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Lakehead University Agora

THUNDER BAY, ONTARIO VOL.6. NO.7 JULY 1989

Update: Pension Plans

By Fred Poulter

Vice-President (Administration)

A meeting with members was held on April 6, 1989, at which sample calculations of improved benefits were presented. Members were asked to consider the use of a moving average of annual fund rate of return versus the application annually of the actual fund rate of return. The averaging method will allow an investment policy to be applied which will increase the overall rate of return and consequently the ultimate benefit to Plan members. The actuarial consultant has been asked to provide a written opinion on the theory, rationale and application of the averaging method.

The Joint Benefits Committee has been advised by the consultant that Revenue Canada has given preliminary verbal comment on the draft text which provides for Plan amendment. There was indication that Revenue Canada may have concern with the maximum pension provisions in the plan and the manner of funding deficiencies in the pension Guarantee Account. No action will take place until written comment is received from Revenue Canada. There has not been any response from the Pension Commission of Ontario but a letter has been sent to the Commission asking for an early review and in particular a request to allow an immediate improvement to pensioners' benefits.

We have been advised that our Pension Fund earned a 12.46 per cent rate of return for 1988. This is the fifth best rate of return for pension funds as reported by SEI Funds Evaluation Services.

Technical, Clerical, Maintenance

A committee representing Plan members has been meeting with University Administration over recent months with the view to improving members' benefits. This will be accomplished by utilizing an estimated \$2.1 million surplus which will be passed along to members by Board of Governor's direction, through a special distribution as of Jan. 1, 1988. Pensioners' benefits will also be improved with cost of living adjustments to compensate for such increases since

{Pension Plans continued on page 3}

NOTICE

The Agora will not be published in August. Have a wonderful -- and safe -- summer. See you in September. Next deadline August 23.



Toe-tally absurd: The crew of CTV's *Live It Up* recently visited Lakehead University to gather material for next season. While in Thunder Bay, host Diane Buckner and company tested -- what else -- insect repellents. One volunteer, David Del Zotto, put his sole into the experiments and put his leg in the mosquito cage to see if they were in the mood to bite. Buckner and guests also dined on some local creepy-crawlies at a bug brunch, which featured haricots verts aux Tenebrio or green beans and mealworms. Dr. Yves Prevost, entomologist in the School of Forestry, hosted the visit and performed chef duties.

Report From The President



Dr. Bob Rosehart

McLeod Scores Major Victory for Universities

As everyone knows, university under-funding has been a chronic problem in Canada for some time. In recent years, the problem has been compounded by increased student demand for university places. In 1986, Minister Greg Sorbara introduced a corridor funding model which was designed to create a more stable funding model for the university system. However, pressed for increased participation, the government, shortly afterwards, announced the "accessibility" fund. The accessibility fund financially encouraged universities to significantly increase their enrolments in 1987 and 1988. Lakehead, for example, was able to increase its enrolment in 1988 and, hence, took advantage of the accessibility funding. The "cloud" on the horizon was obvious last year when the government announced that the accessibility fund would end this year. Obviously, C.O.U. and the Ontario universities were concerned that students who would spend three and four years in the system would only be funded for the first one or two years. This did not seem fair, and the shouts came loudly for what has been termed "flow through" funding for the new students taken in 1987 and 1988.

In the May Provincial Budget, Treasurer Robert Nixon announced that the government was committed to the concept of flow through funding. Commitment is one thing. Money is another. Lyn McLeod has just announced that the government will put an additional \$46 million into the system in the 90/91 year and a possible total commitment of some \$91 million over the flow through years. This is very good news, and the Minister has been able to accomplish this feat at a time of growing budget restraint. The \$46 million additional monies for 1990/91 are on top of the currently committed \$88 million accessibility fund and any inflationary adjustments.

Lakehead University and the system will benefit from these funds, and I encourage you, if you get the opportunity, to convey our appreciation to Lyn McLeod.



Lyn McLeod

O.C.U.A. Receives Approval of New Funding Formula

Related to the above is the commitment by the Minister that she has accepted completely the proposed new long-term funding arrangement proposed by O.C.U.A. for universities and has empowered O.C.U.A. to implement their recommendations. The O.C.U.A. proposals re-establish the commitment to a corridor model that gives a fair degree of funding stability and makes use of the "flow through" monies, when no longer needed for short-term accessibility, to be used for individual institution corridor adjustments. Lakehead will become involved with O.C.U.A. during the next year in the corridor negotiation process. Depending upon the dynamics of the Ontario system, Lakehead is positioned well with respect to moving to a new corridor. Such a move would further enhance the fiscal viability of the institution.

Incidentally, Dr. Viv Nelles, the Interim Chairman of O.C.U.A., has been named by Premier Peterson to become the full-time Chairman of O.C.U.A. This is good news for the system. Dr. Nelles is a history professor from York who has strong interests in northern issues.

Payroll Tax

The Treasurer did it to us in his May Budget. The payroll tax introduced would have cost Lakehead University an unbudgeted \$80,000 in this year (1989/90) and \$240,000 in the 1990/91 budget year. C.O.U. led the charge on behalf of the university system, and the intense pressure put on the government by the schools, hospitals (and opposition) encouraged the Treasurer to announce recently that schools, hospitals and universities would receive a special grant this year to cover the cost and that, in setting the transfer payment level next year, the government

would take into account the negative impact of the payroll tax. This, fortunately, appears to have been a short-lived problem.

Harold Linklater Passes

The recent passing of Harold Linklater is truly a great loss for Lakehead University and this region. Harold was many good things to many people, and he has been a tremendous role model and innovator in Native education in this region. Harold's leadership with the Native Teacher Education Program, the M.C.U. Native Experience Program, and the Keshadaying Residence were significant accomplishments. His efforts at Lakehead have been well founded, and the legacy of his work will live on.

Harold was a quiet man, but one who I found to be a no-nonsense, get-it-done type. On occasion, when I asked Harold to undertake a task with respect to our Native education initiatives, he was most willing and a very hard worker on behalf of his people and Lakehead University. Harold was a true hockey fan and many a night, I watched him sit in the Fort William Gardens watching the battles on the ice. Harold was a quiet man of great abilities, accomplishments and integrity who will be missed by many.

Summer '89

The residences are progressing rapidly and are scheduled to be ready for September.. Many people seem impressed with the quality of the top soil at the Forest/Biology excavation site, and the plans are quickly advancing for the Student Centre/Regional Education Centre project.

Several new academic Chairmen are taking office on July 1 as well as Alan Bowd as Director of the School of Education. Dr. Connie Nelson assumes her role as Director of Graduate Studies and Research and, along with the Senate Research Committee, she will get right down to work in terms of the implementation of the award mechanism for the \$153,000 Research Infrastructure Fund.

I attended high school graduations the past two evenings, and Lakehead University appears to have done very well. Our new scholarship program, enhanced by the Silver Jubilee Awards, is quiet impressive and is having a posi-

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President

{continued from page 2}

tive impact.

I continue to hear many positive comments about the attractive appearance of the campus, and more and more people are taking advantage of the university space for walking, cycling, etc.

The Canada Sea-to-Sea voyage to the Arctic is continuing to go well, and the 25 students are being excellent ambassadors of this institution. This past month, the trip was the subject of a major feature article in the Canadian Airlines "Canadian" Magazine.

For those of you heading out on vacation, have a safe and enjoyable summer.

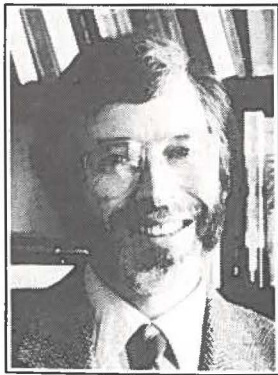
Pensions update

{continued from page 1}

the date of the last distribution. The Committee is also looking at an appropriate investment policy which will safely maximize earnings on the Pension Fund. The Fund earned 12.46 per cent in 1988.

Since this Plan is a defined contribution plan there are not the major amendments required such as in the Professional Plan. However, the Plan will be amended to incorporate new regulations of the Pension Benefits Act. Such regulations include improvements to death benefits and vesting of Board of Governor's contributions. The required amendments along with a very significant special distribution of surplus should allow Plan members and pensioners to realize a significantly improved pension.

Director of Education appointed



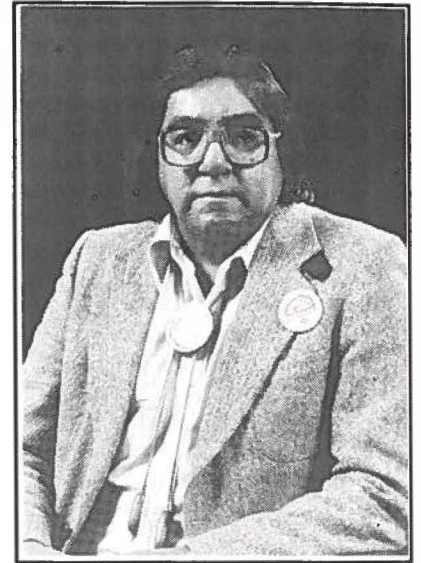
Dr. Alan Bowd

Dr. Alan D. Bowd has been appointed Director of Education for a three-year period. His term runs July 1, 1989, to June 30, 1992. Dr. Bowd has been with Lakehead University since 1985 and served as Chairman of the Continuing Teacher Education Program from 1987 to 1989. He has a BA and MA from the University of Sydney and a PhD from the University of Calgary.

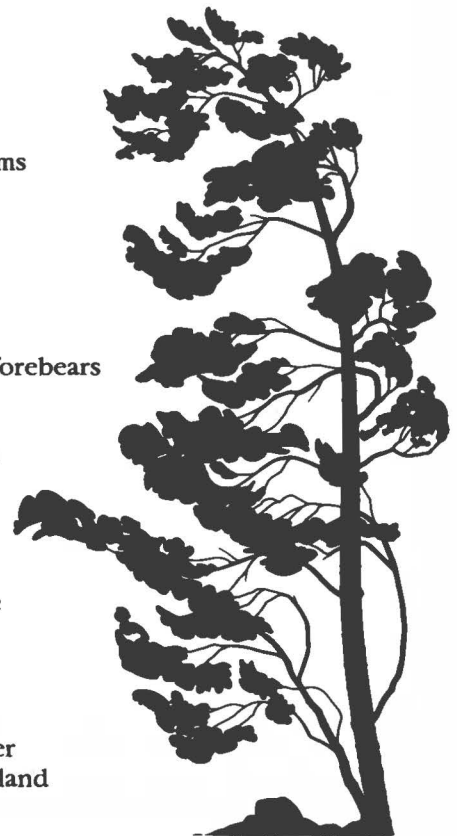
Native educator Linklater will be missed

Harold Angus "Blackie" Linklater, 42, died on Wednesday, June 21, 1989 following a lengthy illness. Born in Fort Frances, Ontario, he was raised on the Couchiching Reserve and graduated from Lakehead Teacher's College in 1969. After teaching on northern reserves for five years he returned to the Lakehead where he organized the Native Teacher Education Program at the School of Education at Lakehead University. For the past fourteen years he had directed and instructed in the program while completing his BA and MEd. Harold's belief in the importance of higher education among native people is reflected by his own academic achievements and provision of the valuable groundwork for future education of all native people. Mr. Linklater served many organizations including the Kinnewa-Aweya Legal Services, Keshadaying Residence, and Family and Children's Services. The university community acknowledges his tremendous efforts and achievements in education and extends heartfelt sympathy to his wife, Gail, son, Simon, family members and friends.

we are the Indians
without moccasins or feathers
unrelated to Cochise
played by Rock Hudson
with guttural ughs and foolish hows
tired of false histories
tired of endlessly circling wagon trains
tired too of government studies plans programs
we are the Indians
with a feeling of unity with all living things
with a feeling of mirth at some of the ways
of the mainstream
with feelings of anger of frustration
of hope and of pride
of love for our children our selves our forebears
still in touch with the earth
sheltered by the sky
warmed by the knowledge of united strength
demanding the right to live
in harmony with all nature
with open hearts open minds open arms
with knowledge of the value of life
with willingness to struggle so we all may live
unafraid we live
undespairsing we wait
for this long night to pass
for this country to again come to value life
for people to love and share with one another
and with the simple rugged beauty of the land
we are struggling to bring in that day
we are allies of all who join that struggle
we affirm our humanity
we are still living
still helping
still seeking
we are the Indians



*Harold Linklater
Native Teacher Education Program*



Harold Linklater

Japanese students to visit Lakehead for English immersion

Lakehead University will be host to 32 Japanese students participating in an English Immersion Program.

There will be a Canadian Heritage Breakfast on July 21, 1989, at 9 a.m. in the Faculty Lounge, providing a welcome and introduction to Canadian culture.

The students from Gifu College, Hashima-gun, Gifu-ken Japan have had several years of formal English instruction but need an opportunity to apply what they have learned in a practical and authentic context. The program, which starts July 20 and ends August 21, will run under the auspices of the Department of Continuing Education. The Director, Dan Pakulak, announced that Lakehead's program coordinator is Jane Livingston and the co-ordinator for the Japanese students is Takafumi Hirose.

The students will stay in residence on

campus, however efforts are being made to place students in host homes on weekends. This would offer the students the opportunity to be thoroughly immersed in Canadian culture and society. It would also allow the host homes to learn more about Japan and its people.

Anyone interested in having a Japanese student as a guest is asked to contact Jane Livingston at 8078.

While at Lakehead University, students will have 60 hours of classroom instruction as well as numerous field trips and presentations given by local historians, artists and educators.

Six Lakehead University students (monitors) will work closely with the students. They will lead group discussions following formal class time and will accompany the Japanese students on excursions, encouraging them to speak English.

Ontario introduces payroll tax

Courtesy of Notes from AUCC

Ontario universities will pay \$37.5 million annually under a new provincial payroll tax to fund the Ontario Health Insurance Plan. This is \$24.5 million more than they paid in OHIP premiums prior to the tax. The tax was included in the provincial budget tabled earlier this year. For the universities, it comes on top of a provincial operating increase of less than 4% for 1989-90 and on top of the impact of the federal budget: the federal budget - which affects universities across Canada - provides, among other things, for a 1% increase (to 11%) in the tax on telecommunications services and increases in unemployment insurance premiums which, for employers, will grow by approximately 15.4%.

Housing needed

New students arriving in Thunder Bay are often in need of interim accommodation while they look for a permanent place to live. If you are willing and able to provide short-term accommodation to students for a few days at the beginning of September, please contact Suzanne Ernsting, Off-Campus Housing Officer at 343-8512. A nominal room and/or board fee may be charged, if so desired.

Lakehead University topic of directory photo contest

Thunder Bay Telephone salutes Lakehead University, which is celebrating 25 years as a degree-granting institute. The Silver Jubilee celebrations commenced May 1989 and will continue until Homecoming Weekend July 1990.

As part of the celebrations, this year's photography contest will centre around the university. Campus shots, photos of people associated with the university, old or recent, are eligible.

The contest runs from October 24 to January 5, 1990.

Full rules and regulations are available at the City Hall Information Desk or The Tele-Phone Place in Victoria Mall.

Dust off the old camera and try your photographic talents. Perhaps your picture will appear on the cover of next year's directory.

Summer camps provide fun, skill development in various sports

Lakehead University's annual sports camps have returned -- bigger than ever.

The University, in conjunction with Abitibi-Price, will offer a summer full of action for the city's boys and girls. In the past summer sessions have focused solely on boys and girls summer basketball camps. This year, the basketball camps will be joined by girls volleyball, boys wrestling and the 9th annual hockey development camps.

The basketball camps will be directed by Lakehead coach Stu Julius, who is entering his ninth season with the Nor'Westers. The camp will focus on individual skill development and team play. Special evening sessions will be offered for the senior players. Day sessions are for students 12 to 16 years of age. Evening sessions will be for students 17 to 19 years of age. The boys camp will run Aug 14 to 19 and the girls camp will run Aug. 21 to 26.

The wrestling camp will be run by Lakehead Wrestling coach Francis Clayton. Individual wrestling techniques will be enhanced by fun competition and a development of skills. The camp is geared toward male athletes ages 7 to 19 of all skill levels. Aug. 14 to 19 will be for the group ages 7 to 13 and Aug. 14 to 18 will be for students ages 14 to 19.

The ever-popular hockey camp is in its 9th year under the direction of Dave Bragnalo, who is a Level IV coach and former

Lakehead University coach. The camp offers sessions for power skating, advanced skill development, and a defencemen's clinic.

The Power Skating and Skill Development Camp is for boys and girls ages 6 to 13 years and will run Aug. 20 to 25. The Advanced Skills Development Camp is for boys and girls ages 10 to 16 years and will run Aug. 26 to Aug. 31. The Defencemen's Development Camp, which runs Aug. 14 to Aug. 19, will be for boys and girls ages 9 to 16.

All staff at the hockey school have extensive hockey and educational backgrounds which lend themselves well to a quality learning experience for the camp participants.

The volleyball camp will be led by Claude Lapre, Nor'Wester coach and Ontario Provincial coach. The volleyball program at Lakehead has seen significant improvement under the direction of Coach Lapre. The camp, which runs Aug. 28 to Sept. 1, is intended for female athletes ages 14 to 19. The camp offers quality instruction, adapted to the quality of the athletes.

For more information about the sports camps, please contact Clyde Tuyl, Athletics Co-ordinator, at 8601. Registration deadline is July 31, 1989.

Report highlights lack of aid to part-time students

Part-time students, who form 38 per cent of the Canadian university population, are not receiving the financial assistance and the academic recognition they deserve, according to two researchers at the University of New Brunswick. In a report entitled "Financial Assistance and Academic Recognition for Part-Time Undergraduate Students at Canadian Universities", Judith Potter and Anne Stapleton criticize the "misconception" that part-time students are people with enough financial resources and time to "trifle with education". Potter and Stapleton point to evidence which shows that the majority is in fact made up of married women with little income who are trying to upgrade their job-related skills. Less than 1 per cent of part-time students receive assistance under the Canada Student Loans Program because it does not provide sufficient funds or adequate repayment terms, the authors say. They urge the Canadian Association for University Continuing Education to press for government support in the six provinces where no part-time student assistance exists.

The report is available from Judith Potter, Faculty of Extension and Summer Session, University of New Brunswick, P.O. Box 4400, Fredericton, N.B., E3B 5A3, Phone: (506) 453-4646, Fax: (506) 453-4599.

Office Services' new summer schedule

As of June 26, some of the Office Services staff will be enjoying their summer. Since Office Services is responsible for staffing the Switchboard, there will be periods of time when this Office will be inaccessible.

For your convenience when the Office is closed, FAX pick up and drop off boxes will be located at the Switchboard. So as not to waste time or inconvenience your department, especially those some distance away, you are asked to call to ensure that Carol Ann Loree (ext. 8272) is available for any other service necessary to your department.



A winning combination: The team in the Department of Research and Graduate Studies. From right to left, the first Director, (1986-89) Dr. Murray Lankester, Research Officer Trish McGowan, secretary Uta Hickin and secretary Kris Delorey.



Flag raising: Lakehead University now has a flag. Looking up at the front entrance to the University Centre, one can see the white and blue flag flying proudly above the campus. Pictured above are, left to right, Fred Anderson, Chief Security Officer, John Whitfield, Dean of Arts and Science, and George Merrill, Department of English and member of the Silver Jubilee Committee. Kneeling to adjust the ropes is a security officer. Along with the flag is a banner which can be seen at the bandshell at Waverly park during the Summer in the Park concert series. Flags and banners both commemorate Lakehead's Silver Jubilee, which began at Convocation 1989 and will continue until Homecoming Weekend in July 1990.

Distance Education: never too far away to learn

Distance can be measured in miles or in time.

Distance Education is designed for students who live hundreds of miles from campus or have no time to attend regularly scheduled classes.

Susan Cole, Co-ordinator of Distance Education, cites two main advantages for distance studies: convenience and flexibility. The courses are convenient because the course materials are delivered to the student's home. "Apart from due dates for assignments and examinations, the student can work at his/her own pace, and work around individual lifestyles," she said.

Learning packages consist of required textbooks, audio and/or visual tapes, study guide and, in some cases, supplemental readings and self-testing materials. A network of Access Sites is operated by Contact North in communities across Northwestern Ontario. These sites include such facilities as audio teleconferencing equipment, telewriters, audio and video (VHS) tape recorders as well as facsimile machines (FAX).

Teleconferencing is what helps set Distance Education apart from other programs. These group telephone meetings create a forum for the exchange of ideas with classmates and interaction with the instructor.

Unique programs

Two unique certificate programs have been included in Distance Education in Environmental Assessment and Tourism and Recreation Resources Management. Cole predicts "the certificate programs will be very successful."

Dr. Brian Phillips, of Lakehead's Geography Department, is involved with the Environmental Assessment program. He has worked with both the development and delivery of courses. "My first experience with delivery was in giving Geography 1100," he said. His first large delivery experience came in January with more than 30 students studying Environmental Assessment.

Phillips sees teleconferencing as a useful tool. "Teleconferencing allows me to know my students," he said, referring to the telephone as a

tutoring device. "I don't think we should teach over the phone."

However the telephone is not the only means of communication. "As far as I know, we are the only ones experimenting with Telewriter II graphics," he said. The Telewriter allows him to write on computer screens in each of the centres. "I can ask a student to come forward and mark a location or write something on the screen. It allows graphic communication as well as oral."

Added benefits

Dr. Jim Smithers, professor of Outdoor Recreation, has been involved in the tourism programs in Distance Education.

There is a collaborative effort between Lakehead and the University of Waterloo, he said. "Students get equal credit at either university."

The joint venture benefits instructors as well as students. "You get to sit down with another real prof from another real university and come up with a course that fits in with both institutions," he said. "You get the best of other people's materials. I've picked up good ideas and resource materials."

Co-operating with faculty at another university has been easier than expected, Smithers said. "Sharing ideas and materials has not been a problem; it's the little nitty-gritty things that are stumbling blocks, but they are not insurmountable."

"In Distance Education, everything has to be extremely specific," he said. "In a class, if you dig yourself in (to a hole) you

can always say 'we'll solve that on Wednesday.' You just can't do that when the class is spread over several miles, going over written material."

Marilyn Coley, a Murillo resident, is a registered nurse taking courses through Distance Education. Although she lives within commuting distance of the University, she cannot give up her job to attend classes full time. The mother of three has found an alternate way to continue her education.

Coley, a case manager with VON Home Care, is studying the Post-Basic RN BScN program. "To work full time and do the course is difficult," she said. The five-year program will occupy much of her time for the next few years.

Teleconferencing has provided a supportive network among the students. The chance to talk with others in the class helps with assignments and understanding the course material.

Discipline needed

However, her first experience with Distance Education left her feeling frustrated, she said. Rigid requirements did not take into account the experience and knowledge already gained through years of active nursing.

On the other hand, the introductory sociology class is "the most well laid out I've seen," she said. "Regular quizzes on the basics let you know if you're on the right track."

To do well in Distance Education "you have to be terribly disciplined," Coley said. "For a person who has poor study skills, it will be very difficult."

Although Murillo is just a short drive from campus, Coley is distanced from the University by her inability to attend regularly scheduled classes.

Of course Distance Education is used by those who are a great distance from Thunder Bay. The program is designed for people such as Caroline Brunton of Sioux Lookout and Brenda Abraham of Geraldton, and many others in remote locations.

Through Distance Education people have the means to gain a degree or further their careers through specific courses.



Distance Education: Remote communities have access to a university education through Lakehead's Distance Education.

Papers/Publications & Special Projects



Dr. Easa, Professor, Department of Civil Engineering, published the following in 1989: "Analytical Method for Traverse Bearing Computations" and "Subdividing a Quadrilateral Land by Intersecting Lines", both in the American Congress Journal of Surveying and Mapping, Vol. 49, No. 1 and 3, respectively; "Direct Land Grading Design of Irrigation Plane Surfaces" and "Three-Point Method for Estimating Cut and Fill Volumes of Land Grading" both in the ASCE Journal of Irrigation and Drainage Engineering, Vol. 115 No. 2 and 3, respectively; "Earthmoving Cost Optimization by Operational Research: Discussion", and "Simplifying Roadway Cross Sections Without Reducing Volume Accuracy"; both in the Canadian Journal of Civil Engineering, Vol. 16, No. 3 and 4, respectively; "Resource Leveling in Construction by Optimization", ASCE Journal of Construction Engineering and Management, Vol. 115, No. 2; "Analytical Solution of the Magnetic Declination Problem", "General Direct Method for Land Subdivision", "Free Tension Concept for Precise Taping", "Irregular Boundary Area Computation by Simpson's 3/8 Rule: Discussion", and "Precision in Cross-Sectional Area Calculation in Earthwork Determination: Discussion", all in the ASCE Journal of Surveying Engineering, Vol. 115.

The following papers were presented by Dr. Easa and others at the 1989 CSCE Conference in St. John's, Newfoundland, June 8 - 10, and were published in the Conference Proceedings (Vol. IV): "Estimating Earthwork Volumes on Straight Roadways Using Nonlinear Ground Profile" with Soliman, Abed, and Kikuchi, "Vehicle Weight and Dimension Reform and Mode Choice in Canada" with Soliman, Gadi, and Wyatt, and "Computer-Based Relignment of Railway Horizontal Curves" with Graham and Soliman. One of the technical sessions of the conference was chaired by Dr. Easa.

Dr. Willard Carmean, Forestry, is the author of three recent publications: 1) Carmean, W.H. 1988. Management of publicly owned forests. Forestry Chronicle 64:459-460; 2) Carmean, W.H., and D.J. Lenthall. 1989. Height growth and site



index curves for jackpine in north central Ontario. Can. Jour. Forestry Research 19:215-224; 3) Carmean, W.H., J.T. Hahn, and R.D. Jacobs. 1989. Site index curves for eastern forest species. U.S. Dept. Agriculture Forest Service, North Central Forest Experiment Station General Technical Report NC-128, 144p.p. (In press). This last publication is a monograph that formulates and presents 127 site index curves for forest species in the eastern United States.

Carmean also has been awarded a grant for \$8,000, and one of his graduate students, Glen Niznowski, has been awarded a \$3,000 grant from the Centre for Northern Studies. These grants will supplement Carmean's NSERC grant for research on site quality jack pine in Northern Ontario. Additional support for these studies is being given by the Ontario Ministry of Natural Resources in the form of field assistance for Carmean's three graduate students.

David Nock, Sociology, has been elected to serve on the Executive Committee of The Ontario Historical Society. The Society was first organized in 1888 and publishes "Ontario History" a prominent historical journal which has been published for about eighty years.

Also, Dr. Nock will be at the Learned Societies' Conference in Quebec City at Laval University, which he has organized, and will act as Chair and Discussant for a session on the Sociology of Religion, June 3, at the C.S.A.A. Meetings (Canadian Sociology and Anthropology Association).

Dr. Darlene Steven, Associate Professor School of Nursing, presented a paper titled,



"Supervision and Termination of Employment Among Nurses in Canada: Legal, Arbitral and Professional Discipline Perspective" at the Canadian Association of University Schools of Nursing annual research conference, held in conjunction with the Learned Societies, Laval University, June 9, 1989. The trip was sponsored from SSHRC research funds.

index curves for jackpine in north central Ontario. Can. Jour. Forestry Research 19:215-224; 3) Carmean, W.H., J.T. Hahn, and R.D. Jacobs.

Dr. Brian O'Connor and Arlene Whiffen, Psychology, presented a paper entitled "Religious Motivation and Personal Adjustment in the Elderly" at the annual meeting of the Canadian Psychological Association in Halifax in June, 1989.

Appointments

Dr. J.G. Locker, P. Eng., was made a member of The Order of the Sons of Martha of the Association of Professional Engineers of Ontario on April 30, 1989. This award was made in recognitions of outstanding and devoted service freely given for the benefit of the engineering profession in Ontario. Dr. Locker was also made the Chairman of the National Committee of Deans of Engineering and Applied Science on May 12, 1989.

Recognition

Dr. Brian Phillips, Department of Geography, received recognition of his work at the Annual Dinner of the Thunder Bay Geography Teachers Association. The award is given annually to selected individuals in honour of contributions to the teaching of geography. Phillips said he was pleased and honoured by the Association's award.



Dr. Brian Phillips

"Nothing in this world can take the place of persistence. Talent will not; nothing is more common than unsuccessful men with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination alone are omnipotent. The slogan "press on" has solved and always will solve the problems of the human race."

Calvin Coolidge.

New men's basketball coach: Lou Pero

Lakehead University has a new face in athletics. Lou Pero has been chosen as the men's basketball coach.

Pero is a graduate of Lakehead University, he is also a former Nor'Wester player from the late '60s.

Pero is one of the founders of the Lakehead University Basketball Camp. He has been involved in the camps as a staff member, co-ordinator and director.

Over an 18-year career as a high school coach, Pero has a record of 341 wins, 161 losses and nine championships to his credit. The move from high school athletics to the university level does not present any problems, he said.

"It's a simple game," Pero said. "The only difference is the quality of the athlete." He noted that the university-level games are faster and have more experienced players.



Ah! ... Summer In The Park

As part of Silver Jubilee celebrations Lakehead University has sponsored a new group of performers for Summer in the Park. Meet the **Park Players**. They might juggle, mime, pick your pocket, sing a ditty or disappear into the crowd before, during or after on-stage performances.

All the concerts listed below are at Waverley Park, except for the Teddy Bears' Picnic.

Wed., July 5 JAZZ NIGHT I
7 to 9 p.m. Miroslaw Sextet
Ari Lahdekorpi
Green Dolphin Street
Jazz Quartet

Sun., July 9 Graham and Friend
1 to 4 p.m. The Tempos
Particle Theory
Superior Percussion
Ensemble

Mon., July 10 Rodney Brown
7 to 9 p.m. VALDY
Rain location: Lakehead
University Agora

Wed., July 12 BLUES NIGHT
7 to 9 p.m. Chris Walsh and Frostback
The Blue Shadows
Crosstown Blues Band

Wed., July 19 Bill Zegil 8 + 1
7 to 9:30 p.m. Shirley and Company
Karen Mayne
The Jukes

Lakehead artists travel south

Southern Ontario was treated to some Northern art last month -- including work by Lakehead University instructors.

Seven instructors from Lakehead's Visual Arts department contributed work shown at the Ontario North Now Pavilion at Ontario Place in Toronto. The exhibit moved to Ontario Place after a successful showing at the Thunder Bay Art Gallery.

Lakehead's Participants were David Aurandt, Mark Nisenholt, Janet Clark, Oliver Tiura, Mavourneen Trainor, Anne Warren, and Sylvia Wagner.



Tues., July 25 TEDDY BEARS' PICNIC
1 to 4 p.m. Children's Concert
Vickers Park
Glen Paterson, Rainbow,
Rodney Brown and
more.

Rain Location: Fort William Gardens

Wed., July 26 ROCKANDROLL NIGHT
7 to 10 p.m. Stigmartyr
Implicit Faith
Crimson Rage
Dream Child

Wed., Aug. 2 JAZZ NIGHT II
7 to 9 p.m. Bert Nowak Jazz Quartet
Hedi Beale
Rat Portage

Sun., Aug. 6 COUNTRY & WESTERN
1 to 4 p.m. DAY (BBQ)
Marlen CC Band
704 Band
Lois Garrity

Wed., Aug. 9 FOLK NIGHT
7 to 9 p.m. Slipt Disque
Lacko
Shaun Naroski

Wed., Aug. 16 FINAL CONCERT
7 to 9 p.m. Bayside
Gibson, Martin, and I
Wayne Faulconer Band

Another successful LUCC picnic

The Third Annual LUCC Picnic was a big success thanks to the people who took part.

About 200 people came out to enjoy the beautiful weather. There were several games for kids of all ages and food for those who worked up an appetite.

The featured events were the balloon toss, won by the father-daughter team of Richard and Laura Ingles with a distance of 42 feet, and the egg toss, won for the second year by Adam and Ian Walsh with a record breaking 143 feet.

Nominations
for potential
honorary degree
recipients for 1990 are
requested from members of
the Lakehead University commu-
nity. The nominations, together
with biographical information
and supporting documentation,
should be sent, as soon as
possible, to Mrs. Linda Phillips,
c/o the Office of the President,
or to Dr. George J. Merrill,
Chairman of the
Senate Honorary Degrees
Committee,
c/o the Department of
English

Research News

From The Office Of Graduate Studies And Research

Research Officer: **Trish McGowan**



CENTRE FOR NORTHERN STUDIES

Continuing Graduate Awards

Dr. Paul Watts, Director of the Centre for Northern Studies, has announced the winners of the Third Competition for Northern Studies Graduate Awards. These scholarships, valued at \$3,000 each, were awarded to the following continuing full-time graduate students:

Annette Van Niejenhuis (Forestry), "Seed Transfer Guidelines in Jack Pine" (Supervisor Dr. W. Parker); **Robert Spark (Geology)**, "Boundary Structure and Metamorphism Between the Shebandowan Greenstone Belt and Quetico Gneiss Belt" (Dr. G. Borradaile); **Geoffrey K. Abdallah (Geology)**, "Mineralogy of Mattabi Massive Sulphide Deposit" (Dr. S. Kissin); **Douglas Thur (Sociology)**, "History of the Lumber and Sawmill Workers Union From Its Beginning in the 1920s to the Present" (Dr. J. Stafford); **De-Wel Li (Forestry)**, "Feasibility of Utilizing Fibrous Pulp Waste" (Dr. E. Setliff); **Ebenzer Winful (Economics)**, "Airline Regulation and the Quality of Air-Service in Northwestern Ontario" (Dr. W. Jankowski); and **He Huang (Physics)**, "Roman Investigation of CdMnTe Semiconductors for Solar Cell Applications" (Dr. W. Keefer).

Congratulations to these deserving students, and best wishes for continued success in their studies.

GRANTS AWARDED

Dr. Philip Fralick (Geology) has been awarded a research grant in the 1989-90 LITHOPROBE University Supporting Geoscience Studies competition. LITHOPROBE is Canada's National Geoscience Project, co-sponsored by NSERC and Energy, Mines and Resources Canada. The project for which Dr. Fralick was awarded support concerns Late Paleozoic Basin Development History of Northern Nova Scotia.

Professor Sharon Lucky (Business Administration) was awarded a research grant to study how the Municipality of

Metropolitan Toronto is responding to the adoption of the Equal Results Model. The project, jointly sponsored by the Lakehead University Senate Research Committee and the Municipality of Metropolitan Toronto, will involve the identification of organizational responses, at the executive and management level, that become apparent as the organization makes the transition from an equal access to an equal results approach to employment equity.



Sharon Lucky

Drs. Rob Farmer Jr. and Bill Parker (Forestry) have been awarded an Ontario Renewable Resources Research Grant by the Ontario Ministry of Natural Resources. The purpose of the research project, entitled "Genetic Variation in Tamarack in Northwestern Ontario", is to evaluate genetic variance in growth and morphological and physiological characteristics of tamarack in Northwestern Ontario. It is hoped that the increased understanding of this species' genetic systems and geneology will lead to the genetic improvement of this and other boreal tree species.

Dr. Gary Murchison (Forestry) has been awarded a Modest-Size Project Grant from the Association of Universities and Colleges of Canada to travel to Alemaya University of Agriculture in Dire Dawa, Ethiopia. The purpose of the visit is to discuss the possibility of establishing a link between the Schools of Forestry of Alemaya and Lakehead University, for the

training of Ethiopian graduate students and the setting up of Masters research projects that would directly benefit Ethiopia.

Dr. Paul Watts, Director, Centre for Northern Studies, has been awarded a grant by the Shibogama Area Tribal Council to undertake a study of the effects of the proposed Musselwhite gold mine project on Pipestream River and the downstream communities of Wunnumin and Kingfisher Lakes.



Gary Murchison

Conferences

Forthcoming Conference on "The Role of Circumpolar Universities in Northern Development" November 24-26th, 1989 in Thunder Bay.

Sponsored by the Centre for Northern Studies and Lakehead University, the conference is expected to attract participation from: Presidents and faculty of circumpolar universities in Sweden, Norway, Greenland, Iceland, Finland, Lapland, the USSR, the USA and Canada; their respective governments; and invited speakers with expertise and perspectives in this area.

We invite you to attend and participate in the conference and would welcome your suggestions as to session topics and possible papers.

Logo chosen for Centre for Northern Studies

A Lakehead University student has won the competition to design a logo for the Centre for Northern Studies.

Roy Kakegamic's design of a loon was selected as being the most representative of Northern Studies. There was a prize of \$500.

The Centre's activities will focus on the areas of Northwestern Ontario, Northern Ontario, the North of other Canadian Provinces, the Circumpolar North and the High Arctic. Themes seen as applicable for the logo included the northern perspective, interdisciplinary studies and research. Northern research streams being developed by the Centre are environmental studies, service delivery and economic development. The research program will emphasize regional applicability within Northwestern Ontario.



Northern symbol: The winning design by Roy Kakegamic in the logo contest for the Centre for Northern Studies.

Visitors on campus

Although summer may seem quiet, there will be a number of groups visiting Campus over the next two months. The Conference and Seminar Centre announces some of the guests they are hosting.

July 1 to 31

Native Languages Program

Lakehead University provides accommodation for 104 guests of this program, allowing Native Students the experience of living on campus and learning at the University.

July 1 to 3

Rotary Club International

Lakehead University welcomes more than 95 guests from around the world.

July 3 to Aug. 14

Science and Technology Program

Accommodation for 65 guests of the program will be provided, allowing these high school students the chance to experience all aspects of university life.

July 7 to 11

Lutheran Youth Gathering Program

The campus will be the hub of activity for more than 700 guests on campus.

July 20 to Aug. 21

Japanese School Trip Excursion

About 45 guests of this program will visit, allowing these international guests to experience life at Lakehead University.

July 15 to 16

American Bus Group

Lakehead University welcomes 105 American visitors for a couple of days of touring the City of Thunder Bay.

Aug. 10 to 15

Winnipeg Swim Club

Accommodation for 85 guests of this club will be provided so they may use our facilities and train for an intensive week of swimming.

Aug. 14 to 16

United Senior Citizens of Canada

More than 600 guests will visit our campus for this national convention.

Aug. 14 to 19

Lakehead University Basketball Camp

Accommodation will be provided for this unique basketball camp.

Aug. 28 to Sept. 2

Lakehead University Volleyball Association

Accommodation will be provided for this unique group.



Competitive spirit: The Annual Corporate Canoe Challenge, held at Old Fort William, was a big success. Lakehead University entered two teams, The Silver Bullets and the Silver Jubilee Ju-Jubes. The Silver Bullets are shown at left. Back row left to right, Ron Lapage, Clyde Tuyl, Yves Prevost, Norm Lavoie, Nancy Grassie, Ken Brown, Don Barnes. Front, left to right, Hank Akervall, Chairman of this year's Fitness Campaign, mascot Carissa Brown, Jane Crossman and Diane Common (crying towel at the ready.) The Silver Bullets did well but were out-done by the Thunder Bay Fire Fighters. The Silver Jubilee Ju-Jubes are pictured below.

The Silver Jubilee Ju-Jubes made a respectable showing in the Corporate Canoe Challenge at Old Fort William. Team members, back row, left to right, Ben, Kaminski, Tom Stevens, Karen Prevost, Paul Watts, David Del Zotto, Joy Lawson, and Greg Beckford. Front row, left to right, Moira McPherson, Katherine Shedden and Sharon Kozak. The Lakehead teams were challenged by canoeing, cannonball throwing and crosscut sawing.



Mackenzie trek right on schedule

The intrepid group from Lakehead University has made good progress on the Sir Alexander Mackenzie Bicentennial Canada Sea-to-Sea voyage. Below are excerpts from the diary beign kept of the journey by 25 students from Outdoor Recreation, Dr. Jim Smithers and project assistant Derek Apple.

Wednesday, June 7: After three very busy days, the Sir Alexander Mackenzie Bicentennial Expedition disembarked Fort Smith, NWT at 8:30 a.m.

The Expedition made good progress through the day, welcoming overcast skies and afternoon showers that made for pleasant paddling...campsites are few and far between as the Slave River winds its way northward from Fort Smith and we finally washed up at 7:30 p.m. on a soggy and buggy mud bar.

Thursday, June 8: It was a drippy morning as we pulled our tent stakes out of the mud, packed our boats and gladly departed from our dismal campsite. At 96 kilometres, this was our longest day yet on the trip.

Friday, June 9: After yesterday's long outing, the canoes traveled at a more lei-

surely pace today, trying out thier sails for the first time on the expedition.

Saturday, June 10: At 10:15 p.m., after 20 miles of tortuous, bug-infested travel, the canoes pulled in at an old trapper's cabin on the right bank of the channel.

It had been a long, hard day despite a rather modest 68 kilometres. But less than a kilometre downstream, the crew could see the silver expanse of Great Slave Lake.

Sunday, June 11: We were up this morning at 5 o'clock and paddled out onto Great Slave Lake at 6:30. It was a moment that expedition members had anticipated for quite some time.

Great Slave Lake, approximately 50 miles wide and 285 miles long, is the fifth largest lake in North America, tenth in the world. It is frozen eight months of the year, and depending on wind conditions, it can be clogged with pack ice into mid-June. For example, on his trip around the lake in 17879, Mackenzie was stalled many days by heavy ice floes.

We made a mid-morning stop on the appropriately named Stony Island -- a small outcrop along the lake's southern shore. It was a special place for our crew, since

Mackenzie and his party spent several days here waiting for the ice to move out. On such a tiny piece of real estate, one feels that they are literally walking where Mackenzie walked.

Tuesday, June 13: Our rest break continued on our small, unnamed island this morning. It was an ideal spot, too. Warm and sunny with a steady, freshening breeze. And no bugs. Along with fishing and sunbathing, many took time to peruse the indigenous plant life.

Wednesday, June 14: This morning the crew was up around 4:30 and back on the final leg into Yellowknife...the expedition was ahead of schedule.

Saturday, June 17: At approximately 650 miles, the expedition has reached an important point on its journey to the Arctic. By the time we leave Yellowknife, we will have been on our way nearly a month. Conditions have been ideal most of the way and the weather across Great Slave Lake was perfect. (Sir Alex must be fuming in his grave with envy.)

All members of the expedition are quite eager to complete the last leg of our run on Great Slave Lake and to finally paddle into the current of Deh Cho -- the Big River.

Ask Dr. Weir

Professor,
Department
of
Chemistry



Dr. Neil Weir

Q. Why does plastic waste not break down in the environment or even in the sea?

A. Plastic waste originates largely from discarded wrapping and packaging materials. Although most of the waste consists of two plastics - polyethylene and polystyrene - polyvinylchloride (PVC) and polyesters are being used to an increasing extent; e.g. many "unbreakable" pop bottles are now made of a polyester.

If you take a trip to the Supermarket, you will buy milk which is packed in a polyethylene container, a steak which is placed on a polystyrene tray and covered with a film of PVC, potatoes which are

packed in a polyethylene bag, a polyester bottle of pop, and finally at the check-out your purchases will be packed in a polyethylene bag. Similarly, your prescription drugs will be packed in a polystyrene container which has a polyethylene cap, and the shampoo bottle is also made of polyethylene. These materials ultimately turn up in the garbage, and become the so-called "plastic waste".

The persistence of these materials is attributable to their resistance to attack and breakdown by micro-organisms; i.e. to biodegradation. Two criteria are important when assessing biodegradability (a) the molecular weight, and (b) the nature of the material. Let me expand on each of these factors.

Plastics are made from polymers, which in turn, are made up of small molecules (monomers) joined together in chains, rather like beads on a string. This polyethylene consists of a large number of ethylene molecules joined together. The molecular weight of ethylene is 28, and that of a polyethylene containing 1000 monomer units is 28,000. Since the strength of a polymer is strongly dependent on the molecular weight, materials used for packaging tend to have high molecular weights (up to a million). It is precisely this requirement which leads to the lack of biodegradability of polyethylene and polysty-

rene, micro-bacteria attacking molecules at their ends only. So there are two vulnerable points in these polymers, whether the molecular weight is 1000 or 1 million. The effective concentration of biodegradable entities therefore decreases rapidly with increasing molecular weight (i.e. 2 per thousand in the first, and 2 per million in the second case), and this relationship is amply borne out by the persistence of plastic waste.

The second factor to be considered is that the probability of attack by micro-organisms increases rapidly, if the polymer contains polar groups, e.g. hydroxyl or acid. The polar nature of the group is associated with slight differences in electrical charge between the atoms making up the group. e.g. in the hydroxyl group, the oxygen atom becomes slightly negatively charged, while the hydrogen atom is slightly positively charged. In the case of polyethylene and polystyrene there are no such polar groups. These polymers are neutral (a non-polar), being composed of only carbon and hydrogen atoms, which have very similar electrical characteristics when bonded together. So these materials are not susceptible to bio-degradation.

Campus Calendar

To include your Department's event or activity in the Campus Calendar, please call Flo Sherren at 8300 or mail your information to SN1002. Please note there will be no *Agora* published in August. **Deadline** for the September *Agora* is August 23, 1989.

July

FRIDAY, 7

Alumni Annual Golf Tournament
Centennial Golf Course
Tee times: 4 to 5 p.m.
Dinner 7:30 p.m. Cash Bar
Tickets available at Alumni House
Call: 343-8155

SATURDAY, 8 & SUNDAY, 9

**Thunder Bay Lapidary
and Mineral Society**
Annual Gem Show
Bora Laskin Building
Saturday 10 a.m. to 8 p.m.
Sunday 10 a.m. to 6 p.m.

MONDAY, 17

Board of Governors' Annual Meeting
4:00 pm
Senate Chambers

August

MONDAY, 7

**CIVIC HOLIDAY
UNIVERSITY CLOSED**

THURSDAY, 31

**Silver Jubilee 2-Pitch Baseball
Tournament and Social**
Tournament begins at 12:30 p.m.
Social at about 4:30 p.m.
in the Faculty Lounge

**DAILY FOREIGN
TELEVISION NEWS
BB2011
9 AM - 5 PM
EVERYONE WELCOME**

September

MONDAY, 4

LABOUR DAY - UNIVERSITY CLOSED

TUESDAY, 5 - SATURDAY, 9

Student Orientation
and Registration Week
Deatailed Registration Schedule available
from the Office of the Registrar

WEDNESDAY, 6 - SUNDAY, 10

H.B.P.E. III - Camp School

MONDAY, 11

Classes begin

THURSDAY, 14

President's Silver Jubilee BBQ
beside Lake Tamblyn

**9th Annual Summer Hockey
Development Camps**

Hockey programs for boys and girls
are being offered in Power Skating and
Skill Development, Advanced Skills De-
velopment and Defencemen's Develop-
ment.

Applications for the August pro-
grams are available at the C.J. Sanders
Fieldhouse. For further information call
343-8213.

CHANCELLOR PATERSON LIBRARY HOURS

Regular hours will resume for the Sum-
mer Session July 4 - August 18, 1989

Monday - Thursday: 8:00 am -
10:30 pm
Friday: 8:00 am - 5:00 pm
Saturday: 11:00 am - 5:00 pm
Sunday: 1:00 pm -
9:00 pm

Summer Spectacular for Kids

The Thunder Bay Art Gallery and "Artvark" (the mascot) are teaming up to celebrate "Summer Spectacular" -- a variety of art classes for children of all ages during the months of July and August. Four sessions are offered Tuesday through Friday and include both in-studio and on-the-grounds art. Sketching, batik, printmaking, sculpture and painting are just a few samplings of the wonderful activities explored. Enrollment is limited so register soon. For more information please call 577-6427.

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Agora

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**celebrating
our Silver Jubilee**



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