



Inside this issue: Towards a mature university — Graduate Studies dean Doug Ormrod wants more students, more collaborative programs with other universities. (See story, page 3.)

EVENING PRIMROSE

A promising alternative for ailing tobacco industry

by Pamela Healey

A pretty yellow flower that grows in many suburban gardens may prove to be as lucrative a crop as tobacco in southern Ontario. Prof. Ib Nonnecke, Horticultural Science, and graduate student John Baker are studying the plant evening primrose as a possible replacement for the ailing tobacco industry. The oil of the plant may be useful as a treatment for a host of health problems ranging from alcoholism to allergies.

Today only about 3,300 hectares of southern Ontario farm land are planted in tobacco, down from 10,000 hectares in the late 1970s. Tobacco farmers, who are losing money on corn and finding the soybean market risky, are looking for a profitable alternative. Nonnecke says evening primrose may have a potential value of \$7,500 a hectare, comparable to the prices obtained for tobacco.

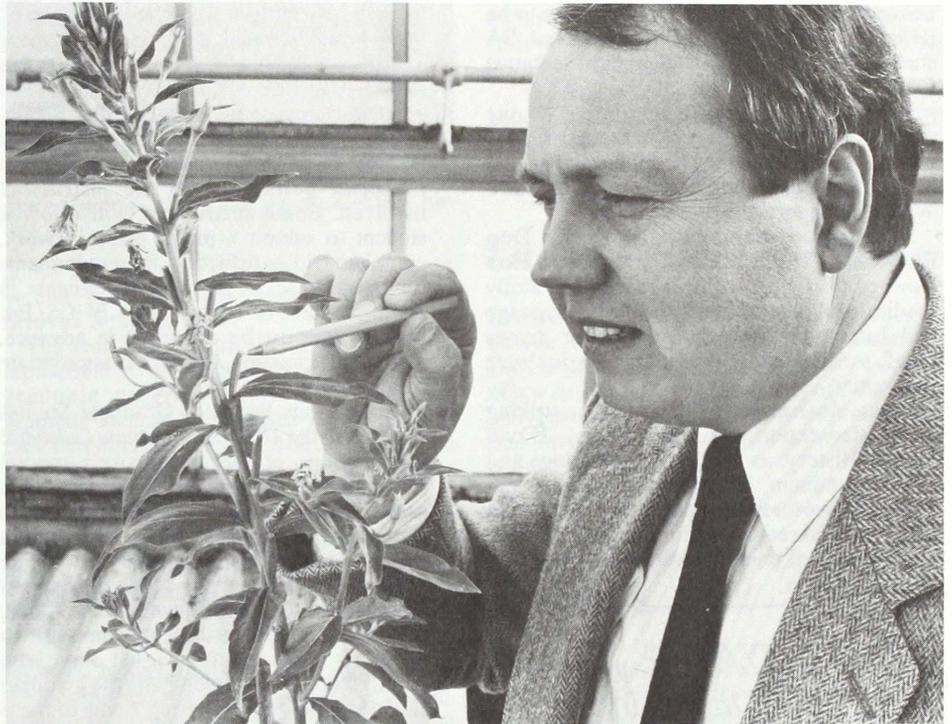
At first glance, the biennial evening primrose doesn't look like a winner; seeds can't simply be sown in the field because a built-in reproduction mechanism stalls germination. Nonnecke and Baker have found, however, that by germinating the seeds in a greenhouse and producing small transplants, they can harvest a crop in the fall after a five-month growing season.

The researchers have a large germ plasm pool from the many genotypes of evening primrose found around the province. This pool includes genetic lines with such characteristics as shatter-resistant pods that help prevent seed loss during harvesting and determinate growth habits that speed up maturity and shorten the growing season.

Nonnecke and Baker will select the lines best suited for rapid growth, maximum seed pod production and oil content to increase the plant's commercial value. Their laboratory studies have shown that the oil of one genetic line contains 15 per cent gammalinolenic acid. Normally, cultivars have nine to 10 per cent.

With the current worldwide glut of food and fibre crops, the scientists say it makes sense to diversify. Evening primrose oil is widely used in the pharmaceutical and cosmetics industries. In fact, the list of potential uses of primrose reads like a compendium of folk medicine. It is used in skin care products in England and other European countries and is marketed in Canada as a dietary supplement, available in drug and health food stores.

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Graduate student John Baker, Horticultural Science, points to a seed pod on an evening primrose plant. This particular genetic line has the highest known GLA oil content — 15 per cent compared to the normal 9 or 10 per cent.

(Photo by John Majorossy, Illustration Services)

Budget news in March? Let's hope!

The Committee on University Planning hopes to take the University's 1987/88 budget to Senate for information and discussion March 17. But President Burt Matthews told Senate Feb. 17 there are some problems with preparation of the budget to overcome first. Not the least of these is that Guelph doesn't know yet how much money it will be getting from the Ministry of Colleges and Universities.

In November 1986, the government announced that there would be a four-per-cent increase in base funding — a 7.3-per-cent increase over 1986/87 in overall funding for the university system. Of that 7.3 per cent, only the four-per-cent increase is available for discretionary allocation

within the institutions. "The remainder is earmarked," said Matthews, "and the University can't use it to defray inflation in the salaries and non-salaries portion of the basic operating budget."

But based on certain budget assumptions made to date, the University thinks the four per cent will not cover inflationary costs, said Matthews. To meet these costs, some areas across campus have had to make budget cuts.

The president said he doesn't know when Guelph will hear from MCU. "We were supposed to get the news in January." The delay is "not a very satisfactory arrangement" for the University's budget process, he said. ○

Vote called on committee reps

Senators were to vote this week for three of four Senate nominees to the selection committee to find a successor to Dr. Janet Wardlaw, associate vice-president, academic, who is taking early retirement July 1, 1988.

Senate's striking committee recommended three faculty names to Senate Feb. 17 — Profs. Mike Jenkinson, dean's office, OAC; Sandy Middleton, Zoology; and Donna Woolcott, Family Studies. But Prof. John Simpson, Physics, said representation was too narrow, and Senate nominated a fourth person — Prof. Jay Newman, Philosophy.

Ballots were mailed to senators by the University secretary Feb. 18, and were to be returned by Feb. 25. Senate appointed BA student David Handy as student representative to the committee.

Senate also approved appointees to the selection committee to review the position of director of the University School of Part-Time Studies and Continuing Education. Prof. Mark Waldron has served a five-year term.

Committee members are Profs. Don Blackburn, Rural Extension Studies; Ron Downey, OVC dean's office; Ed Herold, Family Studies; and Stuart Hunter, English Language and Literature; and student senator James Haaf, Associate Diploma in Agriculture program.

Senate also received for information a striking committee report that names Prof. David Farrell, History, as faculty representative and Karen Landman, BLA program, as student representative for the Senate Library Committee on the special review committee to review the appointment of chief librarian John Black. ○

Pay equity up for discussion

Advocates of pay equity say it is long overdue; opponents say it is too expensive and impossible to administer.

Members of the University community will have an opportunity to listen to both sides of the pay equity issue in a panel discussion sponsored by the President's Advisory Committee on Equal Rights for Women and Men at the University of Guelph March 4 at 7:30 p.m. in Room 209 A&B, Macdonald Hall.

Pay equity advocate Nan Weiner, faculty of management studies, University of Toronto, was one of the authors of the employment equity manual for Ontario Universities. Opponent Tayce Wakefield, government relations officer for General Motors of Canada Ltd., has published an article giving her opposing view. Prof. Jack MacDonald, vice-president, academic, will moderate the discussion.

Admission is free and everyone is welcome. ○

Senate approves Guelph Turfgrass Institute

Senate gave the okay Feb. 17 to plans to establish the Guelph Turfgrass Institute.

The institute will be involved in turfgrass research, extension and educational activities, and will work closely with government and industry. (See *at Guelph* Feb. 12.) A review of the institute will be held after five years.

In other business, Senate:

- received for information a letter from Queen's University asking Guelph to join the fight against the federal government's 10-percent surtax on imported books. The letter was referred to Senate's library committee, but before any further action could be taken, the Conservative government announced in its Feb. 18 budget that the controversial tariff would be lifted;
- approved a Board of Undergraduate Studies revision to the University's policy on academic misconduct that says it is misconduct to submit the same course work or assignment in two or more courses without the prior permission of the instructors involved. Some instructors will allow a student to submit a major piece of work, completed in satisfaction of requirements for one course, to satisfy requirements in another course or courses, says BUGS. But instructors must be consulted in advance, give their permission, and put any appropriate conditions on the work; and
- approved four Board of Graduate Studies changes to the 1987/88 *Graduate Calendar*. Descriptions of the University's special research-oriented centres will be included in a separate section of the calendar, and a statement on the new M.Sc. program in computing and information science will be added. A statement for graduate courses with restricted admission will also be added, saying that graduate students who wish to enrol in these courses must have the permission of the instructor and the graduate supervisor before registering. Some of these courses are costly and may require shared

funding among departments, says BGS, but it has reaffirmed its commitment to the principle that graduate students should not be personally required to pay any share of the costs of these courses. BGS has also produced a clearer statement for the calendar on the number of times a graduate student can repeat a qualifying examination. The examination may be repeated once within a program, and if the student fails a second time, further registration in the Faculty of Graduate Studies will be denied. ○

Names added to graduate faculty

The following people have been added to graduate, temporary graduate and associated graduate faculty:

Graduate faculty: Michael Brookfield, Land Resource Science.

Temporary graduate faculty: Gary Davidson and John Willms, University School of Rural Planning and Development, and Marta Rohatynskyj, Sociology & Anthropology;

Associated graduate faculty: Thomas Burgess, retired/Agricultural Economics and Business; J.R. Duncan, Animal Disease Research Institute, Agriculture Canada, Nepean/Veterinary Microbiology and Immunology; Ronald Pitblado, Ridgetown Agricultural College of Technology/Environmental Biology; Robin Roberts, McMaster University/Biomedical Sciences; Tony van Dreumel, Ontario Ministry of Agriculture and Food, Guelph adjunct professor, Pathology/Veterinary Microbiology and Immunology; and Robert Webb, Human Systems Inc./Human Biology.

Senate received the names for information Feb. 17. ○

Evening primrose *Continued from page 1.*

Based on clinical studies, evening primrose oil looks promising as a treatment for skin disorders such as atopic-eczema and some allergies. Its benefits for health problems such as alcoholism, premenstrual syndrome, hyperactivity in children, certain types of heart disease, high cholesterol, obesity, multiple sclerosis, and dry eyes and mouth are being researched. Clinical studies are also being done using evening primrose oil to alleviate long-term complications of diabetes and to supplement traditional treatments for rheumatoid arthritis, permitting dosage reductions.

The tiny seeds containing evening primrose oil are the richest-known source of essential fatty acids — especially the rare gamma-linolenic acid (GLA) — that perform vital bodily functions such as providing energy, helping maintain body temperature, insulating nerves, and cushioning and protecting tissues.

They also determine cell membrane structure, which is important for proper functioning of the immune system.

In the body, GLA converts to a physiologically active substance (prostaglandin E1) that lowers blood pressure and inhibits tissue inflammation, abnormal cell proliferation, blood platelet clumping and cholesterol synthesis. It is believed that some people who are unable to metabolize sufficient amounts of this essential fatty acid can be helped by taking evening primrose oil orally or rubbing it into the skin.

Nonnecke says the plant has enormous potential for becoming a high-return, limited-acreage specialty crop for the farmer. It grows well in the former tobacco regions of southwestern Ontario, and little specialized equipment or expense is needed to begin production. The Canadian market for plant products is excellent, he says. In 1985, alone, demand rose by 37 per cent. ○

Graduate student enrolment must double: Ormrod

Guelph has the third highest growth rate in the number of graduate students at Ontario universities. But it also has the smallest percentage of graduate students in relation to total student population. That's an imbalance that Doug Ormrod, dean of Graduate Studies, plans to correct.

The imbalance is especially true in the colleges of Arts and Social Sciences, says Ormrod, but he is encouraged by the amount of activity in these areas to bring new graduate programs on stream. He's optimistic that in the next five years, at least 10 new graduate programs will be in place across campus.

New doctoral programs in rural resource evaluation and environmental analysis, mathematics and statistics, and resource and environmental economics will be appraised in the coming year. Graduate programs in drama, psychology, family studies, plant physiology and toxicology are in the development stages, "and three or four others are in the planning stages," says Ormrod.

Ormrod's plan for his five-year term is to help graduate studies at Guelph "catch up with universities of comparable size and get into the same league. For us, it is meaningful that of the medium sized universities, we are growing most rapidly, and we hope to increase that growth."

Ormrod also wants to see the continuation and expansion of collaborative graduate programs with other universities, such as the Guelph-Waterloo physics and chemistry programs, and the Guelph-McMaster public



Doug Ormrod (Photo by Sandra Couch, PRI)

policy and philosophy programs. "We should be able to utilize these connections in other fields as well," he says.

The dean says it is vital for the prosperity and reputation of any university to have sound graduate programs. Currently Guelph's graduate student body is just 10 per cent of total enrolment, and it should be 20 per cent, he says. "To become competitive with other

universities comparable to Guelph, we virtually have to double our number of graduate students."

To do this, Ormrod plans to institute an annual meeting of graduate studies faculty, maximize external scholarship programs and encourage departments to provide funds for more graduate teaching assistants. He also plans to continue informing the government of the University's opposition to fee differentials for visa students. The government's recent decision to exempt many sponsoring agencies from the fee differential solves only a short-term problem, he says.

Guelph has introduced a limited number of scholarships for graduate visa students with a dollar value that equals the fee differential, but "it is far preferable for the differential fee to be dropped," says Ormrod.

"We really have to start thinking about being a mature Ontario university," he says. "A mature university has graduate programs in all its departments." ○

Our people

Dr. Dennis Howell, chairman and chief executive officer of Guelph International Development Consultants, will receive a doctor of law degree from the University of P.E.I. at its convocation May 10. Howell was made an honorary fellow of the University of Guelph at convocation Feb. 6. ○

CoSy links with Indonesia

by Ann Middleton

Canada's links with Indonesia are being strengthened by an international computer conference using CoSy, the University's computer conferencing system. A four-month project that runs until the end of April is helping make Canadian universities better known in Indonesia, an increasingly important trading partner of this country.

Toronto communications consultant Maria Cioni worked with Guelph's CoSy group, chief librarian and communications specialist John Black and Guelph International Development Consultants (GIDC) to establish the project at the request of Canada's Department of Communications, which was asked to develop a Canadian-Indonesian link by the Indonesian government.

Cioni says the computer conferencing project uses the facilities of the international telecommunications satellite organization Intelsat to provide the trans-Pacific links. Canada and Indonesia are among the 109 members of this organization, which provides global phone, data and broadcasting links by satellite. Funding for the satellite portion of the project comes from Intelsat's Project Share, a program that

provides health and rural education opportunities through the use of the satellite system. Additional funding comes from the Canadian International Development Agency, the Indonesian government and telecommunications organizations.

When the Department of Communications asked Cioni for ideas on the establishment of an educational communications link, she suggested a computer-based conference because most universities in both countries have computers and access to telephone lines. She says members will gain new experience, building on existing skills, and this will enable the Indonesians to evaluate a new form of communication, while using a technology that "is not super sophisticated and has a relatively slight chance of equipment failure."

Cioni, a regular CoSy user who is well-acquainted with the Guelph campus, chose CoSy over other systems because of its reliability from the user's point of view. The Indonesians became familiar with the system last fall when Black gave a series of workshops in that country.

Black is one of three Guelph professors acting as moderators for sections of the computer-conferencing activities. He moderates

the computer network section, Prof. Ken Kasha, director of the Plant Biotechnology Centre, moderates the biotechnology section, and Prof. Harry Cummings, University School of Rural Planning and Development, and director of the Sulawesi Project, the regional planning section. Cioni moderates the medical section.

Participants in computer-based conferences do not suffer from jet lag or upset stomachs or too many late nights. They sit quietly at their personal computers in frosty Ontario, foggy Halifax or steamy Jakarta.

Cummings uses the conference to discuss regional and environmental planning with colleagues at the Sulawesi Project office in Jakarta, at other Indonesian universities and across Canada. He says the response time is just as quick for Indonesia as for Toronto, Waterloo or Calgary.

GIDC officers Dr. Brian Brandenburg, Dr. Dennis Howell and Bill Harcourt are monitoring all three sections of the project. The international development firm has close links with the University and interests in Indonesia.

Although the project is only scheduled to run for four months, Cioni hopes it will be the start of something much bigger in terms of Indonesian-Canadian communications. ○

Roy brings professional world to University theatre

With more than 12 years of directing, producing and managing Canadian theatre behind him, James Roy feels he has a responsibility to pass on what he has learned to those who are about to enter the theatrical field. And that's just what he's been doing this winter as artist-in-residence in the Department of Drama.

Roy directed students in a production of Joe Orton's "What the Butler Saw," which is running at the Inner Stage until Feb. 28. He ran it as a professional production, starting with the auditions, to give the students "a taste of what they will have to face when they graduate from school."

For the students, the experience was "a culmination of everything they've been learning," says Roy. "They had to make their knowledge work in a situation that was geared to the final product, rather than the process. And they had to make it exciting for the audience. I wasn't satisfied if they simply felt they were learning without paying attention to what they were producing. I was interested in both."

Roy believes it's important that drama students have contact with the professional world before they finish school. "I always regretted that I didn't have the opportunity to do that. I had to learn the hard way." And he believes "it is incumbent on those of us who are working professionally to pass on what we have learned to the next generation."

For Roy, the past 12 years have provided a wealth of experience to pass on. After graduating from York University in 1974, he was undaunted by the fact that "no one would

hire me" — he started his own theatre and hired himself. That was the Blyth Summer Festival, which he founded in 1975 and served as artistic director for until 1979. From 1980 to 1984, he managed the Belfry Theatre in Victoria, B.C., then moved on to the Manitoba Theatre Centre in Winnipeg, which he ran until May 1986. He has also directed plays across the country and in England.

Passing on his experience to students this semester has proved to be satisfying for Roy: "They've soaked up everything I've given them." And he's impressed with the calibre of students he's found here at Guelph. "I wasn't necessarily expecting that from my experience of universities." He's also impressed with the faculty, who have been "very supportive, very hard-working, very much behind this project. They've really made me feel welcome, like I'm part of the process."

Roy's next project will take him to the Lighthouse Festival in Port Dover, where he will direct a new play written by his wife, Anne Chislett. ○

Personals

Wanted: Small house or bungalow in the country close to Guelph, to rent or lease from May 1, Ext. 4640 or 821-9138.

Lost: Around Feb. 9, set of keys in the OVC library or OVC student mailbox area, on wooden key chain with "Mitch" on it, Michelle, 821-3163.

High school students visit campus

Interaction 1986 spilled over into 1987 on Feb. 17 as 437 students from 23 Ontario schools who could not be accommodated at the regular conference in November had their chance to experience a day at the University.

The students preregistered for morning and afternoon lectures by Guelph professors in subjects ranging from terrorism to the destruction of land resources. The conference on global issues is becoming increasingly popular, says Patricia Hollyman, Office of the Registrar, who had to turn away hundreds of interested high school students from the two-day conference in November.

"The idea of Guelph Interaction is to orient high school students to the University, and it's getting bigger every year," says Hollyman. Adding another day to the conference would be a partial solution, she says, but it's difficult to interrupt teaching schedules for too long, and finding available rooms during the fall semester is not an easy task.

Letters are sent to high schools in October advising them of the annual November conference. Interaction 1986 was the eighth time the program has been offered. ○

For Sale: Atomic (arc) bionic slalom, 207-cm skis with Tyrolia 360R bindings; Dynastar omesoft, 200-cm skis with Tyrolia 380 bindings, Gwen or Mark, 822-0923. Electric piano, Ext. 3364 or 824-6874. Boy's BMX bike; women's Raleigh 10-speed; men's Sekine 10-speed, 822-9092. Women's new black leather motorcycle jacket, size 10; new black leather long coat, size 12, Ext. 6775 or 821-5962.

Letters to the Editor

OPIRG responds

In response to the article "EFW Plans Hinge on Environmental Study," which appeared in *at Guelph* Feb. 12, the Ontario Public Interest Research Group/Guelph Environmental Council, would like to make the following points. Paragraph 4 states that the University "has listened to concerns about possible dioxins and furans pollution." Note the use of the word "possible." Let's make no bones about it — if a garbage incinerator is built, there will be pollution. Whether that is acceptable or not is the question. Consider the following points:

- Wind pattern studies predict a significant amount of incinerator fallout will prevail over the University campus, agricultural fields and the entire city, along with the Arkell wells, the source of our drinking water;
- There is a growing concern about the environmental effects of incineration effluent. According to the Wellington County Waste Management Master Plan (Stage 2B), pollutants are cited as follows: particulate matter, nitrogen

oxides, hydrocarbons, carbon monoxide, hydrogen chloride and fluoride, sulphur oxides, dioxins and furans, and trace elements;

- The scientific community agrees that "standards" and "guidelines" are at best only a guess thus far. Studies exist that suggest we may already be exposing ourselves to an unacceptable level of dioxins and furans. Consensus widely exists that further long-term research is necessary;
- Incinerators are the single largest source of dioxin emissions. Regardless of the sophistication of abatement controls, not all emissions can be controlled;
- The nature of dioxins are such that they persist in the environment and accumulate in the food chain;
- Canada's health and welfare expert advisory committee on dioxins has said that dioxins are one of the most deadly group of chemicals known to humans, and have been demonstrated to cause birth defects, cancer and immune system disorders;
- When addressing the incinerator issue in Guelph last June, Ontario's Environ-

ment Minister James Bradley said: "It's quite obvious in the context of the findings on toxic rains that all of our technology and all of our preconceived ideas about incinerators have to be re-evaluated;

- Similar warnings about dioxins were expressed by the National Incinerator Testing and Evaluation Program (NITEP) after studies were conducted on the P.E.I. energy-from-waste facility (all proposed incinerators in Canada must be evaluated through NITEP, an Environment Canada program); and
- The environmental impact of incinerator emissions can vary greatly depending on the surrounding geographic and industrial makeup of the area. Consequently, NITEP says the P.E.I. findings cannot be extrapolated to other locations.

Let's not be steamrolled by a process that will inevitably produce a study that will continue to cite so-called "minute" and "trace" quantities of contamination as acceptable.

Ron Kelly,
OPIRG/GEC

The Physics experiment that worked



Nicola Cason, a Grade 10 student at Milton District High School, makes a giant bubble in a surface tension experiment during "Girls in Physics" day. The program convinced Cason that physics was for her.

(Photo by Sandra Couch, PRI)

It didn't have anything to do with laser beams or magnetic fields, and it won't be written up in any scientific journals. But it was an experiment that the Department of Physics considers a success.

The experiment was to see whether a day's immersion in a physics laboratory and university atmosphere would encourage high school girls in Grades 10 and 11 to remain in the maths and sciences, especially physics. Those are the grades in which girls are making hard curriculum choices that will affect their career opportunities, said Dr. Bonnie Edwards, a lecturer in Physics, who organized the experimental "Girls in Physics" day along with Prof. Ernie MacFarland.

The day included a lecture entitled "Structure of the Universe" and two hours of hands-on physics experiments that explored topics ranging from surface tension to the speed of sound. In the evening, the girls and their parents met with several prominent women physicists, who discussed their careers and the importance of having a science background.

The 24 girls came with their science teachers from four high schools in Halton County. Barb Singleton, principal of Georgetown District High School, applauded the program, saying it was a good first step in encouraging high school girls to stay in the sciences. "Not only did the girls have an opportunity to use university-quality facilities," she said, "but they saw the potential span of physics from nuclear physics to the physics of the universe." She said she'd like to see more days where the University could share its

resources with high school students, "because it makes their career choices more clear."

Brenda Trickey, a biology teacher at Milton District High School, described the program as "excellent." Noting that enrolment in the sciences declines among high school girls in the senior grades, she said she intentionally brought along students who weren't sure they would stay in the math and science stream for their final years. "They have been scared away for some reason and have this idea that physics is for the boys."

One of Trickey's students, Nicola Cason, admitted that the day in the physics lab was "more interesting than I thought it would be. I wasn't sure what I was going to do before, because I don't like math," said the Grade 10 student, "but now I'm going to take physics for sure."

Comments along those lines were heard all day, said Edwards, who was pleased at the girls' response to the program. She added that the evening session also received positive responses from the parents. "A number of mothers said they wished they'd been encouraged in the sciences when they were in school, and the fathers were also most enthusiastic."

The question now is how to provide similar days for girls from other parts of the province. The first experimental day was limited to girls from Halton County, but there has been considerable interest from elsewhere, Edwards said. She hopes that the University, school boards and high school science teachers can put together a co-operative program for other high school girls in Ontario, perhaps on an annual basis. ○

Family Studies faculty get grant

Prof. Anne Martin Matthews, Rosalind Gibson and Donna Woolcott, Family Studies, have received a \$100,000 grant from the Max Bell Foundation to study the nutritional needs of the elderly and to develop and test a nutrition education program for this group.

Established by a prominent Canadian businessman in 1972, the Max Bell Foundation funds projects in health services, especially research in nutrition education, health education and preventive health care.

Over a three-year period, the University researchers will assess groups of elderly to determine their special nutritional needs, then design appropriate nutrition education programs. Follow up will include a reassessment of the groups to see if the nutrition education programs have been beneficial.

Woolcott says the information obtained from this study will be used to develop education programs aimed at improving the nutritional health of the elderly, promoting a healthy lifestyle for this growing sector of the population and reducing health care costs for Canadians.

Short courses meet needs of small-scale farm

People no longer need a farm background to be successful small-scale or hobby farmers. They can take advantage of Continuing Education's novice farmer program, which offers a variety of Saturday short courses aimed at helping people learn how to get the most out of their rural properties.

This year's program includes a course on buying rural property that can help make the most of finances. Other courses will explain how to manage a woodlot for both pleasure and profit, create a farm pond and build a hobby greenhouse.

Successful farmers and businessmen have been recruited to give instruction in how to manage a small poultry flock and maintain hay and pasture lands. There are also courses for people keen to set up a small fish farm or save money by cutting meat at home.

All courses run from 9:30 a.m. to 4:30 p.m., include lunch and offer a discount for couples. "Farm Ponds" and "Hay and Pasture" are scheduled for March 7, "How to Manage Your Woodlot," "Home Meat Cutting and Sausage Making" and "Small Poultry Flock Management" for March 28. On April 4, the woodlot and meat cutting courses will be repeated, and "Buying Rural Property" and "Building a Hobby Greenhouse" will be offered.

Because of its popularity, the woodlot management course will be offered a third Saturday, April 11; also scheduled for that day are "Fruit Trees: Grafting, Pruning and Spraying" and "Fish Farming."

For more information or to register, contact Continuing Education, Room 160, Johnston Hall, Ext. 3956. ○

Briefly

INTERNATIONAL WOMEN'S DAY celebrations in Guelph begin March 3 with MPP Evelyn Gigantes discussing pay equity at 7:30 p.m. at 21 King St. A reception March 6 from 7:30 to 10 p.m. at the Guelph Civic Museum, 6 Dublin St., features the exhibit "Widening Sphere: Women in Canada 1870-1940." The official opening of the celebration is March 7 at 1 p.m. at 21 King St., followed at 1:15 p.m. by author/columnist Joanne Kates speaking on "Fear of Feminism." At 3 p.m., singer/composer Carolyn McDade discusses "International Women's Liberation Struggle." During the afternoon, there will also be a film/video festival and information fair. Saturday evening entertainment begins at 8 p.m. at The Loft, Carden Street, with the Bird Sisters, followed at 8:30 p.m. by the Windsor Women's Theatre performing Michel Tremblay's "Albertine in Five Times." March 8 activities include an afternoon workshop, "Women's Spiritual Journey," with McDade. For more information, call 837-0267.

EUROPEAN EXCURSION is what the HAFA Restaurant is billing its special luncheon March 3, 11:45 a.m. to 1 p.m. Call Ext. 8116 for reservations.

FURNISHED ACCOMMODATION is needed for visiting faculty for the fall term, 1987. Contact the Off-Campus Housing Office, Ext. 2347 or 3929.

A SPLITTER BOX DEVICE that allows shared access to a single ROLM data line can be seen in the display area of the Computing Services Support Group, Room 204, ICS building.

THE DONALD MCQ. SHAVER Awards for Entrepreneurship are intended to identify Guelph students with entrepreneurial potential. Awards are \$1,000, \$500 and \$250, with five prizes of \$50 for honorable mention. Candidates must submit a report that identifies and describes a product and/or service, identifies potential customers, describes the uniqueness of the concept and includes a business plan. Application forms are available from Joan Sephton, Agricultural Economics and Business, Room 211, J.D. MacLachlan building. Shaver will be available Wednesdays and Thursdays from 10:30 a.m. to 5 p.m. in Room 326, J.D. MacLachlan building, to discuss proposals. Deadline for submissions is March 7. Awards will be presented March 23 at 5 p.m. in the Faculty Club, Level 5, University Centre.

CAMPUS USERS OF SHARP APL will be migrating to the new APL*PLUS system this semester. As of April 30, SHARP APL will no longer be available, and users are asked to migrate any needed APL workspaces and files well before that date. A written guide to migrating and converting workspaces and files is available free from the Computing Services Support Group, Room 204, ICS building, Ext. 8888.

THE OPENING and premiere viewing of the exhibition "Printshops in Canada" is March 8 from 3 to 5 p.m. at the Macdonald Stewart Art Centre. This show, which is organized and will be circulated by the centre, documents 26 Canadian printshops dedicated primarily to the production, publishing and printing of editions by artists. Printshops from coast to coast are represented by such artists as Jean Beliveau, Graham Coughtry, Terry Legault, Christopher and Mary Pratt and Joyce Wieland. After the premiere of this show in Guelph, the exhibition will tour nationally to Halifax, Calgary, Burnaby, Montreal, St. John's, Toronto, Stratford, Oshawa and St. Catharines.

A TRAINING SESSION IN CPR, sponsored by the life support committee, is Feb. 28 from 8 to 11:30 a.m. at the Royal Canadian Legion. To register, call Kenn Orr-Brown, 822-4420, Ext. 297.

REPTILES AND AMPHIBIANS of Ontario is the topic of the Guelph Field Naturalists' meeting March 12 at 7:45 p.m. in the Arboretum Centre. Guest Mike Oldham, co-ordinator of the Ontario Herpetofaunal Survey, will give tips on finding and identifying Ontario's reptiles and describe their life histories and habitats.

A TASK FORCE has been established to assess user requirements of an Optical Mark Reader service on campus. The task force has decided to continue with the existing card-based course evaluation system, which had previously been planned to operate on the ScanTron sheet reader. The test scoring system will, however, continue with ScanTron sheets. Questions and comments may be directed to any member of the task force: Profs. Gord Hines, Mathematics and Statistics; Peter Leppmann, Psychology; and Helier Robinson, Philosophy; Brian Pettigrew, Student Services; and Ron Elmslie and Ted Dodds, Computing Services.

BRAINS, BRAWN, Bran & Bananas, is a nutrition and fitness exhibition in the University Centre courtyard March 3 from 9 a.m. to 4 p.m., sponsored by the Counselling and Student Resource Centre. It will focus on the link between good nutrition, fitness, general well-being and academic performance. In addition to information booths, displays and films, there will be free samples and self-assessment opportunities.

A FUNDING OPPORTUNITY is provided by Challenge '87, a program of wage subsidy for students from the federal Department of Employment and Immigration. The program's objective is to provide students with jobs lasting a minimum of six weeks and a maximum of 18 weeks in an activity that will be of direct relevance to their career plans. Wage subsidies will be up to \$4.35 per hour. Application deadline is March 6, 1987; application forms are available from the Office of Research.

MUSIC FROM LONDON'S Pleasure Gardens is the program scheduled by Mary Enid Haines, soprano, Alison Melville, baroque flute and recorder, and Valerie Weeks, harpsichord, at the Department of Music's noon-hour concert March 5 in Room 107, MacKinnon building. Haines has performed in Canada, South America, Africa and England and has been soloist with the Toronto Chamber Society, the Jubilate Singers and the Te Deum Orchestra. Melville, winner of two Canada Council Arts Awards and a fellowship from the University of Toronto, has appeared with the Toronto Symphony and the Canadian Opera Company. Weeks has performed extensively as a soloist and chamber musician throughout Canada, the United States and Europe, and is a winner of the First International Edinburgh Harpsichord Competition and the CBC Talent Competition. Program I at 12:10 p.m. will include "Hush, Ye Pretty Warbling Choir" by Handel, "Stizzoso, Mio Stizzoso" by Pergolesi and "Sonata for Harpsichord" and "The Broom of Cowdenknows" by Bach. Program II at 1:10 p.m. will feature Bach's "Sonata for Harpsichord, Op. 5, No. 2," several numbers by James Hook and "Gay Florimel" and "Ariel's Song from the Tempest" by Arne.

TRADITIONAL SCOTTISH storyteller Duncan Williamson is the special guest at an evening of Scottish story, poetry and song March 2 at 8 p.m. at the Faculty Club, Level 5, University Centre. Williamson, author of two books, belongs to a family of "travellers," who used to spend their summers on the road, making a living through casual occupations. Admission is \$2; contact Prof. Ted Cowan, Ext. 3226, for more information.

THE INTERFAITH DIALOGUE Group of the University is sponsoring an evening session on "The Living Word: The Role of Scripture in World Religions" March 3 at 7:30 p.m. in Room 103, University Centre. All are welcome and refreshments will be served.

COMPUTING SERVICES staff are now converting the PERK system to a new system under APL*PLUS. Anyone wishing to convert existing PERK files should contact Les Dunn at Ext. 6570 (sosdunn in CMS or LDU on CoSy).

THE WRITING CENTRE, a program sponsored jointly by the Department of English Language and Literature, the Library and the Counselling and Student Resource Centre, is offering two writing workshops. "How to Write an Essay," which provides practical ideas on organizing and writing, is March 3. "Report Writing," showing how to prepare clear and effective reports and technical writing assignments, is March 10. Both workshops are at noon in Room 333, University Centre. Contact the Connection Desk, Level 3, UC, for further details.

Five new awards available to students

Five new awards received Senate approval Feb. 17. They are:

The Tommy Thompson Fellowship: — an annual award of \$1,000, tenable with other Senate awards, to a student with high academic standing entering a graduate program in horticultural science. Preference will be given to a student in ornamental horticulture. Application must be made to the chair of Horticultural Science by June 1. The OAC awards committee will make the selection on the recommendation of the chair of the department. The donor is White Rose Nurseries Ltd.;

Class of '51 OAC Leadership Award: — an annual award of \$1,000, tenable with other Senate awards, to a student graduating from a degree or associate diploma program in OAC who has a "B" standing in the final year of study and who has demonstrated leadership in college or University extracurricular activities. Application is not necessary. The OAC awards committee will make the selection on the recommendation of the dean of OAC. The donor is the OAC Class of '51;

Francis E. Chase Memorial Scholarship: — an annual undergraduate award of \$500, tenable with other Senate awards, to students who have completed semesters 4, 5 or 6 of the B.Sc.(Agr.) program, majoring in applied microbiology. The award will be made on the basis of academic standing, leadership in extracurricular

activities and demonstrated financial need. Application is to the assistant registrar, student awards, by April 1. The OAC awards committee will make the selection. The donor is Jane M. Chase;

Sue Chase and John Steckle Fellowship in Agriculture: — an annual award of \$1,500, tenable with other Senate awards, to a graduate student in the Department of Horticultural Science or Animal and Poultry Science who is enrolled in an M.Sc. or PhD program. Candidates must have high academic standing, be involved in research related to the interests of the department, and must have demonstrated an interest in Canadian agriculture. Application is to the dean of OAC by June 1. The OAC awards committee will make the selection. The award will be made in alternating years to students in each department, starting with Horticultural Science in 1987/88. The donors are Robert and Jean Steckle;

OAC Public Speaking Awards: — two annual awards of \$250 each, tenable with other Senate awards, to the students in the B.Sc.(Eng.), BLA, B.Sc.(Agr.) or B.Sc.(food science or earth science) programs with the highest grades in the course 37-215 "Public Speaking" in the fall and winter semesters. Application is not necessary. The selection will be made by the OAC awards committee. The donor is the OAC Class of '45. ○

Job opportunities

As of at Guelph deadline Feb. 20, 1987, the following opportunities were available:

Clerk I, Division of Continuing Education; temporary full-time from March 16/87 to March 15/88. Hiring range: \$247.17 to \$268.03.

Stenographer, Division of Continuing Education; temporary full-time from March 16/87 to July 10/87. Hiring range: \$255.27 to \$277.38.

Technician, Department of Pathology, OVC; temporary full-time for about six months. Hiring range: \$397.77 to \$431.78.

The following positions were available to on-

campus employees only:

Lauderer II, Laundry Department. Job rate: \$10.25 per hour; probation rate: \$.20 per hour lower than job rate.

Clerk II, Department of Agricultural Economics and Business. Salary range: \$291.19 minimum; \$336.53 job rate (level 5); \$419.16 maximum.

Research Technician, Department of Crop Science. Salary range: \$397.77 minimum; \$460.01 job rate (level 5); \$570.62 maximum.

Custodian 2, Housekeeping Department. Job rate: \$9.77 per hour; probation rate: \$.20 per hour lower than job rate. ○

Next Week at Guelph

Continued from page 8.

Interdepartmental Seminar Series in Systematics - PANDEMONIUM IN PUSSY-TOES: Evolution of the *Antennaria* (Asteraceae) Polyploid Agamic Complexes, 3:10 p.m., BG&Z 309.

OVC Evening Business Management Program - ADMISSION TO A PARTNERSHIP, Bruce Karcher, 7 p.m., OVC 508.

Continuing Education - JAZZ APPRECIATION, 7 p.m.; ART FOR AMATEURS AND CONNOISSEURS, 7:30 p.m.; register Ext. 3956/3957.

Theology from Experience - THE EXPERIENCE UNDERLYING LIBERATION THEOLOGY, 7:30 p.m., UC 332.

Pugwash Panel Discussion - PEACE ACTIVISTS, 7:30 p.m. LRS 124.

THURSDAY, March 5, 1987

CUSO - INFORMATION TABLE, 10 a.m. to 2:30 p.m., UC courtyard.
Society for International Development - DEVELOPMENT IN THE MIDST OF ETHNIC TURMOIL: THE CASE OF SRI LANKA, Jim Shute, noon, MacK 132.

On poverty and people . . .

The western world enjoys a huge agricultural surplus while an eighth of the world's population is chronically undernourished. This is a "horrendous paradox," said Prof. Tom Warley, Agricultural Economics, speaking at the second of a four-part liberal education series dealing with conflicts between the fields of agriculture and ecology.

Poverty, not hunger, is the real question that must be addressed, said Warley. The world can easily feed three times the current population of five billion, but that won't happen as long as poverty exists. While admitting that the richer nations of the world must help the poorer ones, he laid the primary responsibility for development and relief of hunger at the feet of the poor nations themselves.

Prof. Doug Larson, Botany, countered the suggestion that what is good and beneficial to humankind answers the primary question of what is good, saying that science must take into consideration the environment and that people need not always take precedence in the world. He argued that many of the problems facing people today are conceptual problems "and we can't wait much longer to find solutions to them."

Larson also said that the ecological problems people create in their quest for wealth and comfort lead to the idea that what science has wrought, science can solve. That is not necessarily true, he said.

The series continues March 2 at 12:10 p.m. in Room 442, University Centre, with a discussion of "Green Genes: Revolution or Evolution?" ○

Personals

For Rent: Room in new home within biking distance of University, available March 1, female non-smoker, Ext. 6775 or 821-5962. Two-bedroom cottage with guest cabin, Sauble Beach, available May to September, 821-5962, after 5 p.m. Two-bedroom apartment in house, available April 16, 823-1560, after 6 p.m. ○

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat with Rev. Ted Scott, noon to 2 p.m., UC 103; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.

Concert - Mary Enid Haines, soprano, Alison Melville, baroque flute & recorder, and Valerie Weeks, harpsichord, 12:10 and 1:10 p.m., MacK 107.

Apiculture Club - QUEEN REARING, Gord Grant, 5:10 p.m., Graham 200.

CSRC - JOB SEARCH, 6 p.m., register at Connection Desk by 4 p.m.

Film - THE BIG CHILL, 7 and 9:20 p.m., Mac 149.

The following abbreviations are used in at Guelph: AC=Athletics Centre; ANNU=Animal Science Nutrition; BG&Z=Botany-Genetics-Zoology; CM=Chemistry-Microbiology; CS=Crop Science; CSRC=Counselling and Student Resource Centre; Eng=Albert A. Thornbrough building; FS=Food Science; HAFA=Macdonald Stewart Hall (Hotel & Food Administration); HB=Human Biology; Hort=Horticultural Science; ICS=Institute of Computer Science; JH=Johnston Hall; LA=Landscape Architecture; Lib=McLaughlin Library; LRS=Land Resource Science; MacK=MacKinnon building; MacN=MacNaughton building; PCH=Peter Clark Hall; UC=University Centre; VMI=Veterinary Microbiology and Immunology; WMH=War Memorial Hall.

Next Week at Guelph

THURSDAY, Feb. 26, 1987

Clinical Studies Seminar - NEW CONCEPTS IN THE PATHOGENESIS AND DIAGNOSIS OF CARDIOMYOPATHY IN THE DOG, Bruce Keene, 10 a.m., Clinical Studies 508.
Pathology Graduate Seminar - USE OF SERUM AND CFS ANTIBODY TITERS IN THE DIAGNOSIS OF EQUINE VIRAL ENCEPHALOMYELITIS, E. Scott, 11:10 a.m., Pathology 220.
Society for International Development - INTERNATIONAL STUDENTS: A VANISHING BREED? Don Amichand, noon, MacK 132.
Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.
Cellular and Molecular Biology Journal Club - MEETING, Margaret Fallding, noon, VMI 101.
Concert - ANONYMUS, early music group, 12:10 and 1:10 p.m., MacK 107.
Apiculture Club - BEESWAX CANDLE-MAKING DEMONSTRATION, Ivan Petrick, 5:10 p.m., Graham Hall 200.
Film - CASABLANCA, 7 and 9:20 p.m., Mac 149.
Drama - WHAT THE BUTLER SAW, 8 p.m., Inner Stage, \$4.50, continues to Feb. 28.

FRIDAY, Feb. 27, 1987

Worship - CATHOLIC MASS, 8:10 a.m., Chapel, UC Level 5.
Histopathology Seminar - Grant Maxi, 9 a.m., Path 220.
Biomedical Sciences Graduate Seminar - THE UNIQUENESS OF BOVINE PLATELETS, G. Bondy, noon, OVC 1642 (demo lab.)
Current Issues in Agriculture - REDUCED INPUT AGRICULTURE, Ann Clark, 3 p.m., CS 121.
OPIRG Friday Film - THE TIMES OF HARVEY MILK, 8 p.m., MacN 105.

SATURDAY, Feb. 28, 1987

CSRC - JOB HUNTING PROGRAM, 9 to 4:30 p.m., register at Connection Desk, UC Level 3, by 3 p.m. Friday.
Continuing Education - INTERMEDIATE LOTUS 1,2,3; WORDPERFECT I, 9:30 a.m., register Ext. 3956/3957.

SUNDAY, March 1, 1987

Worship - ROMAN CATHOLIC MASS, 10:10 a.m., PCH; ECUMENICAL CAMPUS MINISTRY (Anglican, Presbyterian, United), 10:30 a.m., Chapel, UC Level 5.
Children's Concert - MR. DRESSUP, 1 and 3 p.m., WMH, \$6.
Sunday Afternoon Walk - NATURE VIDEOS, 2 p.m., Nature Centre.
Sunday Cinema - TRUE STORIES, 7 p.m.; DOWN BY LAW, 9 p.m., WMH.
International Cinema - THE TASTE OF WATER (Holland), 8 p.m., MacN 105, \$2.

MONDAY, March 2, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301.
Liberal Education Series - GREEN GENES: REVOLUTION OR EVOLUTION? 12:10 p.m., UC 442.
Engineering Graduate Seminar - EXPERT SYSTEMS, APPLICATION AND DEMONSTRATION, Hadi Farazdaghi, 3:10 p.m., Eng 106.
Worship - INQUIRY INTO CATHOLICISM, 4:10 p.m., UC 332; ROMAN CATHOLIC MASS, 5:10 p.m., Chapel, UC Level 5.
Continuing Education - SINGLE PARENT FAMILIES, 7:30 p.m., register Ext. 3956/3957.
Scottish Evening - STORY, POETRY AND SONG, Duncan Williamson, 8 p.m., Faculty Club, UC Level 5, \$2.

TUESDAY, March 3, 1987

CSRC - BRAINS, BRAWN, BRAN AND BANANAS, 9 a.m. to 4 p.m., UC courtyard; ESSAY WRITING, noon, UC 333; CAREER DEVELOPMENT ORIENTATION, noon, UC 301; WRITING

ASSISTANCE, 5:30 to 9 p.m., Lib 359.

Symposium - CHILDREN AND MONEY, Donna Lero, noon, FACS 103.

Worship - ECUMENICAL CAMPUS MINISTRY, Know Your Bible, noon, UC 444; ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5; SCRIPTURE ALIVE!, 4:10 p.m., UC 334.

Psychology Colloquium - THE ACQUISITION OF SKILL OF MENTAL CALCULATION IN ADULTHOOD, Neill Charness, noon, MacK 316.

Our World - SOUTH AFRICA: ACTION AGAINST APARTHEID, 12:10 p.m., UC 442.

Land Resource Science Seminar - SOIL-PLANT WATER RESEARCH AT CANBERRA, J.B. Passioura, 3:10 p.m., LRS 124.

Physics Seminar - ION MICROBEAM ANALYSIS APPLIED TO FUSION MATERIALS, B.L. Doyle, 4 p.m., MacN 113.

Continuing Education - INTERMEDIATE LOTUS 1,2,3, 7:30 p.m., register Ext. 3956/3957.

Interfaith Dialogue Group - THE LIVING WORD: THE ROLE OF SCRIPTURE IN THE WORLD RELIGIONS, 7:30 p.m., UC 103.

College Women's Club - FASHION '87, 7:30 p.m., Arboretum Centre, \$6.

WEDNESDAY, March 4, 1987

Gerontology Research Centre Seminar - ELDERLY WIDOWS AND WIDOWERS: PATTERNS OF SOCIAL SUPPORT, noon, UC 441.

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; JOB SKILLS WORKSHOP, 2 p.m., register at Connection Desk by 11 a.m.; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359.

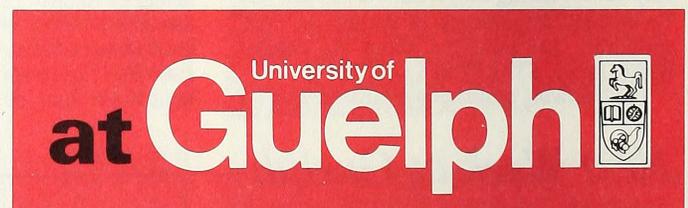
Concert - COLLEGE ROYAL TALENTFEST PREVIEW, noon, UC courtyard.

Guelph Committee Against Imperialist War Preparations - CONFERENCE AGAINST THE TWO SUPERPOWERS, noon, UC 441.

Worship - ECUMENICAL CAMPUS MINISTRY, Ash Wednesday, Eucharist 12:10 p.m., Chapel, UC Level 5; ROMAN CATHOLIC MASS, 12:10 p.m., UC 103; THEOLOGY FROM EXPERIENCE, 7:30 p.m., UC 332.

Entrepreneurship and Your Business - SOME BUSINESS OPPORTUNITIES FOR YOU TO CONSIDER, Donald McQ. Shaver, 3:10 p.m., APS 141.

Continued on page 7.



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