UBC Reports

Volume 33 Number 12, June 11, 1987

Faculty of Dentistry to mark quarter century at convention

by Bunny Wright

More than 800 dentists, dental assistants and dental hygienists are expected on campus June 18-21 for a scientific and clinical meeting that will celebrate the 25th anniversary of the Faculty of Dentistry, in conjunction with the annual convention of the B.C. College of Dental Surgeons.

The four-day event is called "Celebrating Excellence through Education," and is being organized by the Quarter Century Celebration Committee, chaired by Dr. Alan Lowe and co-ordinated by Sharon Bangham.

Symposia, lectures and participation clinics will be offered in a wide range of subjects, and over 100 exhibitors will display their wares in the War Memorial Gym.

"We're oversubscribed with exhibitors," says Lowe. "Originally 90 exhibits were planned for, but now we're up to 104. Short of suspending the exhibitors from the ceiling, there's nowhere else to accommodate them."

Preregistration in the clinics is so heavy that several have had to be scheduled twice. "They are something new," says Lowe. "They've never been done in B.C. before, because we have not had a suitable clinical facility at our disposal."

The 11 clinics will offer opportunities to handle materials, equipment and instruments and to practice techniques under the direct supervision of expert clinicians. They're specifically designed for general practitioners and dental auxiliaries interested in acquiring the most up-to-date skills and knowledge.

The clinic in nitrous oxide sedation, for example, will cover such controversial areas as abuse, addiction and long-term effects of nitrous oxide on the dentist and his staff, and how these can be avoided.

Another will address problems that exist in managing patients suffering from hepatitis-B, AIDS, venereal disease, tuberculosis, herpes simplex and mononucleosis.

Other clinics will deal with direct bonded veneers, radiographic techniques, advanced technology in oral biology, and cosmetic principles of tooth arrangement.

Several illustrious researchers will speak to the meeting, including Dr. P. I. Branemark, the Swedish scientist who developed a clinical reconstruction procedure using dental implants that are directly connected to bone. Branemark, director of the laboratory of experimental biology at the University of Gothenburg, will speak at the symposium on biocompatible implants.

Research problems

The current status of dental research in Canada will be discussed at the second symposium by Dr. John B. Macdonald, former president of UBC, whose 1955 report led to the development of the Faculty of Dentistry and after whom the dentistry building is named.

Macdonald says that although the quality of Canadian dental research in several fields is very high, significant problems exist for dental research in this country.

These include an uneven distribution of research activity; the fact that only a small proportion of research is clinical in nature; inadequate arrangements for training researchers; and the "little, if any," influence wielded by dental schools on the selection of faculty in basic science departments.

Macdonald recommends establishment of a national training program for researchers; that funded researchers should be guaranteed time free of other obligations; provision of $100,000 in research development funds for each dental school in Canada; and that dental schools participate in the selection of basic science teachers.

Symposia will also be held on biological disease indicators, chaired by Sweden's Dr. Bo Krasse, and on imaging in research and practice.

In addition to lectures on specialized topics such as restorative prosthodontics, periodontal disease and oral and maxillofacial surgery, participants can hear about the evolving dental practice and how best to use computers in the dental office.

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UBC hosts $25-million science project

by Jerri Lee

One of the largest multidisciplinary earth science studies ever undertaken in Canada will be hosted by UBC.

Dr. Ronald Clowes of the Department of Geophysics and Astronomy has been named director of the $25-million Canada-wide Lithoprobe project funded by the Natural Sciences and Engineering Research Council and the federal Department of Energy, Mines and Resources.

Dr. Ronald Clowes, Geophysics and Astronomy.

"The objective," says Clowes, principal investigator of the trial phase of the project, "is to probe by indirect means, deep into the rigid outer layer of the earth in order to further our understanding of this layer and the origin and distribution of mineral deposits, the accumulation of hydrocarbons, and the causes of such hazards as earthquakes."

Lithoprobe takes its name from this probing of the lithosphere, the outermost 100 kilometres of the earth, the dynamics of which control the geological development of the crust of the earth over time.

Scientists will use seismic reflection and refraction and electromagnetic surveys to create three-dimensional, detailed images of the continent and offshore continental shelf at several selected locations, called "transects", across Canada. Such models integrated with the other geophysical, geological and geochemical results from the project will permit a better understanding of the important phenomena that led to the formation and evolution of the Canadian landmass during its greater than 3-billion-year-old history.

Talent pool

The Greater Vancouver and Victoria areas have one of the most important concentrations of earth scientists in Canada. Government officials said the existence of this pool of talent argued strongly in favour of UBC's bid to host the project. The successful trial phase was carried out on Vancouver Island during 1984-85 under Clowes' direction.

Clowes said four locations have been selected for the five-year study: the Kapuskasing region in northern Ontario, where the crust of the pre-Cambrian Shield, the main building block of North America, can be studied; the Southern Cordillera of British Columbia where new ideas about the building of western North America by collisions between the old continent and small coastal fragments can be developed; the coast of Newfoundland where processes related to the opening and closing of ocean basins and the effect of this on near surface geology can be studied; and the Abitibi-Grenville region of Quebec and Ontario which contains a large proportion of Canada's mineral wealth.

He said this "truly collaborative" effort will be completely open to participation by all interested members of the Canadian geoscience community.

see Earth Science Page Two

World native meeting

More than 800 native leaders and educators from around the world are meeting at UBC this week for a conference entitled "Tradition, Change and Survival".

The conference examines how traditional native values and beliefs can be used to improve the negative view of education often held by indigenous peoples. It is the first meeting of its kind held anywhere in the world.

Speakers for the conference include Hopi elder and spiritual leader Thomas Banyacya, Peruvian Indian leader Salvador Palomino Flores, Hawaiian leader and vice-president of The World Council of Indigenous Peoples, Hayden Burgess, and John Kim Bell, founder of the Canadian Native Arts Foundation.

The week's events have been highlighted with the colourful pageantry and traditions of indigenous peoples. The conference opened with a Grand Entry of Delegates in traditional dress, followed by a feast of traditional food and B.C. Indian dancing. Other events include Sunrise Ceremonies led by Thomas Banyacya, a pipe ceremony, demonstrations and performances by native carvers, weavers, storytellers, singers, dancers and clowns, and closing ceremonies.

The World Conference of Indigenous Peoples runs until June 13.

Granville Island

Ten students in the School of Architecture have created an exciting new design concept for the inner core of Granville Island, the only part of the island yet to be developed.

Working under the direction of architecture professors Ron Walkey and Bud Wood, the students have designed "Artisan Realm", a working and living area for artists and craftsmen. The assignment is part of an Urban Projects Workshop, which is coordinated each year by the two professors.

The design study makes 12 major recommendations for the area, including the creation of small, "nameable", courtyards and extensive use of roof tops and terraces.

Members of the design team were Isabelle Bourassa, Brent Murdoch, Janet Snell, Ken Grotsky, Michel Pare, Ken Vincent, Jan Lee, Dan Parke, Anita Molaro and Mark Pickrell.

The students received assistance for their project from Granville Island Trust, the Granville Island administration, and several professional architects. The team was provided with office space on Granville Island by Tourigny, Hall and Associates.

Schizophrenia research

A UBC researcher has identified an area on a chromosome which has the potential to provide more information about the causes of schizophrenia.

Psychiatry resident Dr. Anne Bassett's work focuses on two members of a family both of whom have schizophrenia and a specific chromosomal abnormality.

"Not only has this combination not been noted before, but the abnormality itself is new," says Bassett. "It may just be coincidence, or it may have enormous potential."

A paper Bassett delivered on the subject at the recent annual meeting of the American Psychiatric Association "caused a great deal of excitement at the meeting," she says. It also generated considerable media attention both in Canada and the United States.

Bassett completes her residency June 30 and will be going on a two-year fellowship to Columbia University to do further clinical research in psychiatry.

President on council

UBC President David Strangway is one of 13 members named to the newly-created Premier's Science and Research Council. Robert Alexander, president of Microtel Ltd. has been appointed its chairman.

The council appointments coincide with the official transfer of the Ministry of Economic Development's science and technology component to the Ministry of Advanced Education and Job Training.

Other members of the council are: Dr. John MacDonald, chairmain of the board of MacDonald, Detweiller and Associates; Jack Wilson, president of the high-tech company R.S.I.; Dr. Jim McEwan, director of Biomedical Engineering at Vancouver General Hospital; Helmut Eppich, president of Ebco industries; Harry Gairns, head of Industrial Forest Service Ltd.; Klaus Deering, president of Glenayre Electronics; Michael Warren, a Vancouver lawyer serving as trustee of the Terry Fox Medical Research Foundation and the Biomedical Research Centre; Roy Murray, president of the B.C. Institute of Technology; Dr. Bonnie Bukwa, a faculty member at the East Kootenay Community College; Dr. John Hayward, physiology professor at the University of Victoria and Dr. John Borden, a forestry and entomology professor at Simon Fraser University.

Killam research prizes go to 17 faculty members

by David Morton

Seventeen UBC faculty members have been awarded Killam Research Prizes for excellence in their fields of research.

The awards, handed out annually, mean a $20,000-dollar prize with no stipulations on how it is to be spent. It may be used for equipment, research activities, travel or retained for whatever purposes the recipient wishes. The intent is to offer the recipient a rare degree of flexibility.

The Killam Awards also recognize both senior and junior researchers in the Sciences and Social Sciences and the Arts.

Here is the list of this year's winners:

Dr. Mukesh Eswaran, Economics, is considered to be one of the most significant applied economic theorists of his age group in the world today. While he has made contributions in several areas of economics, his most notable work has been on the interface of industrial organization theory and resource economics and more recently on agrarian labour relations. Eswaran also holds a PhD in physics.

Dr. James A. Russell, Psychology, has achieved an international reputation as a pre-eminent scholar in environmental psychology and the psychology of emotions. Among his publications, he has advocated the idea that emotions cannot be ordered into discrete and mutually exclusive categories, rather they are "fuzzy sets" organized around prototypes. In environmental psychology, he has proposed a conceptual model for the study of the subject and suggested a new paradigm for organizing the empirical literature of this diverse field. He is considered to be one of the most important scientific contributors in this field.

Dr. Michael Hayden, of the Faculty of Medicine, has amassed a significant number of publications in a relatively short career in the field of medical genetics. His work at the moment focusses on the investigation of autosomal dominant disorders which result in diseases such as Huntington's Disease and atherosclerosis. His research employs the techniques of recombinant DNA technology. He also pioneered the establishment of a DNA Bank for Huntington's Disease to ensure pre-clinical molecular genetic testing for patients who have family members with the disease.

Dr. Raymond Anderson, Oceanography, is an oceanographic chemist whose work has shown that temperate marine organisms contain interesting and structurally diverse natural products. Many of the substances he has isolated and identified in marine organisms are of great interest to the agicultural and pharmaceutical industries.

Prof. Grenfell Patey, Chemistry, has made many advances in the equilibrium and dynamical theory of liquids and solutions. Among his most significant contributions are the development of Linear Hyper-Netted Chain Approximation theory. Recently, he won the Noranda Award from the Canadian Society of Chemistry, and the Rutherford Medal from the Royal Society of Canada. These are among the most prestigious awards for physical scientists in the country.

French Department Head, **Prof. Laurence L. Bongie**, is known in academic circles as a dix-huitiemiste, or one who studies eighteenth century France, the Age of Enlightenment. His interests are multi-faceted, combining philosophy, literature, the French and English languages, history and criticism. His most recent book, The Love of a Prince, about a secret love affair of Bonnie Prince Charlie's during his time in France (1744-1748), has received world-wide acclaim as an historical work and as a work of popular non-fiction.

Prof. James C. Hogg, Pathology, has developed one of the leading pulmonary research laboratories in the world. His work on the pathology of respiratory diseases, such as asthma and pulmonary edema have been widely recognized, and his research on the cellular immunology of lung function has been described as being "on the cutting edge."

Prof. H. Christian Fibiger, Psychiatry, is noted for the diversity of his research in neurobiology and behavioural neuroscience. He has made significant anatomical contributions on the extrapyramidal nervous system and more recently on the cholinergic neurons of the central nervous system. This research has major implications in the understanding of Alzheimer's Disease. As well, his research on the role of dopamine-containing neuron systems and their relation to depression has had a major impact on the thinking in this field.

Prof. Christopher E. Brion, Chemistry, has achieved recognition for developing new experimental techniques towards the understanding of molecular electronic structure. Using photoelectron and other electron impact spectroscopies, Brion has enabled new measurements of atomic and small-molecule systems. It has provided a new understanding of the stationary energies of these systems and new insights into the shapes of molecular orbitals. His experimental achievements have had a major impact on theoretical scientists from a variety of disciplines around the world.

Zoology **Prof. Peter W. Hochachka's** research efforts have been generally focused in the areas of comparative biochemistry and physiological adaptations, particularly in stress and anoxia, or low-oxygen situations. His major discovery has been a set of temperature activated enzymes in fish that operate in the range of 10 degrees Celcius. Prof. Hochachka's recent book, Metabolic Arrest, considers the mechanisms animals use to reduce or suspend metabolism in response to environmental demands.

The scholarly achievements of **Prof. V.J. Modi**, Mechanical Engineering, have been singled out as being truly interdisciplinary by his colleagues. He is a recognized authority on satellite dynamics, aerodynamics and ocean and wind engineering. More recently, he has made significant contributions in the fluid dynamics of artificial heart valves. Prof. Modi has also received attention for his extra-curricular work in photography.

Dr. Vinod J. Modi

Prof. Charles Blackorby, Economics, is recognized for his work in a number of areas of economics. He is a world authority on social choice theory, particularly as it relates to welfare economics, and his work on aggregation problems has been bolstered by the mathematical rigour he brings to his work.

Prof. Dimitri Conomos, School of Music, is a musicologist whose interests extend into the Medieval music of Byzantium and the Slavic World, among others. His contributions on Byzantium are said to stretch beyond musical considerations and have altered the way academics view the entire Byzantine culture. In his work on Slavic music he has mastered several Slavic languages and is considered a leading authority on the music of the Serbs, Bulgarians, and Russians.

Prof. R. Colebrook Harris, Geography, has written extensively on the experiences of European immigrant groups in the early settlement of North America and more generally on the role of historical geography within the larger discipline of geography. He is editor of Volume One of the much anticipated Historical Atlas of Canada, out this fall.

Prof. Jean Laponce, Political Science, has acquired a reputation of being a uniquely versatile academic. He has written on a broad range of topics, including the protection of minority cultures, the nature of the left and right in political thought and the politics of language. His most recent book, Langue et Territoire, has been called a powerful work that poses fundamental questions for federal language policy. His American counterparts have referred to him as "Mr. Canadian Political Science."

Prof. Joseph C. Smith, Law, is internationally respected as a leading legal and social scholar. He has combined his knowledge of law and its techniques with other disciplines, such as social philosophy and, more recently, artificial intelligence. His work in psychoanalytic jurisprudence has been termed "groundbreaking," and having a profound effect on the development of feminist legal thought. He is also considered to be a leader in legal expert systems.

Prof. Donald Calne, Medicine, is considered one of the three foremost physician scientists in neurology in the western world. His special interest is in movement disorders, in particular, Parkinson's Disease, in which he has helped unravel how the disease is caused. He has also contributed to advances in the pharmacotherapy of Parkinson's. More recently he has turned his interests to the neuro-biological disorders affecting the elderly.

Earth Science continued from Page One

He said UBC's senior administration has been very supportive of Lithoprobe. He has been granted leave for at least three years to head the project and four new offices are being supplied by the university. Both the Departments of Geological Sciences and Geophysics and Astronomy have sponsored the project.

Industry representatives from mining and oil companies are members of the major committees and have provided valuable advice.

"The project will have a decentralized aspect, but as director my main function will be to meet the scientific objectives, supply overall scientific leadership to the transects, encourage communication and interaction and, of course, ensure that all of this is carried out within the established budget," said Clowes.

Lithoprobe is an enterprising concept which builds on Canadian expertise and addresses the next "intellectual frontier in earth sciences," he says.

Study shows life expectancy now better for patients with Down syndrome

by Jerri Lee

B. C.'s Health Surveillance Registry, a world-renowned resource and the only population-based registry in Canada, provides researchers with a unique opportunity to ask a whole range of biological questions, says Dr. Patricia Baird, professor and head of the Department of Medical Genetics at UBC.

Baird used the registry to conduct a study of the life expectancy of children with Down syndrome, one of the most common mental handicaps. The Health Surveilliance Registry records all cases of people born or living in B.C. with a birth or genetic defect or chronic handicapping condition.

"It is not expected that the incidence of Down syndrome will decrease markedly, and persons with Down syndrome will continue to constitute a significant proportion of the mentally handicapped population," says Baird.

"We have found life expectancy in Down syndrome is much better than in the earlier decades of this century, and much better than most researchers expected or projected. This has an impact on many family and health care resources."

She said that accurate survival data for Down syndrome are needed by physicians and other health care professionals in counselling concerned families as well as for medical and educational programs for the integration of affected individuals into the community.

British Columbia with its Health Surveillance Registry provided an unprecedented opportunity for a collaborative study by the Division of Vital Statistics of the B.C. Ministry of Health, and UBC's Department of Medical Genetics.

Baird said the results of the study indicate that life expectancy for Down syndrome persons is "much better than generally believed. We studied 1,341 patients identified from more than one million consecutive live births between 1952 and 1981."

She said that now physicians will have information available to them so that when parents of a Down syndrome baby ask what the prognosis for their child is they will have the answers.

Baird who stresses the importance of research in genetics because of its impact on choices in "real life for real people" is a member of the National Advisory Board on Science and Technology chaired by Prime Minister Brian Mulroney.

Dr. Patricia Baird, head of Medical Genetics.

Today's dentists emphasize prevention and health

by Jo Moss

Dentist.

If the word conjures up an image of needles, fillings and pain, be prepared to revise the picture. Dentists have changed in the last few years. Now focusing on preventive oral medicine rather than restorative care, their role is increasingly one of health advisor.

"Restorative work is no longer all-encompassing. Dentists now operate a more balanced general practice with an increased emphasis on prevention of oral disease and orthodontics," says School of Dentistry Dean George Beagrie.

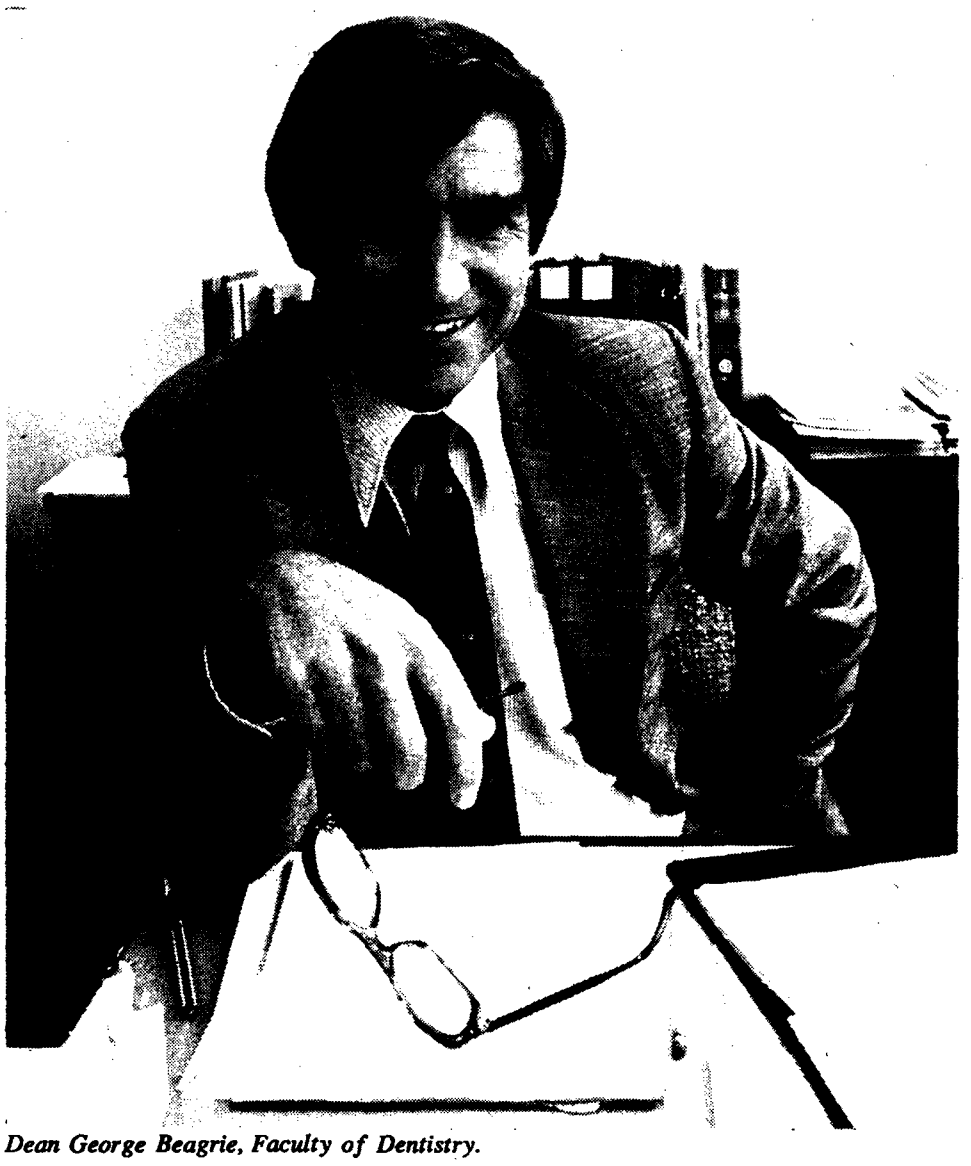
Better dental care by dental practitioners, a solid public education program and increased research in dental schools has resulted in fewer cavities among the general population. As people live longer and retain their teeth well into their twilight years, dentists find themselves dealing with a wider range of senior patients and their oral health problems, including periodontal disease

To meet the changing needs of their patients, the dentist's role has expanded slowly over the last 10 years to include related areas such as nutrition and detection of diseases such as AIDS.

"I think that the dentist of the future will become even more of a generalist in the area of health promotion and act as a counseller on such things as nutrition and hygiene. And why not? If a dentist can control mouth cleanliness as a specialist in oral hygiene, it's the next step. I think we have to have a wider concept of dentistry." Beagrie says.

Under Beagrie's direction, the UBC Faculty of Dentistry has consistently kept one step ahead of the changes. Increased emphasis on dental research has developed improved polymers and resins for use in dental work; succeeded in bringing caries, the disease that causes cavities, under control; and broken new ground in performance logic--the plotting of an ideal sequence of events for maximum efficiency and performance in the management of clinical problems.

"Dental research has contributed to our understanding of other areas of health science," says Beagrie. "One type of new dental material has been used successfully in hip replacement. Current UBC research into the adhesion mechanisms of oral bacteria has applications in medical microbiology, particularly in diseases of the respiratory and gastro-intestinal tracts."



Dean George Beagrie, Faculty of Dentistry.

Beagrie says upgrading is critical in keeping practising dentists up to 1987 standards. Currently continuing education operates on a points system under the jurisdiction of the College of Dental Surgeons of B.C. Dentists have to earn a certain number of points by attending workshops and seminars. Beagrie says upgrading will have to become more specific in the future and tied more closely to universities.

"The re-training of professionals in practice is fundamental to the future of the profession. This will be a new role for dental schools to fill."

Beagrie is taking part in a national review of the profession in Canada, a review that will try to define its role. One of the concerns of the committee, sponsored by the Canadian Dental Association and made up of university deans and others, is the possibility that Canada may be producing an excess of manpower.

The committee's mandate is to set goals of oral health for Canadians, examine competence assurance, educational standards, and licensing and determine the mix of oral health manpower required to meet the goals.

"One of the challenges of the university is to determine its place in society and meet society's needs," Beagrie says. "The public perception of dentistry is changing, but the profession has to change first. Much of the profession thinks that the new information coming out of the universities which is not technical is therefore not involved with dentistry.

Individualism

"You have to remember that dentistry as a discipline is fairly new in universities. Initially, the dental teacher was a clinician rather than a researcher. In my opinion, dentistry satisfies a need for individualism and among dentists there's a degree of professional isolation. In the university there is a need for dental undergraduates to be given a wider education in the health sciences."

UBC's dental program does more than encourage professional collaboration in information sharing and research. The school's national and international ties have increased dramatically in the last few years. At the 25th anniversary ceremony this month, the school will sign an agreement of affiliation with Nippon University in Niigata, Japan as part of an international union of dental schools. A number of exchange programs for undergraduate students is available under this union in places like Ann Arbor, Michigan; Berne, Paris, Jerusalem, and Beijing.

As a Centre of Excellence for the World Health Organization the UBC school has links with other centres in countries such as Thailand and Syria. Beagrie, who has been dean for nine years, was president of the International Association for Dental Research and is currently chairman of the committee of Dental Education and Practice of the International Dental Federation.

"The international focus of the school is a personal crusade of mine," Beagrie says. "I believe it's vital to the school's development."

UBC's dental clinic serves the community

The waiting area of UBC's dental clinic is bustling with activity as a fresh busload of school children enter for their weekly visit. The scene is typical for the clinic, which has been providing dental services to the community since the faculty opened its doors in 1962.

During the school year, 120 supervised dental students treat more than 7,600 patients for all kinds of dental problems, including crown and bridge work, gum disease, orthodontics and oral surgery. The services are offered at approximately one third of the usual dental fee.

Dr. David Donaldson, who has directed the clinics for the past five years, says the type of treatment required by the public has changed over the years because of an increased awareness of preventive dentistry.

"People are taking very good care of their teeth these days, and as a result we aren't doing as many fillings and extractions as we used to, or fitting as many people for dentures."

Donaldson says many individuals come to the clinic because of the thorough treatment offered. "Since the clinics serve as a teaching facility, each stage of a patient's treatment is checked several times by the supervising dentists."

During the academic year, the clinic's patients are largely senior citizens and university students. But come summer, it's children who fill the chairs.

In May and June, UBC receives a $90,000 grant from the provincial government to provide treatment for school children with limited or no access to dental services. More than 1,200 children from all parts of the Lower Mainland are bussed in for regular visits with dental services being offered free of charge. Bringing the youngsters to UBC is organized and supervised by dental staff in municipal health departments and provincial health units.

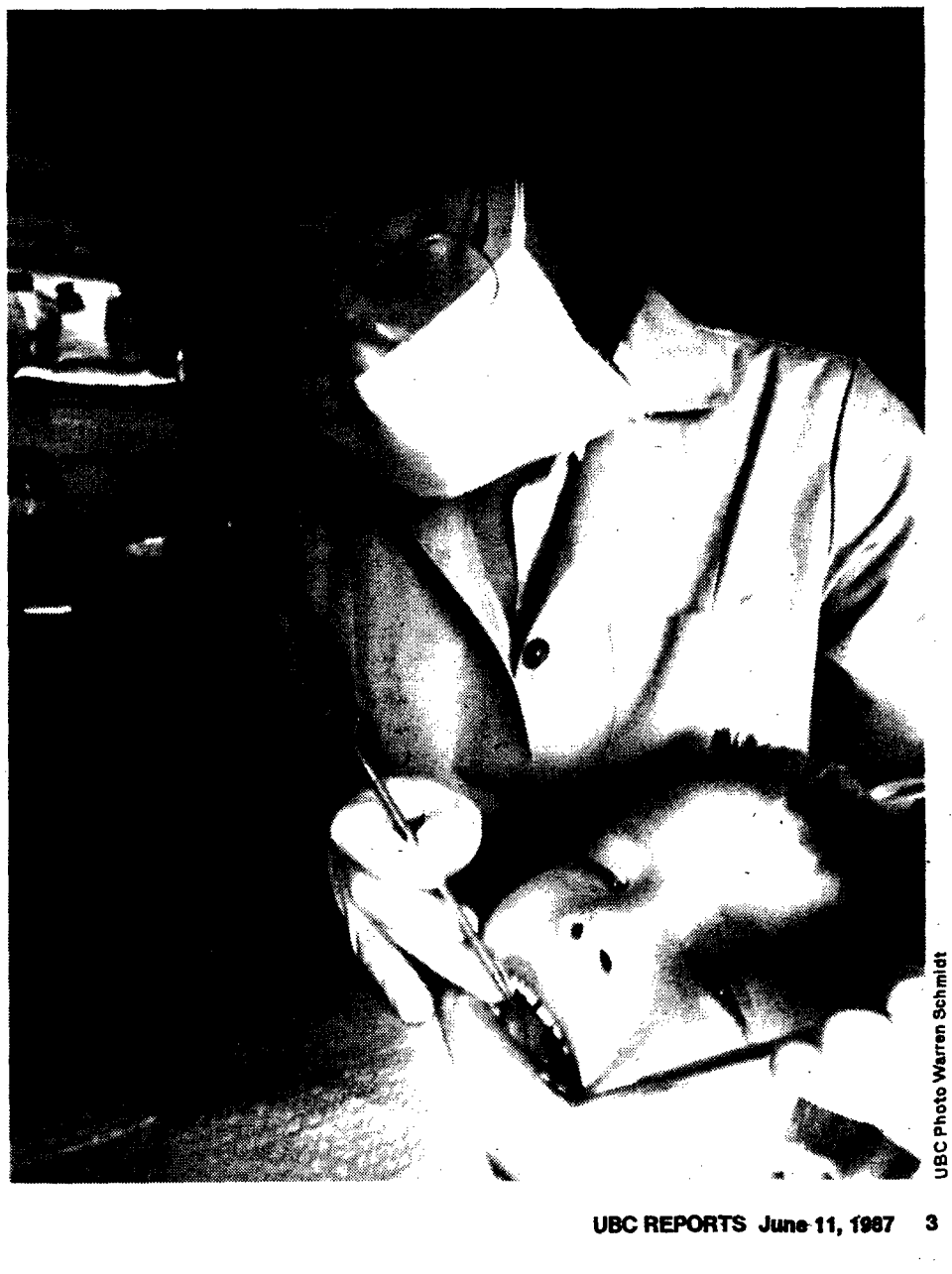
Dr. Jack Hann, who supervises the program, estimates the value of services provided when related to the fee schedule of the College of Dental Surgeons of B.C. approximates $250,000 during the six-week duration of the program.

The summer clinics were started 15 years ago by Dr. Douglas Yeo, chairman of the division of preventative and community dentistry.

In addition to the undergraduate clinics, faculty members and graduate students offer dental services to residents at the Extended Care Unit of the Health Sciences Centre Hospital.

Dental students also offer their services to the community through an independent health care unit in East Vancouver called REACH (Research, Education, and Action for Community Health). Two nights a week, they provide free clinics for low-income residents.

"This initiative is organized and operated by the students themselves," says Dr. Lance Rucker. "About 30 students are involved during the year, with at least six students attending each clinic."



UBC Photo Warren Schmidt

Six-year-old Taylor Read of Coquitlam is at the dental clinic for his first checkup with fourth-year student Barbara Hori. The UBC clinic has provided service to the community since the faculty opened its doors in 1962. During the school year 7,600 patients are treated.

Dr. John Barfoot Macdonald for whom the dentistry building was named was photographed at the opening ceremony.

Dentistry continued from Page One

Dr. Jack E. Taunton, co-director of sports medicine at UBC, will urge dentists to change their lifestyle. He points out that coronary artery disease is the major cause of death and ill health for the middle-aged dentist, and he'll recommend reducing stress, controlling hypertension, quitting smoking, taking up regular aerobic exercise, losing weight, and improving nutrition.

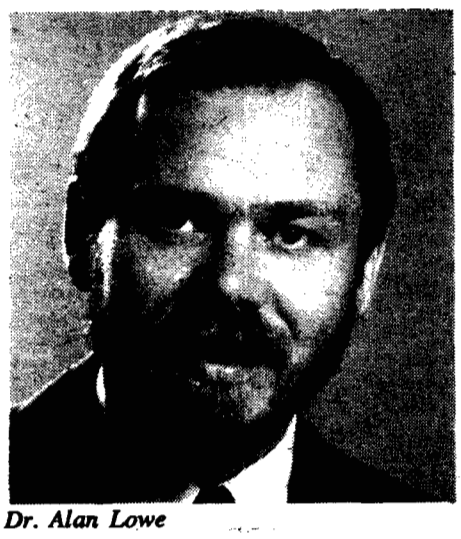
Social program

A full social program has been planned, beginning with a champagne and strawberries reception in the Student Union Building ballroom Thursday evening. Music will be provided by members of the Vancouver Symphony Orchestra, and the 25th anniversary celebrations will be launched by past president Macdonald and President David Strangway; Dr. S. Wah Leung, the Faculty of Dentistry's first dean, and current dean Dr. George Beagrie; and Dr. S. Vanry, president of the College of Dental Surgeons of B.C.

The UBC dental alumni will attend a reunion dinner Friday in the Faculty Club ballroom at which Macdonald will be presented with this year's Honorary Alumnus Award. And a salmon barbecue will take place Saturday evening in the Graduate Student Centre.

Satellite meetings will be held during the four days by the College of Dental Surgeons of B.C., the Academy of General Dentistry (B.C. Chapter), the International College of Dentists, elected delegates and Deans of the Canadian Dental Faculties, and the Certified Dental Assistants' Society of B.C.

Chairmen of the Quarter Century Celebration Committee's various sub-committees are John Diggens (exhibits), Ted Ramage (finance), Marcia Boyd (local arrangements), Bob Clarke and Virginia Diewert (program), and Ernst Schmidt (publicity and publications).



Dr. Alan Lowe

Humble beginnings for dentists who practised in a trailer

by Bunny Wright

UBC's first dental students practiced their craft in a clinic that had once seen life as a commercial trailer.

The reception area was housed in what used to be the driver's seat, the X-ray unit was crammed into the back of the vehicle, and in between, in the main body of the trailer, six dental cubicles were squeezed.

When they weren't working in the trailer, the six students who made up the first dentistry class attended lectures in a hut situated in an orchard that was later to become the site of the Faculties of Forestry and Agricultural Sciences.

It took 13 years to get that far.

The first glimmerings of hope for the existence of dentistry at UBC occurred in 1951, when Dr. Norman Mackenzie, president of the university, appointed a committee led by Dr. Laurence E. Ranta. The committee reported a year later and recommended that a dental school should be established, but not until the Faculty of Medicine had been in operation for at least two years.

The committee was reactivated in 1953 with Dr. James M. Mather as chairman and his group also said, a year later, that there ought to be a dental school at UBC.

In 1955-56, the provincial government provided funds to hire a consultant. This turned out to be Dr. John Barfoot Macdonald, then director of dental research at the University of Toronto. He produced a report consisting of 86 pages of text and 45 tables stating that there was a crucial need for a seventh dental school in Canada.

Nothing was done, however, to implement his recommendations.

In 1961, Macdonald was asked to update the report.

The following year finally saw the establishment of a Faculty of Dentistry at UBC, with Dr. S. Wah Leung as dean. At the same time, the government announced the appointment of Macdonald as president of the university.

Leung, born in China, attended UBC and graduated in dentistry from McGill University. He got his Ph.D. from the University of Rochester and had an enviable teaching and research record at the Universities of Pittsburgh and California before returning to Vancouver.

His first office was in the Wesbrook building, in a room loaned to him by the Department of Preventive Medicine. Later he was housed, along with the dean of medicine, in a small cottage located where the Instructional Resources Centre is now.

He hired as the first dentistry faculty Dr. G. J. Parfitt, Dr. L. Kraintz, Dr. R. H. Roydhouse, Dr. D. Middaugh, Dr. J. D. Spouge, Dr. D. J. Yeo and Dr. H. K. Brown.

The first class registered on Sept. 8, 1964, and construction of the dentistry building began the following year. It was completed in 1967, at a cost of $6 million. The opening took place on March 22, 1968, when the building was officially named in honor of Dr. John Barfoot Macdonald.

Dental hygiene

On May 31, 1968, the members of the first class in dentistry to graduate from UBC received their D.M.D. degrees, and Richard Suen was presented with the first Gold Medal of the College of Dental Surgeons of B.C.

The program of dental hygiene, meanwhile, had gotten under way the previous year, with Margaret Robinson as supervisor. The first class of 20 registered in September 1968 and graduated in 1970, with Dianne McBeth winning the first College of Dental Surgeons' Gold Medal in Dental Hygiene.

The dental hygiene program was moved in 1986 to the Vancouver Vocational Institute.

Other milestones in the history of the faculty include:

March 6-7, 1970: First Open House attracts more than 5,000 people.

March 1970: Dental hygiene students place in the top five per cent of all North American dental hygiene programs, in American National Board examination results. (This feat was repeated every year.)

May 15, 1974: First annual summer dental clinic begins. Financed by a grant from the ministry of health, it has operated every year since. The clinic employs senior students to provide free dental care to needy Lower Mainland children.

July 1, 1978: Dr. George Beagrie appointed dean.

December 1980: First resident accepted into new general practice residency program.

January 1981: Expanded and renovated dental clinic opened in the extended care unit of the Health Sciences Centre Hospital.

February 1987: New computer facilities for patient records, selection and treatment come onstream. (Funding assistance was received from the Vancouver Foundation and the Dental Alumni Association.)

First dean of dentistry Dr. S. Wah Leung pictured at the opening ceremonies for the Macdonald Building.

Influence far and wide of dental training system

by Bunny Wright

The influence of the Faculty of Dentistry extends as far as Thailand and Syria, where a system developed at UBC five years ago is being used to train health care workers.

The system at UBC uses dummies on which dental students learn skills formerly taught as bench work, with teeth set in plaster of Paris.

The dummy is part of a "simulator teaching unit" developed on campus through a grant from the Woodward Foundation. It consists of a specially-designed stool, instrument tray, air suction, dental drill, and an overhead light.

The stool places the student in exactly the correct position in relation to the patient, enabling him to master the critically important distance relationship between the eye of the dentist and the mouth of the patient.

In Thailand, the stools and the horizontal bed-type dental chairs on which patients recline are made of bamboo.

"Since they are made locally," says Dr. George Beagrie, Dean of the Faculty of Dentistry, "the project has contributed to the villagers' economic well-being as much as to their oral health."

The World Health Organization project trains local people to give advice on oral health, to scale teeth and to enter in an "oral passport" the results of a dental examination. Passports are then sent to district health stations, analyzed by computer and returned to the villages with instructions for treatment.

Oral health care is being provided to these people for the first time in their own communities, says Beagrie.

Three kinds of workers are trained to deliver the care, according to a WHO description of the project entitled "Oral Health: A Quiet Revolution."

The "examiners" are health workers stationed in the centres, or nurses working in community hospitals. They receive two weeks of classroom instruction before going into the field.

The "oral health educators" are selected from among teachers and volunteer health care personnel. The health care personnel are given a one-day training session on how to introduce the oral health project to the community. Teachers work on a school program.

There was so much interest in "scalers'" jobs that candidates were selected on the basis of a written examination. They had to be local people, secondary school graduates and between 18 and 22 years of age. Scalers receive a two-week course followed by a four-day refresher, and learn the techniques of scaling, how to provide pain relief by non-surgical methods, and criteria for referring patients to the district hospital.

B.C. students rate tops in math

Thirty-five of the top 100 math students in Canada live in B.C., according to the results of the 1987 Euclid Mathematics Contest for Grade 12. "This is a truly outstanding achievement," says Dr. George Bluman of UBC's mathematics department.

The Euclid contest is part of the Canadian Mathematics Competition administered by the University of Waterloo.

The papers of B.C. students were marked here by a team of 25 teachers, including nine members of the mathematics faculty.

The curriculum-based contest is designed to challenge university-bound students and to identify those with outstanding talent. The results are taken into account when scholarships are awarded.

Twenty-two of the 50 schools on the Canadian Honor Roll are from B.C. Of the rest, 18 are from Ontario, four from Alberta, two from Saskatchewan and one each is from Manitoba, Quebec, Nova Scotia and New Brunswick.

Because B.C. students have consistently done well in the Euclid Contest, more and more high schools are encouraging math students to work on harder and harder problems, says Bluman.

"I think that they are paying a lot more attention to (the contest) and are spending a lot more time working on preparing students to compete," he says.

The percentage of B.C. students on the Canadian Honor Roll has moved from 14 per cent in 1980 to 35 per cent this year. In 1980, only 18 per cent of B.C. schools were on the Canadian School Honor Roll. This year, 44 per cent of them made it.

Bluman said that with the aid of a Challenge grant he and UBC math student Douglas Maskall have prepared a problems book which high schools can purchase. "It's for use in preparation for the Euclid contest and for first year calculus," he says.

A total of 1,921 B.C. students from 121 schools participated in this year's contest. There were 8,700 entries across Canada.

The top B.C. schools are St. George's, Vancouver, which stands in second place, nationally and Sir Winston Churchill, Vancouver, fourth place in Canada.

The highest ranking B.C. students are Greg Wellman, Churchill secondary school; Richard Kiss, Vernon; Karl Berggren, and David McKinnon, St. George's.

UBC Photo Warren Schmidt

Hidden behind the protective glasses and the rubber dam is the patient. Hidden behind the mask and the gloves is the dentist. Doing your work in someone else's mouth is both difficult and stressful. Satisfaction comes from helping people.

Dentist's greatest reward making people feel better

by David Morton

"Often, the first thing a new patient says to me is, 'Nothing personal, but I hate dentists.'"

Dr. Harold Wolverton chuckles to himself as if recalling a private joke. He's practised dentistry in Vancouver for 35 years.

"My response to them is, 'You don't hate dentists at all. You just hate what dentists do to you, or what you expect they're going to do to you.'"

What do you think of when you think of a dentist? A man in a white tunic with a screaming drill in one hand and a hypodermic needle in the other? "Open wide," he says, as he focuses a blinding light into your eyes. The image strikes terror in the hearts of many.

But according to three Vancouver dentists, that image is a stereotype, and if such dentists ever existed, they're not around today.

"Older generations acquired a bad image of dentists because decay was so prevalent a few years ago," says Dr. Mike Oltean, who has been practising in Vancouver since he graduated from UBC's Faculty of Dentistry in 1974.

"The vast majority of the kids I see these days don't have any cavities, so I rarely do any drilling or filling work, any more. The most I do with these kids is a little cleaning, maybe an X-ray, then I send them out to the front for their little prize."

Oltean says the public image of the profession has changed for the better in the past 20 years because of improvements in dental techniques and equipment. There has also been an increase in public awareness of proper dental care, diet and healthy living, he says.

"If you make a visit to the dentist fun for the patient, then it's easier on the dentist as well. It only makes sense."

Oltean gives his patients sunglasses to shield against the lights and stereo headphones with classical music to help them relax. And, if he feels it's necessary, there's a ready supply of nitrous oxide, a mild anaesthetic otherwise known as "laughing gas," to help calm a jumpy patient.

Dr. David Thorburn, who graduated from UBC dentistry in 1981, agrees with Oltean's approach.

"In dentistry, your patients are always awake, they're always uncomfortable, and you're doing your work in someone else's mouth. The whole thing is to make the patient feel better, and sometimes, when you do a good job of it, that can be the greatest reward."

Personal Crisis

According to Oltean, dentistry can be immensely satisfying simply because it helps people. Many regard teeth as an important aesthetic component of their overall appearance, so if they have an accident that causes major damage to them, it becomes a personal crisis.

"When I go in there and fix 'em up, and that person is able to go to their prom or their graduation without feeling bad about their teeth, that's a great feeling. To me that's worth almost as much as the money."

Oltean works in a large office on West Broadway that he shares with three other dentists. He has two hygienists who work with patients prior to seeing him. This allows him to concentrate on more specialized work, while maintaining a regular flow of patients. He sees about 10 per day.

He also enjoys the flexibility that comes with "being your own boss." He says with a

see Reward Page Seven

Dental research aims at periodontal disease

by David Morton

If you think researchers in UBC's Faculty of Dentistry are mostly concerned with tooth decay, think again.

"Tooth decay, or caries as we call it in dentistry, is no longer a major issue," says dentistry research coordinator, Dr. Joseph Tonzetich. "The decrease of caries in the western industrialized nations is one of the great success stories of modern dentistry."

Tonzetich says there are more teeth lost to periodontal disease today, than tooth decay, and he, along with Drs. Don Brunette, Doug Waterfield and Barry McBride are studying the nature of the disease.

Periodontal disease involves the destruction of the periodontal ligament, the fibrous connective tissue that anchors the tooth to the jawbone. It is caused by bacterial plaque building up in the small crevice between the gum and tooth. If the plaque is not removed, the crevice widens and extends down towards the root of the tooth. This exposes the periodontal ligament to bacteria and causes bone loss. Ultimately, the tooth will loosen, the jawbone will begin to deteriorate and the tooth will be lost.

Tonzetich says periodontal diseases can be successfully treated, but there is still some difficulty in diagnosing whether they are in a resting or active state. This is the focus of Dr. Tonzetich's research.

One answer, he says, lies in the chemistry of protein, especially collagen, a fibrous protein that makes up the major protein content of the bone, gum and periodontal ligament. There are two byproducts in the breakdown of protein: hydrogen sulfide and methyl mercaptan, both of which increase in periodontal disease and result in bad breath, a clue that the disease is present.

Using cell cultures, Tonzetich has found that not only are these substances indicators of the disease, they also aggravate the disease.

Tonzetich's colleague, Dr. Doug Waterfield, an immunologist, is investigating the immunological aspects of periodontal disease.

Research in the faculty appears to be far-reaching. Dr. Alan Lowe is interested in the relationship of tongue position to tooth position and is currently looking at the relation of sleep apnea to tongue position. Sleep apnea is a condition that results in the cessation of breathing for brief periods during sleep. Drs. Ravi Shah and Virginia Diewart are studying cleft palate and facial development and Dr. Alan Hannam is interested in facial musculature and occlusion.

Other researchers in Dentistry are zeroing in on a revolutionary technique involving the implantation of dentures. They also believe their discovery will have applications in other medical areas.

The technique they have improved upon involves the implantation of titanium studs into the jaw bone. An artificial denture is then attached to the stud. The result is an artificial tooth that recipients say is almost exactly like a real tooth.

The Branemark Technique, named after the Swedish dentist who developed it, and who is expected to participate at the Quarter Century meeting, is said to be about 90 per cent successful. It is an answer to a dental problem that researchers have been trying to solve for years.

If the titanium studs are not properly installed, the gums of the patient will reject the denture structure. But Drs. Don Brunette, Tim Gould and PhD student, Dr. Babak Chehroudi believe they've found the answer to this problem.

The researchers have developed a special surface etched electronically with microscopic grooves, and coated with titanium. Using cell culture, they have found that new cells adhere to and are guided by the grooves and this guidance may prevent rejection.

If human trials are successful, the UBC discovery will not only be the perfecting touch to the Branemark technique of denture implantation, it will have far-reaching consequences in other medical areas. Any procedure requiring materials that penetrate the skin surface will benefit from this knowledge.

Possible applications include kidney dialysis, catheters, artificial limbs and transcutaneous electrical leads.

Dr. Joseph Tonzetich, professor of oral biology in the School of Dentistry heads the research program.

A dentist's fantasy land

by Jo Moss

It's unlikely that Metrotown shoppers would expect to find the second-largest fish tank in the province in the middle of a shopping mall. They are usually even more surprised to find it's part of a dentist's office.

"People can't believe it," says co-owner and dentist Michael Kirsch. "I love to hear their comments."

When Kirsch arrived in Vancouver from Toronto six months ago, he was faced with the problem of finding a way to attract patients to his new practice, since dentists are prohibited from advertising their services. Kirsch and colleague John Newman came up with Ocean Dental--a dentist's fantasy land which may prove to be the wave of the future.

"We decided to open up in a high profile area with a lot of retail traffic, and offer something different to our patients. We wanted to attract those people, who for one reason or another, don't ordinarily go to the dentist," Kirsch says.

The 480-gallon tank with its coral landscape and saltwater fish species stops shoppers in their tracks. It also puts patients at their ease. "People find watching the fish very calming and relaxing. It helps eliminate anxiety," Kirsch says.

In keeping with the ocean theme, the office is decorated in pink and turquoise pastels, and a seven-foot high toothbrush and giant molar grace the waiting room. Then there's the life-size pink flamingos.

In the dentist's chair the patient can put on stereo headphones and watch music videos on the television monitors suspended from the ceiling.

"It's fun, it makes it a more exciting place to work in, and the patients feel more comfortable," Kirsch says. Even the telephone numbers of his two offices were selected with a view to humour. Dialing 43-BRUSH connects the patient with the Metrotown office; 688-GUMS is the number of the Sinclair Centre location.

One member of this year's graduating class at UBC will be joining the four dental practitioners at Ocean Dental. He won't have any difficulty finding his new office in the multi-level mall--the usual crowd will be gathered outside the fish tank.

PEOPLE

Physical Plant electrician participant in study group

Physical Plant electrician **George McLaughlin** is the first person from UBC to take part in the Second Governor General's Canadian Study Conference. He is one of 23 people from B.C. who have been selected to participate in the conference with the purpose of improving the quality of decision-making in Canadian society.

The 225 Canadians involved in the conference will take their leadership skills and individual expertise in business, unions and other sectors such as community organizations.

McLaughlin is currently in the Northwest Territories visiting nine different centres, including one at Chesterfield Inlet accessible only by a five-hour skidoo ride. As general vice-president of CUPE local 116, his background is in union business, but his participation in the conference is not as a union representative. "All participants leave their hats at home," McLaughlin says.

* * *

Dr. Peter Oberlander, professor of regional planning and director of the Centre for Human Settlements, will be leading a Canadian delegation to Paris this week to present Canada's views on the role of land and its impact on housing and community development.

The United Nations Economic Commission for Europe is convening a seminar on land and its developmental consequences June 15 to 19.

* * *

A hole-in-one. It's what every golfer dreams about. Dean of Agricultural Sciences **James Richards** is smiling because his dream came true. Richards' first swing with a 6-iron at the 12th hole of the University Golf Course during the 31st Annual Faculty and Staff Golf Tournament put the ball in the cup. Organizers say he's the first person in the tournament's history to achieve the fabled feat.

Richards says he thought at first he had overshot the green, but when he realized the ball had gone in "I gave a little hop and a grin of excitement". Although he says he plays just four to five times a year, Richards has missed only one of the last 22 golf tournaments.

Chemistry professor **Dr. Michael Gerry's** teaching abilities have won him the Union Carbide Award for Chemical Education. The Chemical Institute of Canada makes the annual award to a person who has made an outstanding contribution to education in Canada at any level in the field of chemistry or chemical engineering.

Gerry was lauded by the CIC for breaking through the 'veil' that separates students from a professor by the clarity of his instruction, his enthusiasm, and by making the learning process challenging but achievable.

* * *

Psychology graduate student **Jean Kozak** has won the Gerontology Association of B.C. prize. This is the second year the association has made the $100 award. Candidates must be a graduate student whose studies include an emphasis on aging.

Kozak has been studying the attitudes people have towards the elderly for several years. His current work involves people who stereotype the elderly and is an attempt to find out what characteristics those people have in common.

He is also involved in research on the sensory changes of the visual system in older people and has done community work in his field.

* * *

Dr. Charles Laszlo, head of UBC's Clinical Engineering Program, has been appointed chairman of a provincial Board of Hearing Aid Dealers and Consultants. The B.C. board is unique in Canada . It controls the practice of hearing aid dispensing, protects the consumer against exploitation and ensures a high quality of competence on the part of people who dispense hearing aids. The board has proved instrumental in raising consumer awareness regarding hearing problems through various publications.

Laszlo is founding president of the Canadian Hard of Hearing Association and, as a professor in electrical engineering, has developed specialized devices to help the hearing impaired.

* * *

Dr. Michael Blades is earning an international reputation in spectroscopy and this year has been recognized by the Chemical Society of Canada for his research.

The society awards the W.A.E. McBryde Medal annually to a young scientist working in Canada in recognition of a significant achievement in pure or applied analytical chemistry.

Blades received the award for his current research is plasma spectroscopy, laser excited luminescence, and ion-storage mass spectrometry. According to the CIC his work "has contributed significantly in giving analytical chemistry a strong presence on the West Coast of Canada".

* * *

Associate Executive Director of the of the UBC Alumni Association, **Pat Pinder**, has been appointed Major Gifts Officer by the Development Office. Pinder will continue her directorship duties and oversee gift clubs such as the Wesbrook Society. She will facilitate solicitations to major individual donors.

Education professor **Dr. Thelma Sharp Cook** was one of nine women honoured recently at the YWCA sponsored Women of Distinction awards. Selected from 66 nominees, the nine were selected for their contributions to B.C. in one of seven categories.

Cook was recognized for her many achievements in area of management and the professions. She is a founding member of the Crisis Intervention Centre and Suicide Prevention Centre, acts as volunteer chairman of the B.C. Health Association, and is currently one of two provincial members on the board of directors of the Canadian Health Association.

She has also contributed extensively to the Leon and Thea Koerner Foundation, St. Paul's Hospital, the Vancouver Museums and Planetarium Association.

* * *

Three UBC faculty members are among 19 chemists, chemical engineers and educators who are newly elected fellows to The Chemical Institute of Canada.

Dr. Richard Kerekes, director of the Pulp and Paper Centre, **Dr. Samuel Levine**, honorary professor of chemical engineering, and **Dr. Raymond Andersen**, associate professor in Oceanography and Chemistry, were presented with certificates at the CIC Annual General Meeting in Ste Foy, Quebec.

Approximately 17 per cent of the 9,000 CIC members are fellows, a rank which recognizes people who have made a sustained and major contribution to chemistry or chemical engineering.

* * *

Psychiatry professor **Dr. Christian Fibiger** has been recognized by the Canadian College of Neuropsychopharmacology for his outstanding research achievements. At the tenth annual meeting of the college last month, Fibiger received the Sixth Heinz Lehman Award.

The college described the most characteristic feature of Fibiger's work as being its breadth of scope. "He is almost unique in being able to exhibit equal facility in neuroanatomy, neurochemistry and psychopharmacology--not just in understanding concepts from these diverse areas, but in actually innovating and working with the methods in each of them. He could have made a highly successful career in any of these fields..."said a college release.

Fibiger is currently acting head of the Department of Psychiatry.

* * *

Head of Anatomy **Charles Slonecker** was one of two Canadians to receive the gold centennial medal at the 100th. meeting of the American Association of Anatomists.

In all 12 recipients were recognized for contributions in the areas of public service and promotion of the field of anatomy, as well as for research. Slonecker was recognized for his service to the organization; he has been involved in association administration for five years.

The professional association has 3,000 members, most from Canada and the United States.

* * *

The Canadian Society for Chemistry has selected chemistry professor **Dr. Ross Stewart** for the 1987 Syntex Award in physical organic chemistry. Presented annually to a scientist who has made a distinguished contribution in the field, the award recognizes Stewart's research in aspects of hydrogen transfer in organic chemistry.

UBC Photo Warren Schmidt

Your health, their business

Members of the University Health and Safety Committee are shown following a recent meeting. Starting with the back row and moving forward (left to right) are: D. Napier, R. Service, M. Lang, A. McKee, D. Bell, G. Bates, G. Slowan, J. McAdam, S. Affeck, M. Flores, K. Shaw, R. Black, E. Lebitshnig and E. de Bruijn.

American, Canadian astronomers gather here for joint meeting

About 800 scientists from across North America and Europe will be on campus June 14 to 18 to attend the first joint meeting of the American Astronomical Society and the Canadian Astronomical Society being held at the Instructional Resource Centre.

The Hogg Public Lecture, June 16 at 8 p.m. in IRC 2, will be the one event open to the public. On this occasion, Dr. Rene Racine of the University of Montreal will speak on the topic Small is Beautiful: The Quest for High-Resolution Imaging in Astronomy. Racine was until recently director of the Canada/France/Hawaii telescope located on the Mauna Kea volcano in Hawaii. A proposal for a high-resolution telescope at this location is central to the future of Canada's research and instrumentation in astronomy. The telescope is located on Mauna Kea because of its elevation above the clouds, its location near the equator and the relatively unpolluted atmosphere.

Astronomers will be gathering for a major scientific meeting for the first time since the discovery of Supernova Shelton 1987A. Robert F. Garrison, director of the University of Toronto's Southern Observatory will present an update on the Supernova.

A number of internationally known scientists will speak on such topics as Education in Astronomy, Funding for Women, Star Formation, and a working group on Astronomical Software will be held.

Dr. Harvey Richer, Geophysics and Astronomy, is chairman of the local organizing committee. The joint meeting ends June 18 but the Canadian Astronomical Society will continue to meet June 19 when a national forum on the Future of Canadian Astronomy will be held.

Engineering Physics

Students tackle real problems in lab

by Jerri Lee

Students in the Design Laboratory of UBC's Engineering Physics program look to industry to supply them with real research problems.

"The students were interested in some more timely project which would connect them with real questions from local interests or research labs," says Dr. Boye Ahlborn, a professor of engineering physics and instructor in charge of the Design Laboratory in the Physics Department.

Ahlborn said the program, which has been going for 10 years at UBC, developed when students wanted to test themselves with real problems in research and design rather than with academic textbook illustration experiments. They looked to local industry and research groups in engineering and physics for problems and and found them so interesting that they spent more than the required amount of time on them.

"They get involved, are self-motivated and they want to prove they can do something. Often the problems cut across disciplines and the students then look for and find valuable help from members of other engineering departments," said Ahlborn.

Some of the project results lead to research publications, others to patents, and a number of students continue their project as a master's thesis topic or receive job offers from associated companies.

"For each student the project lab is a personal challenge," said Ahlborn. He cites one of the early projects in the Design Lab program as a demonstration of the value of having students work in areas which have not yet been developed commercially. One of the students, a docent at the MacMillian Planetarium, noticed that it took a very long time to arrange slides for the planetarium's presentation. A proposal for a microcomputer controlled projection system was developed in the design lab, and was eventually built at a cost of $360,000 by a newly incorporated company, Planitech.

"With this computer controlled system, slide shows for the planetarium's 220 projectors can now be arranged within less than an hour, a task that had taken two days with the old system."

Ahlborn said a network of contacts has built up between industry and the university based on former students and former project supervisors. Since the program began, a wide variety of projects have been tackled by students--everything from data reduction of ancient ruins to measuring the sucking strength of infants.

The program at UBC is comparable to a similar program at Stanford University, and "the level of sophistication of our projects is as good as any in North America," says Ahlborn, "but it is also known to be a tough program and yet some students come into engineering physics for the design lab."

The Engineering Physics Design Lab has its base in the Physics Department, from where several spinoff companies have evolved from the Design Laboratory including Moli Energy Ltd. which produces a safe high performance cost-effective rechargable lithium battery which is longer lasting than any others; Vortek Industries specializes in the manufacture and development of the world's most powerful arc lamps and TIR Systems which produces Light Pipes for commercial lighting.

Dr. Boye Ahlborn works with students in the Engineering Physics lab. Third-year students left to right are: Ward Bush, Malcolm Smith and Geoff Worley.

In Memoriam

Margaret Roberts MacKenzie

Margaret Mackenzie, wife of the late president emeritus, Dr. Norman McKenzie, passed away in April. Born in 1903 she received a B.A. from the University of Toronto and an M.A. from Smith College. Her contributions to UBC after her arrival with her husband in 1944 were numerous and sustained.

For the first 18 years, while Dr. MacKenzie steered the university, Mrs. Mackenzie played an active role from the modest president's residence which was a converted army hut. Her door was always open to the university community and she was a gracious hostess.

She accepted an honorary position in the Faculty Women's Club and for 43 years was an active and valued member. A lover of the arts and nature, she was also an avid hiker, mountain climber and skier. When she suffered a stroke a few years ago, she displayed remarkable tenacity in overcoming the effects.

In 1984 the FWC established and endowed a scholarship in her name. Donations in her memory to the scholarship fund would be appreciated by her friends and family.

She is survived by two daughters and a son, eight grandchildren and four great-grandchildren.

Dean Emeritus Sperrin Chant

Dean Emeritus Sperrin Chant, who was appointed UBC's dean of arts and sciences in 1948 and retired in 1962, died Sunday, May 10 at the age of 90.

Friends and relatives gathered at the Faculty Club May 23 at a reception in honour of his memory.

Dean Chant was best known publicly for his work on the Royal Commission on Education from 1958 to 1960. His recommendations resulted in the transformation of elementary and secondary education in B.C., bringing about a longer school year, more exams and essays, better teacher training, and greater emphasis on basic subjects. The primary aim of education, he said, ought to be "promoting the intellectual development of the pupils."

His report also included recommendations that led to the establishment of the B.C. Institute of Technology.

"This province and the University of B.C. owe him a debt we can never repay," said former UBC president Doug Kenny, who added that Dean Chant "really built all the major departments within the university" before it had an established reputation, and when it had an enrolment of only 4,000 students.

At the same time, said Leslie Peterson, a former education minister who will become Chancellor this fall, B.C.'s education system was experiencing the greatest period of expansion in its history. "Dean Chant played a prominent role in that," he said, "with his advice to the government."

Dean Chant, whose discipline was psychology, was awarded the Order of the British Empire for his work during the Second World War designing aptitude tests for Royal Canadian Air Force pilots.

He is survived by Nellie, his wife of 63 years, and their three sons.

Not getting older, getting stronger

Is it possible for older women to increase their strength through weight training? UBC graduate student Eleanor Haydock thought so, and taking 50 volunteers ranging from 55 to 76 years old she put a group of them on a light training program to measure the before and after results.

"The subjects trained at home with hand-held weights--all of them did the exercise conscientiously at least three times a day," Ms. Haydock says. "We found that they could indeed increase their strength, which is the amount of weight lifted, but their power--the rate of doing the exercise--did not change."

One of the early difficulties with the project was measuring the power of each volunteer.

"It's not easy to define. Power is an aspect of strength, but what do we really mean when we say someone is strong?"

The problem led her to enlist the help of UBC's Engineering department, and physical education professor Dr. Stanley Brown, to design and build a dynamometer, a novel machine which measures power precisely.

"There's a real lack of physical activities available for people in their 50's and older. That's what got me interested in this kind of research," Ms. Haydock said. "There's also not enough studies being done in the area of gerontology and physical education, particularly since that portion of the population is steadily increasing."

Ms. Haydock has more than an academic interest in her work. A retired librarian, she is in her late 60's.

Summer hours on campus

Although summer doesn't officially arrive until June 21, many university services are already operating on summer schedules, and in some cases, reduced hours are currently in effect.

With the beginning of summer session July 6, many Food Services outlets will increase their hours of operation. The Bus Stop coffee shop, closed for the month of June, will be open July and August, 7:30 a.m. to 2 p.m.. The Arts 200 snack bar re-opens 8 a.m. to 1:30 p.m., July 1 to August 14. Edibles re-opens July 6 from 7:30 a.m. to 2 p.m. and will be closed August 14. The 99 Chairs is open 7 p.m. to midnight from July 6 through to the end of August.

Other outlets: the Barn Coffee Shop, The Express, Subway Cafeteria, Grad Centre Lounge and IRC snack bar maintain regular hours throughout the summer, with the exception of Yum Yums which will close August 14. More information on these and other Food Services outlets can be obtained from 228-2616.

The Thunderbar, a licensed outlet on the second floor of the Thunderbird Winter Sports Centre, will re-open July 2. For more information call 228-6121.

July 6 is the day many of UBC's libraries switch to longer hours. Main Library hours can be obtained from a recording at 228-2077. Contact other UBC libraries directly for opening hours; telephone numbers are available in the white pages of the Vancouver telephone directory. All libraries will close on statutory holidays July 1 and August 3.

The UBC bookstore hours remain unchanged throughout the summer months: Monday, Tuesday, Thursday and Friday 8:30 a.m. to 5 p.m., Wednesday 8:30 a.m. to 8:30 p.m., Saturday 9:30 a.m. to 5 p.m. and closed Sundays.

Reward continued from Page Five

minimum of careful planning, he can take time off work to pursue other activities, such as cross-country skiing, tennis (both of which he teaches in his spare time), hiking and travel. He recently took a five-week sailing vacation to Tahiti, and two years ago, he climbed Africa's Mount Kilimanjaro.

Oltean, in his late thirties, says exercise and a proper diet are important for dentists, because the stress from working in a bent-over position all day long can take its toll.

Thorburn, who has been practising for only six years, says the dentistry profession is what the individual makes it. A dentist can enter any number of different practices ranging from the mall or street level practice that deals with many patients to scaled down practices that specialize in more technical dentistry. Most are somewhere in between.

Thorburn worked for three years in a Surrey dental practice in a shopping mall. He didn't enjoy the pressure of a big practice.

The experience almost caused him to leave dentistry but two years ago, he took a course in cast gold restoration (Dentists are required by the College of Dental Surgeons to take a certain number of hours of continuing education course per year to maintain their credentials). Gold restoration is a fine technique practised by only a few dentists, but Thorburn says it renewed his interest in the profession because it appealed to his passion for detail.

Last year, he became a partner in a smaller office and is in the process of building a new practice...slowly. Occasionally, he does locums, where he substitutes for absent dentists. Thorburn is also an artist and is currently working on a series of fine drawings he hopes to show.

Dr. Harold Wolverton, who graduated from the University of Alberta in 1952, has seen major changes in dentistry, both in the techniques and the way in which it is practised. When he started, the main concern of the profession was tooth decay, or caries. That is no longer a major problem.

"Dentistry has been one of the most effective health services to the general public," Wolverton says.

UBC Calendar

SUNDAY, JUNE 14

Hong Kong and Korean Dance Troupe

Three consecutive half hour performances. Classical and contemporary Hong Kong dance performed by high school students from the Hong Kong Academy of Fine and Performing Art. Lecture and demonstration exploring the effects of shamanism on Korean contemporary dance movements, under the direction of Professor Song, Soo-Nam, Department of Dance, Sookmyung Women's University, Seoul, Korea. Lecture and demonstration of traditional Korean musical instruments with both traditional and modern ballet, under the direction of Professor Cho Seung-Mi, Department of Dance, Hanyang University, Seoul, Korea. Museum admission: $2.50 adults. $1 children, seniors and students. For more information, call 228-5087. Great Hall, Museum of Anthropology.

MONDAY, JUNE 15

Economic Development Guest Lecture

Water Resource Management in Yellowstone Basin Montana: Risk Assessment and Regional Economic Analysis. Dr. Kingsley E. Haynes, Director, Regional Economic Development Institute, School of Public & Environmental Affairs, Indiana University. Room 102, Lasserre Building. 10:00 a.m.

Chemistry Lecture

Photo-Immuno Therapy. Dr. David H. Dolphin, Chemistry, UBC. B.C. Cancer Research Centre, 601 West 10th Avenue, Vancouver. 12 noon

THURSDAY, JUNE 18

Medical Grand Rounds

Atrial Natriuretic Peptides – An Update. Dr. John H. Dirks, Head, Department of Medicine, Health Sciences Centre Hospital. Room G-279, Lecture Theatre, Acute Care Unit, Health Sciences Centre Hospital. 12 noon.

MONDAY, JUNE 22

Cancer Research Lecture

Measurement of Environmentally induce DNA-Carcinogen Adducts in Animals and Humans. Dr. Bruce Dunn, Environmental Carcinogenesis Unit, B.C. Cancer Research Centre. B.C. Cancer Research Centre, 601 West 10th Avenue, Vancouver. 12 noon.

TUESDAY, JUNE 23

The Research Centre Seminar

The Post-Pneumonectomy Compensatory Response. Dr. W.M. Thurlbeck, Pathology, UBC. Refreshments provided at 3:45 p.m. Room 202, The Research Centre, 950 W. 28th Avenue, Vancouver. 4:00 p.m.

Museum of Anthropology Lecture

Temple Builders of Ancient Java. One of the great wonders of the world is the temple-mountain Borobudur. This illustrated lecture, with Archaeologist Helena Langrick, examines the temple-building, sculpture and carving of ancient Java, Indonesia. Programs in cooperation with Continuing Education. Members $6, non-members $8. For more information, call 222-5237. Theatre Gallery, Museum of Anthropology. 7:15-9:00 p.m.

THURSDAY, JUNE 25

Medical Grand Rounds

Carbohydrate Metabolism and Aging. Dr. Graydon S. Meneilly, Gerontology Division, Department of Medicine, Beth Israel Hospital, Boston, Massachusetts. Room G-279, Lecture Theatre, Acute Care Unit, Health Sciences Centre Hospital. 12 noon.

FRIDAY, JUNE 26

Medical Genetics Seminar

HLA and Cancer. Sir Walter Bodmer, Director of Research, Imperial Cancer Research Fund, England; President Elect, British Association for the Advancement of Science. Lecture Hall No. 5, Instructional Resources Centre. 11:30 a.m. – 12:30 p.m.

SATURDAY, JUNE 27

The XII Canadian Congress of Neurological Sciences

Special Plenary Session on Regeneration and Restoration Neurology. Dr. Andrew Eisen, Convenor. Sponsored by The Neuromuscular Diseases Unit, Vancouver General Hospital. 9:00 a.m. – 12:00 noon.
9:00 F. Gage "Factors Involved in the Transplantation of Functional Grafts to the Brain".
9:45 T. Reese "Relationships of Fast Axonal Transport to Growth Cone Extension".
11:00 R. Stein "Replacement Function After Nerve Lesions in Man".
The Arbutus Room, Four Seasons Hotel, Vancouver. Everyone is welcome. Call Terry Horanat at 228-4305 for more information.

Continuing Education workshop

One-day workshop, sponsored by Humanities Dept, Centre for Continuing Education. Unexpected Sights: A workshop in Creative Self Expression. Linda Nelson, Instructor, Carousel Theatre School. $45. For more information call 222-5261. Conference Room, Centre for Continuing Education, Carr Hall. 9:00 a.m. – 4:00 p.m.

NOTICES

Museum of Anthropology Exhibitions

Guided Gallery Walks (June only). Volunteer Gallery Guides offer guided walks through the museum providing information about galleries and collections. Tuesdays, Wednesdays and Thursdays.

UBC Reports is published every second Thursday by UBC Community Relations 6328 Memorial Road, Vancouver, B.C. V6T 1W5, Telephone 228-3131.
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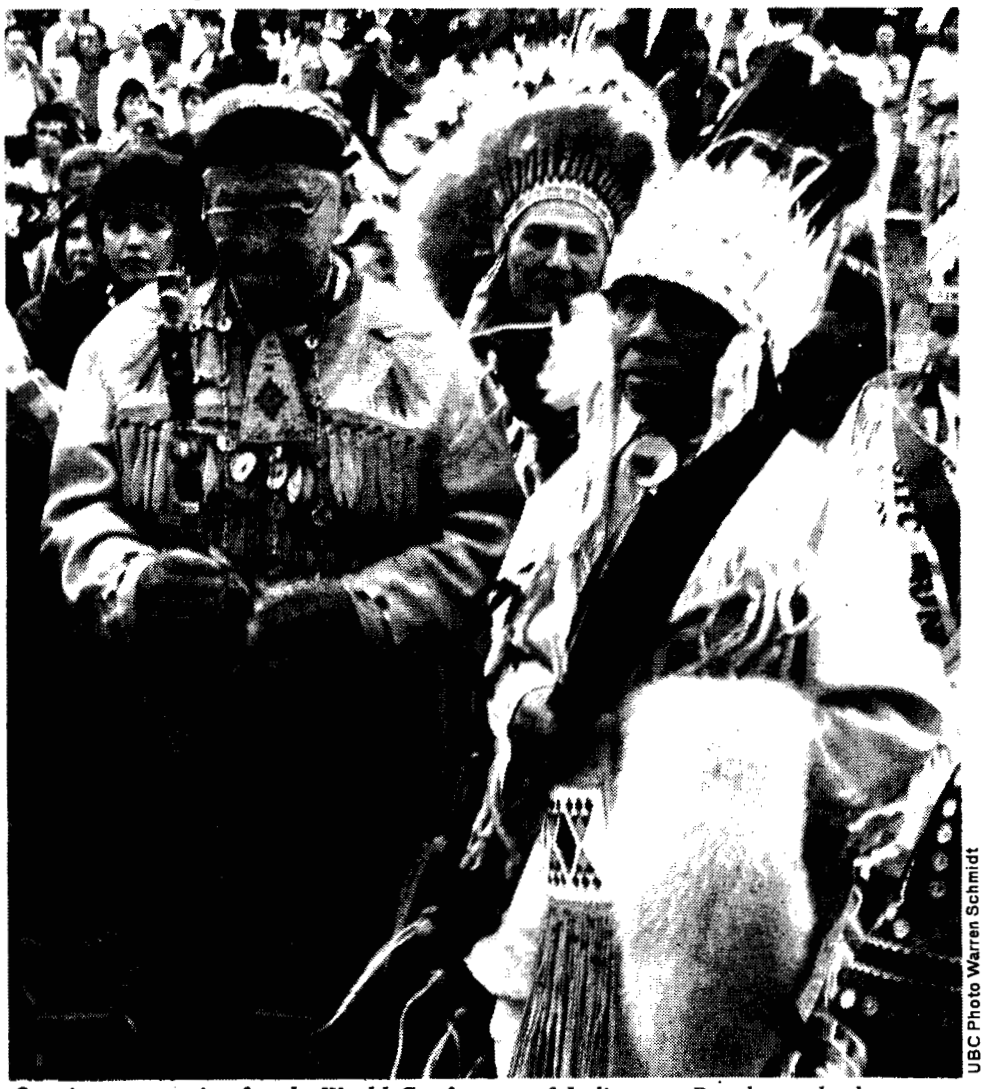

UBC Photo Warren Schmidt

Opening ceremonies for the World Conference of Indigenous Peoples took place Monday on campus with 1,000 native leaders and educators from around the world in attendance. Focus of the six-day conference is on education.

The Flute and The Sword. Exhibition featuring popular religious poster art which explores the passionate nature of two Hindu deities, Krishna and Kali. April 2 – July 26.

The Literary Heritage of Hinduism. Exhibition of sacred Hindu texts discussing the significance of Spiritual Knowledge. April 2 – November.

The Hindu Divine. Six independent exhibitions explore some of the many ways in which abstract concepts of the Absolute are depicted in Indian life through bronzes, stone sculptures, popular art and everyday objects. A seventh exhibition discusses Hindu, Sikh, and Islamic religious expressions in Vancouver. April 2 – November.

The Third Eye. An exhibition featuring non-destructive scientific techniques used to yield information beyond the scope of normal methods of curatorial investigation. May 19 to September 27.

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

Native Youth Programs

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

Resource Modeling Conference

Resource Modeling Association and The Institute of Applied Mathematics – Sixth Pacific Coast Resource Modeling Conference. Principal speakers are: Gardner Brown, Economics, University of Washington; James Cushing, Mathematics, University of Arizona; C.S. Holling, Institute of Animal Resource Ecology, University of British Columbia; Bernard Roitberg, Biology, Simon Fraser University; Paul Smith, Southwest Fisheries Centre, La Jolla, CA. June 11, 12, 13. For more information, call 228-4584, Institute of Applied Mathematics.

Thinking of Volunteering?

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

Frederic Wood Theatre

Year-round performances of traditional and experimental theatre. UBC's summer stock company will perform four plays this year: What the Butler Saw by Joe Orton runs June 17-27; Michel Tremblay's Bonjour La, Bonjour will be staged July 8-18; and the final show, Barry Broadfoot's Ten Lost Years, runs July 29 to Aug. 8. For tick information, call 228-2678.

Language Programs

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

UBC/SPCA Short Course

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

Assoc. of Northwest Weavers' Guilds 13th Biennial Conference

Personal Expressions. A juried show of weaving and spinning at the Asian Centre at UBC. Thursday, June 25, 10 a.m.–5 p.m.; Friday, June 26, 10 a.m.–5 p.m.; Saturday, June 27, 10:30 a.m.–1 p.m. Co-sponsored by the Institute of Asian Research. Free admission.

Commercial exhibits selling spinning and weaving equipment and yarns and fibres in the War Memorial Gym at UBC. Admission $3. Friday, June 26, 10 a.m.–7 p.m; Saturday June 27, 10 a.m.–1 p.m.

Recreation UBC Summer Hours

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

Decision Workshop

A group of interested faculty will meet weekly on Wednesday afternoons from 1:30 to 2:30 in Henry Angus Penthouse to discuss research issues related to important recent books in the general area of decision making and choice. The first book we will consider is Ulysses and the Sirens: Studies in Rationality and Irrationality and we will follow this with Sour Grapes: Studies in the Subversion of Rationality. Both books are authored by Jon Elster and are published by Cambridge University Press. Copies are on reserve in the Main Library. The first meeting will be on Wednesday, July 8 and we will focus on Chapter 1 of Ulysses and the Sirens. All interested faculty are welcome -- just come or contact Ken MacCrimmon (224-8350) for more information.

Botanical & Nitobe Memorial Gardens

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

Haida Houses Project

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

Bursaries to Study French at UBC

Bursaries may be available to Canadian citizens or landed immigrants who have been full-time students during the 1986-87 academic year. July 13 – August 21. The bursary covers tuition, room and board on campus, and cultural and social activities scheduled by the Program. For information, call 222-5224.

Free Guided Campus Tours

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

Summer Sun, Fun and Fitness

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

Reach-out Program

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

English Conversation Class

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

Language Exchange Program

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

Golf Lessons

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

Ice Hockey for Adults

UBC is offering adult ice hockey lessons this summer at beginner, intermediate and advanced levels. They run either Tuesday or Wednesday evenings starting mid-July. Cost is $90 per six week session. Tuition waivers welcome. For more information contact Community Sport Services at 228-3688.

GRANT DEADLINES

JULY 1987

- Alzheimer's Disease and Related Disorders Assoc.
  - -Pilot Research Grants [15]
  - -R.M. Parsons Fdn. Research Grants [8]
- American Chemical Society: PRF
  - -Research Type AC [1]
- American Council of Learned Societies
  - -China Conference Travel Grants [1]
  - -Intl. Travel Grants for Humanists [1]
- American Institute for Cancer Research
  - -Research [1]
- Association of Commonwealth Universities
  - -Commonwealth Medical Fellowships [31]
- Canadian Diabetes Assoc.
  - -Charles H. Best Fund [15]
- Deafness Research Foundation
  - -Research [15]
- Deutscher Akademischer Austauschdienst (DAAD)
  - -Study Visits of Foreign Academics [1]
- Grant (William T.) Foundation
  - -Faculty Program in Mental Health of Children [1]
- Health and Welfare Canada: NHRDP Awards
  - -National Health Research Scholars [31]
  - -National Health Scientists [31]
  - -Postdoctoral Fellowships [31]
  - -Visiting National Health Scientist Awards [31]
- Japan Society for the Promotion of Science
  - -International Prize for Biology [1]
- March of Dimes Birth Defects Fdn. (US)
  - -Clinical Research – Human Birth Defects [1]
- Merck Company Foundation
  - -Fellowships in Clinical Pharmacology [1]
- NSERC: Fellowships Division
  - -E.W.R. Steacie Memorial Fellowships [1]
- Rhodes University
  - -Hugh Kelly Fellowship [31]
  - -Hugh Le May Fellowship [31]
- SSHRC: Intl. Relations Division
  - -International Congresses Held in Canada [1]
- Tsumura Juntendo Inc.
  - -Herbal Medicine Research Grant [1]
- Von Humboldt Fdn. (W. Germany)
  - -Research Fellowship [1]
- World Cultural Council
  - -Jean J. Rousseau World Award of Education [31]

Calendar Deadlines

For events in the period July 5 to July 18, notices must be submitted on proper Calendar forms no later than 4 p.m. on Thursday, June 25 to the Community Relations Office, 6328 Memorial Road, Room 207, Old Administration Building. For more information, call 228-3131.