Saint Mary's University, Halifax, Nova Scotia

the TIMES

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Could cannibalistic galaxies, such as this "cD" galaxy, be a threat to our own Milky Way. ... see story, page 2

"The Times, They Are A Changin'"

These are exciting, busy and ground breaking times for Saint Mary's University. Construction begins this April on the new business school, provincial government pay freezes will be lifted by year end and the first Atlantic Canada doctoral program in Commerce is in the works.

Dr. Kenneth Ozmon, President, Saint Mary's University.

The face of the average student is expected to change in the next few years, as more international students chose Saint Mary's to study. This semester marks the first time the Teaching English As a Second Language Centre on campus has had a record number of students, 100 in total, enrolled in various English language programs.

While students will continue to see an increase in tuition fees, the University hopes that government funding inequities will soon be rectified in favor of Saint Mary's.

"We have one hand tied behind our backs," says Dr. Kenneth Ozmon, President, Saint Mary's University. "At Saint Mary's we start with such a low funding base, it makes it more difficult for us to cope. We derive more money from students through tuition and other sources than most institutions." Currently 50 per cent of the University's operating grant comes from the students. "Students have come to recognize their future is hampered without an education. But with the job market today, many students rely on summer jobs to fund their education. It is very difficult for us to raise tuition over the next few years. But like taxes, tuition will increase," says Dr. Ozmon.

Today, Metro universities and colleges are working together in the best interest of their institutions and students. In the near future, students will see common course numbering and grading systems, and more movement of research and faculty between institutions. "Co-operation is the key word. There are a lot of areas where we can work together more effectively," says Dr. Ozmon.

The growth of the University's academic system, over the past two decades, has been astronomical. From the beginnings as an all-boys school, administered by the Irish Christian Brothers and later the Jesuit Order, the University has evolved into a co-ed, highly successful place of knowledge. Saint Mary's faculty continue to receive more funding per researcher than other institutions and each year the number of grants from the Canadian International Development Association (CIDA), the Natural Sciences and Engineering Research Council of Canada and the Social Sciences and Humanities Research Council of Canada increase.

"I would say that we are leaders in Canada for a Canadian institution of our size. One of the major components that makes our University different is our internationalization in obtaining grants from CIDA and providing service to students from around the world," says Dr. Ozmon.

All students and the three faculties at Saint Mary's will benefit from the building of The Frank H. Sobey Faculty of Commerce School. The new building will provide an additional 80,000 square feet, with state-of-the art classrooms. Rooms will be made available for Arts and Science courses.

The proposal to establish the first ever doctoral program in Commerce has already been sent to Senate. But Commerce is just one component to Saint Mary's. There are a number of major and minor projects in the works with the Arts and Science faculties, including establishing a minor in Commerce for students enrolled in a Bachelor of Arts degree. There are also a number of joint programs administered by the faculties including the Master of Women's Studies program with Dalhousie and Mount Saint Vincent universities and International Development Studies with Dalhousie. "The goal is to always provide studies that are appealing for our students," says Dr. Ozmon.

Dr. Ozmon has seen many changes take place at Saint Mary's. Now in his 18th year at the University, and reappointed as President an additional four years, he is looking forward to tackling the many challenges and issues which the University will face.

"A President of a university has a much more public role today. We act as a lobbyist, fund raiser and booster of an institution. We like to see ourselves as the impetus for change and vanguards for the future. I really enjoy this role. It's important to get beyond the ivory towers and be sensitive to the needs of our community and to be a part of that community," he says.

The activity that is gearing up on campus will keep many people occupied and is sure to keep Saint Mary's in the forefront as a leader in quality, accountable and innovative teaching. Dr. Ozmon says, "In the future you can expect Saint Mary's University to be better academically, and still a university that has a heart." ▽

Saint Mary's wins Funding for Two International Projects

Saint Mary's University is one of two universities across Canada to be awarded two international projects by the Association of Universities and Colleges of Canada (AUCC).

Funded by the Canadian International Development Association (CIDA), the grants, known as UPCD-Tier II, total almost $1.5 million over five years. The first project is in partnership with the Ministry of Education of Gambia. Saint Mary's will play a fundamental role in the establishment of The Gambia's first university. The second project will develop aquatic resource management practices in Cambodia.

Building a university in the Gambia:

Nova Scotia has played an active role in the development of post-secondary education in the Gambia for 20 years. In 1993, Education students from Saint Mary's travelled to the Gambia to teach in a summer school for high school students. Last year, Saint Mary's established the University Extension Program, allowing Gambian students the chance to pursue a post-secondary education, in a country without a university.

Professors from Saint Mary's travel to the Gambia to teach courses relevant to a Bachelor of Arts degree. Upon graduation the students will receive a Saint Mary's degree. This semester there are four professors teaching Geography, Anthropology, Education and the first ever introduction to Chemistry course. The current University Extension Program will continue for the next four years.

Funding from CIDA, of $744,000, for the Tier II project will build on the Gambia's current post-secondary education system. Saint Mary's will work with the Ministry of Education in the Gambia to build an administrative system for a university.

"We're looking at the building blocks of a university," says Heidi Taylor, Manager, International Projects, International Activities Department, Saint Mary's University.

"This is what is really exciting. This project allows us to draw on the expertise of the whole other side of the University like the Registrar's, Admissions, Business Office and even Public Affairs departments. These are people who don't usually get involved with an international project. It's new and different and will be a valuable experience for Saint Mary's," says Taylor. The Gambia already has three institutions including an agriculture college, polytechnical institution and college, but no university. With existing infrastructure present, the goal is to establish a university administrative system that is accountable, affordable, and credible with standards and quality.

Over the next seven months project directors in both countries will establish a detailed plan that will determine which systems need to be formed and improved upon. A number of workshops will take place in the Gambia and Gambians will

continued on page 8

INSIDE:

New Course Teaches Safe Working Procedures

by Renee Field

(Left to right): Dr. Hermann Schwind, Management Department, Saint Mary's, the Honorable Manning MacDonald, Nova Scotia Minister of Labor, Dr. Kenneth Ozmon, President, Saint Mary's, Dr. Paul Dixon, Acting Dean of Commerce, Saint Mary's and Dennis Barnhart, Safety Co-ordinator, Nova Scotia Power and Co-Chair, Project Minerva Steering Committee, assembled in Province House for the official signing of the agreement which provides funds to Saint Mary's and TUNS to offer occupational health and safety courses.

Saint Mary's University is one of two universities in the province to receive funding from both the provincial government and a number of businesses to establish an occupational health and safety course.

"Project Minerva," was officially launched at Province House in November 1996. It is an educational initiative designed to help engineering and business schools produce graduates who appreciate the importance of health and safety issues that affect the Canadian workplace.

Saint Mary's and the Technical University of Nova Scotia (TUNS) each received $7,800 to offer the new courses starting this semester. Jim LeBlanc, Executive Director, Occupational Health and Safety Division, Department of Labor, is teaching the half-credit course at Saint Mary's.

"The objective is to try and create an awareness behind the issues for future managers in the workplace. People need to be prepared," says LeBlanc. The course will examine the historical perspective behind health and safety issues, job analysis and how today's technology affects the working environment. A number of people in the business community and health related fields will be guest lecturers. In addition, LeBlanc has a number of stories he can relate to the class.

Project Minerva was formed with the co-operation of the Nova Scotia government, the Canadian Society of Safety Engineering, the Department of Labor, the Workers' Compensation Board of N.S. and a number of other government departments and companies.

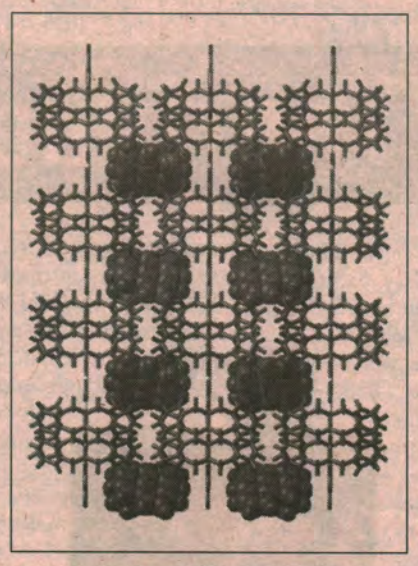
In conjunction with the project the new Occupational Health and Safety Act requires that within two years the principles of workplace heath and safety must be taught in trade schools, community colleges and any other institutions designated by the minister. Saint Mary's and TUNS are leading the way by offering a safety course for commerce and engineering students. ▽

Crystal Power

Disposing of pollutants like PCB's and poly aromatics which are found in the Sydney Tar Ponds, is expensive and difficult. Artificial crystal-like compounds made at Saint Mary's University could hold the key to making a difficult job simple.

Dr. Michael Zaworotko, Chair, Chemistry Department, Saint Mary's University, has been able to manufacture a zeolite-like crystal compound with holes that have absorbing properties for these pollutants.

The crystal compound is called a metal organic open framework compound, or "moofc." More than a dozen have been designed by him, and Dr. Pierre Losier, a doctoral fellow and several undergraduate students. The moofc's contain holes that can separate organic pollutants or gases.



An example of a moofc designed by Dr. Michael Zaworotko, Chemistry Department. Moofc's have absorbing properties and can be used to clean up environmental pollutants, such as PCB's.

They act like a sponge to absorb pollutants and can also slowly release chemicals, such as artificial pheromones to help control insect populations.

The potential for a compound like this seems endless. "There could be considerable reward if commercial development of these compounds occurs," says Dr. Zaworotko. The moofc's are moderately cheap to build, running about $100 per pound. "We can now do what naturally occurring compounds can't do," he says. Dr. Zaworotko's three years of research into crystal engineering is paying off. What before was theoretical has now been proven.

One paper, out of a dozen or more that will be published over the next several months, will appear shortly in *Angewandte Chemie*, one of the leading Chemistry journals.

For the past three years, he has received a total of $78,000 in grants from the Environmental Sciences and Technology Alliance of Canada and the Natural Sciences and Engineering Research Council of Canada. The funding has allowed Dr. Zaworotko to hire two post-doctoral workers and a number of undergraduate summer students for workterms.

"These compounds are probably more important and relevant than anything we've ever done before. The application we are currently pursuing is gas separation," he says.

The only problem is that not enough moofc's can be manufactured for industries. Dr. Zaworotko hopes that an industry will utilize his research to mass produce these compounds for environmental gains. He is currently collaborating with chemists at Queen's University in Belfast, Northern Ireland, University of Alabama, United States, and with Praxair, which is the biggest producer of gases in the world. The collaboration with other universities is funded through a collaborated research grant from NATO. ▽

Mapping Cannibalistic galaxies

by Renee Field

"To boldly go where no man has gone before," could easily describe the research undertaken by a Saint Mary's University astronomer, who plans to compile a sky map detailing "cD" galaxies, which are the largest known galaxies in the universe.

Dr. Michael West, Astronomy and Physics Department, recently received a NATO grant valued at $9,000 as part of an international collaboration project, to study cD galaxies. These galaxies are the true heavyweights in the galactic world, with sizes 10 to 100 times larger than normal galaxies, including the Milky Way. They are also believed to be star eating galaxies with huge appetites.

The term "cD" is old astronomy jargon dating back to when astronomer W.W. Morgan identified a new class of super-giant galaxies. He established the method of denoting the different types of galaxies by letters. In this case, the "D" refers to super-giant elliptical galaxies and the "c" to the fact that they are usually found in the centre of galaxy groups.

The goal of this research is to compile the first complete all-sky catalogue of cD galaxies. There are still many unanswered questions surrounding cD galaxies. "How they are formed is still a mystery," says Dr. West.

There are a number of theories surrounding how cD galaxies accumulate their bloated size. Some scientists think they are carnivorous in their behavior and devour smaller neighboring galaxies. Another view is that they may be "star piles" produced by the accumulation of stars and other material torn from other galaxies during collisions. Determining how cD galaxies are formed is just one of the questions Dr. West plans to investigate. He would also like to discover how common these galaxies are and whether they exist in specific regions of the universe.

"Our catalogue will provide a homogeneous sample of cD galaxies whose properties can be studied in greater detail, and it will also be a valuable resource for other astronomers around the world," says Dr. West.

This project is an international collaboration headed by Dr. West and Dr. Bob Mann, University of London, England and a number of other colleagues at various universities in England and Scotland.

Searching for cD galaxies requires state-of-the-art facilities that can digitize astronomical photographs of the sky. The international effort of the group allows the team access to advanced new data that are being produced by the Super COSMOS scanning machine at the Royal Observatory in Edinburgh, Scotland, which is one of the most advanced digitizing facilities in the world. Once the astronomers have digitized images that are stored on the computer they will utilize a sophisticated computer program that can search among the millions of detected galaxies to find the small number of cD galaxies out there. "It's sort of like separating the wheat from the chaff," says Dr. West.

The group plans to use existing data and photographs from previous telescope observations including information Dr. West compiled in Chile and the Canary Islands. "What is new about this project is our use of the most advanced digitizing facility for astronomical images in the world, which is just coming on-line now," he says.

The NATO grant provides funds that will allow the astronomers the chance to travel to each other's institutions and to the Royal Observatory in Edinburgh. This year, Dr. West plans to make a number of trips to London and Edinburgh that will enable him to work directly with Dr. Mann. Each visit will probably last up to four weeks.

While the project is in its infancy, a cD galaxy map of the universe could one day be an essential tool that may lead the way for future expeditions of that final frontier, space. ▽

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AROUND Campus

Retiring board members

In late November 1996, a retirement reception was held for members of the Board of Governors who retired this year. Pictured with Dr. Kenneth Ozmon, President, Saint Mary's is Robert Pearson, student representative on the board, Dr. Wayne Grennan, Philosophy Department, Saint Mary's, Dr. John C. O' C Young, Professor Emeritus, Chemistry Department, Saint Mary's and current Board Chair, Jack Keith, C.M., Senior Vice-President Atlantic, Bank of Nova Scotia.

Chimpanzee gets a name

The winner of the name draw for the bones of the chimpanzee that Dr. Paul Erickson, Anthropology Department, received last Spring, was Clem Rodrique, Project Planner, Physical Plant. The chimpanzee will now be officially called "Ascendant."

First aid training on campus

On December 10, 1996, 12 employees at the University participated in First Aid Training offered by the Red Cross. Pictured with a head wound is Sam Scribner, Assistant Director, Residence Services with First Aid Instructor Derek Colburn, Residence Co-ordinator, Rice residence.

Remembering the women of the Montreal Massacre

On December 6, 1996 a memorial service was held in the Saint Mary's Art Gallery for the victims of the 1989 Montreal Massacre. Sarah Linley, 19, a second year student enrolled in the Diploma of Engineering program at Saint Mary's is this year's recipient of the Montreal Women's Memorial Scholarship.

Atlantic Centre of Support for Disabled Students receives donation

Michelin made a sizable donation to the Atlantic Centre of Support for Disabled Students at Saint Mary's University. (Left to right): Dr. David Leitch, Director, Atlantic Centre of Support for Disabled Students, Mike Blais, 27, a third year Bachelor of Science student, Norma Nixon, Corporate Communications Manager, Michelin North America (Canada) Inc, and Kevin Penny, 20, a second year Commerce student.

Universities recognize volunteers

This year as part of the Canadian Council for the Advancement of Education (CCAE)'s regional conference, which was hosted by Saint Mary's University, and the Technical University of Nova Scotia, volunteers were recognized for their continued support to universities across the country. Barry Gallant, Acting Director, Alumni Office congratulates Brian Downie, past-president, Saint Mary's University Alumni Association and a lawyer with Cox Downie, in Halifax. Downie was recognized by the Alumni Association and CCAE for his volunteer work with the University.

Selling with a message

Margot Franssen, President, The Body Shop Canada, gave a public lecture on November 14, 1996 in the McNally building. More than 100 people showed up to hear Franssen talk about The Body Shop's marketing campaign. Combining social consciousness with marketing is the winning formula for the Canadian company.

Masters' of Business Administration (MBA) reception

(Left to right): Don Mills, President, Corporate Research Associates, Devlin Hinchey, President, MBA Student Society, Judy Griffith, Associate Vice-President, Human Resources, TD Bank and Leslie Metzing, MBA student, participated in the MBA Society reception that was held in the Courtside Lounge in November, 1996.

Xmas survival packs

In December 1996 the Saint Mary's University Student Alumni Association got into the swing of things. Twenty students donated their time to pack survival kits, which parents purchased for students in residence. Forty cases of chocolate chip cookies were donated by the Real Atlantic Superstore, Bayer's Lake Industrial Park and Kraft donated rice crispy squares and frosted flakes. The students also received a number of other donations from various other companies. Pictured with a wall of cookies is (kneeling) Yvonne Templeton, 21, a third year Commerce student who is Co-Vice-President, Student Alumni Association and Jayne Allen, 19, a second year Science student.

Staff donation to Home of the Guardian Angel

This year proceeds from the staff Christmas luncheon were donated to the Home of the Guardian Angel. Pictured (left to right) is Fred Voeltz, Co-ordinator, Stores Department, Joan Vigneau, Executive Director, Home of the Guardian Angel receiving the cheque of $320 and Kim Squires, Manager, Personnel Services.

London Life donation

In December 1996 London Life donated $2,000, making this the fourth of five annual installments on their total pledge of $10,000 in support of the Building on Strength Campaign for Saint Mary's University. Pictured donating the cheque is Greg Randall, a recent Bachelor of Commerce graduate from the University with Donald Keleher, Director, Development Office.

Displaying our wares

The 17th annual Faculty, Alumni, Student and Staff art exhibition held in the Art Gallery at Saint Mary's University, was a success. Pictured taking a closer look at a print is Leighton Davis, Director, Art Gallery.

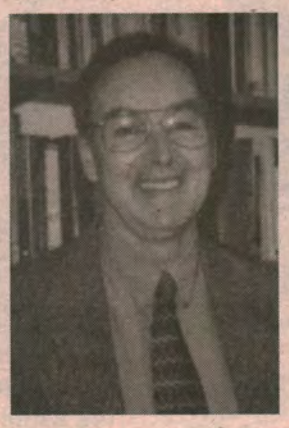
CIM courses earn credit towards Bachelor of Commerce Degree

In December 1996 Saint Mary's University officially recognized Canadian Institute of Management courses for credit towards a Bachelor of Commerce degree. Back row (left to right): Dr. Colin Dodds, Vice-President, Academic and Research, Saint Mary's, Ernie Kemball, President, Atlantic Region, Canadian Institute of Management, front (left to right): Dr. Kenneth Ozmon, President, Saint Mary's and Ron MacNeil, President, Halifax-Dartmouth Branch, Canadian Institute of Management.

The Importance of Rec

Honoring 25 years of service

Dr. Dennis Connelly, Finance and Management Science Department



Dr. Owen Carrigan, History Department

Paul Rooney, Patrick Power Library, Media Services Department

Dr. Michael Larsen, Dean of Arts

Philip MacDonald, Physical Plant Department

Elizabeth Schultz, Physical Plant Department

For the third year in a row, Saint Mary's University set aside a day to recognize employee contributions and service to the University.

On November 22, 1996, the University recognized the accumulation of 290 years of service by honoring 20 employees with 10 and 25 years of service.

"I think it was a great decision to honor our faculty and staff. This is really what Saint Mary's University is all about. We are here to celebrate you," says Dr. Colin Dodds, Vice-President, Academic and Research.

The decision to honor employees evolved out of the Ideas Team, which was established to discover ways to improve the workplace at Saint Mary's. The members of the team drew up a questionnaire, which was sent out to over 300 non-academic staff to discover what employees wanted. Team members also talked to other universities and employers to find out what different organizations were doing for employee morale. The recommendations were sent to Kim Squires, Manager, Personnel Services and Daniel Stone, Director, Personnel Services.

The decision to honor employees at 10 and 25 years of service involved hours of preparation for the first annual event, in 1994. At that time, 231 people were recognized, totaling 4,425 years of service to the University. This year, that number increased to 5,200 years of accumulated service.

"Not only is it the people who are individually being recognized, but the day is set aside to recognize all employee contributions to the University. community," says Squires. "In total almost half of our staff have been recognized." Two hundred and eighty staff and faculty have been officially recognized at the University out of a community of 576 full-time employees.

"There is a lot of preparation that goes into employee recognition, but recognizing the contributions of our staff and faculty is what makes our University special," says Squires. Each employee, whether they are staff or faculty must be contacted on their anniversary date. Photos have to be arranged, lithographs and watches ordered, food organized and the ceremony planned. Recipients at the 10 year level receive a 10 karat white gold label pin and employees at the 25 year level have a choice of either a gold watch or a limited edition lithograph of the University.

Approximately 200 people attended the 1996 ceremony and Squires hopes that all University employees will attend future employee recognition events.

Personnel Services also tries to develop new and different ideas for the day. Last year professor emeritus were honored as part of the program. Any ideas, suggestions or feedback for future programs should be sent to Squires either through inter-office mail, or e-mail: Kim.Squires@stmarys.ca.▽

Dr. Kenneth Ozmon, President, Saint Mary's University, hands Elizabeth Schultz, Physical Plant worker for the past 25 years her gift from the University.

Busy retirement life

by Renee Field

Retirement for many means taking it easy. Not so for one professor, who is now able to devote himself one hundred per cent to his passions— radio astronomy and Jesuit history.

Father William Lonc, Professor Emeritus, Astronomy and Physics Department, retired two years ago, after 27 years with the University. While he wasn't too keen on the idea, he was pleasantly pleased to receive professor emeritus status. The department generously allowed him to keep his office, in the far north corner of the basement in the McNally building.

In that office, crammed with computer software, radio gadgets, articles about radio astronomy, manuals and books, Dr. Lonc has written a number of radio astronomy articles. Last year, after compiling his notes for the past 15 years he published *Radio Astronomy Projects*, by RadioSky Publishing Company, Louisville, Kentucky. The book, which is geared for high school and college level students, tells the reader everything from how to build a radio telescope to how to detect the sun's radiation. Some of the articles in the book were originally published in the *American Journal of Physics* and the *Journal of the Royal Canadian Astronomical Society.*

"Mainly it's a collection of projects which I describe in terms of hardware needed and the physics involved," he says.

Some universities are using the book as a reference manual. It is geared both for amateurs interested in radio technology and for teachers interested in demonstrating laws of physics in a new way. Dr. Lonc is already working on a sequel that will include articles from other authors working in the same field.

Sable Island project

Every summer, Dr. Lonc makes his yearly trek to Sable Island, located about 300 kilometres off the coast of Nova Scotia.

Since 1980, under the aegis of Saint Mary's, he has set up and maintained a radio-research facility on the island. Once a year he gets ferried by the Coast Guard to check on the system. Saint Mary's is the only Nova Scotia university with a year round research project on the island. The radio system is used to study the ongoing propagation of very short radio waves over a long salt water path — from Sable Island to Halifax. The fact that radio waves from the island have reached the receivers on top of th ing is quite unique. "Every once in a wh the island quite clearly... and this is qu Besides maintaining the equipment he of the findings.

Publishing Jesuit history

Even two projects isn't enough for him "computerize" the translation of a book early 1600's in Acadia, Nova Scotia. N almost a thousand pages.

"I think a movie could be made of action," he says. The book, *The First Ac* the first volume out of seven that we Campeau, S.J. and later translated in Topp, S.J. Dr. Lonc believes that ther book's introduction, which is about separate publication.

Part of the story touches on regicide. cide was being talked about openly Henry IV, was not well liked by some p people who even accused the Jesuits of

The story details Brother Gilbert du France to Port Royal. Apparently, he ha on the ship concerning regicide and on was accused of favoring regicide, which his name, Father Biard, the Jesuit Supe the scene and asked Port Royal's gov acquit Brother du Thet of the charge. al refused. Finally, Brother du Thet wa his name. In the end all charges were admitted that he had been "in his cups the damage was already done. The re Superior and the governor-general of is said, however, that the governor expressed remorse for having treated th

The book explores the eastern sea c recounts dramatic encounters with N by the English from Jamestown, Virgi that movies are made from," he says.

cognizing Employees

Honoring 10 years of service

Dr. Van Kamamidi Sastry, Division of Engineering

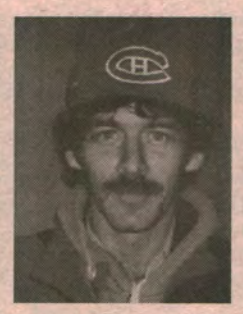
Dr. Francis Boabang, Finance and Management Science Department

Dr. Shelagh Crooks, Philosophy Department

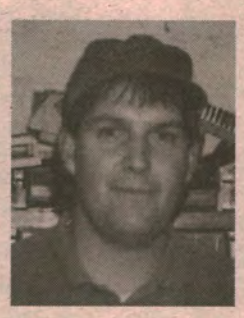
Kenneth Anderson, Physical Plant Department

Joseph Aucoin, Physical Plant Department

Stewart Auld, Physical Plant Department



Wayne Blanchard, Physical Plant Department



James Malloy, Physical Plant Department

Missing from photos are: Mary Leahy, Business Office; Linda MacDonald, Continuing Education; Dr. Margarethe Heukaeufer, Modern Languages and Classics Department; Andrew Wooden, Physical Plant Department; David Brown, Mathematics and Computing Science and Dr. Donald Naulls Political Science Department.

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plots the statistical frequency

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nto French by Father George
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people at the time. There were
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However, the governor-gener-
s sent back to France to clear
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lationship between the Jesuit
Port Royal never recovered. It
-general on his death bed,
he Jesuits so harshly.
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atives and a devastating attack
nia. "This is the kind of thing

Dr. Lonc with one of the many gadgets he has worked on over the years is currently working on a sequel to his *Radio Astronomy Projects* book.

Dr. Lonc hopes to be able to publish the introduction to the book. First however, he needs to make suitable arrangements with a number of colleagues, including Father Campeau, who is about 80 years old, and translator Father Topp, who is in the Jesuit Infirmary in Ontario. ▽

Media Services

Tucked into the corner on the third floor of the Library is an office that many people are unaware of on campus. It is a small department, but without it, there would be no videos, films, slides, overhead projectors, screens or other technical backup to enhance the teaching process.

When Paul Rooney, Director, Media Services started working at the University's Audio-Visual Department, as it was then known 25 years ago, there were only a few items to lend out. Reel to reel tape recorders, six overhead projectors and a few film projectors, made up the department, then located on the second floor of the McNally building.

"When I first came here I would have to have on duty 10 to 12 students, and mostly we co-ordinated the equipment for every hour. Logistically it was a real pill," says Rooney. Each class change meant that equipment had to be shuttled from room to room by the part-time student assistants. There was a room with calculators set up for student use. Today, there are three full-time people in the department. Currently, there are 114 permanent overhead projectors and screens installed in the teaching classrooms.

Thirteen years ago in 1984, Rooney started wiring classrooms, so that television signals could be transmitted to the teaching areas. "At one time I thought maybe 12 rooms would be enough and now we have 40 wired," he says. All the television equipment is hooked up to Media Service's closed circuit television distribution system.

With so much equipment throughout the campus, maintaining it is demanding. Three times weekly, each projector on campus is cleaned, adjusted and new bulbs are installed in burnt-out machines. "Having two great staff members helps immeasurably and being pager equipped as we are, if a unit burns out a bulb during a class period, we can be there literally within minutes after being called," says Rooney. ▽

Pictured in the control room of the closed-circuit television system is Paul Rooney, Director, Media Services, who was recognized for 25 years of service on Employee Recognition Day.

University cartographer dies

For the past 15 years Benoit Ouellette served as Saint Mary's University's cartographer for the entire University community and in particular the Geography Department.

Uncovering the correct and best map was part of his talent. The University community was saddened to hear of his death on December 29, 1996.

Born in Moncton, New Brunswick, Ouellette received his Bachelor of Arts at the University of Moncton. He later continued his education at the College of Geographical Sciences, Lawrencetown, Nova Scotia.

Ouellette was involved with a number of different organizations. He was a teacher at the Taoist Tai Chi Society, member of the Canadian Association of Geographers, the National Geographical Society and the Federation Acadienne de la Nouvelle-Ecosse. He was also an avid wood-carver.

A memorial bursary has been established in Ouellette's name at the University of Moncton. ▽

Scholarly & Professional Development

ASTRONOMY AND PHYSICS DEPARTMENT

Dr. George Mitchell, Astronomy and Physics Department, was recently elected to the position of Chair for the Canadian Institute for Theoretical Astrophysics (CITA). For the past two years he was a member of the governing CITA.

Dr. David Clarke, Astronomy and Physics Department, gave a talk entitled "X-ray Cavities in the Cygnus A Radio galaxy," at the Canadian Astronomical Society meeting in Kingston, Ontario, in May 1996. He attended a workshop on "Massive Parallelism on the Cray T3D/T3E," at the Pittsburgh Supercomputer Centre in June 1996. Dr. Clarke also published a manuscript called "Formation of Cavities in the X-Ray Emitting Cluster Gas of Cygnus A," with Dan Harris, Harvard University and Chris Carilli, National Radio Astronomy Observatory, in the monthly notices of the Royal Astronomical Society. Recently, Dr. Clarke, hosted the 12th 'Kingston Meeting' on Theoretical Astrophysics in which astrophysics from across the world discussed recent innovations in supercomputer modeling and calculations in astrophysics.

Dr. David Turner, Chair, Astronomy and Physics, was recently appointed Chair, Herzberg Institute of Astrophysics Advisory Committee. He travelled to Victoria, British Columbia, in December 1996 with committee members to establish the terms of reference for the committee as well as to complete a site visit of the Dominion Astrophysical Observatory. Dr. Turner was re-appointed Editor, *Royal Astronomical Society of Canada's* (RASC) *Journal* at the June 1996 General Assembly, held in Edmonton. Joining him on the editorial board of the re-designed publication are Dave Lane, Technician, Astronomy and Physics, and Associate Editor Pat Kelly, from the Technical University of Nova Scotia and part-time instructor in the Mathematics and Computing Science Department, Saint Mary's University. Dr. Turner also travelled to the University of Toronto in September 1996 to act as external examiner for the PhD thesis of Ian Shelton, the discoverer of Supernova 1987A.

In November 1996, **Dr. Michael West,** Astronomy and Physics Department, gave a series of five invited lectures on galaxy clusters in Rio de Janeiro, Brazil. The lectures were part of a special series called "Ciclo de Cursos Especiais" held at the Brazilian National Observatory. In addition, Dr. West gave invited talks at the Universidade de Sao Paulo in Brazil and the Observatorio Astronomico de Cordoba in Argentina. Dr. West has accepted an invitation from the Royal Netherlands Academy of Arts and Sciences to give an invited lecture at a special colloquium on "The Most Distant Radio Galaxies" to be held in Amsterdam in 1997. Dr. West recently published an article titled "Galaxy Clusters: Urbanization of the Cosmos," *Sky & Telescope*, January 1997. Dr. West was recently awarded a NATO Collaborative Research Grant in the amount of $8,700. See story page 2.

CHEMISTRY

Dr. Robert Singer, Chemistry Department, and Bonnie L. MacLean, Kimberlea Hennigar, Andrew Vaughan published "The Catalytic Effects of Dimethylzinc on the 1,4-Conjugate Addition of Dimethylphenylsilyllithium to α, β-Unsaturated Carbonyl Compounds," in *Manuscript In Preparation.* Dr. Singer, and Jacqueline K. D. Surette, and Laine Green will publish "1-Ethyl-1-methylimidazolium halogenoaluminate melts as reaction media for the Friedel-Crafts acylation of ferrocene," in the *J. Chem. Soc., Chem. Commun*, in 1997. Dr. Singer previously published with Andrew Vaughan, "Conjugate Addition of Zinc Halide Derived Trialkylsilyl(dialkyl)zincate Reagents to α, β-Unsaturated Carbonyl Compounds," in *Tetrahedron Lett.*, 1995, V. 36, p. 5683.

ENGLISH DEPARTMENT

Drs. Wendy Katz and Lilian Falk, English Department, presented a public lecture called "George Hutchinson, A Canadian Illustrator of Robert Louis Stevenson's *Treasure Island*," on November 29, 1996 in the McNally building.

IRISH STUDIES DEPARTMENT

Congratulations to **Dr. Seosamh Watson,** who has been elected Dean of Celtic Studies at the University College Dublin. Dr. Watson filled in for the Chair of Irish Studies at Saint Mary's University for the Spring term of 1991. During this time, he taught the introductory course in Scottish Gaelic, as well as Gaelic literature in translation and the socio-linguistic History of Ireland.

MANAGEMENT DEPARTMENT

Dr. Terry Wagar, Management Department, presented his research on "Downsizing, Dumbsizing and Rightsizing: Workforce Reduction in Canada," to the Metropolitan Halifax Chamber of Commerce. Dr. Wagar also published, "Union Status, Organization Size and Progressive Decision-Making Ideology as Predictors of Human Resource Practices," in *International Journal of Employment Studies;* "The Relationship Between Plaintiff Gender and Just Cause Determination in Canadian Dismissal Cases," in *Sex Roles*, with James Grant; "What Do We Know About Downsizing," in *Benefits and Pensions Monitor*; and "Wrongful Dismissal: Perception vs. Reality," in *Human Resources Professional.* ▽

TV/VCR donated to Cole Harbour High

(Left to right): Natasha Winters, Cole Harbour District High School student, Gary Hartlen, Principal, Cole Harbour District High School, Harv Stewart, Lisa Blackburn and BJ Wilson, hosts of Q104's Breakfast Show and Jonathan Arsenault, Cole Harbour District High School student.

Today, high schools have access to the internet, and recruiting brochures and videos, all marketing post-secondary institutions. Saint Mary's University, has made it easier for students to select a post-secondary institution.

In November 1996, Saint Mary's University, Q104 and Wacky Wheatley's donated a TV/VCR unit to Cole Harbour District High School, so that students would have a designated machine to view recruiting tapes of universities across the country.

"Up until now we have had to use the classroom machines," says Michael Whitehouse, School Counsellor. "Students had to work around teaching schedules in order to use the machine. With this new unit, students will have a dedicated machine in the Counsellor's Office where they won't be rushed into making a decision."

Making university accessible is a mandate at Saint Mary's University and what better way to reach out to students than to have the Q104 Breakfast Team on hand. Hosts of the breakfast show, BJ Wilson, Harv Stewart and Lisa Blackburn, donated a number of free movie preview tickets to the students.

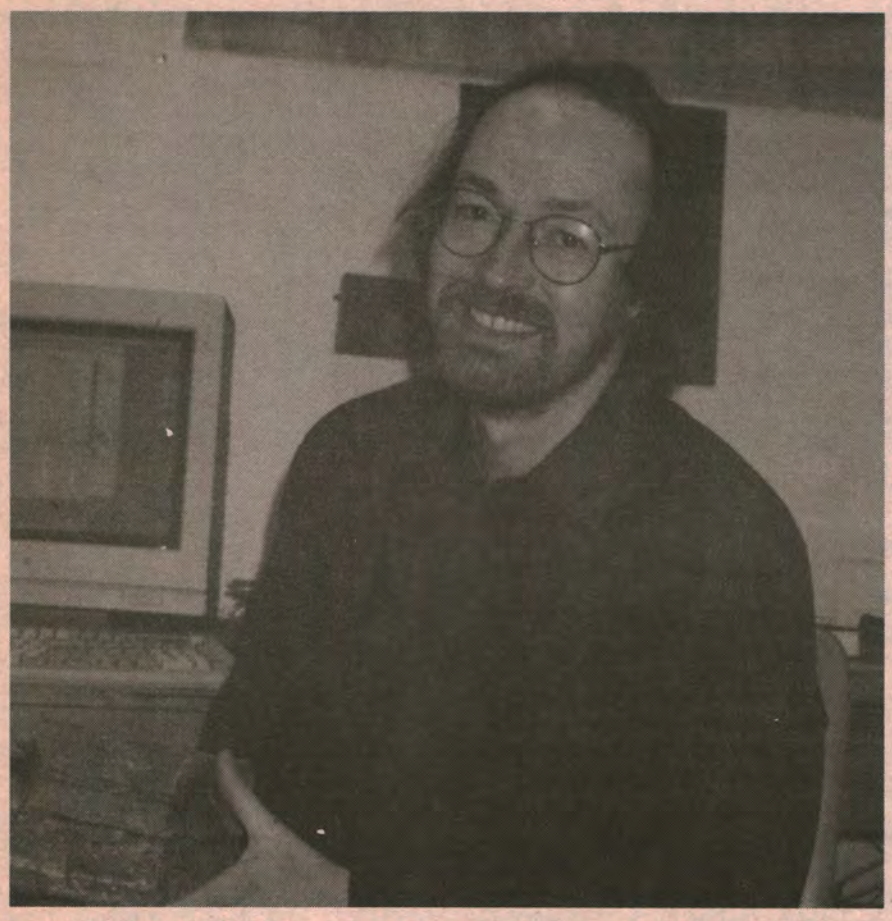
"The decision to attend university can be somewhat daunting but now students can watch the recruiting tapes and get a better feel for the university of their choice. University is an experience as well as an education," says Dr. Kenneth Ozmon, President, Saint Mary's University.

"Having Q104 work with us has been excellent," says Greg Ferguson, Director, Admissions, Saint Mary's. "I have been really impressed by the quality of the advertisements and people are noticing them."

The number of students inquiring about Saint Mary's remains strong. This year the recruitment team is expanding their focus to include more schools in Newfoundland, New Brunswick and Ontario. Currently all the high schools in Nova Scotia and Prince Edward Island are visited at least once. With over 80 per cent of Saint Mary's enrollment originating from the Maritimes, the recruitment team takes their job seriously.

A Saint Mary's recruitment team takes a number of people from different administrative departments including Alumni, Co-op Education, Student Services and Athletics and Recreation. Last year the team visited over 150 high schools in the Atlantic Provinces, and schools in Ontario, British Columbia, the Bahamas, Bermuda and Trinidad.

This semester, Saint Mary's University, Q104 and Wacky Wheatley's will donate TV/VCR units to three different Metro high schools. ▽



Holding a sample of a 200 billion year old rock found in the Arctic is Dr. John Waldron, Geology Department, Saint Mary's University.

Two billion year old rocks found in the Arctic

by Renee Field

Dr. John Waldron's expertise in identifying deformed sedimentary rocks which are found throughout Nova Scotia, led him on a journey far into the Canadian Shield.

This past summer, the Geological Society of Canada (GSC), organized two expeditions to the Slave and Churchill provinces of the Canadian Shield. Remote, barren landscapes, they are accessible only by float planes and helicopters.

Dr. Waldron, Geology Department, Saint Mary's University, has been investigating these rocks for over 16 years. He met up with Dr. Wouter Bleeker, a GSC geologist, at a camp on an island in Hearne Lake, located about 50 kilometres east of Yellowknife, to the north of Great Slave Lake. The lake is ideally suited for the study of rocks formed during the Archean period, a little over two and a half billion years ago. Huge deposits of Archean rocks were formed and today, they are easily accessible on lake shores in the Shield.

"These rocks are half the age of the Earth... the Canadian Shield is the best place in the world to see Archean rocks," says Dr. Waldron.

Four different lakes were visited. "The goal is to understand how these sedimentary rocks were deposited," he says. These rocks are similar to those found in Southern Nova Scotia. In both areas the rocks that form the present landscape have been folded and tilted over time.

However, there are some significant differences between the two areas. "The rocks in the Slave province area are older than the rocks found in N.S. and were formed when there were no animals on Earth," says Dr. Waldron. Most of the deformed sedimentary rocks located in N.S. have small burrows or pathways, that clearly indicate the existence of living animals.

Part two of his research involved examining rocks near Arviat, in Nunavut, located in what is known by geologists as the Churchill Province of the Shield. The camp was located 50 km inland in the Eastern Arctic, where the land is all tundra and vegetation only reaches about a foot in height.

"These rocks are very different from what we find in N.S. There were clearly active volcanoes in the area," he says.

Dr. Waldron was able to identify volcanic eruptions because of the small grains of mineral feldspar that were abundant in the sandstones. There were also banded iron formations found in the rocks. These rocks are unlike any forming today. One irritating aspect of these rocks is getting a precise reading of their location and the orientation of the layers. It is very difficult because they are magnetic and won't allow a compass to make an accurate reading.

These rocks originated during the Archean period. Dr. Waldron speculates that the Archean rocks that have evidence of volcanic particles were once on a very different continent with a different climate, compared to the Archean rocks found in the Slave province. The Churchill and Slave provinces were probably brought together by collisions between continents about 1800 million years ago. The Canadian Shield remained intact during the break-up of the supercontinent called Pangea, about 200 million years ago.

"I was somewhat surprised by these findings. There's been less work done in this area," he says and more research is needed.

This was Dr. Waldron's first field expedition to the Shield and he is already planning a research trip back this summer. ▽

Master's student researches the Innu of Davis Inlet

The relocation of the Innu of Davis Inlet is not only topical, but a political necessity for the federal government, says Tim Powers, 28, an Atlantic Canada Studies Master's student at Saint Mary's University.

"In terms of the move, the distance isn't important. The new location has significant value because it used to be a holy land and burial ground," says Powers, who received a Gorsebrook fellowship worth $1,000 towards his studies.

The research into the conditions of the Innu is second nature to Powers. For the past five years he has worked in a variety of jobs with the federal government, including working with the Minister of Indian Affairs and the Minister of Fisheries. Currently, he is acting as an advisor for the Minister of Indian Affairs concerning the relocation of the Innu of Davis Inlet.

The Mushuau Innu will be moved 15 kilometres from their present site to the mainland of Labrador, Newfoundland. This is not the first move for the Mushuau Innu. Thirty years ago, they were moved 10 kilometres from old Davis Inlet to their present location. At that time, it was thought that the move would be more economically viable. However, the opposite happened and the Mushuau Innu became even more isolated, suffering from a decline in health and social conditions.

The move to the mainland has a number of conditions attached to it by the federal government. At the top of the agenda is improving the social structure of the community and tackling health issues. Over 90 per cent of the population has a solvent abuse problem combined with an estimated 80 per cent alcoholic rate and a 65 per cent unemployment problem. In the short term the construction of new facilities will employ a number of people, but in the long term the solvent and alcohol problems must be handled. The federal government has undertaken a number of feasibility studies aimed at solving these issues. The problems are chronic and a quick solution won't work. Long-term community management is the key. Persistent unemployment is also a factor in this equation.

The majority of the population of Davis Inlet is 25 years old or younger, and building a positive future is a necessity. To reduce the youth suicide rate, the government is hopeful that the move will help restore Innu pride. Access to the mainland makes hunting caribou a lot easier. Traditionally the Innu were nomadic and today they still have a spring and fall hunt.

"The goal is to build a new community from the ground up, with wharves, roads, air strips, and schools," says Powers. Over $80 million from the federal government will go to the community of 500. By the year 2001 the new community will exist.

Politically, the federal government has to manage this move as a positive relocation. It is anticipated that within the next five years the 1,500 Innu of Labrador, will reach a number of land claims agreements both with the Newfoundland and Canadian governments. A compensation package worth about half a billion dollars from Imco Limited, a mining company, is also expected to be signed. How the Innu manage the funds from these deals will be watched closely by the government. ▽

Tim Powers, Atlantic Canada Master's student is researching the relocation of the Innu of Davis Inlet.

MAKING THE NEWS

Chuck Bridges, Director, Public Affairs, spoke with CBC radio concerning the goals and expectations of Saint Mary's as a member of the Team Canada group that went to Asia with Nova Scotia Premier, John Savage, on January 7, 1997.

Professor Ellen Farrell, Management Department, spoke about her research on "Angels" and her recent award, "Best Emerging Researcher" from the Canadian Council for Small Business and Entrepreneurship to CBC's Information Morning Show on December 2, 1996.

Dr. Kenneth Ozmon, President, Saint Mary's University, spoke with CBC television about the University's marketing strategies on January 8, 1997. He also spoke with CBC radio concerning how the government funds universities on January 9, 1997.

Dr. Terry Wagar, Management Department, spoke on downsizing and the effects of downsizing in Atlantic Canadian firms, to ***The Halifax Chronicle Herald****, on November 26, 1996.*

Sports

Huskies Winter Schedule

Hockey

January 29	DAL @ SMU	7:30 pm
February 1	ACA @ SMU	2:00 pm
February 5	DAL @ SMU	7:30 pm
February 8	UPEI @ SMU	2:00 pm
February 19	Playoffs	

Men's Basketball

January 30	ACA @ SMU	8:00 pm
February 4	DAL @ SMU	8:00 pm
February 8	UPEI @ SMU	8:00 pm
February 18	SFX @ SMU	8:00 pm
March 8	ACA @ SMU	7:00 pm
March 15-17	AUAA's at Metro Centre	
March 22-24	CIAU's at Metro Centre	

Women's Basketball

January 30	ACA @ SMU	6:00 pm
February 4	DAL @ SMU	6:00 pm
February 8	UPEI @ SMU	6:00 pm
February 14	ACA @ SMU	7:00 pm
February 18	SFX @ SMU	6:00 pm
March 7-9	AUAA's @ UNB	
March 14-16	CIAU's @ Lakehead	

Women's Volleyball

January 29	SFX @ SMU	7:00 pm
February 12	DAL @ SMU	7:00 pm
February 15	UPEI @ SMU	7:00 pm
February 16	UPEI @ SMU	1:00 pm
February 22-23	AUAA's @ U de M	

Track and Field

February 16	UdeM Championships
February 28	AUAA Championships
March 1	AUAA Championship
March 7-8	CIAU's @ Windsor

University of Laval Captures Sparkling Springs Tournament

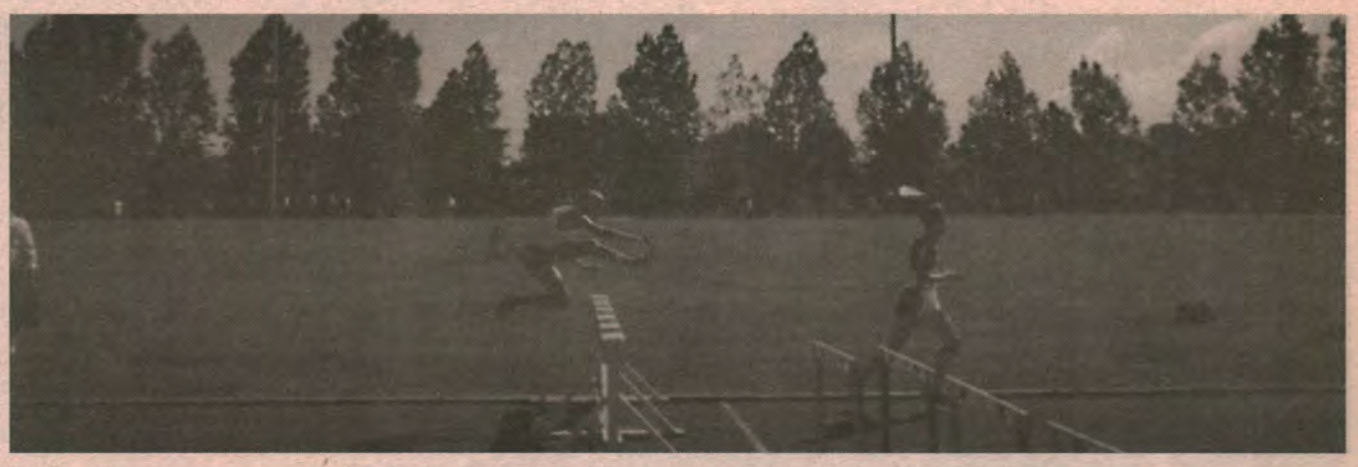
The fourth annual Sparkling Springs women's basketball tournament took place at the Tower January 2-4, 1997. The 1996 champions, McMaster University settled for second place with a 69-54 loss to University of Laval in the championship game.

The consolation event was won by University of Guelph in a 77-71 win over St. Francis Xavier University. St. Francis Xavier may have lost more than the consolation round as their number one national ranking will be in jeopardy due to their 1-2 standing in the Tournament.

Tournament all- stars included Eireann Rigby, University of Prince Edward Island; Karen Arnott, University of Guelph; Theresa MacCuish, St. F.X.; Julie Cantin, University of Laval and Jennifer Sutherland, McMaster.

Genevieve LaPorte,University of Laval, was named the Tournament's most valuable player.

The Huskies ended their weekend with a win over Acadia University (52-47) despite losing Toni MacAfer, Shannon Jones and Lisa Ward. Jones and Ward will be out for the rest of the season. ▽



Hurdling himself over a barrier is Jeff Gorman, a Saint Mary's Arts student who competes internationally in steeplechase.

The Lure of the Steeplechase

by Virginia Jackson

The lush, green pastures of England come to mind when we hear the word "steeplechase" — the elegant combination of horse and rider pitting their strength and strategy against a grueling course.

Jeff Gorman, a first year Saint Mary's Bachelor of Arts student, agrees with strength, agility and strategy, but his type of steeplechase depends on his own legs to carry him over the finish line.

All of the hard work is beginning to pay off for Gorman as he is enjoying his best year in track and field. A former hockey player, he turned in his skates for running shoes in 1992. Since then he has risen to be one of the top contenders in track and field for his age category in Canada. He qualified for the Legion Championships in each of his four years of eligibility. Legion Championships are for competitors aged 14 to 17.

Placing 10th his first year, he steadily rose to sixth place in his final year. Last summer he qualified for the Canadian Junior National team, and placed fifth in the 3000 metre steeplechase and won three silver medals at the Dual Meet — Canada versus Ireland.

Gorman's favorite events include long distance 1500M, 3000M, 5000M and the 3000M steeplechase. He is focusing on the steeplechase as training is relevant to both cross country and indoor running. "Not everyone is cut out to steeplechase," says Gorman, "But I enjoy it."

The starting line of a steeplechase can have as many as 15 runners in a single line all jostling and shoving each other once the gun sounds to reach the inside of the track before the first barrier. Stepping on top of the barriers slows the pace, so most runners hurdle the jumps except for the last, the water jump. While racing for the finish line, runners must gauge their footing to land on the top of the wall of the water jump while maintaining their speed.

"There's a lot of strategy in steeplechase. Knowing the other runners, who breaks away first and whether to follow or wait are split second decisions that must be dealt with while thinking about your footing, the pushing and shoving, and the three foot walls," says Gorman. The barriers do not come down if you tick the top or trip over one. "It's like hitting a concrete wall at a full run."

Gorman came to Saint Mary's with his Coach Kevin Heisler. Hesler is the Coach, of the Saint Mary's middle distance and cross country runners and a full-time Physical Education Teacher at Fairview Elementary. Heisler, along with Debbie Brown, Coach, Saint Mary's Track and Field team, have been keeping an eye on Gorman's development.

"Jeff trains year round," says Heisler. "I tell him that it's a long-term process. You can't train hard for two days and take four off. Success takes a consistent effort."

Once Gorman enters the senior ranks, Heisler says the competition will be harder. "Right now Jeff is one of the best, if not the best for his age category in the steeplechase. Once he hits the senior level, there will be a lot more competition as he will be running against runners who could be 10 years older than him. Runners become better with experience so there are no limits on how good Jeff can be. It's all up to him."

"Kevin is dedicated to the team and has always been there for me. With the commitment he has shown, juggling a full-time job, three sons of his own in hockey and everything else he does, I feel it's only fair to give him my full commitment," says Gorman.

One of Gorman's goals is the 2000 Olympics. This goal inspires him to train six days a week, attend nutrition and mental preparation sessions, and prepare for each and every race to the best of his ability. "It's a year round process of training and maintaining your health," he says. "But I wouldn't trade it for the world."

In the Canadian Intercollegiate Athletics Universities held in November 1996, Gorman finished 14th overall, second out of the Atlantic Universities Athletic Association Conference and a second team all-star.

"University and running have made me very disciplined," says Gorman. "A lot of students are not use to the freedom that university provides. I have taken that flexibility and focused on my running." ▽

continued from page 1

have the chance for work experience at Saint Mary's. Starting in the summer of 1998, 20, two-week mini-universities are planned simultaneously in both countries. The students who participate in this process will design seminars and workshops about development issues for their schools during the year.

In March, project directors from Saint Mary's will travel to the Gambia to begin work on the administrative plan.

Creating Conservation Fishing in Cambodia:

In this project Saint Mary's University, the Royal University of Agriculture (RUA) and the Prek Leap Agriculture College in Cambodia will work together as partners to strengthen the aquatic resource management capabilities in Cambodia.

Drs. Liette Vasseur, Environmental Studies Department and David Cone, Biology Department, Saint Mary's University are the principal co-ordinators of this project. The Marine Institute, Memorial University of Newfoundland is also a partner.

Cambodia needs help and assistance because the country has been depleted of an entire generation of educated citizens due to internal conflicts. Human resource development is a priority. With the fishing industry providing a staple food supply, the need to asses both its economic and viable potential is real.

This is also a Tier II project, with funding of $730,000 from CIDA. There are four parts to this project. The principal objective is to change how Cambodians view fishing. A re-orientation of this industry from production to conservation is essential. Drs. Vasseur and Cone will work directly with Cambodian academics to determine what type of research is needed and the best ways to proceed. Three Cambodian academics will have the chance to pursue post-graduate training in Canada as part of this process.

Part two involves working with the Department of Fisheries to establish a pilot professional development program in aquatic resource management for Fisheries Officers. The third component will focus on monitoring, control and surveillance of the aquatic resource system. The final component addresses gender roles and responsibilities in the fishing industry. For this segment, Saint Mary's will work directly with the Secretariat of State of Women's Affairs to support the development of a strategy which will promote women's rights and contributions to the fishing industry.

With so many projects falling under one heading, a project steering committee, which will have representatives from all parties, will be developed. ▽