

# UBC REPORTS

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## Expansion of SUB goes underground; AMS gets a bargain

UBC's Alma Mater Society is spending \$1.5 million to go underground.

However, there's nothing sinister about this project, which involves the creation of some 15,000 square feet of new space under the south plaza of the Student Union Building between SUB and the Aquatic Centre.

Bengal Construction of Burnaby has been awarded a contract for just over \$1.1 million for the excavation and construction of the space, which will include two new food facilities, typing and word processing centres, bookable rooms for meetings, dances and other social occasions as well as clubrooms and an administration and

registration centre for UBC's intramural athletic program.

Funds for construction of the SUB addition will come from accumulated AMS reserves to be repaid with a \$15 building fee paid annually by all UBC students. The fee was approved in a 1982 referendum.

Mike Kingsmill, a third-year architecture student working under contract to the AMS on the SUB project, foresight had an accident and someone with foresight had saved the AMS a good deal of money on the present expansion project.

"I've never been able to get to the bottom of it," he said, "but for some reason, when the original excavation was done for the SUB, the area we're about to expand into was dug out and sealed off. As a result, we only have to excavate about a foot and a half of earth in the expansion area to get the right ceiling height."

"I suspect, too, that when the over-excavation was discovered, the builders decided to make the best of it. They poured some pillars and put down the concrete slab on which the paving stones of the south plaza of the SUB rest."

And someone also had the foresight to lay down a waterproof membrane on top of the slab, which means it won't be necessary to remove all the paving stones, thus saving the AMS a small bundle of money and minimizing disruption of the plaza this summer.

The SUB addition will have the following new facilities when it's complete in December:

New food facilities are an indoor-outdoor Italian-food outlet seating 100, which will have a sunken courtyard area attached to it, and a fast-food facility across from the games room and bowling alley.

Eighteen electric typewriters will be available in a typing centre on a user-pay basis. Across the hall will be a word-processing centre with three input terminals manned by student operators. Both facilities will be available to any member of the campus community.

Two large multi-purpose rooms, with capacities for 95 and 85 people, will be for year-round use by UBC groups and spring and summer conferences.

Seven major club rooms will be provided in the area, including a darkroom-studio for the Photo Society as well as expanded areas for the Varsity Outdoor Club and the Aquatic Club, both of which need lock-up facilities for valuable equipment.

The intramural sports division of UBC's Athletic Office, currently housed in the War Memorial Gymnasium, will move into the addition when it's complete.

Architects for the project are the Vancouver firm of Henriquez and Partners.

There's nothing unique about the initiative that the AMS has shown in expanding the SUB. It's estimated that since 1928 students have contributed more than \$6.6 million (apart from the current project) for the construction of new UBC buildings.

Past projects financed in whole or in part by students included Brock Hall (the original student union building), the existing SUB, the Aquatic Centre and the Thunderbird Winter Sports Centre.



Third-year architecture student Mike Kingsmill has been one of the key figures behind the development of plans for \$1.5 million expansion of the Student Union Building.

## 130 gifted students visit UBC

UBC played host last week to 130 gifted and talented high school students from across British Columbia in a pilot program organized by the Faculty of Education's field development office.

The week-long program for Grade 10 and 11 students was developed by UBC in response to requests from school districts. Gerry Morgan, coordinator of gifted and talented programs in the Windermere School District, originally requested support from UBC to provide a challenging summer program for bright students. Morgan attended the seminars with students last week and described the program as "outstanding".

"The program wasn't designed as a recruiting package, although we hope students have a positive image of UBC after spending a week on campus," said Dr. Ron Neufeld, director of the field development office. "The purpose of the program was to offer these students a wide range of lectures, workshops, seminars and demonstrations about research being done here at UBC and elsewhere and to give them an idea about what life on a university campus is like."

Work being done in the Faculties of Arts and Science and the professional schools was emphasized on separate days in the program. Teaching duties were performed on a volunteer basis by approximately 75 UBC faculty members.

The program was made possible through cooperation between UBC, the Ministry of Education, local school districts, parents of participating children and the Gifted Children's Association of B.C.

Among the topics offered to students were Chinese religion and philosophy, ethical problems in the practice of law, applied particle physics, the Liberal leadership convention, technology for handicapped children, hidden dangers in business contracts, remote sensing and molecular biology.

In addition, the students sampled the recreational side of campus life, including theatre performances, concerts, swimming and museum excursions.

Dr. Neufeld said the form of next year's program would be shaped by feedback and evaluations from the students.

## 'Moli' battery perfected; two plants to be built

Investment in higher education and research is essential if Canada is to maintain its standard of living and compete successfully in the world economy.

That's the conclusion of dozens of reports from a variety of organizations across Canada.

Whether the society is heeding the advice is debatable, but what is incontestable is the latest practical by-product of basic research in UBC's physics department.

Under the leadership of Prof. Rudi R. Haering, graduate students and other scientists in his laboratory have successfully developed a completely new battery.

It is a rechargeable lithium molybdenum disulphide battery, a major breakthrough in research for a safe, high performance, cost-effective and portable energy system.

The technology is based on a mineral

that B.C. has in abundance — molybdenum disulphide.

The battery is superior in virtually every respect, producing two to three times the energy of nickel-cadmium batteries of the same weight. But its shelf-life — or length of time it retains its charge — compared with the other rechargeable batteries is extraordinary. The charge retention time for a nickel-cadmium "C" size battery is from two to six months. For the new battery it is eight to ten years.

As a result of the research, Moli Energy Ltd., a B.C. company formed to develop the battery, will build two plants at a capital cost of \$52 million to produce a total of 20 million battery cells each year.

Moli Energy already has a staff of more than 75 people in research and development, production and marketing. President of the firm is Mr. Irvine Hollis, formerly president of Duracell Canada.

Although the plants, one in B.C. and the second in Ontario, will use robotics and other computer-guided devices in manufacturing, more than 500 people will be working for Moli Energy within three years, and many more will be employed indirectly through sub contractors to the company.

Moli Energy will produce double "A" battery cells in its B.C. plant. Within one and one-half years, the plant also plans to manufacture button-type cells for electronic and other applications such as heart pace-makers and other devices.

Eventually, both the B.C. and Ontario plants will also produce "C", sub-"C", double "A" and button cells.

Chairman of Moli Energy's board of directors is Dr. Norman B. Keevil, founder and chairman of Teck Corp. Dr. Keevil has a Ph.D. in geophysics from Harvard University, and is Moli Energy's primary investor.

He said he was attracted to the UBC project, in spite of competition from huge research and development establishments of large multinational corporations that also wanted to develop and produce a new battery.

Please turn to Page 2  
See BATTERY

## ENROLMENT FOR SUMMER ABOUT 4,000

There'll be about 4,000 new faces on campus this week as UBC's 1984 Summer Session begins.

Courses in the Faculties of Arts, Science, Commerce, Education, Forestry and Medicine are being offered in Summer Session, which began yesterday (July 3) and continues until Aug. 11.

The majority of students enrolled this year are regular Winter Session students who are taking advantage of the summer offerings to accelerate their programs.

Summer Session enrolment is about the same as last year. Enrolment in UBC's Spring Session was up about 20 students from the 1983 total of 3,573.

For a listing of summer recreational activities on campus see page 4 of this issue. And watch for editions of *UBC Reports* on July 18 and Aug. 1. In addition to listing of lectures, concerts, theatrical performances and other events designed to enliven the summer scene at UBC.

# Battery

continued from Page 1

"I have a good feeling for the scientific significance of the program and felt that this group could succeed," Dr. Keevil said. "This proved to be completely correct and now the impact will not only be felt in B.C. and Canada but throughout the world."

Prof. Haering said that there is a huge demand for a more efficient battery. The last battery innovation was the nickel-cadmium rechargeable battery developed shortly after the turn of the century. Since then, other technologies dependent upon a portable energy source have mushroomed, while batteries have remained relatively unchanged.

"Miniaturization over the past few years has reduced the size and weight of a host of products," Dr. Haering said. "In many cases, the battery power source for these devices is now the single factor limiting further size reduction and greater performance. Our battery should remove that limitation."

Dr. Haering said the new battery should also stimulate production of entirely new products.

"Electric vehicles, for example. Cars powered by rechargeable batteries haven't been feasible until now because of inadequate power systems," Dr. Haering said.

Development of the battery is one of the most significant high-tech events in B.C. history. Dr. Haering began his research about seven years ago. One year later, Dr. Keevil decided to support the project, even though the decision was based on preliminary research results.

The result is that Moli Energy will enter the billion dollar international battery market with an estimated two-year head start over major competitors.

Because much of the work was done at UBC, the University will benefit financially under a contract with the company.

The technology of the battery is entirely new.

All batteries have two electrodes — an anode and cathode — and electricity is produced when ions pass from the anode to the cathode through a substance called an electrolyte.

Usually, batteries are described in terms of the substances that make them up — lead-acid, nickel-cadmium or nickel-iron.

In all batteries now on the market, the electrodes undergo a chemical change during use. Cathodes in the new battery remain essentially unchanged, the first in the world with this characteristic, because of the key feature of the battery, a phenomenon known as intercalation.

Intercalation occurs when atoms of a substance diffuse into the spaces between the atoms of another substance. (Dr. J.G. Hooley of UBC's chemistry department did pioneer work in intercalation.)

An electric current is formed in the new battery when lithium ions from the anode pass through the electrolyte to sandwich themselves between the molybdenum disulphide molecules making up the cathode. When the battery is recharged, the lithium atoms are removed back to the lithium anode.

The Moli battery is the only intercalation battery at the stage of commercial production.

An irony of the discovery is that many other researchers using the same materials built lithium molybdenum disulphide batteries and rejected them as inferior.

"When you discharge the battery for the first time," Dr. Haering said, "its performance is terrible. The reason for this is that the molybdenum disulphide crystals as they occur in nature are semi-conductors, unsuitable for use as intercalation cathodes.

"But during the first discharge of the battery, the crystal structure is altered. In its new structure the cathode... is a metal rather than semi-conductor and highly suitable for intercalation.

"Conversion of the cathode from a semi-conductor to metal will be done in our plants. Other people who have looked at this type of battery in the past and rejected it didn't know that discharging and recharging it through one cycle of use induced intercalation. They were one step short of a major discovery."

Dr. Haering praised Dr. Keevil for his support. He said Canada does not have enough senior corporation executives like Dr. Keevil who are willing to invest in high technology.

# CAMPUS PEOPLE



Melva Dwyer

Melva Dwyer, head of the UBC Library's fine arts division, was honored recently for her "long and distinguished service as a special librarian" by the Canadian Association of Special Libraries and Information Services. A 31-year member of the Library's professional staff, Miss Dwyer has been head of the fine arts division since it was formed in 1958.

UBC music student James Parker was named the first-place winner of the 8th annual Eckhardt-Gramatte National Competition for the Performance of Canadian Music held on the campus of the University of Brandon May 3-5.

In addition to a \$2,500 cash prize, the 20-year-old pianist will perform on a national concert tour from Halifax to Vancouver. He also won a \$200 prize for the best performance of the commissioned work in the competition.

The 1984 winner's brother, Jon Kimura Parker, also a UBC graduate, won the same competition in 1978.

Prof. J.A.S. Evans of the UBC classics department is serving as the general editor of a new paperback series, launched by the Canadian Association of University Teachers, to be published by the University of B.C. Press.

The series, aimed at the general public, is designed to bring some of the concerns of academics to a wider audience through the publication of two or three titles a year. One aim of the series is to make better known some research done on university campuses.

Dr. Edward V. Jull of UBC's electrical engineering department will be Canada's representative at the Council of the International Union of Radio Science meeting in Florence this summer. He was also Canada's representative at the previous meeting of the council in Washington, D.C., three years ago. Dr. Jull says a joint meeting at UBC next year of the U.S. and Canadian committees of the council, and of the Institute of Electrical and Electronic Engineers, will draw between 600 and 800 delegates.

Prof. Gregory Butler, a Bach scholar in UBC's Department of Music, has been awarded an Alexander von Humboldt Foundation Fellowship. It is the first time that the fellowship has been awarded to a musicologist. Prof. Butler will spend the 1984-85 academic year at the Musicological Institute of the Freie Universitat in West Berlin.

Two UBC doctoral students were the recipients of travel grants from the Canadian Bureau for International Education to enable them to attend scholarly conferences this spring and summer.

John H. Hutchinson (Chemistry) of the United Kingdom attended the Can-Am Chemical Congress in Montreal and Takao Hagiware (Japanese literature) of Japan went to Canadian Asian Studies Association meetings in Guelph, Ont. A total of 12 international students studying at nine Canadian universities received grants.

Former and present UBC students are among the finalists in all three categories of a CBC national competition for young composers. Doctor of Musical Arts student Douglas Schmidt and 1981 master's graduate Glenn Buhr were finalists in the Compositions for up to 12 Performers category. D.M.A. student Peter Hatch reached the finals in Solo Compositions, and George Cappon, a third-year Bachelor of Arts student majoring in music, was a finalist in the Electronic Music category. The finals of the CBC competition take place in Toronto this fall.

Three UBC faculty members contributed to a publication of the Centre for Human Settlements dealing with the training of personnel competent to improve living and working conditions in major settlements of developing countries.

The 76-page publication, entitled "Along the North/South Axis," is made up of papers delivered at a seminar of experts held at UBC in November, 1983. UBC contributors to the seminar were Dr. Paz Buttedahl of the Department of Administrative, Adult and Higher Education, Dr. Axel Meisen of the Department of Chemical Engineering and associate dean of Applied Science and Dr. Walter Hardwick of the Department of Geography.

The recommendations of the seminar served as the basis for a paper entitled "Sharing Responsibilities and Roles for Training in Planning and Development," submitted by the Canadian delegation to the 7th session of the United Nations Commission of Human Settlements, which met in Libreville in the west African country of Gabon from April 30 to May 11.

Dr. Peter Oberlander, director of the Centre for Human Settlements at UBC, was a member of the Canadian delegation at the African conference and also wrote the introduction to the centre's seminar publication, which is available at \$9.

Prof. Trevor Heaver, director of UBC's Centre for Transportation Studies, and Chancellor J.V. Clyne are both members of a 14-member task force appointed by the federal government to study whether Canada should expand its deep-sea fishing fleet. The task force has been asked to report in six months time.

UBC mining and mineral process engineering department head Dr. George Poling has been appointed co-chairman of the steering committee of the mining regulation advisory committee for the B.C. Ministry of Energy, Mines and Petroleum Resources.

Librarianship professor Lois M. Bewley, president of the Canadian Library Association, presided over the 39th annual conference of the association in Toronto, June 7 to 12. Some 2,000 librarians, information scientists and library trustees attended. Theme of the conference was '1984 and Beyond — Human Values in the Computer Age.'

The UBC Alumni Association has paid tribute to three distinguished British Columbians, including Dr. Ian McTaggart-Cowan, chancellor of the University of Victoria. He received the 1984 Alumni Award of Distinction. William White, who retired a year ago as UBC vice-president of finance, received the 1984 Alumni Association Honorary Life Membership, and former Alumni Association president George Morfitt was given the Blythe Eagles Volunteer of the Year award.

A UBC scientist whose research is important for toxic and hazardous waste disposal and in the siting and design of underground nuclear waste deposits has received an international award.

Dr. J. Leslie Smith of UBC's geological sciences department is a co-winner of the Oscar E. Meinzer Award of the Geological Society of America.

The other winner is a colleague at the University of Alberta.

The research that led to the award involves basic information on how contaminants in ground water disperse through fractured rock.

Dr. Richard Mattesich, Arthur Andersen and Co. Alumni Professor of Accounting in the Faculty of Commerce and Business Administration, has been elected a "corresponding member" of the Austrian Academy of Sciences.

Patrick Buchanan, UBC's coordinator of residence programs, is president-elect of the Northwest Association of College and University Housing Officers. He is the second Canadian to be elected to the position in the regional association's 22-year history.

Prof. Peter Hochachka of UBC's Department of Zoology is the co-author of a 480-page book published by Princeton University Press entitled *Biochemical Adaptation*.

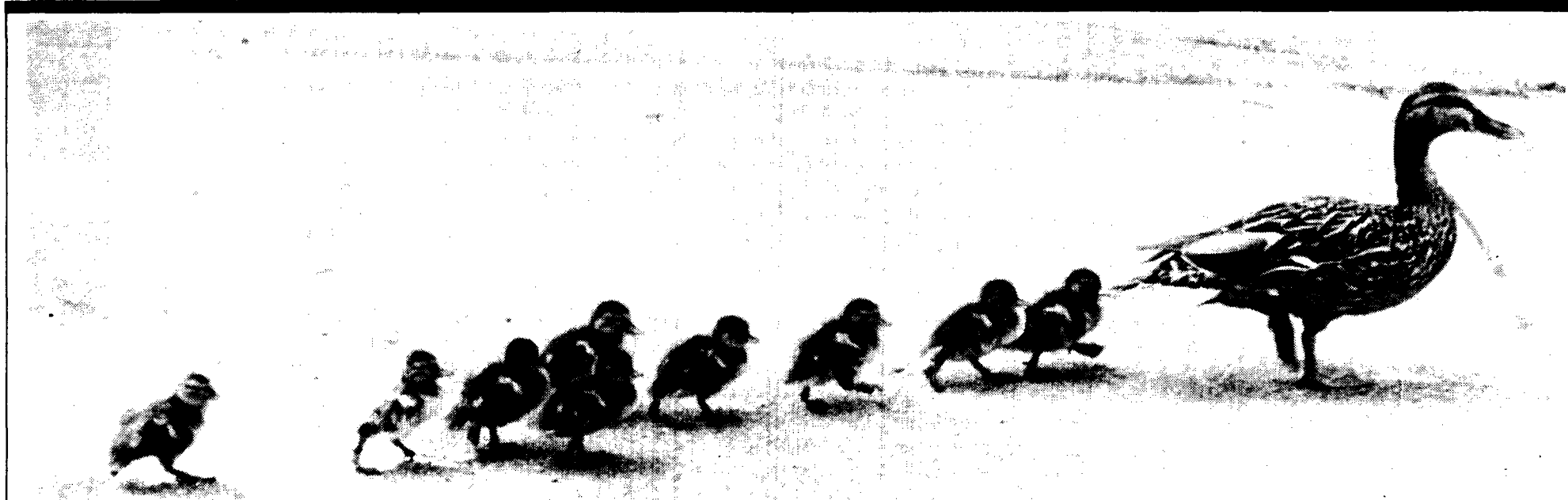
The book discusses biochemical adaptation to environments from freezing polar oceans to boiling hot springs, and under hydrostatic pressures up to 1,000 times that at sea level.

The other author of the book is Prof. George Somero of Scripps Institute of Oceanography at the University of California, San Diego.

Two members of faculty and a former employee of UBC's Audio-Visual Services department have been involved in making a film entitled "See How We Run," under the auspices of Adidas, the sports wear manufacturer.

Prof. Lionel Pugh of the School of Physical Education and Dr. Douglas Clement, co-director of the B.C. Sports Medicine Clinic located at UBC, were the narrator and technical advisor, respectively, for the 30-minute documentary on the joys of running, including proper training techniques to prevent injuries.

The film's producer is former A/V employee Tom Moore, whose company, Spectre Media, produces material for UBC and the Knowledge Network on a contract basis. The Adidas film had its world premiere June 6 at Robson Square Media Centre.



UBC's Old Administration Building was invaded last week by this fearless mother duck and her offspring after an employee picked up one of the ducklings and took it into the building to show to President's Office staff. After failing to

get an audience with President George Pedersen, who's currently on a business trip to West Germany, mother and brood waddled out of the building and headed west in search of water.

## Six new chairs in '84 bring UBC total to 27

An increasing number of private citizens and private and public sector organizations are funding permanent positions at UBC by creating professorships or chairs.

The University now has 27 funded chairs, all but three in the Faculties of Commerce and Business Administration and Medicine.

Six were established this year and 18 since 1980.

A decision to fund a chair clearly reflects confidence on the part of an individual or organization in the quality of the academic work being performed by the faculty of the University, President George Pedersen said.

"In a period of restraint such as UBC is now experiencing, the funding of chairs also allows us to reallocate resources to areas that need strengthening," he added. "The creation of additional chairs is something the University intends to pursue with increasing vigor in the future in order to diversify sources of support for academic activities at UBC."

Here is a list of UBC chairs by faculty, together with the year in which they were established.

### Faculty of Applied Science

- Chair of Aeronautics, Mary Fisher Estate, 1963

### Faculty of Commerce and Business Administration

- United Parcel Service Foundation Professor of Transportation, 1974
- Professorship in Urban Land Economics, 1976
- Albert E. Hall Professor of Finance, 1979
- Arthur Andersen & Co. Alumni Professor of Accounting, 1979
- C.A., C.G.A. Professor of Accounting, 1980
- E.D. MacPhee Professor of Management, 1980
- Herbert R. Fullerton Professor of Urban Land Policy, 1980
- Bank of Montreal Professor of International Finance, 1982
- The Alumni Chair in Management Sciences, 1983
- The Alumni Chair in Marketing, 1983
- William Young Chair in Finance, 1983

### Faculty of Law

- United Parcel Service Foundation Chair in Regulation and Competition Policy, 1984
- The William Hamilton Chair in Industrial Relations, 1984
- Advisory Chair in Finance, 1984
- The Philip H. White Professorship in Urban Land Economics, 1984
- Advisory Chair in Consumer Behaviour, 1984
- Walter S. Owen Chair of Law, 1982
- Douglas McKay Professor Chair in Law, 1983

### Faculty of Medicine

- Chair of Medicine, Mary Fisher Estate, 1963
- Eric W. Hamber Chair in Medicine, 1966
- James and Annabel McCreary Chair in Pediatrics, 1969
- Royal Canadian Legion Professorship in Family Practice, 1977
- Mount Pleasant Legion Chair in Community Geriatrics, 1981
- Belzberg Family Professorship in Medicine, 1982
- CKNW Chair in Pediatric Immunology, 1983
- Allan McGavin Chair in Geriatric Medicine, 1984



Fifteen of the 18 new members of UBC's 25-Year Club for support staff received their quarter-century pins at a Faculty Club dinner on June 18.

## 18 more join 25-Year-Club

UBC's Twenty-Five Year Club for longtime members of the campus support staff has 18 new members.

President K. George Pedersen presented membership pins to the new members, each of whom has completed a quarter century of continuous service at UBC, at a dinner in the Faculty Club on June 18.

The new members are: John Baranowski, a supervising technician in Chemical Engineering; Gwyn Bartram, head of the film library in the UBC Library; Dave Bilton, a sheet metal worker in Physical Plant; George Bruce, assistant head service worker in Physical Plant; Betty Braidwood, manager of food services in UBC's residences; Bill Cardno, head plumber in Physical Plant; Ray Dierolf, an intermediate technician in the acute care unit of the campus hospital; Cornelis "Neil" Galesheet, an operator-driver in

Physical Plant; Edwin Goronzy, assistant chief draftsman in Physical Plant; Jim Horner, head electrician in Physical Plant; Gunnar Lyth, a shift engineer in Physical Plant; John Lomax, insurance accountant in the Department of Finance; Clinton Purdon, a maintenance mechanic in Physical Plant; Walter Potter, storekeeper in Physical Plant; Eugene Ryan, a counsellor in the Student Counselling and Resource Centre; George Sloan, building service worker in the student housing department; William Sobkiw, building service worker in the student housing department; and Mary Whiteman, a cashier in the Department of Food Services.

Membership in the club now totals 131. The new president of the organization is H.M. "Tony" Caven of the Department of Finance, who succeeds Kay Rumsey of the Department of Personnel Services.

## CAUT leaders slam B.C. gov't legislation

Faculty association leaders from universities across Canada have joined to protest a series of B.C. government actions which, they say, will seriously impair higher education in the province.

Meeting in Ottawa, the council of the Canadian Association of University Teachers, which represents 26,000 faculty and professional librarians, resolved to back their colleagues in B.C. through collective action and financial support.

The CAUT condemned legislation passed by the B.C. government last fall which, it said, attacked human rights, academic freedom and tenure, university autonomy and collective bargaining. It called for the withdrawal of the legislation.

The association said the province's drastic reductions in university funding will

## Volleyballers visit China

UBC's senior women's volleyball team faced stiff opposition during a nine-day visit in May to the People's Republic of China, where they met teams from three universities.

At Beijing Normal University, a teacher-training institution in the Chinese capital, the Thunderbirds won their first game 15-11 and then fell to the opposition in three successive games, 14-16, 14-16 and 12-15.

At Hangzhou, the Thunderbirds ran into the team from the Provincial Amateur Sports School, an institution for students of superior athletic ability, and went down to defeat three times, 15-17, 13-15 and 7-15.

The final stop for the volleyball squad was Fudan University in Shanghai, China's biggest industrial city, where the Thunderbirds triumphed three games to two, 5-15, 15-11, 8-15, 15-13 and 15-9.

In between matches there was plenty of sightseeing to such famous landmarks as the Great Wall of China and the Ming Tombs as well as river cruises and visits to zoos and silk factories.

impair the ability of its universities to maintain the quality of education and will threaten accessibility to higher education.

The CAUT condemned the closure of the David Thompson University Centre in Nelson, B.C., saying it "constitutes a further attack on post-secondary education in that province."

It resolved to assist any member of the CAUT dismissed or laid off as a result of the province's Public Sector Restraint Act.

CAUT President Sarah Shorten said: "We continue to view with grave concern the problems occurring at the universities in British Columbia as a result of the actions of the government of the province."

"In resolving to defend the rights and interests of our colleagues in that province," she said, "the CAUT council has reconfirmed the determination of our association to resist any abrogation of academic freedom and contractual rights... and to protest in public the actions and policies of the Bennett government regarding the universities."

## GBS expert gives public lecture

Prof. Dan H. Laurence, literary and dramatic advisor to the estate of famed British playwright and critic George Bernard Shaw, will give a public lecture while visiting UBC to teach during the 1984 summer session.

Prof. Laurence will speak on the topic "Bernard Shaw and the Uses of History" in the penthouse of the Buchanan Building at 8:30 p.m. on Monday, July 16. His lecture is sponsored by the English department, Extra-Sessional Studies and the Centre for Continuing Education.

During UBC's Summer Session, Prof. Laurence will give a graduate course entitled Bernard Shaw and his Contemporary Dramatists.

Prof. Laurence has written extensively on Shaw and is the editor of the standard edition of his plays, letters and music criticism.

# UBC CALENDAR

## Calendar Deadlines

For events in the weeks of July 22 and 29, material must be submitted not later than 4 p.m. on Thursday, July 12. Send notices to Information Services, 6328 Memorial Road (Old Administration Building). For further information, call 228-3131.

## SUNDAY, JULY 8

### Vancouver School of Theology Lecture

Forced Options: Decisions We are Making for Those Who Come After Us. Prof. Roger Shinn, Union Theological Seminary, St. Andrew's Wesley United Church, Burrard and Nelson Sts. 7:30

## MONDAY, JULY 9

### Biochemical Discussion Group Seminar.

Role of Calcium in the Regulation of Mitochondrial Metabolism. Dr. R.M. Denton, Biochemistry, University of Bristol, U.K. Lecture Hall 1, Woodward Instructional Resources Centre. 4 p.m.

### Vancouver School of Theology Lecture.

Spoiling the Egyptians: Church Fathers and the Classical Rhetorical Tradition. Dr. O.C. Edwards, Jr., Seabury-Western Theological Seminary, Chapel of the Epiphany, Vancouver School of Theology. 7:30 p.m.

## TUESDAY, JULY 10

### Music for Summer Evenings.

An evening of chamber music featuring the works of Ravel, Kuhlau, Rossini and Sydeman. Camille Churchfield, flute; John Loban, violin; Eric Wilson, cello; and Kenneth Friedman, string bass. Free admission. Recital Hall, Music Building. 8 p.m.

## THURSDAY, JULY 12

### Transportation Seminar.

Consistency of Residential Customer Response in Time-of-Use Electricity Pricing Experiments. Dr. Douglass W. Caves, University of Wisconsin. Penthouse, Angus Building. 11 a.m.

## Thursday, July 12 (cont.)

### Obstetrics and Gynecology Seminar.

New Trials for Prevention of Ovarian Hyperstimulation in hMG-hCG Therapy. Prof. Masao Igarashi, Obstetrics and Gynecology, Gunma University, Japan. Room 2N35, Grace Hospital. 1 p.m.

### Summer Film Series.

*Alice in Wonderland*. Shows at 7:30 and 9:45 p.m. on July 12, 13 and 14. Admission is \$2. Auditorium, Student Union Building. 7:30 p.m.

### Music for Summer Evenings.

Music of Bach, Handel, Barber, Honegger, Ravel, Morawetz and Casella. Camille Churchfield, flute; and Jane Gormley, piano and harpsichord. Free admission. Recital Hall, Music Building. 8 p.m.

## SUNDAY, JULY 15

### Vancouver School of Theology Lecture.

The Story of Our Life: or, Theologians are Human, Too. The Rev. Canon Stephen Sykes, professor, University of Durham. St. Andrew's Wesley United Church, Burrard and Nelson Sts. 7:30 p.m.

### Early Music Recital.

Bach and His Time. Monica Huggett, baroque violin; and Ton Koopman, harpsichord. For ticket information, call 732-1610. Recital Hall, Music Building. 8 p.m.

## MONDAY, JULY 16

### Vancouver School of Theology Lecture.

Individual and Collective Responsibility in Ancient Israel. Prof. Paul Joyce, Ripon College, Chapel of the Epiphany, Vancouver School of Theology. 7:30 p.m.

### English Public Lecture.

Bernard Shaw and the Uses of History. Prof. Dan H. Laurence, internationally acclaimed scholar, literary and dramatic advisor to the Shaw Estate. Free admission. Penthouse, Buchanan Building. 8:30 p.m.

## TUESDAY, JULY 17

### Music for Summer Evenings.

Music of Brahms, Chopin and Rochberg. Eric Wilson, cello; and Thelma Wilson, piano. Free admission. Recital Hall, Music Building. 8 p.m.

## WEDNESDAY, JULY 18

### Summer Film Series.

Monty Python's *The Meaning of Life*. Shows at 7:30 and 9:45 p.m. on July 18, 19 and 20. Admission is \$2. Auditorium, Student Union Building. 7:30 p.m.

## THURSDAY, JULY 19

### Music for Summer Evenings.

Music of Mozart, Brahms, Bruch, Berg and Vaughn-Williams. Wes Foster, clarinet; Karen Foster, viola; and Jane Gormley, piano. Free admission. Recital Hall, Music Building. 8 p.m.

## FRIDAY, JULY 20

### Early Music Recital.

Music for Two Harpsichords. Ton Koopman and Tini Mathot, harpsichords. For ticket information, call 732-1610. Recital Hall, Music Building. 8 p.m.

## Notices . . .

### Biochemistry lecture

Dr. Andras Lacko of the Department of Biochemistry, Texas College of Ost. Medicine, Fort Worth, Texas, speaks tomorrow (July 5) on Study of the Lecithin: Cholesterol Acyltransferase Reaction. Lecture Hall 4, Woodward Instructional Resources Centre. 4 p.m.

### Lost and Found hours

During the summer UBC's Lost and Found, located in Room 208 of Brock Hall, will be open the following dates from 9 to 11 a.m.  
JUNE: 18, 25, 27. JULY: 4, 9, 11, 16, 18, 23, 25, 30. AUGUST: 1, 8, 13, 15, 20, 22, 27, 29. Telephone number for the Lost and Found is 228-5751.

## Ballet UBC Jazz

Ballet UBC Jazz is offering summer ballet and jazz classes at all levels in the Music Studio of the Asian Centre until Aug. 10. Cost is \$35. Register in classes as well as in the office, SUB 216, from 12:30 - 1:30 p.m. For more information, please come to SUB 216E or call 228-6668.

## Daycare

Immediate full- and part-time positions available in professionally staffed campus daycare. Daycare features a stimulating activity program and considerable flexibility in scheduling. Open to children 18 months to three years. Contact Christine McCaffery at 271-2737.

## French, Spanish and Japanese conversational classes

Three-week daytime intensive programs begin July 23. For more information or registration, contact Language Programs and Services, Centre for Continuing Education, at 222-5227.

## Functional fitness appraisal

The John M. Buchanan Fitness and Research Centre is administering a physical assessment program for students, faculty, staff and the public. The cost is \$20 for students and \$25 for others. For more information, call 228-3996. The following is a list of the times available for the functional fitness appraisal:  
June 18 - Aug. 23: Mondays, 5, 6, 7 p.m.; Wednesdays, 5, 6, 7 p.m.; and Thursdays, 12, 1, 2 p.m.

## Free guided trail walks

Enjoy an invigorating and educational afternoon outing at the University of B.C. Research Forest in Maple Ridge every Sunday. Free guided walks in the woods are led by professional foresters. The walks begin at 2 p.m. at the forest gate rain or shine and last approximately two hours. The trails are well constructed. Bring friends and family, bring a camera and a picnic lunch and make a day of it. For further information and directions, contact the Research Forest at 463-8148 or the Canadian Forestry Association of B.C. at 683-7591. The forest is open to the public from dawn to dusk seven days a week for those who wish to explore on their own. Dogs are not allowed on the Research Forest.

## Correspondence courses

The new issue of the Guided Independent Study calendar supplement 1984/85 is now available. If you would like a copy, please contact Guided Independent Study, 224-3214, or drop by the Library Processing Centre, Room 324.

## Toddler summer school

Full- and part-time positions available now at Canada Goose Daycare on campus. The facility offers a flexible, stimulating learning environment for young children. Open to children 18 months to 3 years. Call 228-5403, 8 a.m. to 5 p.m.

## Daycare

Unit 11, Daycare UBC campus, openings for 18 months to 3 years, full- or part-time spaces. (Limited number available.) Qualified staff. Call 224-3828 (days).

## Short term daycare

The UBC Summer Short Stay program will be running again this year from July 3 - Aug. 17. A staff of three headed by an experienced early childhood teacher will offer an interesting and enjoyable program for approximately 15 children. A few spaces are left. Parents may enrol their children for half days (\$8) or full days (\$15) for as many or as few days a week as they need care. Children may attend on a regular basis or once only. For more information, please phone 228-5343 or 228-6783.

## Frederic Wood Theatre

Stage Campus '84 presents Alan Ayckbourn's play *Bedroom Farce* July 4 to 14. For ticket information, call 228-2678 or drop by Room 207 of the Frederic Wood Theatre.

## Asian exhibit

An exhibit of popular poster art in China, with posters from the collection of Elaine Truscott is on display at the Asian Centre from July 5 to 15. For hours, call 228-4688.

## Faculty Club barbecues

The Faculty Club is having barbecues on the following dates this summer: July 13, July 27, Aug. 10 and Aug. 24. For reservations, call 228-2708. Members only.

## Food Services hours

Campus Food Services units are open the following hours during July: Barn Coffee Shop - 7:30 a.m. to 3:30 p.m.; Bus Stop Coffee Shop (take-out only) - 8:30 a.m. to 3:30 p.m.; Arts 200 (Buchanan Lounge) - 8 a.m. to 1:30 p.m.; EDibles (Scarfe Building) - 7:30 a.m. to 3:30 p.m.; IRC Snack Bar - 8:30 a.m. to 3:30 p.m.; Yum Yum's at the Auditorium - 8 a.m. to 3:30 p.m.; Ponderosa Snack Bar - 8 a.m. to 2 p.m.; SUBWAY Cafeteria - 7 a.m. to 7 p.m.

## Computers and you

The Centre for Continuing Education is offering the following computer courses in July and August: Word Processing for the Novice: Getting Started with WordStar. Takes place on Saturday, July 14 from 10 a.m. to 3 p.m., fee is \$75; Learning to Program in BASIC: Level 1. Tuesdays and Thursdays from July 24 to Aug. 9, fee is \$150. For details on CCE programs, call 222-5276.

## Museum of Anthropology

Exhibits: **Hidden Dimensions: Face Masking in East Asia; History of London**, opens July 15; **Canada**, a six-part experimental display. Special Events: Performance by the Korean Pongsan Mask Dance Group on July 15 at 2 p.m.; Flute-making workshops for children on July 10 and 17; Presentations by the Native Youth Workers on July 10 and Aug. 17, salmon barbecues sponsored by the Native Youth Workers on July 17 and Aug. 7; Anna Wyman Dance Theatre performs on July 22, weather permitting. Museum hours are noon to 9 p.m. on Tuesdays, noon to 7 p.m. Wednesday through Sunday, closed Mondays. For details on museum events, call 228-5087.

# Plenty to do on campus

There's more to Summer Session than classrooms and books. For those in need of a break from their studies, the campus offers a wide range of recreational activities in July and August.

Stage Campus '84 is staging Alan Ayckbourn's play *Bedroom Farce* July 4 to 14 and Charles Crompton's musical *Oh, What a Lovely War* July 25 to Aug. 4 at the Frederic Wood Theatre. Ticket information at 228-2678, or drop by Room 207 of the Frederic Wood Theatre.

Free outdoor noon-hour concerts and free evening recitals in the Music Building begin next week. For details check Calendar listings on Page 4 of *UBC Reports*, and notice boards around campus. Listings for the Summer Film Series in the auditorium of the Student Union Building are also in *UBC Reports*.

The Museum of Anthropology and the Asian Centre have a full schedule of exhibits and events during the summer. The museum is currently featuring a major exhibit of Asian face masks and an experimental display entitled *O Canada*. An exhibit on the *History of London* opens July 15 at the museum. Details at 228-5087. Currently on display at the Asian Centre is a display of poster art of China. Check *UBC Reports* for upcoming exhibits.

The M.Y. Williams Geology Museum, in the Geological Sciences Building, is open weekdays from 8:30 a.m. to 5 p.m.

If you'd like a little exercise, the UBC Aquatic Centre is open daily. For hours, call 228-4521. Or book a racquetball or squash court in the Thunderbird Winter Sports Centre (228-6125). For those who prefer a quiet stroll, the main Botanical Garden, below Thunderbird Stadium, is open daily during daylight hours. The Nitobe Japanese Garden is open from 10 a.m. to 6 p.m. daily, and the Rose Garden, at the north end of the campus, is now in full bloom.

UBC's Department of Information Services offers free guided walking tours of the campus at 10 a.m. and 1 p.m. Monday to Friday. To book a tour, or for more information about events at UBC, call 228-3131, day or night.

## First Class Mail

*UBC Reports* is published every second Wednesday by Information Services, UBC, 6328 Memorial Road, Vancouver, B.C. V6T 1W5. Telephone 228-3131. Al Hunter, editor; Lorie Chortyk, associate editor; Jim Banham, contributing editor.