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30 more employees reach 20-year mark	4
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Lakehead University Agora

THUNDER BAY, ONTARIO VOL. 8. NO. 1

JANUARY 1991

Right:
Nancy and
Frank Luckai,
Andrea and
Dan Duckert



Below:
Patti and
Steve Jovanovic



Left:
Pearl and
Ted Kurlick



Below:
Rita Rosehart,
Penny Petrone,
Sue Day



Left:
Rhonda Kelly



Below:
Eleanora Bailey,
Ruth Keuleman,
Margaret Carter



Santa Claus reported that Roy Murray, President of Confederation College, had asked for a new building on his campus. Never stingy, Father Christmas was able to present him with one brick. A large crowd attended the University Christmas Party on December 20. This annual event includes the "President's Video" which features a year-end review and fond farewell to the retirees and presentation of the 20-year pins. See page 4.

Upper Left:
Lorraine and Ron Harris



Left:
Caesar Cimone and Caroline McAfee



Report From the President



Dr. Bob Rosehart

Welcome to 1991!

V.P. Academic Search

The work of the Search Committee is progressing well, and it is anticipated that candidates for the position will be presented to the University community in February.

Smoking Policy

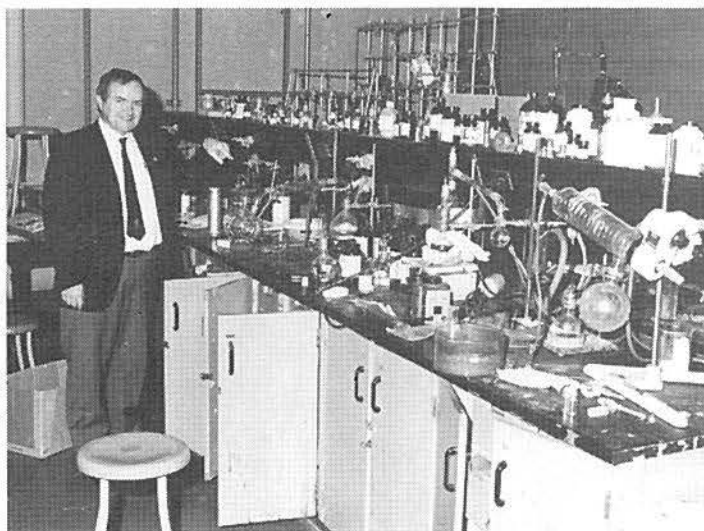
With the expected completion of the Student Centre in September of 1991, we are exploring the proposal of having that area being the only designated smoking area on campus. The ventilation system for that facility is designed to have a high volume air exhaust system. This is the type of system that is appropriate from a health perspective to protect non smokers. Our current policy on smoking is a step in the direction of limiting the personal risk to non-smokers but, in all reality, with integrated air systems in most of our facilities, our students, staff and faculty are still being exposed to second-hand smoke. Medical evidence and the rights of the majority non-smoking group are continuing to suggest to me that it is time for Lakehead to move to a single designated smoking site. Perhaps a university referendum is appropriate. More on this topic in future columns.

Workplace Safety on Campus

Universities are generally not viewed by staff and faculty as "dangerous" workplace environments in the same context as industrial factories. However, universities are varied and complex in the range of activities that happen on campus, and I often feel that we are not aware of the need to treat our

workplaces more seriously from an accident safety perspective. I believe it is also a responsibility to instill upon our students the importance of the shared responsibility for worker health and safety. This past year, Lakehead University lost both an alumnus and a student due to fatal industrial accidents. With her various initiatives, Marion Muldoon of the Human Resources Department, carries this theme to you from time to time. I would like to reinforce her initiative and, as well, to remind you of the statistics that a significant number of personal injuries that occur in the home and, as well, the fact that most serious automobile accidents occur within 30 km. of an individual's residence.

Marion Muldoon and I toured the campus recently to seek out what we considered to be messy and unsafe areas (accidents about to happen). Are we an accident looking to happen? The photo is not encouraging, and I would hope that each and every one of you look over your own particular environment and take the necessary steps to ensure that it is safe for not only you but also your fellow students, faculty and staff.



OBITUARY

Dr. Alan Day died peacefully Monday, November 26, 1990. Dr. Day was full Professor of Mathematical Sciences at Lakehead University where he taught and did research for the past nineteen years.

Born in Sault Ste. Marie on October 9, 1941, Alan Day spent his formative years in North Bay, Ontario. He obtained his B.A. from McMaster University in 1964 and served in the Royal Canadian Air Force with 415 (M.P.) Squadron until he resigned his commission in 1967. At that time he held the rank of Captain and the position of Lead Navigator. He then entered graduate school at McMaster University and in 1970 obtained his Ph.D. degree in Mathematics. He accepted post-doctoral research fellowships at the University of Waterloo, at Vanderbilt University (Nashville) and at the Technische Hochschule Darmstadt (Germany). Dr. Day moved to Thunder Bay in 1971 where he stayed, except for sabbatical leaves and visiting appointments, until his death.

Dr. Day achieved a considerable national and international reputation because of the excellence of his research in Mathematics, particularly in the fields of Lattice Theory and Universal Algebra. He published many research papers in learned journals and presented his results at international conferences and meetings of scholars. He served on the

Editorial Board of the journal *Algebra Universalis*; he was a Director of the Canadian Mathematical Society from 1987 to 1989; and he was a member of the National Sciences and Engineering Research Council Grant Selection Committee from 1987 to 1989. Dr. Day was a long-standing N.S.E.R.C. Grant recipient. Recently, he was awarded the Lakehead University 1990-91 Distinguished Researcher Award.

Alan was proud of being a mathematician, but particularly proud of being a Canadian mathematician. In his leisure time, he enjoyed acting in the Cambrian Players productions. He was a hard-working and hard-playing man, whose mathematics will certainly achieve for him a form of immortality. Despite a long and painful illness, he had a strong determination to live a full life and to persist in his mathematical work. His forbearance was an extraordinary model of courage and positive attitude to his family and friends, and particularly to his international colleagues.

Alan will be missed by his friends in many countries, and especially by his family.

A friend and colleague, William A. Lampe of the University of Hawaii, has written: man of principle is gone, and they are rare.

Around Campus

DR. PEGGY KNOWLES RECEIVES 1990/91 DISTINGUISHED INSTRUCTOR AWARD

Dr. Peggy Knowles, Professor of Forestry and Biology, has been named the Lakehead University Distinguished Instructor for 1990/91. Dr. Knowles received her Bachelor of Arts degree from York University and her Masters and PhD from the University of Colorado?? She has been on faculty since 1980.

The Distinguished Instructor Award is Lakehead University's highest award for excellence in teaching. It is presented annually to a professor who has made a distinguished contribution to teaching.

Acting Vice President (Academics), Dr. John Whitfield, says "it is quite a distinction for a faculty member to receive the award. I was please to receive and accept the recommendation of the Senate Committee on Teaching and Learning. Dr. Knowles has been outstanding in her teaching and the comments from students reflect this. She has had a high profile in the classroom as well as in the area of instructional development".

FIRST MOURN THEN WORK FOR CHANGE

A memorial service in honour of the 14 women killed at l'Ecole Polytechnique de Montreal was held in the Agora on December 6, 1990, the first anniversary of the tragedy. The service, attended by approximately 100 students, staff and faculty, focused on the memory of the victims. As each name was called out, university representatives lit a candle in honour of the woman it represented. Speakers included President Rosehart, Acting Vice-President (Academic) Whitfield, engineering students, Bonny DiGiuseppe and Bradley Johns, engineer Simone Laatu and Chaplain of the university, Sister Alice Greer. The sentiments of each speaker echoed the theme "first mourn, then work for change". In his speech to the audience, Dr. John Whitfield said "(the act) has raised an awareness of violence in our society in a country where we prided ourselves on being non-violent. One measure of a society is how it treats and protects those who are powerless and vulnerable".



OBITUARY

Mr. Arthur Davies passed away December 13, 1990 at St. Catharines, Ontario, at the age of 64. Mr. Davis was appointed the Director of Physical Plant in November 1981. He was responsible for the administration of the plant and physical resources of the university until May 1989 when he assumed the position of Senior Advisor for campus planning. Arthur Davies graduated in mechanical engineering from the University of Manitoba. His work included all phases of production management including plant manager with three private companies. Mr. Davies also operated a consulting engineering business in the Niagara Peninsula where he was involved with design and implementation of quality control and production control system. Left to mourn are his wife, Pat, five children and seven grandchildren. Memorial remembrances to the Canadian Cancer Society would be appreciated.

LAKEHEAD UNIVERSITY INTRAMURAL WOODSMEN COMPETITION

February 2, 1991

A WOODSMEN COMPETITION OPEN TO ALL FACULTIES, ALUMNUS, AND FACULTY MEMBERS, WITH MALE, FEMALE, AND MIXED TEAMS, OF SIX.

EVENTS

- SINGLES • AXE THROW • QUARTER SPLIT •
- DOT SPLIT • PULP TOSS DISTANCE • WINE GOB •
- SNOW SHOE RACE*** • TEAM •
- PULP TOSS FOR ACCURACY • LOG PULL •
- CROSSCUT SAW • SWEDE SAW •

***Each team must provide snow shoes for race.

Entrance fee for each team paid in advance is \$24.00 payable to any member of the Woodsman Team. Teams paying on the morning of the competition will be charged \$26.00. Limited to the first twenty-five teams. Lunch will be provided.

The competition begins at 9 a.m. on Saturday at the Woodsman's practice field, behind the maintenance (shipping and receiving) building at Lakehead University. Spectators Welcome.

The Study will be open after the competition in order to revitalize lost fluids, announce winners, and to make awards.

For further information

call Todd at 767-9124 or Anastasia at 623-2916

HOPE TO SEE EVERYONE THERE. LET THE CHIPS FLY!

ENDOWED SCHOLARSHIP FOR WOMEN IN ENGINEERING

Jo-Anne Silverman, Foundations Officer, wishes to announce that Dr. Jennifer Allen Simons of the Simons Foundation has generously agreed to fund The Simons Foundation Scholarship for Women in Engineering at Lakehead University. The \$10,000 gift is endowed by the Foundation to encourage women to enter engineering programmes. The foundation's philosophy is that technological development is necessary only to enrich and enhance the quality of life. The recipient of the award will be an outstanding woman scholar who demonstrates potential for significant contribution to the sustainable development of our society in her chosen field.



LAKEHEAD UNIVERSITY FORESTRY ASSOCIATION 23rd ANNUAL SYMPOSIUM

RYAN BUILDING RM 1042

FRIDAY, JANUARY 25, 7:00 pm

1. **Julian Dunster**, Professor, Natural Resources Management Program, Simon Fraser University
"What is community forestry?"
2. **The Honourable Bud Wildman**, Minister of Natural Resources
"Ontario government policy on community forestry."
3. **Mary LaRonde**, Stewardship Director, Teme-Augama Anishnabai, Bear Island Indian Band
"Community forestry by and for aboriginal people."

SATURDAY, JANUARY 26, 9:30 am

1. **Richard Baerg**, Forestry Specialist, Natural Resources Division, Canadian International Development Agency
"International aspects of community forestry."
2. **Mike Roy**, Director, Centre for Forestry and Environmental Studies, Corner Brook, Newfoundland
"The pitfalls of implementing community forestry programs."
3. **PANEL DISCUSSION AND WORKSHOPS**

For more information, call 343-8511



Jean Charman '74 to '90
Registrar's Office



Charles McNally '70 to '90
Security



William McCallum '69 to '90
Education



Mr. Lynn A. Barber
Chancellor Paterson Library



Mr. James C. Arnot
Education Library



Mr. Allan Mackenzie
Instrumentation Lab



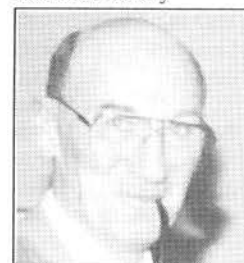
Mr. Gerry Hashiguchi
Biology



Professor Norman C. Bonsor
Economics



Mrs. Mary Garbutt
Chancellor Paterson Library



Dr. Ian Hoodless
Chemistry



Mrs. Norma Gibson
Switchboard



Professor J. David Bates
Education



Professor Ronald A. Nelson
Business Administration



Professor John G. Coolen
Engineering



Mr. Fred Anderson
Security



Ms. Geraldine White
Learning Assistance Centre



Miss Darlene L. Yahn
Computer Centre



Professor David B. Parsons
English



Dr. Gerardus Vervoort
Education



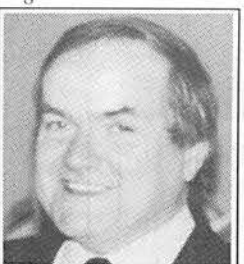
Dr. J. Douglas Rabb
Philosophy



Professor Victor C. Smith
History



Professor Peter J. Rutherford
Education



Dr. Robert G. Rosehart
President and Vice-Chancellor



Dr. John L. Jamieson
Psychology



Geoff Weller
Vice-President (Academic)
(Special 19 1/2 year award)

Congratulations 1990 Retirees and 20-year Recipients

The complete list of retirees for 1990:

Thomas Cheetham '69-90
Campus Development

Norman Ginsburg '69-90
Psychology

Tom Harris '70-90
Economics

John Metcalf '70-90
Security

Charles McNally '74-90
Security

Jean Charman '69-90
Registrar's Office

Som Naimpally '73-90
Mathematical Sciences

William McCallum '69-90
Education

Silverio De Sousa '67-90
Campus Development

Ronnie Josefchuk '70-90
Account's Office

Lorraine Smith '69-90
Computer Centre

20-year pin recipients not able to attend awards ceremony:

Mrs. Gwen Henry
Geography

Mr. John Metcalf
Security

Professor Donald J. Richardson
Forestry

Dr. Neil A. Weir
Chemistry

Professor Tom D. Harris
Economics

Dr. John P. Ryder
Biology

Dr. Peter Mah
Mathematical Sciences

Mr. Clarence Johnson
Chancellor Paterson Library



Special thanks to
Photographer
Sharon Bjorklund



RESEARCH NEWS

EDO NETWORK COORDINATOR MOVES TO LAKEHEAD UNIVERSITY CAMPUS

The Office of Research and Graduate Studies is pleased to announce the arrival of Ms. Karen Farrell, Coordinator of the Northwestern Ontario Development Network, to Lakehead University. The Network is a unique organization created and operating in Northwestern Ontario, involving economic development practitioners such as the Economic Development Offices, Business Development Centres, Community Futures Committees and Native Economic Development organizations.

With the assistance of the Ontario Ministry of Northern Development and Mines, the Network has enabled over 20 communities to take control of their own economic planning, in turn attracting investment and joint ventures to the region. Many different types of businesses, locating in the region, have also been assisted by the Network. Such investments include foreign and domestic organizations and vary from the servicing of aircrafts, harvesting hay and wild rice, to selling in the retail and commercial sectors, manufacturing furniture or mining the resources of the area.

The decision to locate the Network office on the university's campus was based on the realization that Lakehead University is an integral partner in the economic development of the region. The network saw the university as a valuable resource for accessing a pool of technical and research expertise, state-of-the-art technical facilities, and entrepreneurial programs such as Innovation North, the Centre of Entrepreneurship and the Small Business Consulting Service. The Lakehead University Computer Centre has also been instrumental in assisting the Network in developing their electronic communication system, as well as providing Network members with the required training support.

On the other hand, the university envisions the Network as being instrumental in providing the university access to regional resources, which will undoubtedly result in joint collaboration on research projects, cooperative education opportunities, etc.

Karen would like to extend an invitation to all faculty at the university to drop by her office to find out more about the Network, or perhaps just to explore areas for joint collaboration. Karen is located in the Innovation North Office, CB4106, and can be at ext. 8149.



AWARDS

Dr. Peter Duinker, Chair in Forest Management and Policy, School of Forestry was recently awarded a grant by the Fund for Dispute Resolution to undertake a study entitled "Effectiveness of Dispute Resolution Mechanisms in Forest Resource Management in Ontario". As conflicts among resource users in the Ontario forest sector have become more frequent and bitter in recent decades, Dr. Duinker states, that it is becoming increasingly important for resource managers to develop means for effective prevention and resolution of conflicts among users of Ontario's natural resources. The objective of this study is to examine various mechanisms for dispute prevention and resolution being proposed, developed, tested and used in forest-resources management today, and to compare and demonstrate the strengths, weaknesses, and applicability of each approach, thus helping rationalize the choices available to managers and resource users. Congratulations, Dr. Duinker.



Dr. Peter Lee, Department of Biology has been awarded a grant from the University Research Incentive Fund Program (URIF), in conjunction with private sector support from Mid Canada Rice Pool Limited and the Alberta Wild Rice Growers Association, for a research project entitled "Computer-Based Analysis of Wild Rice Quality". In the last decade, the wild rice industry has become very competitive in both Canada and the United States. The response in Canada has been to focus on the high quality of lake-grown wild rice. Dr. Lee proposes to develop a computerized grading system that can measure wild rice length, width, uniformity of colour, and moisture content accurately and quickly. The technology developed will undoubtedly provide wild rice growers the tools which will enable them to continue competing successfully in the marketplace. This collaborative research is an example of how the private sector and the university can work together for each other's benefit and that of the economy of Ontario.

CONTRACTS

Dr. W.H. Carmean, School of Forestry, has been awarded a contract by the Ministry of Natural Resources to develop a "Site Quality Evaluation Manual for Northwestern Ontario", in close cooperation with the M.N.R.'s Technology Development Unit. The manual will summarize the research findings of Dr. Carmean's past and present graduate students and will complement the Forest Ecological Classification Program that has been developed for Northwestern Ontario. It is expected that the manual will be of interest to practising foresters, policy makers, industry and university researchers.



CANADIAN MICROELECTRONICS CORPORATION SUPPORTS ENGINEERING RESEARCH

Prof. J. Coolen, School of Electrical Engineering has been the Lakehead University Member Representative for the Canadian Microelectronics Corporation (CMC) Program since 1988. The CMC is a non-profit organization that provides a variety of services designed to enrich the environment for research in microelectronics in Canada. The corporation was established in 1984 and holds a major grant from the Natural Sciences and Engineering Research Council (NSERC). The CMC has loaned both software and hardware to the Department of Electrical Engineering over the past two years to allow our researchers to design and test integrated circuits. Northern Telecom Electronics in Ottawa, fabricates the university-designed integrated circuits at no cost to the university. Prof. Coolen is to be commended for the vital role he plays in fostering microelectronics research at Lakehead University.

RESEARCH ARTICLE RECEIVES INTERNATIONAL RECOGNITION

An article written by Dr. Ladislav Malek and Ivona Kozieradzki, Department of Biology, has been chosen to be reviewed/summarized in the next issue of the internationally distributed journal, *Rice Biotechnology Quarterly*. The article "Translation of Heterologous mRNAs by Chloroplast Stroma Components" appeared in the journal *Physio. Plant.* 78:395-399.

NEW RESEARCH DIRECTORY UPDATE

The development of the new directory has begun. Its purpose is to not only to be a guide for internal use, but also to be used as a reference or "sales tool" when collaborative activities with other universities, government ministries and private sector groups are being initiated or involved. The Research Office has been active in seeking private sector, provincial and federal government funding for research and has been requested on numerous occasions to provide examples of research, research expertise and equipment/facilities, undertaken and available here. This is an essential document that is in real need of updating and a face-lift. In this current economic climate where funds for research are becoming increasingly limited, we must promote ourselves in the most creative and competitive way possible. This is the vehicle to assist in achieving this. It is hoped that all faculty will share these concerns.

LAKEHEAD UNIVERSITY WELCOMES THE CENTRE FOR NORTHERN FOREST ECOSYSTEM RESEARCH (CNFER)

On January 4, 1991, Lakehead University hosted a welcoming symposium for the new Centre and its staff. This was an opportunity to meet and develop some connections further and enhance our links with the Ministry of Natural Resources. It was a successful meeting with promising outcomes. The Research Office wishes to thank all faculty who came out to welcome this group onto our campus and for participating in an informative session. Special appreciation is extended to those faculty and staff who took the time and effort to show the Centres' staff through your laboratories and other facilities. The Research Office will be continuing to maintain this linkage. If you wish to be updated on activities occurring within the CNFER, or wish the assistance of the Research Office to liaise with the staff of the Centres' units on your behalf, you are encouraged to contact this office at ext. 8939 or 8223.

RESEARCH METHODOLOGY SEMINARS

The Office of Research and Graduate Studies would like to take this opportunity to thank the following researchers for the outstanding presentations they gave as leaders in the seminar series: Dr. J. Jantieson, Department of Psychology - "Why Anova is Obsolete" and Dr. T. Hazenberg, School of Forestry - "Regression". The informal discussions which have followed these presentations have proven to be thought-provoking. If you are a researcher who would like to participate in future interdisciplinary dialogue on both traditional research methodologies and new research practices, please plan on attending these upcoming seminars:

"Grounded Theory" - Prof. J. DeCangas, School of Nursing and Prof. B. Rush, School of Business (January 30, 1991 from 7:00 - 9:00 p.m. in the Faculty Lounge). This seminar will explore the main tenants of grounded theory. The pros and cons of this conceptual framework will be analyzed and its applications to research problems considered. Practical examples of application to research questions and design will be presented."

"Chaos and Non-Linear Dynamics in Human Performance" Dr. D. Weeks, School of Physical Education (February 28, 1991 from 7:00 - 9:00 p.m. in the Faculty Lounge). To date, most applications of chaos theory have been in the physical sciences. However, recent applications have included a number of physiological aspects of biological systems. As a consequence there has been a resurgence in efforts to address human motion in terms of general non-linear dynamics. Discussion will be centred around the successes and failures of a unified theory of human action based on non-linear processes."

"Fissures in the Positivist Approach" - Dr. D.M. Barry, Department of Electrical Engineering; Dr. M. McPherson, School of Physical Education; Prof. K. Allan, Department of Psychology and Dr. E. Epp, Department of History (March 26, 1991 from 7:00 - 9:00 p.m. in the Faculty Lounge). A panel format will be used to explore some of the limitations of the logical positivist perspective that has dominated social science research during the twentieth century. Questions will be raised as to whether the overemphasis on this perspective has limited social science research. In other words, have social scientists let the methodology dictate the questions that are researched. Examples will be given illustrating both appropriate and inappropriate uses of the methodology depending on the nature of the research question.

RESEARCH OPPORTUNITIES

The Japan Science and Technology Fund

The Japan Science and Technology Fund (JSTF) was introduced as an integral part of the Canadian Government's new "Going Global" strategy announced in 1989, to strengthen Canada's position in a rapidly changing international economy. At present, the level of Canadian research collaboration with Japan does not fully reflect either Japan's technological capabilities or its importance to Canada as a trade partner. The JSTF is jointly managed by External Affairs and International Trade Canada (EAITC) and Industry, Science and Technology Canada (ISTC) and delivered in collaboration with the Natural Sciences and Engineering Research Council (NSERC). The fund supports activity across the research spectrum - from basic science in universities to high-risk commercial development in industry. Eligible activities include: 1) Research visits of up to four weeks (by individual researchers) to Japanese institutions or companies; 2) Research exchanges where Canadian researchers work in Japanese private-sector, university or government research facilities, for 6 - 18 months; 3) the Canadian component of

new or expanded bilateral research and development projects; 4) Japanese language training for Canadian researchers with confirmed exchanges/long-term visits (min. 6 months) and principal researchers in JSTF-funded collaborative projects; and 5) Infrastructure support for Canadian research associations such as workshops for the dissemination of research results and knowledge gained of Japanese research activities.

To receive support, eligible activities must be part of a larger, ongoing, strategically directed set of activities. In the case of basic and applied research, the proposed project would relate to a departmental or institutional research plan. Proposals are accepted at any time and applications are reviewed approximately every two to three months.

SCIENCE AND TECHNOLOGY AGENCY (STA), GOVERNMENT OF JAPAN and NSERC Japanese Science and Technology Agency Fellowships

The Science and Technology Agency (STA) established the STA Fellowship in order to offer promising young researchers from overseas the chance to engage in research at Japan's national laboratories (excluding university and university-affiliated laboratories), and at some non-profit R&D institutes.

The Natural Sciences and Engineering Research Council of Canada is the Canadian organization responsible for publicizing the STA Fellowships program and for selecting Canadian nominees for these awards. Final selection of fellows is made in Japan.

Applicants from Canada must be Canadian citizens, or permanent residents who are currently living in Canada. They must hold a doctoral degree in a relevant field or expect to have completed all requirements for such a degree at the time of nomination. Starting dates for tenure of fellowships are subject to negotiation with the host laboratory. It is very important to get in touch with the proposed host laboratory in Japan as soon as possible. An invitation from the laboratory is an essential requirement for an applicant to be nominated. It is recommended that applications reach NSERC about 6 months before the intended starting date.

HEALTH AND WELFARE CANADA National Welfare Grants

All faculty are reminded that major changes have been made to the National Welfare Grants program of Health and Welfare Canada. Specific areas of high priority will now be identified and initial letters of intent solicited. These will be reviewed for relevance to the priority area specifically and the program generally. Selected applicants will then be invited to submit a detailed proposal. The initial priority areas identified are:

1. Critical issues and trends affecting social policy and service delivery.
2. Social service issues affecting recent immigrants and refugees.
3. Community economic development.
4. Social service issues affecting aboriginal people.
5. Child and family poverty.

The deadline for submitting letters of intent for the first three priorities is **January 18, 1991**. A separate call for letters of intent will take place for the last two priority areas sometime in February 1991.

CANADIAN-SCANDINAVIAN FOUNDATION Scholarships and Grants for Studies and Research in Scandinavia

The Canadian-Scandinavian Foundation invites applications for studies and research in Scandinavian countries for

the 1991-92 academic year. Applications are available at the Office of Research and must reach the Foundation not later than **January 31, 1991**.

The 1991 Swedish Institute Scholarships (\$5,000) - For qualified Canadian student/researcher wishing to pursue academic studies or independent research for a period of three to eight months in Sweden.

The CSF Special Purpose Grants (\$500 - \$800) - Provides partial financial support for applicants planning a shorter study/research visit to Scandinavia.

The Finnair Travel Grant offers cost-free air travel from Montreal/Toronto/Finland for a person planning a study/research stay in Finland during a period some time in the Fall of 1991, or the Winter of 1992.

NORANDA/BRADFIELD Graduate Fellowship Program

The purpose of the Noranda/Bradfield Graduate Fellowship program is to promote and encourage research collaboration between Canadian universities and companies in or associated with the Noranda Group. In 1991, up to seven fellowships valued at \$15,500 are available to full-time students in graduate programs leading toward a Masters or a Doctoral degree working in the natural and applied sciences, mathematics, economics, business and commerce.

Applications, including renewals, should be submitted by **March 1, 1991**. For further information, please contact Kris Delorey at the Office of Research and Graduate Studies.

SECOND ANNUAL GRADUATE STUDENT CONFERENCE

Call for Papers

The Second Annual Lakehead University Graduate Student Conference will be held on Friday, March 15, 1991. Graduate Students are asked to submit abstracts of thesis and research projects to Kris Delorey, Office of Research and Graduate Studies by **January 7, 1991**. This year's theme is open to all areas of research.

RESEARCH PUBLICATIONS

(Available at the Office of Research)

NSERC - List of Scholarships and Grants in Aid of Research 1989-1990

Contains a list of all grants and scholarships awarded by NSERC for 1989-90 and those awards administered by NSERC on behalf of other agencies.

NSERC - Grants and Scholarships Statistical Report 1989- 1990

Presents a detailed breakdown of NSERC expenditures by program and university/organization. The report is divided into the following five sections: Program Totals, Research Base, Scholarships and International, Targeted Research and Networks of Centres of Excellence. Brief summaries of the major program categories are also provided.

NSERC - Report of the Ad Hoc Committee on Research Computation

Examines the question of provision and utilization of computational equipment and facilities within the Canadian research environment.

UPCOMING DEADLINE DATES

QUICK REFERENCE

Research Opportunities

Barton Awards - February 1, 1991

The Canadian-Scandinavian Foundation; Scholarships and Grants for Studies and Research in Scandinavia - January 31, 1991.

Canadian Cancer Society's Stephen Fonyo Fellowship Award - anytime, but 2 months prior to when training begins.

Canadian Department of Communications; International Cooperation Assistance fund on New Information Technologies - Open

Canadian Institute for Nordic Studies Graduate Scholarship - January 31, 1991

CIDA Awards for Professionals (duration up to six months) - January 31, 1991

CIDA International Development Research Centre (IDRC) - Open, allow 3 months for a full response.

Educational Centre for Aging and Health; Fellowships/Bursaries - January 1, April 1, July 1, October 1

Energy, Mines and Resources; Environmental Studies Revolving Funds - Open

Health and Welfare Canada; National Health Research and Development Program (NHRDP) - deadline postponed to June 1, 1991

Health and Welfare Canada; National Welfare Grants Special Competition:

- 1) Social service issues affecting aboriginal people and
- 2) Child and family poverty - February 1991 call for letters of intent.

Heritage Canada Foundation Awards Program - June 1, 1991

Japanese Science and Technology Agency Fellowships - STA/NSERC - Open, but allow 6 months for processing

The Japan Science and Technology Fund - EAITC/ISTC/NSERC - Open, but allow 3 months for processing.

Laidlaw Scholar Program - Open

Lakehead University Senate Research Funds; NSERC and SSHRC General Research Grants Competition - March 10, 1991

National Geographic Society; Research Grants - Open

North Atlantic Treaty Organization (NATO) - Advanced Research Workshops - Open

National Science Foundation (NSF) - Open, but must allow 6 months for review and processing.

Northern Ontario Heritage Fund - Open

NSERC/Environment Canada - St. Lawrence Centre Partnerships Program - February 1, 1991

NSERC Forestry Postdoctoral Assistantships - January 15, April 15, July 15, October 15

NSERC International Collaborative Research Grants - March 1, 1991

NSERC International Scientific Exchange Awards - March 1, 1991

NSERC Scientific Publications - April 15, 1991

NSERC Workshops and Seminars - Open

Ontario Ministry of Health; Research Projects Program, Health Care Systems Research - May 1, 1991, Feasibility/Formulation Studies - Open, Information - May 1, 1991, Workshop/Conferences - Open

Ontario Ministry of Health - Ontario Nursing Innovation Fund, Group projects - January 1, May 1, and September 1; Professional Development for RNs and RNAs - Open

Ontario Ministry of Transportation; Highway Safety Research Grant Program - January 31, 1991

Social Science Federation of Canada - Aid to Scholarly Publications Program - Open

Sport Canada; Applied Sport Research Program - February 15, 1991

SSHRC Special Awards: Queen's Fellowships, Canadian Law Scholarship Foundation, SSHRC Legal Research Scholarship, Doctoral Fellowships in Management Studies - Open

University Research Incentive Fund (URIF) - January 31, May 31, October 15

World Wildlife Toxicology Fund - Open

World Wildlife Endangered Species Recovery Fund - January 1, April 1, July 1, October 1

Graduate Scholarships and Research Opportunities CIDA Awards for Canadians (duration up to 2 years) - February 12, 1991

Noranda/Bradfield; Graduate Fellowship Program - March 1, 1991

Second Annual Graduate Student Conference - March 15, 1991

Wildlife Habitat Canada - Graduate Scholarships - March 1, 1991

The Office of Research and Graduate Studies, in conjunction with the Office of Information Services, is asking all faculty to share with us 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 just 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.

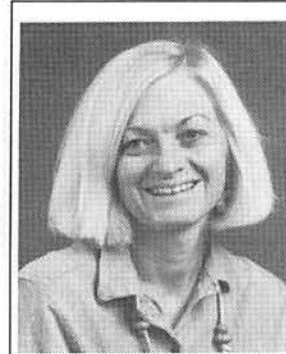
For information and application forms on any of the above research programs, please call Anne Fiorenza at ext. 8223 or drop by the Office of Research and Graduate Studies. For information and application forms for any of the Special Projects/Programs that Connie Hartviksen is managing, please call her new extension #8939 or drop by the Office of Research and Graduate Studies. For information about Foundations, please call Jo-Anne Silverman, Foundations Officer at ext. 8910 or drop by the Alumni House.

Lillian Hoffman

Professor Lillian Hoffman has joined the School of Nursing and teaches advanced nursing courses to 4th year students. Originally from Saskatchewan, Hoffman received both her Bachelor of Nursing and her Masters of Science (Physiology) degrees from the University of Saskatchewan. She has a Masters of Nursing degree from New York State University at Buffalo and is a cardio-pulmonary clinical specialist. Although the major part of her career has been spent in the United States, Hoffman began her teaching career in the 70's at Lakehead University's School of Nursing. Following that, she worked at the Johns Hopkins Surgical Intensive Care Unit in Baltimore, Maryland and taught for 13 years at Syracuse University's School of Nursing. She also worked in the Surgical and Trauma Intensive Care Unit in Washington at D.C. General Hospital. "It was very different there from other work I had done - dramatic - a lot of gunshot and stab wounds". Hoffman's research includes "working on the basic knowledge of nursing students regarding the concepts considered essential for critical care". She is working toward accreditation in Critical Care Nursing.



Jane Taylor



Dr. Jane Taylor has recently joined the School of Physical Education and Athletics. The Agora caught Dr. Taylor for an interview just before she left for Indonesia and Christmas vacation. Dr. Taylor's husband is presently stationed in Jakarta as a CIDA advisor for spatial planning, a project out of Dalhousie University. One of Taylor's two daughters is on a scholarship to the United World College in Singapore and the other attends University of Toronto. All met in Indonesia for a very different Christmas celebration. Dr. Taylor came to LU from Edmonton where she owned a consulting business and was a professor at the University of Alberta. She holds a Honours Bachelor of Arts degree in Physical Education from the University of Western Ontario and MSc and PhD degrees from the University of Alberta. Before obtaining her graduate degrees, Taylor taught high school. At LU Dr. Taylor teaches "adapted Physical Education". Her main research is conducted with children with learning disabilities. "I started the first clinical program for physically awkward children and I want to start one here. It's a teaching/instructional program. I'm working in a new area right now - assessing children at risk between 3 and 4 years old". Dr. Taylor keeps fit by running and cross-country skiing.

Dianne Edmond

Dianne Edmond is the new secretary in the office of the Chief Librarian. Edmond worked at the university library in the early 1980's and recently worked for Canadian Pacific Forest Products. Edmond is from Northwestern Ontario and has lived in Thunder Bay for the past 10 years. She is a very active person and says "sometimes I feel I come to work between all my other activities". Edmond enjoys working out and is a dedicated body builder. She hopes to enter competitions in the near future. With winter approaching she looks forward to cross-country skiing as well. She is very interested in the health care field and teaches a backcare program to chiropractic patients. Presently Edmond is taking "Wellness Promotion courses" at Confederation College in addition to a University of Waterloo correspondence course. In the past spring/summer term she took four courses at Lakehead University. She hopes to use the credits towards a Bachelor of Applied Health Sciences degree.



Gary Langen



Gary Langen is a new addition in Campus Development. Langen worked 10 years for Richardson Terminals. Hired as a millwright, Langen does building maintenance as well and likes the diversity of the work at LU. "I enjoy the change. The work at the elevators was a troubleshooting game whereas here it focuses on a more constructive aspect". Langen is happy not to be working shift work anymore and looks forward to more free time with his family. "Finally I can spend evenings at home and help out my wife a bit". Langen's hobbies include golfing and fishing. He shares a family cottage and fishing camp and is in the process of building his own. More than a few weekends are spent doing house renovations for other people. "I enjoy being busy. There are not enough hours in the day for the things I'd like to do".

CALLING ALL CURLERS

The Lakehead University Alumni Mixed Bonspiel is set for Friday, February 1, 6:00 pm to 1:00 am, at the Kakabeka Curling Club. Tickets are \$17 per person or \$65 per team. Beef on a bun will be served and a cash bar is available. For further information call Alumni House at ext. 8155. Registration deadline is January 25. Come out, spin a couple of rocks and show your stuff!

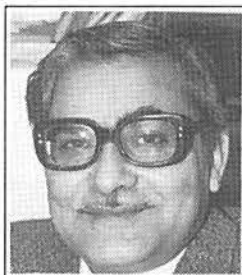
ART IN EDUCATION

If winter's getting to you, change the scenery. Walk over to the Bora Laskin Building on your noon hour and enjoy the amazing artwork on display in the halls. Rita Irwin has created a wonderful environment in which to study art in education.

People, Papers/Publications Special Projects/Awards



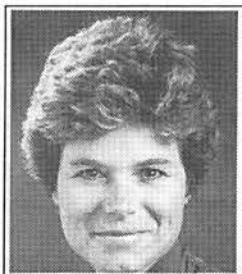
Dr. I. Nirdosh, Professor of Chemical Engineering, has published "Natural Convection Mass Transfer at an Enclosure Between Two Horizontal Discs," in *Chemical Engineering Communications*. Dr. G. H. Sedahmed of Alexandria University, Alexandria, Egypt, is the co-author of the paper.



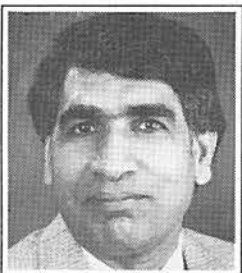
Dr. B. I. Kronberg, Geology, presented a paper on "Response of Major North American Ecosystems to Global Change: A Biogeochemical Perspective", at a recent meeting in La Serena, Chile on "Earth System Response to Global Change: Northern and Southern Hemisphere Contrasts". The latter is the title of a new initiative in Earth System Science being sponsored by the global change committees of Canada, Chile and United States. Dr. Kronberg is the Canadian representative to the organizing committee for this initiative. Following the meeting Dr. Kronberg was invited to lecture at the Universidad de San Luis in Argentina.



Dr. Jane Crossman, Associate Professor of Physical Education presented a paper entitled "The 1980 Olympic Boycott: The Affected Athletes' Perception" at the North American Society for the Sociology of Sport Annual conference, Denver, Colorado, November 7-11. The study was co-researched by Dr. Ron Lappage of the same School.



Dr. U. S. Panu, Civil Engineering, had the following papers published in journals: "Numerical Modelling of Pressure Reducing Valves in Water Distribution Network Systems". *Canadian Journal of Civil Engineering*, Vol. 17, No. 4; U.S. Panu and M. Oosterveld (1990) "Pre-Feasibility Technical Investigations of the Cost of Water Transfer From Lake Superior to U.S. High plains Region". *Canadian Water Resources Journal*, Vol. 15, No. 3; 1-17; G. Hazenberg, and U.S. Panu (1990) "Analysis of Flow into Drainage in Three-Dimensional Flow Field", paper in printing in the *Journal of Hydrology*; U.S. Panu and G. Hazenberg, "Theoretical Analysis of Flow Rate into Perforated Drains", paper in printing in the *Journal of Water Resources Research*. Dr. Panu had the following papers published in conference proceedings: T. Kojiri, S. Ikebuchi, T.E. Unny, and U.S. Panu (1990), "Knowledge-Based System Approach to Reservoir Operations in Water Resources Systems Applications", the proceedings of the International Symposium on Water Resource Systems Application; U.S. Panu, and P.R. Peterson (1990), "Runoff Hydrographs by the Hexagon Grid Method", proceedings of the Annual Conference of the CSCE, Vol. V; I. Galloway, and U.S. Panu (1990),



"Low Flow Frequency Analysis of Streams in Northwest Ontario", proceedings of the Annual Conference of the CSCE, Vol. V; T. Kojiri, U.S. Panu, U.S., and T.E. Unny (1990), "Expert Reservoir Operations Including Preliminary Controls", IAHS Publications.

CONFERENCE AND CALL FOR PAPERS

The 11th Annual Conference of the Society for Teaching and Learning in Higher Education will take place June 15-18, 1991 at Dalhousie University, Halifax, Nova Scotia. The STLHE invites proposals for interactive presentations on developing teaching and learning in post-secondary education. Submissions are welcomed from faculty, instructional developers and those interested in the advancement and enhancement of higher education. For more information or to register contact:

STLHE Conference
c/o Office of Instructional Development and Technology
Dalhousie University
Halifax, Nova Scotia B3H 3J5
Tel: (902) 494-1622, Fax: (902) 494-2319

Dr. R.H. Mitchell, Professor of Geology, recently presented four lectures as part of the Mineralogical Association of Canada's Visiting Lecturer Program. The topic of the lecture was "Primary Diamond Deposits" and was presented at the Universities of Toronto, Waterloo, McMaster and Brock.

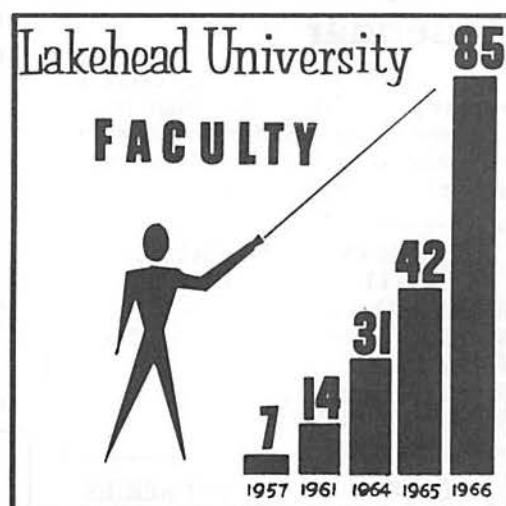
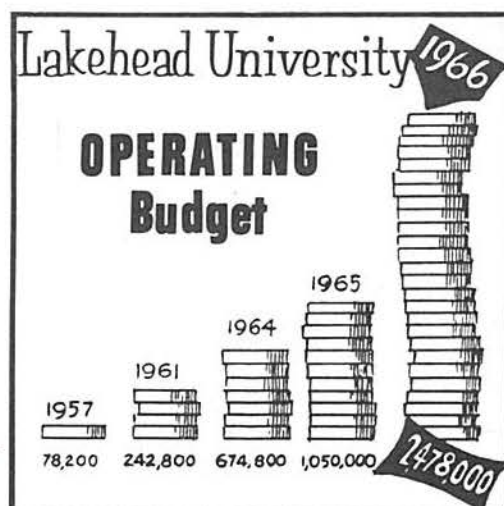
Dr.s Brian Lorch and Brian Phillips, Geography; Dr. Larry Knopp, University of Minnesota-Duluth and 14 senior Geography students participated in a cultural and academic exchange in the late Fall. LU students spent two days in Duluth studying the city's waterfront and planning projects and residential development in different historical periods. Their UMD counterparts travelled to Thunder Bay with the LU students where they looked at aspects of the local physical environment and residential and commercial development. The exchange provided an opportunity for students to compare and contrast the two cities.

Dr. Joe Stewart, Anthropology, and **Dr. Phil Fralick**, Geology, and fellow researchers Ron Hancock, Jane Kelley and Elizabeth Garrett, had their many years of data collection and research published in the *Journal of Archaeological Science*, 1990, 17, pp. 601-625. The article is entitled "Petrographic Analysis and INAA Geochemistry of Prehistoric Ceramics from Robinson Pueblo, New Mexico". Other members of Lakehead University involved with this extensive research paper were Steve Kissin (supervision of an exploratory student project), Cindy Lamontagne (entering and revising the typing of the manuscript) and Sam Spivak (table and figure drafts).



Last Writes

by Katherine Shedden



Call it karma.

A fact sheet highlighting Lakehead University's economic impact on the City of Thunder Bay landed on my desk the same day that I decided to return Linda Phillip's 1967 "Desk Diary". Possessing a weakness for nostalgia, I scanned the 28-year old booklet again. The charts seemed to have greater significance in light of the fact sheet. In 1966, President Tamblin and his finance boss, David Morgan, together with the Board of Governors, had a big fiscal responsibility. They managed the university's 2 1/2 million dollar operating budget. Try \$57.9 million: the university's total operating expenditures for 1989/90 (including operations, capital and research). Fascinated with the term "multiplier of 2.5 x operating expense", especially since whatever it was totalled \$145 million, I quickly called the Finance Department. A concise and understandable reply was forthcoming: every dollar generated by the university has an economic impact on the city of \$2.50. When a building goes up, or we contract for goods or services, the city and its residents benefit. Okay, this really is big business.

Lakehead University is also a major employer with 647 full-time employees and a total of 1,600 full and part-time employees. As we honour 20-year pin recipients each year, I'm astounded by the number of long-serving employees. I didn't have to call Accounts to figure out that multiplier: $29 \times 20 = 589$ years of service to this university! Did you know there's an employee on campus who started work on Monday, June 19, 1961? I hope someone has thought about the 30-year bar awards.

Those seven brave souls who held the fort in 1957, which was then Lakehead Technical Institute, have swollen their ranks to more than 250 full-time professors, with an additional 50 - 100 sessional lecturers. Notice the "university's phenomenal growth" in 1965-66, the year Lakehead became a degree-granting institution.

Enrolment figures are a hot topic at all the universities. Grants are based on enrolment, but also vary according to the programs students choose. Good enrolments are critical but university administrators are ever-watchful about the numbers game - when do you have too many students? The current student enrolment at LU is 6,358 including 4,250 full-time students.

It is estimated that these students from outside the local area bring (and spend) 19.4 million dollars per year. That figure is based on 3,242 students spending an average of \$6,000. The university dispenses \$426 million in assistance to students through scholarships, bursaries and awards. Other

facts: research assistance for 1989/90 was at \$3.9 million, money last year to the City in lieu of taxes - \$.279 million.

Now try \$84.5 million. As of April 30, 1990, that was the total 1989/90 accumulated capital expenditures, including buildings, land and parking, equipment and books. Our much-needed building boom includes the Student Centre, Regional Education Centre, Centre for Northern Forest Ecosystem Research, townhouse residences, additional parking lots and the Medical Residency Building. The replacement cost is an estimated \$161 million.

Geoff Weller, are you ready for all this?

Grads Correspond

Dr. Rosehart,

Namaste from Nepal! I thought you might like to get a card from me while I'm on my placement. I've been in Nepal for 1 month now and so far things are going very well. I spent the first week in Kathmandu taking Nepali language classes. Now I am living and working in a Tibetan Refugee camp outside of Pokhara, which is 200 km N.W. of Kathmandu. There's a terrific view of the mountains here!

I work at the Health Care Centre in the refugee camp. It's a small clinic, only 2 rooms and has limited supplies and equipment but the nursing work is fascinating and rewarding. I work 6 days a week with one other nurse and one assistant (no Doctor). Many of our patients are babies and young children who are brought to the clinic with diarrhea and/or skin problems, caused by poor hygiene and sanitation. When my language skills get better I'd like to get some small groups of people together so they can discuss their concerns about health and I can do some teaching! (hygiene, nutrition, prevention, breast feeding etc.). I have been asked to go to Kathmandu for two weeks in November to help teach a refresher nursing course. Initially I felt some anxiety over this proposal, but the people seem to think I am very well qualified, so I agreed.

I think it will be a learning experience for me also! Any way, I just wanted to say thanks for your substantial donation, and to let you know that the money is being well spent!

Kristen Ecclestone
L.U. Nursing Grad '88
Anthropology/Psychology '90

Campus Calendar

To include your Department's event or activity in the Campus Calendar, please call Lynn Gollat at 8300 or mail your information to SN1002. **Deadline** for the January Agora is **January 15, 1991.**

THE CHANCELLOR PATERSON LIBRARY HOURS
REGULAR HOURS RESUME
Monday - Thursday: 8 a.m. - 11:30 p.m.
Friday: 8 a.m. - 9 p.m.
Saturday: 9 a.m. - 9 p.m.
Sunday: 11 a.m. - 10 p.m.

CORNWALL CONCERT SERIES 1990-91

Recital Hall, Cornwall School
210 S. Algoma St.
Tuesdays at 12:30 pm unless otherwise noted.
January 15 Magnus De Verdier, violin; Heather Morrison, piano **FREE**
January 29 Valerie Patton, soprano; George Holborn, bass; Heather Morrison, piano **FREE**
February 5 Victor Schultz, violin; Erica Schultz, piano \$3
February 12 Penelope Clarke, flute; Joy Fahrenbruck, piano **FREE**
February 25 Master Class with Philip Dent Candelaria guitar **FREE**
February 26 Philip Dent Candelaria, guitar \$3

1990/91 VARSITY HOME SCHEDULE C.J. SANDERS FIELDHOUSE

January 11/12
- Gord Garvie Memorial Wrestling Festival
January 18/19
- Basketball Doubleheader vs Windsor
Women: 6:30pm Men: 8:30pm
January 25/26
Women's Volleyball vs Waterloo 7:30pm

THUNDER BAY ART GALLERY

Phone 577-6427
Nov. 30 - Jan. 13, 1991
- In The Steps Of Our Ancestors
Dec. 14 - Jan. 13, 1991
- Birds Of Prey

JANUARY

WEDNESDAY, 16

Final date for registration, changes and additions to second term half-courses except Distance Education (Dec.7)

FRIDAY, 18

FREE PUBLIC LECTURE
Speaker: Prof. Rosemary Sullivan
Topic: "The Art of Biography"
2 p.m. Ryan Building, 1023

MONDAY, 18

SENATE MEETING
2:30 PM

MONDAY, 28

Speaker: Dr. Kim Feddersen
Topic: "Eroticism, Art and Morality:
Samuel Daniel's Delia and The
Complaint of Rosamond
7:30 p.m. Ryan Building 1022

FEBRUARY

MONDAY, 4

First Day of Classes for February Session

JANUARY 24-FEBRUARY 2 WINTER CARNIVAL

TUESDAY, 5

RESONANT REFLECTIONS
A local period instrument ensemble presents "From the Hunt to the Concert Hall"
The evolution of the natural horn, featuring Derek Conrod, assisted by Heather Morrison - harpsichord, piano Peter Shackleton - recorder Heather Carruthers - baroque bassoon Felicia Urbanski - baroque violin Music from Telemann to Rossini February 5, 1991; 8 p.m.
St. Thomas Anglican Church

Final date for registration, changes and additions for February Session Full Courses

FRIDAY, 8

Final date for refunds on withdrawals (except February session)
Final date for withdrawal from full-courses and second term half-courses without academic penalty.

THURSDAY, 14

BOARD OF GOVERNORS
4 PM

NATIONAL FILM BOARD OF CANADA

and the
Thunder Bay Art Gallery
present a
Festival of Feminist Films
at the
Thunder Bay Art Gallery
all films begin at 8 p.m.

Friday, January 11

· FIVE FEMINIST MINUTES ·

Friday, February 8

· THE FAMINE WITHIN ·

Friday, March 8

· SANDRA'S GARDEN ·

Friday, April 12

· FIREWORDS ·

· FRAGMENTS OF A

CONVERSATION ON LANGUAGE ·

Friday, May 24

· PLAYING FOR KEEPS ·

· NO WAY! NOT ME ·

Friday, June 14

· AFRICAN MARKET WOMEN ·

Agora

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