



Applications to LU from high school students highest increase in Province

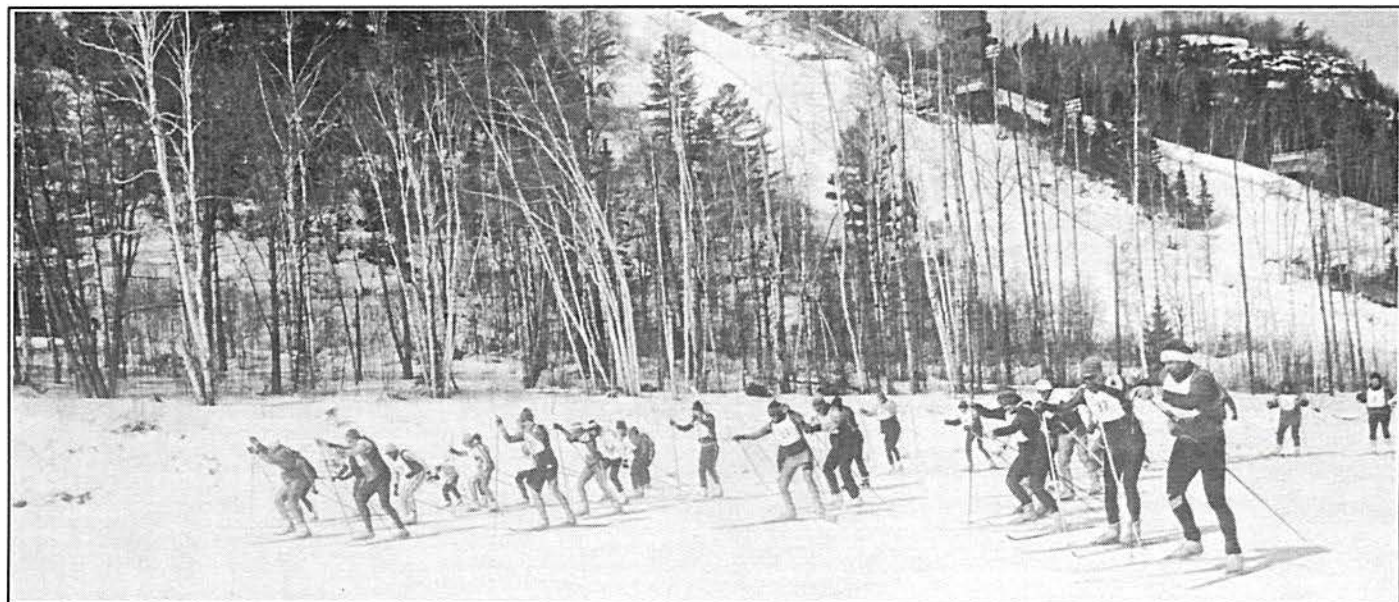
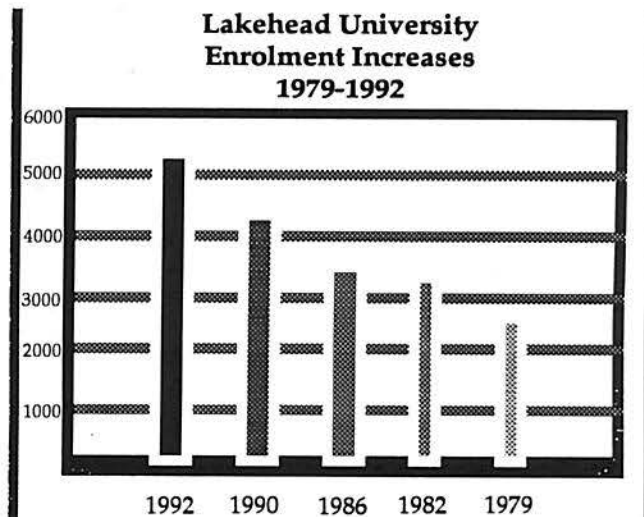
SMALL IS "IN"

Lakehead University continues to benefit from a continuing trend wherein students are applying in larger numbers to the province's smaller universities.

Applications from high school students to LU have increased 18.4% (1,224 vs 1,034) the highest increase of the sixteen Ontario universities. This increase follows on the heels of a 25% increase in applications last year and 5 years of record enrolments at Lakehead University. The university's full-time enrolment reached 5,301 on November 1, 1992, an increase of 12.7% (5,301 vs 4,705) over the previous year's full-time enrolment.

To accommodate yet another anticipated record enrolment for September, 1993, the University is undertaking a comprehensive review of its timetable and room utilization systems with a view to improving the university's space utilization.

**Lakehead University
Enrolment Increases
1979-1992**



Thunder Bay and Lakehead University recently demonstrated their ability to organize and host great skiing events. Close to 100 skiers turned out under sunny skies at Big Thunder to participate in Ski for Hope 1993, a family event that raised over \$15,000 for the CNIB and the LU Alumni Association. LU's share of the proceeds will be designated to the Learning Assistance Centre. The event was sponsored by Ernst & Young and supported by many local businesses including 580 CKPR and 94FM, Bearskin Airlines, Coca-Cola Bottling, Robin's Donuts and Versa Food Services. In another successful ski event, Thunder Bay children enjoying March break paraded international flags at the opening ceremonies for the North American Cross Country Ski Championships held on campus (see page 2).

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1993/94 Operating Budget

While our budget process continues, progress is slow because the major input, our government operating grants, have yet to be announced. Recent media reports pose the possibility of further delays. As well, the Board of Governors meeting for April has been delayed by two weeks until April 29, 1993 in order to accommodate the expected delay but, based on recent reports, further delays may be in the cards. What impact these delays will have on the ultimate budget is not known at this time.

Kudos #1

Kate the Great and all the folks in the Information Office got praise heaped upon them at the Annual Press Club Awards recently. The L.U. crew carried off the award for being the most proactive in working with the Thunder Bay media.

Nordics - Nordics - Nordics

No, this is not a hypothetical article on where or how the participants in the 1995 World Nordic Games will sleep. Rather, I wish to report that the University Senate has recently approved an academic calendar that, for 1994/95, will see the winter study week moved into March to coincide with the Games as well as the regular break for our School of Education students. The one-year switch was strongly supported in informal consultation with our students and will allow Lakehead University students the maximum opportunity to volunteer, to participate, and/or to be spectators.

Kudos #2

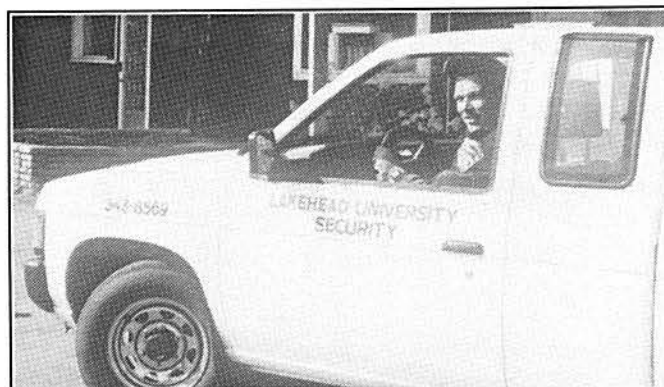
Special congratulations go to Professor Pam Wakewich of Women's Studies on the award of a prestigious S.S.H.R.C. Doctoral Fellowship.

Finally

Congratulations to Confederation College which is celebrating its Silver Jubilee this year. A joint celebration is being planned for May or June.



Rocco Mazzafero, LU Science Workshop, was selected as the outstanding student in the December 1992 Apprenticeship Block Release Program at Sheridan College. He is now a qualified journeyman machinist. Ted Christiansen from the Ministry of Education and Training and a member of the LU Board of Governors, and Dr. Rosehart presented Rocco with his award.



Security officer Dave Mueller drops by Alumni House in the new Security vehicle, a 1993 Nissan truck. Dave wanted to find out just WHO moved WHERE and the answer is on page 11.



Lake named after "Orchid Man"

A small lake in North-western Ontario (northwest of Dorion) has been named Harvais

Lake in honour of a former Lakehead University professor. Dr. Gaetan Harvais was a member of the Biology Department from 1962 until his untimely death in 1982. Dr. Harvais taught Lower Plant Morphology, Algology, Mycology, and Plant Physiology.

Besides being a teacher, Dr. Harvais was an authority on mycorrhiza and the biochemistry of orchid germination. He began this work at the University of Aberdeen, Scotland, where he received M.Sc. and Ph.D degrees. At Aberdeen, he studied various orchids but especially *Dactylorhiza* (Orchis) *purpurella*. In Canada, several orchids were also investigated with emphasis on the showy lady's slipper, *Cypripedium reginae*.

In his will, Dr. Harvais left a bequest for the study of orchids, to be administered by Dr. Paul Barclay. This bequest has been used for several purposes. A scholarship was established at the University of Aberdeen for doctoral students researching aspects of orchid biology. At Lakehead University, three masters students and two honours students have been wholly or partly funded from the bequest and Dr. Barclay has carried out a study on the orchid genus *Goodyera*. Funds were also provided for the establishment of two orchid reserves to preserve the showy lady's slipper, a rare orchid in northwestern Ontario. In these reserves, which are under the auspices of the Ontario Heritage Foundation, orchid research is being done by Ms. Erika North of Lakehead University.

Call for Nominations

The Senate Committee on Teaching and Learning is issuing a call for nominations for the Distinguished Instructor Award for 1993-94. Please submit nominations by May 30, 1993 to:



Dr. Moira McPherson, Chair Senate Committee on Teaching and Learning c/o Physical Education

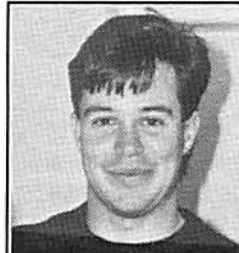
The committee is also seeking student nominations of faculty for six \$100 awards for the 1992-93 session. Copies of the selection criteria are in the LUSU and Departmental offices. If you think your Professor deserves to be honoured please submit a letter of nomination co-signed by at least five students to the address above before April 7, 1993.

Congrats 93/94 LUSU executive

Recent student elections brought in three new faces. Rob Jamieson, a 4th year Outdoor Recreation, Parks and Tourism/Geography student from Port Perry was elected President. Vice-

President Finance is Rick Cox, also from the Outdoor Recreation program and another "southerner" from London, Ontario. Thunder Bay student Pam Gervais was elected Vice-President Student Issues and her program is Political Studies.

This year's voter turnout was approximately 27% which is up from other years. All positions were contested and a total of eight students ran.



Rob Jamieson

PROFILE: HAL MORAN

Formerly: President and CEO of the Ontario/Atlantic Division of Molson Breweries Limited, VP and General Manager with the advertising agency J. Walter Thompson Company, Product Manager with General Foods.

Currently: Founding Partner of Greymatter, a consulting company helping CEOs with strategic planning

Connection with LU: born and raised in Fort William (now Thunder Bay), a graduate of Lakehead Technical Institute (now Lakehead University), a member of the "Share Our Northern Vision" Campaign Cabinet, gave a public lecture "Planning Your Corporate Future" at LU in March at the invitation of the School of Business Administration

Favorite pastime while visiting the Lakehead: dining with friends, drinking scotch and fishing

What business leaders are saying about the economy: "It stinks out there."

Their predictions for the future: "It's going to get worse."

Preoccupation: The Information Age Revolution

What some futurists are predicting:

The demise of the communist regimes Cuba and China; the demise of the United States as the leading world power; Islam will replace Marxism as the main ideology of confrontation; the value of the average home will drop by two-thirds; retirement will be postponed or even revoked for most people; the world will be



one of economic competition, not military.

Advice to the business owner:

Update yourself and your organization; make sure you are computer literate; place information technology in the mainstream of your business

More advice: Re-write your business strategies; look for new alliances; have a fair appraisal system for staff; delegate and then trust your people; make sure your company is making money; increase your personal savings.

On leadership: The successful manager will be a teacher, counsellor, coach and friend, rather than a commander, inspector, and judge.

Watchwords: The next ten years will bring about more change in the way business is done than we have seen in the past fifty.

Best overhead:

No corporation gets hit between the eyes by the future... when they get hit, it is always in the temple.

ARCHIVES

Looking for pictures of Thunder Bay pioneers? The Chancellor Paterson Library Archives may have just what you're searching for! Besides housing papers from University faculty, departments and administration our collection includes photographs, ledgers, business records, manuscripts and personal papers illustrating many aspects of local and regional history.

One of our larger collections is the Oscar Styffe Collection. It has manuscripts, ledgers, a scrapbook and photographs that document the operations of a family-owned forest products company from the 1920s to the 1960s.

Numerous Finnish ethnic collections are also located here. The largest comes from the Thunder Bay Finnish Canadian Historical Society. Spanning a period that stretches from the 1870s to 1970s, these archives contain audio tapes, plays in manuscript, newspapers, journals, photographs and other source materials relating to the history of Finns in Northwestern Ontario, especially immigrants who settled in Thunder Bay.

Students and faculty alike will find the Archives an excellent source for original research material. Presently located on the Library's fourth floor, Archives will move to the fifth floor in May, 1993. For assistance in using these resources please enquire at the information desk or phone 343-8302. □

OCCUPATIONAL THERAPY and PHYSIOTHERAPY DEGREE PROGRAMS TO DOUBLE ENROLMENT

Two recently-established degree programs in occupational therapy and physiotherapy (OT/PT) at McMaster and Lakehead Universities will double in size to meet growing demand.

The baccalaureate programs in OT/PT, will take 60 students in each program from the previous enrolment of 30 students. The OT/PT degree programs were funded by the Ministry of Colleges and Universities and begun in September, 1990 to help address a serious shortage of qualified occupational and physiotherapists in Ontario. In line with the health policy trend toward developing more community-based services for health care consumers, OT/PT officials at McMaster have decided to increase enrolment.

"With the recent announcement of increased enrolments in the School of Occupational Therapy/Physiotherapy, we anticipate that the numbers of Occupational Therapy and Physiotherapy students coming north to complete studies will also increase. We also hope to see additional blocks of academic studies available here as a result of the increased enrolments in each of the Programmes. The Northern Studies Stream of the Programmes offered at Lakehead is endeavouring to prepare students with the required knowledge and skills to practice in northern rural and remote areas," says Sue Berry, Co-ordinator, Northern Studies Stream.

The school of OT/PT in the faculty of health sciences at McMaster celebrated its first graduating class from the new programs in the fall of 1992. The degree programs, among only a handful in the world to use self-directed, problem-based learn-

ing curricula, are second degree undergraduate courses with strong Northern Studies components that compress three years of academic and clinical work into two intensive 11-month blocks. Students have the option of taking a 14-week Northern Studies block based at Lakehead University.

New opportunities in OT/PT are being created in sports medicine, preventive medicine, ergonomics, and in support of independent community living for people with specific living challenges. Program coordinators also note that more men are applying for admission to the traditionally female professions.

BOOK REVIEW

Issumatuq, Learning from the Traditional Wisdom of the Canadian Inuit

by Kit Minor

"I asked an elderly Inuk what was important to her in life. She gazed at me for a long time and began to speak in Inuktitut. As we looked out over Hudson's Bay towards a distant peninsula, she said, 'Do you see that hill over there?' I replied yes. She continued, 'Do you see the hill beyond that?' I again said yes. She then paused and with a smile asked, 'And do you see the hill beyond that?' I looked at her and said 'no'. She smiled and said, 'Yes, but we know it is there and if we join together we will find it, together.' We then talked for many hours of the many struggles that her camp had endured during her life, and throughout the conversation she continually referred to the group effort, with no reference to individual accomplishment."

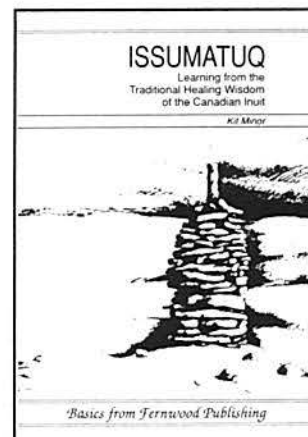
—Issumatuq

You don't have to be a member of the "helping" professions to enjoy Kit Minor's new book.

Drawing on research and 10 years' experience as a Social Worker in the Arctic, Minor offers insight into the world view of the Inuit and covers topics such as survival, spiritual beliefs, shamanism, the concept of two souls, ritual and taboos, traditional healing, the art of silence, suicide, and the effects of outsiders on the Inuit culture.

Minor's purpose is to describe a "culture-specific" design to be used as a tool to assist helpers and social workers to provide more effective and culturally appropriate helping within a specific culture.

The title, Issumatuq, refers to a gaining of wisdom over time and experience. The book is published by Fernwood Publishing and is being sold for \$11.95 at the Alumni Bookstore. □



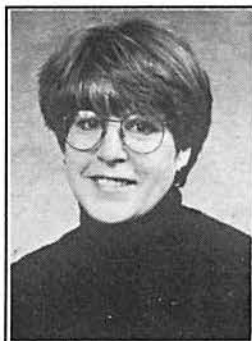
CYNTHIA STACEY

An explorer at heart, Cynthia Stacey moved to Thunder Bay last November from the scenic hills of Gatineau, Quebec.

Now an Assistant Professor with the School of Outdoor Recreation, Parks and Tourism, Cynthia teaches two courses on campus as well as four Distance Education Courses.

Originally from Nova Scotia, Cynthia studied Recreation at Acadia University in Halifax before completing a Master's degree in an interdisciplinary program with the Department of Landscape Architecture and the Resources Development Centre of the University of Guelph. From there she embarked on a PhD program at the University of Ottawa. Her thesis? "Heritage Conservation as an Expression of Community Sustainability".

Cross-country skiing, travelling and generally "playing the tourist" are the things this Maritimer enjoys. She is lying low now until she finishes her dissertation, but has an eye on getting involved with the "Friends of the Fort", the Local Architectural Conservation Advisory Committee (LACAC) and someday visiting her students in Savant Lake.



CONNIE HARTVIKSEN

Connie Hartviksen known to many as the "fish lady" in the Department of Biology made a move to the Health Sciences Centre in September. She is working with the Northern Health Human Resources Research Unit as a Research Associate. Connie's responsibilities to the unit are evolving everyday and include overseeing the day-to-day activities of the unit and facilitating on-going research.

Connie has been involved with research activities not only in Biology but across the university as well. She filled in as Research Officer during a 6-month secondment by Anne Klymenko and then worked part time as the Special Projects Officer in the department.

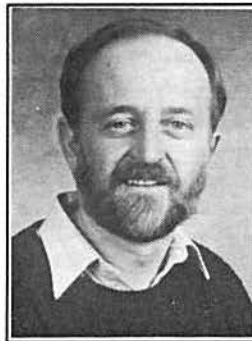
Connie's move to the Research Unit was done with considerable thought. "It offered new challenges and additional opportunities." Another challenge Connie will be facing soon is her enrolment in the Master of Education program at LU. Taking the courses parttime, she hopes to complete the program in a year and a half. Although her work and Lakehead University are important to her, Connie's number one priority is her family. "With both my husband's job (Ken Hartviksen, Director of the School of Business) and mine, ours is a busy household". In the summer the Hartviksens like to retreat to their remote family "cabin" for some solitude. "It's so remote that we have to portage in". Connie also likes to putter in the garden.



DAVID CHALLEN

Social Worker. Executive Director. Policy Maker. David Challen is all of these and now can add "Assistant Professor" to the list. Appointed to the Department of Social Work last summer, he brings a keen interest in LU's "ecological approach" to community development.

Born and raised in Southern Ontario, David took his BA at McMaster University and his MSW



at the University of Manitoba. He has worked with the Children's Aid Society in Brandon, Man.; as Executive Director of Family Services in Sault Ste. Marie, and with the Ministry of Community and Social Services, Vocational Rehabilitation Services, in London, Ontario. When he left the Ministry in 1989, he began teaching at the University of Toronto and is currently enrolled in the PhD program.

His thesis, "The Development and Implementation of the Young Offenders Act", has had to take a back seat this year because of a busy course load. Yet teaching duties have not prevented him from keeping up with his fitness program (running) or from collaborating with LU Professor Dennis McPherson on a paper they presented last month at the National Symposium on Community Economic Development in Alberta.

David's wife, Mary, works in the Mammography Department at the Victoria Hospital in London and they have three children. To celebrate their 25th wedding anniversary they are planning a hiking trip through the Smoky Mountains in Tennessee.



Mary Wilkins, who joined the University in 1969 as supervisor of data entry, was bid fond farewell at her early retirement party. She lived through many changes including the steady progression from one computer to another. "I think we're keeping up and the network service is a good idea." With her husband she plans an active retirement. They love to travel and are leaving for a European bus tour which will include Paris and many exciting cities. Mary wants to thank everyone for coming out to the retirement party. All the best Mary!!

DISTANT VOICES on TV Ontario (MAR. 30 - APR. 27)

Distant Voices is TVO's acclaimed weekly half-hour series focusing on the challenges and changes facing the north and its people. The unique series explores current and topical northern issues combined with pertinent and magnificent imagery from the north.

Tuesday, March 30, 9:30 p.m.

Dr. Jas. Spencer is an unlikely ambassador for Ontario's north. A surgeon who has been practising in Fort Frances since 1968, he left England because he found himself feeling increasingly restricted and out-of-place within that country's medical system. Dr. Spencer has a deep appreciation for the north and especially Fort Frances, which he says had definite lifestyle benefits that mitigate any professional sacrifices he has had to make along the way.

Tuesday, April 6, 9:30 p.m.

Frank Beardy/Marion Morris Muskrat Dam is a small reserve in northern Ontario which is trying to come to terms with life in the 20th century, a life which includes substance abuse. Marion Morris has been working as a counsellor and one of her greatest gifts to the people of her community is the example she has displayed in dealing with her own addictions. Frank Beardy, Chief of the reserve, sees healing coming to his community by the realization of some aspects of self-government, a situation which is bringing back a pride stripped away by years of government dependence. Personal and collective healing are promised in both their examples.

Tuesday, April 13, 9:30 p.m.

Elizabeth Kouhi Author of a number of children's books set in Northwestern Ontario, Elizabeth Kouhi is also a poet who writes in the cadences and images of a beloved childhood growing up in Lappe, a community settled by Finnish immigrants at the turn of the century. Her characters are inspired by a people bred to hardship, reserve, and great courage. Her writing articulates a landscape that is as raw as it is mysterious.

Tuesday, April 20, 9:30 p.m.

Michael Jones is a kayaker and canoeist who was a participant in the Lake Baikal/Lake Superior expeditions, an exchange program between kayakers from Lake Superior and a group originating from the Lake Bakail region in Russia. He is also a conservation officer whose work and adventures on Lake Superior have confirmed a passionate love for the lake whose soul he confirms with eloquence and respect.

Tuesday, April 27, 9:30 p.m.

Mike Solski Seventy-five years old and a lifetime resident of Coniston, just outside of Sudbury, Mike Solski holds the dubious distinction of being the only Canadian mayor to end his term on an assassination attempt. Never here you say? As well as his tumultuous political career, he has worked as a miner and a union organizer in the days when mines were what he has defined as "hell on earth". □



**WE'VE COME THIS FAR. . .
NOW WE NEED YOUR HELP!**

**Dinner Theatre Evening
with Baritone Sax
Musician Del Dako**

**Sunday, April 4th, 1993
The OutpostLakehead University
6:30 pm**

Alexander Mackenzie and the 1993 Expedition Voyageurs invite you to attend a musical evening which includes songs and dances by the voyageurs and a musical trio featuring Del Dako, a popular baritone sax player from Toronto.

Chicken Kiev with a vegetarian option will be served in conjunction with a cash bar.

**Proceeds from the evening will go to
the 1993 Canada-Sea-to-Sea
Expeditions.**

Tickets are available at LUSU or from Peter Labor, ext. 8076. Make cheques payable to Lakehead University please. Tickets may also be purchased from the voyageurs who will visit offices on the afternoon of Monday, March 29.

**A cash donation of \$10 in lieu of
ticket purchase would be appreciated.**

\$40/couple \$25/single

The Mackenzie Expedition departs Thunder Bay on April 28 for the final leg of the voyage across Canada. The Expedition leaves Peace River, Alberta mid-May and will arrive at Mackenzie Rock, near Bella Coola, British Columbia on July 22 - exactly 200 years to the day that Mackenzie arrived there. The brigade, made up of 24 LU students will paddle about 2000 kilometres and walk over 350 kilometres to reach their final destination. Plans are in the works to make the arrival at Bella Coola the biggest celebration the town has ever seen. □



Peace River representatives Adele Boucher and Arlene Staicescu present a \$1500 cheque for the expedition to Dr. Bob Rosehart and expedition leader Peter Labor in mid-March.

RESEARCH NEWS

CONTACT NUMBERS:

Director: Dr. Connie Nelson	ext. 8793
Research Officer: Anne Klymenko	ext. 8223
Health Research Officer: Kelly Morris	343-2131
Graduate Studies Assistant: Lynn Gollat	ext. 8785
Research Secretary: Lynn Wilson	ext. 8283
New Fax Number:	346-7749

MARCH 1993

CARP RESEARCHERS DEVELOPING A PREDICTIVE MODEL FOR CULTURAL HERITAGE RESOURCES

by Vonnie Cheng

"There aren't any gold idols in the bush," said Dr. Scott Hamilton, Department of Anthropology. He and his colleagues at CARP, of course, knew that before they set out last summer to comb the Canadian bush garden for artifacts of native people 300 to 9,000 years ago. Most of the artifacts collected so far are from the Stone Age -- stones shaped and intended to be used as tools, stone chips from the tool-making process, and pottery fragments. The field survey, to be repeated again (and again as required) this summer, is a crucial step in the development of a predictive model for assessing heritage resource potential in forested areas.

CARP (Centre for Archaeological Resource Prediction) was established in June, 1991, by Lakehead University in recognition of the need to better assess areas with archaeological resource potential. Members of the research team there include Dr. Hamilton (Director), Linda Larcombe (Research Coordinator), Luke Dalla Bona (Project Supervisor), and Grant Clarke (Crew Chief). The field crew this year will comprise of 6 L.U. students and 9 high school cooperative education students. The three-year predictive modelling project is being conducted for the Ontario Ministry of Natural Resources. Additional assistance is provided by the Ontario Ministry of Culture and Communications and the Ontario Ministry of Northern Development and Mines.

How does one go about developing a computerized model to mimic prehistoric land use in order to predict heritage resources locations in today's forests? Well, since July 1991, CARP has been actively collecting and digitizing data from a variety of map sources. Masses of

ethnohistoric, ethnographic, historic, and archaeological literature were reviewed to establish a link between the present-day inhabitants/users (hunters, gatherers, fishers) of the boreal forest and their prehistoric counterparts. A detailed catalogue of historic forts and fur trade posts was constructed from primary and secondary historic documents to supplement records of known heritage resource locations and to help the CARP researchers make inferences about the prehistoric people's preferred site locations for hunting, camping, plant gathering, etc. Geological/geomorphological literature, geological maps, aerial photos, and independent research reports were also researched to gain a better understanding of the geomorphological and post-glacial history and its relevance to prehistoric land use activities.

Then comes the "tricky" part -- to decide which of the multitude of variables to include in the predictive model and rank them by their importance to the ancient people in their site selection. Weighting schemes have to be developed for the calculation of the predictive model and for data manipulation by means of advanced microcomputer wizardry. Variables such as proximity to water, lay of the land, slope of the terrain, soil drainage, prime game types and their habitats, for instance, may be included in the preliminary model based on the cyclical movements of the prehistoric hunters and gatherers. During the winter months, they often had to move further and further inland along navigable rivers and streams in search of animal and plant food supplies whereas, in the summer, they would return to congregate at the mouth of main waterways to take advantage of the fish resources.



Scott
Hamilton

The final phase of the three-year research project involves repeated field testing, reevaluation, reformulation, and further field testing. Field work is essential to test the validity of the predictive model but it is a painstaking process to say the least. Even in the study areas where the forest is being actively harvested, members of the survey team have to be equipped with a GPS (global positioning system) device to help identify not only the location of the archaeological sites but also their own location on the landscape. Last year, the field crew covered 32 kilometres of scarified land hunting for artifacts which are hardly distinguishable, to the untrained eye, from the other stones in the area.

The prototype of the predictive model, to be developed by 1994, will be fully tested and evaluated by an extensive field program. It will not, however, have all the "bells and whistles" necessary for direct implementation into the MNR's land development system. Dr. Hamilton hopes that more funding will be available at that time to enable CARP to continue with the refinement and implementation process. Ultimately, the predictive model will be used as a planning tool for cultural managers and heritage planners to better address the heritage resource concerns in the environmental assessment process.

NSERC RESEARCH RESULTS

- almost \$900,000 for 39 researchers

The Natural Sciences and Engineering Research Council recently released the results of the 1993-94 Operating and Equipment Grants Competition. The Office of Research and Graduate Studies is pleased to report that thirty-nine NSERC eligible researchers at Lakehead University were awarded grants totalling \$884,112. Although the figure is slightly lower than last year, the success rate in the operating grants increased to 83%, from 77%. Approximately 34% of NSERC eligible faculty members hold NSERC grants.

NSERC continues to claim that increasing numbers of researchers are applying to the Council for limited research dollars. This year, the situation is exasperated with the Federal budget announcement that the expected 4% increase would not accrue to the Research Councils. The Office of Research and Graduate Studies would like to commend all researchers who applied to this year's competition. In the operating grants competition, two of Lakehead's new researchers were successful in receiving operating grants. They are: Dr. Q.M. Meng, Department of Mechanical Engineering and Dr. Y. Yao, Department of Mathematical Sciences.

The successful researchers in this year's operating and equipment grants competition (new grants and renewals) are as follows:

DEPARTMENT OF BIOLOGY

Dr. R. Freitag - "History of the North American Cicindelidae".
Dr. M.W. Lankester - "Parasite Diseases of Northern Ungulates".
Dr. L. Malek - "Dry Seed Proteasome and Related Proteins".
Dr. D. Morris - "Habitat selection, population dynamics and community structure of northern vertebrates".
Dr. R.J. Omeljaniuk - "Fish pituitary neurohormone actions, signalling mechanisms, and receptor regulation"

DEPARTMENT OF CHEMISTRY

Dr. T.M. Garver - "Hydrodynamic and structural studies of selective lignin macromolecular transformations"
Dr. A.N. Hughes and Dr. D.G. Holah - "Reactions of transition metal salts and complexes with hydroborate and other reducing agents".
Dr. S.D. Kinrade - "Chemistry of aqueous Aluminosilicates and associated metal systems".
Dr. M. Rappon - "Photoinduced reactions of dyes".
Dr. N.A. Weir - "Studies of photodegradation of polymers".

DEPARTMENT OF CHEMICAL ENGINEERING

Dr. L.J. Garred - "Urea sensor for urea kinetic modelling and erythropoietin studies".
Dr. I. Nirdosh - "Removal and Immobilization of thorium-230 present in uranium mill solutions".
Dr. V.R. Puttagunta - "Generalized one-parameter correlation for crude oils, hot water slurring of oil sands".

DEPARTMENT OF CIVIL ENGINEERING

Dr. S.M. Easa - "Highway geometric design for safety".
Dr. K.D. Eigenbrod - "Measurement of pore water pressures in freezing and thawing fine grained soils".
Dr. S.A. Mirza - "Strength and stiffness criteria for composite steel-concrete beam-columns".
Dr. U.S. Panu - "Development of streamflow data in-filling and streamflow forecasting procedures based on pattern recognition concepts".

DEPARTMENT OF ELECTRICAL ENGINEERING

Dr. Q.M. Meng - "Control aspects of the coordination of multiple robots with flexible joints/links and dynamic uncertainties".
Dr. K. Natarajan - "Aspects of discrete time periodic control systems".

DEPARTMENT OF MECHANICAL ENGINEERING

Dr. H.T. Saliba - "Experimental and theoretical free vibration analysis of thin plates with various shapes, boundary conditions and complicating factors".
Dr. A. Sedov - "Ultrasonic transducer and flaw modelling for non-destructive evaluation applications".
Dr. B. Singh - "Scaling criteria for jet cutting of oil sands".

SCHOOL OF FORESTRY

Dr. W.H. Parker - "Focal point seed zones and adaptive variation of North American conifers".

DEPARTMENT OF GEOLOGY

Dr. G.J. Borradaile - "Rock physics and deformation".
Dr. P.W. Fralick - "Paleogeographical interpretation of archean sedimentary sequences in Northwestern Ontario".
Dr. R.H. Mitchell - "Petrology and Geochemistry of kimberlites and alkaline rocks" and an equipment grant for a "Microanalytical system".

DEPARTMENT OF MATHEMATICAL SCIENCES

Dr. W.R. Allaway - "The moment problem on disjoint sets and orthogonal polynomials".
Dr. M.W. Benson - "Parallel iterative methods".
Dr. C.C. Graham - "Research in harmonic analysis".
Dr. C.T. Hoang - "Recognition and optimization algorithms for perfect graphs".
Dr. X. Li - "Distributed logic programming".
Dr. T. Miao - "Amenability of locally compact groups and properties of the Fourier algebra".
Dr. Y. Yao - "Design and implementation of adaptive information retrieval systems" and an equipment grant for a "Workstation".

DEPARTMENT OF PHYSICS

Dr. M.H. Hawton - "Fermion-boson interactions as dispersion forces/physics of absorbed water".
Dr. W.J. Keeler - "Raman spectroscopy studies of CdMnTe-based heterojunctions".
Dr. W.M. Sears - "Electrical and Optical properties of wide band gap semiconductors".
Dr. V.V. Paranjape - "Research in solid state physics".

More ...

SCHOOL OF PHYSICAL EDUCATION

Dr. D.J. Weeks - "Salient features cooling operations in response selection performance".

DEPARTMENT OF PSYCHOLOGY

Dr. M.F. Wesner - "Mechanisms of complex colour perception".

RESEARCH OPPORTUNITIES

AMERICAN FOUNDATION OF AIDS RESEARCH (AMFAR)

The American Foundation of AIDS Research (AmFAR) invites you to submit a letter of intent for projects in biomedical, humanistic, and social sciences research relevant to AIDS. The program has three levels of support:

- 1) Research Grants provide investigators with up to U.S.\$50,000 in direct costs for one year in support of AIDS related biomedical and Social Science research.
- 2) Small Travel Grants provide investigators up to U.S. \$5,000 for short term study or training at another institution. Funds are for travel, per diem, and housing.
- 3) Scholar Awards provide grants up to \$102,000 of salary and benefits for three years to researchers with two to three years of post-doctoral experience. AmFAR Letter of Intent due Tuesday, April 13, 1993.

AMERICAN FOUNDATION OF AIDS RESEARCH (AMFAR)/PAEDIATRIC AIDS FOUNDATION (PAF)

The American Foundation of AIDS Research and the Paediatric AIDS Foundation (PAF) invites you to submit a letter of intent for research projects having a direct relevance to paediatric AIDS and its related issues. There are three types of grants available.

- 1) Paediatric Research Grants provides investigators with up to U.S. \$65,000 in direct costs for one year, renewable for up to one additional year.
- 2) Paediatric Short-term Grants provides up to U.S. \$5,000 to travel and short-term study at another institution.
- 3) Special Two-year Renewable Paediatric Scholar Awards provides up to \$66,000 of salary support for two years to paediatric researchers with two to three years of post-doctoral experience. AmFAR/PAF Letter of Intent due Tuesday, April 13, 1993.

ONTARIO MINISTRY OF HEALTH

The deadline date for the OMOH Health Care Systems Research Program is still undecided. The Ministry will finalize the deadline date for the next competition after the provincial budget is announced. Also, at this time, it is undecided whether there will be a new guideline book and new application forms for the 93/94 competition. That will be decided when the next deadline date is announced.

UPCOMING CONFERENCES

LEARNED SOCIETIES CONFERENCE - May 30 to June 13, 1993, Carleton University, Ottawa, Ontario Canada

REDRESSING THE IMBALANCE: Health Human Resources in Rural and Northern Communities. Sponsored by the Northern Health Human Resources Research Unit (NHHRRU), October 21-24, 1993, Valhalla Inn, Thunder Bay, Ontario. Deadline for submission of Abstracts is April 30, 1993. For additional information, please contact Connie Hartviksen, NHHRRU at 343-2135.

GRADUATE AWARDS

Canadian Library Association Scholarships & Grants

Deadline: May 1

Amount: 4 @ \$1,000 to \$2,500

Various Graduate Scholarships and Graduate Research Grants are available in a continuing tradition of commitment to excellence in library education and advancement of continuing research in the field of library and information science.

Applications available from the Office of Research and Graduate Studies.

Northern Bursary Program: Deadline: June 1

Sponsored by the Ontario Ministry of Community and Social Services, this Program offers financial assistance to post-secondary students pursuing careers in specialized social services. Applications available from the Office of Research and Graduate Studies.

Economics Graduate Scholarship: Deadline: June 1

Amount: 1 @ \$500

Awarded to a high-ranking student who is either entering or continuing in the graduate program in Economics. For further information contact the Chair of the Department of Economics.

Hugh Douglas Hennessy Memorial Award in Economics

Deadline: June 1 - Amount: 1 @ \$300

Awarded to the student achieving the highest overall average in the four core, theory courses completed during the first year of studies in the graduate program in Economics.

Application should be made in the form of a letter to the Chair of the Department of Economics.



International Students Day celebrated the amazing diversity at Lakehead University. Left to right, graduate students from China (Education and English): Jianlin Shao, Xioyu Wu and Au Ming Zhang

UPCOMING DEADLINES

SENATE RESEARCH COMMITTEE DEADLINES

NSERC and SSHRC Conference Travel - May 15
NSERC Research Travel - May 15.

LU-MCMMASTER NORTHERN ONTARIO HEALTH RESEARCH GRANTS - May 3.

NSERC Programs

Bilateral Exchange Program - March 1 and October 15
NSERC/SSHRC Chairs in the Management of Technological Change - July 1.
Forestry Postdoctoral Assistantships - June 1 and December 1.
University-Industry Research Partnerships Program - Open.
International Collaborative Research Grants - October 15 & March 1.
International Scientific Exchange Awards - October 15 & March 1.
Scientific Publication Grants - April 15 and October 1.
Strategic Grants - April 15.

SSHRC Programs

Aid to Occasional Scholarly Conferences in Canada - July 1, November 1, April 1.
NSERC/SSHRC Chairs in the Management of Technological Change - July 1.
Strategic Partnership Development Grants - November 1, January 15, April 15.
Strengthening of Specialized Research Collection - April 1.
International Summer Institutes Program - April 1.

OTHER RESEARCH PROGRAMS

Agriculture and Food, Ministry of: Research Program - May 3.
American Foundation for Aids Research/Paediatric AIDS Foundation - April 13.
Association of Commonwealth Universities - Development Fellowships - May 31.
AUCC: Professional Partnerships Program with Central and Eastern Europe - Open
CBIE: Partners in Progress for Central and Eastern Europe - Open
Canadian Nurses Foundation Research Grants Program - June 15.
Canadian Studies and Special Projects Directorate 1993-94 (April 1, 1993 and November 1, 1993).
CIDA Professional Awards - April 30, 1993.
Educational Centre for Aging and Health; Fellowships/Bursaries - January 1, April 1, July 1, October 1.
Forestry Canada: NODA - April 5.
Health and Welfare Canada/MRC - AIDS Research Program - March 15 and September 15;
Joint Fellowships for AIDS Postdoctoral Fellowships - April 1 and November 15.
Health and Welfare Canada: NHRDP - Deadline changed to October 1, 1993, but NHRDP will also accept applications from June 1st onward to accommodate applicants who found the earlier date more convenient; Career Awards - July 31.
Conferences and Workshops - six months prior to the event.
International Human Frontier Science Program - September 30.

LSB Leakey Foundation: General Grants - August 15, & January 2, 1994;

Franklin Mosher Baldwin Fellowship - January 2, 1994.

National Research Council - Laboratories Research Associateship: - Open.

Ontario Ministry of Health - Nursing Innovation Fund - January 1, May 1, September 1;

Health Research Grants (May 1 cancelled!, November 1), Feasibility Studies (Open), Formulation Grants (Open), Information Studies (May 1 and November 1), Workshops and Conferences (Open).

Risk Research Institute, University of Waterloo - June 15, October 15.

Secretary of State: Canadian Studies Directorate - Open.

SEED Wage Subsidy Program - March 12.

SHASTRI Indo-Canadian Institute: Collaborative Research Program in the Social Sciences and the Humanities - (Letter of Intent) - March 31.

SHASTRI Indo-Canadian Institute Fellowship Competition - June 30.

Supply and Services Canada: Environmental Innovation Program - Open.

United States Embassy Grants in American Studies - September 1

Wildlife Habitat Canada - Habitat Conservation, Restoration and

Enhancement Projects (March 15 and September 15);

Communication and Education Projects (March 15 and September

15); Research Projects (March 1). World Wildlife Fund (Wildlife

Toxicology Research Program) - November 15 and April 15.

GRADUATE SCHOLARSHIP OPPORTUNITIES

Government of Canada Awards - Deadlines vary by country CIDA

Young Researchers Award - Open CIDA Awards for Canadians -

September 8, 1993 deadline cancelled. Next deadline for applications will be February 15, 1994.

The Office of Research and Graduate Studies, in conjunction with the Office of Information Services, is asking all faculty to share interesting research stories to feature in the RESEARCH NEWS. We would like to hear from you if you are currently involved in innovative research, have attended an interesting conference, are collaborating with industry or the community or if you would like to profile your research expertise. RESEARCH NEWS enjoys an audience of approximately 2000 and can be a valuable vehicle for communicating your research endeavours to the community at large.

For further research information call Anne Klymenko at ext. 8223 or drop by the Office of Research and Graduate Studies. For information about Foundations, call Jo-Anne Silverman, Foundations Officer at ext. 8910 or drop by Alumni House.

APPOINTMENTS

Dr. Barbara Kronberg, Department of Geology, has been elected to the Quetico Foundation. A major objective of the Foundation will be to raise money for the proposed Quetico Environmental Research Centre, which could be networked into the international Global Watch program.

Dr. Michael A. Bozek, Dr. Timothy R. Meyer, Dr. Arthur R. Rodgers, and Mr. Laird Van Damme have been appointed Adjunct Professors in the School of Forestry for the period July 1, 1993 to June 30, 1996.

Dr. Michael A. Bozek, Dr. Arthur R. Rodgers, and Dr. Thomas M. K. Song have been appointed Adjunct Professors in the Department of Biology for the period July 1, 1993, to June 30, 1996.

Mr. Glenn Mossop, conductor of the Thunder Bay Symphony Orchestra has been appointed Professional Associate in the Department of Music for the period July 1, 1993 to June 30, 1996.

PRESENTATIONS

Dr. William T. Melnyk, Department of Psychology, gave a presentation February 26 at the St. Francis Hotel, San Francisco, CA, to the Association of State and Provincial Psychology Boards (responsible for regulating the practice of Psychology in each State and Province). Dr. Melnyk has been on the Ontario Board for 11 years. His presentation was, Custody and Access Assessments: A Pro-active Approach, based on his own experiences as a practitioner and from his experience in Board Disciplinary Hearings.

Dr. David Lynes, Department of Sociology, attended the National Roundtable on Aboriginal Health and Social Issues, sponsored by the Royal Commission on Aboriginal Peoples from March 10-12 in Vancouver. Dr. Lynes participated in roundtable discussions on various topics, including Holistic Health Strategies and the role of non-Aboriginal institutions in the realization of community and health objectives.

Dr. Darlene Steven, Associate Professor, School of Nursing, prepared and presented a brief on behalf of the Gerontology Study Group to the Standing Committee on Social Development. The brief was titled "Bill 101: Long-Term Care". She also presented a workshop on "Patient Classification Systems" to nurse managers and the Nursing Practice Committee at Lake of the Woods Hospital. The Nursing Department will be implementing the tool developed for the General Hospital of Port Arthur by the researcher. The instrument is unique in that it incorporates staffing and documentation.

As well, Dr. Steven was invited to participate in a two-day workshop for nurse managers at La Verendrye Hospital, Fort Frances. The topic of discussion was Continuous Quality Improvement".

PUBLICATIONS

Dr. Said Easa, Professor of Civil Engineering, authored an article, entitled "Smooth Boundary Approximation for Computing Area of Irregular Region" in the Journal of Surveying Engineering, American Society of Civil Engineers, Vol. 119, No. 2, 1993. This paper reviews existing methods for computing irregular areas, such as a tract of land bounded by a stream shoreline, and develops a method that combines the advantages and avoids the reservations of existing methods. The proposed method provides a simple, direct formula for accurately computing the area using a smooth mathematical function.

Dr. A. Sedov, Professor, Department of Mechanical Engineering is the author of two recently published papers. "Ultrasonic scattering of flat bottom hole in immersion testing: an analytical model", Journal of the Acoustical Society of America, 92, pp 478-486 (1192) and "A focussed beam/scatterer model for ultrasonic reference standards". Review of Progress in Quantitative Nondestructive Evaluation, 12A, D.O. Thompson and D.E. Chimenti, Eds., Plenum Press, New York, pp.925-931 (1993). Both papers were co-authored with Dr. L.W. Schmer of Iowa State University.

PEOPLE

Fayek M. Ishak, Professor Emeritus, Department of English, who had his entries published in The Coptic Encyclopedia, has received a request from the Research Centre of Saudi Arabia to join a panel of experts to translate The World Book Encyclopedia into Arabic.

Professor Ishak has been working for the last three years on a manuscript that deals with the Devotions and Prayers of the Canonical Hours which were introduced to the Christian world by the Coptic Church of Alexandria in the middle of the 2nd century A.D. Over the years, some parts of the Horologion (Book containing the Offices of the Canonical Hours) were lost and others were changed into prose. In Ishak's new bilingual edition, released last December, the missing parts were re-introduced and the prose text was re-moulded into the nuances of a poetic cast.

These Prayers are used in the Armenian, Coptic, Greek, Romanian, Russian, Syrian and Ukrainian Orthodox churches.



It was old home week at the Open House for the renovated Health Centre. Professor Margaret Page, after whom the centre was named, was a special guest and got together with staff for a photograph. Left to right: Jessie Sutherland, Sheri Mosher, Sandi Covino, Rosemary McFall, Margaret Page, Pat Coates, Dianne Christie.



Left, Dr. Irene Dawyosyr & 1992 Alumni Award recipient Gordon Keeler. Rt., Jennifer Morrison, Presidential Award winner, addresses donors on behalf of award recipients.



Scholarship recipient says "thanks" to donors

On behalf of my fellow scholarship and award recipients I would like to thank the donors of the scholarship program and Lakehead University for their support of excellence. You have provided me, as well as many other students, the opportunity to further our educations.

To begin, I'd like to tell you a little bit about myself and my studies here at Lakehead. My name is Jennifer Morrison and I grew up in a small Northwestern Ontario town called Geraldton. I am a first-year student in the Concurrent Education program, majoring in mathematics. I am the recipient of several Lakehead University scholarships and would like to say that the University's scholarship offer was a significant factor in my decision to study here. As well, Lakehead's quality of education and superb concurrent education program were also very important.

I am the youngest of three children with two older brothers going through University. My parents were able to help my brothers financially but by the third child were unable to contribute in the same way. I have always worked, and at times held two part-time jobs. The fact is, for many students, summer or part-time employment does not often pay well enough and in these tough economic times, there are fewer employment opportunities. Thus the scholarship program is extremely important. I was an honour student throughout high school and spent a great deal of time on my studies. I also participated in many school clubs, councils and sports and travelled throughout the region and Canada representing my school at various events. Scholarship students are not just bookworms. As a scholarship recipient, I feel my hard work has been rewarded in a big way. Nevertheless, the pursuit of excellence despite any monetary gain has always been my goal. Many students are encouraged to strive harder in hopes of receiving a scholarship. Recognition and financial assistance are very powerful motivators.

The costs of tuition, accommodations, books, food, bus and phone calls home quickly add up. University is expensive! The first few months away from home were a little hard but I've quickly settled in and I'm loving my time here at Lakehead and in the city of Thunder Bay. Once again, thank you all for your generosity and your continuous support.

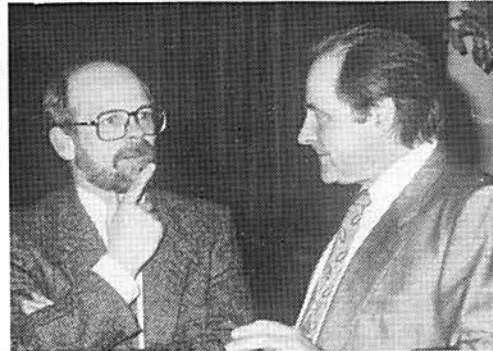
JENNIFER MORRISON, 1st Year Student BA/Ed



Mr. Marv Detweiler, above, Northwestern Business Centre Manager for the Royal Bank, addressed the audience on behalf of the corporate donors.



Left, Lyla Rathbone, right, got involved in the fundraising plan for the Music and Visual Arts Campaign co-chaired by Annette Augustine. Right, Joe Logozzo and John Noyes, are long-time University donors.



THE GHANA ENVIRONMENTAL MANAGEMENT LITERACY PROJECT: Lakehead University and Confederation College join forces with two universities in Ghana

The Ghana Environmental Management Literacy Project, funded by the Canadian International Development Agency, is a five-year project, comprising a four-way institutional linkage. The Canadian institutions are Lakehead University and Confederation College, both of which are located in Thunder Bay, Ontario. The developing country institutions (DCIs) are the University of Science and Technology, located at Kumasi in Northern Ghana and, the University of Ghana, Legon Campus, near the capital city of Accra.

The project is designed to establish a core group of university educators in environmental management and adult literacy; to assist in curriculum development and teaching practices in natural resources management and forestry at the post-secondary level; to assist in organizing and implementing a continuing education, advanced forestry program for practising foresters; to train community leaders and provide the technical support for sustaining the delivery of community-based environmental management and literacy training. The project will enhance the capacity of the DCIs to deliver programs in literacy training designed assist the local communities in combating the problems of severe environmental degradation.

The project's strength lies not only in the inter-disciplinary nature of the work, but in the opportunity for direct interface with the local communities through the establishment of four pilot project areas for community-based demonstration forests and adult literacy training programs. Each pilot project area, one of which will be Bunkpurugu - the community in Northern Ghana which is twinned with Thunder Bay, will comprise several communities working on a range of community-based land-management projects designed to combat problems of deforestation and erosion.

In conjunction with training in land-use planning and conservation methods community members will receive literacy training in the context of environmental issues. Local residents will be actively involved in the land-use planning process, they will provide information on traditional land-use patterns which will contribute to the establishment of a comprehensive GIS/Remote Sensing database for the region. To ensure the continuation of this work the project will provide training in GIS/RS as well as the equipment necessary for carrying out this essential work.

The project will enhance the overall capacity of the DCIs to deliver community-based programs, and monitor land-use patterns, it will also contribute to the establish a community-based network for environmental management and literacy training. There will be opportunity for local leaders to share their experiences with each other and, to bring their suggestions and concerns to the Ghana-Management Committee at the joint-meetings which will take place semi-annually. □

"Moose crew". Standing left to right, Tim Timmermann, Murray Lankester, Ralph Mauro, Sitting left to right, Mary Melnyk, Stan Nemec, Linda Siczkar.

THE EVOLUTION OF A SCIENTIFIC JOURNAL

Alces: A Journal Devoted to the Biology and Management of Moose (Alces alces) (edited and published at Lakehead University since 1978)

Annual meetings of the North American Moose Conference and Workshop began in 1963 and a brief summary of events was circulated in mimeographed form. The first formal publication of The Proceedings followed the fifth meeting in Alaska in 1968. Regular annual issues were not produced until 1972 (considered Vol. 8). The new name *Alces* was adopted for the journal in 1981 (Vol. 17) and the present double-column format was begun in 1988 (Vol. 24). The majority of manuscripts still arise from the Annual Meeting but an increasing proportion are submitted year-round from researchers in Canada, U.S.A., Norway, Sweden, Finland, Germany, Russia, and China. All submissions are peer reviewed before acceptance.

The "moose journal" has been produced in the Lakehead University Print Shop since 1978 (Vol. 14), initially under the direction of Bob Cornell, and since 1988, in the skilled hands of Stan Nemec. The first permanent editor was Harold Cumming, School of Forestry, LU (1978-82), followed by Patrick Karns, Minnesota Department of Natural Resource (1983-85). Currently Murray Lankester, Department of Biology, LU, and Tim Timmermann, Ontario MNR, Thunder Bay share the editorial responsibility (1986 - present). The new format was made possible with the word processing skills of Linda Siczkar, formerly of the L.U. Graphics Department, who has formatted manuscripts received from authors on diskette since 1988.

Each year, 400 copies are printed and sent to over 200 institutional, government, and personal subscribers. Off-prints of individual articles can be purchased by authors. Sales of current and back issues have been handled by Mary Melnyk at the Lakehead University Bookstore for the past 15 years and Ralph Mauro of the Business Office ably watched over the "Moose Book Account". The journal is self-supporting with the occasional donation from hosting jurisdictions and individuals. As of 1992 (Vol. 28) a page charge has been instituted to cover rising production costs of about \$8500/year.

Three International Meetings of moose biologists have been held (Quebec City, Canada '73; Uppsala, Sweden '84; Syktyvkar, Russia '90). Lakehead University Print Shop re-printed the volume resulting from the Quebec City meeting and printed the proceedings of the Russian meeting as *Alces* Suppl. 1, '92. □



WILL YOUR PENSION PLAN BE ENOUGH?

BY WIM BAARSCHERS

Like all members of the pension board, I received the end-of-year performance report on our pension fund(s) some time in February. With this performance report came an appendix which I believe may interest you.

The good news is that the fund(s) have done very well in 1992. The report submitted by our investment managers (Sceptre Investment Counsel Ltd.) showed a return for the year of 9% while the median for Canadian pension funds for 1992 is estimated at 5.9%. Over the last four years, the return of our fund(s) was 10.5% (median 9.8%). That is good news and it would appear that your money is well looked after.

The appendix which Sceptre enclosed is not cheerful reading, but it is worth your attention. Considering our fund's performance, our investment managers obviously know their job and we would be well advised to pay attention to what they have to say. Our Vice-President (Administration), Fred Poulter agreed with me that this message deserves a wider audience and arranged for Sceptre's permission to reproduce their message. Here it is.

"Industry cannot be restored, people cannot be put back to work, banks cannot be kept open, human suffering cannot be cared for if the government itself is bankrupt. The great human values, for all...rest upon the unimpaired credit of the...government." President Franklin D. Roosevelt, Oct, 1933

The fact that Canada and many other Western nations are facing a major government debt crisis is now widely accepted even though most people find it difficult to quantify how serious a problem it really is and what it means to them personally. The numbers are so staggering that they have become almost incomprehensible and are seldom presented in a fashion in which we can visualize the total picture. Our best efforts at analyzing the puzzle may lack some precision but if we have erred, we believe it is because we have been too conservative in identifying government debt obligations. At no point for example did we attempt to include such indirect debts as public service pension plans which currently total \$81 billion for our federal government and which are increasing at a recent rate of \$6 billion per annum.

In examining the Canadian government debt problem, we have added together the outstanding obligations of our federal, provincial and municipal governments as well as crown corporations. With each level of government attempting to lay off a portion of their costs to a lower level, it is important to look at total government debt.

In 1981, Canada's gross domestic product was \$356 billion dollars and the outstanding debt obligations of our governments totalled \$214 billion. At that point in time, our debts were 60% of our overall economic activity (GDP). Over

the 10 years to 1991, our economic output increased 6.6% per annum to \$674 billion while our governments' outstanding obligations rose 11.3% per annum to \$616 billion or 93% of GDP. To place these numbers in a somewhat different perspective, in 1981 the various governments had issued on behalf of each employed Canadian \$19,611 of debt. By 1991, that figure had risen to \$50,800 and by 1992 it was \$54,600.

Despite government protestations that everything within their power is being done to cut spending and to become fiscally responsible, once again this year is expected to see another combined deficit of in excess of \$54 billion. In the fourth quarter of 1990, 24 cents of every dollar raised by governments was required to pay the interest on their outstanding obligations. With the very substantial decline in interest rates since 1990, this figure has recently declined to 22.2 cents but with interest rates already down substantially and with total debt continuing to escalate rapidly, the future direction will be up once again. The cost of paying for past excesses has reached a level that is proving a major impediment to governments' ability to service existing programs much less undertake new initiatives to cushion the impact of the current recession and to get our economy moving forward once again.

Increasingly over recent years Canada has turned to foreign markets to finance a substantial portion of our debts. Foreign investors currently hold approximately \$262 billion of Canada's debt. This in turn translates into \$21,436 per employed person up from just over \$6,400 ten years ago. Canadians are losing control of their own destiny. Not only can't we afford to pay back the money we owe international investors but we must pursue interest rate policies that bear little relation to the underlying fundamentals of our domestic economy. These high rate policies are necessary to maintain the existing foreign investment in Canada's debt markets and to continue to attract an additional \$30 billion to cover our current account shortfall. This shortfall is equivalent to almost 5% of our GDP and highlights the fact that Canadians in total are currently spending 5% more than our economy can support.

Taxes in Canada by all levels of government including social insurance costs have risen from approximately 31% of GDP in 1970 to 38% in 1992. Given that tax revenues are insufficient to cover expenditures, it is estimated that taxes as a proportion of GDP would have to rise to 44% in order to maintain a balanced budget at the current level of government programs. Can we really expect that government can continue to be half of our entire economic output and that we will be able to maintain our existing standard of living? We have placed ourselves in a debt bind wherein we lack the financial capability to enable our corporations to invest in the productive assets necessary to ensure long term non-inflationary economic growth. Rather than being re-invested into our own economy, an increasing proportion of debt servicing is being paid abroad as our net foreign indebtedness continues to escalate.

It is all well and good to say that the situation is out of control but what are the solutions for Canada. The time to attack deficits is during periods of economic expansion not periods of major contraction. We missed our opportunity during the robust 1980s but take some encouragement from the fact that the Federal and several Provincial governments are attempting to gradually bring the situation under control.

What are the potential solutions? The ones that are often proposed are an increase in income taxes, an increase in the GST, a freeze in social programs or a major reduction in many of our existing services such as health care. To be realistic, the solutions are so painful and sensitive that no politician would touch them. The best we can hope for is a greater public appreciation of the problem and reduced expectations concerning what our governments are able to do for us. In the short run we must stabilize the problem through employing a mixture of the various solutions outlined above. Politicians can be expected to take the path of least resistance raising some taxes and reducing some services. Such policies will lead to continued pressure on the Canadian dollar and a reduction in our standard of living but are essential if we are to avoid a serious financial crisis in the not-too-distant future.

Once the situation is stabilized and the economy begins to expand more in line with its potential, we must attack the problem with realistic long-term solutions. We must gradually reduce our reliance on the government and we must redirect existing government programs in a co-operative effort with business, labour and individuals.

We must create an education and business environment which is conducive to developing a highly motivated entrepreneurial work force and globally competitive businesses. We must stop spending our scarce resources on rescuing businesses which will never be anything but a constant drain on our finances and we must provide adequate retraining for those who will suffer from the transition. The ultimate solutions will be counted in decades rather than years and in the interim our standard of living will no doubt continue to fall, but the alternative is too scary to contemplate.

Increasingly, the electorate is becoming aware of the dangers of current excesses and we are fast approaching the point where we will be prepared to accept more drastic measures to improve the future for our children. At that point, strong political leadership will have a chance to lead us toward a more productive future. □

The Department of External Relations announces the results of their recent move. You call still fax us at 343-8192! Ask Gonzo what it's like to clean a 100-year-old farm house with mice!

Information and Promotion Services has moved from SN1002 to Alumni House

Katherine Shedden	343-8631
Frances Harding	343-8193
Betty Hygaard	343-8300

Alumni Services has moved from Alumni House into the portable beside it (lovingly referred to as the "chip wagon")

Scott Fortnum	343-8916
Denise Bruley	343-8372
Barb Loftus	343-8155

University Development changed a few offices but basically occupies the upper floor of Alumni House

John Russell	343-8000
JoAnne Silverman	343-8910
Rob Zuback	343-8913
Cathy Trojan	343-8194

Last month we sat down to coffee with Hank Akervall and took a trip down memory lane. We worked our way from '65 to '68, about the time a strong advisory council, including Akervall, Shannon, Berger and Kangas said "we need a physical education program." Enter Jim Widdop, who was lured from McGill. He became head of Physical Education and Athletics under the blanket of University Schools which included nursing, forestry, engineering, business and library technology. Education was a stand alone college at the time. Widdop was to organize and implement the program in 1969 and Hank dipped down to the University of Northern Michigan to complete his Master of Arts in Physical Education, changing his career direction from forestry to education, especially sport physiology. During that time there emerged a School of Physical Education with a 4-year program. It originally attracted 70 students and graduated it's first class in 1974. Hank says the program included "a whole slough of local physed teachers."

So many things were going on during that growth period, we have to go back a bit to look at how the facilities changed. 1966: the campus included the Braun Building, a brand new one-floor library, men's and women's residences, and the University Centre (auditorium, the Great Hall [cafeteria where the old pub is], lecture rooms - I suppose the central area NOT including the Agora and the Centennial Building). Hank's office was in the "university bookstore" which was housed in the old Pottery House, currently the Psychology testing lab just off Oliver Road. Linda Phillips added a tidbit that *the* University custodian, "a cute old guy named Frank Dwyer" lived in that building! Hank and all the athletic equipment then moved to the University centre (where the health centre is now), then into the fieldhouse when it was opened in 1972. In fact, Hank was responsible for getting Father Bauer, his Olympic hockey coach, to perform the dedication ceremonies.

1972 was also the year that the idea of an outdoor recreation program surfaced. Originally it was offered as a BA in Outdoor Recreation Resource Studies through the Department of Geography. There are probably several versions of how it moved over to Physical Education but Hank became coordinator of the program, added the practical component and the BPEOR became the BOR and in 1980 it was made an honours program - still run out of the Physical Education School.

In 1979 Hank went back to school to work on his doctorate at the University of Northern Colorado. His educational doctorate was completed in 1988 (never say die) and reflected his dual loves - recreation and physical education.

We jump to 1985, the year the Outdoor Recreation program became autonomous from Physical Education. Hank even admits that wasn't his choice. The list of who's who in OR include Thomson, Smithers (who came to replace Hank in 1979 - and stayed), Hannah, Christie, Stevens.

Hank reminds me that in 1974 he "inherited" 17 students and today the renamed School of Outdoor Recreation, Parks and Tourism has 350 students. Hank's interested in a grad check, but he thinks they number about 575. The double degree component was always important and in 1975 at the urging of Doug Lindsay they added natural science.

Tune in next month for the final instalment

CAMPUS CALENDAR

To include your Department's event or activity in the Campus Calendar, please call the Information Office at 8300 or mail your information to **Alumni House**
Deadline for the April Agora is April 15, 1993.

APRIL

Monday, 5

Northern Studies Lecture Series
Topic: "North as Nation: the Social Construction of Canada"
Speaker: Dr. Rob Shields, Carlton University
Place: Centre for Northern Forest Ecosystems Research (Ministry of Natural Resources) Boardroom
Time: 2:30 - 4:30 p.m.

A PUBLIC FORUM ON EDUCATION AND TRAINING

with Shelley Wark-Martyn
M.P.P. (Port Arthur)

7:30 - 9:30 p.m.
Confederation College
Main cafeteria

Tell us what kind of education and training you think Ontarians need for a successful future. Anyone with an interest is invited to attend this public forum.

Information: Ministry of Education and Training: 1-800-465-5020 (toll free).

National Film Board Video Presentation "Mr. Nobody"

A story about 65-year old Jack Huggins, who lavishes attention on his menagerie of cats but whom the Health Department certifies as incompetent. This film provokes the discussion of legal and ethical dilemmas concerning the self-neglecting elderly.

12 - 1 pm
Health Sciences North - Room 2022
Sponsored by Northern Educational Centre for Aging and Health.

Friday, 9 & Monday, 12

Good Friday, Easter Monday
University Closed

Tuesday, 13

Nordic World Ski Championships Research

Theme: Participation in Championships-related Research

Place: Little Dining Room

Time: 12:00 - 2:00 p.m.

Sponsored by the Nordic Championships Research Centre. Feel free to bring your lunch.

Monday, 19

National Film Board Video Presentation "House Divided"

This video is about caregiver stress and elder abuse. Through four moving portraits, this film sensitively portrays the emotional complexity of family relationships that can lead to abuse of older people at home, the anguish and isolation of its victim, and the tremendous needs for community understanding and support.

12 noon - 1 pm

Health Sciences North - Room 2022

Sponsored by Northern Educational Centre for Aging and Health.

THUNDER BAY ART GALLERY

April 8 - 25

Lakehead University Juried Student Exhibition

The 16th annual exhibition comprised of works produced since May, 1992 by students from the Department of Visual Arts. Join the students and faculty on awards night, Thursday, April 8, 8:00 p.m.

April 8 - 25

Selections from the Permanent Collection

Paul Chaat Smith, visiting critic-in-residence at the Gallery will make the selection of works for this Permanent Collection Exhibition which has been curated to coincide with the forum on Native art and culture, April 23 - 24.

April 30 - May 30

Other Children

An exhibition for young viewers from the collection of the Canadian International Development Agency.

BEST CUTLINES FOR THE FRONT COVER OF LAST MONTH'S AGORA

"I know they're hiding the money somewhere" (anonymous)

"The quickest way to change floors in the library" Laura Beeby

"Whaddya mean you found Amelia Earhart's luggage?" William Covello

AGORA

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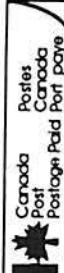
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