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Dentistry team explores implant technique

Denture wearers who are plagued by ill-fitting false teeth now have an alternative.

A new technique developed in Sweden allows a complete bridge of teeth to be secured by five or six posts permanently implanted into the jaw bone. The result is a set of teeth that ecstatic wearers say feel like their own.

The technique, developed in Sweden over the last 20 years, avoids the major problems associated with older implant techniques.

"Implant techniques in the past have had a justifiably bad reputation," said Dr. Monty Reitzik of UBC's Faculty of Dentistry.

"Old implants were biologically unsound. Typically, the gums where the posts protruded from the jaw became infected and the posts loosened and failed. But some wearers were willing to put up with periodic bouts of infection and sometimes constant pain rather than go back to conventional dentures."

The Swedish technique was discovered accidentally by Dr. Per-Ingvar Branemark, director of the Institute of Applied Biotechnology in Gothenburg.

He implanted a hollow titanium post into the bone of a laboratory rabbit to observe changes in bone structure. He discovered that the bone cells died at the comparatively low temperature of about 47 degrees Celsius, which would partly explain why other implant techniques fail since high speed dental drills used to drill holes in the jaw can generate temperatures of 90 degrees.

But he also discovered that the titanium posts could not be removed. They had formed a structural and functional bond with the living bone.

"The precise scientific explanation as to why titanium posts rather than posts made of other material bond so successfully is not known," Dr. Reitzik said.

"It is believed that the bonding is actually with the titanium oxide covering the posts, formed while the pure titanium is exposed to oxygen in the air while the posts are being implanted."

Pioneering basic research on the attachment of gum tissue to titanium has been carried out at UBC's Faculty of Dentistry by Drs. Don Brunette and Tim Gould.

The UBC team, drawn from three of the six departments in the Faculty of Dentistry, trained in the Branemark technique at a special program at the University of Toronto. So far, they have treated 30 patients with considerable success, Dr. Reitzik said.

"Bone, like muscle, increases in mass with

work or exercise or decreases if not used. People who do not have any teeth in their lower jaw, for example, suffer from bone resorption. The amount of bone in their jaw decreases and the gum ridge flattens, leaving little for a denture to hold on to.

"This," he said, "is the major reason why

lower dentures in particular are so hard to fit and why many patients want an alternative."

The Branemark technique takes about six to nine months to complete.

The titanium posts are inserted into the jaw bone beneath the gum and the gums heal over them. When the posts have completely

bonded with the bone structure, the gums are re-opened and a metal fitting is screwed into each post. The fittings protrude into the mouth and patients go onto a soft diet for two weeks while the gums heal. Then a fixed bridge is attached to the fittings.

Dr. Reitzik said in the older techniques, the bridge was attached to the posts immediately after the posts were implanted. The bone, already under stress because of the presence of a foreign object, was subjected to the additional normal stress of chewing and teeth grinding that most people engage in during sleep.

"The Branemark technique does as little damage to the bone as possible. The posts are allowed to bond with the bone undisturbed for three to six months and, because they are underneath the surface of the gum during this period, they are protected from infection.

"The secret of success is the titanium used and the way the posts are introduced to the jaw to encourage bonding and eliminate the possibility of infection."

He predicts that within 10 years the technique will replace in most cases the current method of bridging across missing teeth in people who have lost some teeth only. At present, a fixed bridge of false teeth is anchored to existing teeth on either side of the gap. Unfortunately, the adjacent teeth the bridge is attached to must be cut down to receive the bridge.

"By using titanium posts," he said, "we will be able to replace the missing teeth without touching adjacent whole teeth."



Dr. Monty Reitzik

Centennial bibliography completed

The location and description of just about everything anyone would want to know about Vancouver is now available to students, historians, writers and the just plain curious, thanks to the Vancouver Historical Society and the University of B.C.

The Vancouver Centennial Bibliography, compiled under the auspices of the Vancouver Historical Society (VHS) as its centennial celebration of the city's incorporation in 1886, lists a total of 15,090 items available in public archives in B.C. and elsewhere.

The bibliography project, which was headquartered in the special collections division of the UBC Library for three years, has resulted in four volumes of material and a total of almost 1,800 pages.

Volumes 1 and 2 of the bibliography will tell you the location of:

*3,393 books that deal exclusively with the city or mention it;

*5,672 pamphlets and broadsides listing everything from a 24-page publication called Poems of Armageddon, published in Vancouver in 1914, to Zoo Drawings, the catalogue and price list of drawings by Alistair Bell exhibited at the Vancouver Art Gallery in 1957;

*687 theses written by B.C. university students as part of the requirement for graduate degrees and covering such topics as "Prohibition in B.C.," "Street Women and their Verbal Transactions: Some Aspects of the Oral Culture of Female Prostitute Drug Addicts," "The History of the Vancouver Park System, 1866-1929," and "Street of Tongues: Planning Vancouver's Chinatown";

*999 articles about the city that have appeared in scholarly, professional, literary or regional journals and anthologies;

*1,897 serial publications, beginning with "3 Cent Pulp" (entry 10755), which was published in Vancouver from 1972 to 1980, and ending with "YVR: Vancouver in Review" (entry 12652);

*1,203 manuscripts, beginning with the records of the 29th Vancouver Battalion Association, a First World War infantry unit which was nicknamed "Tobin's Tigers", after their commanding officer, and ending with the records of the Young Women's Christian Association of Vancouver for the period 1903 to 1977;

*549 maps of Vancouver interest, including three by Dionisio Alcala Galiano, the Spanish

explorer who surveyed the Pacific Northwest coastline in the 1790s;

*41 architectural records, which includes 567 plans for federal buildings in Vancouver as well as large collections of drawings, plans and business records donated by architects Arthur Erickson and Ronald Thom and the Vancouver firm of Thompson, Berwick, Pratt and Partners; and

*641 microforms (personal papers and other records on microfilm), photograph collections, film and video productions, sound recordings, portfolios and kits, machine readable data files and four items listed under the heading "Miscellaneous" because they didn't fit into any one of the other categories.

Volumes 3 and 4 of the bibliography manipulate the data that appears in the first two volumes.

Volume 3 is a name and title index of all the material in Volumes 1 and 2.

Volume 4 is a subject and series index that begins with an entry for 2nd Avenue (two 1927 pictures of the intersection of 2nd Avenue and Commercial Drive) and ends with an entry for a 1972 Vancouver Community Press publication called Heart's Tide by Judith Copithorne.

The Vancouver Centennial Bibliography isn't the kind of publication that the casual reader would buy for \$150 (\$100 if you're a member of the Vancouver Historical Society or a bookseller). It's the kind of research and reference tool that you'll find on the bookshelves of scholars and in libraries and archives, to be consulted if you want to know where a particular item about Vancouver is located.

Only 250 sets of the four-volume work have been published.

Literally hundreds of people, paid and unpaid, made contributions to the bibliography project.

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See CENTENNIAL

New Faculty Ass'n executive named

Dr. Barrie Morrison of the Department of Asian Studies is the 1986-87 president of UBC's Faculty Association, succeeding Prof. Sidney Mindess of Civil Engineering, who remains on the association executive in an ex officio capacity as past president.

Other members of the new executive, which took office early this month, are: Dr. Herbert Rosengarten, English, vice-president; Mrs. Suzanne Dodson, Library, treasurer; Dr. James Gaskell, Education, secretary; and Dr. David Haley, Forestry, delegate to CAUT.

Members-at-large on the executive are: Dr. David Balzarini, Physics; Joost Blom, Law; Dr. George Bluman, Mathematics; Dr. Dennis Capozza, Commerce; Dr. Sidney Katz, Pharmaceutical Sciences; and Ms. Gail Riddell, Continuing Education.

Also on the executive is the 1986-87 chairman of the association's Personnel Services Committee, Dr. Birger Bergersen of the physics department.



Key figures in the production of the new Vancouver Centennial Bibliography are these three members of the special collections division of the UBC Library, left to right, University archivist Laurenda Daniells, reference librarian Frances Woodward and division head Anne Yandle.

CAMPUS PEOPLE



Winners of the 1986 Mellon fellowships in the humanities are these two Faculty of Arts students—Ted Alden, left, political science, and David Bates, history.

Two budding historians in UBC's Faculty of Arts are among 123 North American undergraduate students who have been named Mellon Fellows in the Humanities.

UBC winners of the 1986 fellowships are Edward "Ted" Alden, 24, a political science major, and David Bates, 22, an honors student in the Department of History.

In addition to paying tuition and other fees, the Mellon awards include a cash stipend of \$8,500 (U.S.). They can be renewed for a second year.

Both the UBC winners are planning to do graduate work in the area of intellectual history and both are leaning in the direction of attending the University of Chicago.

However, a final decision involves some negotiation designed to ensure that all fellows don't register at a limited number of universities such as the University of California at Berkeley, Harvard University or the University of Chicago.

Alden said he wants to undertake graduate work in intellectual history in modern Europe. A graduate of University Hill secondary school, he has had some experience as a journalist in Victoria working for "Monday Magazine" and as a freelance writer. He won a national award for an article that appeared in the magazine "Harrowsmith."

Bates is interested in 18th century European history, particularly France and the French Revolution and plans to do graduate work on some topic in intellectual history associated with this period.

Both students are seriously considering academic careers in keeping with the aim of the Mellon program of encouraging outstanding young men and women to undertake careers as university teachers and researchers. The program, established by the Andrew W. Mellon Foundation in 1982, is administered through the Woodrow Wilson National Fellowship Foundation.

In winning two Mellon awards, UBC is in the same category as Cornell University, Rice University, Stanford University and the University of Washington. There were four Mellon winners at the University of Toronto. Harvard topped the awards list with 13 winners.

* * *

Dr. Wilf Schofield of the botany department was recently honored by the Association of American Publishers. His textbook "Introduction to Bryology" was named Outstanding Book in the Life Sciences in the 10th annual professional and scholarly book awards. Dr. Schofield also received the George Lawson Medal from the Canadian Botanical Association in recognition of the book. The association cited the book as "a single contribution to botanical knowledge of outstanding distinction".

Dr. Marjorie Halpin, curator of ethnology at UBC's Museum of Anthropology, has been appointed to the Canadian Cultural Property Export Review Board for a three-year term. The board is responsible for determining the significance of cultural property for tax purposes and hears appeals on cultural property export permits. The board's members also advise the Minister of Communications on the award of grants to assist institutions in purchasing objects for which export permits have been denied and in repatriating cultural property.

Dr. Halpin held academic positions at George Washington University and the Smithsonian Institute in Washington, D.C. before joining UBC's anthropology department in 1973. She is the author numerous articles, reviews, exhibition catalogues and books, including *Totem Poles: An Illustrated Guide*, and was the curator of the 1979 museum exhibit *Cycles: The Graphic Art of Robert Davidson* and *Sensibilities: Unsuspected Multicultural Harmonies* in 1981.

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Prof. Glenn Drover, the director of UBC's School of Social Work, has been named senior policy advisor and researcher to the Special Committee on Child Care of the House of Commons.

The nine-member committee has been charged with examining and reporting on the future of child care in Canada in the context of the changing needs of the Canadian family.

Among the questions to be considered by the committee are the requirements of children for care, the role of the federal government in child care and alternatives for future action by the federal government.

The committee, which is to report its findings no later than Nov. 26, will hold hearings in all parts of the country.

Prof. Drover will be responsible for developing the committee's plan for carrying out its mandate, supervising documentation submitted to the committee, travelling with the committee on its cross-Canada hearings and directing the preparation of a draft committee report.

* * *

Dr. Glen Dixon, coordinator of the Child Study Centre in the Faculty of Education, has been elected vice-president for early childhood of the Association of Childhood Education International.

ACEI, the oldest professional organization in the field of childhood education, has more than 20,000 members in 19 countries. As vice-president, Dr. Dixon will be responsible for all early childhood publications and activities and will represent ACEI at international meetings over the next three years.

* * *

Dr. Harry Warren, professor emeritus of geological sciences and the "father of biogeochemistry", has won the H.H. Huestis Award of the B.C. and Yukon Chamber of Mines.

Biogeochemistry is based on a theory Dr. Warren advanced in the 1930's that the presence of minerals in the earth can be detected through chemical analysis of plants or animals in the vicinity.

The H.H. Huestis Award is given annually to individuals who have made a significant contribution to B.C. mineral resource development through the original application of prospecting techniques or other geoscience technology.

The award is in honor of "Spud" Huestis, an active prospector until his death in 1978, who is best known for his work leading to the development of the Bethlehem mine in the Highland Valley of B.C.

Dr. Warren, a Rhodes Scholar and graduate of UBC, retired from UBC's geological sciences department in 1970 after 38 years as a faculty member.

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Prof. Keith Brimacombe, director of UBC's Centre for Metallurgical Process Engineering, has been awarded the 1986-87 Canadian Council Lectureship by the Canadian Council of the American Society for Metals. The lectureship is given to promote cross-country speaking tours by prominent Canadian metallurgists. Prof. Brimacombe will present talks to each of the 13 Canadian chapters of the American Society for Metals during 1986-87.

Preparation: The key to success in Asia

B.C. companies wanting to do business in Asia have enormous advantages over competitors, opportunities some companies are not making full use of.

Dr. Michael Goldberg of UBC's Faculty of Commerce and Business Administration, says that the development of new resources to prepare B.C. businessmen for transactions in Asia, and better use of existing resources are critical if the province is to increase economic activity through greater trade with Asia.

The expertise, advice, research and contacts available to B.C. businessmen are already well-established, said Dr. Goldberg, and the B.C. government wants to expand those resources.

Premier Bennett last month said the provincial government would encourage six centres of excellence at B.C. universities. Two of the centres announced by the Premier are international business and trade and Pacific Rim studies.

Dr. Goldberg outlined strategies for both small and large companies wanting to succeed in trading with Asia.

"No matter how big or small you are, to be successful you've got to do your homework," he said. "Asian cultures are old and homogeneous and differ tremendously from ours. It's imperative to understand something about the history and culture of the target country for the simple reason that they are proud of their own cultures."

"If you know more than your competitors about the people and culture that you're dealing with, your chances of success are that much greater."

Executives of small businesses with limited resources are faced with learning about Asia themselves. This may seem insurmountable, Dr. Goldberg said, but the resources available to B.C. businessmen are vast.

"There are all kinds of cultural and trade associations," he said. "The Hong Kong Canada Business Association, Canada Japan Society, Asia Pacific Business Institute, Canadian Society for Asian Art, Asia Pacific Foundation, and the Malaysia, Brunei and Singapore Society are a few examples."

"UBC has enormous resources in Asian economics, history, languages, art and culture. The University has the largest Asian library in Canada. It's all here waiting to be used."

"Businessmen outside of Vancouver can patch into UBC resources through continuing education programs and the provincial inter-library loan system," said Dr. Goldberg.

He adds that the business community can also take advantage of the expertise of UBC's Faculty of Commerce and Business Administration.

"Our Centre for International Business Studies has done a great deal of research of use to B.C. businessmen. The competitive position of the airline and forest industries are an example, as well as future markets in Asia for B.C. energy exports."

"We also sponsor workshops specifically aimed at the needs of the business community. A recent all-day meeting to prepare businessmen for business in China was over-subscribed and had to be moved from the boardroom of the Hong Kong Bank of Canada to the Asian Centre on campus. We've also taken Canadian businessmen to Beijing and Shanghai and organized one-on-one meetings for them with high-level



Michael Goldberg

representatives of Chinese industry and government. Another meeting on new legislation influencing trade with China was held for Canadian businessmen in Hong Kong and Macau.

"On behalf of the external affairs department we visited China to identify business opportunities for Canada. We are also educating Chinese students and university professors in business administration and management on behalf of the Canadian International Development Agency. All MBA students from China receive an orientation program at UBC before they go on to other Canadian universities."

"So our contacts with Asia are extremely strong. The business community should take full advantage of them."

Dr. Goldberg has different advice for larger companies with more resources.

"Big companies have the advantage of size. They have the resources to hire someone with Asian skills, something that few of them actually do."

"For example, a large corporation can hire an Asian studies graduate who speaks one or more Asian languages, knows the culture and probably has lived in Asia."

"I estimate that corporations can hire Asian graduates for as little as \$20,000 a year, peanuts compared with the size of the potential business deals."

Dr. Goldberg says that an alternative is for a large firm to send one of their employees to live in Asia for a year or two to learn an Asian language and establish business connections.

Large companies, he said, think nothing of investing in a multi-million-dollar computer system as part of the cost of doing business.

"But that investment depreciates. For a fraction of the money a company can send someone to Asia and that smaller investment appreciates rather than depreciates. The person's knowledge of Asia and its markets increases each year and their value to the company increases."

Neil Towers wins Flavelle Medal

Dr. Neil Towers of UBC's botany department will receive the coveted Flavelle award and medal of the Royal Society of Canada.

The award is made every two years for an outstanding contribution to biological sciences during the preceding 10 years.

Dr. Towers joined UBC as head of the botany department in 1964. He resigned as head in 1971 to devote his energies more fully to research.

He has an international reputation in plant chemicals, particularly in photobiology, the study of naturally-occurring substances whose electrons become excited when exposed to light.

In recent years he discovered a large class of plant chemicals, the polyacetylenes, that are potent toxins that cause injury to a wide range of living organisms when exposed to light of certain wavelengths. Polyacetylenes are thought to have evolved as part of the natural

defence system of plants to protect them from predation by insects and other animals.

He is currently collaborating with two other UBC scientists, Dr. Julia Levy of the microbiology department and Dr. David Dolphin of the chemistry department, to produce a "magic bullet" to treat certain forms of cancer.

The magic bullet would consist of monoclonal antibodies that would seek out and attach themselves to the cells of a specific type of cancer. Chemically linked to the monoclonal antibodies would be photosensitive compounds that would be activated by deep-penetrating infra-red light to destroy the cancer cells.

Previous UBC winners of the Flavelle medal include Dr. Harold Copp, former head of the physiology department, and Dr. Michael Shaw, University Professor in the botany and plant science departments.

Future looks bright for UBC film students

One group of students at the University of B.C. who are optimistic about job prospects in 1986 are those who will graduate from the Film Studies program in the Department of Theatre.

The reason -- the film industry in British Columbia is booming. Shot in B.C. last year were nine feature films, three high-budget docu-dramas, 11 television movies and five television series with a total of 52 episodes. Total budget for all productions was \$141 million, of which \$70 million went directly into the provincial economy, providing 2,500 direct and 3,500 indirect jobs.

Prof. Joan Reynertson, who heads the UBC Film Studies program, says a combination of B.C. scenery, a devalued Canadian dollar, and a pool of well-trained film production personnel has been instrumental in drawing American film companies to the province.

One of the major training programs for production crews in Canada is the film studies program at UBC. It has gained such an outstanding reputation that Prof. Reynertson receives numerous telephone calls each day from interested applicants around the world.

The program, now in its 11th year of operation, already has close ties with the B.C. film industry. Prof. Reynertson says she

welcomes the provincial government's recently announced initiative to further strengthen those ties through the Fund for Excellence in Education.

Currently, the department offers an undergraduate program leading to a bachelor's degree, which includes a balanced array of courses in production, history, theory and aesthetics, and master's degrees in film and television production and in history, theory and criticism.

Equipment and staff limitations have forced the program to restrict its annual intake of students to 12. The program could triple its annual intake if additional equipment and faculty were available. Seven graduate students are currently registered in the department.

Prof. Reynertson says the department provides students with a solid grounding in script writing, directing, cinematography, editing, sound recording and animation as well as the history and aesthetics of film.

"Our most pressing need at the moment," she says, "is the replacement of aging equipment with a state-of-the-art production facility that will serve as an on-campus training and production centre."

She would also like to see the University's film activities linked to the industry through establishment of an internship program that would provide students with "hands-on" experience.

Also associated with the UBC program as a teacher is the award-winning Canadian film director, editor and producer Raymond Hall, who is currently the president of the B.C. Film Industry Association.

UBC campus a popular spot for B.C. film industry

One spot you may find graduates of UBC's film program hard at work is right here on the campus.

UBC is a popular location for commercial filming because of the variety of settings found on the campus. In some cases, UBC is the only setting of its kind in the Lower Mainland. For example, when you see shots of ivy-covered buildings in movies filmed in B.C., you can be certain you're looking at UBC's Main Library or Chemistry Building. Other popular spots for filming on campus are the Asian Centre and Nitobe Japanese Garden, Cecil Green Park, the UBC gymnasiums and exterior shots around the central core of the campus.

In the past three years numerous feature films, television movies, documentaries and commercials have been filmed at UBC. Although the summer is traditionally the busiest time for filming, UBC had film requests right through to December of last year and in January and February of 1986 when *Nobody's Child*, a television movie starring Marlo Thomas and *Perry Mason II* starring Raymond Burr were filmed on the campus. Negotiations to use the campus are currently under way with the producers of a Walt Disney film and a television movie which highlights the life of the first woman on the Los Angeles fire department.

"With the rapid expansion of B.C.'s film industry a few years ago the University began receiving three or four requests a week to film on campus," said Community Relations director Margaret Nevin. "The Community Relations Office developed an official policy and procedure for commercial filming, set a location fee and a standard legal contract was developed as part of the location agreement between UBC and production companies using the campus."

Under the location agreement, UBC is reimbursed for use of the campus and for the long hours spent making arrangements for the filming. Until this month, all liaison with film companies was handled through Community Relations. This includes reading and approving

scripts, taking film crews around the campus for location "scouts", making arrangements with the department head or director in the area where filming is taking place, arranging for special parking and physical plant needs, drawing up the legal contract and handling the financial transactions between UBC and production companies. There is a myriad of details to be taken care of for even a single day's shooting on campus. Although the initial contact and script approval is still handled by Community Relations, the day-to-day liaison with film companies was transferred this month to Educational Media Services (formerly AV Services).

UBC's location fee is \$2,500 per day plus a \$1,000 a day deposit for damages. Film companies pay any additional costs they incur, such as physical plant charges or overtime costs for UBC personnel. The location fee is divided between the University, the department or facility where filming is taking place and the two departments involved in setting up arrangements for filming. The location fee can be waived at the discretion of the Community Relations director if there is an outstanding public relations benefit for the University.

UBC also has a "scouting fee" which serves as a protection against spending many days finding locations for a producer who decides to film elsewhere. "Film liaison is a time-consuming task and we wanted to ensure that the University was reimbursed for the hours of work involved, particularly if a company ends up not using the campus," said Ms. Nevin. "Even in the early stages of planning there are numerous details and problems involved."

One of Community Relations' tasks is to veto any requests by film companies that seem too disruptive to campus activities. The campus population will no doubt be relieved to know that a recent request to shoot a helicopter exploding and crashing into the side of a building on Main Mall was denied.



Students from UBC's Film Studies program led by Ogden Gavanski at work on documentary film called "Work Stations" which features employment of the mentally and physically handicapped in various Vancouver industries. As part of their graduate degree requirements, students must produce at least one film or documentary.

CCE celebrates 50th anniversary on April 27

There will be no loud trumpet fanfares or long speeches recounting past glories on April 27 when UBC's Centre for Continuing Education stages a quiet Sunday-afternoon celebration to mark its 50th anniversary.

The invited guests who will attend the event in the recital hall of UBC's Music Building will hear Ellen Silverman and Rudy Rozanski perform Rachmaninoff's Concerto for Two Pianos. There will also be poetry and prose readings chosen with the assistance of English department head Prof. Ian Ross. (Some seating for the event may be available at the last minute. For information, call 222-5216).

Not that the centre, which formally came into existence as the "extension department" in 1936, doesn't have plenty to celebrate.

The centre today offers one of the most extensive and varied adult education programs anywhere in the world.

The late Gordon Shrum, who was director of the extension department in its earliest years, recalled that he was determined "to demonstrate as early as possible that I was not going to put the emphasis on science and technology."

His first appointment was a theatre specialist -- Prof. Dorothy Somerset -- who travelled the length and breadth of the province aiding and abetting the formation and upgrading of new and budding amateur dramatic groups, an activity which led to her being characterized as B.C.'s "first lady of the theatre."

In the 1960s and 1970s, under Dr. John Friesen, now back in Vancouver after international agency work abroad, and Gordon Selman, now an associate professor in UBC's Faculty of Education, the Centre for Continuing Education grew rapidly and established an international reputation.

The current director of the centre, Jindra Kulich, says that in recent years a major thrust of the centre has been fostering the growth and development of continuing professional education for engineers, foresters and the legal profession, to name only a few of the groups aided.

The centre has helped some professions -- the legal profession for example -- to lay the foundations for their own continuing education programs. "Part of our job," he says, "is to get

these organizations on their feet and functioning, using the expertise we have in house or which is available to us through University resources.

"When they feel confident that they can manage their own affairs they achieve independence with our blessing and the assurance of our continuing support and assistance."

UBC's Centre for Continuing Education has initiated several programs that are models of

their kind and result in demands that are sometimes hard to keep up with.

Examples of this kind of program include the downtown Women's Resources Centre, now providing services to an average of 1,300 women each month; a Language Institute that provides English-language training for students from abroad as well as programs aimed at teaching foreign languages to English speakers; and a rapidly expanding array of computer science courses and seminars.

Unique reforestation studies under way

A \$250,000 nursery with a capacity to grow two million tree seedlings was established last fall at the University of British Columbia to produce better quality seedlings for use in the B.C. Ministry of Forests' reforestation program.

The nursery is just one example of the innovative research and teaching initiatives taking place at UBC to solve problems associated with the growth and survival of tree seedlings in the forest industry.

"UBC is the only Canadian university and one of only two universities in North America that offers a course devoted entirely to reforestation," says Prof. Denis Lavender, head of the Department of Forest Sciences in UBC's Faculty of Forestry. "Our new nursery facility is also unique in North America."

The nursery, which serves as a research, teaching and demonstration facility, produced 1 million tree seedlings for the Ministry of Forests this year.

"Our goal is to produce stronger and better quality seedlings that will have a better chance of survival during transportation and reforestation," said Prof. Lavender.

One research project at UBC focuses on

the use of 'plant growth regulators' -- hormones which induce dormancy in plants. Researchers are developing a means to artificially induce dormancy in the tree seedlings (similar to hibernation in animals) so they will be more resistant to the stresses inherent in the transportation and replanting phases of reforestation, periods when the seedlings often die because of the stress and trauma associated with handling and being moved to new surroundings.

"Forestry is the only large-scale operation in the world that attempts to take living things such as tree seedlings and establish them into an unfavorable environment," said Prof. Lavender. "It is not surprising that survival rate is not high for transplanted seedlings."

"Seedlings are naturally sensitive to cues in the environment that signal such things as cold weather or moisture stress and they become dormant as a means of resisting these factors. But they have no natural defenses against being moved around and replanted because this is not a normal part of their growth cycle. We're working to stimulate dormancy in the

seedlings to protect them against these unnatural stress factors, which will hopefully increase their survival rate."

It is estimated that between one and two million hectares of forest land in B.C. is not sufficiently restocked. A major reason for this is the cost of reforestation. Researchers in the Faculty of Forestry believe that the development of "high performance" seedlings with a greater survival rate is a key factor in bringing down reforestation costs.

Prof. Lavender has recently begun work on a comprehensive guide to reforestation in British Columbia. The book will follow the same format as a widely-used guide to reforestation in the State of Oregon, to which Prof. Lavender contributed while teaching at Oregon State University.

Although UBC's nursery facility is being used primarily for teaching and research at present, Prof. Lavender said the Faculty of Forestry plans to establish the nursery as a demonstration and educational centre for professionals in the forest industry and members of the general public.

Centennial

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In 1980 Elizabeth Walker, former librarian in the Northwest History Room of the Vancouver Public Library and an active member of the VHS, suggested the society publish a definitive Vancouver bibliography based on a 1962 compilation (992 items) by Katherine Freer (now head of the cataloguing department of the Vancouver Public Library), which was submitted to the University of London as one of the requirements for the diploma in librarianship.

The VHS executive endorsed the suggestion and proposed the publication of the bibliography as the society's contribution to the 1986 centennial.

A broadly based advisory committee that included four UBC members was appointed by the then vice-president (now president) of the VHS, Peggy Imredy.

The society's hopes for the bibliography rose when an application to the Social Sciences and Humanities Research Council of Canada was approved. Over three years (1982-85) SSHRC contributed \$120,000 to pay salaries and honoraria to individuals associated with the project.

The day-to-day administration of the project was the responsibility of Linda Hale, who in 1982 was fresh out of UBC's School of Librarianship with the third of the three academic degrees she holds from UBC (Bachelor and Master of Arts and Master of Library Science).

The overall direction of the project was supervised by three members of the special collections division of the UBC library -- division head Anne Yandle, University archivist Laurenda Daniells and reference librarian Frances Woodward, who held the title "Principal Co-investigators."

Ms. Yandle said the project organizers anticipated that about 7,000 items might be found for entry in the bibliography, less than half the number eventually catalogued. With a grin, she describes bibliographies as "bottomless pits" that are out of date the minute the compilers stop their work. Between the Vancouver Centennial and Expo '86, she reckons that as many as 1,000 items could have been added to the bibliography if work had continued beyond the June 30, 1985 cutoff date.

Ms. Hale said the workhorses of the bibliography project were students in the UBC librarianship school who worked on the project full-time in the summer and part-time in the winter. They were paid out of the SSHRC grant and funds from the provincial government's Heritage Trust.

She's quick to add that unpaid volunteers made a significant contribution, citing the work of Elizabeth Walker, who catalogued all material related to the city in the Vancouver Art Gallery archives; Margaret Waddington, who shared her previous bibliographic work and added new material to a list of fiction in which

Vancouver is the setting or is mentioned; and retired UBC librarian Eleanor Mercer, who worked with Ms. Woodward in compiling entries on Vancouver maps.

Ms. Hale said the searchers didn't discover any unknown treasure trove of documents in compiling the bibliography. "For me," she said, "the real treasure trove is the whole unit itself." The bibliography, she adds, is more than historical. It includes a great many scientific studies made over the years as well as materials on almost every ethnic group in the city.

Ms. Hale is also proud of the fact that there are no "phantom" entries, which is the bibliographer's way of describing an item that appears on the listings of an archive but which isn't there when someone wants it. To avoid such entries, searchers actually visited every archive listed in the bibliography and verified that every listed item was available.

Ms. Yandle says that UBC contributed "in-kind" services equal to the SSHRC grants during the three-year life of the project. And all the bibliographic material is still in existence as a computer data base, which she hopes will be updated annually with summer research grants.

Word of the centennial project appears to be spreading far and wide. Only last week, the VHS got an order for the bibliography from the British Library in London, one of the biggest institutions of its kind in the world.

New parking system installed in B-Lot

The familiar blue "B" Lot parking decal will soon be a thing of the past. The seven general-parking "B" Lots are being converted to "pay by the day" lots, where decals will no longer be required.

Entry and exit gates are being installed this spring and are expected to be in operation by May 1. Lot users will enter free and pay a daily fee upon leaving. The day rate has not yet been set by the UBC parking committee, but Traffic Office supervisor John Smithman says the daily rate should work out to only a slight increase over the annual decal fee for the average student.

"Depending on the number of days per year a student parks on campus, some may pay less than the cost of an annual decal."

The new system will not permit overnight parking -- all vehicles will have to off the lots between 3 and 5 a.m. An exception to this rule will be made for resident students who are unable to obtain a decal for their residence lot. A special "Resident B" sticker will be available to allow overnight parking and these students will receive an exit card to operate the automatic gates.

To accommodate holders of the current "B" Lot decals, the gates of B2 Lot will remain inoperative until the end of August, and the lot will be available to anyone displaying a current UBC decal.

UBC CALENDAR

Calendar Deadlines

For events in the period May 4 to May 17, notices must be submitted on proper Calendar forms no later than 4 p.m. on Thursday, April 24 to the Community Relations Office, 6328 Memorial Road, Room 207, Old Administration Building. For more information, call 228-3131.

SUNDAY, APRIL 20

French Intensive Sunday.

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

MONDAY, APRIL 21

Cancer Research Seminar.

DNA Damage in Pulmonary Endothelial Cells Induced by Reactive O₂ Species. Dr. Anne P. Autor, Pathology, St. Paul's Hospital and UBC. Lecture Theatre, B.C. Cancer Research Centre, 601 W. 10th Ave. 12 noon.

Preventive Medicine and Health Promotion Seminar.

May You Live in Interesting Times: 1985 Public Health's Year! John Blatherwick, Medical Health Officer, City of Vancouver. Room 253, James Mather Building. 4 - 5:30 p.m.

TUESDAY, APRIL 22

Metallurgical Process Engineering Distinguished Lecturer Series.

AOD - A Tool for High Quality. Dr. R. Andreini, Earle M. Jorgensen Co., Seattle, Washington. Room 305, Frank Forward (Metallurgy) Building. 3:30 p.m.

Geophysics and Astronomy Seminar.

On the Transportation of Volatile Elements in Meteorite Parent Bodies. Dr. Naoji Sugiura, Erindale College, Mississauga, Ontario. Room 280, Geophysics and Astronomy Building. 4 p.m.

THURSDAY, APRIL 24

Occupational Health and Safety Seminar.

Women's Work -- Health Threatening. In this presentation, the relationship between women's work and women's stress will be explored. In particular, work-related sources of stress and reactions to stress will be detailed. Clarissa Green, Nursing, UBC. IRC 3. 12:30 p.m.

FRIDAY, APRIL 25

Medical Genetics Seminar.

Von Willebrand's Disease - Clinical and Molecular Aspects. Dr. G. H. Growe, Hematology, V.G.H.; Dr. S. C. Naiman, Hematology, V.G.H.; and Dr. Bernard Van Oost, Biochemistry, UBC. Parentcraft Room, Grace Hospital. 1 p.m.

Economics Seminar.

Modeling Rational Players. Ken Binmore, London School of Economics and University of Pennsylvania. Room 351, Brock Hall. 4 p.m.

SUNDAY, APRIL 27

50th Anniversary Celebration.

The Centre for Continuing Education celebrates its 50th Anniversary with a music recital and readings. Refreshments. Free admission. Recital Hall, Music Building. 3 p.m.

MONDAY, APRIL 28

Cancer Research Seminar.

The Application of Fine Needle Aspiration Cytology to Lymphoma. Dr. A. Hugh Pontifex, Pathology, Royal Columbian Hospital and Cancer Control Agency of B.C. Lecture Theatre, B.C. Cancer Research Centre, 601 W. 10th Ave. 12 noon.

Neuroscience Discussion Group - Grass Foundation Lecture.

Signals Transduced by GABA and TRH in Cultured Spinal Cord Neurons and Clonal Rat Pituitary Cells. Dr. Jeffery Baker, Laboratory of Neurophysiology, NIH-NINCDS, Bethesda. IRC 3. 4:30 p.m.

WEDNESDAY, APRIL 30

Pharmacology and Therapeutics Seminar.

Biomedical Mechanism of Oxidative Cell Injury in Isolated Rat Hepatocytes. Dr. Margo Moore, Pathology, UBC. Room 317, Basic Medical Sciences Building, Block C. 12 noon.

Research Services Lecture.

The Philosophy and Modus Operandi of the Venture Research Unit. Dr. Peter C. Beadle. IRC 1. 1:30 p.m.

FRIDAY, MAY 2

Medical Genetics Seminar.

Interesting Patients from the Lipid Clinic. Dr. Jiri Frohlich, Pathology, Shaughnessy Hospital and Dr. Michael Hayden, Medical Genetics, UBC. Parentcraft Room, Main Floor, Grace Hospital. 1 p.m.

Continuing Education Lecture.

Freud: Hero or Villain? Ernst Federn, M.S.W., son of psychiatrist, Paul Federn, editor of the Minutes of the Vienna Psychoanalytic Society (1906-1981). Cost is \$7; \$5 for students. Inquiries: 222-5261. IRC 6. 8 p.m.

SATURDAY, MAY 3

Continuing Education Seminar.

Struggling with Freud's Legacy. Ernst Federn, M.S.W., son of psychiatrist, Paul Federn, editor of the Minutes of the Vienna Psychoanalytic Society (1906-1981). Chaired by Dr. John Allan, Counselling Psychology, UBC and Kit Fortune, writer and counsellor. Fee is \$25, \$15 for students. Inquiries: 222-5261. Main Dining Room, Graduate Students Centre. 10 a.m. - 4 p.m.

Notices . . .

Golf Tournament.

The 30th Annual Faculty and Staff Golf Tournament will be held on Thursday, April 24th. Golf competition will be played at the University Golf Course (fees \$15) and dinner in the Faculty Club (full buffet \$19). Application with tournament details available at the Faculty Club reception desk. Open to all active and retired members of faculty and staff -- both men and women.

Language Programs.

Non-credit conversational programs in Japanese, Chinese, French and Spanish begin the week of April 21. For more information, contact Language Programs and Services, Centre for Continuing Education, at 222-5227.

UBC Business Review.

The Commerce Undergraduate Society is pleased to announce the publication of the 21st edition of the UBC Business Review. This year's edition focuses on B.C. and Canadian business and includes articles by Walter Hardwick, Michael Walker, C.D.I.C. vice-president Jack Croll and others. Copies are \$2 and are available from the Bookstore.

Afternoon Teas.

Sunday Afternoon Teas at Cecil Green Park will begin again on Sunday, May 4. Sittings for the tea will be 1 p.m., 2:30 p.m. and 4:15 p.m. The price is \$8.50 per person. Food Services will also begin a Sunday food operation at the Botanical Garden on April 20. Light refreshments will be offered. For more information, call 228-2616.

Daycare.

UBC Unit 1 Daycare has full, part-time and summer positions available for children 1 1/2 to 3 years. For further information call, 228-3019 or 263-8815.

GRANT DEADLINES

MAY 1986

- * B.C. Heritage Trust
 - Research [1]
- * B.C. Medical Services Foundation (BCMSF)
 - Research [19]
- * Bedding Plants Foundation, Inc.
 - Research [1]
- * Canada Council: Aid to Artists
 - Aid to Artists [15]
- * Canada Council: Explorations Prog.
 - Explorations Grant [1]
- * Canadian Foundation for Ileitis and Colitis
 - Research Training Fellowship (Ontario) [18]
- * Canadian Law Information Council
 - Research Fellowship Program [15]
- * Dept. of Regional Industrial Expansion
 - Canada Awards for Excellence [17]
- * Deutscher Akadem Austauschdienst (DAAD)
 - Study Visits of Foreign Academics [1]
- * Fitness & Amateur Sport: Sport Canada
 - Sport Science Support Program [1, for winter]
- * Hamber Foundation
 - Foundation Grant [5]
- * Health and Welfare Canada: Welfare
 - National Welfare Grant [1]
- * Japan Society for the Promotion of Science
 - JSPS Fellowship for Research in Japan [1]
- * March of Dimes Birth Defects Fdn. (U.S.)
 - Reproductive Hazards in the Workplace [1] (initial letter of enquiry with protocol)
- * Muscular Dystrophy Assn. (U.S.)
 - Post-doctoral Fellowships [31]
 - Research [31]
- * NSERC: Strategic Grants Division
 - Equipment [1]
 - Strategic Grant [1]
- * Royal Society of New Zealand
 - Captain James Cook Fellowship [31]
- * Science Council of B.C.
 - Research [1]
- * Secretary of State
 - Canadian Ethnic Studies Conferences [15]
 - Canadian Ethnic Studies Program: Professorships [15]
 - Ethnic Research [15]
- * Spencer, Chris Foundation
 - Foundation Grants [31]
- * Standards Council of Canada
 - University Research Contribution [1]
- * World Wildlife Fund (Canada)
 - General Research [1]

FIRST CLASS MAIL

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