

# **UBC REPORTS**

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On October 7, the Royal Couple visited the UBC campus to celebrate the Queen's Golden Jubilee of 50 years on the throne. This is the fourth time the Royal Couple has visited UBC. (more Royal Coverage on pages 2 ざ 12)

# THE ROYAL VISIT



1.1

The Queen and the President: HRH The Queen and UBC President & Vice-Chancellor, Martha Piper, share a moment during the plaque dedication ceremony at UBC's Main Mall.

#### The (Now Royal) Engineers: UBC engineering students create another honorary engineer by presenting The Queen with her own engineering sweater. It features the initials HRH on the sleeve.

**The real crowd pleaser:** *The Queen wins more hearts (left)* 

during her UBC walkabout. B.C. Premier, Gordon Campbell, escorts The Queen (right) as she makes her way along UBC's Main Mall.



### The Queen's Dedication

Queen dedicates bronze book as a tribute to literacy. BY KATE JOBLING

During her UBC visit, the Queen unveiled a bronze book commemorating her visit as part of the Royal Jubilee celebrations. The bronze depicts the Jubilee Emblem, the B.C. Coat of Arms and the UBC Crest and it dedicates the naming of a special room in the Queen's honour in the Irving K.

display in the room. Ornamental Bronze Limited, a 75-year-old, Vancouver-based company that specializes in memorial and dedication plaques, created the bronze for the Queen's dedication. The Company has developed statues and projects for Vancouver City Hall (the Captain Vancouver statue), the Gastown Clock, the Coat of Arms for the B.C. Parliament Buildings in Victoria and numerous plaques around UBC campus. □



Queen Elizabeth and Premier Gordon Campbell get their first look at a bronze book commemorating the royal visit and the Queen's commitment to raising awareness about the importance of literacy. Below: Local school children present a royal bouquet.



### Ground Crews Worked to Royal Deadline

Fresh paint and clean walls greet the Queen. BY KATE JOBLING

**Despite the flurry of activity** on campus during the past few weeks, The Queen's visit was treated like the visit of any other dignitary or, indeed, similar to what is done for congregation.

"We have not been doing anything that we don't normally do except perhaps moving up the schedule on the repainting of the lamp posts and removing some of the more obvious campus graffiti," said UBC Facilities Manager, Doug Napier. "We've also dedicated more bodies to working the north end of the campus, which is where the Queen's visit to campus was focused."

"Quite frankly, there's not much we had to do to the campus. The cleanliness of UBC grounds on any given day is still much better than any public plaza in London," said Napier. For many of UBC's almost 40,000 students, the Queen's visit was busi-

For many of UBC's almost 40,000 students, the Queen's visit was business as usual. No buildings were shut and no classes were cancelled.  $\Box$ 



Mounties in red serge greeting a smiling royal couple have become a common sight at UBC.

### Royal Couple Repeat Visits to UBC

This was their fourth time.

This year's Royal Visit was not the first the Royal Couple has made to the UBC campus during the past 50 years of The Queen's reign. In October, 1951, the then Princess Elizabeth and HRH, The Duke of Edinburgh arrived in time for Homecoming festivities and watched their

In July, 1959, The Queen opened the new Faculty Club on campus. The University took advantage of that trip to announce the newly funded

HR MacMillan Scholarship for graduate students. In March, 1983, The Queen again visited UBC. Her Royal Highness and Prince Philip visited several of the university's significant sites including the Museum of Anthropology, the Asian Centre and the Health Sciences Centre Hospital.



Some UBC onlookers include: UBC Board Member Ben Pong; Ike and Jean Barber and Chancellor Allan McEachern; Eilis Courtney, UBC Ceremonies and RCMP Staff Sgt. Bar ry Hickman.

IN THE NEWS

Highlights of UBC Media Coverage in September 2002. COMPILED BY MICHELLE COOK

### Kids can jump their way to strong bones

Something as simple as jumping off and on to low platforms can make a child's bones stronger. It can be accomplished in as little as 10 minutes, three times a week, and requires nothing more high-rech than platforms 10-50 centimetres in height, UBC Asst. Prof. of Human Kinetics Heather McKay told the *National Post*. However, bone that is not stressed in exercise can lose density, so the children will have to make exercise a lifetime habit to keep the benefit, McKay said.

### More foreign students choose UBC

Applications by foreign students wanting to attend UBC are up 43 per cent this year, to 4,029 from 2,814 last year. Don Wehrung, director of UBC's international student initiative, attributes part of the increase to fallout from the Sept. 11 terrorist attacks in the U.S.

"The U.S. is sending a signal that it's being more circumspect in granting student authorizations. For international students, the perception is that it will take longer and they'll have a harder time." Wehrung told the Vancouver Sun. He added that Canadian schools are also benefiting from years of marketing themselves overseas, from relatively inexpensive tuition and living costs and from the good reputations many Canadian schools have abroad.

#### All fat is not bad

Canadians can look forward to greater flexibility in tailoring a daily diet that appeals to them but also fits a healthy lifestyle, according to a major North American nutrition study released yesterday. UBC Food and Nutrition Prof. Susan Barr, who led a report subcommittee, told the Toronto Star that the report makes it clear that a healthy diet does need some fat. The report by Canadian and U.S. scientists recommends wide ranges for healthy levels of carbohydrates, fat and protein to provide the necessary daily calories for normal eating.

#### Schools of higher earning

Years of putting off much-needed maintenance work and rising enrolment levels have made universities about as desperate for cash as freshmen at a year-end pub crawl. Considering how poorly equities are performing, pension funds and insurance companies have voraciously gobbled up the university debentures – rated as investment grade by the various bond agencies – as a safe way to invest in their own futures. UBC's associate treasurer **Peter Smailes** told Canadian



Martha Piper told the Vancouver Sun 9/11 was a harsh wake-up call

Business magazine that having bonds allows UBC to go ahead with projects without donations. "Donors see that, and they want to come in."

The debenture issues range in size from \$125 million at UBC to \$225 million at Concordia in Montreal. So far, only four Canadian institutions have issued bonds: UBC, Concordia, U of T and York University.

#### UBC positioned to be a global leader UBC President Martha Piper's

UBC President Martha Piper's keynote address to 800 participants of the Sept. 4 Global Citizenship conference was reprinted on the Vancouver Sun editorial page. In it, Piper said 9/11 was a harsh wake-up call, and if we are to live in one world we must all assume and fulfill our responsibilities as global citizens.

"This is a fight that a university, every university, must join. And, we believe that the University of British Columbia, located in one of the world's most culturally diverse and tolerant cities and linked to the world's most advanced research and educational institutions is ideally positioned to assume a leadership role," Piper said.

#### Unfriendly fire in the Far East

A year after 9/11, the search for culprits and co-conspirators in Southeast Asia has yielded meagre results. UBC Director of Canada-Asia Policy Studies **Paul Evans** told the *Far Eastern Economic Review* that the U.S. war on terrorism has meant less to Southeast Asia than the 1997 regional economic crisis. With ruling political parties taking advantage of the U.S. anti-ter

ing advantage of the U.S. anti-terrorism programme for their own

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purposes, "the overall result is a more conservative order" in eastern Asia, says Evans.

#### Wine Library opens

UBC's newest library doesn't have any books in it, only thousands of bottles of wine donated from B.C. and around the world. The collection in the Wine Library, part of the UBC Wine Research Centre, will help researchers evaluate how well B.C. wines age and how they compare to other international varieties.

"We only select those [B.C. wines] that have the potential to age and we approach the winery and they donate 24 bottles of each wine and we put it in here and age it in the temperature- and humidity-controlled conditions. Every year we taste one bottle and we also analyze a bottle from that line using sophisticated analytical methods," explained UBC Prof. Hennie van Vuuren, the Centre's director, to Global TV.

#### UBC economist one

of Canada's best A Toronto Star business report calls UBC Economics Prof. John Helliwell "one of a handful of truly able economists" that "Canada is fortunate in having."

"Helliwell deserves attention not just because he has outstanding economic credentials but also because he is an innovative thinker whose research often ends up leading to conclusions quite different from conventional wisdom," said the *Star's* economics editor David Crane.

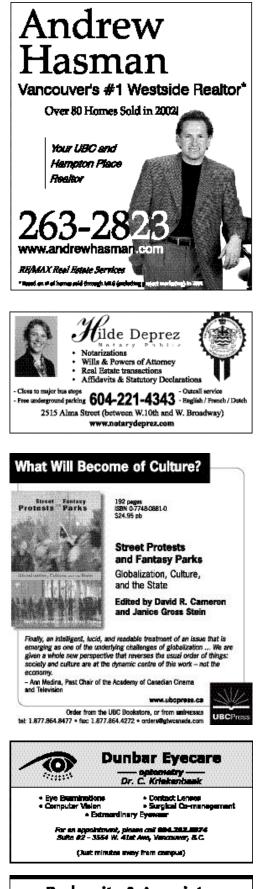
#### UBC remembers 9/11

The Global TV Noon News Hour broadcast live on Sept. 11 from UBC's Robson Square campus, where a memorial was held to remember those lost on Sept. 11, 2001.

In acknowledging the tragic anniversary, UBC President **Martha Piper** told those assembled, "As a university, I think we see the only way that we can respond or act is through increased knowledge and understanding and developing a sense of respect and trust as a community. So our role is really to educate the future citizens of the world."

#### Can Lit's man of the moment

In an article about the release of the *The Encyclopedia of Literature in Canada*, the book's editor, UBC English Prof. Bill New, told the *Vancouver Sun* he's ready for critics who point out omissions in the book. "I'd be delighted to hear from anyone who feels that an entry ought to be added." □



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## Five Questions for Colin Campbell

BY MICHELLE COOK

Think you can learn all you need to know about the United States from watching the West Wing? Think again says the head of UBC's new U.S. Studies program in the Faculty of Arts.

How has the terrorist attack of Sept. 11 affected American Studies research?

It's had a vast effect. If you back up, we had a period of uncertainty about whether Bush was going to be president. He took office amid very serious questions about the legitimacy of his mandate. Initially, the administration advanced very quickly in its core agenda items, but then it began to drift. Then Sept. 11 happened and that galvanized support for the president.

Because of concerns for homeland security, the U.S. is placing very serious challenges at the mat of its allies with regard to individual rights and protections. For Canada, where the Charter of Human Rights has only existed for 20 years, we're under tremendous pressure to reverse course by the nation that provided us with the example of a Charter of Rights to begin with.

In addition, we're dealing with an attitude toward trade which has become considerably more protectionist than anybody would have thought in such a small time frame. With the momentous shift in America's view of external reality, we have to make myriad adjustments in our own perceptions of trade relations, national security and even human liberties.

It sounds like an ideal time to be starting an American Studies program.

I think most people realize that

we can't be ostriches in regard to the United States. Even before 9/11, people in the business community and anyone in a leadership position in Canadian society had to be aware of the U.S. UBC's program has a strong rationale independent of the events of last year, but they have driven home more clearly the need for a program like this.

How is UBC's U.S. Studies program unique?

It will be the only program of its size in Canada. We hope to provide a location for leading scholars to do cutting-edge research. Our objective is to fund seven research chairs in U.S. studies. This will provide the critical mass for more focused undergraduate and graduate training in U.S. Studies. For instance, we could offer undergraduates majoring in other fields but who have a strong interest in the U.S. the opportunity to do a minor concentration in U.S. Studies. I have begun consulting with interested Arts faculty departments about developing such a curriculum.

Recently, the U.S. has opted out of some bigh-profile international initiatives like the International Criminal Court and Kyoto Accord. Will our knowing more about the U.S. make a difference? I think it has made a huge

I think it has made a huge amount of difference already. The Canadian diplomatic core has proven to be historically very savvy about how to do business with the U.S. and how to negotiate and lobby on Capitol Hill. In Washington, the Canadian Embassy has an exceedingly good reputation for its effectiveness. In



Colin Campbell will build a brain trust of U.S. specialists at new centre.

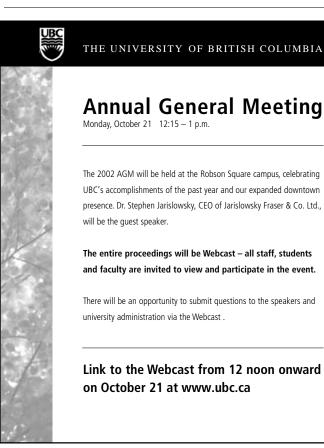
fact, senior British diplomats have always used the Canadian Embassy as a model. Now that other embassies are figuring out this type of diplomacy, Canada is going to have to understand the U.S. political system even better to be taken seriously.

The U.S. has been Canada's neighbour for a long time. Why is this kind of program only appearing now at a Canadian university? When I was teaching at York University during the '70s, there was strong anti-Americanism due

was strong anti-Americanism due to the Vietnam War. Apart from the war, there was strong Canadian nationalism, and major concerns about U.S. ownership of Canadian industry and media, and so the mood was quite different.

Now, we're formally integrated with the United States with respect to trade. However much you might object to free trade, it's part of our institutional framework and that's unlikely to change. With the current war on terrorism, we're being asked to achieve a higher degree of military integration with the U.S. If it's not managed properly by our leadership, it could very substantially reduce the sovereignty of our country. If people don't mobilize some sort of interest, then they're going to wake up one morning and see that if they didn't like free trade, they certainly won't like the new Northern Command.

A Calgary native, Colin Campbell comes to UBC from Georgetown University in Washington, D.C. where he taught for 19 years. He bolds a Canada Research Chair in American Studies with expertise on the U.S. presidency.



### UBC Psychologists Forge Links With China

BY STEVEN TAYLOR & KERRY JANG

Ed.'s Note: The following is a submission to UBC Reports by members of the Dept. of Psychiatry following their recent trip to China.

The face of Chinese mental healthcare is changing rapidly with the adoption of evidence-based approaches to diagnosis and treatment in place of traditional Chinese medicine and treatments imported from the Soviet era.

The interest of Chinese clinicians and researchers in psychological work at UBC began in the early 1990s. Mental health professionals from the Suzhou Psychiatric Hospital and Hangzhou University approached UBC psychologist and psychiatrist Dr. W. John Livesley, then head of the Dept. of Psychiatry.

This past July, a group of UBC psychologists were invited to the 1,000-bed Anhui Provincial Hospital in Hefei to give a series of workshops on the research and treatment of mental disorders. Lying west of Shanghai, Hefei is about the size of Vancouver, and is a major industrial centre and research base in China.

Unlike psychiatric departments in many Canadian hospitals, Chinese hospital departments are truly interdisciplinary. Although Chinese mental health practitioners are keen to adopt Western methods of diagnosis and treatment, Western practitioners can benefit by learning about Chinese systems for integrating mental health care.

In July a series of meetings and seminars at Anhui hospital was organized to discuss Western and Chinese approaches to mental disorders. Dr. Kerry Jang from the Division of Behavioural Science, UBC Dept. of Psychiatry, Dr. Amy Janeck, Clinic Director at the UBC Dept. of Psychology, and Dr. Steven Taylor, from the Division of Behavioural Science in the UBC Dept. of Psychiatry, all made presentations.

Academic exchanges are important to Chinese hospitals because they help fulfill criteria Chinese hospitals need to be upgraded by the Chinese government. Anhui mental health workers have asked to visit UBC next year in order to extend their training in psychiatric diagnosis and treatment. These exchanges provide unprecedented opportunities for cross-cultural research. This kind of research has important implications for the Canadian health-care system as Canada's population becomes increasingly multicultural. □

Steven Taylor is a professor and Kerry Jang is an associate professor both in the Dept. of Psychiatry.

### Ike Barber Donates \$20 Million for Learning Centre

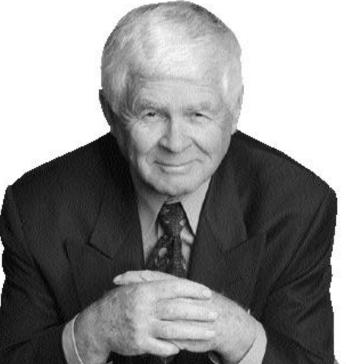
Major expansion planned for Main Library

UBC's Main Library will be transformed into a revolutionary ne learning centre thanks to a \$60-million gift from UBC alumnus and B.C. entrepreneur Irving K. (Ike) Barber, Founding Chairman of Slocan Forest Products.

The B.C. government will con-tribute \$10 million to the \$50 million Centre, and both donations will be matched by UBC.

The Irving K. Barber Learning Centre will be constructed around the core of the Main Library, to add more than 18,000 new square metres of inside floor space and two square kilometres of outside space to the facility, all fully equipped to support wireless technology.

Once complete, the Centre will be the first facility in Canada to integrate information resources



and services and interdisciplinary learning support facilities under one roof. It will be open and staffed 24 hours a day, seven days a week.

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The Centre will house "smart" classrooms, open computer labs, seminar rooms, distance learning support activities, and some of UBC's interdisciplinary learning programs such as Arts One and Science One. The Centre will boast a laptop loan program for UBC and community users, Canada's first automated storage and retrieval system for the library's print collection, and a fireproof and climate controlled vault for the library's rare books, archives and special collections.



Irving K. Barber graduated from UBC in 1950. He says his career has left him with "disposable income" that he would like to share with the people of B.C.

### **UBC Research Unlocking the Key** to Mystery Killer Fungus

No one knows yet how it got here. BY HILARY THOMSON

How did a potentially lethal fungus spread by koala bears end up on Vancouver Island? That's the mystery that UBC researcher Karen Bartlett is trying to unravel.

Bartlett, an assistant professor in the School of Occupational and Environmental Hygiene, has been traveling since March to Vancouver Island tracking down Cryptococcus neoformans var. gattii. It is a microscopic yeast typically found in eucalyptus and other tropical and subtropical trees. It started showing up on the Island in 1999 – the first time ever the tropical fungus has been found in a temperate climate.

When fungal spores are inhaled, they can produce a rare infection called cryptococcosis. Affecting the lungs and nervous system, symptoms include prolonged cough and weight loss and the infection can sometimes lead to potentially fatal meningitis or swelling of the brain. About 59 cases, including two

fatalities, have been diagnosed on the Island since 1999 - an incidence higher than anywhere else in the world. More than 35 cases in pets and wildlife have been diagnosed since 2000.

Although health risks associated with the fungus are low, physicians were educated about the disease that is complicated by patients in northern climates having no antibodies to fight the infection.

"This is a fascinating puzzle for a researcher," says Bartlett, who is an expert on fungi and building materials. "It's exciting to be so directly involved in finding out how this dis-ease is spread and to be working in a natural lab out in the forest."

The mystery started in late 1999 when Island veterinarians identified an unusual airborne infection in llamas, ferrets and other animals. Samples were sent to the B.C. Centre for Disease Control (BCCDC) in Vancouver. UBC, BCCDC and the Vancouver Island Health Authority have been working together to deal with the prob-

Reports of illness originated on the east side of the Island and Bartlett has tested trees from



Karen Bartlett samples B.C. trees for deadly tropical fungus

Parksville and Rathtrevor Beach to Victoria. She is examining samples of tree pulp taken from holes created by birds and insects and also testing bark and the air around the

trees Eucalyptus did not show evidence of the organism but some Douglas Fir, arbutus, Garry Oak, big-leaf maple, cedar, alder and bit-ter cherry have tested positive for the fungus. While the yeast has actually colonized in some of the trees, nearby trees may also have tested positive simply due to wind-blown spores landing there. Bartlett has tested trees in North Vancouver and the Sunshine Coast. all of which have been negative.

She suspects birds may carry fungal spores from tree to tree. She has also found that the yeast survives well in salt water, which suggests other methods of transmis-

Future investigations will look at the range of the fungal spores; determine if the fungus is always present or seasonal; and gauge exposure risks for people working with infected trees, lumber or wood products.

"We're going to see more unusu-al infectious diseases because of climate change, increased mobility and other factors," says Bartlett, who is the recipient of a 2003 Scholar Award from the Michael Smith Foundation for Health Research. "We need to take the environment seriously, allocate resources and make changes to keep the next generation safe."

For more information check the B.C. Centre for Disease Control Web Site at www.bccdc.org.  $\Box$ 

### **Uptown Meets** Downtown in Free Concerts

Music of the streets mingles with UBC Music School BY KATE JOBLING

The UBC Learning Exchange is presenting two free concerts featuring 20 performers from the community and UBC's School of Music on Oct. 19 and 21.

This is the second year for I love the Downtown Eastside - an uplifting coming together of musicians, actors and poets to explore the theme of love in their community through poetry, music and personal testimonials.

Performers celebrate the beauty, value and worth of friends and neighbours who they feel have been marginalized by society simply by living on the eastside of Vancouver. Despite this rather serious theme, the show takes the opportunity to poke fun at locations where 'the needle raptors' converge and celebrates the residents' artistic expression in the form of homemade crack pipes and backalley graffiti art.

I Love the DTES was developed and produced by the Savage God Theatre Company. Producer Donna Wong-Juliani says the show started as a pilot project to bring arts and culture to the heart of the city and it is back by popular demand. This year's perform-ance has been re-worked to include more music, specifically performers from UBC's School of Music at the Point Grey campus

"There is so much in the news about people who live in the Downtown Eastside, but we never hear or see stories through their eyes. That's why we decided to pursue this," says Wong-Juliani.

I Love the DTES will be staged on Saturday, Oct. 19, 7 p.m. at UBC's Robson Square Campus and on Monday, Oct. 21, 12 noon, in the Dodson Room (adjacent to the Chapman Learning Commons) at the Main Library of the Point Grey campus.  $\Box$ 

### **United Way Launch**

Students and faculty launched the University's 2002 United Way campaign with a lunch-time BBQ at the Student Union Building's South Plaza on Sept. 25. Organizers say the event raised \$480.00 towards this year's overall campus campaign goal of \$400,000.

With its successful kick-off behind, the campaign takes off in full force throughout the month of October.

"A number of university departments have planned fundraising and awareness-raising events to take place throughout the month, " said Deborah Austin, United Way's UBC campaign chair. "And we're hoping that all students, faculty and staff

will participate in the many events

Events in October include a Friday noontime speaker series in the Faculty of Agricultural Sciences, a custodial BBQ at the Land and Building Services build-ing, a Pancake Breakfast hosted by the Health Sciences group and a Bake Sale put on by the Faculty of Education.

This year's United Way drive on campus is expected to increase employee participation by at least six per cent over last year. Drive organizers say that staff should have received their pledge cards by now. For pledge card inquiries con-tact UBC's United Way office at 822-8929 or or go www.unitedway.ubc.ca□ to:

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### Saving the Seahorse by Saving the Seas

UBC prof starts first seahorse conservation program **BY HILARY THOMSON** 

Males get pregnant. Couples dance daily after dawn. A tail holds your hand.

Welcome to the curious world of the seahorse and the fascination of Prof. Amanda Vincent.

The new Canada Research Chair in Marine Conservation Vincent has recently arrived at UBC from McGill University. She calls the seahorse a charismatic rallying point for advocacy and action.

"These curly-tailed little beasts act as a flagship for marine conservation issues," she says. "To save the seahorse, we must save the seas.

Vincent is the first biologist to have studied seahorses underwater. the first to document their trade and the first to start a seahorse conservation program.

At UBC she will work at the Aquatic Ecosystems Research Laboratory. Now in the design phase, the unit will be located on Main Mall and will include the Fisheries Centre that Vincent describes as 'world-class' and a big part of her decision to come to UBC. She also looks forward to the interdisciplinary possibilities offered by the Faculty of Graduate Studies.

The co-founder and director of an international group called Project Seahorse, Vincent leads a team of 35 biologists, social workers and other professionals - as well as Filipino villagers and scholars working in eight countries promoting marine conservation.

Eight team members moved with her from McGill and three more students will commute regularly to UBC.

Their research has five major themes: biological research; managing marine populations and fisheries; monitoring and adjusting consumption of marine life; developing conservation policy; and educating and promoting awareness of the need for conservation.

Thanks to Vincent's efforts, 160 countries will vote in November on an international proposal to manage seahorse trade. Countries trading in seahorses include Canada and the U.S. with the largest exporters being India, Philippines, Thailand and Vietnam. Vincent and her team work with both fishers and consumers to establish sustainable use of the seahorse.

Found in tropical and temperate waters - as far north as Baja-California on the west coast - sea-

#### horse numbers are declining rapidly due to habitat loss, accidental capture in non-selective fishing gear and sales for traditional medicines, aquariums and curios. There are about 300 species in

the seahorse family, including sea dragons, pipefishes and pipe horses. Ranging in size from less than an inch to a foot in length, they have the ability to change colour to camouflage themselves. In addition, a prehensile tail allows them to grip and anchor themselves to seaweed and underwater plants to hide from predators. They feed on live food such as brine shrimp, which they suck through their snout.

And most intriguing from a human perspective, only the male becomes pregnant. Pairs of most seahorse species are

monogamous and reinforce their bond with elaborate early morning greeting dances involving colour changes, promenades and pirou-ettes. Eggs are fertilized in the male's brood pouch. He provides oxygen and nutrition throughout the 10-40 day-pregnancy before going into labour

One of Vincent's favourite seahorses is James, a Caribbean seahorse that she studied while at Cambridge. James took the record for reproduction when he gave birth to 1,572 babies from a pouch about half a teaspoon in size.

This is the Year of the Water Horse, according to the Chinese lunar calendar, and Vincent hopes to co-operate with Vancouver's Chinese-Canadian community to advance marine conservation. Traditional Chinese medicine accounts for the largest consumption of seahorses.

Canada could show more leadership in marine conservation, Vincent says. In issues such as ecologically sensitive aquaculture, sustainable fisheries and the establishment of marine protected areas, this country's track record is poor.

"Marine conservation is every-one's responsibility," she says. "Oceans are in crisis and we need to engage urgently on nearly every issue

Designed to build Canada's research capacity, the federal government will invest \$900 million to support the establishment of 2,000 Canada Research Chair positions at Canadian universities by 2005. UBC now has 58 faculty members designated as chairs from a total allocation of 156 positions.

#### University Women's Club of Vancouver **OPEN HOUSE**

Wednesday, October 9 from 5:30 - 8:00pm

The University Women's Club of Vancouver is part of a national and international organization of women graduates. Its objectives are to stimulate intellectual activity, promote an interest in public affairs and educational issues, and to enjoy fellowship and social activities. We support education for women through scholarships and bursaries and are involved in community outreach programs.

The club is located in Hycroft, a beautiful heritage house. We welcome women graduates of any university or college who enjoy friendship, intellectual stimulation and social activities. Come and find out what the club has to offer potential members.

RSVP604-731-4661 Email: uwcvanc@telus.net

University Women's Club of Vancouver at Hycroft 1489 McRae Avenue (at 16th & Granville), Vancouver

#### Peter Hochachka

Peter Hochachka OC, PhD, LL.D, FRSC died at his home in Vancouver on Sept.16 cared for by those he loved the most; his vife Brenda and his children, Claire, Gail and Gareth, With his family's unfailing support, Peter had waged a gallant battle against cancer with a fortitude and good humour that was an inspiration to his many friends and colleagues.

Peter was born in Bordenave, Alberta in 1937 and was introduced to the wonders of nature by his father and grandfather. He credited his grandfather with teaching him "to see nature" and his father with teaching him "to understand it." We are all the beneficiaries of the fruit of these childhood experiences.

Peter became Canada's foremost zoologist, and one of those most fortunate of scientists able to weld a research career with a national and international career in science, communication and service. For this he received many awards, but two were especially dear to his heart: the Fry medal from the Canadian Zoological Society because of the influence F.E.I. Fry had on his research approaches and philosophy, and the Order of Canada because it represented the summation of his achievement. He wore the 'snowflake' faithfully and with great pride.

Peter was the father of the field of adaptational biochemistry, which was described in a Science review of his recent book with George Somero (Biochemical Adaptation) as how molecules make organisms work best within their own specific environmental conditions." Adaptational biochemistry is Peter's legacy to science, Canada and the world.

Peter recognized the implications of his research in areas far beyond narrow disciplinary boundaries. He provoked and facilitated interactions between pure and clinical research fields, becoming one of the world's leading theoreticians on defense mechanisms against low oxygen. This resulted in a number of cross appointments with departments at UBC, including the Prostate Centre at VGH. The latter association led to a groundbreaking paper on the hypoxia connection in prostate cancer with his surgeons as co-authors.

Peter was the most peripatet ic of scientists. The world was both his laboratory and his lecture hall. He dealt in superlatives; the fastest swimmer, the west walker, the fleetest flyer, the highest climber, the deepest diver and, with colleagues and students, he put a girdle round the globe in search of new sub-jects, spreading the scientific word, igniting ideas with his infectious enthusiasm, and always finding yet further avenues to pursue

Peter was one of a kind. Life was an adventure and cancer was a new challenge, ultimately leading Peter to acknowledge his future assignments in a farewell to his colleagues: "to check out the concept of parallel universes and the implica-tions of entanglement." That was Peter, and he will be sorely missed.

- DR. DAVID R. JONES

Dr. David R. Jones is a professor of Zoology at UBC and was a long-time friend and colleague of Dr. Hochachka's.



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### Former UBC President Kenneth Hare Remembered

Meteorologist guided university through stormy seas

It was the '60s, one of the most turbulent times in UBC's history, when Dr. F. Kenneth Hare succeed-ed Dr. John B. Macdonald to become the university's fifth president.

It was a time when protesting students across North America were demanding a greater say in university affairs. It was a time made worse at UBC by rising enrollment coupled with some facilities so overcrowded and out of date that Hare would eventually dub them "deplorable." Those who were close to him remember him as a

gentle man who probably was quite surprised to

discover what was waiting for him at UBC. As soon as he arrived he was presented with a document from students that outlined their dissatisfaction with many aspects of university life and called for substantial changes

in the way the university functioned. The conflicting pressures of the job soon took their toll. On Jan. 31, 1969, just a year and a half after he accepted the presidency, he resigned. In his letter of resignation he said that he had found the job impossible for a man of his temperament.

A native of England, Hare came to UBC from London where he was Master of Birkbeck College of the University of London. In addition to UBC, his academic career included 19 years on the faculty of McGill University where he was dean of arts and sciences. He was a professor emeritus in Geography at U of T, a recipient of the Order of Ontario and 11 honorary degrees and was Chancellor of Trent University and Provost of Trinity College.

An internationally respected environmental scientist, he was known for his expertise in the disposal of nuclear waste and global warming. He was well known for his work in the field of meteorology and was the author of a widely used textbook on climatology The Restless Atmosphere. Helen, his wife of 49 years, says her husband's most treasured skill was singing bass in the church choir.

Born in Wylye, Wiltshire in 1919, he died peacefully at his home in Oakville, Ontario on Sept. 3.

### OUR READERS WRITE

#### We stand corrected

In the interest of historical accuracy, I wanted to clarify the claim made in the Sept. 5, 2002 issue of UBC Reports in the article "UBC Launches its First On-line Master's Degree." UBC actually launched its first two on-line master's degrees this fall; which was "first" is arguable. Both are innovative and both were developed collaboratively with partner universities in other countries. While the article focused on the Masters of Educational

Technology (MET) developed by UBC and Tec de Monterrey in Mexico, it failed to mention the new MEd in Adult Learning and Global Change (ALGC) that received Senate approval at the same time as the MET and also enrolled its first students this fall.

The ALGC program was developed collaboratively with the University of the Western Cape in Linköping Africa, South University in Sweden and the University of Technology, Sydney in Australia. The cohort enrolled

this fall includes 40 students from Australia, Austria, Canada, Iceland, Mauritania, Netherlands, South Africa, Spain, Sweden, and Thailand. More information about this

program can be found at www.edst.educ.ubc.ca.

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UBC mentoring opportunities for local high school stu-dents will soon be made avail-

able via a web-based service called UBC Mentor Centre. The virtual centre is being launched this month and is designed to help teachers secure mentoring experiences for their students. Opportunities include guided group visits, supervised use of lab equipment, and e-mail consultations with faculty members on school projects. Originated by Asst. Prof.

Jane Roskams of the Dept. of Zoology, the gateway Web site will also be linked to other community learning resources.

UBC Mentor Centre is a pilot project of the Vancouver School Board and the faculties of Medicine and Science.

For further information or to volunteer as a mentor, contact Lucia Wilson at lwilson@cmmt.ubc.ca. 🗆

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#### The Cecil H. and Ida Green Visiting Professorships of Green College

Nominations are invited for the position of Cecil H. and Ida Green Visiting Professor. The main criteria for selection are the proposed visitor's distinction, public speaking ability and appeal to a broad spectrum of student, faculty and off-campus undiences. Performing artists may also be nominated. The visits are usually for one concentrated week during February, March, October or November and require a substantial commitment of time from a faculty coordinator.

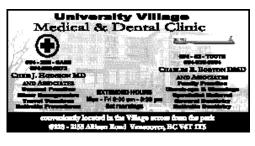
#### Green Visiting Professor in Residence

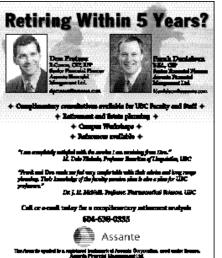
Nominations are invited for the position of Cecil H. and Ida Green Visiting Professor in Residence. Nominees must be exceptional researchers from mixide URC whose work has the potential for significant impact in more than one discipline. The appointee will live at Green College for three months, conduct a term-long seminar under the suspices of the Individual Interdisciplinary Studies Graduate Program, give a general lecture, and make a research-in-progress presentation.

Permanent deadlines: February 15 and October 31

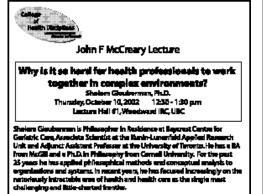
Numinations are accepted at any time for the next competition. For detailed terms and procedures, contact Rosance Rundey at Green College, 6201 Cecil Green Park Road, V6T 1Z1; vice interchance also es

8 | UBC REPORTS | OCTOBER 10, 2002









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Fer further information, please call the College of Health Disciplines (609) 823-5571 or the School of Audiology & Sparch Sciences (804) 822-5591.

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### **Helping Traumatized** Soldiers cope with **Civilian Life**

Three-year study looks for answers. BY HILARY THOMSON

Helping Canadian soldiers overcome the effects of post-traumatic stress disorder (PTSD) and make the transition to a civilian career is the aim of a three-year study headed by UBC counselling psychologist Marv Westwood.

A \$104,000 grant from the Social Sciences and Humanities Research Council (SSHRC) will allow Westwood and colleague Prof. Bill Borgen to evaluate the Transition Program for Canadian

follow-up. The results will help counselors better understand the process of change and transition in the aftermath of traumatizing events, he says.

Peacekeeping soldiers are exposed to events such as atrocities and torture, and retrieving and disposing of human remains. They experience stress-related reactions such as PTSD at rates as high as 35 per cent, says Westwood. Left untreated, these reactions may

#### Left untreated, these reactions may result in aggressive behaviour, troubled relationships, withdrawal and depression.

Peacekeeping Soldiers, a groupcounselling program that he launched in 2001.

"Little research has been done on how exposure to traumatizing events affects soldiers' ability to make the transition to home and work life," says Westwood, who works in the Counselling Psychology program in the Faculty of Education.

He will work with three groups of 6-8 soldiers that have served as peacekeepers and as soldiers in Vietnam. The original program has been expanded to include a career strategies component as well as partner awareness sessions.

Westwood will evaluate the program's immediate and long-term effects through personal interviews and questionnaires conducted before and after participation in the program and at a six-month

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result in aggressive behaviour, troubled relationships, withdrawal and depression.

"Returning peacekeeping sol-diers have not been well-served by existing counselling programs," says Westwood. "We hope this research will help develop therapies that recognize the significance of their experiences."

# Apple fest

The UBC Botanical Garden's pop ular Apple Festival takes place Oct. 19-20 from 11 a.m. - 4 p.m. This year there will be more than 35 varieties of apples for sale and 50 varieties of apples available to taste. Other activities include apple cider pressing and grafting demonstrations, face painting, and a harvest marketplace. Admission to the garden is free. The Botanical Garden is located at 6904 SW Marine Dr. For more information call 604-822-9666. □



New Garden Director Ouentin Cronk took the helm director of the UBC Botanical Garden and Centre for Plant Research on Sept. 1.

Cronk, who comes to UBC from the Royal Botanic Garden, University of Edinburgh, is internationally renowned for his research on flower form the conservation of rare plants on oceanic islands, and plants in the African Violet and Ginger families. He has collaborated with researchers in universities and botanical gardens in Australia,New Zealand, Sweden and the United States.

Cronk was educated at Cambridge University and his most recent research work in Edinburgh has been focused on understanding the evolution and biodiversity of vascular plants.

UBC's Botanical Garden is the oldest university garden in Canada and contains a worldwide collection of plants from temperate climates.

#### Help for Children

A UBC-based research partnership has received \$2.5 million from the B.C. Ministry of Children and Family Development to improve under standing of early childhood development.

The Human Early Learning Partnership (HELP) is an interdisciplinary network of faculty, researchers and graduate students from B.C.'s four major universities Directed by Dr. Clyde Hertzman, a professor of Health Care and Epidemiology, HELP will trace how a child's environment affects learn ing,social,emotional and behavioural development.

By linking university, government and community programs throughout the province, the project will serve as the centre of B.C.'s early childhood development research efforts.

For more information on HELP, visit the website at www.earlylearr ing.ubc.ca. 🗆



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Engineers Renee Boileau and Lilian Fan hoist their robotic creation

### Is That a Fin in the Water?

Robo-ray points the way to better underwater propulsion. BY MICHELLE COOK

Don't be alarmed if you spot something fishy in the basement of the Hennings Building. It's just Robo-Ray, a robotic fin built by a team of UBC Engineering Physics undergraduates looking for a better method of underwater propulsion.

Renee Boileau, Lilian Fan and Tim Moore created Robo-Ray last year. The little electromechanical fin won the Engineering Physics Dept. prize for top senior project but its potential to influence future submersible designs is what has really sparked interest.

"What we were trying to do was find a way to move underwater that is more efficient than a propeller," says Boileau. "The ray fish is flat and skinny and doesn't carry a lot of energy but it can move fast. It's incredibly powerful and graceful, and we were looking for a way to mechanize a robot that would swim through the water with similar grace. By mimicking the flapping and

rippling movements, called rajiform motion, that rays use to swim, it may be possible to design more flexible, energy-efficient unmanned submersibles for use in oil rig inspections, ocean floor surveys and even wildlife conservation activities. Boileau explains.

The team's choice of fish stemmed, in part, from a project done by some Physics students and, in larger part, from Boileau's longtime fascination with rays - something she acquired from watching ocean researcher Jacques Cousteau on television.

Using resources in the Engineering Physics Project lab, Boileau along with Moore, an aspiring naval architect, and Fan, the team's electrical whiz, began experimenting with cables, motors, gears and pulleys to re-create a fin.

### UBC ALUMNI



ILLUMINATING ACHIEVEMENT UBC Alumni Association 8th Annual Alumni Achievement Award Dinner November 14, 2002 Fairmont, Waterfront Hotel Call 604-822-3313 for details.

The Annual Alumni Dinner was a Fall tradition in Vancouver from the early 1920s until the changing times of the '60s brought them to an end. The Commodore Ballroom on Granville Street was the venue of choice, and grads can tell stories of meeting future wives and husbands at the dance.

The modern day series of annual dinners began in 1995 with the first Alumni Achievement Dinner at the Vancouver Hotel. This year's dinner will be held at the Fairmont, Waterfront, and will honour UBC grads and friends who have achieved great things at this university and in the community. Join us in "illuminating achievement" at this year's dinner.

This year's award winners are:

Victor Ling, PhD'69, Alumni Award for Research Roy MacLaren, BA'55, Alumni Award of Distinction

Haig Farris, BA'60, LLD'97, Blythe Eagles Volunteer Leadership Award

Susan R. Harris, Faculty Citation Wallace Chung, DSc'94, Honorary Alumnus Award

Martha C. Piper, Honorary Alumnus Award Garde B. Gardom, OC, BA'49, LLB'49, LLD'02, Lifetime Achievement Award Miranda Lam, LLB'02, Outstanding Student Award

Janice J. Eng, BSR'85, Outstanding Young Alumnus

#### ALUMNI SPOTLIGHT > Victor Ling, PhD'69

piece of yellow sailcloth with a

series of shape memory wires, and ran electricity through them in a

timed sequence to produce the

flapping motion of a ray on the

Robo-Ray was born. A big challenge was getting the

fin to "behave" by controlling the

wires' shape and their heat up/cool

down rate, says Fan. But the bigger

question was: could Robo-Ray

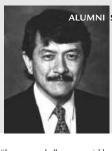
move.

swim?

Dr. Ling is an international star in medical research. He was part of the team, with Michael Smith and Fred Sanger, that pioneered a method for rapidly sequencing DNA, leading to the human genome project and breakthroughs in genetic therapies. His current research focusses on molecular mechanisms that render chemotherapy ineffective. He is assisthat relate channel approximation of the set of the set

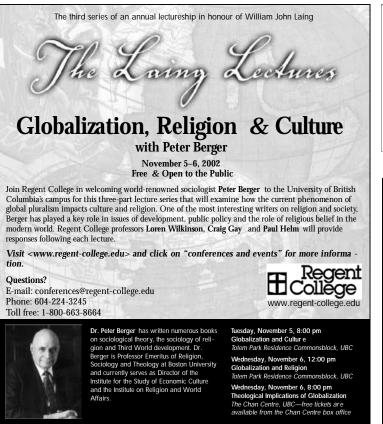
> The team took it to the B.C. Research Inc. 66-metre tow tank on campus and released it.

> It took to water, well, like a fish. Although the members of Team Robo-Ray all graduated in spring 2002, the trio plans to continue working with current undergraduates to build a more complex model with better propulsion. As for Robo-Ray, it's still lurking somewhere in the depths of the Hennings Bldg. 🗆



"It got very bulky very quickly because rays have many bones, says Boileau, who took a zoological physics course to help understand a ray's physiological structure. The team's breakthrough came

when Fan found an unusual type of wire while surfing the Web. Called Shape Memory Alloy, the wire's properties allow it to contract when heated - perfect for mimicking the muscles of a swimming ray. The group fitted a fin-shaped





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	MAXUMIZING WALKING CAPACITY AFTER STROKE	November 23	Professor San Echard Department of English UBC
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ember 2	Professor Peter Burns, Q.C. Feculty of Law, UKC		INTAL HARVEST: OVERCOMING THE
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	THE UN COMMITTEE AGAINST TORTURE: FROM PINOCHET TO A BORDERLESS WORLD		
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in inductive lectives lies need on successful at 15 pm, in Lecture Fair No. 2 of the advand instructional Resources Centre at the University of British Columbia, to lectures is the and the public is invited to attend. Call 822 1444 for a program. For full Information, visit our website at http://psg.com/-ted/vaninst/

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### Eureka Moments in R

When the light goes on. BY BRIAN LIN

Legend goes that when Archimedes discovered how to measure the volume of an irregular solid and thereby determine the purity of a gold object, he jumped out of the bathtub, running into the street, buck naked, yelling "Eureka! I have found it.

While slightly less dramatic, some UBC researchers' eureka moments are no less inspiring.

"For me it happened at about 3 a.m. when I was feeding my niece," remembers Pharmaceutical Sciences Assoc. Prof. Kishor Wasan, who was doing research on how hydrophobic drugs interact with plasma lipoproteins. noticed how the baby was sucking on the nipple, in a sort of pursed lip motion, and it hit me that the drugs partition the lipoproteins in a pursed movement. The next morning, I woke up and read my notes and was delighted that it wasn't gibberish. It actually made sense.

For VP Research Indira Samarasekera, whose area of research is continuous casting of steel, a baffling moment quickly turned into an unexpected discovery when she realized that not only was the shape of the mould important but the dynamic interaction with the newly solidifying shell was a factor, too.

"The results were exactly oppo-site to our predictions based on the shape of the mould alone," recalls Samarasekera. "But we tested the new theory and it paved the way for a set of changes in the design and operation of continuous casting moulds that led to quality improvements.'

Physics and Astronomy Assoc. Prof. Jaymie Matthews' eureka moment consisted of absolutely nothing.

"My colleagues and I had completed an ambitious program to monitor the subtle brightness variations of a rapidly pulsating magnetic star in a remote observatory in the Andes Mountains of northern Chile in 1989," says Matthews. "We used two telescopes simultaneously to capture the star's radiation both in visible and infrared light," Matthews explains. "In our

visible-light observations, we were rewarded with the expected signal." "In the infrared, we saw - to use

a technical term - diddly-squat.' "It's been almost 13 years since

those observations," says Matthews. "Last month, I reviewed a South African PhD student's thesis, which was inspired entirely by that null result. In this case, finding nothing was one of the most satisfying discoveries we could have ever hoped to make."



Kishor Wasan (top), Jaymie

Matthews and Indira Samarasekera recall the moment when it all made sense.



### **Research Funding Highlights**

**UBC consistently per forms well** in securing research funding. In 2001/02 alone there was more than \$260 million in research activity at the university, including the following key peer-reviewed

awards: CIHR: \$33,066,902 NSERC: \$33,205,540 SSHRC: \$6,237,585 \$15,156,255 CFI:

As well, UBC was awarded \$76 million in Canada Foundation for Innovation funding in the January 2002 round of grants. These funds will support a variety of research projects from across the spectrum of the humanities and sciences. This grant from CFI was significantly higher than funding received by any other university.

CFI Innovation Fund Results December 2001 Competition Top to Universities				
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University of British Columbia	\$76,016,571	ര്		
University of Alberta	\$66,520,178	9		
Université Laval	\$33.544,988	4		
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### UBC Researchers Find a Way to Shorten Waits at Airport Security

Study suggests a better method. BY HILARY THOMSON

Frustrated with slow-moving airport security lineups?

A team of UBC student researchers has a plan to make those lines shorter and faster.

Consulting to the Vancouver International Airport Authority since January, the team designed a system that could complete the preboard security screening for 90 per cent of passengers in less than 10 minutes.

A group of five undergraduates, grad students, a faculty member and recent alumni from a variety of disciplines conducted the project at UBC's Centre for Operations Excellence (COE) in the Faculty of Commerce.

"It was a big step from class projects to professional consultation," says Bailey Kluczny, who graduated this spring with a BComm and has been involved in the project as a work-study assign-ment. "I don't know of too many classmates who have had the same experience."

Kluczny - who served as the team's technical analyst - and other team members spent a lot of time at the airport, observing the screening process and collecting data.

They created process maps and built an animated computer simulation of the process. It generates animated passengers that move through the simulated pre-board



Bailey Kluczny helped design a program to reduce YVR lineups.

screening. The tiny figures repli-cate the number and timing of passengers arriving for a flight, covering everything from the passenger who arrives an hour early to the person racing to board with only five minutes to spare.

"It has been so satisfying to be able to work on a project that looks at a real and current problem," says Kluczny.

Work on applied projects like this encourages students to go on to graduate studies in operations research, adds Prof. Martin Puterman, COE director.

After adding a floor plan and animation, the team can see exactly what is needed to keep the screening process moving smooth-

#### What makes a good researcher? BY BRIAN LIN

Curiosity, persistence and an open mind are some of the traits UBC researchers tell us make a good investigator.

"As a researcher, we're seeking the truth about everything that's around us," says Pharmaceutical Sciences Assoc. Prof. Kishor Wasan, who also heads the faculty's summer student research program. "Never try to prove your hypothesis, just try to test your hypothesis. Let your data show you the way.

Agricultural Sciences Assoc. Prof. Dan Weary says that the secret in getting great ideas tested and into action is having a strong research team.

"Your productivity is only as good as the people that you attract into your research group," says Weary. "Give them the resources that they need to make the project a success." "Great ideas are good but one

needs to really painstakingly develop and follow them," says Civil Engineering Prof. Nemy Banthia.

"Curiosity, drive, and especially persistence," offers Pediatrics Asst. Prof. Christine Chambers. "You need to persist when you believe in your ideas, and when others - such as funding agencies and journal editors - don't.

"Good imagination distinguishes great researchers," says VP Research Indira Samarasekera. "To wrestle with the unexpected and arrive at new understanding that challenges old ways of thinking is the crux of good research.3

"Keep you mind open and keep yourself up with the new informa-tion and techniques," says Psychiatry Asst. Prof. Weihong Song. "Be positive and do not be afraid of failure."

ly. The simulation has allowed them to experiment with various staffing and demand levels to find the optimal number of people required to do the job quickly and efficiently. In addition, they looked at the best way to configure the staff working at the X-ray, luggage inspection and metal detector stations.

Results from the simulation were used to develop a staff sched-uling system for the pre-board screening process. For a given flight schedule, the team can determine staff requirements at each of the airport's screening points and what combination of work schedules are effective at minimum cost.

"This model is proving to be a very powerful tool for improving the overall process - it will definitely be used in future planning, says Paul Levy, director, Security and Emergency Planning at Vancouver International Airport Authority.

The project has been presented to the authority and may be pre-sented to the Canadian Air Travel Security Agency that was formed after 9/11 to improve airport security.

The project was presented at UBC's recent Undergraduate Multidisciplinary Research Conference.

### Opera Hits a High Note with Research

Singers study characters, storylines and history. BY MICHELLE COOK

# Singing may not be considered a science, but opera students can hold their own – not to mention some very high notes – when it comes to research.

Preparing to perform an opera role involves more than memorizing lyrics and costume fittings, according to Stephen Bell, Paula tour of the Czech Republic in June 2002. "But it's the performer's responsibility to find out every-thing associated with their character and all the references that contributed to the composer's writing of an opera."

It's a big task, even for those with smaller roles, and opera

before. For this, previous recordings of an opera can be valuable but, Jones says, "it's sometimes dangerous because singers can try to imitate what other singers are doing and we can't do that; we have to create our own role."

character has been interpreted

Most operas are sung in languages other than English, and per-

formers must work with a diction coach to get accents right. "If you have a role

in Manon, [a French opera] you can't sound like you're from Langley," Welsh laughs. "When you go on stage, the audience has to believe they're seeing someone who speaks French."

And, say the four aspiring stars, all this must be done in addition to actually learning to sing the part.

Unlike other academics, who keep written records of their research, all an opera singer may have to show for their hard work is a recording and, hope-

fully, rave reviews. But Jones, Welsh, Bell and MacNeil agree that research and rehearsals are far more important than the actual performance. The academic and artistic value is in the process.

Upcoming performances by the UBC Opera Ensemble include Rossini's Italian Girl in Algiers, in November, The Merry Widow, in December, and Smetana's The Bartered Bride, in March 2003. For more information, visit uvouv.music.ubc.ca



We often hear about the emotional trauma suffered by those who lose their jobs in mass layoffs, but downsizing can be just as stressful for those left behind, and companies need to address this for successful restructuring, say researchers in UBC's Education faculty.

In a study being published this month, Education and Counselling Psychology professors William Borgen and Norman Amundson found that those spared the axe during mass layoffs often experience feelings of anger, fear, confusion and loss of control similar to colleagues who lose their jobs.

"To hear the sad and moving stories, the depth of that, and the stress of continuing to work in a downsized environment was a surprise because, in many ways, in our culture, we think they're the lucky ones," says Amundson.

The pair interviewed 31 downsizing survivors working in government and private organizations in B.C., Alberta and Ontario. Interviewees were asked to describe workplace incidents that either helped or hindered their ability to cope in the six months following layoffs.

While those interviewed often expressed mixed feelings about their situation, the number of negative incidents they reported was more than double the number of positive incidents. Many expressed grief for those who had been laid off, and felt resentment and anger at employers for not giving them adequate time to say good-bye or acknowledge the loss.

The survivors told researchers that watching how those laid off were treated had a profound impact on those left behind, rattling their sense of worth and trust in their employer, and leading them to question their hard work, commitment and loyalty to the company.

Borgen and Amundson found that increased workload and lack of adequate re-training and teambuilding exercises are other major sources of stress for workplace survivors.

According to the study, what survivors want most are good internal communications and a say in the re-shaping of their organization.

Some positive comments emerged from the interviews, too. Survivors reported welcoming the opportunity to try new tasks, and appreciating the value of support from family and friends during the restructuring period.

Borgen and Amundson will use their findings to help develop employee assistance programs and other counselling materials and services. Their recommendations to companies undergoing downsizing include focusing on the survivors, making the transition process transparent, giving employees the information they need to make informed decisions, and offering teambuilding and retraining workshops for those remaining behind.

The study will be published in the U.S. journal *Career Development Quarterly* in October. □



UBC opera singers Justin Welsh (centre) and Rhoslyn Jones (r) in character

MacNeil, Rhoslyn Jones and Justin Welsh. The students, all from the School of Music's opera performance program, presented operatic excerpts at UBC's recent Undergraduate Multidisciplinary Research Conference to demonstrate the work that goes into interpreting characters on stage.

"I think there's a perception that opera singers don't do research," says Jones, who was the lead in Massenet's *Manon*, performed by UBC's Opera Ensemble during a singers can spend anywhere from a few months to more than a year researching their character and the opera they will be performing.

Work begins by reading the libretto, the opera's text. Then, since most operas are based on myths or historical events, performers hunt for the novels, poetry, plays, diaries and historical accounts behind the opera's story to help them get to know their character and the time period. Performers also look at how a



### UBC research offers med students injection of virtual reality

New training tool is welcome news for patients. BY HILARY THOMSON

Turning patients into pincushions when students are learning to insert a needle may be a thing of the past once a UBC medical training tool becomes available.

Currently in development, the computer-based virtual reality simulator will help medical students master the art of needle insertion in a safe and realistic environment.

"Medical students now have to learn the procedure through trial and error," says Simon DiMaio, a PhD student in the Dept. of Electrical and Computer Engineering who is building the simulator as his thesis project. "With an increasing number of advanced therapies being delivered by needle, it's becoming critical to be precise."

The simulator has two components: an on-screen computer model of tissue and a robotic arm no bigger than a shoebox. The model allows the student to see where the needle is going. Moving the robotic arm replicates the sensation of needle moving through tissue to help students learn the degree of pressure and steering required to get the needle to its target site.

Biopsies, anesthesia and various cancer treatments require needle placement to be accurate within millimetres. Surgeons must guide needles that may be long and flexible through complex anatomy solely by feel and experience. Inaccurate placement can lead to significant complications such as biopsy false negatives, incorrect medication or radiation dose, longer procedure times, patient discomfort and tissue damage.

DiMaio and supervisor Prof. Tim Salcudean are developing the technology to include various types of needle and sites comprising complex layers of tissue.



Profs. William Borgen (l) and Norman Amundson help layoff survivors









## Imagine doing your research in a modern facility.



60 performers from the Strathcona Chinese Dance Company (above) perform fast-paced dance routines to the delight of the crowd and HRH The Queen.

Traditional step dancers from the Peggy Peat School of Dance perform on the Main Mall (left).

### **Performers from Many Nations** Entertain the Queen

Dancers, singers and Girl Guides part of the Royal Pageant. BY KATE JOBLING

More than 600 performers from 12 different arts groups celebrated The Queen during HRH's recent visit to campus. The performances represented a number of nations including Africa, Japan, Ireland, China, Bali and Canada's First Nations.

Vancouver-area Girl Guides and UBC-based artists also performed. But, it was the exotic acts that won the hearts of the campus crowd. From the Musqueam Warriors to the Strathcona Chinese Dance Company, fast-paced, high-energy music and dance ruled the day.

The Masabo Culture Company, a group of traditional West African performers, filled the air with driving rhythms as they took centre stage and performed the Senoufo rite of passage and celebration of a boy from youth to manhood through a leopard mask dance called Bolove'.

Taiko drummers beat out their version of celebration as Japanese youth from the Chibi Taiko group honoured The Queen. The University's Gamelan Ensemble performed a ceremonial Balinese fanfare composed in a traditional welcoming style. (The music was composed by UBC's Assoc. Prof. of Music, Michael Tenzer.) Hundreds of Girl Guides draped with flags flanked the Queen as she made her way through the crowd in a brief walkabout.

The performance ended with more than 250 chorale singers from the Magee Secondary Chamber Choir, the Mountain Secondary School Choir, the UBC Choral Union and the University Singers – singing a rousing rendi-tion of Canada: This is My Home – a patriotic piece that was composed and written for Expo '86 by Bob Bradley and Brian Gibson.

### HRH, The Duke of Edinburgh Meets Faculty and Students

The Duke briefed on West Coast environment issues BY KATE IOBLING

While the Queen and crowds watched performers outside, HRH, The Duke of Edinburgh spent some time in the Walter C. Koerner Library meeting with faculty and students from UBC's Institute for Resources, Environment and Sustainability.

The Duke was told about the human impact on Vancouver's rapidly growing and expanding region through a presentation on the effects of intensive agriculture, construction of impervious surfaces and the subdivision of rural properties throughout the Lower Mainland

HRH also was shown a model presentation on the impact of technology and globalization on west

http://fimp.lbs.ubc.oa

coast fisheries, which predicts the effects of prolonged fishing on a particular species and the consequences of other species groups within the food web.

A third presentation focused on the coastal zone being transformed by the invasion of exotic plants and animal species, which has altered the natural ecosystem. The Duke was told that some marine mammals are among the most contaminated animals in the global marine environment.

The presentation included information about B.C.'s coastal communities and how they are looking at economic alternatives, including ecotourism, to replace their current resource-dependent economies.  $\Box$