its whole-hearted co-operation.

Respectfully submitted

WALTER H. GAGE

Director.

REPORT OF THE CHAIRMAN OF THE JOINT COMMITTEE ON PRIZES, SCHOLARSHIPS, AND 101. BURSARIES

During the academic year 1944-45, the most satisfying feature in the work of the Joint Faculty Committee on Prizes, Scholarships and Bursaries was the establishment of several valuable awards. For the year under review, these awards included 2 fellowships, 3 scholarships, 5 bursaries, and 4 prizes, and represented donations by individuals and organizations to the extent of \$4300 annually.

The following is a brief description of these new awards.

F E L L O W S H I P S

The Lions' Club Fellowship, open to graduates for training and research in some problem connected with cancer or virus diseases. An annual award of \$1200 with an additional \$300 available for special equipment.	\$1,500.00
The Canadian Pulp and Paper Association, Western Branch, Fellowship. An annual award, open to graduates, for study and research in forestry.	1,000.00

S C H O L A R S H I P S

The Edwin Waterhouse Scholarship, donated by Price, Waterhouse, and Company. An annual award to a student completing Third Year Commerce.	250.00
The Edith Ashton Memorial Scholarship, donated by Mr. and Mrs. Daniel M. Armstead in memory of Edith Ashton. An annual award to a graduate for research in the field of marine and freshwater botany.	250.00
The Pacific Mills Limited Scholarship, for students entering the First Year. An annual award open to the sons and daughters of employees of Pacific Mills or Canadian Boxes Limited.	250.00

BURSARIES

The Vancouver Section of the National Council of Jewish Women Bursary, available to a woman student who is an undergraduate in any year or a graduate taking Teaching Training or Social work. An annual award.	100.00
The Gamma Phi Beta Bursary, the gift of the Alpha Lambda Chapter of Gamma Phi Beta Sorority. An annual award to an undergraduate in Home Economics.	50.00
The University Women's Club Bursary for Social Work. An annual award to a woman student.	100.00
The Provincial Council of British Columbia, Canadian Daughters' League, Bursary, available annually to a woman student taking Teacher Training or Social Work.	100.00
The Pacific Meat Company Bursary, open to students in the Department of Animal Husbandry for research related to problems of the meat industry. An annual award.	200.00

PRIZES

The News Herald Awards in Journalism, donated by the Vancouver News Herald. Two annual prizes of \$200 and \$150 respectively, for students showing promise in journalism.	350.00
The Dorothy and William Dorbils Prize in Botany and Geology. An award for the best essay submitted on the subject of plant indicators in relation to sub-surface geology. An annual award.	100.00
The Armstead Prize in Biology and Botany, awarded annually to a graduating student in the Honours Course in the Department of Biology and Botany.	50.00

Through the generosity of Mr. H.R. MacMillan, who has undertaken to contribute \$500 annually for 5 years, a loan fund was established to assist students in the forestry courses.

The Committee is also pleased to report increases in the annual value of several of the existing awards, as follows:

The Lady Laurier Club Bursary, from \$75 to \$100.

The Summer Session Students' Association Scholarship, from \$30 to \$40.

The Timber Preservers' Limited Prizes, from a total of \$100 to \$135.

The Ahepa Prize, from \$75 to \$100.

The British Columbia Fruit Growers' Golden Jubilee Scholarship, from \$100 to \$125.

The Mary C. Lipsett Bursary, from \$200 to \$250.

On the recommendation of the Committee, several adjustments were made in other existing awards. To offset decreasing revenue in investments, the number of Khaki University and Y.M.C.A. Bursaries was reduced from 10 to 5, and the Geldart Riadore Bursary was decreased from \$175 to \$150. Finally, on the recommendation of the Faculty of Agriculture, the David Thom Loan Fund was discontinued. It is planned to use the revenue from this fund to increase the David Thom Bursaries.

As a result of representations by the Committee acting in consultation with the Bursar, the Board of Governors decided to separate the awards made available from investments of Royal Institution funds and those made available from University funds. Accordingly the "University and Royal Institution Scholarships for University Entrance" were re-named "University Scholarships for University Entrance" and the "University and Royal Institution Scholarships for Senior Matriculation" were re-named "Royal Institution Scholarships for Senior Matriculation." Furthermore, all University and Royal Institution proficiency scholarships above University Entrance level were fixed at \$200 each. Until these adjustments were made, the total value of these awards varied between \$6275 and \$6725 from year to year; and the excess above the minimum figure, as well as the deficit from Khaki Bursaries, was met from the Special Bursaries Fund. In future, the Special Bursaries Fund will be used solely to assist students of ability who have financial need.

In September, 1944, the Committee, in consultation with Colonel F.T. Fairey, representative of the Dominion and Provincial Governments, recommended 117 awards, totalling over \$22,000, under the Dominion-

Provincial Youth Training Programme. These awards were made to students from more than 50 different centres of the Province. From the Special Bursaries Fund, the Committee also recommended 44 awards to the total of approximately \$5,900. In these awards, 22 centres of the Province were represented. Awards of other scholarships, prizes, and bursaries in the fall and spring amounted to over \$13,000.

It is gratifying to note that several outside organizations have established "local" scholarships, administered by their own committees, to enable students to attend University. During the year, for example, Local 313 of the International Pulp, Sulphite, and Paper Mill Workers of America, Ocean Falls, B.C., after consultation with the committee, decided to set up a scholarship open to students in Powell River, Woodfibre, Ocean Falls, Port Alice and Port Mellon. Awarded on the basis of the written examinations for University Entrance, this scholarship may be used for attendance at the University of B.C.

The Committee wishes to record its gratitude to Colonel F.T. Fairey for his direction, advice and assistance in the Dominion-Provincial Awards. It also wishes to thank the President, the Governing Bodies, and all members of Staff for their co-operation throughout the year.

Respectfully submitted,

WALTER H. GAGE,
Chairman, Joint Faculty
Committee on Prizes,
Scholarships, and Bursaries

REPORT OF

105.

THE DIRECTOR OF UNIVERSITY EXTENSION

GENERAL

The year under review has been one of rapid expansion in the activities of the Department. As well as a general increase in the number of people making use of the regular services and materials, many new groups have become aware of the University's potentialities as a medium through which their particular needs can be satisfied. Thus the year has been especially marked by the considerable number of short courses offered to particular groups such as labour unions and farmers. This is very encouraging development; for the Extension Department can measure its success only in terms of the effectiveness with which it helps to make the University a people's institution, a source to which the citizens of this province can turn for information and inspiration, with the knowledge that their needs are considered as important as those of the students on the University Campus. During this last year, the Department became increasingly conscious that an agricultural assistant was essential to assist in meeting the rapidly increasing demands of the agricultural section of the population.

DISCUSSION GROUP PROGRAMME

Again this year the number of groups using discussion group courses showed a marked increase, with more than 325 registered. The sharp rise over last year's figure of 185 was due largely to the encouraging increase in interest in parent education in this province, with a resultant demand for the discussion course, CHILD PSYCHOLOGY FOR PARENTS, and the new outline MARRIAGE AND FAMILY LIFE. The latter has aroused a great deal of interest: requests for copies have come from points across the Dominion. This course has been used extensively by the educational services of the Armed Forces.

Other courses which proved particularly popular were MODERN LITERATURE, PUBLIC SPEAKING, CREDIT UNIONS and THE CO-OPERATIVE MOVEMENT.

Besides the regular courses, shorter discussion guides, suitable for a series of four meetings, have been made available. Kits of pamphlets on particular topics have also been prepared on request.

In view of the probability of a greatly increased home building programme, with the end of the war, a practical, simplified course in Home Decoration has been planned and should be ready for distribution by January 1st, 1946.

A direct outcome of the Workshop in International Relations described later in this report was the proposal to prepare a discussion unit on CANADA, THE UNITED STATES AND WORLD ORGANIZATION. This, too, should be completed early in January.

The Department is particularly pleased with its most recent acquisitions in the way of equipment: a Multilith and a Multigraph. With a staff artist responsible for illustration and design, these machines in the hands of a competent operator turn out discussion materials whose attractiveness is a real credit to the University.

EVENING CLASSES, SHORT COURSES AND EXTENSION LECTURES

Seventeen classes were offered in the Vancouver Normal School for residents of Vancouver. The following list gives the courses and the enrolment in each:

Current Social and Political Ideals	100
Elementary Journalism	45
Art Appreciation	46
Russian for Beginners	45
Poultry Husbandry	59
Music Appreciation	89
Techniques of Counselling	47
General Botany	33
Introduction to Psychology	107
Public Speaking (two classes)	62
Amateur Gardening and Horticulture	114
Practical English Composition	47
Practical Spanish	39
Musical Structure and Instrumentation	14
The U.S.S.R.	66
Money, Banking, and Monetary Policies	25
	<hr/>
	938

As usual, Faculty members were generous in contributing lectures to the programmes of groups and organizations in Vancouver and other centres. Three hundred and twenty lectures were given, to audiences totalling more than 47,000.

Thanks to the willing co-operation of certain Faculty members, the Department was able to arrange evening classes at Cloverdale and South Westminster. The subject matter included Poultry Husbandry, Soils and Pastures, and Homemaking. A two-day course in Poultry

Husbandry was also held at Chilliwack. For the most part, these special courses were well attended and were very much appreciated by the communities concerned. This was the first time an attempt was made to bring the skill and knowledge of university staff members into direct service in farming communities through contacts extended over a considerable period. It is felt that the experiment was a distinct success, and plans are under way for more courses of this type during the coming year.

An outstanding example of the University's service to special groups was the course in Electronics, arranged at the request of the B.C. Projectionists' Society. This series of fifteen lectures was given by a member of the staff of the Physics Department. Its success may be judged by the fact that a request has been received from the Society for a more advanced course during the coming year.

At the request of the American Society for Metals, a second course in Heat Treatment of Metals was arranged as a series of evening lectures. Sixty-seven registered for the course.

Interest in parent education was evident in the success of the two-day Parents' Institutes held during June--one in Vancouver, the other in Victoria. The Vancouver Parents' Institute initiated a new feature this year: with the co-operation of the Pre-School Education Committee of the Greater Vancouver Welfare Council, the Women's Common Room of the Arts Building became a Play School for a morning, fully provided with supervisors and equipment. Mothers attended the pre-school session, knowing their toddlers were well cared for. The Vancouver Parents' Institute was arranged at the request of the B.C. Parent-Teacher Federation. Lecturers were Miss Evangeline Vincent, Dr. G.W. Pailthorpe, Dr. Elda Lindenfeld and Mrs. Maedi Kals. Registration totalled 170. The Victoria Parents' Institute, arranged at the request of the Victoria and District Parent-Teacher Council, was the first of its kind to be held in that city. Registration was 133. Lecturers were Dr. Elda Lindenfeld, Dr. J.M. Ewing, Dr. Henrietta Anderson and Dr. G.H. Hutton.

Also of particular interest were the two short courses held during the winter:

The week of January 29th brought to the University men and women from all over the Province to attend a special Course for Seed Growers. Arranged by the Department in co-operation with the B.C. Seed Growers' Association, this course gave commercial seed growers an opportunity to become acquainted with the latest developments in

their industry and to discuss their problems with experts and other growers. Lecturers included Dominion and Provincial authorities, members of commercial seed associations and University professors. Registration totalled 114.

One hundred and seven employees of canning firms throughout the Province attended the Course for Fruit and Vegetable Canners held at the University February 19--23, 1945. Arranged in co-operation with the Canned Foods Association of British Columbia, the Course used lecturers from Oregon State College and the American Can Company (Seattle) as well as Canadians who were authorities in their fields. The schedule included a laboratory course in Double Seamer Instruction given in the Mechanical Engineering Laboratory at the University.

At the request of the Provincial Department of Agriculture, the Department held a four-day course during April for Provincial Dairy Inspectors and Veterinarians. The instructor was Dr. Blythe Eagles, Head of the Department of Dairying at the University.

S U M M E R C O U R S E S

Since it seemed by the Spring of 1945 that the end of the war must be approaching, the Department decided to resume its policy of offering summer courses. While classes were smaller on the whole than in previous years, it was felt that the results were worth while, not only from the point of view of work actually accomplished, but also for the publicity value for next year's courses, when good attendances can again be anticipated.

THE SUMMER SCHOOL OF THE THEATRE held July 3rd to August 4th was under the direction of Miss Dorothy Somerset of the Extension Department. Other instructors were Mrs. Vivien Ramsay, Mrs. Elsie Graham, Mrs. Jessie Richardson and Mr. Jack McCance. Thirty-seven students, two from Saskatchewan, registered for the School. The course culminated in the public student performance of two plays: "The Apple Tree", by Harold Brighouse, and Act I of "The Cradle Song", by Martinez Sierra. All the students participated in the acting or production of these plays.

TECHNIQUES OF AUDIO-VISUAL EDUCATION, "a course in the production and use of audio-visual aids"--was given from July 3rd to August 2nd. The Guest Director was Dr. Mervyn V. Miller of the Division of Research in Audio-Visual Education at Stanford University. The course provided full instruction and practice in the use of all types of audio-visual equipment.

WORKSHOP IN INTERNATIONAL RELATIONS
From July 3rd to August 4th, the first Workshop in International Relations was held at the University. Organized on the suggestion of the Canada-United States Education Committee, the Workshop was originally planned to promote mutual understanding between Americans and Canadians through a study of the background, current problems and international relations of the two countries. However, it was found that such a study inevitably involved consideration of the larger issue of international affairs, with the result that the course became truly a Workshop in International Relations.

Due to inadequate time for advance publicity, the registration was somewhat disappointing, with six Americans and four Canadians in full time attendance. In order to add interest to the discussions, visitors from the regular Summer School classes were encouraged to attend the sessions, with excellent results.

The Department was fortunate in securing as director of the Workshop, Dr. Warren E. Tomlinson, of the Department of History and Political Science, College of Puget Sound, Tacoma, Washington. Dr. Tomlinson's energy and skill were largely responsible for the success of the Workshop this year. Other lecturers included professors from the University of Washington and the University of British Columbia, and various Vancouver citizens noted for their knowledge of particular topics covered by the discussions.

In addition to the more intangible benefits derived by the students from free discussion of common problems, two very concrete achievements may be recorded: a study unit on Pacific North-West America was prepared in co-operation with the Washington State Education Office, for use in the high schools of that State, and if desired, in high schools of British Columbia and the other western States; plans were made for the preparation of a discussion outline on Canada, the United States and World Organization, to be made available as part of the regular discussion group programme of the Extension Department.

LIBRARY AND PAMPHLET SERVICE

The Extension Library Service continued to expand during the past year. Books and plays were sent in ever-increasing numbers to points all over the Province. A definite preference for lighter reading was evident: fiction and comedies led the circulation in their respective fields. Two hundred and seventy borrowers were registered with the Library as compared with 190 last year.

Approximately 250 new books were added to the Extension Library. Many of these were fiction, travel and biography, for which there was great demand. Books on marriage and family life, child psychology, and music were added to provide supplementary reading for the discussion group courses in those subjects.

In addition to the books sent to regular borrowers, many volumes were loaned to groups registered for various Extension courses and to members of Citizens' Forums.

The pamphlet service, too, has been in constant use. Pamphlets on a wide variety of topics were sent to more than 537 individuals

D R A M A A N D R A D I O

The year 1944-45 was one in which dramatic groups definitely turned their thoughts to plans for "after the war". Outwardly, dramatic activities did not increase very much, but among groups and individuals throughout the province there was a strong evidence of a desire to revive and enlarge former amateur theatre programmes.

The Department assisted groups and individuals throughout the Province in the usual manner: through the Play Lending Library, short courses, lectures, visits, personal interviews and advice by correspondence.

Additions were made to the Play Lending Library which now includes more than 4,000 plays and books on the theatre and radio. Circulation for the year was 4,747. One hundred and ninety-eight groups availed themselves of borrowing privileges, one hundred and thirty-three of which registered as regular borrowers. Forty groups made use of the Group Play Reading Service, which is becoming increasingly popular.

During the year the instructor in dramatics was active in helping various organizations. She conducted four short Drama Courses, one of them for the Labour Arts Guild and another for the Y.W.C.A., and directed "Christmastide" ceremonies at the Vancouver Art Gallery. In co-operation with the University Department of Education she gave a course in School Dramatics to the students of the Teacher Training class. In the Spring she acted as adjudicator for the speech and drama section of the Okanagan Valley Music Festival. In August the instructor attended the annual meeting in Banff of the Western Canada Theatre Conference, as a member of the executive Committee.

MUSIC AND ART ---

The Phonograph Record Loan Service has continued to expand rapidly. This year one hundred and ten groups made use of this service, as compared with sixty-eight last year, and the circulation of records increased from 3,960 to 4,947. Several of these groups were composed of men in the Armed Forces serving on remote stations.

The University Committee in charge of the Carnegie Music Set co-operated with the Department of Extension in making these fine recordings available to music appreciation groups throughout the Province. During the year the Department has added to its own collection a number of recordings particularly suitable for young people's programmes. This service, initiated at the request of teachers and adults in charge of young people, will be increased during the coming year.

Two courses in Music Appreciation were given by Dr. Ida Halpern in the Evening Class series of 1944-45. In co-operation with the Director of the Summer Session and Summer Session Students' Association the Department arranged a noon-hour summer course in Music Appreciation, as well as one in Art Appreciation.

VISUAL INSTRUCTION SERVICE ---

Again this year, due partly to the heavy volume of requests from the Armed Services, the Department was hard pressed to satisfy the demand for visual materials and equipment. It is hoped that now the war is over and audio-visual equipment again comes on the market, some of the schools and organizations which have made constant use of the Department projectors and accessories will be

able to purchase their own machines. This will make it possible for more remote or less prosperous communities to be introduced to the use of films and film strips. During the period under review, the Department has served approximately 348 towns and communities in the Province. Eighty-one churches, 115 schools, and 406 organizations have made use of the visual instruction services

The library is gradually increasing; with new subjects added this year, the inventory now stands at 840 film strips, 100 sets of lantern slides and 550 motion picture titles, including those obtained through co-operation with the National Film Board of Canada and the National Film Society.

The Director of the Department continued to serve as Regional Agent for British Columbia rural circuits supported by the National Film Board of Canada. Six circuits were in operation, covering the following areas: Vancouver Island and Lower Mainland; Southern Okanagan; Northern Okanagan; West Kootenay; East Kootenay; Prince George -- Prince Rupert. This year there was a shift in emphasis away from war information films to subjects which could be related to specific community interests. As a result, the projectionists have in some measure become adult education field representatives working in close co-operation with the Extension Department, and making full use of its services and materials to assist in community projects.

R A D I O F O R U M S

The Extension Department again served as Provincial Office for the National Farm Radio Forum and the Citizens' Forum. Farm Forum is a joint project of the Canadian Federation of Agriculture, the Canadian Association for Adult Education and the Canadian Broadcasting Corporation, while Citizens' Forum is sponsored jointly by the latter two organizations. Both programmes use a relatively new educational technique: an initial radio discussion; printed material prepared specially for the topic and used by forum members as the basis for their discussion; and the "report back", which is summarized with reports from all other forums the following week.

This year the number of forums was somewhat less than in the previous season, due partly to the fact that the Extension Assistants who served as provincial secretaries for the programmes were unable to devote much time to personal organizational work. However, those who did participate were most enthusiastic and interested.

EDUCATIONAL PROGRAMME FOR BRITISH COLUMBIA FISHERMEN

During the past year the co-operative movement in British Columbia has seen significant developments, in many of which the field workers employed under the grant from the Federal Department of Fisheries have been directly or indirectly concerned. Of particular importance to the movement were the organization of the Fishermen's Co-operative Federation and the formation of the Fishermen's Mutual Marine Insurance Society. The field workers were able to give assistance in the organization of various other co-operative associations, including the Queen Charlotte Entertainment Co-operative. Communities throughout the coastal areas were visited and provided with suggestions and materials for their educational programmes, and a great many public meetings were held.

Assistance has been given to the Publications Committee of the B.C. CREDIT UNIONIST and numerous articles have been contributed to the CREDIT UNIONIST and the FISHERMAN. Mr. Breen Melvin has been working with the Legislative Committee of the Co-operative Union of B.C. which is engaged in preparing recommendations for the revision of the B.C. Co-operative Associations Act.

COURSE IN PERSONNEL ADMINISTRATION

At the request of the Federal Department of Labour, the Department of University Extension organized its third Course in Personnel Administration. Held in Vancouver as a series of two-day sessions during the months from September to March inclusive, the Course was designed to aid industrial establishments in the solution of their personnel problems. Top-ranking authorities in the field of personnel administration and labour relations were brought to Vancouver from various points in the United States and Canada. Among them were R.A. Sutermeister of Seattle; Lloyd Fisher of San Francisco; Harold F. North of Chicago; Dean Edwin R. Guthrie, Dr. Allan Edwards and Dr. Clark Kerr of the University of Washington; and Mrs. Mablè Mosler of Seattle, Washington.

PUBLIC RELATIONS: CO-OPERATION WITH OTHER ORGANIZATIONS

As is obvious from the fore-going pages, the Department has continued to extend its policy of co-operating, wherever possible, with other organizations interested in education.

Through its various activities, the Department has worked in close co-operation with the Canadian Association for Adult Education, the Canadian Federation of Agriculture, the Canadian Broadcasting

Corporation, the National Film Board of Canada, the Federal Department of Labour, the Federal Department of Fisheries and the Provincial Department of Agriculture.

The Director and the Assistant in charge of discussion groups were able to attend the Conference on Adult Education held in Winnipeg during May. The Conference was sponsored by the Canadian Association for Adult Education and was called with a view to co-ordinating plans for adult education activities throughout the major national and provincial agencies concerned.

The Director of the Department has also been closely associated with the following adult education organizations: the Vancouver Institute; the Adult Education Committee of the Vancouver Y.M.C.A; the Provincial Nutrition Committee; the Regional Committee, Canadian Legion Educational Services; National Farm Radio Forum; and the National Council of Citizens' Forums.

The News Sheet issued monthly by the Department has been a distinct success as a means of keeping subscribers in touch with current activities. In addition, special news releases have been sent from time to time to newspapers throughout the Province, and the University examination results were publicized as usual.

In July a special Assistant was appointed to the Department to assist with the public relations programme of the University. At the present time when the institution is expanding so rapidly, it is felt that an effective public information service is essential to keep the public informed on current development at the University.

S T A F F

A number of staff changes have been made during the past year. New appointments include Mr. Norman Barton, Assistant in Visual Instruction; Miss Audrey Andrews, Film Librarian; and Mr. Arthur Sager, Assistant in Public Relations. Mr. R.T. McKenzie, Assistant to the Director remained on leave of absence with the Armed Services.

A C K N O W L E D G M E N T S

In conclusion, I wish to record my appreciation of the loyal and unselfish co-operation of the members of the staff. They have endeavoured at all times to advance the University's programme of

Adult Education. I wish to record too, the invaluable contribution made by members of the teaching staff of the University. During a time when the classes have been abnormally large and the staffs have been depleted by war service they have given generously of their time and energy to the work of the Extension Department.

Respectfully submitted,

G. M. SHRUM,

Director of University Extension.

REPORT OF

116.

THE DIRECTOR OF THE UNIVERSITY HEALTH SERVICE

In spite of increased registration the Health Service has carried on a busy programme throughout the year, and the Service has been maintained at the highest possible level which time has allowed.

The Health of the student body on the whole has been good, no serious epidemics arising to curtail academic activities. The physical examination of new students and women students of Intermediate and Senior years proceeded on schedule. We were fortunate in having the assistance of one extra nurse during the examination period in the Fall Term.

PHYSICAL EXAMINATION OF NEW STUDENTS

A total of 1188 new students were examined during the year. Of this number 579 male students received the combined Cadet and University Entrance Examination by the respective military examiners. In addition our office re-examined 470 women students of other than the First Year for Compulsory Physical Education, required of all students.

The physical examination classifies students according to capacity for exercise. It picks out those students for whom undue physical exercise might be harmful. Discussion with the student of defects found helps to establish a keener appreciation of personal health and for those with remedial defects the desire to have them corrected.

The total number of examinations performed by the Health Service has steadily increased since 1940 and the number this year has topped the prewar record of 1939.

A close record was kept of the important findings at the time of initial examination. Foot disability was encountered in 16.5% with arch trouble the predominant finding. A large number of students use glasses, some for reading only. This year 36.3% wear glasses and in addition 5.6% require followup because of visual defect. Dental defects requiring immediate attention were encountered in 12.3% of students.

Defective hearing was noted in 3.5%, organic heart lesions in 2.5%, digestive troubles in 4.2%, rheumatism in 1.6%. Of unusual interest is the fact that 44.8% of students had had their tonsils removed. Defects of personality were noted in 4.7% apart from 1.6% who showed

disorders of the nervous system. In any large group of young people neurotic and psychoneurotic conditions are not uncommon. Many of them are amenable to cure once the proper associations have been made and the environment stabilized. However, there are others who need help badly. A Mental Hygiene Programme under professional supervision is essential and it is hoped that the Services of our Staff Mental Hygienist, at present on leave of absence, will soon be available.

Pulmonary tuberculosis was discovered in 0.9% of students of which only one case was in an active stage. In addition 0.3% of students showed the healed childhood type of tuberculous lesion.

According to our exercise classification 6.1% of women students were in class 3, which automatically barred them from physical training. Male students numbering 90, rejects from the Cadet Services, showed a corresponding rate of 22.2%.

Altogether 37.9% of students showed defects at time of initial examination which required further follow up and treatment.

HEALTH SERVICE ACTIVITIES DURING THE SESSION

Many office visits were made during the year. These included visits for First Aid, consultation and examination, readmission and exclusion, immunization and laboratory procedures such as urinalysis, tuberculin testing and blood testing. In addition, daily sick lists were dispatched to the Medical Officers of the Cadet Corps.

Our office has now reached its capacity limit for student visits. Although the walls of the narrow quarters have bulged at times the same staff has carried on as best it can. We are looking forward to larger quarters in the proposed building scheme.

Of unusual interest was the visit of the Mobile Chest X-ray Unit of the Provincial Board of Health, Division of Tuberculosis Control. Altogether 413 students referred through the preliminary tuberculin survey passed through this Unit in two days. In addition 187 other students were referred to the Central Clinic of the Tuberculosis Division for X-ray and examination.

As in previous years staff members of the Metropolitan Health Department, Vancouver, gave eight lectures in Public Health to students in the Departments of Education, Nursing and Health, and Sociology.

More and more students are coming to the office for immunization against Communicable Disease. It is gratifying to note this response.

Records were kept of the disease conditions for which the students came to the office and also an analysis of time lost. Prominent on the list is Communicable Diseases. The influenza epidemic of last year fortunately did not carry into the 1944-45 session and time lost was reduced considerably. Fortunately apart from winter and spring colds, there was no major epidemic. Of some concern were 449 cases of Gastro-enteritis noted under defects of the Digestive System. The majority of these cases occurred in January, February and March and while there was no direct evidence of communicability one cannot give any assurance that they were not infectious in origin. Predominant symptoms were abdominal pain and moderate to severe diarrhoea with fever exceptional. Very few of the cases were sick more than a few days. Time did not allow epidemiological follow up but considerable sampling failed to discover any known human pathogens in the excreta tested. Two cases of acute Bacillary Dysentery were however discovered the origin of which was established.

Tuberculosis, one of the main killers of young adults, has received our closest attention. Each year new students are given the tuberculin test and the reactors are x-rayed. We are indebted to the Military Services for their co-operation in allowing parade time so that the men could be tested in groups. This has saved much of our time. Five new cases of tuberculosis were discovered in the total student group during the session. In addition there are 22 other students previously diagnosed. The total tuberculosis rate for the University on a 3,000 student basis is thus 0.9%. Fortunately only two cases had to leave the University because of this disease and all others are closely watched.

The yearly tuberculin survey is important as it establishes a rate of infection for young adults. Exposure to tuberculosis results in a positive reaction but a positive reactor does not necessarily develop active disease. The chest x-ray repeated year by year is a safeguard in this respect. The positive tuberculin rate this year for new students was 26%. This represents a substantial decrease from previous years. The rate in 1943-44 was 33.2% and in 1942-43 was 38.2%. It is to be hoped that this downward trend continues and that it is associated with a decrease in the number of cases of active tuberculosis in the community generally.

The Health pamphlet library is freely used by the students. Thousands of pamphlets on assorted health subjects have been taken and it is particularly gratifying to note that many more students are becoming conscious of the dangers of Venereal Diseases and how to avoid them.

Mrs. K. Farstad has served most acceptably as clerical secretary.

In conclusion the Health Service desires to express its appreciation to the President, Faculty and Staff Members, and the various Divisions of the Provincial Board of Health for their assistance and guidance.

Respectfully submitted,

J. S. KITCHING,
Director.

REPORT OF

120.

THE ASSOCIATE DIRECTOR OF PHYSICAL EDUCATION

GENERAL STATEMENT

Physical Education at the University of British Columbia during the session 1944-45 was faced with several problems. Some of these may be enumerated as follows: the lack of adequate staff which lowered the calibre of instruction; insufficient facilities which limited the extent of the programme; and the absence of an official University-sponsored programme which caused Physical Education to appear as a rather small part of the training conducted by the C.O.T.C.

The attention of University authorities is again drawn to the report of the joint committee of Senate and Faculties on 'The Manner in which a Department of Physical Education may be set up and Administered.' In addition to this report, plans for a proposed new building are now in the hands of the Chairman of the University Planning Committee. It is strongly recommended that this report and these plans be reviewed for the purpose of guidance and reference in the development of a Department of Physical Education in respect to a Required Programme, Intramural Programme, Professional Course, and Extramural Athletics.

INTRAMURAL SPORTS

The Intramural Sports Programme included eighteen teams which competed in round-robin and elimination tournaments in the following athletic events: table tennis, badminton, volley-ball, snooker, basketball, touch football, softball, cross-country, golf, track and field, and swimming.

MILITARY REQUIREMENTS

Through the co-operation of the C.O.T.C., between 500 and 600 men took part in Physical Education as a one hour per week requirement for part of their military training. This work was done with the help of three well qualified student assistants.

STUDENT ATHLETICS

This year the Physical Education staff has assumed the responsibility of coaching the Varsity Teams in Cross-country and Basketball. In other years, Canadian Rugby, English Rugby, Track and Field, and Boxing have been supervised by staff members in Physical Education. It would indeed be a great potential educational feature if, in the future, all athletic teams could be coached by members of the Physical Education Staff.

TEACHER TRAINING

Twelve students from the Department of Education were enrolled in a special Health and Physical Education course. This course represents an introduction to these two fields, but should be carefully studied for the purposes of revision and suggested prerequisites.

SUMMARY

The key note in the development of Physical Education at the University of British Columbia as a recognised Department is the need for increased facilities. The extent of any programme in Physical Education, regardless of staff, is directly dependent on available facilities and recognition and co-operation by the various faculties. Too much emphasis cannot be placed on the findings of the joint committee of Senate and Faculties on 'The Manner in which a Department of Physical Education may be set up and Administered.' To continue to ignore the obvious implications of this seventeen page report would show a great lack of foresight in regard to student needs in the matter of health, physical efficiency and recreation. It is again strongly recommended that the whole case of Physical Education be thoroughly reviewed.

Respectfully submitted,

M. L. VAN VLIET.

Associate Director of
Physical Education.

REPORT OF THE

122.

INSTRUCTOR IN PHYSICAL EDUCATION FOR WOMEN

REGISTRATION

The third year of the War Work Programme, Part A, has been completed. Part A of the programme requires every undergraduate woman student to take one hour a week of physical activity. Registration cards for 1,008 women students were received and checked by the Physical Education Office. Of this number 868 were registered by us in classes, 51 were medically excused, and 46 were members of the Red Cross Corps. Others were partial students or students taking graduate courses.

PROGRAMME OF CLASSES IN WAR WORK, PART A

Activities were selected which would accommodate the large number of students to the best advantage. The present facilities and staff, and time table problems limit the programme considerably. During the last three years an effort has been made to grade the work given in the various classes. First year students were required to take a Keep Fit class in preparation for activity classes in their upper years. Activity courses were reserved for upper class women. It is very discouraging for the women students, however, to learn a sport and have no opportunity for practicing or enjoying the sport with other students who play that sport. Periods assigned to women students are required for class work. There are no recreational periods possible for women students due to lack of facilities and staff.

Classes were conducted in the Following: Archery, Badminton, Basket Ball, Keep Fit and Recreation Leadership.

ARCHERY

Four classes--97 registrations. Members of these classes were second, third, and fourth year students and practically all beginners in Archery. Every student learned to shoot and 60 of them took part in a Display Tournament held at the end of March. Instruction included care of equipment; information in regard to purchase and type of equipment for use in schools and for recreation purposes; and suggestions on teaching Archery. (Instructor --Miss Gertrude Moore)

B A D M I N T O N

Two classes for beginners and 2 classes for advanced players in which coaching was given--3 informal periods for players--170 registrations. (Instructors--Miss Lois Reid and Miss Moore.)

B A S K E T B A L L

Two classes for those interested in playing Men's Rules in Basket Ball--42 registrations. These were informal play periods in which coaching was given. (Instructors--Miss Helen Matheson and Miss Moore.)

K E E P F I T

Six classes for first year students--321 registrations. The course in the Fall Term included various types of exercises to develop balance, flexibility, agility, strength and endurance. In the Spring Term the emphasis was on rhythmical work, with and without hand apparatus. The year's work was designed to prepare students for activity courses in the following years at the University. (Instructor--Mrs. Isabella Roper.)

RECREATIONAL LEADERSHIP

Four classes--238 registration. These courses were given for students interested in becoming recreation leaders, playground, supervisors, group workers, teachers and nurses in Public Health throughout the Province. Four courses were given and each included theory and activity work. (Instructor--Miss Gertrude Moore.)

- The content of the RECREATIONAL LEADERSHIP COURSE consisted of such subjects as theory of play, the background of the recreation movement, modern recreation programmes, fundamentals of group work, and characteristics of various age groups, etc. Activities included games, dancing and other phases of a recreation programme such as dramatics, social recreation, nature lore and camping, etc.
- The FOLK DANCING COURSE specialized in the dancing rhythms and the musical aspect of a recreation programme. The theory included methods in teaching rhythms and dancing; the school programme in folk dancing for boys and girls, inter-relation of other subjects of the school curriculum, etc. The activity programme contained dances to be used in every grade in school and in recreation programmes.
- The PLAY AND PLAYGROUND COURSE specialized in the physical activities of a recreation programme. The theory included the traditional theories of play; play as a factor in education;

the objectives and needs of a play programme; the importance of trained and skillful play leaders, etc. The practical work was games of all types for various age groups.

- The NURSES' CLASS. This class was arranged particularly for nurses. It included theory and practice material selected with two objectives:
 1. Material which will be of use to the nurse in her public health work in the community (i.e. Recreation and Health, Posture of School Children, the importance of supervised play, etc.)
 2. Material adapted to the nurse and her own health, (i.e. posture tests, exercises for feet, abdominal exercises, and games for her own recreation, etc.)

THE INTRAMURAL PROGRAMME

This has been a most successful year for the Intramural Programme. The success is due partly to the improved games' skill of the students. This is the result of the regular and required class work in games since the War Work Programme became effective. The higher standard of play has increased the interest and competition. The success of this year may also be attributed to the organization for the promotion of Intramurals which has been built up over a period of years. Class managers are appointed and supervised by the Women's Athletic Directorate. Students who are appointed now have had experience in various positions before being given the responsibility of Intramurals. Awards are given to efficient managers. University Awards and points which are counted towards awards are given to players on the teams. Three small cups are given for the three sports in which Round Robin series are conducted. In these sports the largest number of women compete. The cup is awarded the team winning most points in the series. An Intramural cup is given to the team winning the largest aggregate of points in all sports. Though the promotion, organization and administration of the Intramural Programme is done by the Physical Instructor, great credit goes to Miss Ada McLaren, Intramural Director, for the success of this year's programme.

Sports this year were Volley Ball, Table Tennis, Badminton, Archery, Swimming, Bowling and Soft Ball. Teams varied in size from four members to ten. It is estimated that 350 women took part in the programme. Commencing October 1st and finishing March 31st, eight teams played throughout the series in each

sport. These teams represented First, Second, Third and Fourth Year Arts, Agriculture, Home Economics, Nurses, and Commerce. Fourth Year Arts won the Intramural Cup with 100 points, Third Year Arts and Aggies tied for second place with 84 points, and First Year Arts was third with 79 points.

Matters in administration which have received the attention of the Physical Instructor have been attendance records of all students; checking of all students' medical cards; supervision of the inadequate and unsuitable locker accommodation in which it was impossible to provide nearly 100 women with any facilities for leaving strip and equipment; the preparation of reports, budgets and estimates; the care and supervision of equipment for purchase and repair; the ordering of books in Recreation and Physical Education for the library; familiarizing the students with these books and encouraging the use of them; assistance and material given to graduate and undergraduate students who are teaching Physical Education and recreational work; information was supplied to students on request by them in regard to the professions of Recreation, Physical Education and Health; assistance was given students in securing positions in Recreational Leadership and Physical Education and group work.

The Instructor organized a group for a recreational period to play Basket Ball, using Women's Rules, and two matches were arranged with outside teams. The Instructor also organized and conducted the Swimming Meet held at the Y.M.C.A. The Instructor has at all times given assistance and counsel in the business of the Women's Athletic Directorate, to the promotion of sports organized by the women students, and to the granting of Athletic Awards. The Instructor assisted with the organization of a Women's Physical Education and Recreation Club. The purpose of the Club is to unite the women interested in the professions of Physical Education and Recreation so that they may study the opportunities and problems in these professions in British Columbia and Canada. Physical Education theory classes were given to the students taking the course in education.

The Physical Instructor has had requests from schools for qualified teachers in Physical Education; from Vancouver and Victoria playgrounds for trained supervisors; from Clubs and Community Centres for Recreation Leaders; from the Canadian Forestry Association for leaders to organize girls in Provincial Forestry Clubs; from Camp Directors for trained camp leaders. This demand for young women fully trained in Physical Education, Health, Recreation and Group Work indicates a need for professional courses which could be offered most acceptably by the University.

There is a certain satisfaction in a comparison of the 1936 report and the current 1944-45 report. In January, 1936 an experiment in Physical Education was started on a part time voluntary basis. Registration numbered 300. Classes were held for two hours each morning with two short informal play periods two afternoons and one hour per week. From that beginning the work developed until the War Work Programme was introduced. The enthusiasm and the co-operation of the women students in their desire for a Department of Physical Education made it possible to include one hour a week of physical activity in the plans. With the development of the Intramural programme, many women students now have two hours a week of physical activity. It is hoped that these courses have laid the foundation for further developments and the establishment of a degree course in Physical Education. It is felt that such courses would form an integral part of the University curriculum, and would help to fulfill the requirements of physical fitness among the citizens of Canada, particularly among the women.

Respectfully submitted,

GERTRUDE E. MOORE,

Instructor of
Physical Education for Women.

REPORT OF THE OFFICER COMMANDING
UNIVERSITY NAVAL TRAINING DIVISION
UNIVERSITY OF BRITISH COLUMBIA

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GENERAL

The purpose of the University Naval Training Division is to provide Naval Training for University Students who are interested in the Naval Service. Students are attested in the R.C.N.V.R. on Divisional Strength at H.M.C.S. "DISCOVERY", as Ordinary Seamen or Stokers Class II as the lowest rating in the Executive and Technical Branches respectively.

This year the arrangements were slightly different than last year. Students leaving the University for any reason were called on Active Service, but did not appear before an Officer Selection Board unless qualified for Technical Officers. Thus U.N.T.D. ratings went on Active Service as Ordinary Seamen instead of as Officer Candidates. This change was occasioned by the easing of the demand for Naval Officers.

The assignment of Bounty Pay was made according to the ruling of the Joint Service University Training Committee, each officer and rating receiving \$5.00 of the assigned pay.

On 21st February, 1945, the U.N.T.D. was inspected by Commodore E.R. Brock, R.C.N.V.R., Commanding Officer Naval Division.

On 24th March, 1945, the U.N.T.D. participated with the Canadian Officers Training Corps in the March Past in honour of Brigadier D.R. Sargent, E.D. T/GOC Pacific Command. Following the March Past, the U.N.T.D. ratings and C.O.T.C. men going on Active Service, and their fathers, were entertained at a banquet in Brock Memorial Building.

The numbers of enlistments and disposals are listed in the appendix.

RECORD OF ENLISTMENTS AND DISPOSALS

	STO.II	ORD.SMN.	TOTAL
Old Hands returned	28	51	79
New Entries	<u>32</u>	<u>66</u>	<u>98</u>
T O T A L	60	117	177 .
Active Service by Jan. 1945	-	9	9
Discharged by Jan. 1945	1	2	3
On Strength May 1945	59	106	165
Active Service in May 1945	6	32	38
Discharged in May 1945	7	9	16
Active Service for summer only	9	3	12
Spring Training Period (includes some who were later discharged)	15	73	88

T R A I N I N G

In agreement with requirements for deferment by the Mobilization Board, U.N.T.D. ratings received instructions and training for six hours each week during the academic session.

The training periods were Wednesday afternoon and Saturday afternoon or Monday night.

The unit was divided into two companies, Old Hands and New Hands. The training syllabus was laid out by C.O.N.D. for all U.N.T.D.'s in Canada as a three year programme and covered such subjects as Drill and Field Training, Seamanship, Bends and Hitches, Navigation, types of ships, Naval Organization and Administratives Naval Law, and Naval History.

During the year several periods were spent at H.M.C.S. "DISCOVERY" where special gear is available for instructional purposes. The Naval Service provided trucks to transport the ratings from the University to H.M.C.S. "DISCOVERY".

The actual instructions were given by Officers and Instructors from the Active Service Instructional Staff at H.M.C.S. "DISCOVERY".

S P R I N G T R A I N I N G P E R I O D

No exemptions were granted from this training period except to men going on Active Service for the duration or for the summer months.

The U.N.T.D.'s of Manitoba, Alberta, Saskatchewan and British Columbia were trained at H.M.C.S. "NADEN", Esquimalt, B. C. Old hands were given several days sea time aboard ships available at Esquimalt.

O F F I C E R C A N D I D A T E S

Only Mechanical, Electrical, Mathematical and Physics graduate students were eligible for Officer Selection. Six ratings were selected from this unit and four pre-final years Mechanical and Electrical were selected for summer training. These ratings were assigned as acting E.R.A. 4/c or acting E.A. 4/c to escort ships operating on the Atlantic Ocean.

Respectfully submitted,

H. M. McILROY,

Lt.Cmdr.(S.B.) R.C.N.V.R.
C.O., U.N.T.D., U.B.C.

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

130.

G E N E R A L

This report covers the activities of the University of British Columbia Contingent of the Canadian Officers Training Corps for the sixth and final year of the Second World War. All three branches of the Armed Forces were represented by units at the University until 31st December, 1944, when the University Air Squadron was disbanded. Upon the disbandment of their Unit the 252 members of the U.A.S. were attested and taken on strength of the C.O.T.C. The total strength of the Unit as at 31 March 1945 was 27 Officers and 1019 Other Ranks. The University Naval Training Division continued throughout the session with approximately 150 ratings..

The strength of the detached company of the C.O.T.C. at Victoria College increased from 51 all ranks in 1943-44 to 101 for 1944-45. Major R.T. Wallace, a member of the staff of Victoria College, continued to serve as Officer Commanding.

At the final Local Headquarters Training Parade held on 24th March, 1945, Brigadier D.R. Sargent, E.D., T/GOC-in-C, Pacific Command, inspected the C.O.T.C., and took the salute in a combined March Past of the U.N.T.D. and the C.O.T.C. Following the parade a Banquet was held in the Brock Memorial Building to honour the members of the U.N.T.D. and the C.O.T.C. who were leaving for Active Service. Addresses were given by Chancellor E.W. Hamber, Brigadier D.R. Sargent, Commander J.M. Smith and President N.A.M. MacKenzie.

Since the Air Force had stopped recruiting and the war appeared to be drawing to a close, enlistments for Active Service for the year were considerably lower than in previous years. The enlistments were distributed as follows:

Navy	17
Army, C.A.(A)	<u>64</u>
T O T A L	81

The total enlistments from the University Training Units for the period 3rd September, 1939 to 31st August, 1945 were as follows:

C.O.T.C.	1452
U.N.T.D.	150
U.A.S.	78
TOTAL	1680

These were distributed as follows:

Navy	417
Army	629
Air Force	634

T R A I N I N G

With exception of one Company all men were required to devote six hours per week to military and physical training. One company, composed of cadets who had completed two years of C.O.T.C. training and two camps, was required to train for only three hours per week. The greater part of the training was held on Wednesday and Saturday afternoons, evening parades were provided for those whose timetable and work made it impossible for them to attend the afternoon periods.

During the year there was a marked revival of interest in rifle shooting. The indoor Range was kept open every day with a qualified Instructor in charge. The members of the Corps put in many extra hours practicing on this range. In this way the marksmanship of the Unit was considerably improved. Inter-company competitions were held and prizes awarded for the highest scores in each company. The first-prize winners in the battalion and in each company were invited to the Annual Banquet where prizes were presented by Colonel A.W. Sparling, D.S.O., E.D., Officer Commanding, 39th Reserve Brigade Group.

Rifle teams were entered in the Dominion of Canada Rifle Association Competitions for January, February and March, 1945. In the March Competition one team was awarded a prize with a score of

472 out of a possible 500. The highest score of this team was obtained by C.S.M. Robinson, W.G. with 97 out of a possible 100.

Three platoons of senior Cadets were given Specialist Training in Signals, Pioneer and Carrier work. Examinations were conducted in the Carrier Platoon with the following results:

Class III Wheeled 50 Qualified

Universal Carrier 29 Qualified

A number of Officers were prepared for theoretical and practical qualifying examinations as shown in Appendix IV.

A N N U A L C A M P

The Annual Camp was carried out at 112 Basic Training Centre at Chilliwack, B.C. All physically fit cadets were required to attend Camp. The Camp strength was 1024. Due to the excellent co-operation of the Officer Commanding, A6 C.E.T.C. at Chilliwack, it was possible to provide a varied syllabus of training. The excellent work of the Signal, Carrier and Pioneer Platoons was continued at Camp. The Signal Platoon provided telephone communications within the Camp and assisted in the Company and Platoon schemes. The Carrier Platoon provided drivers for the Camp Transport and in addition continued with their carrier training.

The Inspector General for Western Canada accompanied by the Officer Commanding, 39th Reserve Brigade Group, carried out a formal inspection of the Unit at Camp on 7th May 1945. V.E. Day occurred while the Unit was in Camp and an appropriate ceremony was held on the parade square. A very successful Camp was marred by a fatal drowning accident which took the lives of three cadets.

S T A F F

The Authorized Administrative and Training Staff for the year consisted of two Officers and four Warrant Officers for training and one Officer, two Warrant Officers and two clerks for Administration.

Major R.W. Bonner, Seaforth Highlanders of Canada, was Chief Instructor with Capt. R.F. Osborne acting as Training Officer. Capt. S.E. Walmsley continued to serve as the Unit Adjutant.

DISCIPLINE

There were no breaches of discipline during the year. All ranks were commended by the Commanding Officer for the high morale and keen interest shown at parades, lectures and the Annual Camp.

ACKNOWLEDGEMENTS

The Commanding Officer wishes to express his appreciation for the assistance and co-operation afforded him by the Chancellor, the President of the University, the General Officer Commanding, Pacific Command, the Officer Commanding 39th Reserve Brigade Group, the Officer Commanding A6 C.E.T.C., the Joint Services University Training Committee, the Commanding Officers of the U.N.T.D. and the U.A.S., and 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.

REPORT OF THE OFFICER COMMANDING
NO. 6 SQUADRON, UNIVERSITY AIR SQUADRON¹³⁴.
ROYAL CANADIAN AIR FORCE

GENERAL

After a successful first year, the squadron which had disbanded for the summer months was re-organized at the opening of the Fall term, with 120 airmen already on strength reporting. All having successfully passed the examinations at various Service Training Flying Schools, were re-classified from A.C.2 to A.C.1

ENLISTMENTS

In spite of the fact that no technical personnel were allowed to be enlisted, and even though the medical standards had been severely raised, 119 recruits were enrolled.

TRAINING

Early in September a Joint Services University Training Board drew up a recommendation concerning future training within the Universities. It dealt essentially with the co-ordination and scope of training within the universities. This recommendation was considered in detail by U.A.S. officers at A.F.H.Q. at their first meeting held September 7, 1944. (S/L R.M. Hardy, C.O. No. 8 U.A.S., University of Alberta, represented the Western Provinces. It was then again considered in detail at a joint meeting of Commanding Officers of units of U.N.T.D., C.O.T.C. and U.A.S.

The recommendation, as amended at these meetings, was then submitted to the Executive Council of the University Conference.

In addition there was considerable discussion among U.A.S. officers and A.F.H.Q. officers concerning details of U.A.S. training to be set up within the policies discussed at the above meetings.

The proposed new training policy was not drawn up to fit the situation at the small colleges, since it was essentially a University programme, and the opinion of A.F.H.Q. according to S/L Hardy, being that enlistment requirements under the new policy would make the programme unacceptable to the majority of the colleges.

The recommendations in part--as furnished in a letter from S/L Hardy, dated Sept. 12, 1944, were:

- "Although requirements for active service airmen indicate that the U.A.S. is no longer necessary as a war measure, the R.C.A.F. may wish to establish auxiliary squadrons in the large universities after the war, to maintain a reserve and as a source of officer material.
- It is assumed that U.A.S. personnel are to qualify for wings irrespective of the university course in which enrolled, e.g. Engineering, Medicine, etc. The draft syllabus for 3rd and 4th year pilots is on the E.F.T.S./S.F.T.S. level. The draft syllabus for the 3rd and 4th years is on the AOS/ANS level. It is recommended that 3rd and 4th year training for those airmen who have completed the first two years (I.T.S. level) be carried out on the above basis as an experiment, looking towards post-war requirements.

In the light of the foregoing, the detailed procedure at the opening of the university or college term should be along the following lines:

- Units whose airmen have completed only one year of the present syllabus can continue under the present regulations without concerning themselves with the proposed new programme, except in so far as recruiting is concerned. Potential new recruits may be told something of the nature of the proposed new programme".

As no other advice other than that quoted above had been received, and since this unit was not concerned with the 3rd and 4th year syllabus, having been in operation only one year, organization was immediately completed on the basis of 1st and 2nd year I.T.S. standard.

In order to accommodate the students, parades were held Monday evenings, Wednesday and Saturday afternoons, making up 6 hours per week as required by both the university and the Air Force. Since, however, it was necessary to carry both 1st and 2nd year courses, the instructional load was naturally doubled.

STAFF AND EQUIPMENT. _____

The co-operation of Air Vice-Marshal G. Howsam was deeply appreciated. Not only did he provide all the equipment necessary for the complete course but in regard to staff he could not have been

more considerate. F/L G. Campbell was posted to this unit as Administrative Officer, WOI Mayne as Disciplinarian, F/S Bell as P.T. and Air Craft Recognition instructor, while F/S Vels, in spite of the fact that he could have had a promotion by moving elsewhere, elected to carry on as Orderly Room Sergeant with this unit.

I N S T R U C T I O N A L S T A F F

The bulk of the work was carried by F/L's Ure and Gage, ably assisted by F/L Duff who also acted in the capacity of secretary-treasurer of the Station Fund account. In spite of the fact that academic duties were becoming increasingly heavy, all the above cheerfully took on a double load of teaching in order to maintain the standard set and attained during the first year of training. I cannot too highly praise the work they did or adequately express my appreciation of the very loyal co-operation afforded me by them all.

S Y L L A B U S

Each item on the syllabus was meticulously considered and dealt with, the work outlined being completed on schedule up to the Christmas vacation. Morale was exceedingly high and the competition for the C.O.'s shield for General Proficiency extremely keen. Flight 7 was the winner for the first term.

C E S S A T I O N O F T R A I N I N G

During the Christmas holiday it was announced over the radio that all U.A.S.'s were to be disbanded on December 31st. Since no official word had been received from A.F.H.Q., training was continued with the opening of the Spring term. Official word, however, finally being received that the unit had ceased to exist as of December 31st, the airmen themselves felt that they would like to hold a farewell parade and banquet.

President N.A.M. MacKenzie was kind enough to take the salute in the final March Past. As usual the band of Western Air Command furnished the music in its recognized superb style.

C O N C L U S I O N

The final Banquet was held on January 22nd in the Hotel Georgia with S/L Harris in the chair. Every airman was present and felt very honored at having as their guests Air Vice-Marshal F.V. Heakes, C.B.; President N.A.M. MacKenzie, M.M. and Bar, B.A., LL.B. LL.D., K.C., F.R.S.C.; Lieut. Commander H.M. McIlroy; Group Capt. Chapman, D.C.M., D.F.M.; Group Captain J.H. Ferguson; Major C.W. Topping; Dean J.N. Finlayson, M.Sc. LL.D., M.E.I.C., M. Am. Soc. C.E.; Dean F.M. Clement, B.S.A., M.S.A.; Squadron Leader G. Symons and Mr. C.B. Wood, M.A. Major-General G.R. Pearkes, V.C., D.S.O., M.C., LL.D.; Chancellor E.W. Hamber, B.A., LL.D.; Lt.-Colonel G.M. Shrum, M.M., Ph.D., F.R.S.C. and Dean D. Buchanan, M.A., Ph.D., LL.D., F.R.S.C. wrote expressing their regrets at being unable to be present but conveying their best wishes to the disbanding airmen.

It is with deep regret on my part, and I am sure this sentiment is shared by all former officers and airmen, that Air Force training has been suspended on university campuses. I feel, however, as former Commanding Officer, of No. 6 U.A.S., R.C.A.F., I could not lay down my task without expressing my deepest appreciation to all members of the unit who so loyally endeavoured to make their unit second to none in Canada. My heartfelt thanks go also to Dr. MacKenzie and Dr. Shrum whose sympathy and understanding helped so much to make administering the unit a pleasure.

Respectfully submitted,

J. ALLEN HARRIS,

(J. Allen Harris) S/L,
C.O. No. 6 U.A.S., R.C.A.F.

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