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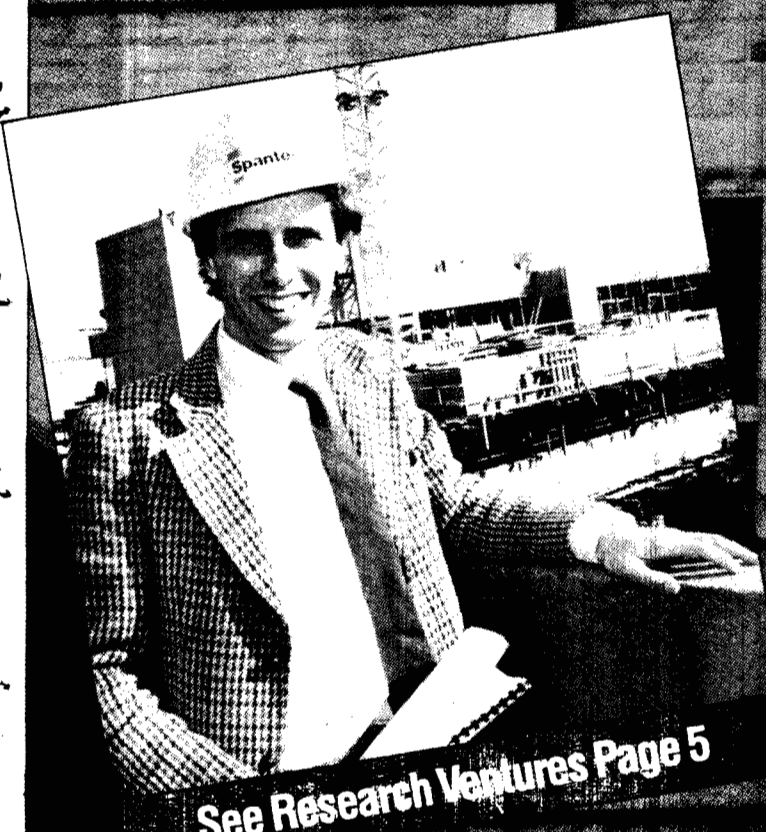
Congregation 1987



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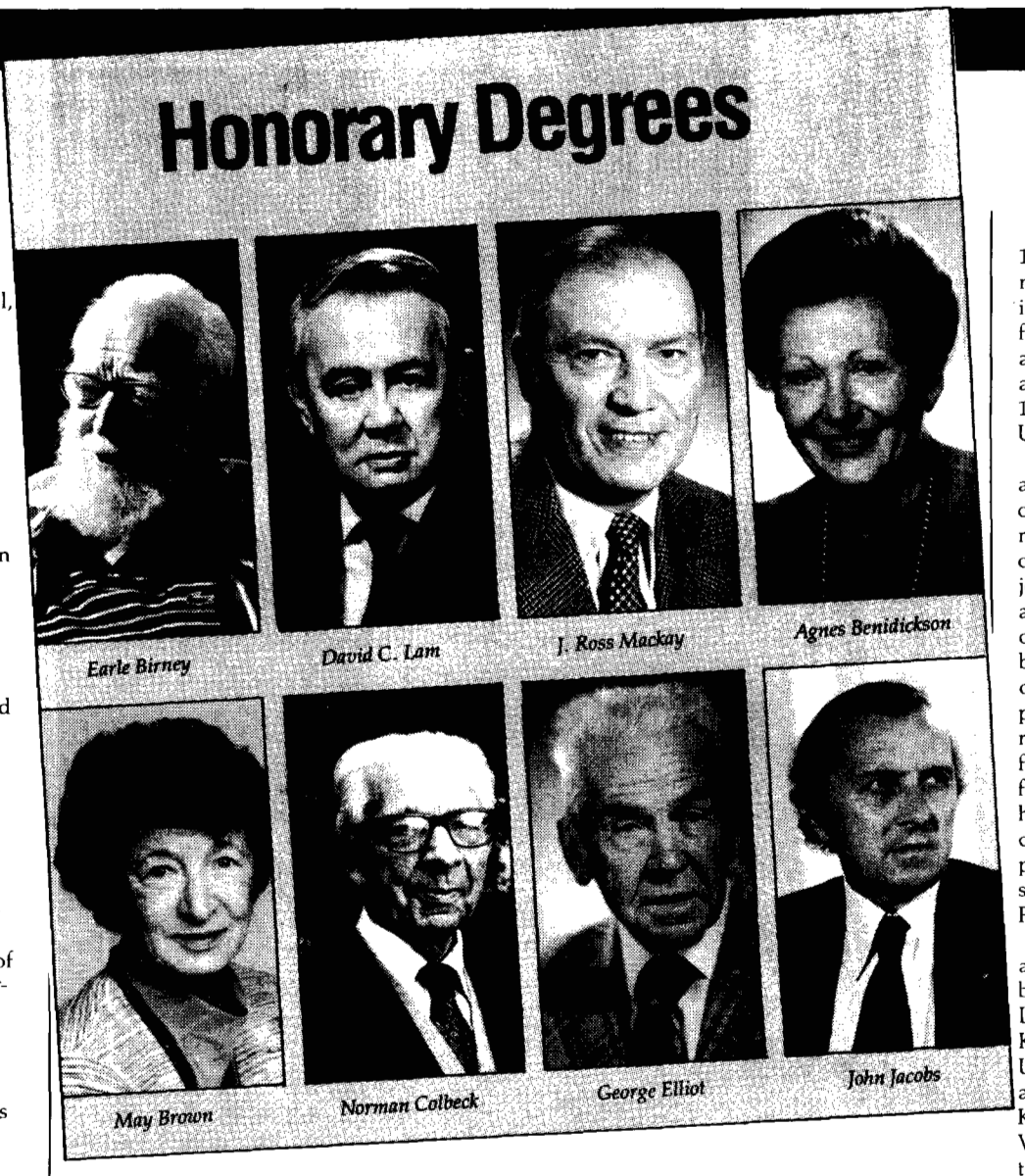
Honorary Degrees



by Lorie Chortyk

UBC will confer honorary degrees on eight people who have made outstanding contributions in the artistic, business, legal, religious and academic worlds during its three-day spring Congregation.

Degrees will be awarded to Canadian writer Earle Birney, Vancouver businessman and philanthropist David C. Lam, former Vancouver alderman May Brown, Canadian geographer J. Ross Mackay, Queen's University Chancellor Agnes Benidickson, former deputy minister of health George Elliot, internationally known geophysicist John Jacobs, and British bookseller Norman Colbeck.

UBC Chancellor W. Robert Wyman, who will confer the degrees at this week's ceremonies, will himself receive an honorary degree at a special ceremony scheduled for the fall. Mr. Wyman completes his term as chancellor this summer.

The honorary degree of Doctor of Science will be conferred on Profs. John Jacobs and J. Ross Mackay at the 2:30 p.m. ceremony on May 27.

Prof. Jacobs, an internationally known scientist, played a key role in the development of geophysics and astronomy studies at UBC. A graduate of the University of London, Prof. Jacobs taught at the University of Toronto for three years before joining UBC's Physics Department in 1957. While at UBC, he created the Institute of Earth Sciences and the Department of Geophysics and Astronomy. He is currently a professor of geophysics at the University of Cambridge.

Significant research

Prof. J. Ross Mackay is one of Canada's most distinguished geographers. Since the 1950s, he has done significant research on permafrost, the physical properties of ice and snow, landform evolution and other studies related to the Canadian Arctic. Since his retirement from UBC in 1982, Prof. Mackay has received numerous awards recognizing his contributions to Canadian geography, including an honorary degree from the University of Waterloo, the Order of Canada, and a special achievement award from the Geological Society of America.

Dr. Agnes Benidickson and politician May Brown will receive honorary Doctor of Laws degrees at the morning ceremony on May 28.

May Brown, a graduate of McGill University and UBC, taught in the B.C. school system and at UBC and Dalhousie University before joining civic politics in 1977. Her government appointments include membership on the Board of Directors of the Greater Vancouver Regional District and B.C. Transit.

Dr. Benidickson, a graduate of Queen's University, has made a significant contribution to the social and cultural life of Canada. She has served as president of the Canadian Council on Social Development, the Association of Canadian Clubs and as honorary president of the National Gallery in Ottawa. In 1980 she was elected chancellor of Queen's University, a position she still holds.

At the 2:30 p.m. ceremony on May 28, the honorary degree of Doctor of Letters will be awarded to Canadian writer Earle Birney and British bookseller Norman Colbeck.

Creative writing

Earle Birney is one of Canada's best known and most prolific writers. His work spans more than 60 years, starting from his student days at UBC in 1922. He introduced Canada's first creative writing course at the University of Toronto in 1940 and joined UBC in 1946, where he set up the university's own creative writing program. Dr. Birney is the winner of many distinguished writing awards, including the Governor-General's Medal for Poetry.

Norman Colbeck enjoyed a successful career as a bookseller in England for more than 40 years. In 1966 he came to Vancouver to present a collection of rare 19th and early 20th century books and manuscripts to the UBC Library. Consisting of more than 20,000 items, it is the finest library collection of its kind found anywhere in Canada. Mr. Colbeck served as curator of the collection from 1967 to 1972 and continues to take an interest in UBC's library holdings.

Dr. George Elliot will receive an honorary Doctor of Laws degree at the 9:30 a.m. ceremony on May 29. Dr. Elliot has made an outstanding contribution to health care and health care education in B.C. He joined the B.C. Health Department in 1935 and served as assistant provincial health officer and assistant to the deputy minister before being appointed deputy minister of health in 1972. He also served as professor and acting head of UBC's Department of Health Care and Epidemiology from 1965 to 1967 and was on two federal royal commissions in the 1960s. He has been involved with numerous medical associations and foundations in the province, and is currently medical advisor to the Mr. and Mrs. P.A. Woodward's Foundation.

At the afternoon ceremony on May 29, an honorary Doctor of Laws degree will be conferred on Vancouver businessman David Lam. Mr. Lam was born in Hong Kong and was educated in China, the United States and at UBC. After serving as chief executive officer of Hong Kong's Ka Wah Bank for 10 years, he came to Vancouver with his family in 1967. Since that time he has established himself as one of B.C.'s most successful real estate developers. Recently, Mr. Lam donated $1 million to establish a Management Research Library in UBC's Faculty of Commerce.

UBC Chancellor W. Robert Wyman, a UBC commerce graduate, is currently chairman of one of Western Canada's most prominent investment firms, Pemberton Houston Willoughby Inc. Mr. Wyman has worked in the securities field for 30 years and has been with Pemberton Houston Willoughby Inc. since 1962. He has served as director and chairman of the Canadian Chamber of Commerce, chairman of the Vancouver Board of Trade and Investment Dealers Association of Canada, and governor of the Employer's Council of B.C. He was elected as UBC chancellor in 1984, a position he retires from this summer.

Congregation Schedule

UBC's 1987 Congregation ceremonies begin at 9.30 a.m. and 2.30 p.m. May 27, 28 and 29 in the War Memorial Gymnasium. Immediately following each ceremony, coffee, tea and refreshments will be served on the plaza adjacent to the Student Union Building. Everyone attending Congregation is invited. In the event of bad weather, the reception will be held inside the Student Union Building.

Wednesday, May 27

9.30 a.m. - The following academic degrees will be conferred in the disciplines of Agricultural Sciences, Engineering, Architecture, Community and Regional Planning and Interdisciplinary Studies: Ph.D., M.A., M.Sc., M.A.Sc., M.Eng., M.A.S.A., M.Arch., B.Sc.(Agr.), B.L.A., B.A.Sc., B.Arch. Congregation speaker - The Honorable Robert G. Rogers, Lieutenant Governor, Province of British Columbia. Valedictorian - James R. Wickens, Engineering.

2.30 p.m. - The honorary degree of Doctor of Science (D.Sc.) will be conferred on internationally known geophysicist John Arthur Jacobs and also on renowned Canadian geographer John Ross MacKay. The following academic degrees will be conferred in the field of Science: Ph.D., M.Sc., B.Sc. Congregation speaker - John Arthur Jacobs. Valedictorian -Robert I. Thompson, Science.

Thursday, May 28

9.30 a.m. - The honorary degree of Doctor of Laws will be conferred on former Vancouver alderman May Brown and also on Queen's University chancellor Agnes McCausland Benidickson. The following academic degrees will be conferred in the discipline of Education: Ph.D., Ed.D., M.A., M.Ed., M.P.E., B.Ed.-Elementary, B.Ed.-Secondary, B.Ed.-Special Education, B.P.E., B.R.E., and diplomas in Education. Congregation speaker - Agnes McCausland Benidickson. Valedictorian -Christine Van der Ree, Education.

2.30 p.m. - The honorary degree of Doctor of Letters (D.Litt.) will be conferred on Canadian writer and poet Alfred Earle Birney* and also on bookseller Norman Colbeck who, in 1966, donated his outstanding collection of 19th century British literature to UBC. Academic degrees will be conferred in the dsciplines of Arts, Music, and Library, Archival and Information Studies: Ph.D., D.M.A., M.A., M.Sc., M.F.A., M.Mus., M.L.S., M.A.S., B.A., B.F.A., B.Mus., and diplomas in Applied Linguistics, Art History, Film/Television Studies, French Translation and German Translation. Congregation speaker - Dr. Roy Stokes, Professor Emeritus, Librarianship. Valedictorian - Joanna Calne, English Honours.

Friday, May 29

9.30 a.m. - An honorary degree of Doctor of Laws (LL.D.) will be conferred on former deputy minister of health George Robert Ford Elliot. Academic degrees will be conferred in the following disciplines - Dental Science, Medicine, Pharmaceutical Sciences, Audiology and Speech Sciences, Family and Nutritional Sciences, Nursing, Rehabilitation Medicine and Social Work: Ph.D., M.A., M.Sc., M.H.Sc., M.S.N., M.S.W., D.M.D., M.D., B.M.L.Sc., B.S.N., B.Sc.(Pharm.), B.Sc.(O.T.), B.Sc.(P.T.), B.H.E., B.Sc.(Dietet.), B.S.W., and diplomas in Periodontics. Congregation speaker - George Robert Ford Elliot. Valedictorian - Blair Christensen, Medicine.

2.30 p.m. - An honorary degree of Doctor of Laws (LL.D.) will be conferred on Vancouver businessman and philanthropist David See Chai Lam. Academic degrees will be conferred in the dsciplines of Commerce and Business Administration, Forestry and Law: Ph.D., M.A.Sc., M.Sc.(Bus.Admin.), M.B.A., M.F., LL.M., B.Com., B.S.F., B.Sc.(Forestry), Lic.Acct., LL.B. Congregation speaker -David See Chai Lam. Valedictorian - Franco Trasolini, Law.

*Degree to be conferred in absentia.

President's Welcome

It gives me great pleasure to extend to each of you a warm welcome to the University of British Columbia for the annual conferring of academic and honorary degrees.

This week is one of the most important in the university calendar, marking a significant milestone in the lives of those about to graduate. The graduation ceremony itself is the climax of years of hard work and intellectual achievement by students in many different fields.

This is a time for celebration by graduates and their spouses, parents and friends—a time to recognize the enormous effort that goes into making a degree possible, and the sense of accomplishment and commitment to the future that it represents.

UBC is one of the major academic centres in Canada, and the degrees it grants reflect the high standards of this great university. It is therefore with pride that the university recognizes the talents of each and every graduate today.

From here, our graduates will spread across Canada and throughout the world as they follow their chosen path. In British Columbia, UBC graduates are a vital force in the social, cultural and economic development of the province, helping to develop new technologies, educate the young, open up new business opportunities, take care of the sick, and build towards the future in many different fields.

President David Strangway

For some, UBC has opened doors to a professional career, for others it has offered new community opportunities and, for all, it has served as a source of intellectual stimulation and growth. In recent years, UBC has placed increasing emphasis on the liberal arts and sciences, helping to extend the focus of students beyond the narrow confines of a single discipline so that graduates can go out into the world with a broader understanding of the issues of today.

"Helping people to understand" is an important part of our job, whether it is helping students to acquire the skills they need to become productive members of society, or introducing the general public to the mysteries of university research.

This year, we found just how interested people are in the work we do when 150,000 people visited campus during our first campus-wide Open House in ten years. They saw the results of some of our excellent research and teaching programs, and learnt more about the specialized services we provide for the outside community. And when it was all over, a BCTV reporter summed up the experience by saying "thank you UBC for helping us to understand."

For all those who are graduating today, I hope you will also feel UBC has "helped you to understand", and that you will carry the benefits of that understanding into your chosen career.

I wish you good luck and best wishes for the years ahead.

Congregation 1987

A message from the Chancellor

I am pleased to welcome you to this, the 1987 Annual Congregation of the University of British Columbia. This is the third graduation I have attended as Chancellor, and my second with Dr. Strangway as President.

For me, as for you, this is also a significant occasion, for it is also my graduation. This is my last congregation as chancellor, just as this is your last year as students at UBC. As we go out into the world together, I would like to share with you my thoughts on the past three years, and my observations for the future.

The past three years have been difficult ones for the university. They have come during a period of retrenchment and recession, where post-secondary education, and indeed education in general, has had to deal with increasing cutbacks—cutbacks which have had a serious effect on the quality of education the institutions have been able to provide.

We cannot underestimate the importance of post-secondary education for the economic, social and cultural health of the province. The training that takes place in our institutes of higher learning is an essential part of the fabric of our modern world. If we, in British Columbia, are going to compete effectively in the global village, then we must train our young people well, providing them with the skills to participate.

Traditional industries can no longer supply all the jobs needed to support the population, and many people must upgrade their skills in order to meet the employment needs of enhanced industries.

In British Columbia today, the percentage of students who pariticipate in post-secondary education is the lowest of any province in the country, and the provincial unemployment rate is one of the highest in the country.

These facts are simply unacceptable. They must be changed—by me, by you, by the citizens of this province, by the government. They will not change if they are ignored. They will only change if we develop the concern and commitment to make them change.

Although I leave here as chancellor, my commitment to the university is even stronger than it was when I began three years ago.

Every year we are losing excellent faculty members, who are attracted by better offers from other institutions. We must recognize that it is these key people who make the university excellent— that without them the university will inevitably become second-rate. They must be retained and, in order for this to happen, they must be compensated on a competitive basis. I intend to do all I can to make sure that this happens.

We have got to be able to compete on a national and international basis, and we need the teachers, the researchers and the well-trained professionals in order to do that.

Solid commitment

In summary, there are two vital responsibilities we, together with the government, must address. First, we must increase the opportunity for people to enter university, and second, we must improve the treatment we're giving to those who are training these students. Without a solid commitment to these responsibities, B.C. will not become an effective competitor in our modern world.

Some of you may be aware that I have been appointed as the University of British Columbia's representative to the new University Advisory Council. The message I intend to carry to this council, and the message I will be urging them to recommend to government, is that we address these two concerns as a top priority. I will be repeating this message whenever I can, wherever I can.

In order to convey this message, I am going to need your help, both now and in the future. Whatever your chosen field, you have the opportunity to help influence the direction this province takes, and I urge you to join me in a commitment to make the province a better place for your children, and your children's children.

Academic traditions

by Lorie Chortyk

You only have to look at the fashions and hairstyles to see that times have changed on campus. But as UBC's 1987 graduating classes gather this week to receive their academic degrees, they'll follow traditions and customs shared by fellow students since medieval times.

The gowns, hoods and hats worn by students and faculty members have evolved from everyday clothing worn in the 13th century. Clothes worn by scholars in the Middle Ages became part of a tradition of academic dress that has been passed down through the centuries to universities around the world.

The academic gown worn by graduating students is a modern equivalent of the large overcoat worn by medieval scholars. The hood, lined with a specific color to indicate the degree to be conferred, is all that remains of a large parka-style hood that was attached to the scholar's robe.

Another Congregation tradition that dates back to the Middle Ages is the wooden mace, which is carried into the War Memorial Gymnasium by a member of the Congregation procession and placed on the stage. The mace, originally used as a war club, is recognized as a symbol of authority. UBC's mace was designed and carved in 1959 by native artist George Norris.

Because the Ph.D. is the highest academic degree awarded by UBC, doctoral candidates have their hoods placed over their shoulders after being presented to Chancellor W. Robert Wyman.

During the ceremony the dean of each faculty, or his nominee, presents students who have met all the requirements for graduation to the Chancellor.

When the student's name is read out, he or she crosses the stage and kneels on a padded stool in front of the Chancellor, who taps the student on the head with his mortarboard and says "I admit you."

At this point the student has officially been admitted to UBC's Convocation, the group which elects the Chancellor and some Senate members every three years.

UBC Outreach

Last summer, 50 of Canada's brightest Grade 11 and 12 students came to UBC to participate in the Shad Valley Program—a summer school with a difference.

Designed to expose students to new ideas, stimulate their minds and open up exciting future career possibilities, Shad Valley currently operates in five universities in Canada. UBC joined last year and, according to director Dr. David Vogt, the program is a runaway success.

"We were delighted by the calibre of students. They came from as far away as Newfoundland, and took back with them a very positive message about UBC," says Dr. Vogt. "Twelve of them are trying for UBC entrance scholarships, and at least another 15 are applying for places.

"The program was a stimulating experience for students and faculty alike, and it opened the students' minds to a lot of exciting, new possiblities. When they came, most of them had fairly traditional ideas about their future careers, but by the time they went home they had broadened their horizons enormously, and were considering very different career paths."

Hands-on

Students attend four weeks of lectures and seminars and gain hands-on experience in areas such as medical genetics, biotechnology, computers, engineering, mathematics and medical imaging. They spend the next six weeks working for a sponsor company, learning new technologies and ideas and finding out about the working world.

The Shad Valley Program is one of a growing number of opportunities UBC offers talented high school students who are interested in pursuing a university education.

"We have so much to offer at UBC," says Dr. Vogt, "and we are only just beginning to explore the ways we can share our facilities and expertise with talented students before they have made their career decisions."

The annual Physics Olympics is one such program. Now in its tenth year, the Physics Olympics pits five-member high school teams against each other during a one-day contest held at UBC. "Students come from all over the province," says program coordinator Dr. Michael Crooks.

UBC physics students, many of whom participated in the B.C. Physics Olympics when they were at high school, help to organize the event.

Physics students in B.C. can also try out for the International Physics Olympiad. Started in Eastern Europe 18 years ago, this competition is now attended by student teams from 21 different countries. Canada joined two years ago, and Dr. Crooks says many B.C. students are interested in the chance to participate. "In the fall, we find out from the schools which of their students are interested, and we send them physics problems every month. They send back their answers and we mark them. The following May, we bring 20 or 30 of the top students to campus, where they write the Canadian national examination to find out who will represent Canada in the Olympiad."

Five students are chosen. Last year, two of those students were from B.C., although one of them had to decline the invitation because he had already agreed to participate in the International Mathematics Olympics in Warsaw. This year, the Physics Olympiad will be held in Jena, East Germany, the first weekend in July.

Math stars

"It's always a marvellous experience for the students when they come to UBC for the week," says Dr. Crooks. "For many of them, it's the first time they've ever been in a room full of people as bright as themselves and with the same interests."

B.C. also has many stars in mathematics. Each year, the university organizes B.C.'s participation in the Canadian Euclid Competition. Last year 1,927 B.C. students wrote the exam—the highest per capita participation in the country.

"Consistently, B.C. students' results are better than those for any other province," says B.C. program organizer Dr. George Blumen. "This is a very positive reflection on the quality of maths teaching in B.C." Top entrants win book prizes, and are considered potential candidates for UBC entrance scholarships.

Creative writers also receive special attention. This year, 1,648 aspiring writers from Grades 11 and 12 entered UBC's first ever essay contest, sponsored by the English Department, and the calibre of entries was very impressive, according to coordinator Dr. Andrew Parkin. Eight-five entrants won honorable mentions, 22 won book prizes for essays of distinction, and the three best entries netted their authors $1,500, $1,000 and $500 respectively.

Young writers in the Vancouver area are able to take advantage of a series of 'New Shoots' workshops offered by the department of Creative Writing, in conjunction with the Vancouver School Board. The program offers Grade 10, 11 and 12 students a chance to develop their writing skills through constructive, practical criticism, and to meet other aspiring writers of their own age.

Students are helping students

by David Morton

Last term, Lee Grenon took on two difficult assignments in a third-year sociology course he was studying. As he was soon to find, information on the topics was scattered, meaning that he had to consult large numbers of sources, only to find a small paragraph or newspaper clipping that was relevant. There was so little, in fact, that he considered changing his topic.

Lee's biggest challenge in tackling the research, though, was the fact that he is blind. He has enough vision to read some normal-print-sized books but the going is slow, and extensive research is particularly difficult and time-consuming.

"For a blind person to do research, it's really quite difficult," says Lee. "I'm very dependent on other people, such as volunteers or librarians, who often don't have the time to find the references and sources for me to begin note-taking."

But thanks to a new disabled student assistance program at UBC, Lee was not only able to complete his research, he was able to write one of his papers on the Crane Library's new word processors for the visually impaired.

The "Students Helping Students" program put Lee in touch with a first-year Library Sciences student who helped him do the research for his assignments. As well, the program found a computer science student to teach him the fundamentals of computerized word processing.

Good time

"Not only did this assistance save an incredible amount of time, it drastically improved the quality of my work . . . I got more information and better information. What's more, I had a good time with the program. It's more enjoyable doing research and learning with someone else.

"When I was learning the computer, my tutor had me typing out old rugby songs just to show me how the word processor works."

Fortunately, Lee's sight disability is not severe enough to require help in getting around the campus, although the Students Helping Students (SHS) program could have provided help there, as well. Next fall, the 23-year-old Sociology major will enter his final year at UBC. He will also continue as president of the UBC Disabled Students Society, an organization which he describes as an advocacy group for all types of disabled students at UBC.

Tutoring

Eleven other students with a range of disabilities received help from the SHS program between October and March. This help came in the form of tutoring, mobility assistance, light housekeeping and grocery shopping—all of which reflected an academic or practical need identified by recipients of the program.

Assistance was delivered on a one-to-one basis by other UBC students hired by the program.

"The program offered whatever help that was requested by the disabled students themselves," explains Charlene Hawthorne, a third-year psychology student, hired last October to coordinate the SHS program on a part-time basis.

"We asked each student what his or her particular needs were and then we'd go out and hire a UBC student qualified to do the job."

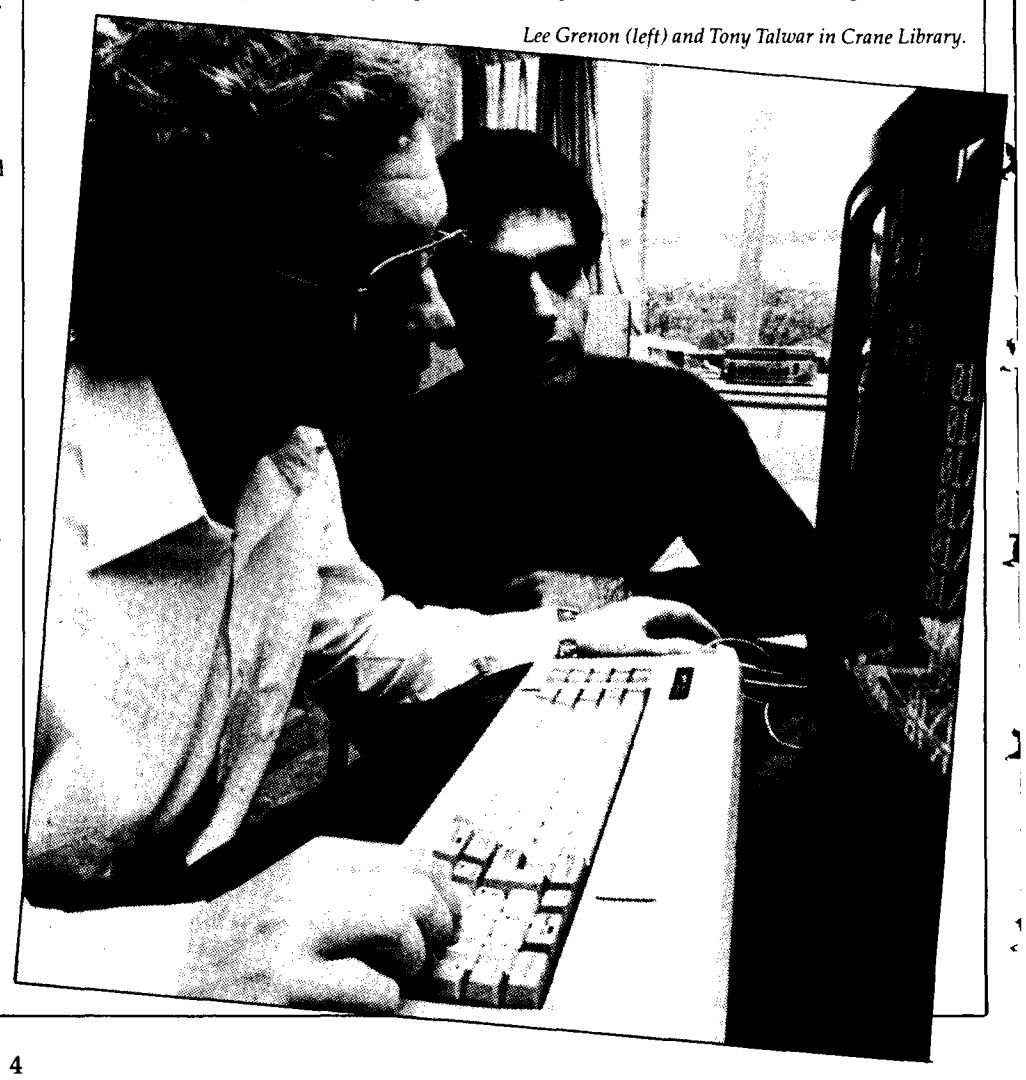
According to Cheryl Brown, of UBC's Student Counselling and Resource Centre and the administrator of SHS, funding for the program came unexpectedly from the provincial Ministry for Advanced Education and Job Training. The funds arrived late in the fall term, and by the time the program was fully operational, many disabled students had found other means of assistance.

"Once we had the structure for SHS established, our biggest problem was letting people know the program existed," says Ms. Brown. "At the time, there was no established network of disabled students on campus, so we had to work through our own informal network."

Ms. Hawthorne's first task as coordinator of SHS was to begin contacting people. Some groups on campus, such as the Crane Library, the Women's Centre and Speakeasy in the Student Union Building, were helpful in publicizing the program. Much of the work, however, was done through phoning and writing letters to follow up on leads.

"Many disabled students are reluctant to identify themselves, for fear of discrimination or because they are wanting to protect their independence," says Ms. Hawthorne. "The one thing we must assure them of is confidentiality, then they're willing to talk."

Ms. Brown, who estimates there are 300-400 disabled students on campus, says if funding is renewed, it should begin before the end of the academic year to ensure that incoming students are aware of the program. Information could be distributed in registration packages. She says the program should also be extended throughout the summer, particularly in April when students are writing exams.



Lee Grenon (left) and Tony Talwar in Crane Library.

Research ventures

by Elaine Stevens

Many researchers around the world are working to improve understanding and treatment of human diseases such as cancer and viral infections, and scientists at UBC stand a good chance of being among the leaders of the pack.

For many years, the university has been at the forefront in biotechnology research, and its position was further enhanced with the establishment of a new Biomedical Research Centre last year, a joint venture between the Terry Fox Medical Research Foundation of British Columbia and the Wellcome Foundation of Great Britain, and with the formation of a new Biotechnology Laboratory this year.

"The presence of these centres will help to foster interaction between specialists working in different but complimentary areas of biotechnology," says Dr. Michael Smith, director of the Biotechnology Laboratory. "It should also lead to new strategies, drugs and vaccines for dealing with infective agents and cancer, as well as contributing to the economy through improvements in forestry and agriculture."

Natural proteins

According to Dr. John Schrader, director of the Biomedical Research Centre, "our emphasis is on the use of chemical techniques to synthesize variants of natural proteins that may be effective as therapeutic agents, whereas Dr. Smith's laboratory will be more involved in attacking problems using genetic engineering techniques. The technology in Dr. Smith's lab is, in every sense, complimentary to that in ours, and these two centres will greatly strengthen medical research on campus."

Just nine months ago, groundbreaking ceremonies were held for the $8 million Biomedical Research Centre building. Scheduled for completion in November of this year, the centre's research will initially focus upon interleukins, Dr. Schrader's specialty.

"Interleukins are very powerful hormones made by the cells of the immune system. They are important in regulating the body's response to infection and when they are produced inappropriately they can cause many different problems, playing a role in many diseases including arthritis, allergies and cancer."

He adds that the pharmaceutical industry is interested in interleukins because "they have the potential to be used to regulate growth and function of the body's immune system, as well as to stimulate the production and function of blood cells and overcome some of the serious side-effects of chemotherapy."

New solutions

The Biotechnology Laboratory, under Dr. Smith, will concentrate on genetic engineering. It will provide the opportunity to develop further UBC's considerable expertise in animal and human biology, fermentation/process engineering and plant/forest biotechnology.

"The same basic technology in genetic engineering can be applied in many different ways," says Dr. Smith. "We have already seen many instances where genetic engineers work with researchers in more traditional disciplines to come up with new solutions, and we anticipate much more of this kind of interaction in the future.

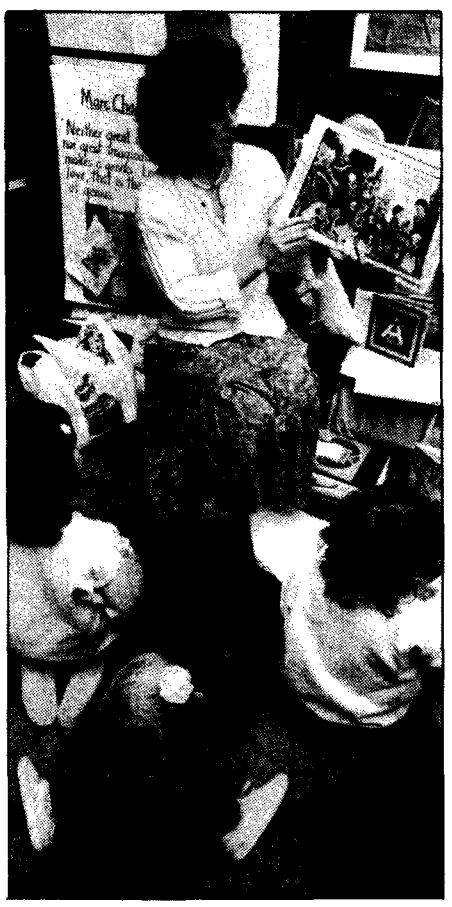
"Many people don't realize that understanding of AIDS progressed as rapidly as it did because of genetic engineering. The biotechnology was all in place before hand, enabling the virus to be analyzed quickly. The same is true in cancer research—developments in the past 10 years have outstripped all we learnt before that time."

Dr. Smith predicts that the future is rosy for biotechnology. "New drugs will be developed from genetically-engineered proteins that are better designed to do the job, whether it is combatting viral infections and cancers, producing leaner pigs or improving tree growth."

Dr. Michael Smith

Dr. John Schrader

Child Study Centre



Teacher Marlene Palmer with youngsters in Child Study Centre kindergarten.

On the television monitor two children are seen in closeup, their backs to the camera. They are listening to music.

"Glory, glory, hallelujah," rings out over the sounds of other children. "Glory, glory hallelujah," sings the voice on the cassette, lustily, cheerily. "Glory, glory, hallelujah; His truth goes marching on." The children, a boy and a girl, are utterly absorbed.

They are two-year-olds, members of a Child Study Centre pre-school class that is observed on the monitor every week by a parent group and a discussion leader. Each week the camera eventually focuses on one child. Today, it has selected the little boy who likes music.

"Look at them," murmurs one of the mothers. "They look like they're watching the sunset together."

The little boy's mother tells the group that "he takes that cassette everywhere with him—it's like a teddy bear.

Shot widens

"He isn't pressing at his eyes," she says, after a moment, and explains that the child does this when he's restless or uneasy. "I wonder if he feels comforted because she's sitting beside him."

"Pull back a little," says Dr. Glen Dixon softly. He is an associate professor in UBC's Faculty of Education, and director of the Centre. The camera operator in the classroom across the hall hears him through earphones. The shot widens, widens—and reveals that the rest of the class has departed, leaving the two children, still sitting side by side, alone in that corner of the room, listening to the music.

The little boy is blind.

He doesn't know what this means, though. And neither do his pre-school classmates. No attempt has been made by the staff to identify him as a "disabled" child. Most of the other children haven't even realized yet that there is something in his behavior that is unusual.

But one of the teachers points out that recently the little girl listening to music with him has been watching him intently. She accompanies him everywhere; she is concentrated upon him. Obviously she is thinking about him hard, trying to figure something out.

The little girl's mother is asked whether her daughter speaks about her friend at home. "Whenever he's not at school," she says, "she tells me."

The boy's mother remembers that earlier in the year her son had to miss several pre-school classes, and the rest of the children, all of whom had provided photographs for their cubbyholes, had asked the teacher why there was no photograph of their absent classmate in his.

"I'd never even thought of it," says his mother; "that the picture would be for them—not for him."

Parent class

The Child Study Centre, located in the Kitchener School Annex at 4055 Blenheim Street, is a research and demonstration facility operated by the Faculty of Education, and the parent class for two-year-olds described above is only one of its many preoccupations. It offers pre-school programs for children one to five years old, and provides the setting for the largest early language literacy research project in Canada.

The kindergarten class, which is jointly sponsored by UBC and the Vancouver School Board, emphasizes emergent language and literacy for five-year olds. Teachers participate in curriculum design, and there is intensive parental involvement. Children tell, write, draw and paint their own stories.

The kindergarten, says Dr. Dixon, "emphasizes literary reading and writing skills, through exposure, in a program that focuses on play."

But other skills are also explored. On the walls of the classroom, a place filled with color and activity, are Chagall prints, and a sign that reads: "Express your imagination like Chagall."

Another joint program of the Child Study Centre and the Vancouver School Board is the pre-school English as a Second Language Project at Sexsmith Community School. This project accommodates three- and four-year-olds whose mother tongue is a language other than English. It has been the focus of considerable federal government funded research in multiculturalism and will be extended later this year into other community schools in the Vancouver area.

by Bunny Wright

Enduring legacy

by Jim Banham

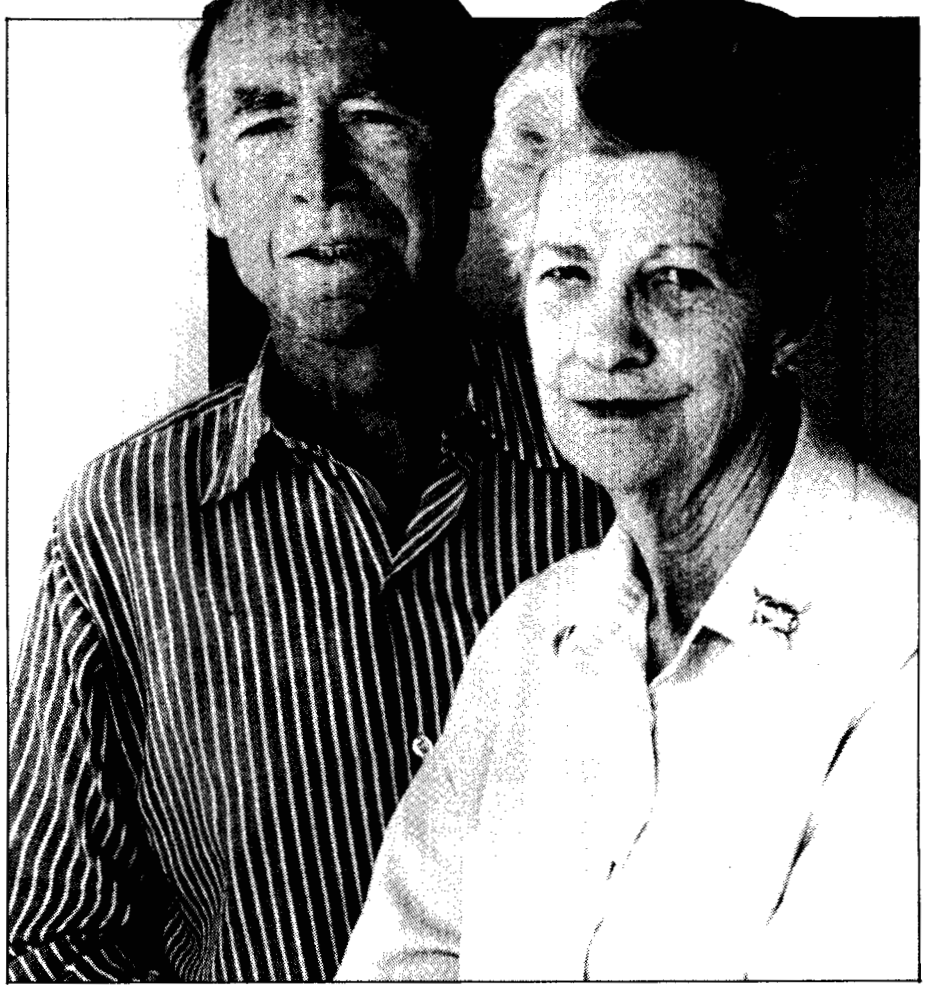
In 1947, when anthropologist Prof. Harry Hawthorn and his wife, Audrey, arrived at UBC, the art of the native Indians of the North American west coast was all but extinct.

"At that time," said Prof. Hawthorn, "there was hardly a single native Indian on the Northwest coast from Alaska south who was capable of producing anything close to the quality of the best Indian work of a century earlier."

The Hawthorns became key figures in the revival of west coast Indian art and played a significant role in studies and reports that led to the improvement of Indian economic and social conditions.

Their most enduring legacies are undoubtedly the contributions they made towards the outstanding collection of west coast Indian art housed in the Museum of Anthropology. The Hawthorns also played an important role in the Museum's construction.

From the beginning, the Hawthorns fostered an interest among both young and old members of the Indian community in their art. In 1948, Prof. Hawthorn visited villages up and down the B.C. coast, emphasizing the value of education. He also made contact with Mungo Martin, the artist who had carved one of the last west coast totem poles in about 1913. In 1948 he was earning his living as a fisherman.



Drs. Harry and Audrey Hawthorn whose work contributed enormously to the collection of West Coast Indian art in the Museum of Anthropology.

Fellow Indians

Prof. Hawthorn persuaded Mr. Martin to come to the UBC campus to repair some decaying poles. Mr. Martin quickly became interested in the work of the anthropology museum. He encouraged his fellow Indians to visit, and they often supplied valuable information to graduate students associated with the museum. In the decade between 1949 and 1959 the museum received a steady stream of baskets, boxes, trunks and paper bags containing hundreds of artifacts.

"The Indians saw the museum as a place where their art was valued and which manifested that by paying for it, caring for it and showing it off," said Prof. Hawthorn.

Mrs. Hawthorn adds: "It was my impression that the Indians felt a sense of relief in entrusting their artifacts to us. They felt they would be safe in our hands."

In addition to refurbishing the Barbeau poles, Mr. Martin began to carve again. His activities aroused the interest of other members of the Martin family, including the Hunts, Douglas Cranmer and Bob Davidson. Each of these was to make valuable contributions to the revival of west coast Indian culture.

A young CBC announcer, Bill Reid, was also interested in Mr. Martin's work. Reid, whose grandmother was a Haida, soon left the CBC to pursue what must, at that time, have seemed a very uncertain future as an artist.

Rave reviews

By the mid-1960s, the UBC collection, swelled by special purchases made possible by gifts from industrialists such as H.R. MacMillan and Walter Koerner, had long outgrown its cramped quarters in the basement of the Main Library.

In 1968, mayor Jean Drapeau contacted Mrs. Hawthorn and proposed that she bring some of the most important pieces in the collection to Montreal for exhibit at Man and His World, on the former Expo'67 site. The display, which stayed two years, drew rave reviews in Time magazine and the New York Times.

In 1971 the federal government marked British Columbia's entry into Confederation with a $10 million federal grant to the province. $2.5 million of this was set aside for the construction of a new Museum of Anthropology at UBC, in recognition of the importance of the museum collection to Canada.

The building, designed by Arthur Erickson, has become one of the University's chief points of contact with the general public and the B.C. Indian community.

Bridging the gap

Bridges are in place that attempt to close the gap between arts and sciences at UBC.

They take the form of courses: arts courses designed for science students, and science courses with arts majors in mind.

David Suzuki, Mavor Moore and Earle Birney deplored in a panel discussion earlier this year the separation of the arts from the sciences. They told an enthusiastic Open House audience of more than 700 that both areas are equally important, and that students serious about their education should make sure they get some of each.

The calendar offers plenty of opportunities.

The Physics Department has a course for musicians, for example. Called *The Physics of Music*, it is an introduction to the physical principles important to the production, transmission and perception of musical sounds. The emphasis is on demonstrations, and topics studied may include the description of sound waves, resonances, scales, and an examination of specific musical instruments.

Physics has another course for non-science students that's called *Man's Energy Sources*. It looks at some physical concepts involved in energy in its various forms—mechanical, acoustical, electrical, nuclear, chemical and thermal. This course also talks about energy conservation, and heat and the laws of thermodynamics.

Over in the Faculty of Arts, the Philosophy Department has a wide selection of courses which are often taken by non-majors. Among them are *Philosophy of Art, Philosophy of Religion, Social and Political Philosophy, Bio-Medical Ethics, Philosophy of Science, Philosophy of Literature* and *Philosophy of Law.*

No background in science or mathematics is required for Astronomy 310, *Exploring the Universe*, which is open only to students who are not registered in the Faculty of Science or Applied Science. The course is a discussion of modern topics of astronomy and geophysics without the use of advanced mathematics. Topics covered include galaxies, quasars, stellar evolution, pulsars, "black holes," the origin of the solar system and the age of the earth, space exploration, seismology and earthquakes, continental drift and ice ages.

Practical writing

Courses in *Practical Writing* and *Advanced Practical Writing* are offered by the English Department for students interested in the principles of written communication in business and professional activities, and practice in the preparation of abstracts, proposals, reports and correspondence.

Biology 310, *Human Heredity and Evolution*, is another science course that's designed primarily for students in the Faculty of Arts. It relates genetic and evolutionary concepts to man and to human populations.

French for Reading Knowledge provides students who have no previous language instruction in French with a basic knowledge of French grammar and vocabulary sufficient for the understanding of scientific and scholarly works. It's intended as a service course for university departments that require a reading examination in their advanced programs.

The French Department also offers *Commercial French*, the essential vocabulary and style of French commercial correspondence and business texts, and *French Practice for Elementary Teachers*, designed to improve the oral and written proficiency of teachers in the French exposure programs at the elementary level.

Geology has *Canadian Geology: Our Environment and Resources*, a course that aims to provide a general understanding, without involving laboratory science, of our natural geological surroundings.

Mathematics offers *Finite Mathematics*, intended for students not in the Faculty of Science who wish to have some exposure to mathematical thinking. The course gives an introduction to probability, statistics, linear programming and game theory.

Science students often take *German for Reading Knowledge*, which aims to develop a reading knowledge of German sufficient to enable students to understand scientific and scholarly material. It provides basic grammar and practice in the translation of texts in the natural sciences, the social sciences and the humanities into English.

Ocean waters

And over in Oceanography, non-science students can take *Man and the Oceans*. This course provides a comprehensive review of oceanography, dealing with the motion and composition of ocean waters, life in the sea, the age and composition of the sea floor, and a history of the exploration of the oceans and its impact on man's culture. Applied aspects are also included, such as food from the sea; mineral and oil exploitation; pollution; navigation; military uses; and the law of the sea.

"I'd rather be a dentist"

No sooner had Janice Garret finished the two-year dental hygiene program at UBC five years ago, than she decided she'd rather to be a dentist.

It meant coming back to the university the following year to complete her pre-dentistry classes and then another four years of dental school. But her mind was set.

"Actually, I knew I wanted to go back to dentistry half way through dental hygiene school so I was able to start planning right away," she says.

Unfortunately, none of her hygiene courses could be credited towards dentistry.

"You're taught different things in the dental hygiene program. The main difference is the emphasis on interpersonal skills. You deal with people differently than in dentistry. But I was able to carry that over into dentistry, and I was that much further ahead."

During the summers, she was able to work as a dental hygienist, and she worked part-time during the school year.

Ms. Garret is hoping to find work in another dentist's office, before starting her own practise.

Commerce

John Pryde says it takes years of experience to become a liability trader in the investment industry. But come this June, the 22-year-old Commerce graduate will launch his financial career with one of Vancouver's top investment firms—not as a junior clerk, but as a liability trader.

Pryde, along with four others graduating from Commerce will be going to good jobs this summer thanks to a new program that gave them hands-on experience in the high rolling investment field. The Dean of Commerce (UBC) Portfolio Management Society, set up one year ago, put six fourth year Commerce students in charge of managing an actual $400-500,000 investment portfolio.

The funds, which came from financial firms, were invested in a variety of equity and bond options, and according to Pryde, grew an average of 28 per cent—slightly better than market performance. The students were in charge of researching the options, carrying out the investment transactions and monitoring their performance on a regular basis. Their activities were observed by six third-year Commerce students who will become the managers in next year's program.

Graduating students from left to right: Doug King, Doyle Bauman, John Pryde, Rob Edel, Paul Lee and Scott Lamont.

Mentors

The students themselves were monitored by an eight-member client committee comprised of members of the Vancouver business community and Commerce faculty. The committee represented the interests of a "real-life" client, setting investment guidelines and questioning the actions of the fund managers.

The students also had access to a group of mentors, from the Vancouver investment community. They acted as a source of informal, daily advice on portfolio management techniques, market psychology and other concerns.

As well, the two-year Portfolio Management Society (PMS) program placed students in study-related summer positions where they were able to observe the business first hand.

The program is the brainchild of Vancouver investment managers Milton K. Wong, Murray Lieth and investment dealer, Michael Ryan. With the backing of Commerce and Business Administration Dean Peter Lusztig and others, they helped raise the capital for the investment activities. The donations were converted to an endowment and profits were made available to the Commerce Faculty's division of finance.

According to Dr. Lusztig, the program has worked out so well that the number of third year students has been doubled for the coming year. There will be two teams of students managing portfolios. All 12 third year students have been placed in summer positions in Toronto. The six managers, who now enter fourth year, have positions in Vancouver firms for the summer.

Mike Ryans of Pemberton Houston Willoughby Bell Guinlock says the program puts the graduating students two years ahead in the financial investment job market.

Graduates

John Pryde, in fact, had four job offers before accepting his position at Pemberton Houston Willoughby Bell Guinlock.

"I don't think any graduating student, or very few, would be given the opportunity to do the job they gave me," Pryde explains. "My advantage is I've already had market experience, and I don't know of any other university program that gives you that."

Scott Lamont, who begins work in the Bank of Montreal Treasury Department in June, says the personal communication skills he developed could not have been learned in the academic work of the commerce program.

"It wasn't just getting to know the people in the industry that was so important, it was learning how to talk to them," adds Doug King, who will be joining an accounting firm this summer and continuing at UBC to complete his Certfied Accountant designation.

Though King is the only one of the PMS graduates not entering the financial industry, he says accounting firms are becoming more interested in people from other areas of business. He says his involvement in the program was a significant factor in his being hired at Thorne Ernst and Whinney (formerly Thorne Riddel) in Vancouver.

Other students of the PMS program starting jobs this summer are Doyle Bauman, with Dominion Securities and Paul Lee with Chrysler Canada. Robert Edel is considering various employment options in the Vancouver financial industry.

by David Morton

Governor-General's Gold Medal for 1987

When told that he had won the Governor General's Gold Medal Award for outstanding academic achievement, 19-year-old Fanghar Rabbani smiled and shrugged his shoulders.

It is the latest accomplishment in his short three-year university career, in which he has received numerous scholarships and awards, not to mention commendable marks. This month he graduates from the honours program in Mathematics with a 94.1 per cent average.

And while he says he is happy about the award, he is more concerned about where he will go from here.

Among the options he has to consider are a $22,000 graduate scholarship at Harvard university, a similar scholarship at Princeton and an NSERC award to attend the University of Toronto's graduate school.

Nevertheless, Mr. Rabbani's mind is made up. He says he will probably remain at UBC and enter the Faculty of Medicine, where he has also been accepted.

"It is so hard to know what the right decision is," he says. "You really only know if you were right 10 years later, and then maybe it's too late."

Mr. Rabbani says his studies in mathematics provided him with a rigourous training that prepared him for entering any number of other fields. Ultimately, he would like to be in research in the medical field.

Born in Tehran, Iran, Mr. Rabbani came to Canada with his family when he was three years old. His propensity for mathematics materialized at an early age. At high school in West Vancouver, he completed the required number of math courses by grade eight. He was part of a special class for gifted students. After grade nine, he skipped a year.

When he first came to UBC in 1984, he had no intention of studying mathematics. However, in his first year, Dr. Roy Douglas of the Mathematics department encouraged Mr. Rabbani to pursue the subject and offered him a summer research position studying algebraic topology, a position normally offered only to graduate students.

"I didn't make the decision to finish my degree in math until the start of my third year. I switched from the combined honours in math and physics so I could take a wider variety of pure math courses."

Fine Arts everywhere

The Fine Arts Department is spread all over the map of UBC. "We have one studio technician," says Dr. James Caswell, department head. "He gets from place to place on a bicycle.

"It would be nice," he adds, wistfully, "if at least all the art historians could share a suite of offices."

Art and art history were first taught at UBC in 1949 when the noted Canadian painter B. C. Binning was appointed to the faculty of the newly-formed School of Architecture. The Department of Fine Arts was established as an independent department within the Faculty of Arts in 1955. It has grown steadily since then, and now offers art history programs leading to a Bachelor of Arts, a Diploma, and Masters and Ph.D. degrees.

The Fine Arts Library, which operates as a branch within the central library building, was established in 1948 and now consists of about 88,000 volumes which include books, periodicals and exhibition catalogues. There are also large clipping and photography collections, and a video disc system that contains duplicates of the holdings of the Fine Arts Slide Library.

The Art Gallery, also established in 1948, maintains a continuous display of loan exhibitions with a predominatly contemporary emphasis. The work of artists from B.C., Canada, the U.S. and elsewhere is featured.

Flexibility

The department also offers Bachelor of Fine Arts and Master of Fine Arts degrees, via the studio arts program. Although this program is designed particularly for students who contemplate careers in the visual arts, others are occasionally accepted, if they can demonstrate sufficient aptitude.

"More and more," says Dr. Caswell, "I'm seeing students who are just taking what they want to take, with no particular use in mind. They know what flexibility is all about." He quotes a 1985 survey by UBC's Student Counselling and Resources Centre which showed that the rate of unemployment among liberal arts graduates was only 8.8 per cent, compared with 17.4 per cent among commerce grads and 20 per cent among students who had graduated with applied science degrees. "Arts graduates," he says, "can do many more things than people can who are trained solely in something like computers."

He adds that the Fine Arts Department will soon be offering a Bachelor's degree in Studio Arts that will be "halfway between a B.A. (not as much art history) and a B.F.A. (not as much studio work)."

Learning the art of print making.

The art history side of the department's offerings embraces three areas of emphasis: the history of Western art and North American contemporary art; North American indigenous art, including the art of native peoples and contemporary Canadian art; and Asian art. UBC is the only institution in Canada to treat these latter two areas seriously, says Dr. Caswell.

Music, music, music

by **Bunny Wright**

Last year, UBC's Department of Music became the School of Music. The name change is significant, even though it didn't signal an administrative shift, says Dr. William Benjamin, Director of the School. "The message that it conveys to the world is that we are a comprehensive School; our teaching is directed toward professional careers. 'Department,' " he adds, "conveys an exclusively academic emphasis."

The School of Music celebrated the 25th anniversary of the Bachelor of Music program two years ago with a gala concert in the Orpheum Theatre that was attended by almost 2,000 people. The program was headlined by UBC graduate Judith Forst and faculty member Robert Silverman. A fund-raising campaign organized around the event raised close to $50,000 for new entrance scholarships.

In addition to the B.Mus., which is the principal undergraduate course of study, the School offers programs leading to the Bachelor of Arts with a major, or honours, in music; the Master of Music degree in performance and composition; the Master of Arts in historical musicology, music theory, and ethnomusicology; the Doctor of Musical Arts, designed for performers and composers who have already reached a high level of proficiency and artistry in their fields and who may wish to teach at the university level; and the Ph.D. program, which admits superior candidates for scholarly studies in musicology.

Self-selecting

UBC music graduates can be found in almost every musical organization in Vancouver, including CBC Vancouver, the Vancouver Chamber Choir, the Vancouver New Music Society, the Cantata Singers, the Vancouver Society for Early Music and the Vancouver Symphony Orchestra.

They also teach in practically every B.C. community big enough to have a school music program.

And UBC alumni are teaching, performing, and working in various aspects of the business of music in towns and cities throughout Canada.

Applicants to the program tend to be "self-selecting," says Dr. Benjamin. "They have to go through a performance audition, a test in music theory, and an interview. This procedure is known to high school music teachers, and tends to weed out the unqualified."

Although most students continue to come from B.C., more and more are coming from the rest of Canada, says Dr. Benjamin, "especially graduate students."

UBC's performance program offers majors in piano, organ, guitar, voice, opera and orchestral instruments. Undergraduates receive private instruction for four years, and are required to perform regularly in ensembles such as the University Chamber Singers, the University Singers, the University Choral Union, the University Symphony Orchestra, the University Wind Symphony, the UBC Chamber Strings, the University Opera Workshop and Theatre, the Collegium Musicum Ensemble, the Contemporary Players, the Stage Band and the Asian Music Ensemble.

The School of Music prepares students for many careers, says Dr. Benjamin. "A minority of students come here with very, very strong performance backgrounds. Every year we have a few who are marvellous performers. But the majority have not developed to that extent. Some do, during their four years here; and some don't." Although some graduates become soloists, most do not. They may become members of orchestras; teachers in high schools, colleges or universities; choirmasters and organists in large churches; professional choristers; or studio musicians.

"The program is not only for people with exceptional gifts," says Communications Officer Lauren Arffa. "It's also to prepare people to work in the field. And it's a big, big field." Graduates get jobs as arts administrators, music critics, composers for film, television or the stage, creators of jingles for commercials, and are hired by government funding agencies like the Canada Council. Others become freelancers who may combine performance with private teaching and/or composing.

Real world

"I do think we give students a sense of the real world, here," says Dr. Benjamin, and he adds, "I think that within its limits of size, which are fairly restricting, the School is remarkably strong in a number of areas. It is as good as or better than any other Canadian School. We have everything here that a student would need."

This includes a recital hall which seats 289 and is widely recognized as among the best facilities of its kind, and a music library with approximately 60,000 books and scores, 4,000 microfilms, 10,000 sound recordings and 150 music periodicals, constituting one of Canada's finest collections of research and performance materials.

It also includes a faculty consisting of 29 full-time and approximately 45 part-time members. Many of the latter are principals and members of the Vancouver Symphony Orchestra, and the full-time faculty includes a number of distinguished performers, scholars and composers.

About 200 public concerts are performed each year by the School of Music. Most are student concerts, but performances are also offered regularly by faculty and outstanding local and touring musicians.

Creative writing

by **Bunny Wright**

Writing, says George McWhirter, is "a bit like any natural resource: you can't put oil down the well, but if it is down the well you can tap into it, channel it, and eventually, sell it."

Mr. McWhirter is the head of UBC's creative writing department. Established in 1965, it was the first creative writing department in Canada.

It began in 1946 as a course within the English department taught by UBC graduate Earle Birney, who, according to Mr. McWhirter, "came here to teach medieval literature on the condition that he also get one course that he believed in: the first stone in a little shelter for the creative artist naked in academia."

A great many creative artists have found shelter in the creative writing department during the last 40 years. Among them are current faculty members Robert Harlow, novelist and first department head; Mr. McWhirter, who is a poet; short story writer, screenwriter and playwright Jake Zilber; and Sue Ann Alderson, author of six books for young children.

Prize-winning graduates who attended the early classes in the 1940's and '50's include filmmaker Daryl Duke; George Bowering and Fred Wah, each of whom won the Governor-General's Award for Poetry; and Jack Hodgins, who won the Governor-General's Award for Fiction. Students who came along in later years include Mr. McWhirter, winner of the Commonwealth Poetry Prize; Dennis Foon, who has won the CBC Literary Prize for Drama, the British Playwrights' Association Award for a children's play and the Chalmers Award for playwriting; Carol Bolt, winner of Chalmers Award; and Ann Ireland and Ian Slater, who each captured a Seal First Novel $50,000 Prize.

Addiction

Graduates have accepted teaching and administrative positions in many universities. Frank Davey is chairman of creative writing at York University; Chris Johnson is chairman of the theatre program at the University of Manitoba; Derk Wynand is an associate professor of creative writing at the University of Victoria; and Gary Geddes was chairman of creative writing at Concordia University.

"Writing is the poor man's—or woman's—addiction," says Mr. McWhirter. "If you make $15,000 a year as a writer, you're doing great." Yet at least one-third of the department's graduates will manage to support themselves, he says, by doing nothing but various forms of writing.

With this in mind, the department requires its students to work in at least three genres, "so they become used to doing something other than their main interest—just to keep them flexible."

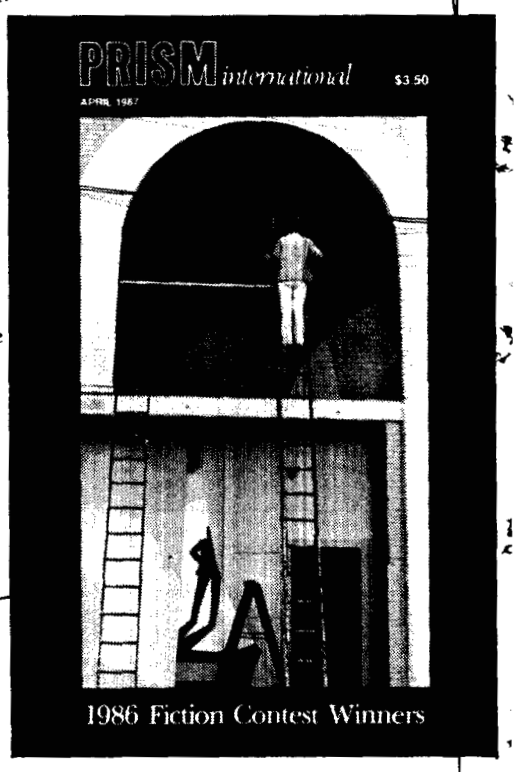
During the last two years of the undergraduate program they choose among courses in the writing of children's literature, creative non-fiction, radio drama, drama for film and television, stage drama, the novel, the short story, poetry or translation.

The only non-fiction course offered is "imaginative non-fiction," says Mr. McWhirter. "The personality of the writer is as much a part of the piece as what's being written about." Work might include the familiar essay, book reviews, biographical or autobiographical sketches, or full length books.

Undergraduates drawn to the program are either students who have just graduated from high school and are interested in becoming writers, or mature students. "We have quite a few mature students," says Mr. McWhirter, "who have wanted to write for a long time. They've been writing on their own, and now want to do it full time."

The department offers programs leading to the degrees Bachelor of Fine Arts and Master of Fine Arts. Qualified MFA students may elect to pursue special programs in translation or interdepartmental programs in playwriting in conjunction with the Department of Theatre.

Graduate students edit PRISM international, the department's literary magazine, established in 1977.



Faces from the Peking Opera presented at the Asian Centre during Open House.

Asian Connections

by David Morton

UBC's connections with countries in the Pacific Rim could be one of the university's best kept secrets, according to UBC International Liaison Officer Larry Sproul.

"There seems to be a relative lack of awareness among other universities and agencies in Canada that UBC has an impressive international profile in these countries," says Sproul. "In fact, we have some of the most extensive Asia Pacific activities going on anywhere in the world."

For example, Sproul notes that UBC's Japanese Studies program is among the largest in Canada. And UBC has the largest collection of Japanese language books in the country.

Mr. Sproul, who was appointed as head of the International Liaison Office last February, is going to change the profile of UBC's Pacific Rim connections.

Every faculty

UBC is a de-centralized institution and its activities in Pacific Rim countries are quite dispersed.

The International Liaison Office was established as a clearinghouse of information on UBC's international activities and to facilitate co-operative ventures between universities and foreign interests.

One of the office's initial projects was to compile an inventory of the university's Asia-Pacific activities. Mr. Sproul asked faculties and departments for summaries of their international involvements. The response was overwhelming.

The inventory shows UBC has connections in 14 Asia-Pacific nations with the involvement from almost every faculty or school at the university. Even departments such as English, the Botanical Gardens and Continuing Education have ties.

The projects involve a wide range of activities, including faculty and student programs, exchanges and research initiatives. UBC faculty have also taken part in federal-provincial programs to expand ties with Pacific Rim countries; for example, the establishment of Vancouver as an International Financial Centre. Perhaps the strongest focal point of UBC's Asian ties is the Asian Centre, which houses the Institute of Asian Studies, the impressive Asian Studies Library and Mr. Sproul's International Liaison Office.

To people on campus, the most visible connection would be the numbers of Asian exchange students. They hail from the Phillipines, Taiwan, Sri Lanka, Japan and India.

For the past five years, the Faculty of Commerce and Business Administration has coordinated a CIDA program that brings graduate students from the People's Republic of China. Last year, the Management Education Linkage Program sponsored 15 students studying for Master's and Ph.d. degrees.

The Faculty of Forestry also has Asia-Pacific connections, most notably with China. Forest geneticist and tree improvement specialist Dr. Oscar Sziklai has made numerous trips to China, lecturing and advising Chinese foresters on a variety of topics.

Dr. Sziklai is currently supervising the forest genetics operation of the CIDA-funded Integrated Intensive Forestry Management Project in Lang Xiang province, northeast China. The project, which integrates all areas of forestry management, is functioning as a demonstration unit. The Chinese, concerned about their forest resources, are making extensive use of North American expertise. Dr. John McClean, also of Forestry, is heading up the pest management segment of the program.

According to officials involved in the program, Dr. Sziklai has acquired a reputation for taking complex ideas and communicating them effectively to the Chinese. Last fall, he was the first non-Chinese person named to the 70,000-member Chinese Society of Forestry.

Tree specialist

Thirty-three year-old Zhang Weijiong, for instance, has spent the past two years studying for his Master's degree in marketing. Originally from the University of Shanghai, Mr. Zhang says the concept of marketing is relatively new in China, as the country pursues its "open door policy."

"The idea of marketing is different in China than it is here. In North America, it is a buyer's market. In China, it is a seller's market. That's a big difference, but the basic idea is still the same."

Commerce, in fact, is one of the more active faculties with Asia-Pacific connections. Several faculty members have either visited or delivered lectures at Chinese universities, and numerous courses on Chinese business have been offered on this side of the Pacific.

Last fall, Executive Programs director Dr. Bruce Fauman led a group of Canadian business people to China to investigate trade and business opportunities. Dr. Fauman said the two-week trip to Beijing and Shanghai opened business doors for the participants that might otherwise have been closed had they gone independently.

Summer at UBC

by Lorie Chortyk

UBC—We're more than just labs and classrooms. This summer, come and explore all the attractions UBC has to offer. Browse through a gallery or museum, enjoy a game of tennis or a refreshing swim, see a play, take a garden stroll or indulge yourself with afternoon tea. Listed below are some of the attractions and upcoming events on campus. Make UBC a part of your summer!

TOURS

* FREE GUIDED WALKING TOURS of the campus are offered weekdays at 10 a.m., 1 p.m. and 3 p.m. by UBC's Community Relations Office. Tour highlights include the Geology Museum, the Main Library, the Aquatic Centre, the Rose Garden, the Asian Centre and more. Special tours for hospital groups, shut-ins and special needs groups can be arranged. To book a tour, call 228-3131.

* See the latest in dairy agriculture at UBC's DAIRY CATTLE TEACHING AND RESEARCH CENTRE. Free group tours offered weekdays throughout the summer. For details, call 228-4593.

* Visit TRIUMF, the world's largest cyclotron, where sub-atomic particles are created for use in leading edge research and cancer therapy. Free tours offered twice a day, Monday through Friday. To book a tour, call 222-1047.

* At the UBC OBSERVATORY you can view solar flares, stars, sunspots and see equipment used to monitor seismographic activity. For details, call 228-2802.

ATTRACTIONS & ENTERTAINMENT

* UBC's SCHOOL OF MUSIC offers its annual concert series Music for a Summer's Evening on seven consecutive Thursdays from July 2 through Aug. 12. The free concerts begin at 8 p.m. in the Recital Hall of the Music Building (early arrival is recommended). For details on UBC music performances, call 228-3113.

* Minerals, fossils, even an 80-million-year-old Lambeosaurus dinosaur skeleton are on display at UBC's GEOLOGY MUSEUM, located in the foyer of the Geological Sciences Building. An impressive collection of fossils and crystals are on sale at the Collector's Shop. Museum is open weekdays from 8:30 a.m. to 5 p.m. Call 228-5586 for details.

* A visit to UBC's ASIAN CENTRE is the next best thing to a trip to the Orient. Adjacent to the Japanese Nitobe Garden, this spectacular building is a major Vancouver centre for Asian activities. Upcoming displays include an exhibition of Japanese architecture by Fred Thompson (June 1-20); Fibres Forever, an exhibit of Northwest weaving (June 21-27); an exhibition of Japanese scrolls (June 28-July 15); Visions, a display of Chinese paintings by Margaret Chinn (July 18-26); and an exhibit of Pakistani textiles (Aug. 1-31). The Japanese Bell Tower at the entrance to the centre is a must for photographers. Call 228-2746 for more information.

* FREDERIC WOOD THEATRE stages year-round performances of traditional and experimental theatre. UBC's summer stock company will perform four plays this year: Agatha Christie's Appointment with Death opens May 27 and runs through June 6; Loot by Joe Orton runs June 17-27; Michel Tremblay's Bonjour La, Bonjour will be staged July 8-18; and the final show, Barry Broadfoot's Ten Lost Years, runs July 29 to Aug. 8. For ticket information, call 228-2678.

* OLDE ENGLISH TEAS are offered every Sunday afternoon at Cecil Green Park, a beautiful turn-of-the-century mansion overlooking Georgia Strait. Tea is served from 12 noon to 4 p.m. Reservations (228-2018) are recommended.

* Take a stroll through UBC's beautiful BOTANICAL GARDEN. The Main Garden, located on Stadium Road, features many specialized garden areas and a Garden Shop with unique gift items. The Japanese Nitobe Garden, located behind the Asian Centre, is a visitor's delight with its delicate landscaping and authentic Japanese teahouse. Call 228-4208 for hours.

* UBC's BOOKSTORE has more than 50,000 volumes to browse through, with the equivalent of seven specialty bookstores under one roof. There's also a wide selection of souvenirs, clothing, stationery, and even microcomputers. Parking is available right outside the Bookstore on East Mall. Call 228-4741 for more information.

KEEP FIT

* UBC's AQUATIC CENTRE features two 50-metre indoor and outdoor swimming pools, saunas and steam rooms, a whirlpool and a complete fitness centre. Call 228-4521 for 24-hour pool information.

* Tennis enthusiasts are invited to make use of the extensive indoor and outdoor tennis facilities (including grass courts) at UBC's TENNIS CENTRE. Club memberships, a pro shop and year-round lessons available. For more information, call 228-4396.

* If you'd like to improve your golf swing, practise your hockey skills or even brush up on your fencing moves, the COMMUNITY SPORTS PROGRAM at UBC can help. UBC offers a wide range of sports programs for children and adults throughout the summer. Call 228-3688 for details.

Charm of the past, beauty of the present at Cecil Green House where teas are served Sundays.

Big Winners

UBC's sports teams brought home a bagful of medals and honours from national and international competition this year in one of the most successful seasons in the history of the university.

About 500 students play on the more than 30 men's and women's Thunderbird teams at UBC, competing against other institutions both regionally and nationally.

In football, the men's team captured the 1986 Canadian championship title in a nationally televised game played in Toronto. Cornerback Mark Norman won the President's Trophy as the Canadian university defensive player of the year.

The men's soccer team won their third national title in as many years and goalie Brian Kennedy was selected for the top All-Canadian soccer team for the third year in a row. Kennedy graduates this year as UBC's top male athlete.

The women's soccer team did equally well taking their fourth consecutive title in Canada West conference play. The Thunderbirds advance to a possible first ever national championship this fall.

Track and field athlete Joanne Gaspard had an outstanding season winning her second national title in the 60-metre hurdles at the Canadian Interuniversity Athletic Union (CIAU) championship. She was named UBC's top woman athlete this year.

Top team

UBC's rugby team, which traces its roots to the founding of the university, won the unofficial North American university championship in February. Team captain Roy Radu will finish off his season as a member of the national rugby team representing Canada in the first ever rugby World Cup in Australia and New Zealand this summer.

UBC Photo by Warren Schmidt

The year's top athletes were Joanne Gaspard and Brian Kennedy.

In Canada West conference play, regional competition which determines the teams that will advance to the national championships, the women's field hockey team finished second. Two players, Jody Blaxland and Melanie Slade, were selected for the top All-Canadian team.

The women's swimming and diving team won their fourth Canada West title in a row, but lost to Toronto in the Canadian championships. And in men's volleyball, the Thunderbirds had Greg Williscroft and Phil Boldon selected as All-Canadian players.

Big Sports

For the first time in several years the men's hockey team made the Canada West playoffs. And the men's basketball team won their first Canada West title since 1975.

Thunderbird teams attract top athletes and UBC coaches encourage the best athletes to the campus, scouting high school teams throughout the province during the year. For some players there is an opportunity to compete overseas. Both the mens and womens volleyball teams played recently in Japan, Korea and China, and this August, UBC's rugby team will tour Scotland and Ireland.

With the 1988 Olympic Games just 18 months away, many coaches and athletes are already working towards the qualifying events to be held this summer.

New people

"Canadian universities are seen as a seedbed for many of Canada's world class athletes," says the Dr. Robert Morford, director of the School of Physical Education and Recreation.

For other students, as well as faculty and staff, UBC's extensive co-ed intramurals program offers the chance to meet new people and enjoy sports. More than 14,000 people take part in activities such as hockey, volleyball, soccer and basketball. The soccer league alone has 160 teams.

"Intramurals sports are in such demand that we simply can't access enough space for all the programs," says Dr. Morford. "The gyms are in full operation from 8 a.m. to midnight throughout the school year."

by Jo Moss

Biomedical Communications

by David Morton

Biomedical Communications Director Ian Cameron is standing in front of a television camera in the basement of UBC's Instructional Resource Centre. The floor director points a finger at him, signalling that he is now "on the air."

Mr. Cameron has been in front of a camera many times, but right now he's nervous. At this instant, his image is being carried via a complicated satellite/microwave link to a television screen in front of 250 medical doctors at Jinan University, 60 miles northwest of Hong Kong in China.

The Chinese audience is about to view a video tape of two specialized surgical procedures conducted by doctors at UBC's Acute Care Hospital, a heart operation and a knee operation. And at another camera in the Biomedical Communications studio is a group of dignitaries waiting to deliver a few words of introduction.

For once in Mr. Cameron's career, his mind goes blank. All he can think of to say is, "Hello, China!"

He is soon able to breathe a sigh of relief as the live telecast proceeds without a hitch. The video tape proceeds as planned. When it is over, the Chinese doctors ask a few questions of the UBC surgeons and the telecast is finished.

That was back in November 1985. It was the first time such a link had been made successfully anywhere in the world, and it was another feather in the cap of UBC's Biomedical Communications.

Bronze medal

Awards come frequently to this department, which serves as a vital audio/visual unit meeting the enormous communications needs of the Faculty of Medicine.

Photography, film and video production, medical illustration, graphic design and coordination of special communication needs are among the services this unit is capable of delivering.

Last fall, a segment of the department's video series on epilepsy won a bronze medal in a Brussels film festival. Medical illustrator, Bruce Stewart, head of the department's art division is one of the top illustrators in North America. And medical photographers Fred Herzog and Peter Thomas have received awards for their private work as well as for their work at Biomedical Communications.

TV cable

Between the Faculty of Medicine's four Lower Mainland teaching hospitals and the department's UBC office, there are 54 photographers, television and audio-visual technicians, illustrators and production and support people. They work on an "on-call" basis with university and hospital staff, whether it's taking a photograph of a surgical procedure or the production of an instructional video for breast cancer patients.

By Mr. Cameron's own estimate, the department produces 60 per cent of the all university's audio/visual aids.

"The medical profession has an enormous need to communicate information, because its resources and expertise are spread out across the country and province," Mr. Cameron explains. "Every medical test or diagnosis produces some form of visual output, whether it's a chart, a picture, a graph, or an x-ray. It is our role to find a quick, efficient means of transmitting this data."

UBC's Acute Care Hospital is wired with seven-and-a-half miles of television cable to make this instant communication a reality.

For example, a surgeon, in the middle of an operation, could receive an instantaneous opinion from a pathologist on a tissue sample extracted during the surgery. Through the hospital's closed circuit television network, the surgeon and pathologist could carry out their consultation, from the lab to the operating room, using transmitted images of the tissue sample.

Biomedical Communications has also pioneered new techniques allowing consultation between the doctor and patient over large distances. In 1981, the department established "slow scan" techniques for genetic counselling.

Slow scan is an incomplete form of television transmission that makes use of relatively inexpensive telephone lines, rather than cable or microwave connections. Full two-way audio communication is carried out, while still-images of the patient are transmitted to the physician at intervals of 17 seconds. This allows the physician to monitor the patient's body movements as a means of guaging their reactions to the consultation. Slow scan has since been used in psychiatric consultation as well.

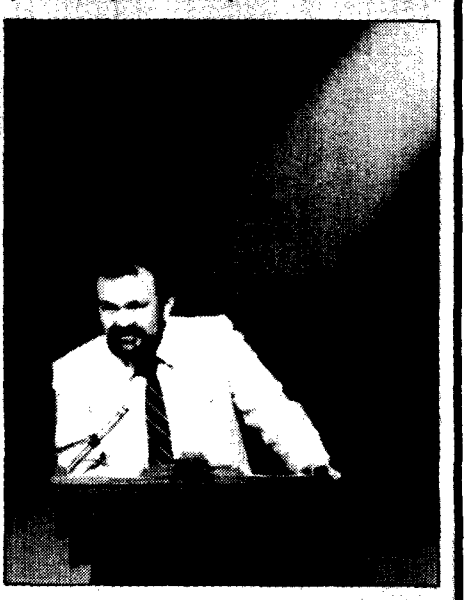
Mr. Cameron says his department's long-range plan is to link all hospitals and teaching facilities in the province to create one large medical communications network.

"There is a great need for this kind of a network," he explains. "When doctors come to Vancouver for meetings, for instance, not only does it cost them a lot in travel expenses, it takes them away from their jobs. You have to attach a dollar value to that as well.

"If they could have their meeting via television link, it would save vast amounts of money."

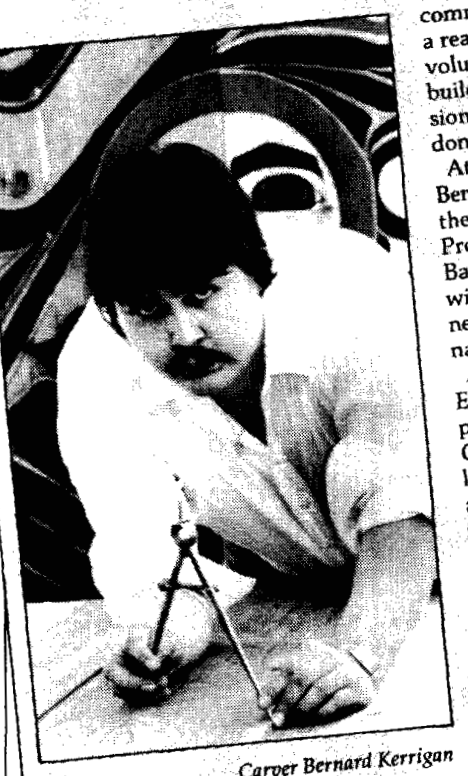
He adds that province-wide diagnostic services could be improved, as well as providing new channels for patient and public health education.

Already, work is in progress with B.C. Tel to link existing regional networks. Tentatively called the "Health Network," Mr. Cameron says the project is about five years away from completion.



On camera, Ian Cameron, director of Biomedical Communications.

Children's Garden



Carver Bernard Kerrigan

The flowers are blooming in UBC's newest garden—just in time for the dedication ceremony. Three months ago the only features on the site were mud and bricks. Now, thanks to the work of many volunteers, phase one of the Neville Scarfe Children's Garden is complete.

On Thursday, May 28 the garden will be officially opened and everyone is invited to attend. Refreshments will be served at 2:30 p.m. and visitors will have the opportunity to wander through the garden before the dedication ceremony which begins at 3 p.m.

Many of the groups and individuals, both from the university and from the community, who helped make the garden a reality will be present. Hundreds of volunteers pitched in to plan, design and build the garden, raise funds, lend professional advice or moral support, and donate materials of every kind.

At 3:30 p.m., a cedar mural carved by Bernard Kerrigan, a graduating student of the Native Indian Teacher Education Program, will be dedicated by Chief Simon Baker of the Capilano band. The mural will be a permanent fixture in the wilderness section of the garden which features native B.C. plants and shrubs.

As a joint project of UBC's Faculty of Education and Landscape Architecture program, the Neville Scarfe Children's Garden is designed to be an exploring and learning environment for children of all ages. As such, it's a fitting tribute to the first Dean of Education Neville Scarfe, who was a firm believer in the value of children's play.

In addition to providing an outdoor laboratory for children the garden offers a peaceful retreat for faculty, staff, students and visitors to campus. Located on the west side of the Scarfe (Faculty of Education) Building, the children's garden began as a project for UBC's Open House and was supported with a $3,000 graduating class gift from the Alma Mater Society.

UBC's Landscape Architecture students took on the work of designing the garden area as part of their course work. Although only a handful of students were involved with the garden through the months of planning and designing, every one of the almost 70 students in the Landscape Architecture program lent a hand in its construction.

Over the next two to three years the second and third phases of the garden will be developed. Plans include completing the pond and creek and perhaps adding features such as birdhouses, swings and a greenhouse.

World health meeting here

More than 1500 delegates from throughout the world are expected at UBC June 9-13 for a joint meeting of the International Council for Health, Physical Education and Recreation and the Canadian Association for Health, Physical Education and Recreation.

It will be the 30th bienniel conference to be held by the Council, which is an A-status organization of UNESCO. The last time the meeting took place in Canada was 1967, also in Vancouver.

The event is being hosted by Dr. Bob Morford, director of UBC's School of Physical Education and Recreation. The chairperson of the conference, whose theme is "Towards the 21st Century," is Sonya Van Niekerk.

Ms. Van Niekerk promises "very flamboyant opening ceremonies," featuring Simon Fraser University's pipe band and groups of children performing ethnic dances, among other things.. Dance will be featured in the last event on the agenda, too. Seven universities are collaborating to produce the International Dance Spectacular that will close the conference on Saturday, June 13. (Some of UBC's participating dancers are shown on the cover of this issue of UBC Reports.)

Between the opening and closing festivities participants will be able to choose from among 300 sessions in such areas as fitness, health, sports medicine, physical education in schools, recreation, dance, motor learning, sport psychology, administration, facilities, technology, sport science, coaching, and current research.

The presenters include Nancy Osgood, who Ms. Van Niekerk says is one of the most celebrated authors in the field of fitness and the elderly, and William Hettler from the University of Wisconsin, "the foremost speaker in fitness, health and wellness; we're incredibly lucky to get him."

Panel discussions and debates will take place on several topics, including Sport in Canadian Culture, Fitness and Wellness, and Ethical Viewpoints on Drug Use in Sport.

Workshops and demonstrations will be offered in many areas, including dance, weight training, European handball, juggling, Eskimo games, gymnastics and water activities.

All sessions are opening to the public at a cost of $10 per session, or $35 per day. Further information is available from the conference office at the School of Physical Education and Recreation, telephone 228-2982.

Among those expected to attend are the Council's secretary-general, Dr. Carl Troester, and Alexandru Serpico, first premier vice-president of the International Olympic Committee. An Olympic forum will be held daily during the conference, says Ms. Van Niekerk.

Resourceful Faculty

by Jo Moss

As an expert in medical genetics, Dr. Patricia Baird is often called on by the media to talk about her work. On one occasion, as a guest on a local open-line radio show, it was brought home to her how a scientist's work can sometimes have direct and visible benefits.

The topic was pre-natal diagnosis, and, as Dr. Baird tells the story, she discussed the importance of older women undergoing a pre-natal diagnosis during pregnancy to check for chromosome abnormality. The next day a 46 year-old listener checked into the UBC clinic to do just that.

"It turned out there was an abnormality and that woman would have had a chronically handicapped child," Dr. Baird says. As it was an unplanned pregnancy, and the couple already had a family, they chose to have an abortion.

"As a result of having the test, the family at least had a choice," says Dr. Baird. "It was a case of helping a real-life situation."

The expertise of UBC faculty members is one of the often unrecognized resources of the university. Many faculty in almost every department on campus answer calls from the media on a regular basis. They may not always be quoted in the newspaper the next day or interviewed on radio or television, frequently they simply provide the specialized background the reporter needs to follow the story.

Tax dollar

"Our group ethic is that it is part of the work as responsible faculty members. It's a useful and necessary role," says Dr. Baird.

Her sentiments are echoed by others across campus.

"It's one of the things taxpayers get for their tax dollar," says Dr. Mark Thompson, a labor management expert in Commerce and Business Administration. When a big story is breaking, his phone rings constantly. He says the Commerce and Business Administration faculty is probably one of the busiest on campus in terms of the number of media calls received.

Political Science professor Dr. Donald Blake recalls that one of his most exciting experiences was doing live commentary on BCTV for the 1986 provincial election. His worst was during the 1979 provincial election, when he and other faculty members were asked by a Vancouver newspaper to predict the election results.

"We had cautiously predicted an NDP victory," Dr. Blake says, "Our comments were hedged with qualifications, but wher the newspaper came out those were absent. It was a Socred victory and we had egg on our faces."

In addition to calls from reporters, most departments handle an enormous number of general information requests from individuals in the community. "What gets to us is not as well sorted as it could be," says Dr. Harry Smith, professor and head of Forest Resource Management. Dr. Smith says it would be impossible to put a figure on the number of calls to the department. Any requests for information that cannot be answered are referred to other university departments, or to agencies off campus.

Public support

The UBC Community Relations Office also handles calls from the public and the media—almost 700 a week. Information officers have searched out UBC experts in everything from mosquito breeding to werewolves. Even a call from an Vancouver newspaper, unabashedly asking for a Sasquatch expert, was matched with the appropriate faculty member.

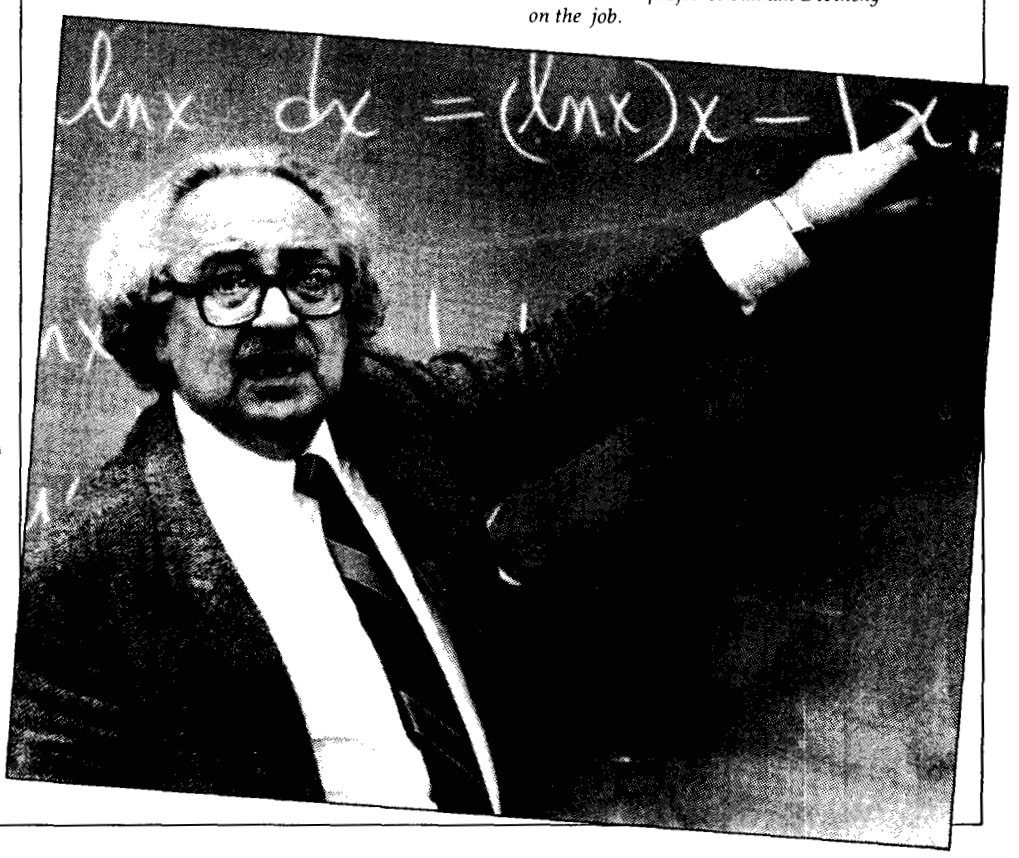
In addition to fielding requests for information relating to their area of research, UBC faculty are frequently invited to speak as technical specialists to community and professional groups and associations, and businesses and government organizations, both in Canada and overseas.

Forestry professor Les Reed, for example, is a specialist in Canadian forest policy, a topic often in the news. Reed says he usually has three or more speaking engagements a month, and whether its a community club in Prince George or a state governors conference in the U.S.A., Reed is willing to meet their need for an expert.

"I'm interested in public education because it means public support," says Reed who is probably UBC's most quoted forestry professor.

Faculty expertise may also be called on to assist government ministries at the municipal, regional and national level, or to testify at court hearings or before government boards.

Health Care and Epidemiology professor, Dr. Martin Schechter, was recently named to the AIDS advisory committee to the provincial government, psychiatry professor Dr. Morton Beiser is chairing a federal task force on the mental health issues affecting immigrants, and Les Reed is currently serving on a national advisory board on science and technology.



Mathematics professor Nathan Divinsky on the job.

Sports Medicine Clinic

by David Morton

It looks like a fast food restaurant in the middle of a soccer field on the outskirts of campus. But the unassuming appearance of UBC's Sports Medicine Clinic is not a reflection of its international status.

The clinic has been written about in the likes of Time and Maclean's magazine and has been the subject of television documentaries.

Its co-directors, Drs. Doug Clement and Jack Taunton, both graduates of UBC's medical school, are acknowledged pioneers in the field of sports medicine. Clement, in fact, was singled out by Influence magazine as one of the 50 most influential men in Canada for his work in the field.

The staff of 37 sees an average of 1,000 patients per week, or 40,000 to 50,000 per year. More than 90 per cent of those patients are recreational athletes, referred to the clinic by general practitioners. Elite athletes, such as Graham Fell, Debbie Brill, Lynn Williams, Todd Brooker, and Olympic gold medallist Alex Baumann, are seen on a priority basis . And players from a variety of Canada's professional sports teams also use the clinic.

The clinic has also produced a wide body of research in areas such as stress fractures and tendinitis, iron-induced anemia in long-distance runners, bicarbonate-loading and blood content in athlete training.

Twenty years ago, there was no such thing as a sports medicine doctor. Clinics, too, were a long time coming. But, as Dr. Clement points out, the first advertisements of Participaction Canada in the early 1970s, comparing the healthy, robust Swede with the lethargic-looking Canadian, sparked a nation-wide "fitness revolution."

The Sports Medicine Clinic was established partly in response to the growing numbers of recreational joggers inspired by this drive for fitness. Dr. Clement, a former Olympic runner and silver medallist in the 1954 Commonwealth Games, pioneered a sports medicine practice in the late 1960s, because nobody else could treat the sports injuries that were turning up at his private practice. When Dr. Taunton graduated from UBC medical school in 1976, he and Dr. Clement joined together to create the first sports medicine clinic in Western Canada, appropriately called the Terra Nova Sports Medicine Clinic, based in Richmond, B.C. That became the UBC Sports Medicine Clinic in 1979.

The opportunity to operate under the auspices of a university offered them the academic credibility they were looking for, as well as the environment to carry out research and provide specialized treatment of sports-related injuries.

According to Dr. Clement, sports injuries have not been adequately dealt with by the general mainstream of medicine. "The most frequent response of a physician to a patient who runs 120 miles a week and says his knees are sore is: 'That's fine. Stop running.'

"That's a very tempting and understandable response, but it doesn't go over well with the athlete. The motivational pattern of a person involved in exercise isn't to stop, but simply to find a solution.

"That is the main reason why sports medicine evolved."

Dr. Clement estimates that over 50 per cent of the injuries the clinic's staff see are related to the knees. Another common injury is stress fractures. Dr. Clement explains that these injuries occur in any number of body locations, some less typical than others. The number of them that he and his medical staff see, however, has given the Sports Clinic a significant expertise in this area.

In 1985, Olympic track star Lynn Williams sustained two stress fractures on the femur bones of both legs four months apart. Under Dr. Clement's care on both occasions, she was put onto alternate training regimens—stationary bicycle riding and running in water. Within six weeks on the first occasion and three in the second, she was back on the track, resuming her regular training program. In August, she went on to win a gold medal in the 3,000-metre event at the 1985 Commonwealth Games.

Dr. Doug Clement (left) and physiotherapist Ron Mattison with patient Chris Stewart in the Sports Medicine Clinic.

Revolution

Dr. Clement has used the same techniques on numerous other top athletes.

"Results have been so consistently good that we now have established that alternate training might be better than running," he says.

With the volume of patients and burgeoning medical staff, there has been pressure to expand the facilities of the Sports Medicine Clinic. This summer, the floor space will be doubled from 4,000 to 8,000 sq. ft. And plans are already under way for a more construction in 1992. That move will likely involve further expansion in staff and facilities.

The next wave in the fitness revolution, according to Dr. Clement, will be walking. Citing an aging North American population, he says there is a growing need to find lower-impact fitness activities. Walking is the ideal sport.

"Everything out there is pointing to the fact that walking is right for this segment of the population. And I suppose it is right," says Dr. Clement.

"Walking is going to explode."

Growing fish

The explosive growth of B.C.'s aquaculture industry is adding a new, and much needed, dimension to our nation's domestic and export fish production.

Aquaculture—the domestic rearing of fish—enables operators to raise fish of a specific size and quality to meet changing market demands.

"Importers are becoming more sophisticated in their selection of quality fish products," says Prof. Beryl March of UBC's Animal Science Department. "Japan and Norway have had successful aquaculture industries for some time now, and importers in Europe and elsewhere have come to expect fish of a consistent size and grade. Small pan-size salmon are very popular, for example.

"Unless Canada can supply uniformly good products, we are going to lose out in this market."

Prof. March is one of several researchers at UBC working in aquaculture and related fields, such as fisheries biology. Their studies range from finding the most effective and economical feeding systems for fish, to genetic selection, to the management of fish in high density, and disease control in fish populations.

"The advantage of rearing fish domestically is that the operator has total control of the system," says Prof. March. "It's possible to harvest fish year-round and to produce fish with specific characteristics, using controlled nutrition, genetic selection and management of their environment."

She adds that aquaculture is not meant to replace natural fisheries in B.C.

Can learn

"Aquaculture products complement rather than compete against products of the traditional fishing industry. At this point we're not looking at the production of food for the masses with aquaculture. We're producing a fancy product for a high-priced market."

Prof. March predicts that the aquaculture industry in Canada will expand rapidly in the next decade. "We're fortunate, because we can learn from the aquaculture industries already established elsewhere, and we can apply principles from traditional poultry and livestock production.

"The aquaculture industry is at the stage agriculture was several centuries ago, in terms of domesticating animals," says Prof. March. "First there was the hunter, then the rancher, and finally the farmer who reared animals domestically.

"In the case of fisheries, we've been hunting the fish in the wild, and we're just now seeing the wisdom of rearing fish and shellfish domestically."

A boost for coal

by Lorie Chortyk

A new UBC research facility is providing a boost for coal producers in British Columbia and Alberta.

Ironically, little research has been done until now on processing techniques for the fine grade of coal found in these two provinces, which supply more than 80 per cent of all Canadian coal production.

At the UBC Coal and Mineral Processing Centre, researchers are working to develop more efficient and economical coal-processing techniques to give Western Canadian producers a competitive edge in world markets.

"The UBC pilot plant is unique in North America, because it looks at problems of particular importance to the Western provinces," says Prof. Janusz Laskowski of UBC's Mining and Mineral Process Engineering Department. "A lot is known about processing techniques for the coarse coal found in other parts of Canada, but there are still many unanswered questions about processing techniques for fine coal."

Thermal drying

UBC researchers are working to improve methods used to "clean" fine coal, which involves separating the coal from inorganic material. "Because our coal is so fine and fragile, we have to use an expensive technique called flotation to separate the coal from the tailings," says Prof. Laskowski. "After it has been through the flotation process the coal must be "dewatered", which requires costly filtration and thermal drying techniques. Our goal is to develop cheaper and less complex methods of cleaning and dewatering fine coal."

Prof. Laskowski says UBC researchers are also interested in finding ways to reduce the ash content of B.C. thermal coal.

"By reducing the impurities in the coal, we can increase its value as a heat source and lessen any adverse effects on the environment. The more we can purify our product, the more desirable it will be on the market."

The size of the equipment in the coal centre is large enough to allow meaningful research to be carried out without excessive "scaling-up," a process which is often required when research is moved from the laboratory to large-scale applications in industry.

The UBC Coal and Mineral Processing Centre was built with funds from the provincial and federal governments. UBC researchers hope the new pilot plant will be used extensively for long-term collaborative projects with industry.

Top students of 1986-87

Among the 4,054 students who graduate this week are 27 students who finished at the top of their graduating classes. Listed below are the names of these students and their awards. (Students are from Vancouver unless otherwise noted).

Association of Professional Engineers Proficiency Prize (Most outstanding record in the graduating class of Applied Science): Neil MacLeod Gunn (Richmond, B.C.).

Helen L. Balfour Prize (Head of the graduating class in Nursing): Jean Elizabeth Fraser.

British Columbia Recreation and Parks Association, Professional Development Branch Prize (Head of the graduating class in Recreation Education): Heidi Deborah Mannis.

Dr. Maxwell A. Cameron Memorial Medal and Prize (Head of the graduating class in Education, Elementary): John Paul Milne (Burnaby, B.C.).

Dr. Maxwell A. Cameron Memorial Medal and Prize (Head of the graduating class in Education, Secondary): Simon Higginson (Terrace, B.C).

Ruth Cameron Medal for Librarianship (Head of the graduating class in Library, Archival and Information Studies): Leonora L. Crema.

College of Dental Surgeons of British Columbia Gold Medal (Head of the graduating class in Dentistry): Peter George Dueckman and Russell Lance Naito (shared).

Professor C.F.A. Culling—Bachelor of Medical Laboratory Science Prize (Greatest overall academic excellence in the graduating class of the Bachelor of Medical Laboratory Science degree): Jackie Da Ros (Dawson Creek, B.C.) and Alison Pontifex (Delta, B.C.) (shared).

Dr. Brock Fahrni Prize in Occupational Therapy (Head of the graduating class in Rehabilitation Medicine, Occupational Therapy): Tracy Dorin Rempel (Squamish, B.C.).

Dr. Brock Fahrni Prize in Physiotherapy (Head of the graduating class in Rehabilitation Medicine, Physiotherapy): Rebecca Jean Thomas (Kamloops, B.C.).

Governor-General's Gold Medal (Head of the graduating classes in the Faculties of Arts and Science): Farhang Rabbini (West Vancouver).

Hamber Medal (Head of the graduating class in Medicine): Andreas Michael Kluftinger (Richmond, B.C.).

Horner Prize and Medal for Pharmaceutical Sciences (Head of the graduating class in Pharmaceutical Sciences): Wendy Lorraine Konkin (Burns Lake, B.C.).

Kiwanis Club Medal (Head of the graduating class in Commerce and Business Administration): Naomi Miriam Youngson.

Law Society Gold Medal and Prize (Head of the graduating class in Law): Keith Edward Walsh Mitchell.

H.R. MacMillan Prize in Forestry (Head of the graduating class in Forestry): Mark Winslow Bishop (West Vancouver).

Dr. John Wesley Neill Medal and Prize (Head of the graduating class in Landscape Architecture): William Paul Rosenau.

Physical Education and Recreation Faculty Prize in Physical Education (Head of the graduating class in Physical Education): Allison Jeanne Gilbert (Quesnel, B.C.).

Royal Architecture Institute of Canada Medal (Graduating student with the highest standing in the School of Architecture): Mary Ann Hager.

Wilfrid Sadler Memorial Gold Medal (Head of the graduating class in Agricultural Sciences): John William D. Speirs (Penticton, B.C.).

Special University Prize (Head of the graduating class in Special Education): Susan Diana Lim.

Special University Prize (Head of the graduating class in Family and Nutritional Sciences): Jill Elizabeth Shelley (Delta, B.C.).

Special University Prize (Head of the graduating class in Fine Arts): Duncan Barr Gilmore (Qualicum Beach, B.C.).

Special University Prize (Head of the graduating class in Music): Ana Maria Ochoa (Medellin, Colombia).

University of B.C. Medal for Arts and Science (Proficiency in the graduating classes in the Faculties of Arts and Science): John Kenneth MacKay (Fairview, Alberta).

Theatre at UBC

by Bunny Wright

"An actor's chances of success are about 80-20 against," says Dr. John Brockington, the outgoing head of the Theatre Department. "Even the best of them sometimes fall flat on their faces in London or New York. There is," he says, thoughtfully, "something very strange about this business."

Yet since its formation in 1958, under the chairmanship of Dorothy Somerset, UBC's Theatre Department has graduated a lot of people who have somehow managed to make it as actors, directors, producers, designers and technicians.

These days, though, it's the practitioners of the arts and crafts of film and television, which have been recently added to the department's curriculum, who can be most confident about getting work.

Many of them are offered full-time employment even before they graduate, says instructor Raymond Hall, who is also a professional filmmaker and president of the B.C. Film Industry Association.

"A much higher percentage of students gets work than I had expected," he says. "And too many of them are offered full-time work while they're still at school."

UBC graduates are represented in the membership of all craft unions and the Directors' Guild of Canada. They are working for local and international production companies, the CBC and the National Film Board, says Mr. Hall.

Film studies

It was during Dr. Brockington's 22-year tenure as head that the department grew to encompass the Bachelor of Fine Arts programs, the graduate degree programs, and film and television studies.

"The introduction of the B.F.A.," he says, "made it possible for the Freddy Wood (the Frederic Wood Theatre) to become a student theatre. It has always been a very strong and respected institution in the city, and for many years a lot of Equity actors performed here. But with the introduction of the B.F.A. program we were able to ease the professionals out without losing any audience. Now, we use the odd guest artist—professional actors who play the roles and are also available to help the students, their fellow actors, and to take classes."

The B.F.A. is not intended to be the equivalent of a professional acting school, he says. "The program is halfway between the B.A., which is a nice balance between academic and practical, and a professional program." Some students are ready when they graduate "to go out and try it in the workplace." Others go into teaching, or on to more specialized study. Dr. Brockington adds that the department has graduated "people who have made it right and left, and who were here long before the introduction of the B.F.A."

Student actors

The Theatre Department presents three programs of plays each year, one of which is performed in the Frederic Wood Theatre. The 1986-87 season consisted of *Blood Relations*, by Sharon Pollock; Arthur Miller's *The Crucible*; *The School for Wives*, by Moliere; and Shakespeare's *The Winter's Tale*. The productions were directed by faculty members Charles Siegel and Stanley Weese, Dr. Brockington, and Vancouver director Ray Michael.

The second production program takes place in the Dorothy Somerset studio, where three to five plays are directed each year by graduate students and faculty, with casts made up of student actors.

The third season of plays is the Summer Stock program, designed to provide senior students with the opportunity to gain experience in all aspects of theatrical production at a time of year when they are free from academic responsibilities.

Although Dr. Brockington is stepping down as head, he will continue to teach and direct. "But I want to give other people a chance to wave their flags on the stage of the Freddy Wood," he says. "I want to direct in a much looser framework, less in the public eye."

Among the many productions he has directed at the Frederic Wood Theatre or, before its construction in 1963, in the old Auditorium, are Shakespeare's *Henry IV, Part I*, *Much Ado About Nothing*, *The Taming of the Shrew* and *Hamlet*. He has also staged musicals like *Salad Days* and *The Fantasticks*, Harold Pinter's *The Homecoming*, Chekov's *The Three Sisters*, Shaw's *Man and Superman* and *The Cocktail Party*, by T. S. Eliot.

Some of the Theatre Department's former students include Larry Lillo, Richard Ouzounian, John Gray, Nicola Cavendish, Brent Carver, Eric Peterson, John Wright, Scott Hylands and Goldie Semple.

Degree for Rick Hansen

UBC will pay tribute to world-class athlete and alumnus Rick Hansen by conferring on him the honorary degree of Doctor of Laws in recognition of his outstanding community service—the commitment to raise funds for spinal cord research.

The date Hansen will receive his degree is not yet confirmed.

"The university is proud of this remarkable young man and his exceptional talents," says President David Strangway. "Rick Hansen has set an example for everyone."

A champion athlete, Hansen has won 19 international marathons including the World Wheelchair Championships in Miami, Florida—four times. He has competed nationally in basketball, volleyball, tennis and racquetball and has won several gold medals in national and international track competition.

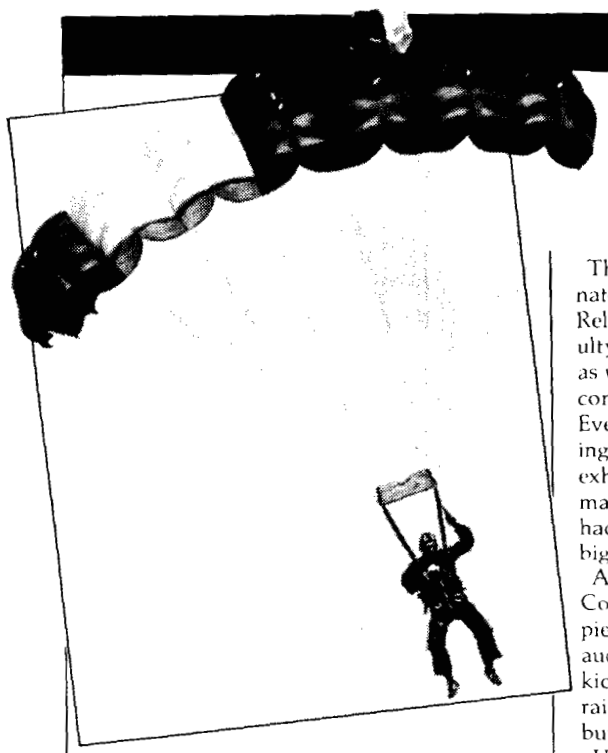
The first disabled person to enrol in UBC's School of Physical Education and Recreation in 1976, Rick Hansen was the first to graduate from that school in 1986.

As a coach he has worked with volleyball and basketball teams and aspiring athletes in youth development camps.

Hansen has given sports demonstrations at schools, lectured at hospitals and rehabilitation centres and appeared as an ambassador for Canadian wheelchair athletes.

Hansen's two-year wheelchair journey created world-wide awareness of the potential of disabled people and raised more than $10 million for spinal cord research, rehabilitation and wheelchair sports.

Just over two years ago Rick Hansen was given a sendoff on campus. Here, Rick is pictured on the eve of his departure when he was presented with a Special Achievement Award by Buzz Moore of the Athletic office. Now with his round-the-world marathon completed, Rick will receive an honorary Doctor of Laws degree from the university.



Open House, great times! Great people!

It was three days of sunshine and fun-filled activities for young and old alike. And when the count was tallied, 150,000 visitors had made their way to the UBC campus March 6, 7, and 8 for the first university-wide Open House in 10 years.

There were more than 400 different activities, displays and events and from the magic show in the Chemistry building to the simulated earthquake in Engineering, it was standing room only. Visitors watched quail eggs hatch in the Food Sciences Department, took their gardening questions to Hortline in the Botanical Gardens, and gazed at the moon through a telescope outside the Astronomy building.

About 200 student guides sporting yellow bibs answered questions, directed visitors, and gave lively campus tours aboard buses rented for the occasion.

Judging from the number of letters and phone calls to the university from delighted visitors, as well as enthusiastic comments from faculty, staff and students, the whole affair was a rip-roaring success. One woman who took time to write a letter echoed the sentiments of many visitors when she described UBC's Open House as "the best event since Expo."

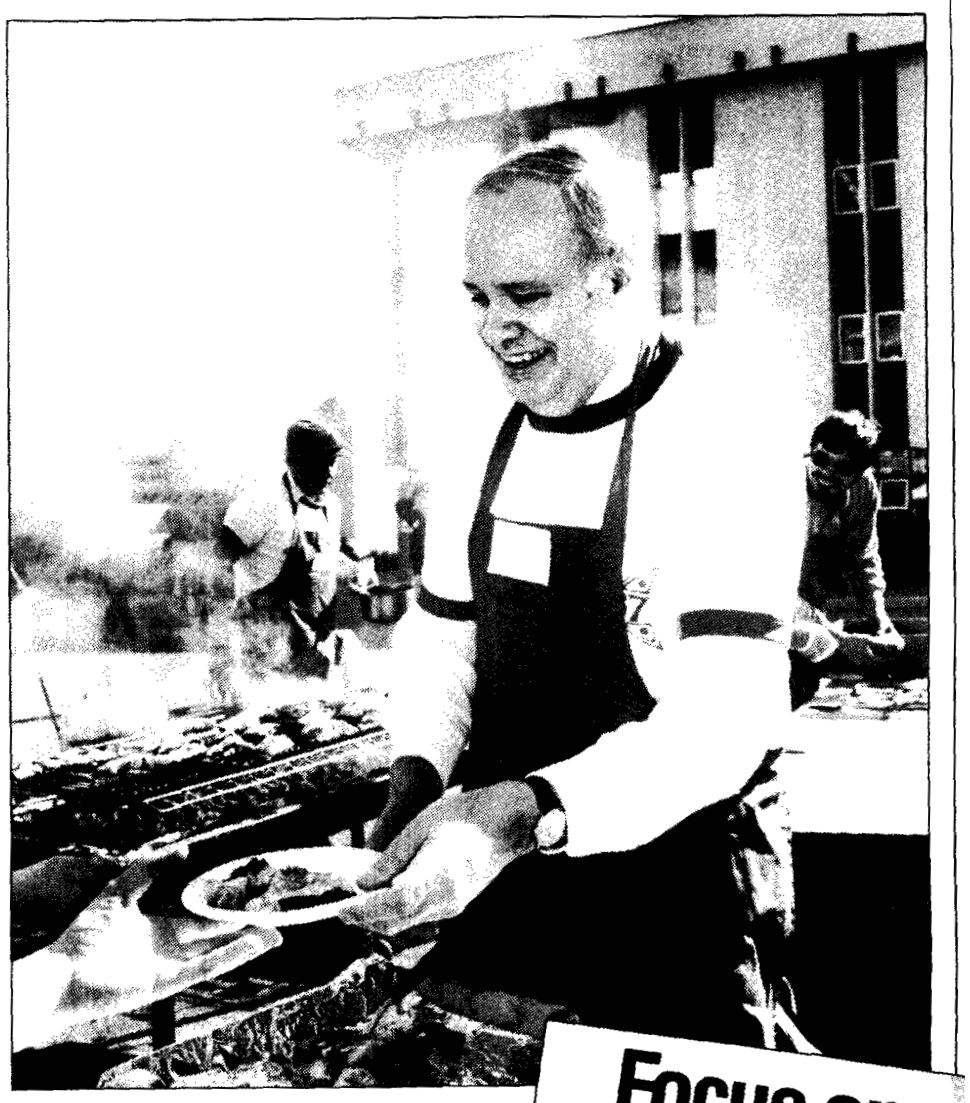
The three-day event was planned, coordinated and publicized by the Community Relations Office. Students, staff and faculty from every department on campus, as well as alumni, and volunteers from the community, contributed to its success. Everyone involved put in extra hours working evenings and weekends to arrange the exhibits, performances and displays that made Open House a reality—yet they had energy left to extend to all visitors a big welcome.

A gala evening—the Celebrity Alumni Concert and Auction—featuring cameo pieces by distinguished alumni and an auction of eclectic items and experiences kicked off the Open House weekend. It raised more than $20,000 towards a bursary for special needs students.

UBC made a special effort to encourage groups of high school students to the campus and an estimated 30,000 teachers and students from all over B.C. took advantage of the opportunity for a learning holiday. They came from towns such as Fort St. James, Fraser Lake, Comox, Port Hardy and Invermere, and for some it was their first chance to visit a university.

Seven grade 12 students from Clinton became television stars for a day when their visit was filmed by CBC Television for a special one-hour documentary on UBC's Open House scheduled to air sometime in June.

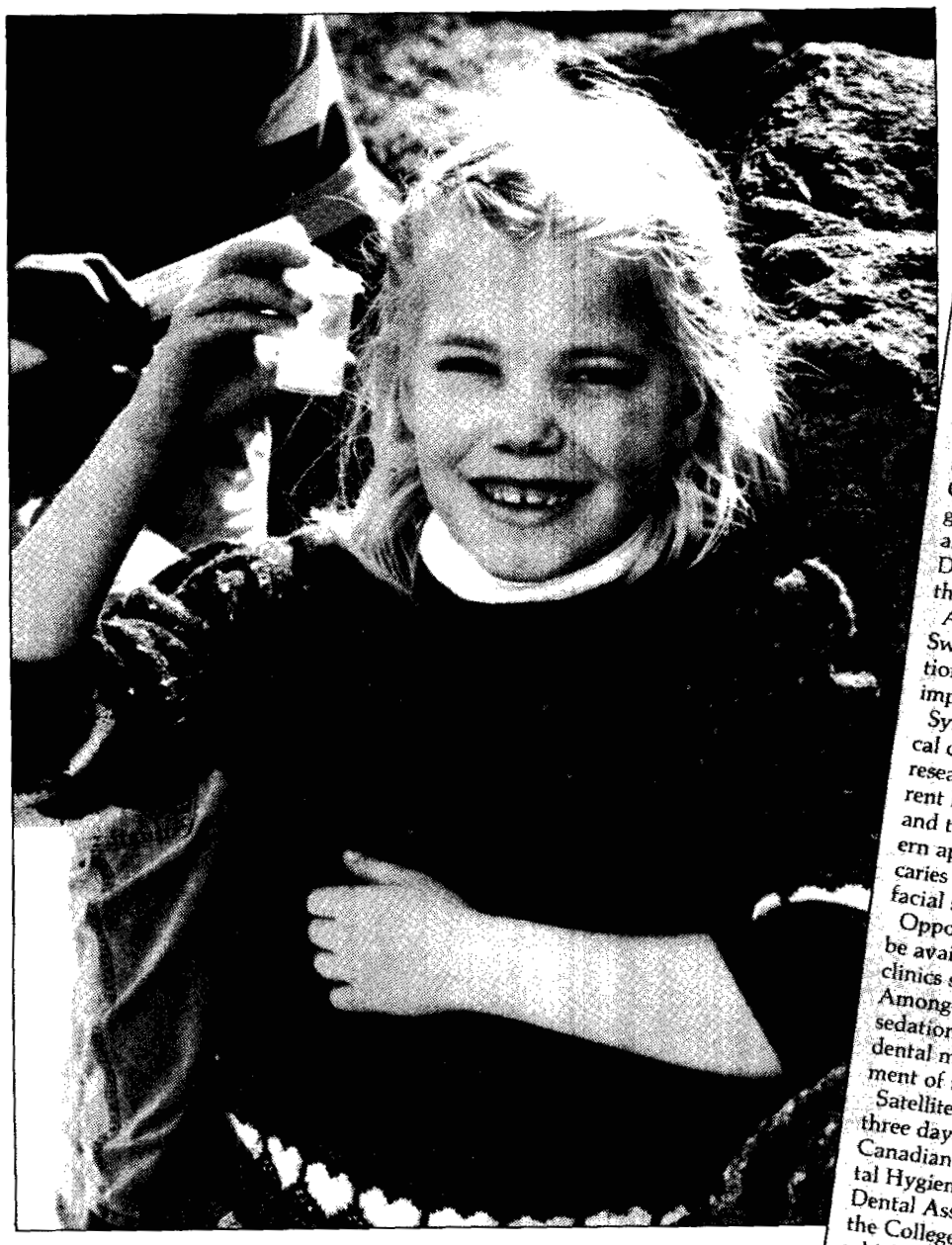
All three major television stations and most radio stations and newspapers in Vancouver, and throughout B.C., covered Open House events and activities. One television reporter's comment perhaps best describes the spirit of the occasion, when at the end of his broadcast he said, "Thank you UBC for helping us to understand."



Hard pressed

For all visitors, Open House was an opportunity to find out more about what happens at the university and what UBC has to offer the community. Volunteers in the information tents were deluged with requests for information about recreation facilities, theatre productions, non-credit courses, credit courses, museum programs, concerts, exhibitions, special lectures and library access. They were hard pressed to keep up with the demand on admissions booklets, brochures such as 38 Great Ways to use UBC, and copies of the Community Report, a tabloid describing what's going on at Canada's second largest university.

"Open House was part of our on-going effort to bring the university and community closer together," says UBC President Dr. David Strangway. "It's a chance for faculty, staff and students to show how their research, teaching and community activities touch the lives of people throughout the province, and a chance for the public to find out how UBC can serve them."



Big community event of the year was UBC's Open House when all kinds of wonderful things happened for all kinds of people.

Focus on dentistry

The June 11 issue of UBC Reports will focus on the Faculty of Dentistry, which will celebrate its 25th anniversary June 19-21 with a scientific and clinical meeting that will be held in conjunction with the annual convention of the B.C. College of Dental Surgeons.

Eight hundred of B.C.'s 1,700 dentists are graduates of UBC, says Dr. Alan Lowe, chairman of the committee charged with organizing the event, and every one of them is being encouraged to attend.

Dr. J. B. Macdonald, former president of UBC, will make a special presentation on the current status of dental research in Canada. He will also be the honored guest at the Dental Alumni Association's annual reunion dinner on June 19. It was Dr. Macdonald's 1955 report that led to the development of the faculty.

Among the scheduled participants is Sweden's Dr. P. O. Branemark, an internationally acknowledged expert in dental implants.

Symposia will also be conducted on biological disease indicators and imaging in research and practice. There will be concurrent lectures on such topics as diagnosis and treatment of periodontal disease, modern approaches to the treatment of dental caries and current trends in oral and maxillofacial surgery.

Opportunities for hands-on dentistry will be available at half-day participation clinics scheduled for June 20 and 21. Among the topics to be presented are sedation, radiology, cosmetic dentistry, dental materials, oral biology and management of the infectious dental patient.

Satellite meetings will be held during the three days by delegates and deans of Canadian dental faculties; the B.C. Dental Hygienists' Association; the Certified Dental Assistants' Society of B.C.; and the College of Dental Surgeons of B.C., which will hold its annual meeting at UBC on June 21.

Conference Centre draws visitors

by David Morton

"We're self-proclaimed ambassadors for the university campus," says UBC Conference Centre manager, Susanne Nikles.

"To thousands of people a year, we are the university. We bring them here, we provide their room and board and we coordinate their meetings. It's extremely important that we give more than 100 per cent in performing our jobs."

In early May, the Conference Centre moved headlong into campus conferences and providing accommodation for some 141 groups over the summer. For the servicing staff—an assistant manager, three conference coordinators and numerous summer students—that translates to a potential of beds for 16,991 delegates and meeting space for 22,010.

Quite a load for a campus office that functions on 12 staff in the off-season. In 1986, the centre's best year ever, the workhorse staff booked and serviced 194,229 bed nights and grossed $5.3 million dollars, about double that of previous years. Mrs. Nikles attributes that largely to Expo, but is quick to add that the University of B.C. has some of the best facilities for campus-oriented conferences in Canada.

"What conference organizers like the best is that everything is in one place and that our accommodation is reasonably priced," says Mrs. Nikles. "They can have all their meetings on campus, they can be fed and even enjoy some small entertainment all without the concerns of transporting people around the city."

Indeed, where else in the city could a single room be found in the likes of the Walter Gage Complex, perhaps overlooking Vancouver's North Shore mountains and Howe Sound for $26 to $55 in the summer months?

Food services

"It is a pure pleasure to show UBC to prospective conference organizers," says assistant manager for sales and marketing, Judy Finch. "People are wildly impressed with the campus. People are invariably pleased with the Gage residences and the Instructional Resource Centre. It's the sheer scope of what we have on campus."

Conference Centre manager Susanne Nikles.

The Conference Centre is a full service conference coordinating facility aimed solely at attracting meetings to the campus. "We handle all aspects of meetings on campus," says Mrs. Nikles, including accommodation, booking classrooms and lecture halls, arranging for meeting equipment, liaising with UBC's Food Services for catering and, more recently, conference registration. Off-campus activities, such as tours or entertainment are left to conference organizers or downtown professional meeting planners.

Most conference groups are academic in nature, ranging from as small as 25 to as large as 6,000, as in the case of the International Union of Geodesy and Geophysics, IUGG, which will hold its annual congress this August at UBC. While this conference has booked the entire Gage and Totem residences for accommodation and, the balance of delegates will be boarding off campus because their numbers will exceed the centre's 3,000 capacity.

Planning for conferences of this size is no small feat. Preparations often begin two to three years in advance, usually involving Mrs. Finch's sales efforts with the group making the bid to attract the conference to Vancouver and the university.

On campus

Some forward looking groups book even further in advance, such as the International Agronomy Association conference which will be holding its meeting in July, 1996. The conference centre is also involved in a bid to bring the 1994 Commonwealth Games to UBC, an event that will bring some 1,500 international athletes and 600 officials to the campus for two weeks.

"Most of our business comes to us from people on campus," says Mrs. Finch. "They're usually trying to attract their academic society to UBC for an annual meeting."

Cover Photo

UBC photographer Warren Schmidt captured the spirit of the university in his picture of the main library. This great and beautiful landmark is a Canadian resource — a most impressive research facility. The photo also reflects the dynamism of the students who populate the campus. The dancers, who will perform at the International Council for Health, Physical Education and Recreation being held June 9-13 at UBC, are from the dance program of the School of Physical Education directed by Jean Cunningham. The dancers are Alisa Kage, Trish Eccles, Ingrid Bischoff and Vicky Pratt.

Tune in

Tune in to UBC research on your favorite radio station.

UBC Perspectives is a series of radio mini-documentaries featuring university faculty engaged in interesting research. Produced by the Community Relations Office, and narrated by scientist Dr. David Suzuki, the 13-part series of three-minute programs is distributed to 300 stations across Canada by Broadcast News of Toronto.

The series has already garnered a gold medal in an international competition sponsored by the Council for the Advancement and Support of Education (CASE) in Washington, D.C.

You may just catch the last of the second series this month. Watch out for the next series scheduled for completion this fall.

Solving crimes

by Lorie Chortyk

UBC researchers are working on a new technique to positively identify rapists, killers and the victims of crime through the genetic typing of blood, semen and tissue samples.

UBC pathologists James Ferris, Anne Autor and Lorne Kirby have received grants totalling $55,000 from the B.C. Ministry of the Attorney General and the Law Foundation of British Columbia to conduct testing on the technique, which may be available for use in B.C. courts as early as 1989.

DNA (deoxyribonucleic acid) genetic typing is the process of breaking down and identifying individual components of DNA, the genetic substance of the cell which is unique to each person, and often called the "blueprint of life." The technique makes it possible to identify a person from tissue, semen or blood samples, even when the samples are several years old.

Dr. David Hardwick, head of the UBC Pathology Department, says the technique is a significant innovation in the field of forensic pathology.

"This development has the potential to make B.C. one of the first centres in the world to apply advanced biotechnology to legal matters."

Dr. Hardwick says courts in B.C. and other Canadian jurisdictions will have access to the new identification technique through a genetic typing laboratory set up in the UBC Pathology Department.

Key evidence in many criminal cases is based on the identification of body fluids or tissues exchanged between the victim and assailant or left at the scene of the crime.

In cases where an assailant can't be positively identified, prosecution of rape and murder cases often fails because of lack of vital evidence linking the victim and the accused. The current methods of blood typing used to identify assailants are not always reliable.

Dr. Hardwick said the new technique is also a breakthrough for disputed paternity cases.

"Until now, it's been extremely difficult to positively identify a man as the father of a child in question. DNA typing clearly establishes paternity because genetic patterns of a child are inherited from both parents."

UBC's Library is one of the finest research libraries in North America. Considerable effort is being made to obtain new public and private support for the library. Rare and priceless books, such as the one pictured here, can be seen in the Special Collections division. Although housed in the now overcrowded Main Library, the special collections at the university are considerable and owe much to the support of private donors.

UBC Calendar

MONDAY, JUNE 1
Cancer Research Centre Seminar
Current Developments in the Use of Spheroids as Models of Tumor Microregions. Dr. James P. Freyer, Toxicology Group, Life Sciences Division, Los Alamos Laboratory, Los Alamos, New Mexico. Free coffee and donuts served. For more information, call 877-6010. Lecture Theatre, B.C. Cancer Research Centre, 601 West 10th Avenue, Vancouver. 12:00 noon.

THURSDAY, JUNE 4
Chemistry Pacific Coast Lectureship
Asymmetric Synthesis and Kinetic Resolution; Some Concepts and Examples. Professor H. Kagan, Universite de Paris-Sud, Orsay, Paris. Room 250, Chemistry Building. 4:00 p.m.

SATURDAY, JUNE 6
Amnesty International Conference for Educators
The Movement Towards Global Citizenship: Teaching for Human Rights. Renate Shearer, Human Rights Research and Education Centre, Ottawa; Jack Kehoe, Professor, Faculty of Education, UBC; also workshops and panel discussions on curriculum development and on the rights of students and teachers. Pre-registration $15. For more information, call 734-5150. Garden Room, Graduate Student Centre. 9:30 a.m.—5:00 p.m.

SUNDAY, JUNE 7
French Conversational Program
All-day French conversational program. $60 includes lunch and dinner. For information, call Language Programs and Services, Centre for Continuing Education, 222-5227. Room D339, *Buchanan Building*. 10 a.m.—10 p.m.

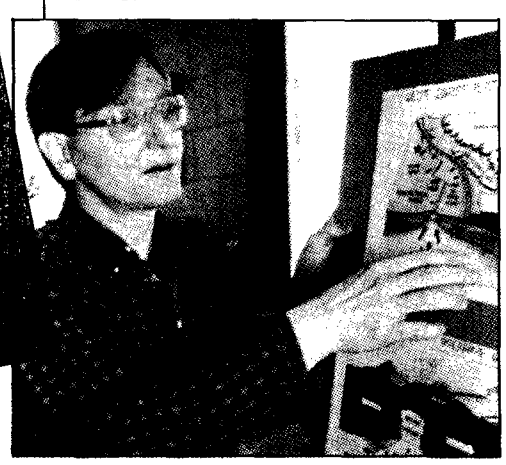
MONDAY, JUNE 8
Cancer Research Centre Seminar
Interaction of Ionizing Radiation. Dr. Gabe Lam, Physics Department, Cancer Control Agency of B.C. B.C. Cancer Research Centre, 601 W. 10th Ave., Vancouver. 12:00 noon.

TUESDAY, JUNE 9
The Research Centre Seminar
Extracorporeal Membrane Oxygenation (ECMO) for Long-Term Cardio Pulmonary Support. Dr. P.G. Ashmore, Head, Pediatric Surgery, Children's Hospital. Refreshments provided at 3:45 p.m. Room 202, The Research Centre, 950 W.28th Avenue, Vancouver. 4:00 p.m.

THURSDAY, JUNE 11
Biomembranes Discussion Group
The genetic analysis of membrane protein insertion in *Escherichia coli*. Dr. Colin Manoil, *Department of Microbiology and Molecular Genetics*, Harvard Medical School, Boston, MA. Room 201, Wesbrook Building, UBC. 4:00 p.m.

Earth science study

Dr. Ronald Clowes of the Dept. of Geophysics and Astronomy was recently named director of a $25-million Canada-wide earth sciences project. Lithoprobe is the name of the five-year study funded by the Natural Sciences and Engineering Research Council and the federal Dept. of Energy, Mines and Resources. The project, one of the largest ever undertaken in Canada, will probe the rigid outer layer of the earth to help scientists further understand this layer, and related problems such as the origin and distribution of mineral deposits and the accumulation of hydrocarbons as well as the causes of earthquakes.



NOTICES

Museum of Anthropology Exhibition
The Flute and The Sword. Exhibition featuring popular religious poster art which explores the passionate nature of two Hindu deities, Krishna and Kali. April 2—July 26. Museum admission: Adults $2.50, children, seniors and students $1. For more information, call 228-5087. Theatre Gallery, Museum of Anthropology.

Museum of Anthropology Exhibition
The Literary Heritage of Hinduism. Exhibition of sacred Hindu texts discussing the significance of Spiritual Knowledge. April 2—November. Museum admission: Adults $2.50, children, seniors and students $1. For more information, call 228-5087. Theatre Gallery, Museum of Anthropology.

Museum of Anthropology Exhibitions
The Hindu Divine. Six independent exhibitions explore some of the many ways in which abstract concepts of the Absolute are depicted in Indian life through bronzes, stone sculptures, popular art and everyday objects. A seventh exhibition discusses Hindu, Sikh, and Islamic religious expressions in Vancouver. April 2—November. Museum admission: Adults $2.50, children, seniors and students $1. For more information, call 228-5087. Gallery 9, Museum of Anthropology.

Native Youth Programs
Native Youth Workers present the following illustrated talks and tours: Traditional Uses of the Cedar Tree; The Potlatch-Past and Present; Traditional and Contemporary Fishing; and Totem Poles. May through August. May and June: Sundays; July and August: Tuesday through Friday. For more information, call 228-5087, Museum of Anthropology.

Thinking of Volunteering?
Volunteer Connections is open May through August to help you find the volunteer position that best suits you. This is a free service, Monday to Friday 8:30 a.m.—4:30 p.m. in the Student Counselling and Resources Centre, Brock 200. For information, call 228-4347. For an appointment, call 228-3811.

Museum of Anthropology Exhibition
The Third Eye. An exhibition featuring non-destructive scientific techniques used to yield information beyond the scope of normal methods of curatorial investigation. May 19 to September 27. Museum admission: Adults $2.50, children, seniors, students $1. For more information, call 228-5087. Gallery 5, Museum of Anthropology.

Museum of Anthropology Conference
Tradition, Change and Survival. A world conference on Indigenous People's Education will be held at UBC, including opening ceremonies at the Museum. *June 8*—13. For information and registration, call 251-4844 (local 30). Museum of Anthropology.

Language Programs
Three-week, non-credit, morning programs in French begin June 9, July 13 and August 4; all-day immersion programs begin July 13 and August 4; Three-week, non-credit, morning programs in Spanish, Japanese, Mandarin and Cantonese begin July 7 and July 27. For more information, call Language Programs and Services, Centre for Continuing Education, at 222-5227.

UBC/SPCA Short Course
Animal Cell Culture. Open to students, staff and faculty attending any of the B.C. universities. June 11 and 12. This course provides a basic level of knowledge for those wishing to learn techniques of animal cell culture. $55. For registration, contact the following no later than June 10: Dr. David Mathers, Dept. of Physiology, 2146 Health Sciences Mall, Tel. 228-5684.

Assoc. of Northwest Weavers' Guilds 13th Biennial Conference
Personal Expressions. A juried show of weaving and spinning at the Asian Centre at UBC. Thursday, June 25, 10 a.m.—5 p.m.; Friday, June 26, 10 a.m.—5 p.m.; Saturday, June 27, 10:30 a.m.—1 p.m. *Co-sponsored by the Institute of Asian Research*. Free admission.

Assoc. of Northwest Weavers' Guilds 13th Biennial Conference
Commercial exhibits selling spinning and weaving equipment and yarns and fibres in the War Memorial Gym at UBC. Admission $3. Friday, June 26, 10 a.m.—7 p.m; Saturday June 27, 10 a.m.—1 p.m.

Recreation UBC Summer Hours
The Recreation UBC outdoor rental shop resumes full-time summer hours beginning May 1 through September 1. All types of outdoor equipment may be rented for reasonable prices. Open daily 7:30 a.m.—3:30 p.m. except Sunday. Located in the dispensary of the War Memorial Gym. For more information, call 228-3515 or 228-3996.

Free Guided Campus Tours
Bring your friends, visitors, community, school or civic group to UBC for a walking tour of the campus. Every Monday through Friday at 10 a.m., 1 p.m. and 3 p.m., groups will have the opportunity to see and learn about the UBC campus:- everything from the unique Sedgewick underground library to the Rose Garden and more. Tours last approximately 2 hours in the morning and 1 1/2 hours in the afternoon. To book a tour, call the Community Relations Office at 228-3131.

Botanical & Nitobe Memorial Gardens
The Botanical Garden and Nitobe Memorial Garden will be open daily 10:00 a.m.—8:00 p.m. Free admission Wednesdays. For information, call 228-4208.

Haida Houses Project
Northwest Coast artist, Norman Tait and a team of five carvers are turning a 29.5 ton, 20 metre-long log into a Nishga cargo canoe—the first of its kind in over 100 years. It will be paddled down the west coast to California, tracing the ancient abalone trading routes. For further information, call 228-5087. Haida Houses, Museum of Anthropology. Continues throughout the summer.

Counselling Psychology Research Participants Required
Participants between the ages of 18-25 are required for a research project associated with the Department of Counselling Psychology. The project examines the ways in which parents have attempted to influence young adults regarding their occupation, career and life plan. Participants willing to complete a questionnaire requiring approximately 1-1/2 hours will be paid $10 and $20 for a two hour interview. For more information, call Dr. Richard Young at 228-6380.

Summer Sun, Fun and Fitness
UBC Leisure Pursuits Instructional Program. Outdoor aerobics, weather permitting, Monday to Friday 12—12:40 p.m. Call 228-3996 for location, or if you would like to see classes offered at other times. Aerobics to music—in UBC's newest weightroom, basement War Memorial Gym. Monday to Friday 1—1:40 p.m. Weightroom is open Monday to Thursday 12—7:45 p.m. and Friday 12—5:45 p.m. Expert and helpful supervision on location. $2 drop-in charge for all activities, summer passes available. For more information about classes, other activities and outdoor equipment rentals, call 228-3996.

Reach-out Program
Volunteers needed for the Reach-out Program. Become Vancouver correspondents for the international students who will be studying at UBC in 1987. For more information, call UBC International House 228-5021.

Fathers Wanted
Fathers of children between the ages of 3 and 8 are required for a research project associated with the Department of Psychology of the University of British Columbia. The project involves evaluating a program that teaches parenting skills. Approximately 50 minutes are required and $5 will be paid for your participation. For additional information, contact Susan Cross, Clinical Psychology, UBC, 321-4346.

UBC Reports is published every second Thursday by UBC Community Relations, 6326 Memorial Road, Vancouver, B.C. V6T 1W5, Telephone 228-3131.
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