

# guelph

## UNIVERSITY NEWS BULLETIN

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## Pathways To Tomorrow

*University preparing for Open House Weekend*

"Pathways to Tomorrow" is the theme for the annual College Royal and Open House for 1983 at the University of Guelph. Open House weekend, March 12 and 13, which crowns the 10-day, student organized event, will provide visitors with an intimate behind-the-scenes look at the entire University.

For many thousands of visitors, the popular Open House provides a pleasant and relaxed, yet stimulating family outing. A babysitting service will be offered for the first time at College Royal '83. Sponsored by the Campus Child Care Co-operative, the service will be available in Peter Clark Hall in the University Centre, Saturday, 10 a.m. to 4 p.m., and Sunday, 12 noon to 4 p.m.

On Open House weekend, visitors flock to see the many displays and demonstrations that highlight academic life and the special interests of student clubs.

Competition is keen at College Royal as students vie for top place ribbons and impressive trophies. The best known and most popular competition is the livestock showmanship competition, which began at the first College Royal in 1925.

Other traditional highlights include the cat show, dog show, square dance compe-

tion, fashion show and demonstrations of synchronized swimming. Old MacDonald's Farm, on Sunday only, is popular with the younger visitors, and the "Fly Days" service, offering aerial tours of the campus and surrounding area, will also be available, weather permitting.

The dog show will be Friday, March 11 while the cat show and the fashion show will both be held on Saturday, March 12 and Sunday, March 13. The square dance competition will be held on Saturday, March 12. Again this year, free bus service will be available on campus during Open House Weekend, making frequent stops at special points of interest.

President Forster will officiate at the formal opening of College Royal on Saturday, March 12 at 1 p.m. The ceremony, in Peter Clark Hall of the University Centre, will also feature the winners of some of the student competitions.

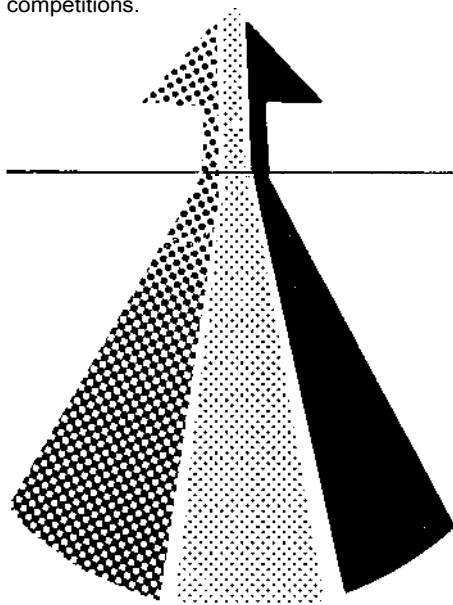
A popular feature of College Royal for many years has been the College Royal Ball. This year, The Eddie Graph Orchestra and Earl Ray and his band will provide music for the event, Saturday, March 5 in the University Centre courtyard and Peter Clark Hall.

Curtain Call, a light-hearted spoof of campus life, draws capacity crowds each year in War Memorial Hall. This year's dates are Wednesday, March 9 to Saturday, March 12, and tickets are available at the University Centre box office.

A new exhibit this year is the Glass Blowing Display in Rooms 260, 251, 252 and 256 of the Chemistry and Microbiology building.

New features at College Royal '83 are underwater hockey staged by the Scuba Club and a competition among the campus residences for the best decorated lounge. "We hope this competition will brighten up the residences for Open House and increase campus spirit," says public relations convenor Lorrie McFadden.

As usual, there will be plenty of free parking on campus for all visitors. □



COLLEGE ROYAL '83



# Guelph researchers get \$1.6 million in NSERC grants

The University of Guelph received 33 grants totalling \$1.6 million from the Natural Sciences and Engineering Research Council of Canada, out of a total of \$25.8 million awarded in 1982-1983. This is an increase of 5.6 per cent from 1981-1982.

In specialized areas, such as food/agriculture and environmental toxicology, the University received 28.5 and 9.5 per cent of the awards, respectively, according to Dr. Wayne Marsh, Assistant to the Dean of Research. For food/agriculture, \$976,212 was awarded to researchers at the University, while \$316,952 was awarded in the area of environmental toxicology.

The largest grant was \$145,730 to a team led by Professor K.R. Solomon, Environmental Biology. Research teams working under Professors K.J. Kasha, Crop Science, and B.D. Kay, Land Resource Science, received \$129,000 and \$110,000 respectively.

Other principal investigators who received grants were: Professors W.R. Fawcett and C.A. Fyfe, Chemistry; G.L. Mackie, Zoology; A. Mellors, Chemistry; D.P. Ormrod, Horticultural Science; S.H. Safe, Chemistry; J.B. Sprague, Zoology; H.S. Bayley, Nutrition; J.M. DeMan, Food Science; H.G. Downie, Biomedical Science; B. Grodzinski, Horticultural Science; L.A. Hunt and R.B. Hunter, Crop Science; J.C. Jofriet, Engineering; S.D. Jones, Animal/Poultry Science; L.W. Kannenberg, Crop Science; G.J. King, Animal/Poultry Science; J.E. Laing, Environmental Biology; B.D. McKersie, Crop Science; M.H. Miller, Land Resource Science; D.N. Mowat, Animal/Poultry Science; D.P. Murr, Horticultural Science; S.C. Negi, Engineering; J.I. Raeside, Biomedical Science; V. Souza Machado, Horticultural Science; R.E. Subden, Botany and Genetics; J.C. Sutton, Environmental Biology; H.J. Swatland, Animal/Poultry Science; F.R. Van de Voort, Food Science, and C.W. Forsberg, Microbiology.

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The University has also been awarded four new University Research Fellowships by NSERC for 1983-1984. This represents eight per cent of the total fellowships and is a proportionately high amount considering Guelph's size relative to other universities, says Dr. Marsh.

The recipients are: P.T. Boag, Zoology, K.P. Pauls, Crop Science, J.D. Wilson, Land Resource Science, and R.C. Wyndham, Microbiology.

If all are accepted, this will bring the total number of NSERC University Research Fellows at the University to 121□

## 'No-win' future within present framework



The 'No-Growth' Society Lecture Series continued last week with an examination of an ecological view presented by Zoology professor David Lavigne. Having first dissociated ecologists from commitment to doom and gloom and the espousal of radical causes, Prof. Lavigne went on to outline a "no-win" scenario for the future of mankind within the present social, political and economic framework.

Picking up on the comments of previous speaker, Dean Jack MacDonald, College of Physical Science, regarding exponential development in the food and energy requirements of an expanding population, Prof. Lavigne showed that the finite nature of available space and resources must eventually impose its limits.

Ecology is not a single issue discipline, he pointed out. "It is the scientific study of the inter-relatedness of all living organisms with their environment, part of which is other living organisms." Unfortunate interpretations of Genesis have misled mankind into believing that the planet is his to exploit, but he has to face the fact that he is subject to the same ecological constraints as any other organism and must learn to work with his fellow creatures on earth or face extinction, said the speaker.

Is there any hope? Prof. Lavigne wondered if we should look more towards education than research. Politicians, economists, lawyers and theologians tend to be ill-informed about the biological sciences and more education at this level is essential if the movers and shakers are to understand the consequences of their programs. The moral and pragmatic issues of survival for our children should not be left to political expediency, he said.

Guelph alderman Anne Godfrey speaks Monday, February 21 on "Political Considerations."□

### Joy Parr

Professor Joy Parr is a visiting professor in the Departments of History and Sociology and Anthropology to Friday, February 25. A graduate of McGill and Yale, and now associate professor at Queen's University, Prof. Parr is considered one of Canada's foremost social historians. Her study of the "Home Children", *Labouring Children: British Immigrant Apprentices to Canada, 1869-1924* (Croom Helm), was recognized by the Canadian Historical Association as one of the most outstanding books to be published in Canadian history in 1980. Subsequently, Prof. Parr has edited *Childhood & Family in Canadian History* (M & S, 1982), *Canadian Girls and Women, 1867-1920* with Beth Light (forthcoming, 1983), and *Growing up Poor in Rural Ontario: The Diary of A.W. Currie* (forthcoming, University of Toronto, 1984). She is working on a new project, *Three Small Towns: The Rise and Decline of Secondary-Manufacturing Communities in Ontario, 1880-1940*.

While on campus Prof. Parr will deliver a public lecture Thursday, February 24, in Room 237, MacKinnon building, at 11:10 a.m. on the "Home Children", "Oliver Twist in Real Life." She will also be presenting two seminars: "Dissonant Views on Rural Society: J.K. Galbraith versus A.W. Currie" on Tuesday, February 22, at 11:10 a.m. in Room 101 of the School of Hotel and Food Administration building, and "Case Records as Historical Sources: Ethical and Methodological Dilemmas" Wednesday, February 16 at 7 p.m. in Room 309, MacKinnon building. Everyone is invited to attend. □

### Jay Appleton

Professor Jay Appleton, Reader in Geography, The University, Hull, England, will be in residence during the first two weeks of March as Distinguished Visiting Professor for 1983 in the School of Landscape Architecture.

In his work, *The Experience of Landscape* (John Wiley Press), Prof. Appleton has proposed and argued a theory of landscape aesthetics based on the analysis of research, literature, and experience in a wide area of art and science. He has been seeking to apply this theory to the detailed and practical analysis of landscapes through an appropriate system of symbolism. Anyone involved in the analysis and planning of environmental aesthetics will find his five public lectures stimulating and useful.

His schedule of lectures is as follows:

"Landscape Aesthetics: A Philosophical Problem," Tuesday, March 1, 8 p.m., Room 113, Physical Science building; "Habitat Theory: A Biological Answer," Wednesday, March 2, 7 p.m., Room 204, Landscape Architecture building; "The Symbolism of Environment," Thursday, March 3, 7 p.m., Room 204, Landscape Architecture building; "Habitat Theory in Architecture and Landscape Design," Monday, March 7, 7 p.m., Room 204, Landscape Architecture building, and, "Habitat Theory in Literature and the Visual Arts," Tuesday, March 8, 7 p.m., Room 204, Landscape Architecture building. □

A message from your  
Energy Conservation Committee:



Do It In The Dark



# Chinese veterinarian here this spring, first in Guelph-Beijing exchange

Professor Frank Milne, Clinical Studies, has returned from a trip to China where he met with Professor Chen Jia-pu in preparation for the Chinese veterinarian's visit to Guelph for four and a half months this spring and summer as the first member of the Guelph-Beijing exchange program.

The CI DA-sponsored exchange connects Guelph with the Agricultural University of Beijing, a large institution on the outskirts of Beijing (Peking). The program will involve the exchange of faculty members in agriculture and veterinary medicine for four and a half months a year from each institution.

Prof. Milne, a horse specialist, was somewhat surprised to be asked to work with a veterinarian from a country where horses are not of great interest. However, he learned that horses have considerable importance as military animals in China, particularly in the large northern cavalry regiments. They are also important sources of animal transport as are mules, donkeys and bullocks.

While in Beijing, Prof. Milne met extensively with Prof. Chen, delivered lectures and toured the facilities. He is now arranging a program for the Chinese scientist involving a study of techniques at the veterinary college and visits to outside facilities and colleges to observe artificial insemination and ovarian transplant units.

Prof. Milne explains that Chinese academics are trying to catch up with new scientific and teaching techniques to make

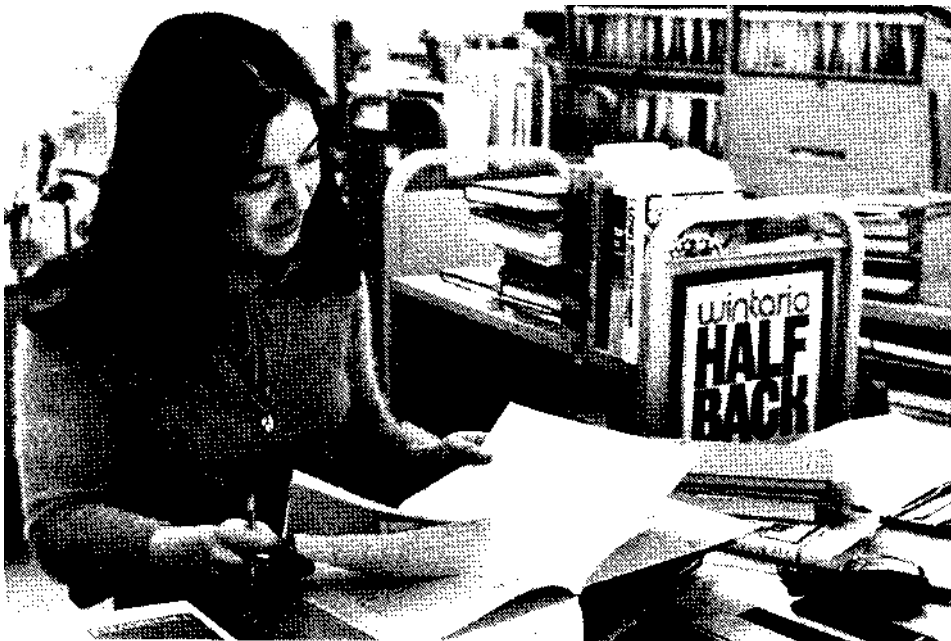
up for the time lost during the Gang of Four period. One area, however, where they are far ahead of their Western counterparts, is acupuncture. Prof. Milne hopes that during his stay in Guelph, Prof. Chen will give some demonstrations in the use of acupuncture analgesia, a technique that is commonly used by Chinese veterinarians.

Professor John Cairns, Director, Centre for International Programs, is currently in China working out further details of the exchange which will involve several faculty members from OVC and OAC.

From China, Prof. Milne went on to the University of Peradeniya, Sri Lanka, where he was visiting professor in the department of clinical studies for the fall semester. During the journey back to Canada, Prof. Milne was a guest of the Japan Racing Association in Tokyo. He visited the Equine Health Laboratories to discuss research. □

Estelle Parnell-Clunies of Guelph has received the John R. Jackson Award for excellence in dairy research. It was presented at the recent National Dairy Council meetings in Toronto at the Harbour Castle.

Ms. Parnell-Clunies is the first recipient of this award sponsored by the National Dairy Council of Canada. Alvin Johnstone, chairman of the National Dairy Council, presented the \$4,000 award. □



Linda Da Maren, Acquisitions Section, Library, unpacks and checks the first delivery of Canadian books purchased with Wintario Halfback tickets donated by members of the University community. With some astute shopping and the Halfback tickets, this dictionary cost \$10 and some change. Last week alone, 250 Halfback tickets reached the Library. Tickets can be deposited in boxes located at the Information Desk in the main Library, at the circulation desk, OVC Division, and on the third floor of the University Centre near the elevators closest to the Bursar's Office.

THE GUELPH Chamber Choir and the Opera In Concert Chorus of Toronto will present Poulenc's *Gloria* and Durufle's *Requiem*, Saturday, February 26 at 8 p.m. at Chalmers United Church, 50 Quebec St., Guelph.

Tickets at \$5 General, \$4 Students and Seniors, are available at the box office, University Centre or at the door. Doors open at 7 p.m.

HOUSING IN CANADA, a series of seminars sponsored by the Department of Consumer Studies, features Ron Cascaden, housing analyst, Kitchener branch, Canadian Housing and Mortgage Corporation. His seminar, "Design and Application of Local Housing Market Studies," will be held in Room 106, College of Family and Consumer Studies, Thursday, February 24 at 2:10 p.m.

All interested members of the University community are welcome to attend. Refreshments will be provided. Information: Professor Chris Terry, Ext. 3780, or the Department of Consumer Studies, Ext. 2120.

THE SURPLUS DEPARTMENT in Blackwood Hall is selling the following items that may be viewed in the basement of the Animal Science & Nutrition building, Room 004 after contacting Elaine King, Ext. 3281: one Diablo Systems Incorp., Serial #53964, Multi-Writer III with three print wheels and one each of Titan 10, APL and proportional spacing wheels.

AN EXHIBITION of landscape paintings by Islington artist Grace Nicholson is on display at the Faculty Club, level 5, University Centre until Monday, February 28.

ACID RAIN will be the topic of a speech delivered by Adele Hurley, executive director, Canadian Coalition on Acid Rain, when she visits the campus Monday, February 21. The talk begins at 12:10 p.m. in Room 259, Botany Genetics and Zoology building.

THE UNIVERSITY of Alberta seeks an academic and administrative leader for its faculty of graduate studies and research for July 1.

Written nominations or applications for the position should reach the vice-president, academic by March 1 at The University of Alberta, Room 3-5 University Hall, Edmonton, Alberta, T6G 2J9.

A RESEARCH ASSISTANT, is needed in the Department of Psychology on a part-time basis. The person must have good working knowledge of SPSS, BMD and multiple regression techniques. Apply to Professor B. Earn, Ext. 2167.

THE NEXT Royal Alex Shuttle is to the musical "Singin' and Dancin' Tonight" Thursday, March 10.

The show, from the Charlottetown Festival, is an action treasury of the best in Canadian music. It features the music and songs of Paul Anka, Burton Cummings, Galt McDermott, Gene MacLellan, David Clayton-Thomas, Neil Young and Alex Dramer.

Tickets for the bus trip and performance, sponsored by the University Centre, are \$25 each, and are available from the University Centre box office, Ext. 3940. The travel cruiser leaves the University Centre at 6:30 p.m. and returns immediately following the show.

## Mathematical predictions offer insights into biological processes

# The odd couple

Statistical approaches to biological problems have a long history and their importance is widely recognized. The application of mathematics to such problems, however, is a relatively new development in which the University is playing a pioneering role.

Guelph's pre-eminence in biological, agricultural and veterinary sciences offers a unique opportunity to explore mathematical, as well as statistical, aspects of research into the widest range of these sciences. This includes ongoing projects in the Department of Mathematics and Statistics related to sex, as well as recent work on "chaos".

The approach in applying mathematics to biological problems, according to Professor William Smith, Chairman, Department of Mathematics and Statistics and an active researcher in this area, is usually a modest one. "The precision of mathematical predictions associated with the physical sciences, for example, cannot always be achieved, but relationships are being established which offer some interesting insights into biological processes.

"We are beginning to develop mathematical models which help us understand the qualitative aspects of an underlying biological system. These same models may also help establish possible causalities and suggest experimental procedures to test the hypotheses underlying the model."

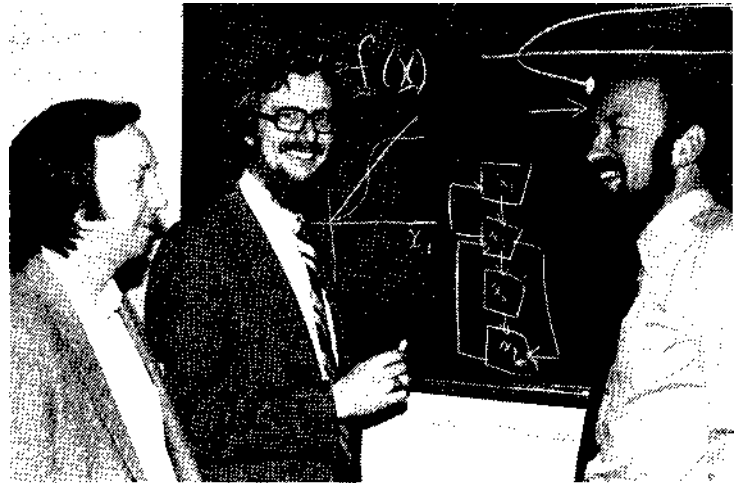
All such studies, he says, are intrinsically interdisciplinary. The mathematician, to be of value to such a study, must have, or be willing to acquire, more than just basic familiarity with the related science, and enjoy the co-operation of researchers in that field.

The same point of view is expressed by Professor Gordon Hines, also of the Department of Mathematics and Statistics, who has been working with biologists to develop mathematical responses to such questions as "What advantages, if any, does sexual reproduction have?"

"Suppose", he asks, "that future human females become able to clone themselves; that is, reproduce parthenogenetically. By producing only daughters, and so concentrating their resources, such females might be able to produce more daughters surviving to maturity than their sexual counterparts. In the short term, the question is which would be more advantageous in random environments — the efficiency of daughter-only reproduction with parthenogenesis, or the continual winning combinations produced by the gene shuffling with sexuality?"

This and similar questions were considered by Dr. William Moore of Wayne State University who devised a computer model based on a single chromosome which seemed

Left to right:  
Professor William Smith, Chairman, Mathematics and Statistics with Professors William Langford and Gordon Hines.



to indicate only a narrow range of environments advantageous for sexual reproduction. The same model, when extended to two or four chromosomes, indicated a widening of the range of such environments, but further extension of the computer model was not feasible.

Prof. Hines, who has worked with Dr. Moore before, was asked to develop a mathematical model which could cope with a very large number of segregating loci. This model confirmed that as the number of chromosomes approaches human levels, the advantages of sexual selection in random environments are potentially very wide indeed.

Another recent example is the development by Prof. Smith of mathematical models describing a hormonal control mechanism which may lead to a better understanding of the reproductive endocrine system, the system regulating the supply of hormones associated with the reproductive system in humans and in other species. The hypothalamus (part of the brain) regulates, via the secretion of a releasing hormone, the pituitary gland in the secretion of luteinizing hormone. Estrogen in females and testosterone in males are the third important hormones of the system. Research has entered on the role of the various feedback interactions among these hormones in regulating the system.

Prof. Smith is also involved in the application of mathematical approaches to theoretical aspects of senescence, ecology and renewable resource management, as well as medicine. His interest in the reproductive system dates back to a former joint appointment in the medical school at Dalhousie University in Halifax and originated in discussions with colleagues working in the infertility clinic there.

"Life processes," he warns, "are never simple and the possibility of developing mathematical models which take everything into account is not even on the horizon, but we are seeing how a mathematical approach to biological problems is already

making predictions which can be tested by experiment."

The interaction between biology and mathematics is actually a synergistic process, according to Prof. Smith. For example, as well as providing biological insights, in the last decade, the development of mathematical models devised to describe certain types of biological systems has led to a renewed interest in the mathematical community in the special types of mathematical systems involved. One such area is that of dynamical systems theory, the study of mathematical systems described quantities that change with time. It is enjoying a significant renaissance.

Such seemingly non-mathematical terms as "catastrophe theory", "chaos" and "fractals" have arisen in the technical jargon of the field. Professor William Langford, a newly-arrived associate professor in the Department, is an international authority in this rapidly developing field.

In March, 1981, a special one-day conference on dynamical systems theory entitled "Chaos Day" was held at Guelph, attracting researchers from Canada, the United States, and Europe. The proceedings of this meeting will be published in the near future, edited by Professor P. Fischer and Prof. Smith. Next month, another meeting is planned on the same subject, organized by Professors P. Fischer, W. Langford and W. Smith. One of the featured speakers will be Dr. Benoit Mandelbrot of IBM New York, the inventor in 1975 of the concept of fractals, which is a geometrical concept relating to shapes of noninteger dimensions. Fractals are apparently relevant to practically every branch of science. Dr. Mandelbrot has recently become somewhat of a celebrity — a rarity in mathematics — and was recently featured in *Time Magazine*. He will be visiting Guelph this March under the Distinguished Short-Term Visiting Professor program. During his stay, he will be delivering a public lecture, details of which will be announced shortly. □

Barnett, B.J., C.Y. Cho and S.J. Slinger, 1982. "Relative Biopotency of Dietary Ergocalciferol and Cholecalciferol and the Role of and Requirement for Vitamin D in Rainbow Trout (*Salmo gairdneri*)," (Nutrition). Vol. 112, No. 11: 2011-2019

Benson, Eugene, 1982. "Whispers of Chaos: Famous Last Words," *World Literature Written in English*, Fall 599-606 (English Language and Literature).

Bhatnagar, M.K., O.E. Vrablic and S. Yamashiro, 1982. "Ultrastructural Alterations of the Liver of Pekin Ducks Fed Methyl Mercury-Containing Diets," *Journal of Toxicology and Environmental Health* 10: 981-1003 (Biomedical Sciences).

Bird, R.P., H.H. Draper and V.E.O. Valli, 1982. "Toxicological Evaluation of Malonaldehyde: A 12-month Study of Mice," *Journal of Toxicology and Environmental Health*, 10: 897-905 (Nutrition).

Brooke, J.D., A. Chapman, L. Fisher and P. Rosenrot, 1982. "Repetitive Skill Deterioration With Fast and Exercise-lowered Blood Glucose," *Physiology and Behaviour*, 29: 245-251 (Human Biology).

Brooke, J.D. A. Chapman, L. Fisher, J. Hoare and P. Rosenrot, 1982. "Fasting Blood Glucose, Dietary Intervention and Supported Hand Tremor," *Nutrition Reports International*, 25: 67-71 (Human Biology).



Concert goers enjoy a mid-day break at the Thursday Noon Hour Concert series sponsored by Concert Management in Music Room 107 of the MacKinnon building. The February 17 program features Desmond Hoebig, violoncello and Andrew Tunis, piano. Program 1, at 12:10 p.m. includes Valentini's "Sonata in E Major"; "Sonata in C Major, Op. 102, No. 1" by Beethoven and Stravinsky's "Suite Italienne." Program 2, at 1:10 p.m., consists of Rachmanioff's "Sonata in G Minor, Op. 19." The concert is free and open to the public.

Brooke, J.D., A. Chapman, L. Fisher, J. Hoare and P. Rosenrot, 1981. "Basal Blood Glucose and Tremor of the Hand," *Canada Physiology*, 12: 95 (Human Biology).

Brooke, J.D., J. Beaver, R. Jeppesen and W. Paskievici, 1982. *Report of the Peer Review Committee on 12-hour Shifts*, Toronto: Ontario Hydro, 1982, (Human Biology).

Brooke, J.D., 1981. "Curricula in Human Biology — Ideas on Simple Structure," *Ann. St. Hum. Biol.* 8: 393 (Human Biology).

## Alumni Affairs moves to Johnston Hall

The Alumni Affairs and Development directorate has moved. Its offices are now located on three floors in the southwest corner of Johnston Hall.

The offices are in areas that in pre-University days were part of what was known as "Community House" which was used to accommodate visiting dignitaries and also as a reception centre.

Shortly after the establishment of the University, "Community House" was occupied by the Faculty Club until it was relocated in the University Centre in 1975.

Director John Babcock and the Development (Fundraising) offices are located on the second floor in the 273 series of rooms. Entrance is by the south door at the front of Johnston Hall. The Alumni Office (Programs) is located on the first floor in Room 105. To reach these areas, use the south door at the front of Johnston Hall or through the side door opposite the MacKinnon building. The latter entrance should also be used to reach the support services (Alumni Records) and Publications offices which are located on the lower level in Room 006. The Department's printing and mailing facilities remain in the University Centre in Room 008.

All telephone numbers remain the same except for Communications Officer Robin Baird Lewis, who may be reached at Ext. 3810 or 3321. □

**THE FORTRAN GI** compiler is slated for removal March 1. The compiler was called by the command: FORTGI. For those computing users who still need the old FORTRAN IV compilers, G and HX are available (being called, respectively, by FORTG and FORTHX). It is recommended that the new VS FORTRAN (FORTRAN-77) compiler be used, which is called by the command FORTRAN. For those users who make use of the DEBUG packet in FORTGI, there is a similar facility in VS FORTRAN, and it is available with both LANGLVL(66) and LANGLV L(77) options.

For more details on VS FORTRAN, type HELP FORTRAN. Further help may be obtained from the computer lab, Ext. 3584 or from Murray Alexander, Ext. 3712.

## Nancy Cain

Nancy Cain has joined the Department of Horticultural Science as lecturer and extension co-ordinator.

Ms. Cain received her B.Sc. (Agr.) and her M.Sc. in Horticultural Science at the University of Guelph. After comple-



tion of her master's degree, she worked at the faculty of forestry, University of Toronto on regulation of rooting in poplar. Following that, she worked with the Ministry of Natural Resources on poplar plantation establishment. Her research interests have been in woody plant physiology and response to environmental stress.

As well as acting as extension resource person for the Department, Ms. Cain will undertake research in herbicide use in ornamentals and fruit crops.

## Marshall Fine

Marshall Fine has joined the Department of Family Studies as an assistant professor.

He has an Ed.D. from East Texas State University, an M.S.W. from Wilfrid Laurier University and a B.A. from the University of Waterloo. As a clinical member and approved supervisor in the American Association for Marriage and Family Therapy, he has provided marital and family therapy for the past 10 years in many settings.

Prof. Marshall's special area of interest is family and marriage therapy.

His teaching responsibilities at Guelph will include courses in Marital and Family Dynamics and Communication in Family Consultation at the undergraduate level and therapy skills and theory at the graduate level.



**TWELVE CHILDREN** from Priory Park School, Guelph, have been selected to perform with children's entertainer Bob Schneider at War Memorial Hall, March 5. Sponsored by the University Centre, the hour-long concert is a lively, colorful show for pre-school to 10 year-old children.

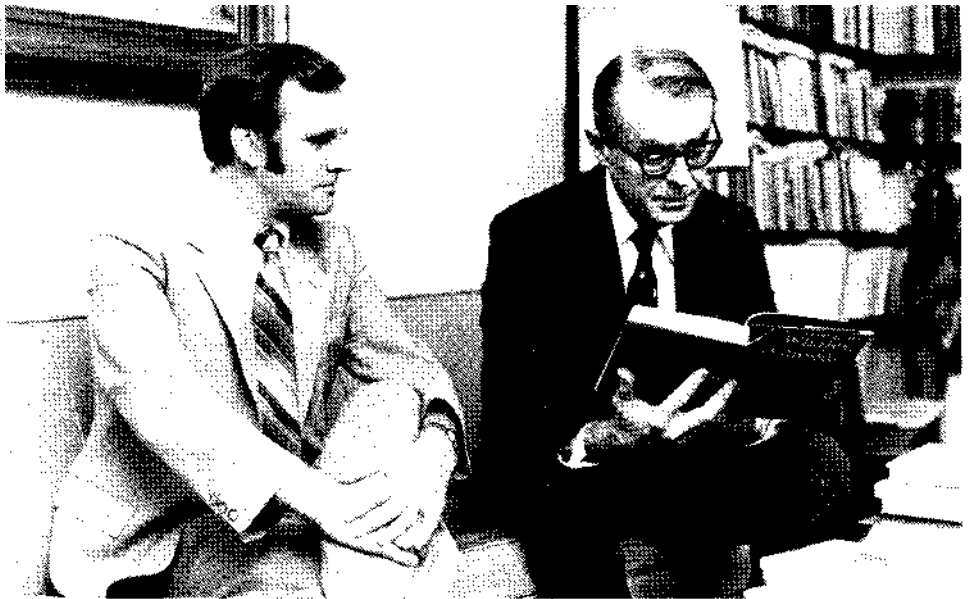
The Priory Park youngsters are from grades one to six. Two individuals were selected from each grade level. They will rehearse with Mr. Schneider Wednesday, February 23 at the school.

**The Ecology of Whales and Dolphins**  
**D.E. Gaskin**  
**Exeter, N.H.: Heinemann, 1982**

Zoology professor David Gaskin has brought together in one volume all the major aspects of population biology of the Cetacea, establishing an overall perspective for the group both in time and space. No other work on the Cetacea has attempted to discuss and review them from an ecological point of view within an evolutionary context.

The origins, dispersal and nature of the present distributions are considered in the first part of the book. In each case the Cetacea are discussed within the general framework of biological method, knowledge and controversy. Speciation of cetaceans, and the interpretation of zoogeographical patterns are examined with respect to existing controversies about the speciation process in general, and the differences which exist among zoogeographers about the way in which patterns develop.

Migrations, feeding behavior, social organization and reproductive patterns are considered within the context of the kinds of selection pressures which cetacean populations have faced. The elements of population analysis and the use of data obtained



*Prof. David Gaskin discusses his new book with President Forster.*

in management are described, and the relative success and failure of whale management is reviewed in biological, economic and political terms. The potential threat of ocean pollution to these animals is examined in detail.

The bibliographies relating to each chapter have been compiled for the senior undergraduate, graduate student, teaching and research faculty and the serious layman.

The book and the chapters are arranged by topic for the general biologist, rather than the specialist.

The depth of discussion, the treatment of controversial topics, the inclusion of original research and the extent of the bibliographies, also ensure that the book is of interest to scientists working on marine mammals, related groups, and on other marine organisms. □

Professor C. Young Cho, Nutrition, and Fisheries Branch, Ontario Ministry of Natural Resources visited the Philippines, Singapore, Malaysia and Sri Lanka as a consultant for the International Development Research Centre, Ottawa to audit fish nutrition programs that he set up three years ago. He also presented a paper, "Effects of Dietary Protein and Lipid Levels on Energy Metabolism of Rainbow Trout", at the 9th Symposium on Energy Metabolism Lillehammer, Norway.

In the same trip he travelled to Sweden, Denmark, Scotland, France and Japan, to raise funds for the Committee VI/3 of the International Union of Nutritional Sciences and for seminars and consultation with fisheries agencies, universities and fish feed and aquaculture industries.

President Donald Forster addressed the Kitchener/Conestoga Rotary Club in Kitchener last Friday. He startled the members with facts and figures about the size of Guelph's research program and the accomplishments of faculty members over the years. He also told them about the encouragement given by Guelph and Waterloo that led to Canada's bid for a \$50 million UN bio-technology centre.

Rotarians came away with a greater appreciation of our University as an asset for the golden horseshoe region. He encouraged them to take in the University's Open House March 12 and 13.

Dr. David W. Jardine, Family Studies, conducted a workshop, "Music with Children: A Non-Developmental Approach", at the Ontario University Laboratory Schools Conference held on campus.

Professor Stephen Jones, Animal & Poultry Science, was a member of a trade mission led by the Ontario Minister of Agriculture, The Honorable Dennis Timbrell, to promote Ontario pork in Japan.

Prof. Jones presented seminars in Tokyo and Osaka on the programs in Ontario which guarantee the reliability and quality of Ontario pork.

In 1981, Canada exported approximately \$180 million of pork to Japan with Ontario supplying 30 per cent of this total dollar value.

Professor N.R. Johnson, Languages and Literatures, attended the annual meeting of the McMaster Association for 18th-century Studies. Its theme was "Popular Culture". He delivered an illustrated paper, "Popular French Almanacs of the 18th-century."

On two occasions he has also addressed students in the French immersion program at Queen Elizabeth Park Secondary School in Oakville, speaking on French comic strip heroes and also on famous criminal trials.

Professor William Nickling, Geography, presented a paper, "Factors Affecting Wind Erosion of Agricultural Soils in Southern Ontario, Canada" at the Third International Conference on Soil Erosion and Conservation held in Honolulu. He was appointed chairman of the wind erosion working group, World Association of Soil and Water Conservation.

Dr. Ib. L. Nonnecke, Horticultural Science, spoke to the rutabaga section of the Ontario Fruit and Vegetable Growers Association Annual Conference recently on "The Research with Rutabagas at the University of Guelph."

Dr. T.D. Nudds, Zoology, gave an invited lecture to the staff of the Ministry of Natural Resources' Wildlife Research Station at Maple on "Evidence for Habitat Selection by Ducks and Some New Analyses".

Professor John T. Powell, Human Biology, spoke to the Sertoma Club on "The Fitness of Things."

Professor Marion Steele, Economics, presented the paper, "A Housing Allowance That Does Work; Household Response to the Canadian Income-Conditioned Percent-of-Rent Plans," at the American Real Estate and Urban Economics Association meetings held in New York City.

Professor Francis Tapon, Economics, delivered an invited paper, "Microeconomic Foundations of a Strategic Planning Model of the Firm," at the American Economics Association meeting held in New York.

Professor Tom Tritschler, Chairman, Fine Art, presented an illustrated lecture on artist Edward Hopper as part of the fall lecture series at the Macdonald Stewart Art Centre.

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# System to assess food land needs

A province-wide land evaluation system has been developed by Guelph researchers to assess ways to meet Ontario's food needs in the 21st century.

Working under the aegis of the University School of Rural Planning and Development, the team has developed a computerized system with a data base pertaining to land availability, potential uses, crop productivity, livestock feed requirements and commodity demands and imports.

Geography professor Barry Smit, who co-directs the Land Evaluation Project with School of Agricultural Economics and Extension Education professor, Stephen Rodd, says the project makes it possible to evaluate land for agriculture under many changing socio-economic, environmental and technological conditions.

The system is still being refined by the team, which includes researchers from the Department of Land Resource Science and a small full-time staff, but there appears to be little precedent anywhere in the world for this kind of land evaluation system.

Prof. Smit says a system to evaluate the implications of possible future land use trends is necessary because of increasing demands for land for agriculture, recreation, urbanization, resource extraction and forestry.



Scene from *The Balcony*.

## Heroes in a brothel

The Drama Department's next production is Jean Genet's *The Balcony*.

Jean Genet became notorious as the homosexual convict-turned-writer whose view of the world fashioned flowers from the gutter. Genet's heroes live a life of remorseless self-dedication in which to go too far is not far enough. They are extremists of love and sensuality, never for one moment unaware of their situation.

Set in a brothel, *The Balcony* has been hailed as one of the richest and most complex works of the modern theatre. "Through a dazzling array of characters and bizarre episodes, Genet explores central religious, sexual, political and moral questions with a tenacious disregard for conventional attitudes and values. A demanding play for actors and audiences alike, *The Balcony* has at times been banned for its sexual explicitness and shocking attack on accepted mores. Nearly 30 years after its original production, *The Balcony* is less likely to shock its audiences, but its visions still demand attention.

Directed by the Drama Department's artist-in-residence, Henry Woolf, and designed by Allan Watts, *The Balcony* runs at the Inner Stage, Monday, February 21 to Saturday, February 26.

Tickets at \$3 are available at the University Centre box office, Ext. 3940. □

He explains that public food preferences cannot be easily anticipated because of many complex variables. The economic advantages of importing specific foods rather than growing them in Canada is constantly changing. Non-agricultural demands for land are also difficult to forecast. While governments must respond to political realities, there is a need for information on the food-producing potential of land and how this potential is influenced by possible future conditions, he says.

Changes in land use occur if the area and quality of land available for agriculture are reduced or if food production must be increased to meet domestic demands or export opportunities. The challenge of the Land Evaluation Project, therefore, was to develop a system capable of answering a wide range of "What if . . . ?" questions.

The project, funded since 1976 by the Land Resource Research Institute, agriculture Canada, the Ontario Ministry of Agriculture and Food, and NSE RC, is not limited to the Ontario context. It can be adapted to other areas in the world where a comparable local data base is available. Agriculture Canada is interested in extending the system to other parts of Canada, and the possibility of exporting the technology to the Caribbean is under review by the team in response to a request from the Caribbean Agricultural Research and Development Institute (CARD I.)

## Police auction

Surplus Sales, in conjunction with the Security Department, is holding a police auction Thursday, February 17, from 6 p.m. to 9 p.m. in Peter Clark Hall of the University Centre.

Public viewing of items begins at 5 p.m.

If any Department has items to auction off contact Dave Scott, Ext. 8139. □

### Goods and Services Available

Pianos repaired, refinished, tuned, old pianos bought and sold, 837-1036; home repairs, painting, carpentry, 856-9268; child care, 822-5395.

### For Sale

1973 Mercury Cougar, 2113; baby rocker, bottle warmer, car bed, bumper pad for crib, colonial maple crib, travel playpen, sterilizer and bottles, insulated diaper bag, bath change table, 1975 Corvette, 836-6374; single bed mattress, 2 dressers, table with 4 chairs, 836-5157 after 1800; treadle sewing machine, 822-9699; Apple II Plus computer (48K), disk drive and phosphor green monitor, 3927; 1980 350 Jawa, 856-4049 after 1800; 1973 Toyota Corolla (parts), 823-2737; man's brown tweed sports jacket, size 42, 822-8289.

### Wanted

Sofa bed, P.O. box 48-2119; crib mattress, 658-9938; child's crib, 822-9699; sleeping bag for winter outdoor camping, 824-9579; ride from Kitchener (Belmont & Highland area) to Guelph and return weekdays, 0800 to 1630, share gas, 8768.

### Accommodation

#### For Rent

2 bedroom basement apartment, near University, available immediately, P.O. box 28-2119; 3 bedroom house, close to University, May-Aug. '83, 821-4442; 2 bedrooms in a house, permanent or summer only, 821-8049.

Lead Hand Agricultural Assistant, Crop Science. Salary Grade 007. Start rate: \$379.10. Six Month rate: \$397.06.  
Professional Assistant, Pathology. Grant position. From nine months to one year. Salary negotiable.  
Electronic Technician, Computer Operations. MTS V. Salary range: \$376.43 — \$541.46.  
NMR Technician, Southwest Ontario NMR Centre. MTS V. Salary range: \$376.43 — \$541.46.  
Administrative Assistant I, Clinical Studies. Salary range: \$292.37 — \$416.89. Open to on-campus employees only.  
Executive Secretary Dean's Office, College of Arts. Maternity Leave. Salary range: \$267.14 — \$384.20.

# Next Week at Guelph

## THURSDAY, 83 02 17

Noon Hour Concert - DESMOND HOEBIG AND ANDREW TUNIS, cello and piano, 1210 and 1310, MacK 107.

Spotlight on the University of Guelph - 1900, cable 8.

Police Auction - 1900, PCH.

Mid-Semester Break - CLASSES CANCELLED.

## FRIDAY, 83 02 18

Mid-semester Break - CLASSES CANCELLED.

Faculty Christian Fellowship - 1200, Johnston Hall Rm. 157.

Worship - ANGLICAN EUCHARIST, 1700, Johnston Hall 158.

Conference - DIALOGUE ON HOMOPHOBIA, 2000, UC 442.

Sports - WOMEN'S ARCHERY, Guelph at Queen's; MEN'S HOCKEY, Toronto at Guelph, 1930; SWIMMING, OUAA finals at Brock.

## SATURDAY, 83 02 19

Sports - MEN'S BASKETBALL, Windsor at Guelph, 2000; MEN'S CURLING, OUAA finals at Laurentian; WOMEN'S ARCHERY, Guelph at Queen's; WOMEN'S CURLING, OU/OW Finals at Laurentian; SQUASH, OUAA finals at RMC, 0900; WRESTLING, OUAA finals at McMaster, 0800; SWIMMING, OUAA finals at Brock. Continuing Education - SNOW, WIND AND SUN CONTROL, 0900, Ext. 3956 for details.

Conference - DIALOGUE ON HOMOPHOBIA, 1000, UC 442; PINK TRIANGLE DANCE, 2000, PCH.

Arboretum - NIGHT STALKER'S OWL PROWL, 1900, Arboretum, register at Ext. 3932.

## SUNDAY, 83 02 20

Worship - CATHOLIC MASS, 1000, PCH; CAMPUS CHURCH SERVICE, 1030, PS 113.

Sunday Afternoon Walk - MAMMALS IN WINTER, 1400, J.C. Taylor Nature Centre, Arboretum.

International Cinema - ATLANTIC CITY, 2000, PS 105.

Conference - DIALOGUE ON HOMOPHOBIA, 1200, UC 442.

Sports - WOMEN'S CURLING, OU/OW finals at Laurentian; MEN'S CURLING, OUAA finals at Laurentian; SQUASH, OUAA finals at RMC.

## MONDAY, 83 02 21

ICS - SAS GRAPHICS, T. MacKay, 1030; BASIC PROGRAMMING LANGUAGE FOR SMALL COMPUTERS, D. Genner, 1330, Ext. 3046 to register.

Liberal Education Series - LIVING IN A NO-GROWTH SOCIETY: POLITICAL CONSIDERATIONS, Alderman Anne Godfrey, 1210, UC 442.

Careers and Jobs - CHOICES: INTRODUCTION, 1300, register at the Connection Desk by 1100.

Spotlight on the University of Guelph - 1830, cable 8.

Writing Centre - REPORT WRITING WORKSHOP, 1830, register at the Information Desk, McLaughlin Library.

Theology from Experience - WHAT IT MEANS TO BE CELEBRATING PEOPLE, 1930, UC 335.

Drama - THE BALCONY, 2000, Inner Stage, MacKinnon building, tickets at the UC box office.

## TUESDAY, 83 02 22

Seminar - DISSONANT VIEWS ON RURAL SOCIETY: J.K. GALBRAITH VERSUS A.W. CURRIE, Visiting Professor Joy Parr, Queen's University, 1100,

Hafa 101.

Our World - MALAYSIA: A Developing Country, 1210, UC 442.

Physics Colloquium - TEST OF W.E.D. AND RELATIVITY ON ATOMIC SPECTRA, Dr. H. Gordon Berry, Argonne National Laboratory, Argonne, Ill., 1600, PS 113.

Worship - CATHOLIC MASS, 1700, chapel, level 5, UC.

God, Man and World - 1700, UC 334.

Careers and Jobs - RESUME WRITING CLINIC, 1800, CSRC.

Continuing Education - AGRIBUSINESS MARKETING MANAGEMENT, T. Funk, 1900, Ext. 3956 for details.

Faculty Association - MEETING, 1930, Faculty Club lounge.

Drama - THE BALCONY, 2000, Inner Stage, MacKinnon building, tickets at UC box office.

## WEDNESDAY, 83 02 23

Worship - ANGLICAN EUCHARIST, 1200, Johnston Hall 158; CATHOLIC MASS, 1200, chapel, level 5, UC; IMMANUEL FELLOWSHIP, 1900, AS 141; CHRISTIAN doctrine class, 1700, UC 333; CATHOLIC PRAYER GROUP, 1700, chapel, UC, level 5.

CUSO - INFORMATION TABLE, 1000, UC Courtyard.

College Royal - CELEBRANT SPEECHES, 1100, UC Courtyard; SIGN-UP FOR FLY DAYS, south of UC Courtyard.

Biochemistry Seminar - REDOX PROPERTIES OF F LAV INS IN ACIDIC SOLUTIONS, 1200, Hort 124.

Drama - THE BALCONY, 2000, Inner Stage, MacKinnon building, tickets at UC box office.

## THURSDAY, 83 02 24

Continuing Education - GRIEVANCE HANDLING AND THE ARBITRATION PROCESS, W. Marcotte, 0900, Ext. 3956 for details.

ICS - COMPUTER NETWORKS, K. Percival, 0900; COMPUTER CONCEPTS, M. Brochet, 1330, Ext. 3046 to register.

Graduate Research Seminar - STRUCTURAL-FUNCTIONAL CORRELATION OF THE LUNG IN LIGHT HORSES WITH SMALL AIRWAY DISEASE, 1100, Pathology, Rm 220.

Lecture - HOME CHILDREN: OLIVER TWIST IN REAL LIFE, Visiting Professor Joy Parr, Queen's University, 1110, MacK 237.

Noon Hour Concert - ANAGNOSON & KINTON, duo pianists, 1210 and 1310, MacK 107.

Staff Development Opportunities - MICROCOMPUTER CONCEPTS, M. Brochet, 1330, ICS 220, Ext. 3058 to register.

Housing in Canada - DESIGN AND APPLICATION OF LOCAL HOUSING MARKET STUDIES, Ron Cascaden, CHMC, 1410, FACS 106.

Worship - CATHOLIC MASS, 1700, chapel, level 5, UC.

Apiculture Club - BEEKEEPING IN TANZANIA, D.E. Massawe, 1710, Graham Hall, Rm 200.

Film - GUELPH MEDIEVAL SOCIETY, 1800, WMH.

Careers and Jobs - INTERVIEW SKILLS CLINIC, 1800; JOB SKILLS WORKSHOP, 1800, register at the Connection Desk by 1500.

Spotlight on the University of Guelph - 1900, cable 8.

Lecture - INTERPERSONAL RELATIONSHIPS, Jim Olthuis, 1900, AS 141.

Film - DECISION TO WIN: THE FIRST FRUITS, film on El Salvador, 1930, PS 113.

Drama - THE BALCONY, 2000, Inner Stage, MacKinnon building, tickets at UC box office.

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