

# in edition

 The UNIVERSITY of WINNIPEG

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## Education in Transition

Few events in recent history have been as sudden or as dramatic as the collapse of communism and the adoption of parliamentary democracy in those nations formerly under the control of the Soviet Union. The rebuilding process touches all facets of life, including the educational system, and that is what education/development studies professor Eleoussa Polyzoi travelled to Moscow to examine.

"The purpose of the study was to explore the process of the initiation of educational transformation in Russia since the fall of communism," Polyzoi explains. "The study represents a replication and expansion of a three-year study that examined educational change in the Czech Republic." She says the study is unique because it looks at educational change as a process rather than an event. It also examines the changes with a view to matching them against a model of educational change developed by Michael Fullan, a leading North American educational theorist. "Fullan's model is adapted to explain change in the Czech Republic, developed out of a setting where change was dramatic and sudden," she notes.

In Russia, by comparison, the process of reconstruction has been much more chaotic. "Banks have closed and officials have been taken hostage; riots and panic have been widespread," says Polyzoi. "In the last year, schools have closed because teachers have not been paid for months. The ruble has become devalued and the Russian people are filled with uncertainty."



*Eleoussa Polyzoi says the experience in Russia is a "living laboratory," providing a unique opportunity for the investigation of educational change.*

Polyzoi's study was designed to examine the impact of this prolonged economic instability on educational transformation in Russia and to ultimately compare the Russian experience with that of the Czech Republic. "I looked at whether the extent to which the old must be deconstructed before moving onto the new, is indicative of the difficulty experienced with a system in transition."

While in Moscow, Polyzoi conducted interviews with members of the Ministry of Education, teacher educators, university researchers, and members of advocacy and school reform organizations. She also spoke with

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RESEARCH ISSUE

## Using Natural Archives to Understand Weather



Bill Buhay says he has had a tremendous amount of help from University students. "They are eager to work in the field, and they are really dedicated."

Oxygen and hydrogen from water and organic materials may be the key to understanding past weather trends and to predicting future patterns. Isotope geochemist and geography professor Bill Buhay says that organic matter from wetland peat, tree-ring sequences and lake sediments as well as lake sediment pore waters can help answer some questions about climate history. "Using these natural archives, we can determine long-term weather trends," he explains. "For example, the seasonal change in oxygen and hydrogen isotopic composition of precipitation is a tool that can be exploited for climate reconstructions over much longer time intervals."

Buhay is currently working with Bernhard Mayer from the University of Calgary and Frank

Pawellek from Ruhr-Universitaet-Bochum on a research project entitled "Isotopic Assessment of Climactic Changes as Documented in Continental Records of the Last 15,000 Years." In North-West Germany, Pawellek recovers peat cores as an archive of past organic life. The samples are delivered to The University of Winnipeg, where students Allison McPhee, Liza McClintock, Lisa Di Ianni and Michelle Pinsonneault chemically extract the cellulose component of the peat organics.

The University of Calgary then receives the cellulose samples. An Ion Ratio Mass Spectrometer is used to determine their oxygen and hydrogen isotopic composition. "We're now working on three peat cores, gathering data for the past 13,000 years," says Buhay. "We can relate geochemical signals from the cores to climactic and atmospheric circulation changes in northwestern Europe."

Buhay is planning to examine core samples from Lake Winnipeg. "The mud in the basin will provide a 12,000 year record of the organisms that lived in this area," he notes. The analysis of the core samples also involves measuring the oxygen and hydrogen isotopic composition of pore water samples. "Clay accumulates at the bottom of lakes, and water becomes trapped there in sealed pores," Buhay explains. "The isotopic composition of these pore waters gives us information about precipitation entering the lake as well as past regional climates."

Buhay will also begin a study of the Red River Basin to gain an understanding of its flood frequency. "We will analyze the changes in geochemical signals in the tree-ring sequences," he says. "It may only give us a 1,000 year history, but the study could provide additional details about the flood history of the Red River."

## Education in Transition

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a number of teachers, school administrators and parents.

Polyzoi's research on educational transformation in Russia will constitute one chapter of a new book that she is currently co-editing with Michael Fullan from the University of Toronto. The book is tentatively entitled *Change Forces in Post-Communist Central Europe: Change in Countries Undergoing Transition*.

## Volunteers Needed!

Convocation celebrates the success of our hard-working students. It's a very special event for the graduands and their families, and for those of us who work at the University. However, there is still much to be done behind the scenes to ensure that the ceremony runs smoothly.

The next Convocation takes place on Sun., June 6 in the afternoon, and volunteers are needed to help make this event an enjoyable one. If you're willing to lend a hand, call Marilyn Lockwood, events coordinator, at 786-9174.

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Comments, suggestions and submissions are welcome. (All material is subject to editing.) The deadline for the next issue is May 17.

*in edition* is printed on recycled paper. After you have finished with this issue, please pass it on to a friend.



## Oxford Bound

What Geri Breddam-Taylor describes as “the ultimate privilege” is soon to be a reality for her. “I remember telling Dean Fox in passing that it would be an incredible honour to take courses at Oxford,” says Breddam-Taylor, a math and computer teacher at The Collegiate. “Shortly after that he suggested that I apply for a teaching fellowship for one of the Oxford Teaching Seminars. I thought it over and I decided, why not try?”

The Distinguished Teaching Fellowship is designed to honour an exceptional secondary school teacher. The award covers all tuition and seminar fees, guest lectures, and program activities in Merton College at Oxford University. Breddam-Taylor’s nomination was selected from over 1,000 applications by the Foundation for International Education. “I never thought I would be going,” she admits. “I was on cloud nine for a long time.”

An innovative approach to teaching coupled with drive and energy makes Breddam-Taylor stand out. “I’ve developed a number of courses from the ground up, including a computer course for a student who is a paraplegic,” she says. “For me, bringing new materials into the classroom and doing everything I can to meet my students’ needs is every bit as essential as actually teaching the class. I never rely on last year’s material.”

To make her class relevant and effective, Breddam-Taylor combines elements from several courses. “I teach math and computers, so I might give them an assignment that involves using the Internet to research a mathematician,” she explains.



*Geri Breddam-Taylor was surprised to learn that she had been awarded a fellowship at Oxford. She says, “When I sent the application, I never dreamed I’d actually be chosen!”*

“Or I might assign a math problem that requires graphing and spreadsheets. This adds variety, but it also reveals the practical applications of each subject.”

Breddam-Taylor will be studying Comparative International Literature, bringing a Canadian perspective on secondary education. “Teachers from all over the world will be able to compare teaching approaches. We’ll eat, sleep and breathe education,” she says, noting that the seminar is designed to let small groups of six or more explore the topics in depth and share experiences.

Breddam-Taylor is looking forward to the opportunity to learn how teachers from other cultures motivate students. “I want to know how others make their students want to learn,” she says. “The Collegiate specializes in tailoring programs to meet students’ needs. In any given class I might have a row made up of a 17-year old, a 40-year old and two 15-

year old students. It takes a lot of planning to engage all of them.” She adds that despite the challenges, her students constantly surpass her expectations. “They amaze me over and over again,” she says. “I’m so impressed by their talent and their ability to deliver anything I request. Many of them have no fear: they will explore whatever computer program I throw their way; they’ll get up in front of their peers and talk about their work. They are truly extraordinary.”

Experiencing life in an ancient Oxford college and meeting outstanding academics and educators from the university and local schools is Breddam-Taylor’s dream come true. She says, “I can’t wait to touch the walls of Oxford!”



## Fubuki Daiko

with special guests Michael Stecky, percussion  
and Tracy McCorrister, actor

Sat. May 15, 7:30 pm

Sun. May 16, 2:00 pm

Eckhardt-Gramatté Hall   
\$15/\$13/\$10/Grps@\$7

**786-9000**

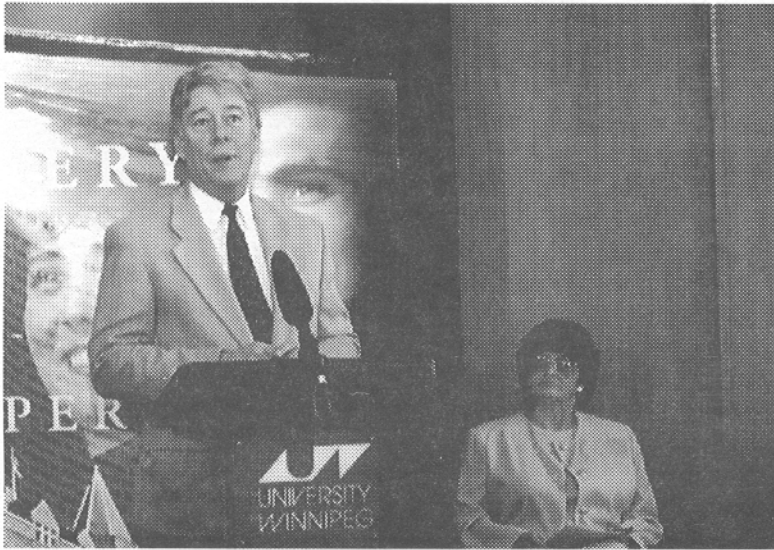
**Mondetta**  
stage



PERIMETER  

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## Government Aids Expansion



*Jim McCrae said the expansion of the University is an important boost to downtown development.*

The Filmon Government has announced plans to contribute \$3.5 million to the University's expansion into the Citadel building. Described by Education Minister Jim McCrae as a "bold step into the future," this move promises to enhance several areas, including the theatre and drama department and The Collegiate.

"This is an exciting day," McCrae said at a press conference. "We are opening new doors and giving The University of Winnipeg more doors to open." McCrae noted that the province is providing \$2.5 million immediately and \$1.025 million next year. The remainder will come from private funding.

In addition to facilitating further development of University programs, the purchase is an important boost to downtown development. "Manitoba is fast becoming the place to go for film and television production, and we have to be ready to take advantage of these opportunities," he said. "It's a growing sector of our economy, and this move marks the beginning of something very special. Manitobans will have access to improved facilities as well as instruction in film production and other areas of communications

related to the employment needs of business, media, technology and culture."

Theatre chair Doug Arrell said the expansion will enable the department to offer a more complete program. "We're in discussions with the film community about offering new courses that will add to what we already have to offer," he said.

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## Poet Makes Foray Into New Genre

After waking from a particularly frightening and intense dream, Catherine Hunter says she got out of bed and wrote one sentence: *Writing is an act of recovery, a bringing back of the body, a form of respiration.* Her latest novel, *Where Shadows Burn* (Turnstone Press), came out of that dream.

"*Where Shadows Burn* explores the relationship between the living and the dead," says Hunter, an assistant professor in the English department. "It also focuses on costumes and disguises, both literal and metaphorical," Hunter says. Kelly, the main character in the novel, is a costume designer who is devastated by the recent suicide of her husband, James. Despite her attempts to put her life back together, she is continually disturbed by supernatural occurrences, such as bizarre phone calls and fleeting shapes and shadows.

Already in a state of despair, Kelly is finally moved to action when her nephew's life is in danger. They flee to Minneapolis where she gets a job as costume designer for a Hamlet production. The leading actor in the play is showing a keen interest in Kelly, which threatens her anonymity. As

the plot unfolds, Kelly is forced to face the web of secrets that has entrapped her family—and now threatens their lives.

Poetry is always about truth and beauty, so on the surface, this purely fictional novel might seem like a radical departure for Hunter. But she says the two forms of writing aren't drastically different. "For one thing, the character of Kelly is just as much "me" as any of the voices in the poems," she notes. "Both forms of writing are about alternately concealing and revealing critical details." Hunter notes that readers will be faced with the question of whether James is actually a ghost—did he ever die?

For Hunter, the characters in her book have lives of their own and lead the action of the play as much as she does. In a recent essay written for *Prairie Fire*, Hunter recalls turning on her computer to see what her characters were up to, much the way she would tune into a TV show. She wrote, "The characters existed, and I suspect they still exist, somewhere quite beyond me, although they never come to visit my computer any more."

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## Celebrating Multiculturalism in the Workforce

By the year 2001, approximately 25 per cent of Manitoba's workforce will be composed of immigrants, and one out of every four new entrants in the labour force will be Aboriginal. For Manitoba to become globally successful, our managers must learn to deal effectively with cultural diversity.

Collaboration amongst academia, government and business has resulted in the annual Multicultural Human Resource Management Competition. It is a unique competition that aims to increase students' awareness and knowledge of human resource management systems and policies that build upon the strengths of Manitoba's cultural immigrant workforce.

As part of their course work, students undertake projects related to practical human resource strategies required for an immigrant work force. As future managers, they are preparing themselves to deal effectively with the multicultural Manitoba workforce of the 21st century. Introductory level class papers are judged by the professor, and advanced class papers are submitted to a panel of expert practitioners for judging.



*Winners of the Introductory Competition (L to R): Marivic Omega, Angie Bruce, Joanne Banares, Chantal Deslauriers, Kris Rzesnoski, Matt Lane, Daniel Charles, Jeremy Leduc, Matthew Jantz.*

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## Campus Notebook

### **Kudos to our Pulitzer prize-winning Chancellor**

Chancellor Carol Shields has won a 1999 Guggenheim Fellowship to write her new novel. Shields was among 179 artists, scholars and scientists selected from approximately 2,800 applicants to be appointed fellows of distinguished achievement in the past and exceptional promise for future accomplishment.

The first-ever City of Winnipeg book award has been named after Shields. "This is a bold, inventive and creative step for the city," Shields said, adding that she is greatly honoured by this gesture. The first annual Carol Shields Winnipeg Book Award will be given out in April 2000 at the annual Manitoba writing and publishing awards gala. The Shields, which will carry a \$2,000 cash prize, is open to any book of fiction, non-fiction, poetry, or drama which contributes "to the appreciation and understanding of life in Winnipeg."

### **Local Heroes Love to Read**

Students at King Edward Community School had a chance to meet some local heroes when members of The University of Winnipeg women's basketball team visited their school in February as part of *I Love To Read Month*. Student athlete Cara Braun read *The Final Game* to a fourth-grade class. As an education student, she already had experience teaching at King Edward. "My sister's the same age as these kids; I recognized some of them in the hall," she said. After the story, Braun answered questions about basketball and signed autographs for her new admirers.

### **The Results Are In!**

The votes are counted and the new University of Winnipeg Students' Association Executive has been announced:

President: Matt Henderson

VP (Advocate): Chandra Mayor

VP (Student Services): Chris Charney



# Grants Announced

The following is a list of grants at The University of Winnipeg:

## NSERC Equipment:

Steen Dannefaer and Don Kerr \$19,770  
Purchase of low temperature refrigerator for position studies in semi-conductors

Desiree Vanderwel \$32,386  
Liquid scintillation counter for study of beetle pheromone biochemistry

## NSERC Operating — New

Desiree Vanderwel \$50,078 Year 1 of 2  
Regulation of pheromone biosynthesis in the Yellow Mealworm, *Tenebrio molitor*

Randy Kobes \$160,000 Year 1 of 4  
Finite temperature field theory and chaotic systems

Gabor Kunstatter \$157,080 Year 1 of 4  
Quantum field theory and its physical applications

Doug Williams \$112,000 Year 1 of 4  
Temporal regulation in associative learning

Sheela Ramanna \$12,100 Year 2 of 4  
Hybrid software quality measurement systems: concepts, models, and applications

Mike Zaworotko \$44,814 Year 4 of 5  
Crystal engineering of functional solids

Scott Forbes \$33,000 Year 4 of 4  
Parental optimism and the evolution of family size

Geoff Wang \$16,500 Year 3 of 4  
Predicting early forest recovery following disturbances: the influence of site, historical and spatial factors

Alaa Abd-El-Aziz \$38,500 Year 3 of 4  
Metal-mediated macromolecule synthesis

Doug Craig \$31,350 Year 2 of 2  
Single molecule enzymology

Simon Liao \$15,400 Year 4 of 4  
Invariant object description and recognition

John Braun \$12,375 Year 4 of 4  
Bootstrapping dependent data

James Currie \$11,000 Year 4 of 4  
Combinatorics on words

Vaclav Linek \$11,000 Year 4 of 4  
Colouring of block designs

Bill Martin \$11,000 Year 4 of 4  
Association schemes: structure and applications

Ortrud Oellermann \$13,750 Year 3 of 3  
Average graph parameters, augmentation problems and generalizations of Menger's theorem

Terry Visentin \$9,900 Year 4 of 4  
Algebraic methods in enumerative combinatorics

Yiqiang Zhao \$25,300 Year 3 of 4  
Queues networks and performance analysis related to satellite switches

Steen Dannefaer and Don Kerr \$37,290 Year 3 of 4  
Positron studies of defects in semiconductors

Jim Clark \$13,200 Year 4 of 4  
Inhibition and other associative processes in semantic retrieval and related paradigms

## SHRC — New

Bev Fehr \$23,977 Year 1 of 3  
Intimacy expectations in women's and men's friendships; an interaction-prototype model

Zbigniew Izydorczyk \$14,658 Year 1 of 3  
Textual studies on the *Evangelium Nicodemii*: towards a critical edition

Release time stipend \$3,438 Year 1 of 1

Doug Walton \$16,088 Year 1 of 3  
The dialogue structure of legal argumentation

Release time stipend \$3,438 Year 1 of 3

Albert Welter \$10,165 Year 1 of 3  
Establishing the Ch'an Tsung (the Ch'an school): the creation of Ch'an identity in Sung China

Release time stipend \$3,438 Year 1 of 2

## SSHRC — Continuing

Bob Young \$22,500 Year 2 of 3  
Marketing Marianne: French propaganda and the United States of America, 1900-1940

Persis Clarkson \$6,000 Year 3 of 3  
Economic and ideological integration in the Tarapaca Desert, Chile

Bruce Daniels \$10,260 Year 3 of 3  
Puritans, New England and America: a people, a region and a nation

Carol Harvey \$9,000 Year 3 of 3  
A critical study of Phillippe de Remi's *La Manekine* in medieval times and in French Canada

## NSERC

## PGSAs

Michael Eggertson Chemistry — Physics and Chemistry  
Nadia Howlader Mathematics — Computing and Mathematical Sciences  
William Pansaert Mathematics — Computing and Mathematical Sciences  
Min Phan Business Computing — Computing & Math. Sciences  
Joia Siemens Biology — Earth Sciences and Ecology  
Lisa Stewart Chemistry Physics and Chemistry

## SSHRC

## Aid to Small Universities

Targeted Research Themes: Group Identity and Culture \$21,524  
Year 1 of 3  
Grants Relationships in a Changing World  
Policy Formulation

## NSERC

## Intellectual Property Management Program

U of M as lead organization, with U of W and BU \$95,544 Year 1 of 3

## The Disenchanted Forest



Geoffrey Scott examines surviving Aspen on a ridge southeast of the smelter in Flin Flon.

The impact of air pollution on ridge-top ecosystems downwind of the smelter at Flin Flon is something geography professor Geoffrey Scott has been investigating for the past three years. "I spent three summer and one winter field study periods collecting data on vegetation and soils near the smelter," Scott says, adding that several geog-

raphy thesis students were involved with the field work and laboratory analyses. As well, biology students have worked on soil microbial diversity under the guidance of biology professor Anne Adkins.

For 75 years, the Flin Flon smelter has contributed large amounts of sulfur dioxide and heavy metals, including zinc and copper, to the atmosphere. Some very obvious and many subtle impacts can be detected around the city and within the down-wind boreal forest vegetation cover, Scott says. "Effects on plants are particularly serious during winter temperature inversions when pollutants are trapped near the ground surface," he explains. "This 'fumigation' impacts the evergreen conifers, such as jack pine and spruce, more than deciduous tree species, such as birch and aspen, because the conifer needles are directly exposed to the pollutants year-round." Scott adds that lichens and mosses are also sensitive to sulfur dioxide and are virtually absent near the city.

Scott says that on rock-outcrop ridges downwind of the smelter, pollutants entering the soil not only kill off the usual covering of mosses and lichens, but also contribute to the death of jack pine and spruce cover. "Tree death seems to result from the direct interception of air pollutants by leaves as well as various things that impede the trees' ability to take up nutrients from the soil."

More importantly, Scott's field studies suggest that jack pine succumb quickly to the loss of both water and nutrients as their only real soil medium, the thin layer of lichen-moss cover overlying solid bedrock, 'dies off' due to the pollution. With the loss of this soil medium, Scott says, most trees die and fall over. Rock-outcrop survivors are found only where pockets of soil remain. Ironically, only metres away on the outcrop lower slopes and lowland sites where the trees are growing on less impacted mineral soils, the tree canopy appears relatively intact. "However, for up to 17 km downwind of the smelter, the classic green carpet of the forest-floor feather mosses is absent, and the mosses, which normally grow like socks around the lower part of the trunk, are missing," Scott notes.

Scott is beginning a research text on tropical environments, an area in which he has extensive experience. At the same time he will maintain his interest in soil organic matter changes associated with agriculture and other land use practices.

## 1999 Congress of the Social Sciences and Humanities

Sherbrooke and Lennoxville will welcome over 7,000 scholars in the humanities and social sciences from across the country and around the world, for the annual Congress of the Social Sciences and Humanities. Held every year since the 1930s, it is now North America's largest interdisciplinary gathering of its kind. For scholars, it is the most important conference of the year for presenting their latest research and demonstrating the value of their work to society.

Jointly by the Université de Sherbrooke and Bishop's University, the Congress is a unique opportunity for Canadians to discover and discuss the latest research on education, social policy, economic growth, cultural development, language, and other issues. For example, an International Forum on the Challenges of Globalization will provide government with the insights of independent Canadian researchers into this rapidly developing policy area. The Congress will also feature three interdisciplinary colloquia on *Heritage and Identities*; *Space and Place*; and *Education and Social Cohesion*.

A lively *Fête populaire* will bring delegates together with local artists and community members for musical performances, dramatic presentations, art exhibitions, and book readings.

Everyone is invited to register for this year's conference, to be held from June 2 to June 12, 1999.

### Contacts:

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## COMING EVENTS

"Coming Events" is compiled by University Relations. Planning a campus event? Please let us know. Send **written** information to Paula Denbow(paula.morphy@uwinnipeg.ca), University Relations, 10 working days in advance of the event. Basic details are required: what, when, where, sponsor, price of admission (if any) and the name of a contact person.

MON., MAY 24

• **Victoria Day**—University closed.

WED., MAY 26

• A reception in honour of **Dr. Marsha Hanen** on the occasion of her retirement will be held in the Riddell Hall Dining Room from 3:30 p.m. to 5:30 p.m. If you are planning to attend, please call 786-9122.

SAT., MAY 29

• **Career Trek Graduation and Concert**—195 young people will be celebrating completion of the Career Trek program. Career Trek gives people ages 10 to 17 a chance to spend one term at The University of Winnipeg, the University of Manitoba and Red River College. Students who might not ordinarily have a chance to attend a post-secondary institution are given a

glimpse of how exciting it can be. The ceremonies are at 10 a.m., 12 p.m. and 2 p.m. (a different time for each age group) in Eckhardt-Gramat  Hall. There will be a concert beginning at 7 p.m. For more details, call Darrel Cole at 474-6653.

SUN., JUNE 6

• **Spring Convocation**—Annual Spring Convocation for the conferring of degrees.

WED., JUNE 9

• All University of Winnipeg Alumni are invited to the **Alumni Association's Annual General Meeting**. Alumnus Joe Bova will be our guest speaker. The meeting begins at 7:30 p.m. in the Faculty and Staff Club, 4th Floor, Wesley Hall. Please call 786-9711 for details.

MON., JUNE 28

• **Board of Regents** will have their Annual General Meeting in 2M70 at 5:30 p.m.

THURS., JULY 1

**Canada Day**—University closed.

## Tundra Seeds Its Own Future

The ecology of seeds is an important area of ecological investigation, according to biology professor Richard Staniforth. It could hold the key to understanding the evolution of forests. "We're able to do this work right here in our University greenhouse," he laughs. "We have incubators and a greenhouse — that's all our students need to conduct most of their projects."

Staniforth has been monitoring plant growth and reproduction in the Arctic to determine how plants behave relative to climate change. There are at least six stations in Canada where similar research is being conducted. "The International Tundra Experiment (ITEX) has engaged scientists from eight different countries in the analysis of three species of plants found globally," he explains. "So far we have found that plants are flowering earlier, seed production is occurring earlier and conditions are becoming drier and warmer earlier."

The group hopes to determine how plant communities are going to respond to these climate changes. "Depending on how the plants respond, we will have clues as to whether the Tundra will evolve into forest."

Staniforth's foray into new territory — the boreal forest ecosystem — has contributed to the University's enviable reputation. The University of Winnipeg is the only institution between Thunder Bay and Edmonton that offers a program of courses in forest ecology, including silvics, dendrochronology, and forest health. "Our work in the field of seed ecology of forests also makes us unique," he says. "My contribution to this group of researchers is to look at the seed banks and gauge the number of seeds that have accumulated in the soil, and it has been as high as 40,000 per square



*Richard Staniforth is pleased to be offering a unique course in forest ecology.*

metre. We also look at the species composition on the soil seed banks. This information can be used to determine what the future vegetation of the forest will be after it has been cut or after a forest fire."

Staniforth has also been heavily involved with overseeing student research projects. "Those enrolled in the fourth-year projects course require a project supervisor, and I've been fortunate to work with some exceptional students," he notes. Karin

Newman is the most recent of such students. "She studied the endangered Western Silverleaf Aster, which is found in only two populations in Canada," Staniforth explains. "She studied seed production and germination to find out what has been restricting the size of the populations." What she found was surprising. "It turned out the pollination of these flowers has not been effective. Those that are fertilized do not survive well. A major problem was that mites and other seed predators were eating the seeds."

At the end of July, Staniforth will be returning to Baker Lake, Nunavut with colleague Josef Svoboda from Erindale College at the University of Toronto. They will continue to study the effect of climate changes on ecosystems on the Tundra.