

UBC



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**DIGGING THROUGH TIME:** It took UBC archeology students four weeks to uncover the remains of what they believe to be a territorial chief buried under one of 35 ancient burial mounds found near Mission. Photo by Charles Ker

## Sacred burial sites unearthed

By CHARLES KER

On a wooded slope where the Harrison and Fraser rivers meet, Michael Blake proceeds to give his visitor the lay of the land.

"To the left is a residential zone," says the UBC archeology professor, gesturing to a series of rectangular depressions in the earth. "To the right, we have a sacred burial area stretching in one great, long row."

The burial sites, unmistakable mounds of earth hugging the hill-

side, range in size from small rock cairns to huge swells three metres high by 12 metres across.

Inside two of the larger mounds, teams of third-year archeology students quietly dig for human bones. Soil acids may long since have eaten away any remains, but the excavators are sure the stone crypts still have a unique story to tell.

"This might be one of the most important sites in B.C. because of what it can tell us about the prehistory of the Fraser

Valley," said Blake. "It has the potential to explain a great deal about how complex societies evolved here."

Three days later, the UBC archeology team unearthed the most elaborate human burial yet found in the province: human bones, copper discs, abalone shell pendants and hundreds of tiny beads cut from dentalium shells all wrapped in cedar bark and blankets probably made from mountain goat wool.

See FIND on Page 2

## Faculty contract 'sensible' says association head

By GAVIN WILSON

**T**he new contract agreement signed recently by UBC faculty members compares favorably with other recent settlements at Canadian universities, says Faculty Association President William Bruneau.

"Ontario universities, faced with a one per cent overall budget increase in the current year, are negotiating agreements of between zero and one per cent, and considering rollbacks in a few instances," he said.

The UBC

agreement, ratified in June by 92 per cent of members of the association and

the Board of Governors, includes salary increases and improvements to maternity leave and the career progress increment plan.

It covers about 1,900 faculty members, librarians and program directors with the Centre for Continuing Education.

"We are particularly pleased that this is the second consecutive contract agreement with the Faculty Association that has been reached through the process of negotiation, without recourse to arbitration," said Dr. William Webber, associate vice-president, academic.

The two-year agreement includes a 3.5 per cent general wage increase retroactive to July 1, 1991, and a one per cent general wage increase (based on salaries at June 30, 1991) retroactive to April 1, 1992.

There are no further general wage increases in the second year of the agreement.

Bruneau said the association reluctantly accepted the salary freeze in the second year in recognition of the "extraordinary difficulties faced by the university."

Although Bruneau said negotiations were complicated by the provincial government's Compensation Fairness Act (intended to control wages in the public sector, the act has since been rescinded), the settlement permits extension of career progress increments to more Faculty Association members than in past years.

"We are not happy with the direct interference of the provincial government or with the effect of an absolute limit of zero per cent," he said. "But, recognizing the difficulty facing gov-

ernments and the public right across the country, we feel it is a sensible agreement."

As well as the general salary hikes, another three per cent of the total faculty salary base was made available, starting July 1, 1991, for discretionary increases including merit, anomaly and inequity, and career progress increments.

Similar increases totalling three per cent took effect as of July 1, 1992, with a further \$250,000 allocated to topping up salaries of those in the bottom 20 per cent of their salary range.

Most faculty can expect to see retroactive pay increases appearing on July paycheques.

Improvements to maternity leave, some of which will require the approval of the Unemployment Insurance Commission, are also part of the new agreement.

Bruneau said the agreement also reaffirmed a minimum salary scale for sessional lecturers and extended the number of years that full professors are eligible for career progress increments.

As well, the two parties agreed to discuss the administration of the faculty pension plan and the possibility of transfer of tuition waivers to spouses.

### Inside

**METAMORPHOSIS:** Members of the Geography Dept. follow the evolution of the city and surrounding region of Vancouver. Page 2

**A WORLD UNDER SEIGE:** Exploring the title "environmentalist," Bill Bessie deals in the science of ecology. Profile, page 3

**MAJORITY RULE:** Political scientist David Elkins puts forth a new solution to the constitutional question. Page 8

## Ashworth wins Alumni Award of Distinction

Professor Emeritus Mary Ashworth is this year's winner of the Alumni Award of Distinction.

Internationally renowned for her work as an English as a second language teacher, Ashworth (MEd '67) was one of five individuals recently recognized by the Alumni Association for distinguished service as alumni, faculty or volunteers.

Lloyd Douglas Hayward, professor emeritus from the Dept. of Chemistry, received the Faculty Citation for outstanding service to the community

outside a faculty member's teaching and research duties.

The Blythe Eagles Volunteer Service Award for exemplary service to the association went to Robert Clark (BA '42), a professor emeritus from the Dept. of Economics.

Michael Goldberg, dean of the Faculty of Commerce, received the Honorary Alumni Award for non-alumni active in association affairs.

Basil Peters (PhD '82), chairman of Nexus Engineering, was the Outstanding Young Alumnus Award winner.

## — Olympic snapshot —

**Q: What well-known UBC professor played on the 1948 Canadian Olympic men's basketball team?**

Read our special report on UBC at the Olympics on pages 4 and 5 of this issue.

(answer: Pat McGeer)



# Geographers pen rich account of Vancouver

By CHARLES KER

When he arrived on campus two years ago, publisher Peter Milroy was admittedly "uneasy" about a project he inherited at UBC Press.

The task involved publishing a richly illustrated book produced by 19 geographers working in the same department in about half the normal turnaround time.

"Like all publishers, I have learned to be wary of collaborative works," said Milroy, UBC Press director. "They can often involve an unforeseen clash of personalities and always present the opportunity for an exponential expansion of Murphy's Law."

Milroy's anxiety was put to rest earlier this summer with the launch of *Vancouver and Its Region*, an all-encompassing look at Vancouver's past, present and future.

Produced entirely by UBC's Dept. of Geography, the book is a unique collaboration bringing together schol-

ars whose research interests range from the humanities to the natural sciences.

Written for a general audience, its nine chapters chronicle the social, demographic and technological transformations that have helped shape the city, while examining the ecological, economic and political challenges that lie ahead.

Graeme Wynn, historical geographer and associate dean of Arts, said the book was prompted by a growing uneasiness that as geographers and other academics become more specialized, their research also becomes more isolated from the public.

As chief editor, Wynn wrote in the book's preface: "From the first, we strove to develop an integrated set of accessible essays that would convey a sense of the broad range of fascinating and distinctive perspectives that Geography offers for the understanding of places while demonstrating the subject's capacity to put the increasingly

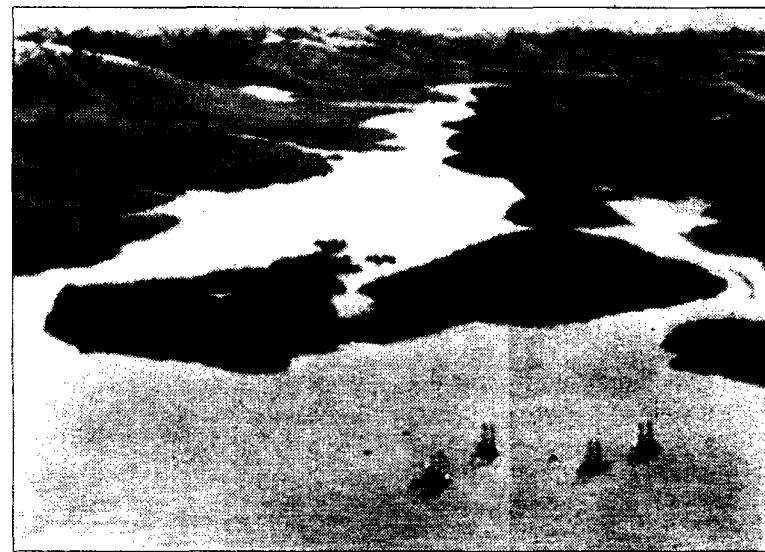
fragmented pieces of modern scholarship together in a compelling and informative manner."

Professor Timothy Oke, co-editor and head of the Geography Dept., cited accessibility as one of the key aims of the project.

"Some of the scientists found it difficult to interpret technical material for the general public but we had to make it readable," he said. "Our goal was to try and get people connected to this place, to realize that they are a part of it and that the region is changing very quickly."

*Vancouver and Its Region* was initially funded by a grant from the Royal Canadian Geographical Society which allowed the appointment of several graduate research assistants to work on the project.

Its launch coincided with the annual conference of the Canadian Association of Geographers hosted by UBC in May.



Original painting by Jim McKenzie

An illustration from the book *Vancouver and Its Region* portrays the site of the present city of Vancouver as it would have looked in 1792.

## UBC students rank high in number of fellowships granted

Forty-three UBC students have been offered doctoral fellowships by the Social Sciences and Humanities Research Council (SSHRC) to study at the university in 1992-93.

An additional two students have been awarded fellowships to study elsewhere while three more awards will go to incoming scholars.

UBC's fellowship total of 48 is second only to the University of Toronto's 72. Other totals include the University of Montreal, 44, McGill University, 32, McMaster University, 24 and the University of Western Ontario with 20 fellowships.

Olav Slaymaker, associate vice-president of research for the humanities, interdisciplinary initiatives and social sciences, said UBC's excellence in these areas is often overshadowed by research in the natural, applied and health sciences.

"The fact is that UBC has consistently been among the top universities when it comes to social science and humanities scholarship," he said.

The council selected a total of 626 Canadian doctoral students from a list of 3,126 applicants for the fellowship awards. Each award is valued at \$14,436 a year.

Representing about 45 disciplines in the social sciences and humanities, the recipients will either start or continue full-time studies leading to a doctorate from a Canadian or a foreign university.

As the primary federal funding agency for research and training in the social sciences and humanities, SSHRC will invest \$92.4 million for research grants, fellowships and programs this year.

The breakdown of doctoral fellowship awards by discipline at UBC for 1992-93 is one each for philosophy, interdisciplinary studies, art history, religious studies, history, anthropology, english literature, musicology, theatre and linguistics, two in comparative literature and economics, three in administrative studies and English-Canadian literature, four in sociology and geography, five in political science, seven in psychology and eight fellowships in education.



Photo by Joe Nagel

### Impressive headgear

Giant antlers of the extinct Irish Elk appear to loom over M. Y. Williams Geological Museum curator Joe Nagel. The antlers, which span three metres, were on display for just one day earlier this month.

## Find tells of structured society

Continued from Page 1

Blake said the discovery gives irrefutable evidence that the people living there were part of an elaborate hierarchy and not members of some egalitarian hunting and gathering society.

"Without a doubt, this demonstrates that the present day Scowlitz people are descendants of ancient chiefs," said Blake, who noted that the skull features and jewelry found in the grave indicate a chief's burial.

Lying opposite the Scowlitz Band reserve on the Harrison River east of Mission, the archeological treasure sits on land owned by Canadian Forest Products Ltd. It had been surveyed in 1963 but nothing, aside from 10 small cairns, was noted.

During the first few days of a five-week, summer field school, UBC researchers hacked out a 200-metre swath of bush and uncovered an unprecedented 35 burial mounds and 25 house depressions.

Significant for the mounds alone, the site has also produced a myriad of historical artifacts including clay pipes from the Hudson's Bay Co., musketballs, spearheads and other stone tools.

On a reconnaissance visit to the site in March, graduate student Brian

Thom found a perfectly preserved slate fishing knife packed in clay and submerged in shallow water.

Called a kwetsel by the Scowlitz, the knife is believed to be the only one of its kind found with a wooden handle still intact. The knife has since been sent to the Canadian Conservation Institute in Ottawa for preservation treatment and a minute sample sent to Florida for radiocarbon dating.

Along with the kwetsel, Thom and Kathryn Berwick, a "wet-site" specialist, also found bits of basketry and cedar-bark matting, again perfectly preserved in the river bank.

"It was amazing because we literally tripped over all this stuff," said Thom, who will devote his master's thesis to the site. "A lot of it was just hanging out from the bank."

Blake said the village is one of about 20 known archeological locations in the province to have these water-logged, organic deposits. In addition, there are also four, giant crater-like depressions on an adjacent island which are of interest because they resemble Salish pithouses more commonly found in the Interior.

As for the mounds, Gordon Mohs, heritage consultant for the Sto:lo Tribal Council, said the team's findings rep-

resent one of the most important discoveries in B.C. archeology since most similar sites were bulldozed long ago. The last burial mound excavated in the province was during the Second World War at Cowichan Bay.

It is believed high-status people were entombed under the larger mounds, lesser classes under the smaller ones and countless hundreds of common citizens buried in unmarked graves scattered along the shoreline.

"Whether they were built up in one shot or incrementally, we don't yet know," said Blake. "Perhaps they were part of an annual renewal ceremony."

Working 12-hour days, five days a week, the 11 members of the UBC field school excavated the mounds with metal pails and trowels, carefully cataloguing all they found.

Before leaving, the human remains were put back and a special ceremony was conducted by elders from the Scowlitz Band to consecrate the ground.

Together, all the artifacts and structural features indicate the site was an important village occupied continuously for some 5,000 years up until the late 1800s. To Blake and Mohs, it represents decades of future archeological research.

## How to be a Local Hero

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# Art and science to join hands in forest

By ABE HEFTER

Four Vancouver artists have embarked on a project to develop a unique British Columbia tourist destination which blends culture with nature in the Malcolm Knapp Research Forest.

The Enviro-Art project is the brainchild of controversial Vancouver artist Rick Gibson who, several years ago, planned to squash a rat, on canvas, with a cement brick in the name of art.

He didn't follow through, however, because of the public outcry that ensued.

What he will do at the Malcolm Knapp Research Forest should be far less controversial. Gibson, Kempton Dexter, Caroline Figol and Lycia Trouton plan to combine contemporary art with nature and science in a project patterned after the Grizedale Sculpture Forest in England.

"The village of Grizedale hosts 150,000 tourists throughout the year, where hikers encounter art in a modern research forest," said Gibson.

"I was fortunate enough to be among them three years ago and approached UBC to see if the university would be interested in developing a similar project."

Don Munro, director of the Malcolm Knapp Research Forest, said the university embraced the

government-funded idea as a chance to meld science and art.

"Those opportunities don't come around too often," he said.

Munro said Gibson and the three other artists will be given room to create from materials found in the forest.

"Scientists and researchers at the forest are excited about the project and the chance to work side by side with local artists," said Munro.

The finished works will be left on permanent display within sight of the hiking trails and will not require maintenance. Gibson believes the project, funded through the community tourism employment training program, will add a new cultural dimension to the Maple Ridge area.

One project Gibson is looking at is a sculpture that deer can eat. He is currently researching their eating habits and has discovered they feed on tree seedlings, lichens and apples.

If he goes ahead with the idea, Gibson will take periodic photos of the exhibit as it is being eaten by the deer. The photos would eventually form the basis of his work.

Gibson said the other three artists are still looking at a variety of possible projects. He hopes the Enviro-Art project will be completed by the end of autumn.

## Head injury sufferers

# Manual to help caregivers

By CONNIE FILLETTI

"We have the technology to keep people alive, but where is the support for quality of life in the long-term?"

It's a question that Sonia Acorn, an assistant professor of Nursing at UBC, has asked herself for a long time. Now she has an answer.

Acorn is producing, with colleagues Julie Flather and Judy Little, the country's first education and support manual for family caregivers of head injury survivors.

"Increased trauma care means that head injury survivors can now be expected to live as long as anyone else," said Acorn. "Unfortunately, most of their care must be provided at home, which is not always the appropriate place for the type and extent of care they require."

Acorn attributes the problem to a scarcity of professionals with the necessary expertise and training — particularly in smaller communities — to cope with the increasing number of survivors.

"As a result, there is great potential for burn-out, exhaustion and social isolation for families who provide head injury survivors with care at home," she said.

Acorn based her findings on a province-wide survey of families who were caring for a head injured survivor at home. The majority of the participants were mothers caring for their sons, usually in their teens or early 20s, who suffered head injuries as a result of motor

vehicle or industrial accidents.

Her research indicates that, in addition to the physical care needs of head injury survivors, the greatest problems they face are behavioral, intellectual and with their communication skills.

Typically, they experience short-term memory loss and fatigue, and become easily agitated.

"They go home after rehabilitation and find that they can't live by themselves," Acorn said. "They can't function outside the structure of the hospital where they have been cared for around the clock. Very simple things throw them in a tizzy."

Currently, the only alternative to home care is for the head injury survi-

vor to be placed in an extended care facility with predominately elderly patients. Paid at home caregivers are rare.

Acorn hopes the manual will help family caregivers increase their understanding of the needs of the head-injured family member, and improve their ability to cope with caring for him or her.

Designed in modules, the manual covers such topics as impact on the family system, impact on the caregiver, balance and life tasks, community resources and special issues.

Production of the manual, which will be available next January, was funded by the B.C. Health Research Foundation.



Photo by Media Services  
Sonia Acorn hopes to address the difficulties facing family members trying to cope with caring for head injury victims.



## Profile

# Don't blame Rio: summit defined issues, Rees says

By GAVIN WILSON

"Hey, how do you know all this?" I wondered.

"Bill Rees," he said

- Stan Persky in a Vancouver Sun column on ozone depletion

When talk turns to the environment, often the first name on people's lips is Bill Rees.

Next to David Suzuki, he is UBC's best-known advocate for the environment.

A professor of resource ecology in the School of Community and Regional Planning since 1969, Rees investigates the ecological basis for economic development. His research has taken him from the Peruvian Andes to the Arctic.

Rees was a founding member of Pollution Probe, established in 1969 as one of Canada's first environmental groups.

He was also a key member of the City of Vancouver's task force on atmospheric change, which two years ago produced the landmark report, Clouds of Change. He has served as an environmental consultant for more than 20 years.

His outspoken, often chal-

lenging opinions have made him a notable public figure, whether he is speaking in a church basement in Dunbar, at a major conference in Washington, D.C., or in the media.

Despite all of this, Rees rejects the environmentalist label.

"Environmentalism tends to be too rigidly

ideological. I consider myself to be a scientist, an ecologist," says Rees, who began his academic career in zoology. He holds a PhD in bio-ecology from the University of Toronto.

Until the mid-1980s, the major focus of his work was the impact of development on the Canadian north. Since then, his attention has turned to global environmental trends and the idea of sustainable development.

That much-debated concept does not mean — as some would have it — that we can maintain our current economic system, he says. Our economy requires continuous growth, and as presently structured, this is based on the "liquidation of

our natural assets."

Humanity today consumes more of nature's goods and services than are produced by the world's ecosystems, threatening a global crisis.

Rees points out that the signs are everywhere: the collapse of once abundant fisheries, the depletion of agricultural soils, disappearing forests, desertification, the thinning of the ozone layer.

"These are all related symptoms of the same problem — over-consumption by excessive human populations," he says.

Rees compares current concerns with the environment to people who abuse their bodies all their lives and then, suddenly suffering angina, start worrying about their health.

"They go through a whole lifestyle change. They stop smoking, they stop drinking, they stop eating fat. That's what we, as a planetary civilization, are now confronting — the first shock of planetary angina."

He believes humankind must recognize that it is dependent on the natural world, and that the earth's

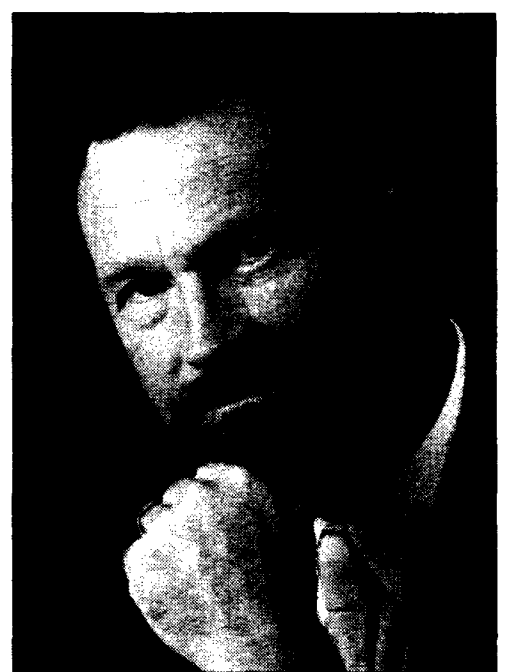
ecosphere is the source of all energy and matter.

"The economy is simply the mechanism by which we have organized to extract the products of photosynthesis, as well as mineral resources, for human use.

"We like to think of ourselves as the great producers, but in thermodynamic terms, we don't produce anything — we just consume."

Despite the failure at the recent Earth Summit in Rio de Janeiro to address the key issues facing the world today — over-consumption in the developed world and over-population in developing countries — Rees believes it was a worthwhile exercise.

It is important to think of Rio as the "second major step in global consciousness-raising," he said, the first being the publication of the Brundtland report, which popular-



Rees

ized the concept of sustainable development in the mid-1980s.

But at least the Earth Summit crystallized the issues, Rees says, and soon we will see increasing sophistication in the environmental debate and in pressure put on governments to "come to grips with reality."



# Special Report:



# Barcelona '92

## A proud Olympic history

"Citius, Altius, Fortius."

The first UBC athlete to take the Olympic challenge—faster, higher and stronger—was sprinter Harry Warren, who represented Canada at the 1928 summer games in Amsterdam.

Since then, more than 160 UBC students, coaches and officials have worn Canada's colors in Olympic competition, resulting in 50 medals for Canada. The latest will suit up in Barcelona, Spain, at the games of the 25th Olympiad, which run from July 25 to Aug. 9.

Over the years, the rowing teams have been the dominant UBC Olympic force. More than 50 rowers from UBC have represented Canada in Olympic competition, according to UBC Athletics historian Fred Hume, none more successful than the 1956 four-oared and eight-oared crews.

That year, the UBC campus was awash in Olympic gold, thanks to the performance of the rowing team in Melbourne, Australia. Under the auspices of coach Frank Read, the men's fours came away with the gold medal, while the men's eights captured the silver.

Eight years later, in Tokyo, Roger Jackson, who later became president of the Canadian Olympic Association, teamed up with George Hungerford to

capture the pairs gold. Jackson is one of nine UBC athletes to compete in three Olympics, having also appeared in Mexico City in 1968 and Munich in 1972.

UBC's most recent success in rowing came in Los Angeles in 1984, with Pat Turner and Paul Steele among the members of the gold-medal-winning eights team. Tricia Smith, who appeared in three Olympics, was a silver medal winner in the pairs that year.

UBC's Olympic hopes in rowing this year rest on the shoulders of Megan Delahanty and Cedric Burger. Delahanty, a PhD candidate in the field of biochemistry, will compete in the women's eight, while Burger, fourth-year physical education student, will take part in the men's coxless four.

UBC athletes have also excelled in track and field, with more than 30 Olympic appearances. The 1972 season was a very good one for UBC track and field, with six members of the women's varsity track team and five members of the men's team appearing in Olympic competition, along with coach Lionel Pugh.

However, despite the numerous appearances by UBC track and field athletes in Olympic competition, no medals have been won. The task this

year belongs to former UBC student Graeme Fell, who will be returning this fall, and Paul Williams, who will be attending UBC in September.

Dr. Doug Clement, co-director of the Allan McGavin Sports Medicine Centre, is another three-time Olympian. He was on the 1956 Olympic track team as a competitor and put in an appearance in 1984 and again four years later as a coach.

UBC has also been well represented on the Olympic front in field hockey, with more than two dozen appearances by UBC athletes and officials.

Several UBC Olympians have excelled at more than one sport. Perhaps the most unique was Joy Ward Fera, who, after a career at UBC as an outstanding performer with the ski team, went on to compete in Montreal in 1976 as a rower.

On a winter note, Canada's Olympic hockey team at Innsbruck in 1964 was based at UBC, and featured former UBC hockey coach Terry O'Malley, and former Athletics Director Bob Hindmarch, who was the team manager.

UBC's latest taste of winter Olympic competition came earlier this year in Albertville, France, where alum Rick Amann suited up—for the German hockey team.



Photo courtesy Alumni Association

The men's coxless four from UBC earned a gold medal for Canada at the 1956 Olympics.

## Athletes sweat it out in Barcelona

Two litres an hour.

It has nothing to do with speed or distance on the playing field. Yet it is a measurement that could play a critical role in determining the success of endurance athletes at the Summer Olympics.

Endurance athletes, like marathon runners and long-distance cyclists, can lose up to two litres of fluid an hour during competition. With temperatures expected to reach the 40 degrees Celsius in Barcelona during the games, failure to replace lost body fluids could be disastrous.

"Dehydration can result in heat stroke, which can leave a person comatose and can even result in death," said Susan Barr, an associate professor in the School of Family and Nutritional Sciences.

The importance of preventing dehydration during exercise

**Barr's advice to endurance athletes is: drink up.**

has been recognized for some time, said Barr. However, she added, the recent development of hyponatremia (low blood sodium levels) in a few ultra-endurance athletes has led some experts to suggest that athletes limit their fluid intake.

Hyponatremia can occur either as a result of excessive losses of sodium through sweat, or through diluting blood sodium levels by drinking and retaining more fluid than is lost.

"It is a serious condition which can result in confusion, vomiting and convulsions," said Barr.

Barr studied eight subjects to determine the effects of different types of fluid replacement during endurance exercise over a moderate time period—longer than most Olympic events will take, but shorter than ultra-endurance events such as ironman triathlons.

They each took part in three,

six-hour cycling trials in a temperature-controlled heat chamber set at 30C.

During one set of trials, the subjects replaced lost fluids with equal amounts of water. During another set, they replaced lost fluids with equal amounts of a saline solution containing sodium in amounts similar to those found in commercially-available sports drinks. During the third set of trials, they completely restricted fluid intake.

"When drinking either water or saline solutions, the subjects' blood sodium levels did decrease, but remained within the normal range," said Barr.

"Water did the job just as well as the saline solutions because there wasn't enough salt in the saline solution to maintain pre-exercise blood sodium levels."

However, when the subjects completely restricted fluid intake, both body temperature and heart rate increased steadily and only one subject was able to finish the trial.

"Five subjects quit because they were too exhausted to continue and another had to quit because his heart rate reached 95 per cent maximum capacity."

Barr said fluid intake kept the heart rate stable at around 70 per cent of maximum—an appropriate level for the exercise being done—and body temperature down to a near-normal 38C.

Barr's advice to endurance athletes is: drink up.

"Elite endurance athletes competing in the Olympics don't have to worry about taking in too much fluid because it would pretty well be physically impossible to stomach more fluid than they are losing as sweat. The closer they can come to replacing lost body fluids, the better they'll be able to perform."

## Paige takes the big plunge

As a youngster, Paige Gordon always dreamt of taking part in the Olympics—as a gymnast.

Now, seven years after making a decision to forego gymnastics in favor of diving, Gordon will live out her Olympic dream from the 10-metre diving board at the 1992 summer games in Barcelona.

"My sister, Megan, was the diver," reflected Paige, 19.

"One day I went to the pool, put on my swim-suit, and dove. I'm not sure I know why I stuck with it, but I did, and began to do well in it."

For two years, Paige, now a second-year Arts student, tried her hand at both sports. Then, at the age of 12, with pressure coming from her coaches to make up her mind, she made the decision to drop gymnastics and concentrate on diving.

"It was the right decision," she said. "However, I started as a gymnast and I always wanted to be a gymnast. Even now I regret quitting, but, my prospects seemed brighter in diving."

Paige is going to the Olympics following her first-place showing in the 10-metre diving trials in Winnipeg in May.

Megan, a 21-year-old entering her fourth year in Commerce and Business Administration, needed a second-place showing to join her sister on the Canadian team.

She finished third.

"Each competitor had to turn in 14 dives in Winnipeg," said Paige. "Megan lost it just a bit on her third-to-last dive and just couldn't make up the lost ground."

"She came so close. It was a tre-



Paige Gordon takes flight above the diving pool as she prepares for the Summer Olympics.

mendous disappointment."

The Gordon sisters have been competing together "forever," said Paige. They were on the Canadian team at the Pan American Games in Cuba last summer and have performed in numerous international meets together.

Megan will move on to several European meets before catching up to her sister in Barcelona, as a spectator.

"Megan is the only one who knows what I'm going through," said Paige. "She can give me the kind of support that no one else can. It's important for me to know that she'll be in the stands with my mother and father pulling for me."

Paige says none of this would have been possible without the support of her parents; her mother, Bonnie, an assistant professor in UBC's School

of Physical Education and Recreation, and her father, Terry.

"They have put so much work into this moment," said Paige.

Although "this moment" doesn't include Megan, Paige is hopeful that the two will be back together again on the diving platform.

And if history is any indication, she may be right.

Another well-known Canadian diving duo, Wendy and Debbie Fuller, were confronted with similar circumstances eight years ago. In 1984, Debbie qualified for the Los Angeles Olympics while sister Wendy failed to make the grade. However, four years later, they both qualified for the summer games in Seoul.

Paige is confident she and Megan can write a similar script.

"Hopefully, you'll see us both in Atlanta in 1996."

# UBC at the Olympics

## Heat a factor for athletes

# Medicine centre sets up shop in Barcelona

He was among the first. Now, he's among the best.

Dr. Doug Clement, co-director of the Allan McGavin Sports Medicine Centre, along with four other members of the centre, will travel with the Canadian team to Barcelona for the Summer Olympics as part of the medical crew.

"When you put it all together," said Clement, "Canada probably leads the rest of the world in the degree of medical coverage and expertise available to international class athletes."

"UBC's contribution, certainly since 1984, has been huge."

Clement, recently awarded a lifetime achievement in sports medicine and science by the Sports Medicine Council of Canada, and centre co-director Dr. Jack Taunton, both graduates of UBC's medical school, are acknowledged pioneers in the field of sports medicine.

They will be joined in Barcelona by Dr. Don McKenzie, and physiotherapists Trish Hopkins and Clyde Smith. Physiotherapist Ron Mattison will accompany them to a pre-Olympic training camp in France but will not make the trip to Spain.

Like Clement, Taunton and McKenzie have a wealth of international experience, Taunton with the field hockey team and McKenzie with the kayakers. Taunton and McKenzie have been involved with their respective sports for more than 10 years and were at the 1984 Los Angeles games and the 1988 games in Seoul.

This will be the fourth Olympics for Clement, a former Olympic runner and a silver medallist at the 1954 Commonwealth Games.

His first taste of international sports medicine came in 1970 at the Com-

monwealth Games in Edinburgh, Scotland, when he was among the first group of dedicated physicians assigned to travel with Canadian athletes to Olympic-style competitions.

Prior to that, there was no such thing as a sports medicine doctor, explained Clement.

"It wasn't a service that was expected or necessarily supplied. Health services were provided by someone who was around at the time, and perhaps happened to be a doctor."

Then, at the 1968 Summer Olympics in Mexico, one isolated incident led to the establishment of an organization that would be responsible for medical coverage of Olympic-calibre athletes outside of Canada: A Canadian rower collapsed with pneumonia during a race.

"That incident became a focus of a royal commission on sport, which was set up in 1969 to deal with the state of the amateur sport system in Canada."

"The commission recommended the establishment a group of dedicated physicians who would travel with Canadian athletes to international multi-sport events."

In Barcelona, Clement will coach the distance runners, as was the case in Seoul. He will also likely be called upon to provide medical services as well, since the Canadian team won't have a dedicated track physician.

Hopkins and Smith were selected to the Canadian team through the sports medicine division of the Canadian Physiotherapy Association after writing a series of exams. They will be part of the central medical staff provided by the Canadian Olympic Association and will work out of a clinic that will operate around-the-clock.

Clement says the medical staff will

be especially concerned with the heat and humidity in Barcelona.

"This is something western-based Canadian athletes will have problems adjusting to," said Clement. "Temperatures could reach in the 40s and will present quite a challenge in the endurance events."

Canadian medical teams make a habit of travelling with tonnes

of equipment to make sure they're ready for any circumstances.

Jack Taunton knows what that's like. As chief medical officer for the Canadian team at the Pan American Games in Cuba last summer, Taunton ensured that the Canadian squad arrived in Havana with 44 tonnes of water in tow, since the water in Cuba was unsafe for Canadian athletes to drink.

"Like the athletes, Canadian medical team members must be prepared for anything at these major international games," said Taunton.

"As was the case in Cuba, heat and humidity will be an enemy for the athlete in Barcelona. Early adaptation and fluid-electrolyte replacement will be high on the list of priorities for the Canadian medical team."



Canada's Olympic athletes benefit from the experience of (from left) Ron Mattison, Dr. Doug Clement, Dr. Jack Taunton, Dr. Don McKenzie, Trish Hopkins and Clyde Smith, of the UBC Sports Medicine Centre.

# Swimming duo gears up for life in the fast lane

Talk about mixed emotions.

The first thought that entered Kevin Draxinger's mind after he had successfully qualified for the Olympic 200 metre backstroke was: "If I do this in Barcelona, I'm going nowhere."

Draxinger and Turlough O'Hare will represent UBC in swimming at the Summer Olympics after posting qualifying times at the national trials in Montreal in May.

However, there were few high-fives

around the pool that day. Draxinger, O'Hare and UBC swim coach Tom Johnson came away from Montreal with the sobering realization that there was still a lot of work to be done before Barcelona.

"Turlough and Kevin are going to have to swim much better at the Olympics than they did in Montreal," said Johnson, who will act as an assistant coach to the Canadian swimmers in Barcelona.

Physically, they were at their peak at the trials, but mentally, they were flat, he explained.

"At this level of competition, you have to be focused on nothing but swimming. The trials were very early in the season and they could have used a few more hard races before then. But, they'll get that chance before the Olympics with meets in France and Fort Lauderdale, Fla."

Johnson believes O'Hare and Draxinger are in the prime of their swimming careers going into the Olympics. He has coached both of them for about eight years. Just as he realizes that both need to sharpen up, he is also convinced

they are at their peak.

"These two athletes have paid their dues. They are experienced world-class swimmers. There are no excuses."

Draxinger and O'Hare met in the pool as youngsters and have shared the ups and downs of competitive swimming for a decade.

Draxinger, whose family resides in Kelowna, has lived with the O'Hare family in Richmond for the last five years. Studying as an unclassified student this year, Draxinger came away with the Bobby Gaul award as the top graduating varsity athlete last year after completing his Bachelor of Science.

After battling through an injury-plagued Olympic year in 1984 and failing to qualify for the 1988 games in Seoul, Draxinger, 25, realizes this is his last kick at the Olympic can. However, at the same time, he's looking at it as just another meet.

"Simply advancing to the final is going to be difficult enough," said Draxinger. "There's no point putting more pressure on yourself."

O'Hare, who turns 23 today, is going into his fourth year in the School of Physical Education and Recreation.

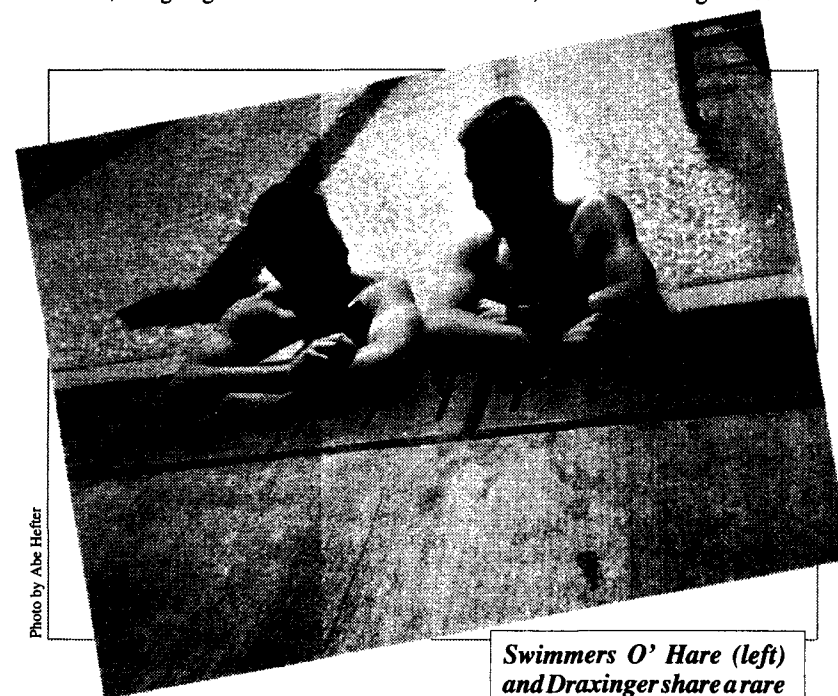
He finished 11th in the 400-metre freestyle at the 1988 Olympics in Seoul and will swim both the 400-metre and 200-metre freestyle in Barcelona, and perhaps the 4-by-200-metre freestyle relay as well.

"The 200-metre freestyle is my number one event, but I'm not going to Barcelona with any false hopes. I'll swim as fast as I can and hopefully advance to the final. That's everyone's goal."

O'Hare points out that it's easy to get caught up in the medal trap when assessing an athlete's performance at the Olympics.

"There's more to Olympic life than gold, silver and bronze," said O'Hare.

"I hope to break my current Canadian record in the 200-metre freestyle in Barcelona. I'd also like to break Peter Schmidt's Canadian 400-metre freestyle record, which has stood for 12 years," he added.



Swimmers O'Hare (left) and Draxinger share a rare moment of relaxation during training for Barcelona.

Stories by  
Abe Hefter

# Calendar

July 19 -  
August 15

## MONDAY, JULY 20

### Regent College Evening Public Lecture

Public Ethics In A Pluralistic Society? Lessons From The Early Church. Dr. Markus Bockmuehl, University Assistant Lecturer in Divinity, U. of Cambridge. College Main Floor Auditorium from 8-8:50pm. Discussion follows. Call 224-3245.

## TUESDAY, JULY 21

### Library Tours

Tour Main and other libraries on campus at 10:30am and 2:30pm. Main Library Entrance Hall. Duration 30 minutes. Call Sheryl Adam at 822-2076.

### Rehabilitation Medicine Special Seminar



Undergraduate Physiotherapy Programs: Issues, Problems And Hopeful Solutions. Prof. Alain Belanger, School of Physical Therapy, Laval U.

Koerner Pavilion Lab 8 from 12:30-1:30pm. Call 822-7416.

### VST Summer School Public Lectures

Loneliness: A Cradle For God's Loving Word. Dr. Arnold D. Weigel, assoc. prof. of Practical Theology, supervisor of Contextual Education, Waterloo Lutheran Seminary. Vancouver School of Theology's Epiphany Chapel at 7:30pm. Free parking. Call 228-9031.

## WEDNESDAY, JULY 22

### Health Promotion Research Seminars

Considerations When Doing Research In First Nations Communities with Dr. Jennie Joe, assoc. prof./director, Native American and Training, U. of Tucson, Az.; The Self-Management Program For Chronic Illness, Dr. Katie Lorig, sr. research scientist/dir., Patient Education Component, U. of Stanford, Calif. The Arthritis Centre 3rd Floor Meeting Rooms at 12:30pm. Call 879-7511.

Workplace Health Promotion: Strategies For The 1990s. Dr. J. Allan Best, director of Research/Health Promotion, Wilson Banwell & Associates Ltd., Corporate Health/Development Services. Family/Nutritional Sciences 40 from 4-5:30pm. Call 822-2258.

UBC Reports is the faculty and staff newspaper of the University of British Columbia. It is published every second Thursday by the UBC Community Relations Office, 6328 Memorial Rd., Vancouver, B.C., V6T 1Z2. Telephone 822-3131. Advertising inquiries: 822-3131. Managing Editor: Steve Crombie. Ass't Editor: Paula Martin. Production: Bill Jamieson. Contributors: Ron Burke, Connie Filletti, Abe Hefter, Charles Ker, and Gavin Wilson.



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## CALENDAR DEADLINES

For events in the period August 16 to September 5, notices must be submitted by UBC faculty or staff on proper Calendar forms no later than noon on Tuesday, August 4, to the Community Relations Office, Room 207, 6328 Memorial Rd., Old Administration Building. For more information call 822-3131. The next edition of UBC Reports will be published August 13. Notices exceeding 35 words may be edited. The number of items for each faculty or department will be limited to four per issue.

### Regent College Evening Public Lecture

The Spirit Against The Flesh: Another Look At Pauline Perspective. Dr. Gordon Fee, professor of New Testament, Regent College. College Main Floor Auditorium from 8-8:50pm. Discussion follows. Call 224-3245.

## THURSDAY, JULY 23

### Academic Lecture Program 1992

Current Perspectives Or Current Treatments In Schizophrenia. Dr. Gary Remington, head of research, Neuropsychopharmacology, Research Unit, The Clarke Institute, Toronto. Psychiatry 2NAB from 12-1pm.

### VST Summer School Public Lectures

Dreaming Of A Place Not Like This One: New Experiences Of Worship. Dr. Marjorie Proctor-Smith, assoc. prof. of Liturgy/Worship, Perkins School of Theology, Dallas. Vancouver School of Theology's Epiphany Chapel at 7:30pm. Free parking. Call 228-9031.

## MONDAY, JULY 27

### Regent College Evening Public Lecture

Impressions From Recent Visits To Christian Churches In China: A Slide Lecture. Prof. Daniel Bays, chairman, History, U. of Kansas. College Main Floor Auditorium from 8-8:50pm. Discussion follows. Call 224-3245.

## TUESDAY, JULY 28

### VST Summer School Public Lectures



Columbus To Cabot - What Is Their Legacy? Dr. Cecil Corbett, chancellor, Charles Cook Theological School. Vancouver School of Theology's Epiphany Chapel at 7:30pm. Free parking. Call 228-9031.

## WEDNESDAY, JULY 29

### Regent College Evening Public Lecture

Matthew: The Gospel Of Fulfillment. Dr. Richard France, New Testament teacher/principal, Wycliffe Hall, U. of Oxford. College Main Floor Auditorium from 8-8:50pm. Discussion follows. Call 224-3245.

## THURSDAY, JULY 30

### VST Summer School Public Lectures

Jazz Homiletics. Dr. Eugene L. Lowry, prof. of Preaching, Saint Paul School of Theology, Kansas City. Vancouver School of Theology's Epiphany Chapel at 7:30pm. Call 228-9031.

## WEDNESDAY, AUG. 5

### Regent College Public Lecture

The Puritans And Ourselves. Dr. J.I. Packer, Sangwoo Youtong Chee professor of Systematic Theology, Regent College. College Main Floor Auditorium from 8-8:50pm. Discussion follows. Call 224-3245.

## NOTICES

### Honorary Degrees Nominations

The Tributes Committee is now accepting nominations for honorary degrees for 1993. Nominations or requests for forms should be mailed to the Ceremonies Office, Room 214, Old Administration Building. Deadline for nominations is Aug. 30/92. Call 822-2484.

### UBC Campus Tours



Free walking tours of the campus are available through Aug. 28. Drop-in tours leave the SUB on weekdays at 10am and 1pm and take about 90 minutes. Highlights include gardens, galleries, museums and recreational facilities. Specialized/shorter tours for seniors, children and others. Call 822-3777.

### Orientation '92

Campus orientation for new students. All first year students, their parents, and college transfer students are invited to attend. Aug. 6-Sept. 4. Call School and College Liaison Office at 822-3733.

### UBC Bookstore's Annual Sidewalk Sale

Now through Aug. 1 from 10am-4:30pm, rain or shine. Call 822-2665.

### Voices From The Picket Line

The Centre for Research in Women's Studies/Gender Relations is interviewing union women involved in the March strike at UBC. Call Alexa at 822-9171.

### International Conference

Ismar '92: Meeting Of The International Society For Magnetic Resonance. IRC 2, 4, 6 on July 19-25. Call 822-2293.

### Fine Arts Gallery

Open Tues.-Fri. from 10am-5pm. Saturdays 12-5pm. Free admission. Main Library. Call 822-2759.

### Frederic Wood Theatre Performance

The House Of Blue Leaves by John Guare, directed by Simon Webb. In repertory through Aug. 1. Frederic Wood Stage at 8pm. Adults \$10, students/seniors \$8. Call 822-2678.

### Musical Theatre

Cabaret. UBC Summer Players. Dorothy Somerset Studio, every Thurs./Sat. through Aug. 1 at 8pm. Adults \$10, students/seniors \$8. Call 822-2678.

### Statistical Consulting/Research Laboratory

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

### French, Spanish, Japanese/Chinese Conversation Classes

Aug. 4-21, Mon.-Fri. from 9am-12:30pm. Call Language Programs and Services at 222-5227.

### Sexual Harassment Office

Advisors are available to discuss questions and concerns on the subject. They are prepared to help any member of the UBC community who is being sexually harassed to find a satisfactory resolution. Call Margaretha Hoek at 822-6353.

### Exercise/Weight Management Study

Sedentary female volunteers 25-49 years, 20-50 lbs overweight and tired of dieting required to participate in a three month exercise intervention study. Call 822-2266.

### High Blood Pressure Clinic

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

### Seniors Hypertension Study

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

### Drug Research Study



Male and female volunteers required for Genital Herpes Treatment Study. Sponsoring physician: Dr. Stephen Sacks, Medicine/Infectious Diseases. Call 822-7565.

### Heart/Lung Response Study

At rest and during exercise. Volunteers aged 35 years and up of all fitness levels required. No maximal testing. Scheduled at your convenience. Call Marijke Dallimore, School of Rehab. Medicine, 822-7708.

### Women, Work And Stress

Secretarial/clerical workers needed to participate in a study investigating the problems and methods of coping with work related stress. Call Karen Flood in Counselling Psychology at 822-9199.

### Retirement Study



Women concerned about retirement planning needed for an 8-week retirement preparation seminar. Call Sara Comish in Counselling Psychology at 931-5052.

### Jock Itch Study

Volunteers 18-65 years of age are needed to attend 5 visits over an 8-week period. \$100 honorarium to be paid upon completion. Call Dermatology at 874-6181.

### Teaching Spouses Memory Strategies

If your spouse has memory problems and you want to learn some techniques to help, call Karen or Monica at 822-2140.

### Stress/Blood Pressure Study

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

### Surplus Equipment Recycling Facility (SERF)

Used rebuilt IBM Selectric II correctable typewriters for \$400, while supplies last. Disposal of all surplus items. Every Wednesday, 12-5pm. Task Force Bldg., 2352 Health Sciences Mall. Call 822-2813.

### Botanical Garden

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

### Nitobe Garden

Open daily from 10am-7pm. Free admission Wednesday. Call 822-6038.

## Volunteers sought to welcome overseas students

International House is looking for about 200 volunteers to welcome overseas students to UBC.

Volunteers are needed from mid-July to the first week of September as international students arrive on campus in preparation for the coming school year.

"Volunteers get a chance to meet new international students and play a part in extending them a warm UBC welcome," said Diane Larsson, assistant co-ordinator of the reception program.

Some volunteers will greet students at the airport and direct them to waiting shuttle buses. Others are required to drive students as they look for off-campus housing. Also needed is temporary accommodation on a stand-by, emergency basis for students who, for whatever reason, have nowhere to stay when they first arrive.

All UBC faculty, staff and students are welcome to volunteer. For more information, call Diane Larsson at International House, 822-5021.



# People

## Baird awarded Order of British Columbia

Dr. **Patricia Baird**, a professor of Medical Genetics, and former head of the Dept. of Medical Genetics, has been awarded the Order of British Columbia.



Baird

Established in 1989, the Order of British Columbia recognizes outstanding achievement, excellence or distinction in a field of endeavor benefitting the people of the province or elsewhere.

Baird was one of 13 British Columbians honored from among 230 nominees.

Currently, Dr. Baird is chairing the Royal Commission on New Reproductive Technologies. She is also a vice-president of the Canadian Institute of Advanced Research.

.....

Dr. **Ian Tsang**, a clinical associate professor of Medicine, has been appointed to the governing council of the National Research Council of Canada (NRC).

Tsang, who joined the Faculty of Medicine in 1980 specializing in rheumatology and arthritis, is involved in continuing research studying back pain in astronauts.

He has served as chief of staff and as a board member of Vancouver's Holy Family

Hospital since 1986, and was recently appointed to the Human Rights Tribunal Panel of the federal Dept. of Justice.

The 21-member governing council provides guidance and direction for the management of all NRC policies and programs.

.....

**Hugh Brock**, an associate professor in the Dept. of Zoology, has received the Young Scientists Award for 1992 from the Genetics Society of Canada.

Brock was invited to the society's annual meeting at the University of Victoria to receive the award and deliver a lecture on his research. He studies how the structure of proteins found on chromosomes regulates gene activity.

The award recognizes a notable paper or series of related papers based on original research in genetics or allied fields and written by a member of the society.

The research must be completed and published by the candidate in a refereed journal during the 15-year period immediately following the completion of a first degree.

.....

**Don Russell**, a professor in the Dept. of Geophysics and Astronomy, is this year's winner of the J.Tuzo Wilson Medal, awarded annually by the Canadian Geophysical Union in recognition of outstanding contributions to Canadian geophysics.

Russell is a founding member and former president of the union, and has been active in many other geophysics organizations, both in Canada and abroad.

He has an international reputation as a scientist, especially for his pioneering work on isotope geophysics and, more recently, seismoelectrical effects. He has also served as head of the Dept. of Geophysics and Astronomy and as UBC's associate vice-president, academic.

Russell received the medal in May at a joint meeting of the Canadian and American Geophysical Union, held in Montreal.

.....

**Setty Pendakur**, a professor in the the School of Community and Regional Planning, has been appointed to the new board of directors of B.C. Transit.

The 19-member board, which oversees all transit operations in the province, was announced by Finance Minister Glen Clark in June.

Pendakur was also one of two ministerial appointments to the five-member board of governors of the B.C. Real Estate Foundation.

Pendakur has taught transportation planning at UBC since 1966.

.....

Dr. **Judith Vestrup**, an associate professor of Surgery, has been appointed to the board of directors of the Justice Institute of B.C.

Vestrup, a native of Nakusp, B.C., completed an honors B.Sc. degree in Physiology at UBC, where she also received her medical training. She won the Hamer Scholarship in Medicine for first place standing in her graduating year.

The Justice Institute of B.C. develops and provides training programs and educational services for law enforcement professionals and members of the community, which are designed to improve public safety.

Vestrup was first appointed to the Faculty of Medicine's Dept. of Surgery in 1981.

.....

Forest Sciences Professor **John McLean** has been appointed associate dean, graduate studies and research, in the Faculty of Forestry.

McLean, who has been with the faculty since 1977 as a forest entomologist, will be responsible for administering all aspects of forestry graduate and post-baccalaureate programs.

In addition, he will promote externally sponsored research activities, particularly interdisciplinary projects involving faculty from Forestry's three departments and the rest of the university.



McLean

## Lecture series looks skyward

By GAVIN WILSON

Space flights to Mars. The secrets of the northern lights. A Canadian experiment that is measuring wind speeds 300 kilometres above the Earth's surface.

These are some of the topics to be covered in three public lectures to be held on campus this month in conjunction with the 18th International Symposium on Rarefied Gas Dynamics.

Called Moving Lights and Satellites, the lectures will feature three distinguished researchers in space physics and space engineering. It is sponsored by the B.C. Ministry of Advanced Education, Training and Technology and is open to the general public as well as members of the university community.

"This special public session is being held to heighten the awareness of the public, and especially young students, about the opportunities for study and research in the space sciences and aerospace engineering," said Bernard Shizgal, a professor in the departments of Chemistry and Geophysics and Astronomy who chairs the local organizing committee for the symposium.

The speakers and their topics are: — Peter Bainum, Howard University, who will give an overview of the past, present and future of the space program, including the possibility of a return voyage to the moon, the exploration of Mars, and mining of the moon and asteroids for raw materials

— Gordon Rostoker, University of Alberta, who will speak on the aurora borealis, or northern lights, which are caused by charged particles streaming away from the sun at speeds of hundred of kilometres per second and entering the earth's electromagnetic field. Known for their

great beauty, the aurora borealis also disrupt satellite operations and electrical power grids on earth.

— Gordon Shepherd, York University, who will speak on the WIND Imaging Interferometer, or WINDII, a joint Canada-France project that measures global wind patterns at altitudes of 80 to 300 kilometres. Part of NASA's Upper Atmospheric Research Satellite, WINDII is providing the first climatic description of this little-explored region.

The talks are scheduled to start at 1:15 p.m. on Wednesday, July 29 in the Woodward Instructional Resources Centre, lecture hall #6. The talks will be followed by a question

period and refreshments.

All three speakers are also taking part in the Rarefied Gas Dynamics symposium, which will be attended by physicists, chemists, engineers and mathematicians from more than 20 countries.

The symposium is the world's principal forum for reporting recent advances in kinetic theory, transport processes and nonequilibrium phenomena with applications to space science and space engineering, plasma processing of materials, aerospace engineering, plasma physics, aerosol dynamics, surface science and associated mathematical and computational methods.

## BIOMEDICAL COMMUNICATIONS

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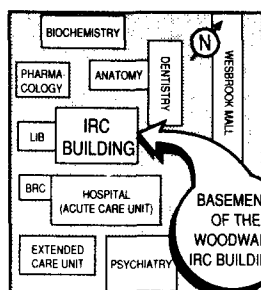
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### Services

**HOUSESITTING:** Mature and reliable Health Professional, non-smoker, non-drinker, will house-sit in exchange for accommodation. Prefer Vancouver west side. Two months minimum preferred. Have your pets, plants, lawn, home security, mail and important messages competently and confidentially looked after while you are away. Excellent personal and work references. 873-1953 evenings til 9 p.m.

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# Where should the majority rule?

By DAVID ELKINS

**C**ommon to many of the federal government's proposals for Constitutional change are at least two implicit assumptions.

First, activity in regard to the institutional changes will usually be undertaken by governments, not by individuals, groups, or other organizations. Second, whenever government action is a requirement, affected groups which do not have control of a provincial government will receive less attention or be less able to block actions by a national majority.

If one does not have provincial status, as Aborigines do not, or if one does have it but believe that current provincial powers are inappropriate, as Quebec does, then one feels threatened by majoritarian institutional arrangements. Thus, the federal proposals can be evaluated from the perspective of who deserves their own province and what powers these provinces need.

I propose to consider two hypothetical new provinces of a non-territorial sort as an avenue towards uncovering some implications of proposed constitutional changes. These two provinces, I believe, would answer many of the needs of two minority groups whose ways of life are most threatened in Canada — Aborigines and French-speakers outside of Quebec.

By non-territorial, I mean that the minority cannot be given its own exclusive territory without movement of people on a scale we would regard as dictatorial and insensitive.

Non-territoriality comes in at least two forms in the case of cultural minorities: some members of the minority do not reside in the territory and so do not benefit from being part of the majority there, and some members of other culture-groups do reside in the territory and are thus "permanent" minorities there.

The first type of non-territorial province would consist of francophones where they live outside of Quebec, and the second would consist of Aborigines across the country south of 60°.

The francophone province which I hypothesize might be called "La Francophonie" to distinguish it from Québec. It would consist of all francophones outside of Quebec wherever they might reside in Canada.

I assume that, whatever the criteria for being a francophone, one is free to reside in La Francophonie or not, as is the case with existing provinces.

La Francophonie would need very special powers, not exactly like those of a territorially based province. Hence, one value of speculating about this province derives from the need to shift our focus from an exclusive concern with federal and provincial jurisdictions.

Instead, or in addition, we must consider which powers can only be administered by territorial governments or agencies and which services

could be delivered by institutions without a territorial base.

For example, education is not inherently territorial, although we tend to think first of neighborhood schools. Yet, territorial provinces have parallel school systems, whether private and public, or Catholic and non-sectarian. Thus, the two systems violate the assumption of exclusive use of territory.

The same applies to taxes which can be classified as direct or indirect and also as territorial or not.

Regardless, one can expect that La Francophonie will find itself behaving in some ways more like a national government than a provincial one. Such a province will face the same degree of regional diversity that the federal government in Ottawa currently confronts.

Distances and regionally specific situations might lead this new province to constitute itself as a federal system. For example, Acadia might conveniently be one unit, the Ottawa Valley and the concentration of francophones in eastern Ontario might form another, and the West (including northern Ontario?) could become a third unit. Of course, La Francophonie would have only one premier, even though it consisted of several self-governing units.

The second type of non-territorial

Nor would First Peoples necessarily be continuous since there might well be enclaves of non-aboriginal settlement within at least some of the larger parts of this province. And certainly reserves today form "islands" within each province.

Although the reserves are exclusively for aborigines at the present time, they probably should not be so restricted after the creation of First

would undoubtedly need to be shared — for reasons of cost or efficiency — between First Peoples and existing provinces.

Non-territorial provinces along these lines would have many benefits relevant to current constitutional proposals. Some benefits are:

— these provinces could participate directly in an elected Senate,

— First Peoples would solve in a stroke the general issue of aboriginal self-government and especially of letting aboriginals themselves work out the details of those arrangements in their own areas of sovereign provincial responsibility, and

— First Peoples and La Francophonie would also provide exact parallels to other provinces as an avenue to participate in future constitutional deliberations, an important demand by aboriginals in particular.

I have suggested that we often use territorial organizations to deal with social problems. Would creation of First Peoples as a province for aboriginals constitute a step forward socially or would it be a form of apartheid?

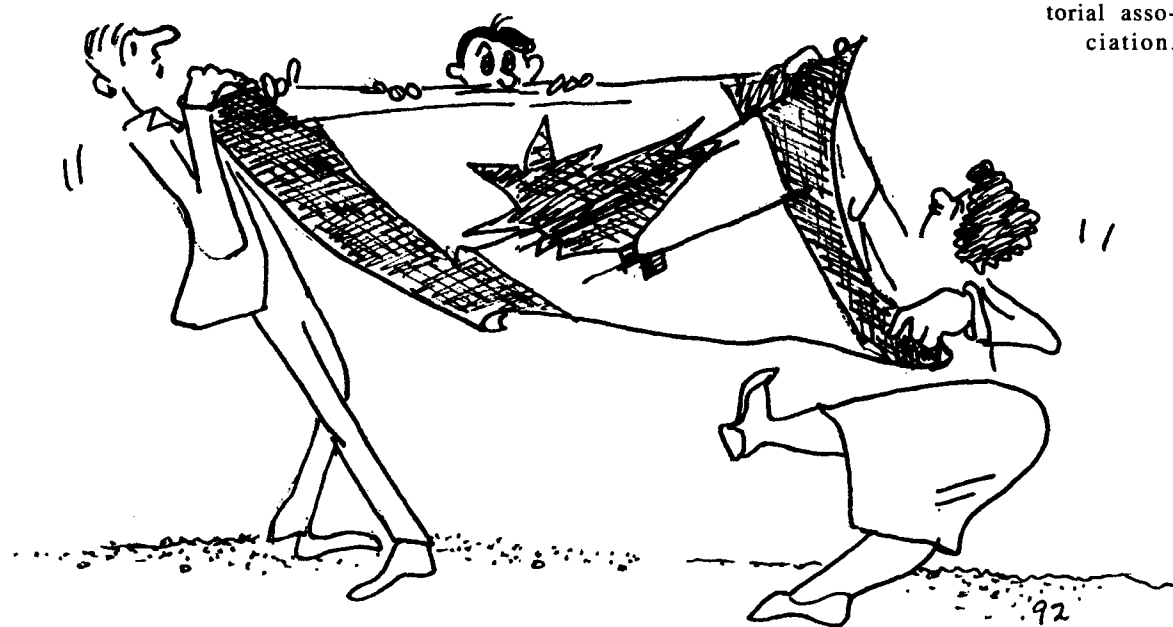
For one thing, I have postulated that La Francophonie and First Peoples would allow the same voluntary mobility we now presume for existing territorial provinces. Each person can choose where to live, whether in a territorial province or in a non-territorial association.

For aboriginals and the French, Canada was, in different ways, imposed on them: by conquest in one case, by deceit and spread of settlement in the other.

Peoples. Furthermore, land claims settlements may result in shared, non-exclusive use of territory, just as the Cree and Inuit of northern Quebec have fishing, hunting, and trapping rights outside their reserves in areas where Quebec has areas of jurisdiction.

Like Canada and like La Francophonie, First Peoples would be very diverse in language, cultures, economic situations, and affluence. It would therefore have a government which felt the pressures of national diversity currently felt by Ottawa. Indeed, First Peoples might be organized as a federation of aboriginal nations with quite varied local structures of governance.

Unlike La Francophonie, its powers might be defined differently because of the peculiar combination of



province could be called First Peoples. Its basis would probably not be individual, as with La Francophonie, but more likely land based without assuming exclusivity, contiguity and continuity.

If the base were existing reserves or if it were the results of current comprehensive land claims, the result would be similar in type, although different in area. Neither basis assumes a single contiguous territory. There are currently more than 2,000 reserves among over 600 bands, grouped historically into 40 to 50 nations.

territorial and non-territorial aspects.

Since some reserves are relatively affluent and others very poor, equalization within First People would be arranged as they saw fit. Existing provinces shift resources (or not) among their regions and municipalities, just as the federal government transfers resources among provinces.

We should not, however, get hung up here on the exact details of which services would be provided by whom. The broad point is that some services

My guess is that most aboriginals now living on reserves would remain and many who now live in towns and cities would return to the reserves. But not all of them.

Such openness and mobility in Quebec has not so far resulted in an entirely French province, and not all francophones want to live in Quebec, which is why I have hypothesized La Francophonie. Why would we expect a significantly different equilibrium for First Peoples? If a similar pattern arose, we need not fear that

First Peoples would become an emblem of apartheid.

If wholly homogeneous provinces are not desirable and are unlikely to occur anyway, need we be concerned about a province which is predominantly aboriginal, or for that matter predominantly French?

The short answer is "no". We do not worry about the evil effects of overwhelmingly English provinces, so why worry about these other forms of distinctiveness? Perhaps we should worry about how English some provinces are, but until we do, we need not worry how aboriginal First Peoples might be.

The longer answer brings us back to the central focus of my speculations.

The purpose of speculating about — or advocating — non-territorial provinces for aboriginals or francophones concerns the perceived need to give threatened minorities their own place to be a majority, to have a government that speaks on their behalf, and thereby to remind all Canadians of these aspects of ourselves.

But there are many minorities in Canada. Why then should provinces be created only for aboriginals and francophones?

For myself, aboriginals and francophones are the groups which deserve special consideration for a related reason. For aboriginals and the French, Canada was, in different ways, imposed on them: by conquest in one case, by deceit and spread of settlement in the other. All other groups have come to Canada "after the fact" as it were, instead of having Canada imposed upon them.

For at least 150 years, Canada has wrestled with the political implications of overlapping social distributions across its territory. At the present, we face again the need to think creatively about our institutions and about protection of rights and ways of life.

Since the creative use of territory has not provided a permanent solution to our social problems, perhaps the next step in our political evolution should be to question our single-minded reliance on territorial governments and institutions. To do this, I have proposed two hypothetical provinces which are non-territorial in somewhat different ways.

Whether or not these are practical possibilities, they should help us to gain some leverage on institutional changes put forward in the constitutional debate.

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*Illustration by Diana Cooper.*