

# Action taken on teacher evaluations

By CHARLES KER

Starting next year, UBC administrators will be taking a closer look at student evaluations of teachers.

At its first meeting of the year, the university Senate unanimously endorsed a report outlining 13 recommendations regarding teacher evaluations.

The first recommendation called for all deans, directors and department heads to submit an annual report summarizing what had been done about results which showed less than satisfactory teaching performances.

"Students think that poor teachers, no matter how often they get evaluated, keep on teaching badly and that's the problem we're trying to address," said Professor Graham Kelsey, who co-chaired the committee that drafted the report.

In its preface, the report stated: "While the university can show that formal teaching evaluation is done in every faculty, its effectiveness is sometimes open to question and the effort expended in doing it is seen by many students as wasted."

Other committee recommendations included:

- that "serious consideration" be given to making statistical summary results of the evaluations available for inspection by students.

- teachers with poor evaluation results be strongly urged to upgrade their skills through the Faculty Development Program.

- that Senate reaffirm its requirement for an annual evaluation of teaching so as to give students the opportunity to express their views.

The report also called for a review of evaluation procedures and instruments to ensure evaluations are fairly managed, peer evaluation is appropriately used and students are given adequate time to complete evaluation forms.

Associate Dean Donald Wehrung, of the Faculty of Commerce and Business Administration, urged Senate to make it compulsory for all faculties to post evaluation findings for the benefit of faculty and students. Wehrung,

whose faculty already makes its evaluation reports public, viewed the move as a further incentive for professors to perform well in class.

Evaluations are based on questionnaires filled out by students at the end of the year. However, the form of the questions, whether multiple-choice or opened-ended, varies among faculties. Peer evaluations also take place within each faculty.

Orvin Lau, a third-year science student and committee co-chair, introduced the motion in Senate which led to the creation of the eight-member committee last October. The committee included three students, four faculty and a convocation member of Senate.

It is the third such group established since 1974 to examine the long-standing issue.

"In the past, Senate has approved a pot-pourri of recommendations dealing with teacher evaluations," said Kelsey. "But this is the first time they have taken a systematic approach to the whole problem."

Highlights from other reviews showed that evaluation is a valuable tool for reappointment, promotion and tenure. Previous reports also pointed to a traditional reluctance at UBC to impose a central methodology for evaluation upon faculties.

More than 2,000 third- and fourth-year undergraduates filled out questionnaires for the committee's report.

Asked how they would rate the way UBC evaluates its faculty members' teaching, 34 per cent said it was "good to excellent", roughly 35 per cent rated it as "just adequate" and almost 31 per cent put it in the "less than adequate" to "very poor" range.

The report recommendations will take effect in January, 1992.

The university annually recognizes outstanding teachers on campus with 22 teaching prizes of \$5,000 each. The \$675,000 Teaching and Learning Enhancement Fund, a new initiative introduced earlier this year, will also finance 31 enhancement projects in 11 faculties.



*On Tour*

Photo by Cheryl Niamath

Artists of the Chinese Youth Goodwill Mission performed recently at the Old Auditorium. Sponsored by the UBC International Liaison Office, the 18-member troupe is made up of students from colleges and universities throughout Taiwan. Vancouver was the first stop on a nine-city North American tour.

## Results challenge current ideas on vaccine

# Study suggests HIV not sole cause of AIDS

By GAVIN WILSON

UBC researchers have discovered that HIV antibodies can be detected in a strain of mice that suffer from a progressive, fatal disease, even though the mice have not been exposed to the AIDS virus.

The results appear in a paper by Geoffrey Hoffmann, an associate professor with a joint appointment in Microbiology and Physics, and PhD student Tracy Kion.

The paper was published earlier this month in the journal *Science*, the official publication of the American Association for the Advancement of Science.

"It is a surprising result, but we think we can understand it in the con-

text of a theory of the pathogenic process of HIV," said Hoffmann.

Hoffmann and Kion are among those researchers who question whether HIV is the sole cause of AIDS. Their findings could help explain some of the more puzzling aspects of the disease, such as why people tend to become seriously ill only after their immune system creates anti-HIV antibodies.

In their study, Hoffmann and Kion detected anti-HIV antibodies in mice that suffered from the auto-immune disease lupus. Normal, healthy mice do not produce these antibodies.

The researchers believe that anti-HIV antibodies damage the immune systems of the mice and are involved in causing lupus. Since there are many

similarities between lupus and AIDS, the researchers suggest that anti-HIV antibodies may also be involved in causing AIDS.

This suggests it may be important to suppress rather than boost the immune response to HIV, a quite different strategy for the prevention of AIDS from that being currently pursued by most researchers working on vaccine development, the researchers said.

Hoffmann and Kion have also found anti-HIV antibodies in another unexpected circumstance — in mice that are immunized with white blood cells, called lymphocytes, taken from other mice. Lymphocytes produce antibodies and regulate the body's immune response.

The researchers said that lymphocytes, which can be passed from one person to another in blood and semen, may have a co-factor role in AIDS.

A combination of lymphocytes from another person and the AIDS virus could more efficiently induce the production of antibodies that cause the disease than the virus alone, they said.

The combination could produce complementary immune responses that attack each other, creating a synergy that results in the complete collapse of the immune system.

The detailed theory by Hoffmann, Kion and Michael Grant, (formerly of UBC) appeared in a recent issue of the *Proceedings of the National Academy of Sciences (USA)*.

## Inside

**OPEN WIDE:** A UBC researcher has found a treatment which controls acute pain associated with dental work. *Page 2*

**COME ON DOWN:** Once again UBC opens its doors to alumni for Homecoming. *Around and About, page 3*

**NEW DIGS:** Migratory birds will get new artificial nesting grounds in joint project designed to replace deep-sea fishery. *Page 8*

# New department heads appointed for Arts

In one of the largest administrative changes in faculty history, half of the Faculty of Arts' departments and schools now have new heads.

Although a large number of heads were due to step down in 1991, that number was made even larger by three promotions. Patricia Marchak (former head of Anthropology and Sociology) was made dean, Professor Olav Slaymaker (former head of Geography) was appointed associate vice-president, research, and Professor John Helliwell (former head of Economics) was awarded the two-year Harvard Professorship in Canadian Studies.

New department heads include:

**Carole Christensen**, School of Social Work  
Professor Christensen received her BA from Howard University, MSW from Michigan and her D.Ed from McGill University. She joined UBC this year from the School of Social Work at McGill. Her research probes cross-cultural awareness with a special interest in the delivery of social services to minority and immigrant groups. She also specializes in marriage and family counselling practices.



Christensen

**Michael S. Duke**, Department of Asian Studies

Professor Duke specializes in the study of Chinese literature of both the classical and

modern eras. He received his BA from the University of California at Davis and his PhD from U. C. Berkeley. Before joining UBC in 1982, Duke taught at several universities in the United States. He is a founding member of the International Chinese Literature Association and a frequent commentator on Chinese affairs.

**Howard Jackson**, Department of Philosophy  
Jackson is a specialist in the philosophy of language and an expert on the work on symbolic logic by the German mathematician Frege. Jackson received his B.Sc. from the University of Illinois and his PhD from the University of California at Berkeley.

**Dale Kinkade**, Department of Linguistics  
Professor Kinkade is on study leave and will assume his duties as head in 1992. (Professor David Ingram will be the acting head in the interim). Kinkade received his BA from the University of Washington and his PhD from the University of Indiana. Before joining UBC in 1982, he was previously the chair of the Department of Anthropology at the University of Kansas. Kinkade is a specialist on Pacific Northwest Indian languages with a speciality in Salish.

**Karl Kobbervig**, Department of Hispanic and Italian Studies

Professor Kobbervig specializes in the history of romance languages. Together with Arabic scholar, Professor Hanna Kassis, Kobbervig has published a Spanish index to the Koran based on the original Arabic and two Spanish versions. He received his BA and PhD from the University of

Washington and joined UBC in 1956.

**Timothy Oke**, Department of Geography  
Professor Oke joined UBC in the early 1970s after receiving a PhD at McMaster University. He has recently been named to the Royal Society of Canada for his pioneering contributions to atmospheric science, particularly those on urban climates. In recent years, Oke has been a Killam (1988) and Guggenheim Fellow (1990).

**Richard Pearson**, Department of Anthropology and Sociology

Professor Pearson received his BA from Toronto and his PhD from Yale. A member of the Royal Society of Canada, Pearson has been the recipient of Guggenheim, Killam and Social Sciences and Humanities Research Council fellowships. A specialist in the prehistory of east Asia, he has published numerous archaeological studies of Japan, Korea and China.

**Craig Riddell**, Department of Economics

Professor Riddell graduated from Queen's University with a PhD in Economics. After joining UBC's Department of Economics in 1982, he served as one of the principal research coordinators for the Royal Commission on the Economic Union and Development Prospects for Canada (the MacDonald Commission). A specialist in labor economics and labor relations, Riddell is also a member of several advisory boards of government at the federal and provincial level.

**Robert Silverman**, School of Music  
One of Canada's most distinguished musi-

cians, Professor Silverman is also a pianist of international renown. He joined the UBC School of Music in 1973 after studying at McGill and the Eastman School of Music in Rochester, N.Y. Silverman has performed to critical acclaim in cities around the world and across Canada. He can also be heard frequently on CBC Radio.

**Peter Ward**, Department of History

An internationally recognized scholar in social history, Professor Ward received two degrees at the University of Alberta before switching to Queen's for his PhD. A member of the Canadian Historical Review editorial board, Ward's recent work has focused on the relationships between economic and social circumstances and the family. He has just completed a major work on the birth weight of infants and the standard of living in North America and Europe.



Ward

Additional faculty announcements include:

Associate Professor Michael Kew has been appointed acting director of the Museum of Anthropology for one year; Professor Peter Simmons has been appointed acting director of the School of Library, Information and Archival Studies, and Associate Professor Valerie Raoul will be acting head of the French Department until June 30, 1992.

## Treatment controls pain

# Patients say aah, not ouch

By CONNIE FILLETTI

For most people, a trip to the dentist is equated with pain.

But a UBC researcher has found that the combined use of transcutaneous electrical nerve stimulation (TENS) and low levels of nitrous oxide can successfully control acute pain associated with restorative dentistry.

A study by Dr. David Donaldson, head of Oral Medicine and Surgical Sciences, indicates that the success rate for managing pain in dental procedures such as preparing crowns and bridges and placing amalgams, can reach as high as 85 per cent when electrical stimulation is augmented by nitrous oxide.

"Electrical analgesia, when used alone for restorative dentistry, produced disappointingly poor results," Donaldson said.

"However, combining electrical analgesia with nitrous oxide sedation was satisfactory, with an overall success rate exceeding 80 per cent."

The research showed an 85 per cent success rate for controlling pain when both therapies were used together from the beginning of treatment.

Nitrous oxide, a colorless, sweet tasting gas, also known as "laughing gas," is a general anesthetic gas at certain levels, but low levels can safely produce anxiety relief with some pain controlling properties. TENS is the application of mild electrical stimulation to skin electrodes placed over a painful area, causing interference with the transmission of hurtful stimuli.

A total of 124 dental patients, divided into three groups, participated in the study.

Donaldson said the success rates with nitrous oxide and TENS seems to be tooth-dependent.

"The anterior teeth appear to respond better than posterior teeth because the electrodes are closer to the nerve," he explained.

The study further suggests that patient acceptance may have an impact

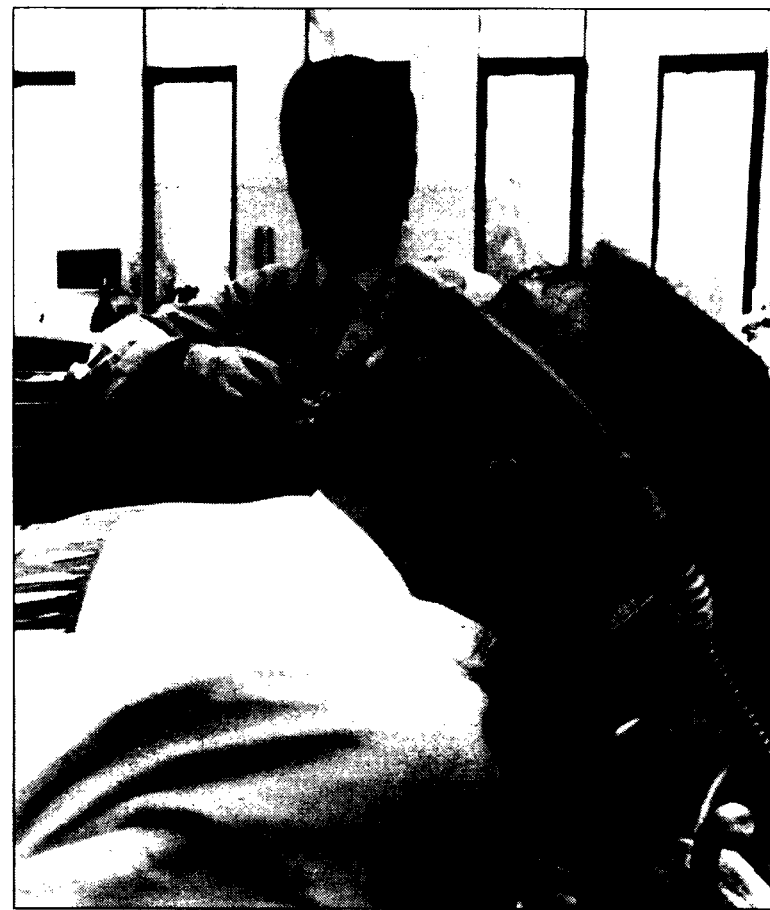


Photo by Media Services

**Donaldson treats Savlin Nolicic with TENS and nitrous oxide. The combined treatment can reduce the pain of restorative dental work.**

on the success rates for controlling pain using the combined therapy.

"A small number of patients who reported that the analgesia was successful, still considered the treatment unacceptable because of their dislike of muscle tremors produced by the electrical device, or the euphoric effects of the nitrous oxide," Donaldson said.

He also observed that the treatment's popularity with patients varied, based on their anxiety levels. The more anxious a patient was, the less effective the treatment became.

However, patients allergic to local anesthetics or wishing to avoid their potential complications, experienced satisfactory success rates.

Other mild side effects of the combined nitrous oxide and TENS therapy observed during the study included perspiration, nausea and dizziness.

Donaldson advised that the treatment was not acceptable for certain dental procedures such as tooth extractions.

He added that the treatment is still relatively uncommon. Nitrous oxide is not generally used by all dentists and consensus has not been reached on which form of electrical energy is most reliable or appropriate for use with acute pain control.

Several TENS devices are currently being assessed to determine which is most effective for this type of treatment.



United Way

\$280,000 goal for 1991

## Campaign builds on last year's success

By CONNIE FILLETTI

UBC's 1991 United Way campus drive is up and running.

Campaign organizers hope to raise \$280,000 during this year's fund-raising effort, spearheaded by over 200 UBC faculty and staff volunteers — almost double last year's volunteer corps.

A 27 per cent increase in employee donations made last year's campus United Way appeal the largest in the non-profit sector, and the largest in any sector in the Lower Mainland.

Last year's goal of \$240,000 was exceeded by almost \$10,000, based on donations from 1,622 UBC employees.

"It is an opportunity to be of real help to people of all ages and with a diversity of needs," said Dr. William Webber, associate vice-president, academic, and chair of the 1991 campus campaign.

"Past support from the campus community has been outstanding, and we are looking forward to even greater success this year."

Webber added that the United

Way is the only charity to which contributions can be made through payroll deduction at UBC. Individuals may designate that their contributions go to one or more of more than 80 agencies within the United Way, or may elect to have them given to any charitable organization.

Donors may also designate that their contributions not go to specific agencies.

"It's important for people to know that \$ .98 of their donated dollar goes to the agencies for the purposes intended," Webber said.

Several fund raising events are planned for this year's drive, including an Oktoberfest, sponsored by Plant Operations, on Oct. 1, and a lunchtime karaoke performance by faculty, organized by the Faculty of Pharmaceutical Sciences, on Oct. 17.

Officially launched Sept. 17, the campaign continues throughout October. Pledge cards and information pamphlets are currently on their way to UBC faculty and staff.

# Lum's art exhibits unique edge

By CHARLES KER

**K**en Lum can't quite find the words.

By phone from his studio in downtown Vancouver, the 35-year-old conceptual artist and UBC Fine Arts professor is trying to describe his latest creations.

"I'm really not sure what you'd call it," Lum said. "They're photoworks I guess, but they protrude from the wall. Once you see them, it'll make sense."

The aluminum-box wall-hangings Lum is feverishly working to complete are for an October show at the Museum of Modern Art in Paris. Between now and March, Lum's work will be featured at exhibitions in Pittsburgh, Spain, Italy and the opening show of the Museum of Modern Art in Warsaw, Poland.

But from Sept. 19 to Oct. 12, Lum, one of Canada's best known artists abroad, will have a special installa-

tion at the UBC Fine Arts Gallery.

Guaranteed to be different, his UBC display will include ordinary sofa cushions placed on the gallery floor surrounded by large banners inscribed with nonsensical slogans.

Scott Watson, gallery curator, said the banners look like they may have been used in a demonstration while the cushions "make the whole thing a bit edgier."

In fact, Lum exhibits are usually characterized by a certain edginess: so-called "language paintings" that resemble slick advertising billboards featuring splashy words which aren't words at all; or furniture installations with sofas arranged symmetrically, either on their sides or in a circle, so they can't be used.

Perhaps what he is best known for are his portrait logos which are just that — run-of-the-mill studio shots of ordinary people, but with colorful, poster-sized logos bearing either the

person's name or a title describing the picture, emblazoned next to them. Some Lum logo titles include Melly Shum Hates Her Job (a woman seated in her office), Mounties and Indians (four native people standing between two Mounties in full regalia), Gillian and Smokey (a girl holding her cat) and God Bless Stephen Carreiro (a boy praying).

Lum's interest lies in the relationship between high art and the pervasive graphic or media process art seen in posters, publishing and advertisements.

"It's not like high art exists autonomously from its surrounding," said Lum. "Graphic art has developed into a world of its own and we're surrounded by it."

Watson says it's easy to read Lum's aggressive style as a rebuke or social critique.

Lum says he just wants to make people reflect more on their environment.

The Fine Arts Gallery is open for reflection Tuesday to Friday from 10 a.m. to 5 p.m. and Saturday noon to 5 p.m.

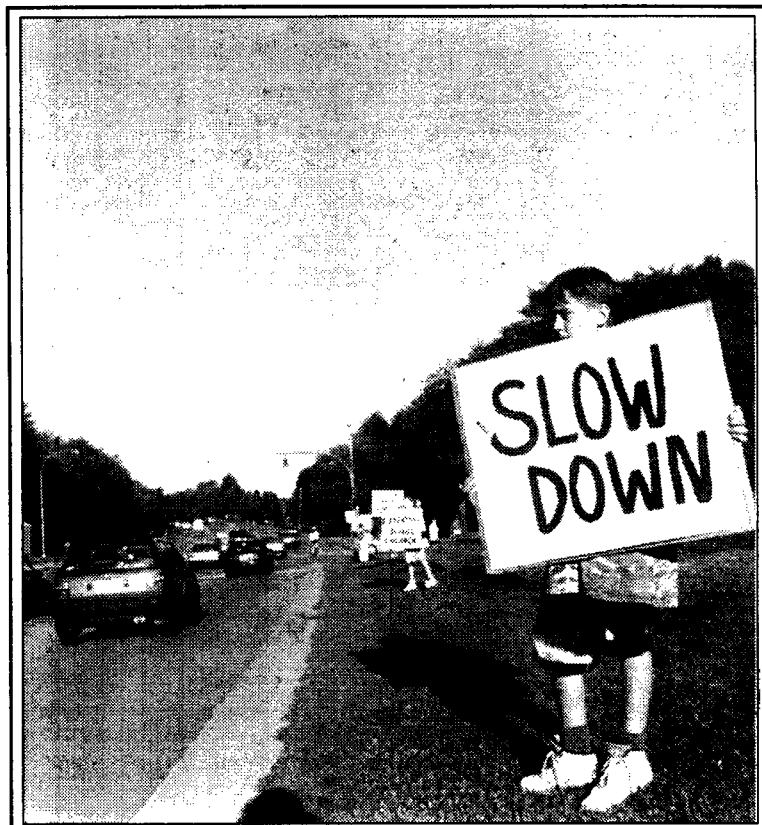


Photo by Gavin Wilson

UBC students weren't the only ones starting school this month, and children and parents from University Hill Elementary, such as Kelly Mercks, pictured here, have taken to the streets to remind motorists to observe posted speed limits on campus approaches.

## Loon Lake gets new classroom

By ABE HEFTER

Don Munro says it used to be affectionately known as the rec hall: a large, log house at Loon Lake that was used for everything from a laboratory to a dance hall. On Oct. 4, the old rec hall will officially give way to a state-of-the-art classroom that will be accessible to both students and the public alike.

"For three weeks, Loon Lake becomes the classroom setting for virtually every third-year student in the Faculty of Forestry," said Munro, director of UBC's research forests. "It's been that way since 1950, when the facilities at Loon Lake were built."

Located near the centre of the Malcolm Knapp Research Forest, students use the resources there as headquarters for field studies. In addition, they are available to interested groups for seminars and retreats. Thanks to a donation from Monsanto Canada Inc. and additional funds from UBC and the Malcolm Knapp Research Forest, the premises have been upgraded with the construction of a new classroom.

"The entire facility at Loon Lake is made up of a classroom, cabins, a dormitory, guesthouse and cookhouse," said Munro. "The construction of the new classroom marks the completion of the opening phase of renovation. The next phase calls for the replacement of the current housing units with new facilities."

Managed by the Faculty of Forestry, the facilities at Loon Lake have been used by many faculties and departments on campus. Munro said the Monsanto Loon Lake Classroom will add a new dimension to the facility and will be an improvement in overall efficiency.

The first event scheduled for the new classroom is a two-day vegetation management seminar Oct. 3-4. At the conclusion of the seminar, Robert Miller, vice-president, research, will officially open the new classroom. He will be assisted by Munro; Clark Binkley, dean of the Faculty of Forestry; Frank Oberle, federal minister of Forestry; Claude Richmond, provincial minister of Forests; and Glen Stith, vice-president, Monsanto Canada Inc.

## Kids invade campus for science

By GAVIN WILSON

Venture out to campus on Saturdays this autumn and you'll see young minds engaged in learning in a different sort of classroom.

Kids aged 5 to 17 will be here, working side by side with UBC researchers, conducting experiments with African locusts, studying gene cloning and DNA manipulation, synthesizing chemical compounds and comparing bird languages with their own.

It is all part of Science Saturdays, a unique Continuing Education program put together by David Vogt, director of the science program and the UBC Observatory.

"This program will put kids in contact with real scientists doing real science," Vogt said.

"They will be able to see and expe-

rience first hand the adventure and enthusiasm of research. We're hoping to portray what science is really like, beyond the classrooms and textbooks."

Vogt said several aspects of the program make it unlike other science programs for kids.

One is the diversity of science presented. Another is the access to sophisticated scientific equipment, such as incubators, spectrometers, microscopes, computer work stations, as well as specimens from the entomology and geology museums.

More important are the human resources available at UBC. Professors, lecturers and graduate students from several departments will be offering the classes, Vogt said, and, since they will only present topics that involve their own research, they will be knowl-

edgeable and enthusiastic.

"This is a wonderful marriage of resources and personnel with the needs and interests of the community," he said.

"We consciously designed the program to do something no one else could do, so that we're not competing with other programs, we're complementing them. What we are presenting is UBC science."

Vogt said the courses will be of interest to young people who want to learn more about science and to parents who want to expose their children to science.

There are 26 courses offered through the program beginning in mid-October and continuing through until mid-December. For more information or to register, call 222-5273.

# It's Homecoming time again

By RON BURKE

**J**ust 12 months ago, preparations were under way for Homecoming '90, the final phase of UBC's ambitious 75th anniversary celebrations.

All over town, people were readying their evening wear for the Gala Great Trekker Award Dinner at the Hotel Vancouver. On campus, students were preparing floats for the Homecoming parade and the Thunderbird mascot was practising his routines for the Blue & Gold Classic football game.

With the tremendous popularity of March's Open House and the Discover Summer at UBC program, it was looking as though the university would go three-for-three in its anniversary project areas. We were not disappointed.

Now, in September of 1991, the successes of all the 75th celebrations are pleasant memories and it's time for Homecoming again.

Here are the events open to

alumni, students, faculty, staff and members of the community:

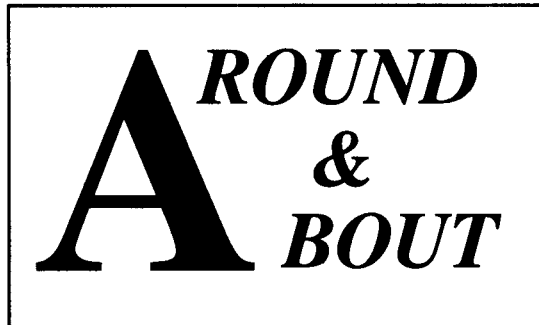
**Student Homecoming Parade** — Thursday, Sept. 26, 12:30 p.m., starting in B-Lot and winding across campus to the Student Union Building. For more information, call the AMS office at 822-3092.

**Great Trekker Award Dinner** — Thursday, Sept. 26, reception at 6:30 p.m., dinner at 7:30 p.m., Ballroom, Student Union Building. This year's recipient is social activist and author Rosemary Brown, MSW ('67), a member of the provincial legislature for 14 years.

Every year a UBC alumnus or alumna is honored with the Great Trekker Award for service to the community. The award commemorates the seminal event in UBC student history: the 1922 march protesting B.C. government delay in completing the Point Grey campus. The protest sparked the 1925 move from UBC's original, tempo-

rary digs at Vancouver General Hospital to Point Grey.

Tickets for the dinner are \$25



for students and \$40 for others. For more information, call the AMS office at 822-3092.

**Blue & Gold Classic Football Game** — Saturday, Sept. 28, 7:30 p.m. kick-off, Thunderbird Stadium. UBC's gridiron stalwarts battle the University of Manitoba Bisons in the annual Homecoming game. Tickets are available from the AMS box office, the Athletics department and at the gate. Tickets are free for UBC students. The T-Bird mascot will be on hand to entertain

during the game and at half-time. For more information, call the Athletics Department at 222-BIRD (222-2473).

**Arts '20 Relay and Pancake Breakfast** — Sunday, Sept. 29, starting at Vancouver General Hospital at 9 a.m.

The relay covers an 11.1 kilometre course from VGH, where UBC's first classes were held in 1915, to the Point Grey campus. Teams of eight runners race along 12th and 16th

Avenues to the Great Trek cairn on Main Mall. Both university and community teams are welcome. With average participation in the 1,500 to 2,000 people range, the Arts '20 is one of the largest university athletic events in the country. For more information, call the Intramurals Office at 822-6000.

As part of last year's enhanced 75th anniversary program of activities, the Arts '20 added a pancake breakfast, anniversary cake and entertainment to the awards

ceremony. These proved so popular that once again they will all be part of the post-race festivities on Main Mall, above Sedge- wick Library.



In addition to these general events, a number of class reunions and alumni division activities, such as barbecues and mini-open houses, are planned for Homecoming. For more information on these events, call the programs department of the Alumni Association at 822-3313.



If 1990 marked the 75th year of operation for the University of B.C., a similar celebration for the UBC Alumni Association must not be far away. In fact, the association has already begun to plan its gala Diamond Jubilee, scheduled for 1992. A special series of events, gatherings and general good fun is in the works. Stay tuned for more information.



September 22 –  
October 6

**MONDAY, SEPT. 23****Astronomy Seminar**

The Global Hubble Constant. Dr. N. Visvanathan, Mount Stromlo/Siding Spring Observatories, Canberra, AU. Geophysics/Astronomy 260 at 4pm. Coffee at 3:45pm. Call 2-6706/2-2267.

**B.C. Cancer Research Seminar**

Retrovirus-Like Promoters In The Human Genome. Miss Anita Feuchter, Terry Fox Lab, BC Cancer Agency. BCCRC Lecture Theatre, 601 W. 10th Avenue at 12pm.

**Biochemistry/Molecular Biology Seminar**

Discussion group. Neuronal Regulation Of Schwann Cell Proliferation And Differentiation. Dr. Gerry Weinmaster, Salk Institute. IRC#1 at 3:30pm. Call Ivan Sadowki at 822-4524.

**TUESDAY, SEPT. 24****Faculty Development Program**

Teaching Large Classes: Maximizing Your Effect Upon Student Learning. Graham Kelsey, Admin/Higher Education. Buchanan A-204 from 3:30-5pm. Registration required. Call 822-9149.

**Modern Chemistry Lectures**

Developments In Automated Flow-Injection Analysis. Dr. Adrian Wade, Chemistry. Chemistry B250 at 1pm. Refreshments from 12:40pm. Call 822-3266.

**Botany Seminar**

The Demography Of *Iridaea Splendens*. Leonard Dyck, MSc. candidate, UBC. BioSciences 2000 from 12:30-1:30pm. Call 822-2133.


**Statistics Seminar**

Estimation Of The Extremal Index Function And The Distribution Of The Maximum Of A Stationary Dependent Sequence. Dr. Harry Joe, Statistics. Angus 223 at 4pm. Call 822/4997 or messages 822-2234.

**Medical Genetics Seminar**

Prohormone Processing Enzymes In Yeast, Nematodes And Man. Ken Peters, BSc. graduate student. IRC #1 from 4:30-5:30pm. Refreshments at 4:15pm. Call 822-5312.

UBC Reports is the faculty and staff newspaper of the University of British Columbia. It is published every second Thursday by the UBC Community Relations Office, 6328 Memorial Rd., Vancouver, B.C. V6T 1Z2. Telephone 822-3131. Advertising inquiries: 822-6163. Managing Editor: Steve Crombie. Art Editor: Paula Martin. Contributors: Ron Burke, Connie Elliott, Abe Heller, Charles Ker and Gavin Wilson.

 *Please recycle*

**CALENDAR DEADLINES**

For events in the period October 7 to October 19, notices must be submitted by UBC faculty or staff on proper Calendar forms no later than noon on Tuesday, September 24 to the Community Relations Office, Room 207, 6328 Memorial Rd., Old Administration Building. For more information call 822-3131. The next edition of UBC Reports will be published October 3. Notices exceeding 35 words may be edited.

**Brown Bag Seminar**

Indonesian Development In Agriculture. Dr. H. Didung Abdul Adjid, Director-General of Food Crops, of Agriculture, Government of Indonesia. Asian Centre 604 at 12:30pm. Call 822-4688.

**Oceanography Seminar**

Geostrophic Adjustment In A Layered Ocean With Step Topography. Andrew Willmott, Exeter University, England. BioSciences 1465 at 3:30pm. Call Susan Allen at 822-2828.

**Law Lecture**

Canadian Constitutional Reform. Lucien Bouchard, leader Bloc Quebecois, former Minister, Environment Canada. Curtis 101 at 5:30pm. Call 822-3066.

**WEDNESDAY, SEPT. 25****Geography Colloquium**

Hydrology/Hydraulics/Sediment Transport Of The Pleistocene Missoula/Lake Bonneville Floods In The Pacific Northwest. Jim O'Connor, US Geological Survey. Geography 201 at 3:30pm. Refreshments at 3:25pm. Call 822/2985/2663.

**Applied Mathematics Colloquium**

Quasi-periodic Phenomena In Forced And Coupled Oscillations. Dr. Wayne Nagata, Mathematics. Math 104 at 3:45pm. Call 822-4584.

**Orthopaedics Grand Rounds**

Topic TBA. Division of Oncology. Dr. C.P. Beauchamp, Chair. Eye Care Centre Auditorium at 7:30am. Call 875-4646.

**Microbiology Seminar Series**

Biofouling Caulobacters: A Question Of Sticking Around. Dr. John Smit, Microbiology. Wesbrook 201 from 12:30-1:30pm. Call 822-6648.

**Wednesday Noon Hour Concert**

Valerie Siren, soprano; Karen Enns, piano. School of Music Recital Hall at 12:30pm. Admission: \$2 at the door. Call 822-5574.

**THURSDAY, SEPT. 26****Physics Colloquium**

Membranes And Random Surfaces. Dr. Michael Wortis, Physics, SFU. Hennings 201 at 4pm. Call 822-3853.

**Pharmacology Seminar**

Role Of Neuropeptides In The Modulations Of Spinal Nociception. Dr. Ruth Cridland, Physiology. IRC #2 from 11:30am-12:30pm. Call 822-2575.

**Obstetrics/Gynecology Research Seminar**

Cancelled. Call 875-2334.

**Faculty Development Seminar**

Student Learning Needs: Designing A Lesson Plan Which Reflects Them. Eugene Hrushowy, Professional Development Consultant, Douglas College. Registration required. Buchanan A-204 from 3:30-5pm. Call 822-9149.

**Graduate Scholarships Day**

Information session for all grad students and 4th yr. undergrads. Meet representatives from the Dean's office/SSHRC/NERC/Science Council of BC. Grad Student Centre Ballroom from 8:45am-4:30pm. Call 822-4556.

**FRIDAY, SEPT. 27****Obstetrics/Gynecology Grand Rounds**

Fallopian Tube Catheterization For Proximal Tubal Obstruction. Dr. Miles Novy. University Hospital, Shaughnessy Site D308 at 8am. Call 875-2171.

**Teaching Assistants Seminar**

Positive Grading Practices - Evaluating Student Work. For TAs whose major role is marking papers, essays or problem sets. Faculty Development Program. Graduate Student Centre from 4-5:30pm. Call 822-9149.

**Chemical Engineering Seminar**

Microvascular Exchange. Ian Gates, graduate student. ChemEngineering206 at 3:30pm. Call 822-3238.

**Fall Clinical Day/A.J. Elliott Lecture**

Ocular Trauma/Oculoplastics. Dr. John L. Wobig, assoc. clinical professor, Ophthalmic, Plastic/Reconstructive Surgery, Casey Eye Institute, Oregon Health Sciences U. Eye Care Centre Auditorium from 7:30am-4:30pm. Call 875-4555, local 6127.

**Forestry Seminar**

What Do Foresters Value? Prof. J.E. Coufal, NY State U., Albany. MacMillan 166 from 12:30-1:30pm. Call 822-3553.

**Paediatrics Grand Rounds**

Review Of Mortality: The BCCH Experience. Dr. J. Dimmick, Associate Dir., Pathology. G.F. Strong Auditorium at 9am. Call 875-2118.

**SATURDAY, SEPT. 28****Vancouver Institute Saturday Night Lecture**

Koerner Memorial Lecture. The KGB: From Lenin To Gorbachev. Dr. Christopher Andrew, Dir. of Studies in History, Corpus Christi College, Cambridge, England. IRC #2 at 8:15pm. Call 822-5675.

**Rehab Medicine Alumni Event**

Rehab Alumni/Friends Broomball Challenge and Family Ice-skating. Admission: a donation for the Vancouver Food Bank. Kits Community Centre, 2690 Larch at 7pm. Call 732-5180.

**SUNDAY, SEPT. 29****Nursing Alumni Brunch**

Alison Taylor, guest speaker, talks on the mentoring program. Cecil Green Park at 11:15am. Tickets: \$10. Reservations requested. Call 822-3313.

**MONDAY, SEPT. 30****Applied Mathematics Colloquium**

An Operator Splitting Method For The Wigner-Poisson Equation. Dr. Anton Arnold, Mathematics, Purdue University, West Lafayette, IN. Math 104 at 3:45pm. Call 822-4584.

**Paediatrics Research Seminar Series**

Interactive Effects Of Chronic Maternal Alcohol/Cigarette Smoke Exposure On Growth Of The Offspring. Dr. Joseph Leichter, Family/Nutritional Sciences, Children's Hospital 3D16/ABC at 12noon. Refreshments at 11:45am. Call 875-2492.

**History Seminar**

Koerner Memorial Lecture. The KGB And The Cambridge Moles. Dr. Christopher Andrew, Dir. of Studies in History, Corpus Christi College, Cambridge, England. Buchanan A-104 at 12:30pm. Call 822-5675.

**History Lecture**

Koerner Memorial Lecture. Researching The Intelligence Archives In The UK And The USSR. Dr. Christopher Andrew, Dir. of Studies in History, Corpus Christi College, Cambridge, England. Buchanan Penthouse at 3:30pm. Call 822-5675.

**BC Cancer Research Seminar**

Computed Tomography-A Method To Predict In Vivo Lung Toxicity After Irradiation. Dr. Ellen El-Khatib, Senior Clinical Physicist, BC Cancer Agency. BCCRC Lecture Theatre, 601 W. 10th at 12pm. Call 877-6010.

**TUESDAY, OCT. 1****Space Station Science Symposium**

Materials/Fluid Sciences In Reduced Gravity with Prof. Yves Malmejac, Centre De Etudes Nucleaires de Grenoble; Drs. Hisam Azuma, National Space Development Agency, Japan; Earl Cook, Science Research Lab, 3M Corp.; Charles Wood, U. of Toronto. SUB Theatre. Dr. Don Brooks 822-7081.

**Botany Seminar**

Conditional Recognition Of Cauliflower Mosaic Virus Polyadenylation Signal. Dr. Helene Sanfacon, Agriculture Canada Research Station, Vancouver. BioSciences 2000 from 12:30-1:30pm. Call 822-2133.

**Lectures In Modern Chemistry**

The Application Of Chemistry To The Examination Of Works Of Art. Dr. Suzanne Q. Lomax, National Gallery of Art, Washington, DC. Chemistry B250 at 1pm. Refreshments from 12:40pm. Call 822-3266.

**University Computing Services Workshops**

Introduction To Micros with Jim Stewart. Fee: Students \$50, others \$37.50. UCS Annex 1 from 9:30am-12:30pm.

Introduction To Unix with Alistair Blachford. Continues Oct. 3/8. Fee: Students \$20, others \$60. Computer Science 460 from 12:30-2:20pm.

Registration for both, Computer Sciences 209. Call 822-8938.

**Statistics Seminar**

Simultaneous/Sequential ROC Analysis For Multiple Diagnostic Tests. Raymond Fang, Statistics. Angus 223 at 4pm. Call 822-4997.

**Medical Genetics Seminar**

Gender Abnormalities In British Columbia. Dr. Barbara McGillivray, acting dir., Clinical Genetics Services. IRC #1 from 4:30-5:30pm. Refreshments at 4:15pm. Call 822-5312.

**History Lecture**

Koerner Memorial Lecture. The Growth Of Intelligence Collaboration In The Twentieth Century: The Experience Of The English-speaking World. Dr. Christopher Andrew, dir. of Studies in History, Corpus Christi College, Cambridge, England. Buchanan A-104 at 12:30pm. Call 822-5675.

**Oceanography Seminar**

Energy And Sinking Rates Of Marine Diatoms. Anya Waite, DOUBC. BioSciences 1465 at 3:30pm. Call Susan Allen at 822-2828.

**Faculty Women's Club General Meeting**

Speaker: Dr. C. Lynn Smith, Dean of Law. Babysitting available. Cecil Green Park at 1pm. Call 222-1983.

**WEDNESDAY, OCT. 2****Space Station Science Symposium**

Observing/Sensing Sciences with Profs. Brian McBreen, University College, Dublin; Koryo Miura, Int. Space/Astronautical Science, Japan; Dr. Rod Tennyson, U. of Toronto Institute for Aerospace Studies. SUB Theatre. Dr. Don Brooks 822-7081.

**Biotechnology Seminar**

Physiological State Control Of Bioprocesses Using Expert System: Application To Recombinant E. Coli For Phenylalanine Production. Dr. K. Konstantinov, Int'l. Center of Coop Research in Biotechnology, Osaka U., Japan. IRC #5 at 3:30pm. Call Dr. R. Turner at 822-6132.

**September 22 –  
October 6****Orthopaedics Grand Rounds**

Wrist Arthroscopy. Dr. P.T. Gropper, Chair. Eye Care Centre Auditorium at 7:30am. Call 875-4646.

**Kaspar Naegele Memorial Lecture**

Groping For Survival: Combining Sociology, Ecology And Feminism? Dr. Margrit Eichler, Ontario Institute for Studies in Education. Anthropology/Sociology 207-209 at 12:30pm. Call 822-5675.

**Wednesday Noon Hour Concerts**

Julia Nolan, saxophone; David Branter, saxophone; Robert Rogers, piano. School of Music Recital Hall at 12:30pm. Admission: \$2 at the door. Call 822-5574.

**Microbiology Seminar Series**

Biological Work Protection Against The Staining Fungi: Past/Present/Future. Dr. Colette Breuil, Forestry, UBC. Wesbrook 201 from 12:30-1:30pm. Call 822-6648.

**Geography Colloquium**

A Human Factors Approach To Road Safety Studies. Gerry Brown, assoc. professor, Civil Engineering. Geography 201 at 3:30pm. Refreshments at 3:25pm. Call 822-2985/2663.

**Forestry Seminar**

Longterm Effects Of Forest Fertilization On Nitrogen Cycling. Drs. Cindy Prescott/Morag McDonald, Forest Sciences. MacMillan 166 from 12:30-1:30pm. Call 822-3553.

**THURSDAY, OCT. 3****Space Station Science Symposium**

Life Sciences In Space with Prof. Masamichi Yamashita, Inst. Space/Astronautical Science, Japan; Drs. Larry Young, Man-Vehicle Laboratory, MIT; Augusto Cogli, Institut fur Biotechnologie, Gruppe Weltraumbiologie, Zurich; Barry Glickman, Centre Environmental Health, Victoria. SUB Theatre. Dr. Don Brooks 822-7081.

**Faculty Only Seminar**

Using Consumer Markets To Regulate The Environment. Prof. David Cohen, Law. Curtis 149 at 12:30pm. Call 822-4232.

**Physics Colloquium**

Particle Physics On Mass Scales Below 1 Micro-electronvolt? Dr. Eric Addeberger, U. of Washington. Hennings 201 at 4pm. Call 822-3853.

**Pharmacology Seminar**

Alpha-Mediate Signal Transduction/ Vasoconstriction. Dr. Reza Tabrizchi, Pharmacology/Therapeutics. IRC #2 from 11:30am-12:30pm. Call 822-2575.

**Experimental Medicine Seminar**

Novel Approaches To Interleukin-3 Therapy. Dr. Amanda Jones, Biomedical Research Centre. University Hospital, UBC Site GF-279 from 4:30-5:30pm. Call 882-7215.

**Economics Seminar**

Topics In The Estimation Of Time Series Models. Max King, Monash U. Australia/ U. of California, San Diego. Brock 351 from 4-5:30pm. Call 822-2876.

**President's Lecture On Psychology**

The Cycle Of Violence And Beyond: The Long-term Sequelae Of Child Abuse And Neglect. Dr. Cathy Spatz Widom, School of Criminal Justice, State University of New York, Albany. Kenny 2510 at 12:30pm. Call 822-5675.

**Great Teachers Symposia**

Faculty Development Program. Symposium panel will consist of past/present winners of university teaching prizes who will address issues surrounding teaching/learning. Angus 104 from 3:30-5pm. Registration required. Call 822-9149.

**Kaspar Naegele Memorial Lecture**

The Legal Construction Of Fatherhood. An Overview Of Canadian Law. Dr. Margrit Eichler, Ontario Institute For Studies In Education. Buchanan A-102 at 12:30pm. Call 822-5675.

**Kaspar Naegele Memorial Lecture**

Discussion: Groping For Survival: Combining Sociology, Ecology And Feminism?. Dr. Margit Eichler, Ont. Institute For Studies In Education. Anthropology/Sociology 207/209 at 4pm. Call 822-5675.

**University Computing Services Workshop**

QuickStart: MS-DOS For Students with Thochin Chua. Fee: \$8.95. UCS Annex 1 from 12:30-1:30pm. Register in Computer Sciences 209. Call 822-8938.

**UBC Symphony Concert**

Jesse Read, conductor. Old Auditorium at 12:30pm. Admission: free. Call 822-5574.

**FRIDAY, OCT. 4****Paediatrics Grand Rounds**

Ecmo: Who Needs It? Dr. A. Solimano, clinical assoc. professor. G.F. Strong Auditorium at 9am. Call 875-2118.

**Chemical Engineering Seminar**

Title TBA. Speaker TBA. ChemEngineering 206 at 3:30pm. Call J. Piret at 822-5835.

**University Computing Services Workshop**

Computer Keyboard Skills with Jim Stewart. Fee: Students \$37.50, others \$50. UCS Annex 2 from 1:30-2:30pm. Register in Computer Sciences 209. Call 822-8938.

**School of Music Concert**

UBC Contemporary Players, Eric Wilson/Peter Hannan, directors. Music Bldg. Recital Hall at 12:30pm. Admission: free. Call 822-5574.

**UBC Symphony Concert**

Jesse Read, conductor. Old Auditorium at 8pm. Admission: free. Call 822-5574.

**SATURDAY, OCT. 5****Vancouver Institute Saturday Night Lecture**

A World Turned Upside Down. Prof. Ivan L. Head, O.C., Q.C., President, International Development Research Centre, Ottawa. IRC #2 at 8:15pm. Call 822-5675.

**NOTICES****Carpool Matching**

A service for faculty, staff and students. Call Karen Pope, Dean's Office, Applied Science at 822-3701 and find your area match.

**Call For Former UBC Athletes**

Athletics is updating its mailing list of former athletic team players: originators/contributors to programs in place today. If you qualify or are knowledgeable in the location of any other past player, call 822-8921 after 4:30pm.

**Frederic Wood Theatre**

Until Sept. 28 only: 5th Of July by Lanford Wilson. Directed by John Wright. FWT at 8pm. Adults \$10, Students/Seniors \$7. Tickets available at the Theatre Building 207 or call 822-2678.

**Health Sciences Bookshop Open Saturday**

The Bookshop is open Mon.-Sat. from 9:30am-5pm in the Medical Student/ Alumni Centre at 2750 Heather St. corner of 12th Ave. Call 879-8547.

**Research Conference Deadline**

Registration ends Sept. 30 for the School of Nursing's one day conference scheduled for Oct. 8 at the Graduate Student Centre: Gaining Momentum In Research: Focus On Nursing Initiatives. All welcome. Fees vary from \$21.40 for lunch only to \$42.80 for the full day. Call 822-7453.

**Executive Programmes**

Business Seminars. Sept. 23-24: Speed Reading, \$595. Sept. 25-26: Construction Claims, \$950. Oct. 3-4: Executive's Computer, \$550 and Financial Statement Analysis, \$595. E.D. MacPhee Executive Conference Centre. Call 822-8400.

**English Language Institute Evening Classes**

ESL offers Conversation Skills, Advanced Discussion, Speaking/Debating, Fluency/Pronunciation, Writing/Grammar, Practical Writing for Business, and TOEFL Preparation, from 7-9pm. Classes begin Sept. 30 and Oct. 1. Call 222-5208.

Professional Development Series For Practicing Language Teachers October Workshops: Teaching English in Japan, Videotaping in the Language Class and Stimulating Student Talk in the Lang. Class. Tuesday evenings from 7-9pm. Call 222-5208.

**Reading, Writing/Study Skills Centre**

Register by Sept. 30 for non-credit courses in grammar, composition, study skills, reading for speed/comprehension, business writing and ECT preparation. Call 222-5245.

**Language Programs/Services**

Beginner, intermediate or advanced levels of conversational French, Spanish, Japanese, Mandarin and Cantonese start the week of Sept. 24. Non-credit, 10-weeks, Tuesday/Thursday evenings and Saturday mornings. Call 222-5227.

**Statistical Consulting/Research Laboratory**

SCARL is operated by the Department of Statistics to provide statistical advice to faculty and graduate students working on research problems. Forms for appointments available in Ponderosa Annex C-210. Call 822-4037.

**High Blood Pressure Clinic**

Volunteers (over 18 years) needed, treated or not, to participate in clinical drug trials. Call Dr. J. Wright or Mrs. Nancy Ruedy in Medicine at 822-7134.

**Seniors Hypertension Study**

Volunteers aged 60-80 years with mild to moderate hypertension, treated or not, needed to participate in a high blood pressure study. Call Dr. J. Wright or Nancy Ruedy in Medicine at 822-7134.

**HIV Research Program**

Volunteers needed for a study of the oral absorption of 3TC, a new anti-HIV drug. Must be HIV positive with a CD4 count between 200-500 and be free of medications for minimum 3 weeks. Requires a 2-night stay on two separate occasions, one week apart. Financial compensation. Contact: Patricia Fulton, Clinical Trials Coordinator, Infectious Disease Clinic, St. Paul's Hospital. Call 631-5054.

**Herpes Research Study**

Participants needed for treatment studies of shingles (herpes zoster) and first herpes simplex infections, with new antiviral agents. Also ongoing study for males 18-45 years with recurrent herpes simplex. Dr. Stephen Sacks, Medicine, sponsoring physician. Call 822-7565 or leave your name/number at 687-7711, pager 2887.

**Heart/Lung Response Study**

At rest and during exercise. Volunteers age 45-75 years, all fitness levels, required. No maximal testing. Scheduled at your convenience. Call Fiona Manning, School of Rehab Medicine, 822-7708.

**Lung Disease Study**

Subjects with emphysema or fibrosis needed to investigate means of improving lung function without drugs. Call Fiona Manning, School of Rehab Medicine, 822-7708.

**Bereavement Study**

Participants needed for a study investigating the long-term effects of adolescent bereavement. Must have lost either parent at least five years ago, and have been between 13 and 17 years at the time of the loss. Two one-hour interviews required. Please call Ann McKintuck in Nursing at 224-3921/3999.

**Retirement Study**

Women concerned about retirement planning needed for an 8-week Retirement Preparation seminar. Call Sara Comish in Counselling Psychology at 822-5345.

**Office Workers Research Study**

Women volunteers needed for a Counselling Psychology study on work and stress. Required, completion of one questionnaire per month for 3 months. Call Letty Toews at 222-2060.

**Personality Study**

Volunteers aged 30 or more needed to complete a personality questionnaire. Required, 2 visits, about 3 hours total. Participants receive a free personality assessment and a \$20 stipend. Call Janice in Dr. Livesley's office, Psychiatry, Detwiller 2N2, 822-7895.

**Depression Study**

Participants needed for study researching a new anti-depressant medication. Depression sufferers, 18-65 years. Call Doug Keller in Psychiatry at 822-7318.

**PMS Research Study**

Volunteers needed for a study of an investigational medication to treat Pre Menstrual Syndrome. Call Doug Keller, Psychiatry, University Hospital, Shaughnessy site at 822-7318.

**Hair Loss Research**

Women aged 19-49 years experiencing moderate hair loss, crown area only, are needed for study. Must be able to attend 1-2 times weekly for 9 months. Honorarium paid. Call Sherry in Dermatology at 874-8138.

**Dermatology Acne Study**

Volunteers between 14-35 years with moderate facial acne needed for 4 visits during a three month period. Honorarium paid. Call Sherry at 874-8138.

**Stress/Blood Pressure Study**

Learn how your body responds to stress. Call Dr. Wolfgang Linden in Psychology at 822-3800.

**Surplus Equipment Recycling Facility**

All surplus items. Every Wednesday, 12-3pm. Task Force Bldg., 2352 Health Sciences Mall. Call 822-2813.

**Student Volunteers**

Find an interesting and challenging volunteer job with Volunteer Connections, Student Counselling and Resources Centre, Brock 200. Call 822-3811.

**Narcotics Anonymous Meetings**

Every Tuesday (including holidays) from 12:30-2pm, University Hospital, UBC Site, Room M311 (through Lab Medicine from Main Entrance). Call 873-1018 (24-hour Help Line).

**Fitness Appraisal**

Administered by Physical Education and Recreation through the John M. Buchanan Fitness and Research Centre. Students \$25, others \$30. Call 822-4356.

**Faculty/Staff Badminton Club**

Fridays from 6:30-10pm in Gym A of the Robert Osborne Centre. Cost is \$15 plus library card. Call Bernard at 822-6809 or 731-9966.

**Neville Scarfe Children's Garden**

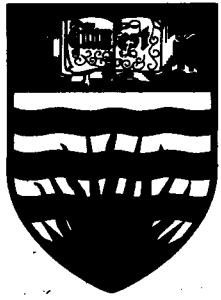
Located west of the Education Building. Free admission. Open year round. Families interested in planting, weeding or watering the garden, call Jo-Anne Naslund at 434-1081.

**Botanical Garden**

Open from 10am-6pm daily. Free admission on Wednesdays. Call 822-4208.

**Nitobe Garden**

Open from 10am-8pm daily. Free admission on Wednesdays. Call 822-6038.



# Interim Report from Task Force on Waste Reduction, Recycling and Re-use

## Background

Throughout the world, environmental concerns have risen to the top of the public policy agenda. Governments, organizations and individuals are increasingly aware of the adverse consequences resulting from a continuing neglect of our environment and actively pursuing alternatives designed to sustain, enhance and enrich it for future generations.

In as large and complex an institution as The University of British Columbia, there are many steps that can be taken to reduce waste and encourage recycling. President, David Strangway, therefore, directed that a task force be established under my chairmanship to:

**Review waste recycling programs now in place at UBC, assess options being exercised at other universities, make policy recommendations for consideration by the University's Board of Governors, and identify for consideration by the administration waste recycling opportunities.**

To address the many dimensions of the issue, experience and expertise was sought from a variety of academic disciplines and administrative units throughout the University.

Membership on the task force consists of:

- A. B. Gellatly (Chair)
- Vincent Grant, Surplus Equipment Recycling Facility
- Alan Artibise, Community and Regional Planning
- Keith Bowler, Purchasing Department
- Anna Brown, Student
- Joanne Gislason, Student
- Wayne Greene, Occupational Health and Safety
- Iva Mann, Greater Vancouver Regional District
- Mary Risebrough, Student Housing and Conferences
- Chuck Rooney, Plant Operations
- Guy Ferrari, Plant Operations
- Christine Samson, Food Services
- John Smithman, Parking and Security Services
- Jim Atwater, Civil Engineering
- Victor Lo, Bio-Resource Engineering
- Brenda Jagroop, Waste Management
- John Chase, Executive Assistant to the Vice-President, Administration and Finance

The Task Force has held seven meetings. It became evident early on that the tasks could be carried out best by forming subcommittees to deal with specific issues. Nine subcommittees were formed. The purpose of this report is to describe the progress to date of each of the subcommittees.

## Special Wastes

### Objectives:

- a. Identify all special waste streams, not just those compatible with disposal through incineration (Special Waste Regulations).
- b. Review recycle/recover/reuse options for the principal waste streams.
- c. Identify present and future needs in terms of quantities of materials that require incineration (such as biological, contaminated materials, solvents and animal carcasses).
- d. Evaluate incinerators that can meet the identified needs; solicit advice and obtain cost estimates for incinerator replacement; liaise with regulatory agencies which will be required to licence, inspect and monitor the facility.

### Task Force Recommendations:

The task force was established from a collection of experts available from the campuses of the three B.C. universities: UBC, SFU and

U.Vic. The objective was to develop a joint approach to waste disposal, possibly leading to a joint facility for some aspects of waste disposal. It included representatives of the waste generators, university regulators, and engineers specialised in evaluation of disposal options. The recommendations of the task force, published in August 1989 [1], may be paraphrased as:

- i. The establishment of a comprehensive recycling program for paint wastes and other recyclables such as motor oil.
- ii. The establishment of a waste management and tracking system which would follow waste from cradle to grave.
- iii. The establishment of a new tri-university incineration and waste management facility to manage many wastes and to incinerate those materials for which incineration is the best disposal option. This facility's emissions will meet the most stringent existing and anticipated North American standards, and will be based upon the most advanced available technology. It will be located on the site of the current UBC Waste Disposal Facility at the South end of the UBC campus.
- iv. Formation of an advisory committee, composed of university officials and community representatives which would have access to the proposed facility, including operational records, and would make policy and operational recommendations.

The report also made specific recommendations about the technology which should be installed for incineration, and about operational protocols such as climatic controls which would minimise environmental impact.

The recommendations of the task force were accepted by the universities. It was determined that they could be implemented best by an engineering consultant acting in concert with the university's experts. (The project was of such magnitude, requiring substantial civil, mechanical, and chemical engineering expertise that the university was not optimally structured for its implementation. However, the universities' engineering experts were retained in a smaller task force to ensure that the original task force's recommendations were implemented both in letter and spirit, and to lend substantial technical expertise on incineration, regulatory and public issues to the consultant.)

### Project Continuation:

After reviewing the proposals and credentials of over twenty consultant engineering companies, CH2MHill, a group with substantial experience in the area of hazardous and municipal waste disposal was retained as project engineers and consultants. This occurred in Fall 1989. They were initially commissioned to produce a pre-design report which would include accurate estimates of facility cost, and a facility design. This report typically precedes final detailed design and tendering. Technologically, the pre-design report incorporated updated technical recommendations which followed from a trip made by representatives of CH2MHill and UBC to the most recently designed North American facilities. This trip was organized to discuss unpublished practical and operational details associated with the most modern incineration, recycling and pollution control technology. The proposed UBC facility will incorporate the best of the new technology which was observed as well as innovative new concepts.

The pre-design report [2] was completed in August 1990, the product of substantial work by CH2MHill and approximately monthly meetings with the university's technical team. At the same time, recognising the need to involve the university and Point Grey communities in the process while substantial flexibility remained in technical and operational decisions, the Advisory Committee recommended by the Univer-

sity Task Force was formed. The membership of this committee includes a technical expert in toxicology as well as representatives of the rate payers. The committee elected as its chairman Dr. Webber, the former dean of the Faculty of Medicine at UBC. The advisory committee has met twice to this date and has requested technical information with respect to the incineration process and emissions. Meanwhile, the technical work on the process is ongoing leading up to the tendering of the major components. This will occur shortly.

## Research and Develop Markets

### Objectives:

- a. To determine which materials and supplies create major hazards to the environment.
- b. To develop reliable sources of environmentally sensitive replacement materials.
- c. To coordinate plans with other public sector bodies, e.g. BC Purchasing Commission, Universities and Colleges.
- d. To develop markets for surplus and waste materials.

### Action to Date:

1. As paper products form 50% or more of our waste, our focus has been:
  - a. To discover reliable sources for recycled\* and unbleached papers
  - b. Determine current products for which recycled\* materials can easily be substituted.

\*Refers to at least 50% reused material of which at least 5% of the total is post-consumable waste.

  - \* All 1990 exam books were made of recycled paper.
  - \* Most on-campus newsletters are now being printed on recycled paper.
  - \* Eight sets of university forms requiring GST changes will be printed on recycled paper.
  - \* Many departments are using recycled paper in their photocopiers; however, problems still exist for high speed copiers and duplicators, and the paper is 15% more expensive.
  - \* UBC's major paper contracts are open for rebidding in March of 1991. In the meantime, all interim paper and printing requirements are being quoted in both virgin and recycled materials.
  - \* Media Services are developing standards for university stationery to be in both recycled and/or virgin fibres. This will be consistent with the graphics standards manual.
  - \* All buyers in the purchasing department have been instructed to search for the use of recyclable materials and supplies wherever possible.
2. SERF and the University Bookstore have now established a trade-in program which allows for the exchange of coated paper (Thermoc) fax machines for plain paper (Laser) machines.

### Future Objectives 1991:

1. In contracting for fine paper due April 1991, UBC will be working with other universities and public sector bodies to develop a cooperative contract for recycled and unbleached paper products with a prime objective of keeping prices at no greater than the current virgin fibres.
2. Purchasing is researching converting most photocopiers from one-sided to two-sided copying capability plus the ability to copy from coloured paper. Both reports are expected to be completed by October 1991.
3. Once the waste stream analysis report is completed by the consultants, we will be working on their recommendations.
4. Once implementation of all of the paper recycling program has been completed, we will tender the sale of our waste paper in order to maximize our return.

## Transportation Committee

### Objective:

Investigate and recommend on issues involving automobile commuting, city and regional transportation.

### Action to Date:

1. Introduction of two bus services have offered alternatives to the automobile for moving from one campus destination to another. The parking shuttle bus runs a scheduled service on a fixed route from 8 AM to midnight daily. The Security bus service provides on request a personal taxi type service, 4 PM to midnight, from any on-campus location to another.
2. Meetings are continuing with Operations Managers from B.C. Transit to encourage their cooperation in designating UBC a viable market for new routing services and access to the anticipated Sky Train link.
3. Parking and Security Services support the Alma Mater Society car pool program through offering cut-rate parking in a preferred parking lot to members of their program. Portable permits for the carpool lot will be sold starting in the Fall, 1991.
4. Along with SFU, UBC is participating in a pilot car pool project being initiated by the B.C. Department of Energy.

### Recommendations of the Committee:

1. Encourage improvements to existing transportation services. As campus parking fees rise, good alternative forms of transit will gain the attention of the commuter. B.C. Transit should be enlisted to help us meet our goals.
2. Promote the commercial attractiveness of UBC to interest the entrepreneur with new methods of transportation (trains, boats?)
3. Promote cycling by providing bike shops, routes, special events, and shelters.
4. Promote carpools through convenience incentives, commuter matching services, and awareness campaigns. Car pools will succeed only if commuters receive enhanced convenience. Better parking locations and substantial parking price cuts for the pool car, together with emergency transportation such as motor pool cars or taxi coupons may lure a driver from his car. We recognize that many "single driver" cars seen at UBC gates may have dropped passengers before arriving here.

## Conversion of UBC Vehicles

### Objective:

Investigate and recommend on the feasibility, economics and timing of converting UBC-owned vehicles to clean fuels.

### Actions to Date:

The sub-committee has focused on two alternative fuels: Liquid Propane Gas and Compressed Natural Gas. Both produce similar amounts of emission and have comparable initial installation costs for vehicle conversion. However, they differ greatly in range available per fill-up, and cost of refuelling stations. Compressed Natural Gas offers an operating cost advantage over gasoline, but refuelling stations require expensive compressor systems to disperse the fuel. Further, the driving range is about 75% less than gasoline resulting in productivity losses due to refuelling time required. Liquid Propane Gas also offers an operating cost advantage relative to gasoline; however, the fuel is a by-product of natural gas and refinery operations and therefore more prone to fluctuate.





# Interim Report from Task Force on Waste Reduction, Recycling and Re-use

tions in world oil prices. Driving range is similar to that of gasoline and re-fuelling stations are less expensive than those for Compressed Natural Gas.

The committee is presently exploring several areas of consideration before recommending an alternative fuel for UBC vehicles. These areas are:

- incentives/available grants/funding options
- conversion considerations; establish benchmarks for suitable vehicles
- types of conversion systems available.
- Pros/cons of different systems.
- CNG/LPG considerations. Compressor station options.
- examination of research projects currently in progress.
- economics of program
- alternative lubricating products available
- concept of providing public with alternative fuel refilling station at UBC versus promotion of public transit to faculty, students, and staff.

## Energy Conservation

### Objective:

Investigate and develop energy saving programs and consider campus energy generating systems.

### Actions to Date:

1. Because of energy management programs and projects currently underway by the Department of Plant Operations which basically are being carried out under the same terms of reference as those of the committee, there has not yet been a need for active involvement by the committee. However, the committee is expected to become more active at a later date when data and results are available from those programs and projects.

2. Energy conservation measures have been ongoing at UBC since the late 1970's. Major programs have been undertaken to reduce and more efficiently manage energy use. Results of these programs include installation of a computer-based building management system to monitor and control facilities energy consumption, reduction of lighting energy use, and reduction of steam required for building heating.

3. Currently Plant Operations has a major project underway with the objective of reducing electrical energy use by 10% by the end of 1992. An engineering study is underway and implementation of the study recommendations is scheduled to begin in February of 1992. Plant Operations is working closely with B.C. Hydro to take advantage of opportunities available under Hydro's Power Smart program.

4. A feasibility study has also been initiated to determine whether cogeneration is a viable option for the University. The Department of Campus Planning and Development and Plant Operations are proceeding with this work and have had input from B.C. Hydro and B.C. Gas.

As a result of a vigorous energy management program and government deregulation of pricing structure in the industry, the University is achieving energy cost savings of \$1.2 million per annum.

## Food Services

### Objective:

To develop recommendations for an ecologically sound food service and strategies to reduce food waste.

### Actions to Date:

#### Disposables

1. Totem Park and Place Vanier Residence Cafeterias are approximately 95% disposable free. Totem Park uses portion

pack beverages and some paper plates at the salad bar.

2. Subway Cafeteria is approximately 95% Styrofoam free. Takeout containers are still Styrofoam. Some product is packaged in clear plastic disposable containers. Subway Cafeteria also uses portion pack beverages and paper plates at the salad and fruit bar.

3. Campus Units. These units are using almost 100% disposables. Styrofoam cups are used, but customers may request paper cups or have their own cups filled. Campus units use all portion pack beverages. Styrofoam containers are used for takeout and soup.

Some solutions to the problem of disposables are as follows:

1. In September 1991, Food Services will offer for sale the following items:
  - a. a 12 ounce reusable Aladdin mug for \$1.95.
  - b. an 8 ounce reusable Aladdin mug for \$1.50.
  - c. a 12 ounce reusable soup container.
  - d. Plastic reusable chopsticks.
  - e. Reusable camp style stainless steel cutlery.

Posters and tent cards have been developed to promote this venture. Also, we hope UBC Reports and the Ubyssy will do an article highlighting Food Service environmental concerns and action.

2. Wooden or cardboard stir sticks are to replace plastic.

3. A portion cream dispenser has been installed at Subway. Bulk cream dispensers have been installed in campus locations thus eliminating the need for small plastic creamers.

4. Bulk condiment containers are also in use at Subway and many Food Service campus locations.

At present, Food Services cannot eliminate the use of Styrofoam in its operations. There is much controversy regarding the relative effects of Styrofoam and paper on the environment. A recent study at the University of Victoria promotes the use of Styrofoam over paper and, closer to home, the Vancouver Parks Board, after extensive study, decided to continue using Styrofoam.

UBC requires disposable service in many of its locations, but careful thought must be given to environmental concerns when planning new operations.

#### Recycling

1. At present, Food Services recycles all pop cans. These are returned to the supplier and the deposit refunded.

2. A cardboard baler is installed in the Student Union Building. This baler is used by the AMS and Food Services and seems to be operating successfully. We are presently studying the possibility of installing balers at other large Food Service locations.

3. Recycling containers, especially for aluminum cans, have been designed and ordered for all locations. These containers will aid in the collection of all pop cans on campus.

4. All computer and office paper is being recycled.

5. Grease from all kitchens is being picked up regularly by a rendering company for downgraded reuse.

6. All large plastic containers from the kitchens are being sold for recycling. These 5 gallon containers are quite in demand.

7. Recycling of glass and some plastics will await the results of the Waste Management Study.

8. A new policy on portion drinks is being developed. It is hoped that the use of tetra packs will be reduced.

#### Other

1. Brown paper bags have replaced plastic at the Mini Marts and for takeout food at all Food Service units.

2. Special attention will be given to the

purchasing of new items to ensure that they are environmentally friendly.

3. A new vending contract is in effect with special emphasis on environmental issues.

It is interesting to note that Totem Cafeteria, with its new meal plan, has reduced waste considerably.

Food waste from kitchens has yet to be studied.

Also, the use of chemicals in Food Services has not been studied except from a safety standpoint.

## Agricultural and Composting

### Objectives:

- a. To develop recommendations for composting food, gardening and agricultural wastes;
- b. To investigate the use of chemicals in horticulture.

### Actions to Date:

1. Identified need for a proper animal waste management system as most are flushed into the sewer system.
2. Identified need to examine converting food wastes into animal feed.
3. Identified need to quantify the amount of food and agricultural wastes following which the committee will consider various treatment utilization alternatives.
4. Considered the desirability of establishing a Bio-Waste Management Centre to relate the existing R&D expertise within the University with the current garden and tree wastes composting operation.

## Education

### Objective:

Plan an ongoing educational program including the area of energy conservation.

### Actions to Date:

This committee will undertake the education of the university community when Task Force recommendations are completed.

## Waste Reduction, Reuse, and Recycling

### Objectives:

- a. Review the current waste management system including conducting a waste audit.
- b. Develop plans for coordinating waste reduction, reuse, and recycling.
- c. Set measurable goals for waste reduction, reuse, and recycling.

### Actions to Date:

1. The committee reviewed the current waste collection and disposal procedures as carried out by the Department of Plant Operations. Highlighted in this review were a number of environmentally sound practices currently in effect including:

- a. A paper recycling program implemented by S.E.R.F. and Plant Operations which is removing a significant percentage of paper from the waste stream.
- b. Composting of vegetative matter for reuse on campus grounds.
- c. Use of recycled motor oil by Plant Operations vehicle fleet.

2. A consensus was reached that because of the committee's broad mandate, it would be desirable to seek assistance from qualified consultants.

3. A detailed Request For Proposal was prepared and eight responses re-

ceived. Four of the responding firms were invited to make presentations to the committee. After the presentations, the committee was unanimous in recommending that negotiations be entered into with the firm of Resource Integration Systems Ltd. (RIS) with the intent of engaging them to assist in the development primarily of environmentally sound waste management procedures as well as other "greening" measures.

4. A contract with RIS has now been signed. Students to assist in the project, ten in total, have been interviewed, selected, oriented, field trained, and are now in the field defining the composition of waste in various locations. In mid-March a waste dump audit was undertaken. This will be followed by a preliminary design report leading to a full program implementation proposal to the University in late spring.

5. The study will include building waste audits, composition of the campus waste stream, collection procedures for recyclable materials, marketing of these materials, reduction and reuse opportunities, and educational and promotional strategies.

6. Following completion of the study and approval of the recommendations, new systems will be implemented on a pilot basis this summer, with full implementation in September.

7. The waste management program is currently collecting paper, cardboard and newsprint for recycling. Approximately 255 campus buildings are served by the paper recycling program, and expansion is continuing.

Comparison of landfill tonnages indicates an average diversion rate of 52 tonnes per month since the beginning of the UBC Recycling Project in June 1990. This represents a cost-avoidance to the University of \$32,000. The estimated diversion is higher than the recorded tonnage of marketed recyclables due to:

a. increased awareness of environmental issues resulting from participation in the recycling program. This has tended to encourage reduction/re-use alternatives and individual recycling initiatives.

b. diversion/recycling activities that cannot be measured accurately.

The amount of recyclables marketed each month is approximately 32 tonnes. This results in an average revenue of \$1,325/month, in addition to the tipping fee cost-avoidance of \$69/tonne. Revenue and cost-avoidance are expected to increase, due to:

- a. increased volume as program expansion continues.
- b. educational efforts aimed at increasing paper recovery and decreasing contamination.
- c. negotiation of more favourable marketing terms based on the high volume currently achieved.
- d. expected increases in tipping fees and proposed material bans at landfill.

The three-year UBC Recycling Project is well into Phase I (establishing paper recycling on campus). The average monthly tonnage of marketed recyclables has increased 350% over the level attained during the pilot project, and growth is continuing. In addition, the waste management office has acted as a resource to encourage individual diversion initiatives within the UBC community.

Planning for Phase II of the project will commence after completion of the Waste Audit report and resulting administrative decisions. Until this time, the waste management program will be focusing on expanding service, increasing recovery, and assisting with community waste reduction initiatives.

# Rare migratory bird gets new habitat

By ABE HEFTER

The Fraser River Delta will continue to be a destination in the yellow-headed blackbird's migratory travel plans.

Construction now under way in the area will create a home for the large and colorful bird, which could potentially lose its only known breeding area in coastal B.C.

The project, in the Iona Island Regional Park, is being spearheaded by Patrick Mooney, an assistant professor in the Plant Science Department's Landscape Architecture Program.

The site is being modelled to include habitat for other marsh nesting songbirds, waterfowl, migratory songbirds and shorebirds.

"The yellow-headed blackbird's only known breeding colony in coastal B.C. will be destroyed by the proposed runway expansion at the adjacent Vancouver International Airport," said Mooney. "A team of consultants and advisors, including an aquatic ecologist, wildlife biologists, engineers, park planners and landscape architects, have conducted ecological modelling within the proposed site which was then designed to accommodate key species."

Working with the Vancouver Natural History Society, Mooney received funds to restore a marsh within the recently created Iona Island Regional Park and to enhance the habitat potential of an adjacent fresh water pond.

"The Fraser River Delta provides habitat for migratory birds, which is

globally significant," said Mooney. "The Canadian Wildlife Service has estimated that the loss of habitat in this area could affect birds from 20 other countries and three continents."

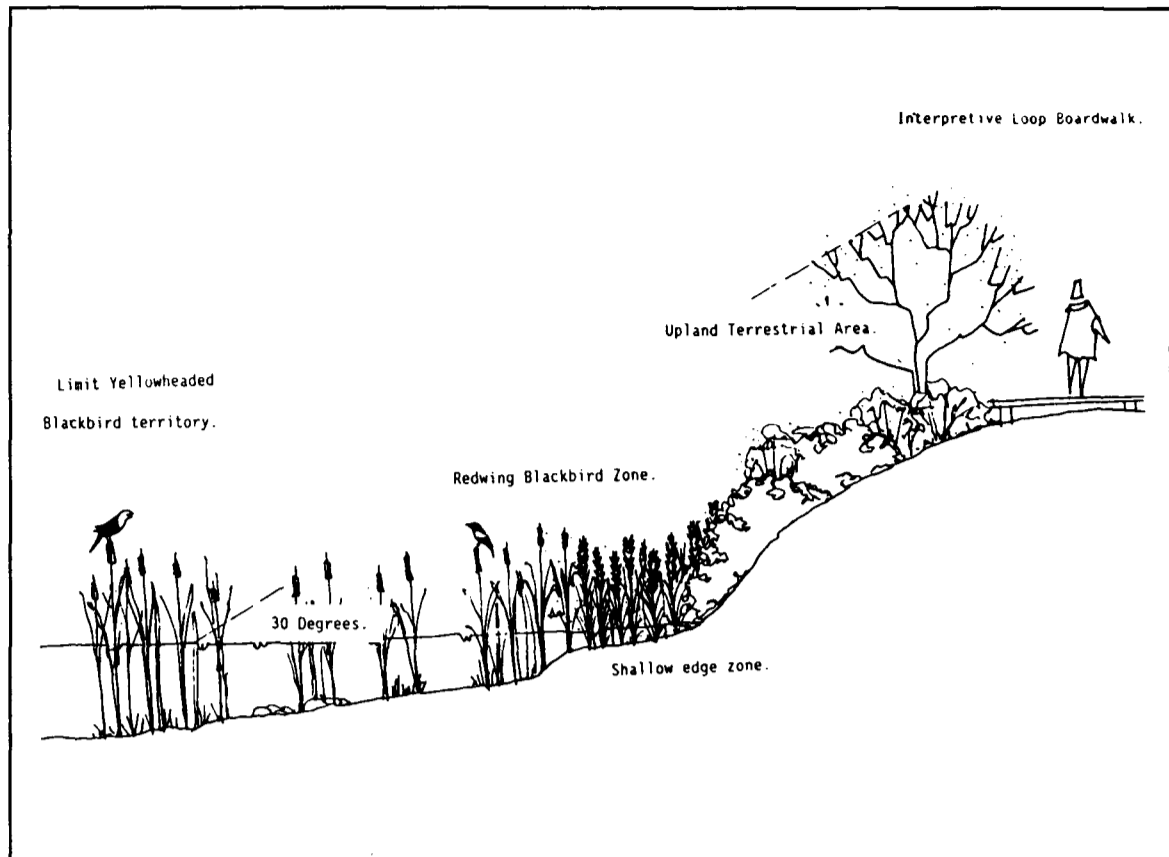
Home for these migratory birds will be a pond created from a flat sandfill site adjacent to the Iona sewage treatment plant — a site that would have eventually been colonized by weeds. Birds are normally attracted to sewage ponds because they are ideal for nesting and feeding. Coupled with the fact that this area is flat and treeless, with plenty of wide open spaces, Mooney said this was an ideal spot to set up what he calls a giant laboratory experiment.

"What we are doing is creating an artificial environment — a generic snackbar and resting place for these migratory birds on their way from Alaska and the Arctic Circle to South America. We will be monitoring and assessing our success for three years after completion."

Gordon Smith, park planner with the Greater Vancouver Regional District, said the project is an excellent example of environment, recreation and industry working hand in hand.

"People will be able to see what happens when a project like this comes together," said Smith. "The GVRD will build a boardwalk through the marsh and naturalists will run tours through the area."

The GVRD will contribute more than \$145,000 to the project. Environment Canada will add almost



An artificial habitat will be created in the Fraser River Delta to simulate the rapidly disappearing nesting habitats of several species of migratory birds. The area will also serve as a nature park for observation and study of the habits of these birds.

\$140,000. Other funding will come from The Vancouver Natural History Society, with a \$31,500 contribution, and the Environmental Youth Corps, which is contributing more than

\$4,400. The project has a proposed completion date of January, 1992.

"There exists a great need to combine our ecological understanding of landscape with practical applications

of land management," said Mooney. "Ultimately, we hope to learn more about ecological principles and technical methods used in implementing landscape restoration projects."

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