

# UBC Reports

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## UBC, faculty negotiate agreement



Celebrating the announcement of \$16.4 million for a new Chemistry/Physics Building on campus are, left to right, UBC President David Strangway, Minister of Advanced Education and Job Training Stan Hagen, and former chemistry department head Dr. Charles McDowell. Construction of the building will begin in early September.

## Victoria provides funding for chemistry physics building

The Hon. Stanley Hagen, Minister of Advanced Education and Job Training, has announced funding for a long-awaited \$16.4 million Chemistry/Physics Building on campus.

Identified as an "urgent building need" by UBC's Senate in 1977, the four-storey, 80,000 sq. ft. building will provide high quality research laboratories for organic and inorganic chemistry, as well as space for analytical and technical support services, teaching labs, faculty offices and a science student reading room. The building is scheduled for completion by the summer of 1990.

Hagen noted that, "Essential research functions of this major university will now have a facility second to none in the country, ensuring that the University of British Columbia will continue to be a leader in scientific education and research."

UBC President David Strangway said the university is "delighted" with the approval of this much-needed facility.

"Our present chemistry building, built in 1926, no longer meets building or safety codes," he said. "This new facility, with its state-of-the-art research laboratories, will enable UBC to become even more competitive for national and international research contracts."

President Strangway added that approval of the new building is a "very positive" sign of the government's support of excellence in B.C. universities.

Leading edge research in UBC's chemistry and physics departments has resulted in the creation of several high technology spin off companies in recent years. Vortek Industries, creators of the Vortek Plasma Arc Lamp, Moli Energy, manufacturers of the long-life Moli battery, and Canadian Micro Analytical Services are just a few of the companies created as a result of research developed at UBC.

UBC chemistry department head Larry Weiler said the new building will be used for both basic and applied research and will enhance collaborative work between the chemistry and physics departments.

"The quality of the research space in the new facility will certainly increase the chances of technological breakthroughs being achieved."

He describes the present condition of labs in the chemistry building as "deplorable".

"In some labs poisonous gases are being channelled out

through home-made fume hoods built out of sewer pipes. Other labs are actually old washrooms that have been converted into research space."

Weiler outlines some of the new research labs being incorporated into the building.

"One of the new areas will be a joint laser facility, where researchers from chemistry and physics can carry out very high precision studies on the structure of atoms and molecules. The lab will also be used by plasma physicists working on nuclear fusion and for research into semi-conductors--materials which transmit electricity without power loss."

The facility will give UBC researchers a boost in what has become a world-wide race to develop superconductor technology.

Weiler says the new building will also house a state-of-the-art tissue culture lab for research into chemicals derived from plants and microorganisms.

The building will be constructed at the corner of East Mall and University Boulevard, across from the Bookstore.

Architect for the building is Thompson, Berwick, Pratt and Partners.

## Sauders give UBC \$250,000

UBC has received \$250,000 for research on a blood test for cancer screening that is being hailed as a major breakthrough by medical researchers across North America.

The donation, made by UBC Board chairman William Sauder and his wife, Marjorie-Anne, will be used to purchase equipment in UBC's nuclear magnetic resonance (NMR) imaging lab, where the screening is being carried out.

Chemistry department head Larry Weiler estimates that with the new equipment researchers will be able to screen more than 1,000 blood samples a week. "With our present equipment we can screen about 20," he said.

The NMR technique measures the magnetic properties of lipoproteins, or fat-containing cells in blood plasma. "Because cancer cells emit different NMR signals than normal cells, we can differentiate between individuals who have cancer and those who are healthy or have other diseases," explains Weiler. Involved in the development of the blood test will be

The Faculty Association and the university have reached an agreement on faculty salaries for 1986/87 and 1987/88.

In late night talks held Tuesday, July 14, the last day of negotiations, the two sides agreed on a general increase of 1.05 per cent for 1986/87, effective Jan. 1, 1987, and a general increase of 4.98 per cent for 1987/88 effective July 1, 1987.

"In each year provisions have been made for career advancement and some modest provision has been made for benefits in 1987/88," said Vice-president academic Daniel Birch.

The agreements are subject to approval by the Faculty Association and the Board of Governors and must be submitted for approval by the Compensation Stabilization Board.

Negotiations began June 10 before Victoria announced its 1987/88 grant to the university.

UBC President David Strangway circulated a letter last month to individual faculty members outlining the university's position on salary increases for the two years under negotiation.

Strangway said the letter "was a logical follow-through to the meeting with faculty members May 26". The closed-door meeting, organized jointly by Strangway and then-president of the Faculty Association Herb Rosengarten, was an opportunity for faculty members to air their grievances and to question Strangway on the university's position.

"At that time we didn't know what our grant would be from the provincial government," Strangway said. "The issue at the meeting was the 1986/87 salary negotiations. I was there to explain why the university didn't have the ability to pay and to make it clear that the university's position was not an arbitrary action or capricious act."

With the notification of the provincial grant, the university was in a position to make a good offer, Strangway said. "It seemed important to make the best offer we could afford and to make it up front."

When notified by telephone of the negotiation results, Strangway said he was delighted that an agreement had been reached. "Both parties are to be congratulated. With negotiations dealt with in a timely way, we can turn our attention to the many opportunities facing the university."

## Crash course for students

Some of Canada's brightest students will be crashing cars on campus this summer. They'll also dissect brains, create synthetic music, build robots, investigate superconductors and examine molecular genetics.

It's all part of the Shad Valley summer program, a four-week opportunity for young people in grades 11 and 12 to develop their talents in the areas of technology and research. The results of the car crashes will be carefully analyzed as part of an introduction to accident engineering--the study of the causes and effects of traffic accidents.

About 250 students from across Canada participate in the annual program which is held at five universities including UBC. Developed five years ago by the Canadian Centre for Creative Technology at the University of Waterloo, the program gives Canada's future entrepreneurs hands-on exposure to recent developments in science and technology.

Running June 28 to July 25 at UBC, the Shad Valley program is sponsored by Canadian corporations and advanced technology companies which provide six weeks of employment for a student after the program.

This year's students come from as far away as Dartmouth, Nova Scotia and Whitehorse, Yukon Territory. For many, it's their first visit to Vancouver and the UBC campus.

researchers from the departments of chemistry, physics, biochemistry, pathology and medicine, and researchers from the UBC teaching hospitals and the Cancer Control Agency of B.C.

Weiler says the test, first demonstrated in late 1986 by a biochemist in Boston named Eric Fossel, has claimed the attention of cancer researchers across North America.

"The technique is revolutionary because the tests can be done routinely, and it doesn't require tissue samples which have to be obtained from a biopsy."

He adds that the technique may also provide a means of monitoring the progress of a patient already being treated for cancer.

In the months ahead researchers will be trying to determine such things as how early cancer cells can be detected by NMR and what factors may interfere with the accuracy of the tests.

# Research project uncovers 18th century scandal.

by David Morton

In the words of one critic, *The Love of a Prince* has it all—romance, a seedy scenario, passion, betrayal and manipulation. But you won't find it playing at your local movie theatre.

*The Love of a Prince*, written by Dr. Larry Bongie, head of UBC's French Department is a well-written, solidly researched account of Bonnie Prince Charlie's amorous adventures in France.

It is based on a series of love letters written by a hitherto unknown lover of Bonnie Prince Charlie's, his cousin Louise, Princesse de Rohan. The letters also contain the revelation that the Prince had a son by Louise, though it died a year after birth.

Bonnie Prince Charlie was living in France at the time, after his unsuccessful attempt to regain the British throne and his daring escape from Scotland.

Pieced together, the letters render a moving tableau of the affair, albeit a one-sided tableau. The Prince's letters were destroyed by Louise on his instructions.

Bongie begrudgingly admits his book has romantic appeal (he has recently had a London enquiry about turning it into a play), although he was reluctant to enter the historical romance genre. His real intention was simply to throw new light on the well-studied figure of Bonnie Prince Charlie. Celebrated in song and legend, he emerges from Bongie's book as a cruel, almost amoral character.

*The Love of a Prince* is a departure for Bongie, who is a recent recipient of a Senior Killam Research Prize. He is known as a dix-huitièmiste, one who studies the literature,

history and philosophy of 18th-century France. His contributions to 18th-century French studies resulted, in 1983, in the French government's naming him an Officier de l'Ordre des Palmes Académiques.

"It is a fascinating time in French history" he says. "The literary perspective was all important, then. Enlightenment authors were

great communicators who wrote works of history, philosophy or political science, to please as much as to instruct."

Bongie's research takes him to archives all over Europe. In France, he is a regular at the National Archives, where he combs through mounds of 18th-century documents. He has much of this material reproduced in microfilm

for closer study at home.

"I like to discover something new about an author," says Bongie. "I don't mean a small fact—the proverbial laundry list—that might at best make an interesting footnote about someone's life. I mean something that changes the thinking about that author and his times."

In 1977, Bongie, was researching a book in Windsor's Royal Archives when he discovered the love letters—all 95 of them—that became the basis of *The Love of a Prince*.

At first, they were a mystery. They were unsigned, undated and in a "hopeless jumble." Working like a detective, Bongie not only discovered who the sender and recipient were, he pieced the letters together and uncovered the hidden story.

The 22-year-old princess is so obsessed with her passion that she caters to every fancy of Bonnie Prince Charlie. At his insistence, she even brings their romantic interludes into her husband's house in Paris. And together, they plot to disguise their "love child" as her husband's.

The Prince soon turns jealous and spurns her passionate advances. The letters end abruptly with Louise still pleading her love. Charlie denies he was ever in love with her and resolutely takes a new lover.

The Prince's final years are not kind to him. He becomes an abusive drunkard rejected by the French court that once revered him as a hero.

Bongie concludes he is a tragic figure, who, "having botched his epic and outlived his tragedy...finally abandoned his ultimately meaningless role in life's novel of the absurd."



UBC Photo Warren Schmidt

Dr. Larry Bongie uncovered a rare gem among the stacks of 18th-century French manuscripts he pours over. His latest book is about a secret love affair between Bonnie Prince Charlie and his French cousin.

## UBC gets \$5 million in provincial grants

by Lorle Chortyk

Funds allocated to UBC under the provincial government's Fund for Excellence in Education will enable the university to strengthen programs in biotechnology, computer systems, Pacific Rim studies and other priority areas in 1987/88.

UBC received \$5,060,000 to fund special initiatives in integrated computer systems research, forestry, Pacific Rim studies, the engineering physics project clinic, film studies, atmospheric sciences, audiology and speech sciences, occupational and physiotherapy, and arts administration. Funds were also provided to upgrade campus information systems and to offset library acquisition and equipment costs.

In addition to money for new proposals, \$2,473,000 in renewal funding was provided for programs in biotechnology, international business and finance, and North Asian legal studies.

Vice-president academic Daniel Birch said the allocations strongly reflect priorities put forth to government by the university. "Ministry officials consulted with us frequently about our long-term goals and priorities before the allocations were approved."

He added that although the university's highest priority is adequate funding of its base operating budget, UBC is pleased about the assurances of long-term funding being made through the Fund for Excellence.

## Conferences set

Forest experts from Europe and North America will analyse the effects of air pollution and acid rain on trees and plants at a conference at UBC July 27 - 31. Delegates to the conference, sponsored by the International Union of Forest Research Organizations, will discuss the impact of changes in the earth's atmosphere during the past 50 years on the world's forests. The conference, "The Growth of Woody Plants in a Changing Chemical and Physical Environment," will take place at MacMillan Hall.

As many as 500 wine connoisseurs have chosen UBC to host their international conference, the first in Canada. Members of the Society of Wine Educators, the people who teach wine making and tasting, industry experts, retailers and marketers will bring wines from all over the world for special tastings. They'll also discuss the history and methods of production of wines from France, Germany, Italy, Portugal, Spain, California, South Africa and India. The conference takes place August 6 - 10 at the Student Union Building.

"The fund provides start-up costs for special initiatives, but the government has also made a commitment to provide on-going funding for each of the academic programs through our base operating budget."

The largest of the first-time allocations, \$1,050,000, went to the Departments of Computer Science and Electrical and Mechanical Engineering for research into microelectronics and advanced computer systems.

The three departments have established a Centre for Integrated Computer Systems Research in the Faculty of Graduate Studies to develop technology in the areas of computer communications networks, robotics and telecontrol, remote sensing for resource management and computer vision. The

## In Memoriam

Prof. J. "Gil" Hooley, an honorary professor of chemistry, died last month at the age of 72. He had been a member of the chemistry department since 1942.

Born and raised in Kitsilano, Hooley attended UBC from 1930 to 36, earning undergraduate and graduate degrees in honors chemistry. The data he produced on the atomic weight of rubidium for his master's thesis is still being used today and is considered a classic piece of research in this field.

After earning his PhD from the Massachusetts Institute of Technology, Hooley joined Corning Glass Works in New York as a researcher. One of his most challenging projects at Corning was the construction of a giant telescope reflector for the Palomar Observatory.

In 1942 Hooley returned to Vancouver with his wife Agnes, an honors chemistry student he had met while doing graduate work at UBC, to take up a position in UBC's chemistry department. He served as chairman of the department from 1949-55.

While at UBC Hooley carried out pioneering research in the areas of specific heat measurements and staging in graphite compounds. In 1979 he received the prestigious Charles E. Pettinos Award, an international award made by the American Carbon Society.

Hooley was appointed an honorary professor of chemistry in 1980, a year after his retirement.

The chemistry department is establishing a trust fund in Prof. Hooley's memory for undergraduate scholarships and bursaries. For more information, contact Prof. Larry Weiler at 228-2471.

funding will be used to provide research space, equipment and personnel for the centre.

The university received \$845,000 for research into better forest harvesting and processing techniques, development of new forest products and marketing strategies, and forest regeneration.

Collaborating with the forestry faculty in these areas are researchers from the botany department and electrical, mechanical, bio-resource and civil engineering.

The Faculty of Arts and the UBC library received \$320,000 to support five new faculty positions in Pacific Rim studies and to develop the library's Asian collections. The positions, which will be filled in the Departments of Political Science, Economics, Geography, Anthropology and Sociology and Asian Studies, will bring to UBC experts in Japanese domestic and international politics, the contemporary Japanese economy, the geography of Japan, contemporary Japanese society and culture, and Indonesian language.

The university also received \$225,000 to expand its film studies program, and \$157,000 for a master's program in arts administration. The program, which provides training for students interested in managing cultural organizations, is a joint venture of the Faculties of Arts and Commerce and will be offered as part of UBC's Master of Business Administration program.

A joint proposal from the Faculties of Arts and Science to establish a centre of excellence in atmospheric science was funded for \$300,000. The money will be used for new faculty and staff positions in the Departments of Geography and Oceanography. An undergraduate program will be implemented, focusing on such topics as the effect of a 'greenhouse' warming on natural resources, how urbanization and land clearance affect climate, the implications of climate changes on hazards such as coastal flooding, avalanches and storms, and other related areas of study.

The Department of Physics and the Faculty of Applied Science received \$113,000 to support and expand the Engineering Physics Project Clinic. Fourth-year engineering physics students involved in the clinic tackle technical design problems submitted by industry.

The Schools of Rehabilitation Medicine and Audiology and Speech Sciences received \$250,000 to expand their teaching and research programs. The expansion was requested in response to the growing demand across North America for trained graduates in physical therapy, audiology, occupational therapy and speech language pathology.

## Turrell gets physics post

Professor Brian Turrell has been named new head of the Physics department. A UBC Killam Senior Fellow in 1986, Turrell joined the university as assistant professor in 1964, leaving a post at Sussex University, England. He stepped into his new departmental position July 1.

As a condensed matter physicist, Turrell has been involved in basic research investigating the properties of magnetic materials. Over the past two years he has been working with devices known as superheated superconducting colloidal detectors which are being developed in the hopes of detecting small sub-atomic particles called WIMPS (weakly interacting massive particles). Many scientists believe that WIMPS hold the key to one of the cosmological puzzles of the universe—the "missing mass". They argue that only 10 per cent of the mass of the universe can be accounted for. So far, they say, the remaining 90 per cent is still "missing".

But it's not only astrophysicists who are interested in these devices. "The colloidal detectors are capable of detecting X-rays and gamma rays," says Turrell. "As we improve the technique, they may possibly have medical and industrial applications in the future."

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The federal department of finance has appointed economics professor Dr. John Helliwell as the Clifford Clark Visiting Economist. Helliwell will provide the department with advice on emerging economic issues and take part in policy development at the highest level.

Helliwell has held a wide variety of academic and professional appointments and has lectured and published widely in Canada and abroad on such areas as macro-economics, international finance, taxation and monetary policy. He has served on private sector advisory committees to the government and was formerly chairman of the Economic Advisory Panel to the federal Minister of Finance.

Created in 1983, the Clifford Clark Visiting Economist post honors the late Dr. Clifford Clark who was deputy minister of finance from 1932 until 1952 and was responsible for developing the finance department into a central agency for economic policy-making.

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Professor V. Setty Pendakur of the School of Community and Regional Planning has been elected the President of the Canadian Asian Studies Association for a two year term.

# Forest research aims at movable hybrid trees

by David Morton

Most British Columbians take the forest industry for granted but outsiders think we can't see the forest for the trees.

"Throughout my working experience, I've had this sense of British Columbia as a frontier, in terms of forest research, specifically in the area of tree improvement.

"There is so much energy and enthusiasm here, and the programs are far enough along that the research possibilities are almost limitless."

Those are the words of one of North America's leading researchers in the field of forest genetics, Donald Lester. Last July, he joined UBC's Faculty of Forestry, assuming his position in the newly-established Poldi Bentley NSERC/Industrial Chair in Forest Genetics and Tree Improvement.

Jointly funded by the Natural Sciences and Engineering Research Council, the forest industry and the provincial Ministry of Forests, the chair puts Lester at the helm of a five-year program to research tree improvement in B.C.

While working as a research supervisor for the U.S. forest company, Crown Zellerbach, Lester was a frequent visitor to the province over a period of 10 years. He says he was impressed with the size and scope of the tree improvement programs here.

"In one geographical area, you can go from a coastal to an interior environment, and in both areas find very active tree improvement programs.

"I could see a few places where I thought I could make a contribution to the provincial and industrial effort to create more productive forests."

Lester's research will lead him into two areas related to tree improvement. The first is an investigation into the effects of moving tree seedlings from one geographic location to another, for example, from a coastal environment to an interior environment. Working with hemlocks and lodgepole pines, he will be studying their growth patterns in relation to climate and the quality of wood produced.

"We know from earlier research that there may be some boost in the growth of certain species when you move them to new environments," says Lester. "But there is also likely to be some risk if you transport them to an unfavourable climate.

"An early frost, for instance, may cause damage to a seedling from an area that doesn't normally experience early frosts."

The ultimate objective, he explains, is to maximize the tree's growth potential without taking exceptional risks from climatic conditions such as frost damage.

The second area of Lester's research is what he refers to as "exploratory crossing," or putting together new combinations of genes which may lead to exceptional growth rates in a given species.

Working primarily with spruce trees, Lester is attempting to create combinations that exploit the genetic advantages of trees from different environments. The goal is to produce a hybrid that grows well in a range of environments.

If the crossing has been successful, new seeds can be extracted from the cones in late August and early September. Next spring, the seeds will be germinated and the researchers can begin testing the seedlings for their productive potential.

## Coast study gets funding

University scientists will soon be able to combine their research to come up with some practical answers on how to best utilize B.C.'s more than 12,000 kilometres of coastline.

A recent \$150,000 grant from the Donner Canadian Foundation will provide seed money for a new Marine Ecosystem Program--the first such integrated approach to marine research in the province.

The joint program will involve the University of British Columbia, Simon Fraser University and the federal Department of Fisheries and Oceans.

MEP projects will study some of the critical problems facing policy makers and will provide a better scientific basis for the management of marine resources especially in the areas of fisheries and pollution. The results will influence the ways in which fishermen, fish farmers, scuba divers, bathers, boaters, industry developers, marina operators and others utilize coastal waters.

"It's an opportunity to bring together specialists in a variety of disciplines to undertake research that has direct applications," says MEP spokesperson and UBC oceanography professor Tim Parsons. "For example, there's been speculation that mine tailings and dredging sediments may interfere with herring which winter in the depths of the ocean. Currently scientists don't know much about herring. Under the MEP we can bring together a sedimentation expert and a herring expert and provide some answers."

MEP will operate out of the Canadian Fisheries and Oceans laboratory located in West Vancouver. The federal government is donating the lab space and support services to the program.

Under MEP, part of the CFO lab will be renovated with the assistance of additional grants of \$30,000 from the UBC Research Development Office, \$30,000 from NSERC (the Natural Sciences and Engineering Research Council of Canada) and \$10,000 from the Simon Fraser Research Development Office. The Donner Canadian Foundation grant will cover the projected annual operating expenses of \$50,000 for three years.

By September MEP will be up and running. Parsons predicts the lab will be in full operation by the spring of 1988.



UBC forest geneticist Dr. Donald Lester uses a syringe to pollinate different hybrids of spruce trees. He is hoping to develop trees that grow in a variety of environments.

## UBC course helps New Brunswick

New Brunswick government consultant Rebecca Holt was so impressed by one of UBC's Faculty of Education courses, that she booked a flight for her first visit to Vancouver to find out more about the Distance Education program.

A former teacher, Holt is currently adviser to the Ministry of Education in New Brunswick, and she's concerned about how teachers will handle the government's move to integrate special needs students into the school system.

"There's a tremendous need for New Brunswick teachers to develop their skills in classroom management with the influx of students who will require special attention,"

Holt says. "What impressed me about the course was that it could help teachers with all children, not just special needs children, in the regular classroom."

The course which prompted her visit was Counselling Psychology 426, titled The Role of the Teacher in Guidance. Based in part on what is known in psychology as Adlerian theory, it provides teachers with the practical skills for managing classroom behaviour, by showing them how to set up a co-operative system of decision making and problem solving through group effort.

"The unique feature of Adlerian philosophy is that each individual is seen as worthwhile

and as having individual potential to be developed," says Vancouver psychologist and sessional instructor Edna Nash. "As well, there is a commitment to action within the community which, in the classroom, takes the form of weekly meetings by the students to determine the rules of behaviour."

Nash developed the counselling course to meet a concern expressed by practising teachers that they lacked adequate counselling and guidance skills. First taught as part of the Education curriculum, Nash helped produce 24 videotaped half-hour programs which could be offered to teachers through the province via the Knowledge Network.

While in Vancouver, Rebecca Holt visited several schools to see for herself the co-operative methods put into practice.

"In the traditional classroom situation, the approach is very authoritarian with the teacher telling the students what to do. What I saw in these classrooms was a humanistic approach where the students and teacher work out the rules of the classroom together and determine what the consequences of their actions will be."

Holt says the techniques and philosophy of this method would be well-suited to special needs students in New Brunswick schools. In each classroom the better students would be able to help the special needs students in a system where each child is working towards individual personal growth.

The UBC Faculty of Education, through the Field Development Office, provides further professional training for the 27,000 teachers in B.C.

## Not older ... just better

The number of physically fit older people is increasing in Canada, a prospect that points to changes not only in how people view the elderly, but also to the need for change in areas such as health, leisure, lifestyle, and sports.

This was one of the concerns expressed at a recent conference when more than 1,200 delegates from 34 countries met at UBC to discuss the future of physical education. The joint meeting of the International Council for Health, Physical Education and Recreation, and the Canadian Association for Health, Physical Education and Recreation was hosted by the School of Physical Education and Recreation around the theme Towards the 21st Century.

Conference co-ordinator and director of Rec UBC Sonya Van Niekerk says the issue of wellness and the older adult is of increasing concern and one that the Canadian government has promised will receive research funding.

"But it's just one area in the physical education field which is changing rapidly," she says.

According to Van Niekerk, the field will be considerably different by the year 2000.

## Elderly lack services in small communities

by Lorle Chortyk

Elderly people in small B.C. communities are suffering because of poor transportation in their home towns. That's the main conclusion of a study by Dr. Gerald Hodge of UBC's School of Community and Regional Planning.

Hodge surveyed 150 seniors this summer to identify the needs of the elderly in small B.C. communities and to examine how well they are being met by government and service agencies.

"The need for transportation is overwhelming because it's linked to so many other activities," he says. "In 98 per cent of B.C.'s small towns no public transportation or taxi services exist. When the nearest doctor is in the next town and food stores are located miles away, this becomes a serious problem for many elderly citizens. At least one quarter of the seniors we surveyed don't drive."

Other major concerns for seniors are access to health care, help with home maintenance and repairs, and companionship.

"Most small towns have very high proportions of elderly citizens, in some cases up to 40 per cent of the population," says Hodge. "Yet often the needs and concerns of seniors go unheard in the province."

Hodge and his research assistants Aileen Murphy and Lynn Guilbault surveyed and interviewed seniors in small towns in the Okanagan, the East Kootenays, the Fraser Valley, the Sunshine Coast and Vancouver Island. The team also interviewed municipal officers and principal caregivers such as homemakers and volunteer drivers to determine what services were available for the elderly in each community.

The study was funded by the Ministry of Municipal Affairs in Victoria, and was carried out through UBC's Centre for Human Settlements, where Hodge is a scholar-in-residence.

"Although there are exceptions, we found that the needs of the elderly are not being met very effectively in most small communities," says Hodge. "Little communication exists between the local government and community

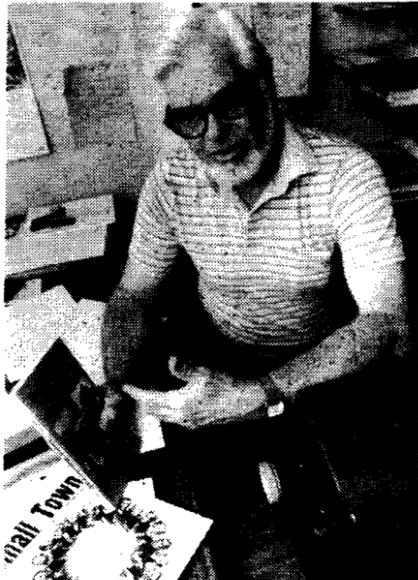
groups who provide services for the elderly, and in most small towns resources for seniors programs are very limited."

He points to Creston, Comox, Rossland, Gibsons and Parksville as examples of B.C. towns where the government and community have developed good services for the elderly.

"These communities have coordinated government and community services, involved seniors in the planning of programs and have come up with imaginative ways to make use of their limited resources."

For example, says Hodge, some communities provide transportation for the elderly using school buses which would otherwise sit empty for six hours each day.

In addition to this summer's in-depth study, Hodge is establishing a statistical database from all 140 municipalities in B.C. The information will be used to study trends of elderly citizens in small towns from 1961-81.



Gerald Hodge has just completed his study of seniors in small towns.

# UBC Calendar

## MONDAY, JULY 20

**Community & Regional Planning Lecture**  
Resource Planning and Management - Some Examples of a Human Ecological Approach. Professor J. Gordon Nelson, Urban and Regional Planning University of Waterloo. Room 105, Lasserre. 10 a.m.

## WEDNESDAY, JULY 22

**Psychiatry Lecture**  
The General Story of Human Evolution. Sir John Eccles, Nobel Laureate in Medicine, Abteilung Neurobiologie, Max-Planck-Institut für Biophysikalische Chemie, Göttingen, West Germany. For more information, call 228-7376 or 228-7377. Lecture Hall 2, IRC. 12:30-1:30 p.m.

**Biotechnology Laboratory Seminar**  
Evolution and Expression of Trypanosome Variant Surface Glycoprotein Genes. Dr. John C. Boothroyd, Medical Microbiology, Stanford University School of Medicine. IRC 3. 4 p.m.

**Theology Lecture**  
Religion, Reproduction and Technology. Dr. Daniel Maguire and Dr. Marjorie Maguire, Marquette University, Milwaukee, Wisconsin. Chapel of the Epiphany, Vancouver School of Theology. 7:30 p.m.

## THURSDAY, JULY 23

**Medical Grand Rounds**  
Antiviral Agents. Dr. Stephen L. Sacks. Division of Infectious Diseases, Health Sciences Centre Hospital. Room G-279, Lecture Theatre, Acute Care Unit, HSCH. 12 noon.

**Music for Summer Evenings**  
Michael Strutt, guitar; Lynne Pining, flute. This local duo is known as Allegra - Music for Flute and Guitar. Free admission. Recital Hall, Music Building. 8 p.m.

## FRIDAY, JULY 24

**Chemistry Seminar**  
Relativistic Effects in Chemistry. Dr. J. G. Snijders, Department of Theoretical Chemistry, Free University, Amsterdam, The Netherlands. Room 225, Chemistry Building. 2:30 p.m.

## SUNDAY, JULY 26

**Garden Tours with David Tarrant**  
Western Gardener David Tarrant will lead tours of the UBC Botanical Garden at 10:30 a.m., 1 p.m. and 3:30 p.m. Tea will be served in the garden from 1 p.m. Admission is two-for-one. For details, call 228-4208.

**African Carnival**  
Evelyn Roth's Festival Arts. Performance with Spirit House inflatable sculpture and carnival music. Afro-jazz drama choreographed by Jeni Legon. Costumes available for audience participation. For more information, call 228-5087. Behind Museum of Anthropology, near Haida Houses. 2:30 p.m.

## MONDAY, JULY 27

**Theology Lecture**  
Indigenous Christianity. The Rev. Percy Tait, Chief Councillor of New Aiyansh, B.C., Representative on Council of Native Affairs, Anglican Church of Canada. Chapel of the Epiphany, Vancouver School of Theology. 7:30 p.m.

## TUESDAY, JULY 28

**Ts'isha'ath Naming Ceremony and Feast**  
At the UBC Museum of Anthropology. This centuries old ceremony will honour Marina Rayner, four year old daughter of Cynthia and Russell Rayner. Admission \$10. For more information, call 228-5087. The program begins at 5 p.m. with NYP presentations, salmon feast at 6 p.m. Behind Museum of Anthropology. Naming Ceremony commences 6:30 p.m. in the Great Hall.

## WEDNESDAY, JULY 29

**Theology Lecture**  
Christian Faith and the Television Evangelists. Dr. Gabriel Fackre, Andover Newton Theological School, Massachusetts. Chapel of the Epiphany, Vancouver, School of Theology. 7:30 p.m.

## THURSDAY, JULY 30

**Medical Grand Rounds**  
Cardiac Sudden Death. Dr. Charles Kerr, Division of Cardiology, Health Sciences Centre Hospital. Room G-279, Lecture Theatre, Acute Care Unit, HSCH. 12 noon.

**Music for Summer Evenings**  
Kum Sing Lee, piano; John Loban, violin; Lee Duckles, cello. Chamber music of Brahms, Beethoven and Kreisler. Free admission. Recital Hall, Music Building. 8 p.m.

## TUESDAY, AUGUST 4

**Cancer Research Centre Lecture**  
Radiosensitivity of Human Tumour Cells in Primary Culture. Dr. Bill Brock, Associate Professor, Department of Experimental Radiotherapy, University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston, Texas. Lecture Theatre, B.C. Cancer Research Centre. 12 noon.

## THURSDAY, AUGUST 6

**Music for Summer Evenings**  
Philippe Etter, viola; Ian Hampton, cello; Melinda

UBC Reports is published every second Thursday by UBC Community Relations 6328 Memorial Road, Vancouver, B.C. V6T 1W5, Telephone 228-3131.  
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National ski champion Karen Percy is one of 10 members of the Canadian women's National Alpine Ski Team who checked out their fitness level recently in the Buchanan Exercise Science Lab in the UBC Aquatic Centre. The results of battery of tests administered by Dr. Ted Rhodes will be incorporated into each skier's personalized training plan. The facility attracts Canada's top teams all year round.

Coffey, piano; Gene Ramsbottom, clarinet. An evening of chamber music featuring Piano Quartet in C minor by Faure. Free admission. Recital Hall, Music Building. 8 p.m.

## NOTICES

**Chinese Brush Painting Exhibition**  
Sponsored by the Institute of Asian Research. "Visions" paintings by Margaret H. Chinn. Free admission. Demonstration on Sunday July 19 at 2 p.m. For more information, call 228-2746. Asian Centre Auditorium. July 18 - July 26. 10:30 a.m. - 5:30 p.m. daily.

**Museum of Anthropology Exhibitions**  
The Flute and The Sword. Exhibition featuring popular religious poster art which explores the passionate nature of two Hindu deities, Krishna and Kali. Until July 26.

The Third Eye. An exhibition featuring non-destructive scientific techniques used to yield information beyond the scope of normal methods of curatorial investigation. Until September 27.

The Literary Heritage of Hinduism. Exhibition of sacred Hindu texts discussing the significance of Spiritual Knowledge. Until November.

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. Until November.

Museum admission: Adults \$2.50, children, seniors, students \$1. For more information, call 228-5087.

**Forest Sciences, IUFRO Workshop**  
Woody Plant Growth in a Changing Physical and Chemical Environment Symposium. Dr. D.P. Lavender. For more information, call 228-4166. July 27 - 31. Room 166, MacMillan Building. 8 a.m. - 5 p.m.

**Stress Management Course**  
The University Health & Safety Committee is sponsoring a 3-hour course on personal stress management. Sessions will be held from 12:30 - 1:30 p.m. on July 27, 29 and 31 and will be presented by Dr. Dorothy Goresky, Student Health Service, UBC. Free. Room 414, IRC 4th Floor Conference Room. For more information, call 228-2643.

**Frederic Wood Theatre**  
Year-round performances of traditional and experimental theatre. UBC's summer stock company will perform this year: Michel Tremblay's *Bonjour La, Bonjour* now till July 18; and the final show, Barry Broadfoot's *Ten Lost Years*, runs July 29 to Aug. 8. For ticket information, call 228-2678.

**Bursaries to Study French at UBC**  
Bursaries may be available to Canadian citizens or landed immigrants who have been full-time students during the 1986-87 academic year. Now - August 21. The bursary covers tuition, room and board on campus, and cultural and social activities scheduled by the Program. For information, call 222-5224.

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

**Safety Program Seminar**  
The Occupational Health and Safety Department is holding a 2-day seminar on occupational health and safety programs. Topics include Safety Responsibilities, Effective Safety Committees, Safety Inspection Techniques, Accident Investigations and Safety Training and Instruction. Free admission. Will be of interest to managers, supervisors and safety committee members. For information and registration call 228-2643. Wed. and Thurs., August 19 and 20.

**Native Youth Programs**  
Native Youth Workers present the following illustrated talks and tours: Traditional Uses of the Cedar Tree (1:15 p.m.); Northwest Coast Ceremonies and Feasts (2 p.m.); Fishing Technology on the Northwest Coast (2:30 p.m.); Totem Pole Tour (3:30 p.m.). Tuesday through Friday July 21 through August 28. For more information, call 228-5087, Museum of Anthropology.

**Laboratory Chemical Safety Course**  
The UBC Occupational Health and Safety Office is offering a course covering chemical storage, handling and disposal, laboratory inspections, emergency response and spill clean up. The two morning lecture sessions (August 24 and 25) and one morning practical session (September 2, 9, 10 or 25) are intended for people who handle chemicals in a laboratory, especially lab technicians, stores keepers and safety committee representatives. Information and course registration is available from the Occupational Health and Safety Office, 228-2029.

**Graduate Student Centre Summer Hours**  
The Grad Centre Lounge is open Mon. - Thurs. 4:30 p.m. - 11:30 p.m. and Fri. from 4:30 p.m. - 1:00 a.m. The view is beautiful and the public are welcome. Lunch service in the Garden Room, 11:30 a.m. - 2:00 p.m. Special events include Monday video nights in the Lounge (free). Schedules are available at the Centre. Wednesdays we present live music in the Lounge and on Friday evenings recorded music and dancing. Every Friday at 4 p.m. come and visit the ever popular Beergarden in the Garden Room. For more information, call 228-3203.

**Thinking of Volunteering?**  
Volunteer Connections is open now 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.

**Recreation UBC Summer Hours**  
The Recreation UBC outdoor rental shop has full-time summer hours now 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 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, call the Community Relations Office at 228-3131.

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

**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, call 228-3996.

**English Conversation Class**  
English Conversation Class, with a variety of music, stories and films - all free! International House, Upper Lounge. For more information, call 228-5021. Monday evenings, 7:30 p.m.

**Language Exchange Program**  
This program is for those interested in learning foreign languages or in exchanging a foreign language for English. Call International House between 9 a.m. and 5 p.m. Monday - Friday at 228-5021.

**Golf Lessons**  
Get in the swing of things with UBC golf lessons. Lessons are held Monday and Wednesday evenings at various times. There are basic and intermediate levels. Small classes ensure personal attention. A video session helps you see the problems with your swing. Equipment is available at no extra charge. The cost is \$55. Tuition waivers welcome. For more information contact: Community Sport Services at 228-3688.

**Research Forest Tours**  
The UBC Research Forest, Silver Valley Road, Maple Ridge offers guided tours until Sept. 7. Sundays and holiday Mondays a professional forester will guide visitors on a free two-hour tour of the gentle trail system leaving the main gate at 2 p.m. rain or shine. Group and individual tours run Wednesday to Friday and can be arranged by calling 463-8148.

**Research Participants Required**  
Participants between the ages of 18-25 who are employed full-time are required for a research project associated with the Department of Counselling Psychology. The project examines 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 or John Schneider at 228-6380.

## Fitness tests for disabled

Physical Education professor Kenneth Coutts would like to see fitness testing available province-wide for wheelchair athletes. Coutts, whose work is helping to change perceptions of disabled people, says his research indicates that the body compensates for the disability.

"There was some speculation that respiration limits the exercise capacity of quadruplegics," Coutts said. "In fact, although they lose some of the muscles involved in respiration, they are able to breathe enough air to supply their working muscles with oxygen. Disabled people have a reduced muscle mass that does not require the same amount of oxygen as does the larger muscle mass of an able person."

Coutts uses standard fitness testing to measure such things as heart rate, respiration and energy expenditure. The only exception is the use of a special device with rollers instead of a treadmill. Coutts is interested in how the location of a disabling injury affects athletic performance.

"For a person with a disabling injury it's comparable to a car with an eight cylinder engine suddenly running on four. But with training, disabled people can develop the muscle mass to function at a high performance level," Coutts says.

Coutts became interested in the fitness testing of disabled athletes when athlete Rick Hansen was a student at the university. Over the last several years, he has tested many groups of disabled and able-bodied people in wheelchairs.

## Fund goal set

UBC's United Way executive committee wants to raise \$130,000 in this year's fund raising campaign and increase individual contributions by 10 per cent.

Committee chairman Dr. C.V. Finnegan said last year 767 faculty and staff, only 13 per cent of the potential university population, contributed to the United Way.

This year, the executive committee is gearing up early, hoping to encourage more people to contribute. Committee members will also decide whether to include students in the fund raising drive, which takes place in October.

## Calendar Deadlines

For events in the period August 9 to September 12, notices must be submitted on proper Calendar forms no later than 4 p.m. on Tuesday, July 28 to the Community Relations Office, 6328 Memorial Road, Room 207, Old Administration Building. For more information, call 228-3131.