UBC Reports

VOLUME 11, NO. 1 — VANCOUVER 8, B.C. — JANUARY - FEBRUARY, 1965

GIFTS AID LIBRARY, RESEARCH

Forestry and mineral engineering instruction are being expanded and reorganized at the University of B.C. to meet the rapidly growing requirements of Canada's two great basic industries.

Strong emphasis on graduate training and research is planned by two new heads whose appointments have been announced by Pres. John B. Macdonald. Details below.

A gift of nearly $700,000 has provided a major foundation for basic medical research at the University of B.C.'s planned Health Sciences Center.

The money is the residue of the estate of George G. Heighway, a retired B.C. lumberman who died November 15 last at the age of 79. It is the largest single bequest for medical research ever made to UBC.

It is the second major gift to UBC by the Heighway family. Mr. Heighway's wife, Florence, left $259,000 divided equally between the Canadian Arthritis and Rheumatism Society and for scholarship and bursary aids to students in the medical faculty at UBC. Mr. Heighway was given a life interest in the bequest, but waived it in favor of the university at the time.

BASIC RESEARCH FUND

Dean of Medicine John F. McCreary said that Mr. Heighway's $700,000 gift will overcome a problem that is difficult for any new medical school: how to obtain funds for basic research.

"This most generous bequest will be very helpful indeed," said Dean McCreary. "It supports the pioneer aspects of research for which we must provide money to get projects into shape before we can apply to the Medical Research Council for federal research grants."

Mr. Heighway's will directs that the residue of his estate, estimated by the Royal Trust Company at between $600,000 and $700,000, will constitute the Florence & George Heighway Fund, to be administered by the UBC Board of Governors. He left $100,000 to a cousin in Australia, $50,000 to a brother and $5,000 to a nephew.

The will specifies that income from the fund be used for research to cure or alleviate a disease or illness, preferably in the field of arthritis, but that the money is not to be used as a substitute for funds available from government or other sources.

COMMITTEE NAMED

The will directs the appointment of a five-member committee, consisting of the President of the University, the Dean of Medicine, a member of the

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See FUND AIDS MEDICAL RESEARCH

President Challenges 'Brain Drain'

President John B. Macdonald has challenged claims that much talent trained at the University of B.C. is drained off by the United States and other countries.

Dr. Macdonald estimates in his report for the 1963-64 academic year that nine out of ten UBC graduates live in Canada — most of them in B.C. The report provides a breakdown by final degrees covering 26,529 graduates whose addresses are known to the UBC Alumni Association.

Dr. Macdonald defines the qualities that distinguish a university from other institutions as "the fostering of a permanent spirit of inquiry and creativity, the engendering of powers of sound judgment, and the developing of the cultural resources of society . . .

"A university offers not what is accepted, but what will become accepted. It seeks the truth, not immutable and permanent, but the truth that is forever on the horizon and changing, maturing as society grows and as man's knowledge increases."

(Substantial extracts from the report, and a table giving a breakdown of graduates' whereabouts, appear on page two.)

DEAN JOSEPH A. F. GARDNER

Dean Aims For Strong Faculty

A British Columbia-born expert in the chemistry and physics of wood has been appointed Dean of the Faculty of Forestry at UBC.

Dr. Joseph A. F. Gardner, 45, says his aim will be "to build one of the strongest forestry schools on the continent."

UBC President John B. Macdonald said that Dr. Gardner was chosen after a lengthy search ranging through North America, Europe and Australia.

An honors graduate of UBC who took his Ph.D. at McGill University, Dr. Gardner has been on the UBC campus with the federal government's Forest Products Laboratory since 1947. He headed the chemistry section, where he became widely known in the industry as "Mr. Cedar" because of his research into the use of the most plentiful tree in the B.C. coast forests.

DIRECTS LABORATORY

Dr. Gardner became Director of the Forest Products Laboratory in 1963. His appointment as UBC Dean of Forestry, approved recently by the UBC Board of Governors, is effective in February. He succeeds T. G. Wright, who resigned last June to re-enter the forest industry. Dr. R. W. Wellwood has been acting dean.

Dr. Macdonald commented: "It may naturally be asked why a scientist who is not, in the narrow sense, a professional forester, has been appointed to this very important post.

"The search initially explored the

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See FORESTRY DEAN NAMED

PROF. CHARLES L. EMERY

Mining Studies Reorganized

A leading Canadian mining engineer has been appointed head of a newly-created department of mineral engineering in the faculty of applied science at UBC.

Prof. Charles L. Emery, presently head of the department of mining engineering at Queens University, will join the UBC faculty on July 1 as head of the new department.

Dean David M. Myers, head of UBC's faculty of applied science, said reorganization of education in mining engineering at UBC was significant for the mining industry in B.C. and Canada.

MAJOR PART TO PLAY

He said the mining industry is advancing rapidly in B.C. and throughout Canada, and UBC has a major part to play in providing graduates thoroughly trained in the most modern aspects of mining and allied disciplines.

Dean Myers said the emphasis in the new department would be on graduate training and research which is largely lacking in Canadian mining schools at present.

Dean Myers said Prof. Emery has had very wide experience in both the industrial and academic areas of mining engineering and is a leading authority on the new science of rock mechanics, the study of the behaviour

Please turn to page four
See MINING EDUCATION EXPANDED

Two gifts totalling nearly $7 million made by Dr. H. R. MacMillan and the H. R. MacMillan Family Fund will stimulate and strengthen graduate studies at the University of British Columbia, President John B. Macdonald has announced.

"I believe these are the most generous gifts ever made to graduate education in Canada. They complement one another perfectly.

"Our first priority is to increase our graduate and post baccalaureate professional students from 2,099 at present to 5,500 by 1973—from 14 percent to 25 percent of our student body.

"The most encouraging event in this endeavor is the far-seeing financial support it has now received.

STRENGTHEN LIBRARY

"The MacMillan gifts provide tremendous impetus to our graduate program in two ways: by strengthening our ability to provide library resources essential for research work and advanced study, and by providing fellowships for PhDs which compete in generosity with fellowships which have been attracting many of Canada's brightest graduate students to American universities. We must encourage our young people to remain in Canada, and UBC must therefore have a strong graduate program.

"I want to emphasize that the MacMillan gifts are NOT of a capital nature, or involved with the 3 Universities Capital Fund Campaign. The gifts cannot substitute for operating funds which UBC normally anticipates from government and other sources.

"The value of the MacMillan gifts can be realized only if they are used fully to supplement normal UBC expenditures.

"Dr. MacMillan's personal gift of $3 million, which with earnings may total close to $4 million, will provide $300,000 a year for 10 years to supplement our operating budget expenditures on books and periodicals.

CANADA'S BEST LIBRARY

"We can increase our present 700,000 volumes to two million volumes by 1975 to make our library the best in Canada. Such facilities are crucial for attracting top-flight faculty and graduate students, and essential for the work in which they are engaged.

"The H. R. MacMillan Family Fund will provide $3.2 million over 20 years for fellowships for Ph.D. students. Each fellowship will provide $3,200 a year for up to three years, or until a Ph.D. program is completed—whichever period is shorter. UBC will receive $500 a year for each fellowship for overhead and essential travel. Fellowships are subject to annual renewal based upon performance.

"The first 15 H.R. MacMillan Family Fellowships will be available next September; in September, 1966, there will be 30 fellowships available, including renewals; in September, 1967, there will be 45 fellowships available, including renewals, and the same number including renewals each year for 17 years thereafter.

"Applicants can come from any University, but must be Canadian citizens. The Fellowships can be used only at UBC. Each applicant must undertake to remain in Canada for a reasonable time after completing a Ph.D. program, provided he is offered a satisfactory position.

SCRUTINIZE APPLICATIONS

"Applications will be received by appropriate UBC academic departments and scrutinized on a basis of personal as well as scholastic qualifications before students are nominated to the University Fellowship Committee for consideration.

"To qualify initially, a student must have an undergraduate average of at least 75 percent, and first-class marks in at least half of the subjects."

EXCERPTS FROM PRESIDENT'S REPORT

'Universities Seek Ever-changing Truth'

Universities today make so many practical contributions to our very complex society that it is easy to lose sight of their central purposes. The variety of programmes offered in a comprehensive institution like the University of British Columbia is beyond simple imagination. The Humanities and Social Sciences, the Fine Arts and Pure Science are only part of a responsibility that includes in addition professional Faculties (e.g., Medicine, Law, Forestry) and Institutes (e.g., Oceanography, Fisheries, Industrial Relations). Beyond the campus the University's interest and influence not only extend across British Columbia and Canada but are felt the world over.

The intricacy and scope of a university's activities have led one president to coin the term "multiversity," and one might be tempted to ask, is there any predictable limit to the interests and functions of multi-faceted giants like the University of British Columbia? My own conviction is that there are limits, and that these should be related to the central purposes of a university, the qualities that distinguish a university from all other institutions. A President's Committee on Academic Goals has this year been discussing those qualities. They include the fostering of a permanent spirit of inquiry and creativity, the engendering of powers of sound judgment, and the developing of the cultural resources of society.

SIGNIFICANT OPPORTUNITY FOR STUDY

The implications of these purposes are broad. A university can and should engage in those areas of human endeavour that offer significant opportunity for intellectual inquiry into the nature of man and the universe. Thus, the study of nuclear physics is appropriate: the study of hairdressing is inappropriate. Between such obvious extremes lie areas in which the decision is more difficult. The problem becomes acute in the effort to assess whether a particular field offers worthwhile opportunities for furthering the primary goals of the university. In general (but not always), professions are regarded as meeting the criteria, for instance, law, engineering, medicine, teaching; and it is perhaps fair to say that one of the attributes that distinguish a profession from a vocation should be the extent to which the former permits significant inquiry and contributes to society's cultural resources.

Universities are often called upon to engage in activities that in the judgment of most educated people lack the essential characteristics that would justify their inclusion in a university; the reader will have no trouble in thinking of illustrations. Frequently these pressures are the result of genuine needs in a community and the only question that demands an answer is whether they should be provided by the university or by some other institution. The late Sidney Smith, President of the University of Toronto, offered as a negative rule of thumb the principle that a university should engage only in those activities that no other institution can perform so well.

These observations are pertinent to another characteristic of a university. By its very nature it will always create a strained relationship between itself and the society of which it is a part. A university offers not what is accepted, but what will become accepted. It seeks the truth, not immutable and permanent, but the truth that is forever on the horizon and changing, maturing, as society grows and as man's knowledge increases. Thus, for example, lawyers in practice want the university to produce lawyers competent to practise law according to the best traditions of the day; the university seeks as its first objective to produce lawyers who are thoughtful and enquiring about the law, its history, its status, the extent to which it serves man's present aspirations, the ways in which it evolves, and the responsibility of lawyers not only to interpret but to encourage evolution. The two views are not incompatible and each can be sympathetically and helpfully translated by the two parties. Similar problems beset all professions in their relations with a university. It is to be expected that difficulties will arise from time to time in a university's relationships with society. If they do not, one might seriously question whether the university is being loyal to its basic purposes. . .

UBC INFLUENCES LIVES OF GRADUATES

The University's graduates, those who leave with the spirit of the University a permanent influence on their lives, are the most important contribution of the University to society. In 1963-1964 the University enrolled 14,714 full-time students. Of these, 12,817 were undergraduates, 919 graduates, and 978 students of professional schools. The great majority

DR. JOHN B. MACDONALD

were British Columbians (89.5%). While most were residents of the lower mainland, about 16% had homes in the interior and upper coastal regions, and more than 1,000 (7.5%) came from Vancouver Island. But the University also serves the nation and the world. Nearly 1,000 students travelled from other Canadian provinces, and 631 came from a total of 86 other countries.

The full-time students comprise only a fraction. The Summer Session enrolled 5,463 students, two-thirds of whom were teachers improving their qualifications. The Department of University Extension provided credit-courses for 2,761 students, about a quarter of them off the campus in fifteen different centres, and nearly one-half of them by correspondence. Nearly 13,000 attended evening classes, short courses, and seminars on the campus. An additional 5,000 attended similar courses throughout the province. Some 1,500 participated in discussion-groups in forty-seven British Columbian communities; more than 2,500 took advantage of the Department's lending services.

WHERE DO UBC GRADUATES GO?

In all, 45,198 persons shared in the opportunities to learn that were planned by the University. Their interests ranged from a Ph.D. in physics or zoology to the practical problems of fishermen and sheep-raisers. . . .

The University in 1963-1964 granted degrees to 2,768 students. Where do these graduates go? While the University of British Columbia contributes a reasonable number of trained people to the national and international scene, the statistics show that by far the greatest number remain in this province and in Canada. The much-discussed "brain drain" has been exaggerated. At the same time, the developing provincial and national economies increase the prospect of keeping more and more of our trained people at home. Growing universities are creating a rising and insatiable demand for highly qualified teachers. Opportunities for research at universities are expanding, and can be expected to multiply and diversify as well in government and industry, as the economies attain greater sophistication.

As to the so-called "brain-drain," the record of the Department of Physics testifies to the exaggeration of the charges and to the causes of whatever emigration does occur. Few think of Canada as a country deeply involved in nuclear problems. Yet of the 84 Ph.D.'s in physics (U.B.C.) who have settled into permanent occupations, 59 (70%) have remained in Canada. Of these, 32 are teaching in nineteen universities extending from Victoria to Newfoundland. There are 17 still in B.C. Of the 19 who went to the United States, 11 are engaged in American industries. But of the 59 in Canada, only one is engaged in industry. That pattern will change dramatically over the years ahead as more and more industries oriented towards science are established in Canada.

SURVEY OF 1964 ENGINEERING CLASS

Another challenge to the often-heard claim of expatriation is the distribution of the 196 engineering graduates of 1964. Of 148 (75.5%) who have settled into occupations, only three are employed in American industry; 142 reside in Canada. Parenthetically, let us note that British Columbia also draws extensively upon talent trained outside the province. A recent study by Dean David M. Myers of the Faculty of Applied Science reveals that, while 1,880 engineers trained here have found employment elsewhere, there are 2,180 engineers at work in British Columbia with degrees from other institutions.

And what has become of the estimated 34,000 living men and women who graduated from the University during the last half century? The locations of some are not known, but 26,529 have provided their addresses to the Alumni Association and these furnish a sampling large enough to give a reasonably accurate indication of geographical distribution. It has long been our experience that graduates who go to other countries are the most diligent in maintaining communication with us.

Of the 26,529 located graduates, 12,471 (47%) are living in Greater Vancouver; 19,415 (73.1%) in British Columbia; 24,176 (91.1%) in Canada. In the United States are 1,348 (5.1%); in other countries 1,005 (3.8%). It should be remembered that some of those living outside Canada returned to their own countries after obtaining degrees at the University of British Columbia.

Geographical distribution of graduates by final degrees, based upon known locations of 26,529 of an estimated 34,000 living graduates.

Degree	Greater Vancouver	Other B.C.	Total B.C.	Other Canada	Total Canada	United States	Others	TOTAL
Bachelor of Arts	4,263	2,413	6,676	1,568	8,244	500	379	9,123
Bachelor of Applied Science	1,329	728	2,057	802	2,859	163	142	3,164
Bachelor of Commerce	1,312	363	1,675	473	2,148	74	43	2,265
Bachelor of Law	726	292	1,018	139	1,157	13	26	1,196
Bachelor of Architecture	94	31	125	35	160	3	4	167
Bachelor of Education	1,277	949	2,226	122	2,348	21	42	2,411
Bachelor of Home Economics	264	139	403	131	534	30	9	573
Bachelor of Physical Education	126	100	226	53	279	10	5	294
Bachelor of Library Science	34	11	45	13	58	—	—	58
Bachelor of Music	8	8	16	4	20	—	—	20
Bachelor of Science in Agriculture	349	385	734	166	900	70	41	1,011
Bachelor of Science	560	308	868	137	1,005	27	55	1,087
Bachelor of Science in Forestry	247	264	511	86	597	15	12	624
Bachelor of Science in Nursing	234	126	360	117	477	19	17	513
Bachelor of Science in Pharmacy	295	213	508	31	539	4	6	549
Bachelor of Social Work	251	109	360	195	555	48	18	621
Doctor of Medicine	209	118	327	57	384	48	28	460
Master of Arts	376	171	547	222	769	136	46	951
Master of Architecture	6	3	9	5	14	1	—	15
Master of Applied Science	99	28	127	100	227	45	27	299
Master of Business Administration	8	—	8	8	16	1	3	20
Master of Education	70	51	121	11	132	2	4	138
Master of Forestry	15	10	25	9	34	4	5	43
Master of Science in Agriculture	53	47	100	52	152	23	15	190
Master of Science	89	23	112	70	182	38	35	255
Master of Physical Education	6	1	7	1	8	1	—	9
Master of Science in Pharmacy	1	1	2	1	3	—	—	3
Master of Social Work	133	31	164	80	244	24	14	282
Doctor of Philosophy	28	17	45	67	112	26	28	166
Doctor of Laws	7	4	11	4	15	2	—	17
Doctor of Science	2	—	2	2	4	—	1	5
	12,471	6,944	19,415	4,671	24,176	1,348	1,005	26,529
	47%		73%		91.1%	5.1%	3.8%	

UBC Reports

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Three U's Fund Nears Third Mark

The 3 Universities Capital Fund was fast approaching the one-third mark February 1 with a total of $8,327,962 either given or pledged to the drive.

Fund leaders are now in the midst of the second phase of the year-long campaign to raise $28,000,000 for 29 construction and equipment projects at B.C.'s three public universities — Simon Fraser University, the University of Victoria and UBC.

The total to February 1 includes the following major gifts and pledges: MacMillan, Bloedel and Powell River — $2,000,000; B.C. Telephone Co. — $850,000; Crown Zellerbach Canada Ltd.—$750,000; B.C. Forest Products Ltd. — $400,000; Columbia Cellulose Co. Ltd.—$360,000; Rayonier Canada (B.C.) Ltd.—$350,000; Canadian Forest Products Ltd. — $350,000; B.C. Sugar Refining Co. Ltd.—$225,000; Weldwood of Canada Ltd. and Canadian Collieries Resources Ltd. — $210,000; Municipality of Burnaby — $150,000 Vancouver Sun — $100,000; Vancouver Province—$50,000.

FROM PAGE ONE

Fund Aids Medical Research

medical faculty chosen by the President and the Dean, and two businessmen chosen by the Board of Trade.

The committee "shall determine from time to time the research that is to be supported and advanced.

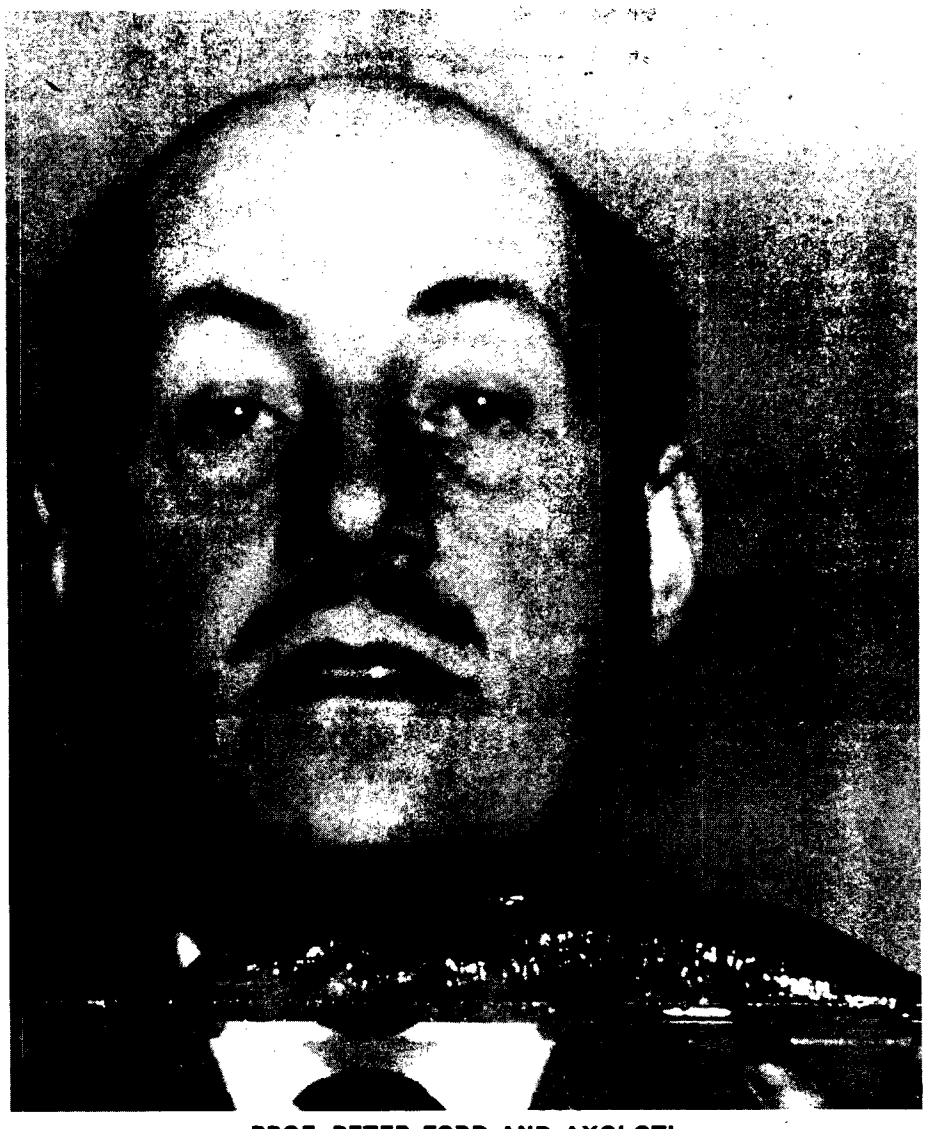
"Consideration shall be given to use the income from this fund so that it is not in substitution for monies then available for research programs which are or may be from time to time adequately financed by governmental or other sources of research funds, and although I am interested in and would prefer research for the cure of arthritis, it is upon the conditions that the application of any of the income herefrom would be considered to be advantageous by the said committee and not in substitution to any government or other grants in this field.

"It is my hope and as a guide to the said committee that whatever field of research is directed by them to be undertaken from the use of this income from the said fund that it will have the hope and probability of leading to a cure and an alleviation of a disease or an illness."

Born in Sydney, Australia, June 17, 1885, Mr. Heighway in early years was employed by the Corporation of Point Grey, and received a motion of thanks on February 23, 1916, for his "valuable and excellent services."

Later he was with the Powell River Company. He was married in Powell River on September 26, 1929. There were no children. Mrs. Heighway was a public health nurse in New Zealand before her marriage. In later years, she suffered from arthritis.

Mr. Heighway was an accountant and part owner of Dewdney Logging Company until he retired about 10 years ago.



PROF. PETER FORD AND AXOLOTL

ARRIVE FROM MEXICO

Six-Year Search for Exotic Axolotl Ends

A frustrating six-year search by a UBC zoology professor ended recently with the arrival from Mexico of 23 amphibious animals, each about ten inches long.

Professor Peter Ford, of UBC's zoology department, began writing letters and making enquiries six years ago in an effort to obtain wild specimens of a salamander-like animal known as the Axolotl to Mexican Indians.

He finally wrote to a trade counsellor in the Canadian embassy in Mexico City, who located wild specimens of the animal at a tropical fish supply house.

FRUSTRATING JOURNEY

"Even getting them to Vancouver proved frustrating," said Dr. Ford. "The first day I went to the airport, the export papers, but not the animals arrived," he said. "The next day someone in Mexico City put them on a plane for Montreal."

The following day the animals arrived in water-filled plastic bags from Montreal.

"So far as I know," said Dr. Ford, "the Axolotl at UBC are the only wild specimens in Canada." He said laboratory-bred specimens, obtainable from the United States, are unsatisfactory because they require prolonged care and feeding before reaching maturity.

What is important for Dr. Ford's purposes are the eggs which the mature, female, Axolotl will produce.

EGGS AVAILABLE

The eggs, each about the size of the head of a finishing nail, are valuable to zoologists in the study of embryology, or egg development.

"Axolotl eggs are extremely hardy," Dr. Ford explained, "and can withstand all sorts of ill treatment even to the extent of being operated on."

The female Axolotl will produce 200-300 eggs each year in the wild state, Prof. Ford said. He plans to get that many every three months by force feeding the animals.

"We're feeding liver to our Axolotl," said Dr. Ford, "but one advantage of the animal is that it will eat almost anything that moves in front of it, including its own kind."

FOUND IN LAKES

In the wild state, Axolotl are found in high, cold mountain lakes throughout Mexico. Mexican peasants often catch the animals and eat them, Dr. Ford said.

Axolotl normally live in water and extract some oxygen through three pairs of external gills at the rear of the head. They also have lungs like a normal land animal and breathe by coming to the surface of the water and gulping air.

AMS Plans $3.9 Million Union Bldg.

Construction of a new $3.9 million student union building is expected to start within a year, officials of the Alma Mater Society have announced.

The new building, to be built on a site adjacent to the War Memorial Gymnasium, will contain more than 150,000 square feet of floor space and will replace existing inadequate facilities in Brock Hall.

Students have assessed themselves $15 each per year for the next 15 years to pay for the facility. The Board of Governors has agreed to allocate $800,000 to provide for food services in the building.

NATIONAL COMPETITION

A national competition for design of the building was won by Winnipeg architect Kenneth R. Snider. More than 70 designs were submitted to a board of assessors, who narrowed the competition down to four.

Initially, the AMS plans to invest about $3,000,000 in a central building to house AMS offices, club rooms, food facilities, and a ballroom. Expansion of facilities within this building will bring the total cost to nearly $4,000,000.

The master plan for the development calls for future construction of a theatre and chapel, which would push the total cost to more than $5,000,000.

AMS president Roger McAfee said it is hoped the first unit of the building will be completed during the 1967-68 academic year.

The new building carries on a UBC tradition by which students have provided nearly all the athletic and student recreational facilities on the campus.

Since 1929, students have contributed approximately $1.5 million, and have been responsible for the creation of seven major campus facilities.

In the early days, students gave their labor to help develop athletic fields.

In 1927, students raised $25,543 to build what is now known as the Women's Gymnasium and presented it, all paid for, to the University.

BUILT STADIUM

In 1937, students built entirely on their own the Stadium at a cost of $39,304, and gave it to the University. These achievements came from student bodies only a tenth of today's size, and in dollars worth many times today's dollar.

In 1940, students contributed substantially to the original $78,900 Brock Hall, the present student centre. In 1957, students assessed themselves through Alma Mater Society dues to raise another $300,000 to expand Brock Hall.

In wartime, students who were members of the Canadian Officers Training Corps contributed their COTC pay to build the $54,000 Armory — aided only by a $7,500 provincial grant.

After the war, students assessed themselves $367,000 toward the $800,000 War Memorial Gymnasium. In the 1957-58 UBC Development Fund drive, students contributed $250,000 to build Sherwood Lett House, a residence block.

In 1963, they contributed $250,000 toward the $500,000 Winter Sports Centre.

LIBRARIAN'S PREDICTION IN REPORT

Computers Will Link University Libraries

The University of British Columbia's librarian says the electronic computer will one day link book collections at all B.C. universities.

In his annual report to the Senate, UBC librarian Basil Stuart-Stubbs says all that prevents the immediate introduction of computer services is the prohibitive cost of equipment.

Mr. Stuart-Stubbs says the day is coming when librarians at any B.C. university will be able to ask a central computer what books and documents are available on any subject, and be told where the material is located and who has it if it happens to be on loan.

In other sections of his report, the librarian reported that in the month ending August, 1964, the UBC library spent nearly $40,000 adding approximately 100,000 books, documents, maps and manuscripts to its collection.

UBC's book collection now totals 613,878 volumes and last year UBC students and faculty members borrowed more than 743,155 items, an increase of nearly 100,000 over the previous year.

Many libraries are now experimenting with computing equipment, Stuart-Stubbs says, and within ten years B.C. universities should be able to introduce such machinery.

The introduction of computers will be a necessity in the future, Stuart-Stubbs says, because of a vast increase in academic collections and the creation of many new libraries.

"But whatever revolutions take place," he says, "the aims of all libraries must remain unchanged: to provide the individual user with whatever materials he needs as quickly and conveniently as possible."

B.C. POULTRY FARMERS are $300,000 richer as a result of research carried out on UBC's six-and-a-half acre poultry farm under the direction of department head Dr. Jacob Biely, left. Cheaper type of feed resulted from trials on thousands of birds such as the one being weighed above. Trying to entice the bird into eating is assistant professor Beryl March, who developed fish meal supplements added to new feeds.

DEVELOPED ON CAMPUS

UBC Poultry Feed Research Saves $300,000 Annually

B.C.'s poultry farmers are $300,000 richer this year as the result of research carried out at the University of British Columbia.

Feed trials conducted on thousands of chickens by the department of poultry science in UBC's Faculty of Agriculture have demonstrated that number one feed wheat screenings can replace the more expensive wheat and corn in poultry rations.

The screenings, mostly broken wheat kernels and other grain seeds, are the refuse left from the cleaning of wheat in Vancouver grain elevators prior to overseas shipment.

CHEAPER FEEDS

Professor Jacob Biely, who heads UBC's poultry science department, began trials on the new feeds in 1960 and demonstrated that they are just as nutritious as the more expensive corn and wheat.

"When No. 1 feed screenings are supplemented by protein, mineral, and vitamin concentrates," Prof. Biely said, "poultry rations are approximately $12.00 to $15.00 per ton cheaper than the old feeds."

Another B.C. ingredient which plays an important role in the formulation of poultry rations is herring meal. Extensive research carried out by assistant professor Beryl March demonstrated that B.C. fish meal is a superior source of protein and mineral when used in poultry rations as a supplement to No. 1 feed screenings.

RESEARCH IMPORTANT

Prof. Biely illustrates the importance of research in poultry science by pointing out that the average Canadian in 1964 consumed 25 to 30 pounds of poultry meat per year as compared to ten pounds 20 years ago.

Eggs and poultry meat are now the second largest source of farm income in British Columbia, he says, and these advances have been made possible through the combined efforts of many branches of science.

"The geneticist," he said, "has bred a better and faster growing bird, the nutritionist has formulated feeds which are more efficiently converted into meat and eggs, the veterinarian has protected the health of the birds, and the agricultural engineer has provided the controlled environment which permits year-round production."

UBC's main contribution, says Prof. Biely, has been in the field of nutrition. The department currently has four full-time staff members, and five graduate students — more than any other poultry science department in Canada — plus 12 technicians and auxiliary personnel.

COMPUTER USED

Genetics and food technology are beginning to play a larger role in research in the department.

Dr. Charles W. Roberts, who joined the staff in 1962, makes extensive use of UBC's $1,000,000 IBM 7040 computer for genetics studies.

At present he feeds data obtained from studies on live birds into the computer, but he foresees the day when the computer can be utilized to predict the most feasible method of breeding a chicken which will produce more eggs or have more meat on it.

FROM PAGE ONE

Forestry Dean Named

field of professional forestry, and then extended among scientists of varied background who had been closely associated with the scientific aspects of forestry.

"Dr. Gardner showed the most evidence of the qualities of scholarship, imagination, administrative capacity, and educational orientation which we sought. The intellectual qualities of the individual are more important, we believe, than the precise route of his training, given an adequate association with the profession of forestry, and a professional orientation and sympathy."

STRONG SCHOOL SOUGHT

Dr. Gardner, who worked in the industry to help pay his way through university, commented: "Here in the centre of the woodpile, so to speak, we should have one of the strongest forestry schools on the continent. I think that is what everybody wants to see at UBC.

"The fact that I am a chemist underlines what most people in the forestry industry acknowledge: that industrial chemistry must contribute to forestry's inter-disciplinary use of the basic sciences. Forestry is a multi-discipline training using the sciences increasingly to achieve practical ends.

"We require more emphasis on training and research into wood anatomy, pathology and chemistry. Increasing pulp production is going to bring about more intensive forest management practice to produce the trees, and requires more and more wood utilization experts to get the most out of the trees.

"The production of professional wood scientists is going to increase. I want to increase as well the amount of research being done at the graduate level as much as possible."

INTEREST IN TRAINING

Dr. Gardner said there is a very active interest, particularly among pulp and paper producers, in what sort of training is most required in forestry schools.

"There are some great opportunities in research in forestry and forest products," said Dr. Gardner. "These opportunities also offer the opportunity to young British Columbians to live and work in their native province."

Born in Nakusp, B.C., Dr. Gardner attended elementary and secondary schools there. His interest in wood research began in his senior undergraduate year at UBC while conducting research for a thesis in the chemistry of western hemlock lignin which he wrote for his B.A. (honors in chemistry) in 1940.

He took his MA with a major in chemistry and minor in physics at UBC in 1942, and his PhD in organic chemistry at McGill in 1944.

Except for two years of wartime explosives research at McGill, Dr. Gardner has been engaged since in research in wood chemistry and the allied wood products field.

HEAD NAMED

Mining Education Expanded

(CONTINUED FROM PAGE ONE)

of rocks under the mechanical and thermal stresses occurring in mining operations.

Other areas of research to be undertaken at UBC are operations research and the consideration of mining operations as engineering systems, as well as the application of modern scientific knowledge to ore extraction.

STIMULATE STUDENTS

"We propose to undertake advanced studies and research in these areas and provide a stimulating environment for students interested in entering mining and similar industries," Dean Myers said.

Prof. Emery, 52, is a native of Hamilton, Ontario, and was educated at Queens, where he received the degrees of bachelor and master of science in 1936 and 1958.

He carried out further graduate work at the University of Sheffield, where he received his doctor of philosophy degree in rock mechanics in 1960.

Prof. Emery was an assistant professor of metallurgy at Queens in 1937 and 1938. From 1938 until 1941 he was a mill engineer and mine manager for Ontario mines producing gold and fluorites.

From 1942 to 1950 Prof. Emery was a teacher and consulting engineer in Port Arthur, Ontario, and also served as chairman of the Lakehead Technical Institute Committee.

ORGANIZES INSTITUTE

In 1950 he joined the Ontario department of education and served as principal and organizer of the Provincial Institute of Trades. In 1956 and 1957 he was principal of the division of applied science at Waterloo University. Since 1961 he has been professor of mathematics and mining engineering at Queens.

Students Will Benefit from Property Sale

Top UBC English students will benefit from the sale of 150 acres of property formerly owned by UBC on Bowen Island.

UBC's Board of Governors has approved proposals which provide an annual $300 prize to the winner of the English honours medal and an annual $1,200 scholarship to an outstanding student entering the final year of the English honours program.

Up to $3,000 of the proceeds of the sale will be used to outfit a room in the UBC Library where groups of students will be able to listen to recordings of poetry and prose.

The balance of the sale proceeds will be invested and the annual income used to provide the prize and scholarship. The remainder of the income will be used by UBC's Librarian to purchase books requested by the English department with a view to furthering graduate study and research in English.

UBC sold the property on the northwest side of Bowen Island in September to Vancouver lawyer G. B. McIntosh.

The original deed of gift to UBC by Dr. and Mrs. Wallace Wilson, of Vancouver, provided that the proceeds from any future sale of the property be used to promote the study of English through UBC's English department.