

NEWS BULLETIN

UNIVERSITY OF GUELPH

her first year at McMaster University that she stumbled on archery as a competitive sport. Like all first year students at that time, she had to decide on a sport for the compulsory six week physical education course. Those six weeks of archery were the first step on the path that led through university tournaments eventually to the World Archery Championships in York, England, last summer.

After graduating from McMaster last year, Miss Grant came to Guelph to take some Fine Art courses, preparatory to enrolling in the cartography course at Sheridan College. Although she has not been involved in archery many years, Miss Grant has been described as "a natural archer" by Shirley Peterson, who coaches the Women's Archery team here.

Elmer Ewert started fiddling with bows and arrows he made himself at an early age, but didn't take the sport up seriously until ten years ago when he bought a bow to take on his holidays. The casual shooting into sand dunes on that holiday sparked Mr. Ewert's interest in a sport that now takes as much as 30 hours a week of his time, in practice and tournaments, and took him to the World Championships in Holland and the Canadian National Championships, both in 1967.

During the spring and summer, both archers have been practising at the archery range set up by the School of Physical Education in a vacant field opposite the Aviary. There is also an indoor range in the Physical Education building. Mr. Ewert says he would not have made the Olympics without the encouragement of the Physical Education people.

Both Mr. Ewert and Miss Grant also have targets set up in their back yards. Miss Grant



Elmer Ewert prepares to shoot an arrow made from precision aircraft aluminum alloy. The bow is made from imported hardwood with working limbs of straight-grained hardrock maple faced and backed with fiberglass.

practises at her parent's home near Windsor, and Mr. Ewert shoots in true Robin Hood fashion down a corridor in trees, in this case his four acre sugar bush near St. Jacobs, where in a good year he and his family harvest 80 gallons of maple syrup.

A good archer needs to be dedicated, and according to Mr. Ewert, stubborn. He says that after a year shooting with a bow and arrow, everyone's muscles are similar. Then mental control and concentration become the determining factors as to whether an archer will be of tournament quality.

Because most archers are largely self trained, and as Mr. Ewert says, stubborn, the olympic coaches at the training camp to be held in Edmonton early in August, will only try to create the necessary environment to further polish existing archery form to a level that will maximize performance at Munich.

Mr. Ewert says it is important to be "psyched in" to championship competition months in advance. In addition to constant training that sometimes adds up, on top of work, to a 17Y2 hour day, he says he has to mentally rehearse what he will be doing in a tournament, to the extent that, under tournament pressure, performance will be automatic.

In Munich, the archers will be under pressure for four days, eight hours a day, in competition where each will shoot a total of 288 arrows. The women shoot 70 and 60 metres the first day, 50 and 30 metres the second day, then repeat this sequence the final two days. The men shoot 90 and 70 metres the first day and 50 and 30 metres the second day, repeated on the third and fourth days (a metre is slightly more than a yard). The final scores are determined from the total aggregate of the four day's shooting.

Although archery has been out of the Olympics for 60 years, World Championships have been held every two years. Canada's Olympic Archery team has three women and three men members. The other team members are: Don Jackson, Lindsay; Wayne Pullen, Dorchester, and two Vancouver women, Dorothy Lidstone and Vi Muir.

Guelph archers

Modern day Robin Hoods Shoot at Olympics



Mary Grant practises at the University archery range for the Olympics. The archer's bow is as heavy as the individual can control to give maximum arrow speed and minimum wind drift. Miss Grant's bow pulls 31 pounds while Mr. Ewert's bow pulls 46 pounds.

Two archers from the University of Guelph who started out playing Robin Hood and Red Indians as children will compete in the Olympics in Munich next month. They are Mary Grant, part-time Fine Art student, and Elmer Ewert, lab technologist in Clinical Research.

Mary Grant of Cottam, a geography graduate who wants to be a cartographer, says she was always a tomboy, and as such naturally played at bows and arrows. However, it was not until

International conference on seals

The first International Symposium on the Biology of the Seal will take place at the University of Guelph, August 14 to 17. More than forty internationally renowned scientists from 15 countries will present technical papers during the four day symposium.

Technical papers will cover all phases of research on seals, including evolution, zoogeography, anatomy, social behaviour, vocalization, navigation, population dynamics, management, ecology, migration, temperature regulation, reproduction and diving mechanisms.

Professor Keith Ronald, Dean of the College of Biological Science and convener of the meeting, explained that the symposium will generate much interest within the entire scientific community because marine mammals are a good indicator of the ecological state of the oceans. Many scientists, he said, feel that man's eventual habitation of the oceans depends on the extent to which he can understand and imitate the adaptation mechanisms of marine mammals.

Proceedings of the symposium will be published by the International Council for the Exploration of the Sea (ICES) in the series *Rapport et Proces Verbaux*.

In addition to the technical sessions, the symposium will include several films about the oceans, seals and nature in general. These films, of interest to both the scientist and the layman, will be shown in the evening to the general public. A schedule of evening activities

will be available before the opening of the symposium. Exhibits from several countries and international organizations will also be of interest to the general public. The University's extensive seal research facilities will be open for inspection, with demonstrations of equipment and techniques.

Professor Ronald said that a number of the scientists would stay on after the symposium to work with the facilities and faculty at Guelph.

Expected to attract about 100 delegates from all over the world, the conference is sponsored by the College of Biological Science of the University of Guelph, International Council for the Exploration of the Sea, International Commission for the Northwest Atlantic Fisheries and the International Biological Program. Additional financial support has come from the Canadian National Sportsmen's Show, Fisheries Research Board of Canada, Food and Agriculture Organization, National Research Council and the World Wildlife Fund (Canada). Executive officers from these sponsoring organizations will attend the conference, giving talks of a non-technical nature.

Immediately following the International Symposium, there will be a day-and-a-half working meeting on the status of threatened and depleted seals. This closed session, sponsored by the Survival Service Commission of the International Union for Conservation of Nature and Natural Resources (IUCN), will deal with threatened species of walrus, sea lions and seals.

The IUCN publishes an index of wildlife — a multi-volume directory of birds, fish and mammals in which each species is described and its relative abundance indicated. The guide's description of 11 seal species will depend on the outcome of this meeting — the first of its kind to deal exclusively with seals.

Professor Keith Ronald, Dean of the College of Biological Science and a well-known seal biologist, will chair both meetings.

Ontario increases aid to universities

Ontario's colleges and universities have received a 3.4 per cent increase in the Basic Income Unit for the 1973-74 academic year, it was learned last week. George Kerr, Minister of Colleges and Universities made the announcement to press following a speech in Guelph last week.

The Basic Income unit, or BIU, which is used in calculating support levels for colleges and universities, has been set at \$1,825, up \$60 from this year.

It is expected that formula operating grants to universities will increase by about 9 per cent for the 1973-74 academic session.

In a letter to the presidents of the province's universities and colleges, Mr. Kerr said that "the government has always considered education as one of its highest priorities. This announcement, which comes in a period of great fiscal restraint, should indicate to you our strong and continuing commitment in this area." Commenting on the BIU increase, University of Guelph President W. C. Winegard said "It is about as much as we had expected, although we had hoped for more. It will not cover increased salary and wage costs."

Campus job opportunities

New Listings as of July 14, 1972

Stenographer, Biomedical Sciences. Salary range: \$77.94 — \$111.47.

Operator I, Computer Operations, Institute of Computer Science. Salary range: \$106.06 — \$141.34.

Residence Clerk, Department of Residences. Salary range: \$87.45 — \$92.45.

Porters, Department of Residences, 5 required. Salary range: \$2.64 — \$2.92.

Soils symposium

to attract scientists

from 20 countries

Some 100 scientists from 20 countries are expected to attend a symposium on "transport phenomena in porous media" (which means primarily the flow of liquids through soils and underground deposits) to be held August 6 to 9 at the University of Guelph.

The symposium is being sponsored jointly by sections of the International Association for Hydraulic Research and the International Society of Soil Science. Those attending will include soil scientists and hydrologists, and civil, chemical and petroleum engineers. It will be the first such conference held in Canada.

Fifty-one papers from scientists in the United States, Russia, Canada, France, Australia, Iran and other countries are to be presented. These papers are also being published in a two-volume edition which is some 800 pages long and is for sale at \$23 a copy.

The symposium is being organized by professors D. E. Elrick and B. D. Kay of the Department of Land Resource Science, H. D. Ayers and W. N. Stammers of the School of Engineering and F. A. L. Dullien of the University of Waterloo's Department of Chemical Engineering, in cooperation with the University of Guelph's Office of Continuing Education and the Department of Information. Side trips, for those who wish them, are being arranged to the Stratford Festival and to what is probably the most stupendous example of fluid flow in Ontario — Niagara Falls.

Ronald Colman

stars in free film

Ronald Colman starred in the first G F F T presentation this term and he stars in the last as well. But *A Double Life* is a far cry from the swashbuckling heroics of *Prisoner of Zenda*. Colman plays a dedicated actor who becomes so obsessed with his stage role of Othello, he begins to play the part in real life, ultimately leading to tragedy. The aging, but still handsome Colman, delivers an excellent performance, and the Academy Awards Committee cited him the Oscar as Best Actor in 1947. A brilliant script by Garson Kanin and Ruth Gordon also contributes to the film's success. Shelley Winters, Signe Hasso and Edmond O'Brien co-star. The final chapters of *Captain Marvel* will also be shown, so be sure to attend this Monday beginning 8 p.m. sharp in Room 105 Physical Sciences. Remember — it's FREE!

Press tour waste utilization projects

Close to 25 newsmen from southern Ontario as well as civic and provincial government officials are on campus today for the University of Guelph's Waste Management Press Day.

When one considers that every man, woman and child produces three or four pounds of garbage a day (not to mention industrial waste), the problem of its disposal becomes mammoth.

The University of Guelph has, for some time, been carrying out research on the problems of waste disposal — both liquid and solid, urban and rural. A number of projects are underway, including composting, plowing garbage into the soil, and techniques of treating agricultural wastes. In an effort to demonstrate the University's involvement

in this important area, representatives of newspapers, radio and television stations, magazines, and government departments were invited to spend the day at Guelph touring the various waste utilization projects and talking to the faculty concerned.

University of Guelph personnel working on the projects include Professor Len Webber and Dr. Larry King, Land Resource Science; Professor Jack Pos, School of Engineering; Professor John Robinson, Microbiology.

The projects are funded by the Ontario Ministry of Agriculture and Food, the Ontario Ministry of the Environment, the Canada Department of Agriculture and the National Research Council.

Arts council award for young filmmaker



Trevor Davies, a second semester Arts student, has received a \$1000 grant from the Provincial Council of Arts for production of a ten minute film poem on the work of Canadian Painter Norval Morriseau.

The grant, one of nine awarded out of 80 applications, is intended to encourage young filmmakers. A candidate is judged on the basis of a film and recommendations from within the industry.

Mr. Davies' experience in filmmaking started at Thunder Bay Community College where he completed a course in film. Last summer, he made or worked on films for several educational institutions, television and a national church organization.

Mr. Davies described his current production as a study of Morriseau, illustrating the realist basis in his paintings. The film will give insight into the painter's imagery, which is based on the myths and legends of the Thunder people. Tentatively, plans call for a comparison of Morriseau's paintings with photographs of approximately the same scenery. Pending permission from the publishers, Duncan Campbell Scott's poem, *Night Hymns on Lake Nipigon*, will serve the narrative, accompanied by nature sounds recorded in the wild.

Filming will start in August, and, barring unforeseen difficulties, the production will be completed by December.

Politics class visits Pierre Vallieres

Fourteen University of Guelph students and Professor Henry Wiseman spent the weekend with French Canadian separatist Pierre Vallieres recently, and found him "warm, intellectual, serious and utterly charming", in the words of one of the Political Studies 315 students.

The course is French Canadian political studies. On other occasions, Professor Wiseman has taken a class to Quebec City where they interviewed men like Robert Bourassa and Jean Lesage. However, this time the class travelled 190 miles northeast of Ottawa to a village near Mont Laurier where Pierre Vallieres sits awaiting trial as a "kind of high priest" with his friends, fellow separatists.

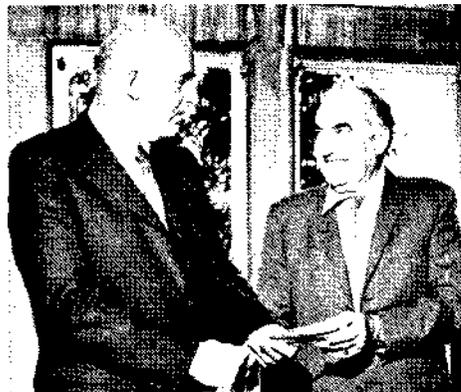
On Vallieres' invitation, the students stayed at his home, an old clapboard French Canadian farm house, where they had a formal seminar

early in the visit, followed by discussions deep into the night and home made baked beans for breakfast. He took them to a local village nightclub where political songs and jokes were in vogue.

The students emphasized that although Vallieres now believes the Quebecois can achieve independence peacefully through the Parti Quebecois, and that although his views seem to have softened from the cry for violent action for separation in his book, *White Niggers of America*, he is willing to take any action that is necessary to achieve independence for Quebec. He says the Quebecois are willing to fight, but feels it will not be necessary unless the rest of the country takes up arms on separation.

Vallieres and his followers are not concerned with French Canadians living outside of Quebec, and have no thoughts to waste on what the rest of Canada thinks about Quebec, the students found.

One of the students interviewed summed up the feelings of the group who visited Quebec when he said, "This is really learning."



Professor R. P. Forshaw, president of the Guelph Campus Cooperative accepts a \$25 award from Dr. H. D. Branion, Assistant to the President. The award was made by the Association of College Stores to Professor Forshaw, for the co-op's system which gives members with a participating certificate a 5% discount on all textbook sales. Last year Mel Cochrane, then manager of the Campus Co-op Bookstore, won an award for excellence in book displays from the same association.

APPOINTMENTS

Patrick M. Sweeney has been appointed Secondary School Liaison Officer. He will work out of the Office of the Registrar. During the high school year, Mr. Sweeney will travel around the province, speaking to high school audiences about the University of Guelph. During the summer, Mr. Sweeney is available to talk with students planning to attend university in the fall.

Mr. Sweeney graduated with a B.A. degree in Sociology from the University in January. While a student, he was a house advisor for three years.

Mr. Sweeney worked as a student coordinator at the Guidance Dialogue Conference held

Patrick M.
Sweeney



here this spring for guidance teachers from all over the province.

Mr. Sweeney is married. His wife, Debbie, is a student here.

He is in the admissions section of the Office of the Registrar and can be reached at Ext. 2297.

'Chemicals' necessary for agriculture

For people in the future, one of the more quaint and curious features of our era will no doubt be our tendency to divide farming practice into organic (which is good!) and chemical (which is bad!). Such a distinction is totally illogical from a scientific point-of-view. Yet we cherish it as we cherish any

"The history of getting biological controls to work is pretty dismal."



Freeman McEwen

Organic farming is an enjoyable hobby for the amateur gardener but of little value in most types of commercial agriculture, says Professor Freeman McEwen, chairman of the Department of Environmental Biology.

"The history of getting biological controls to work is pretty dismal," he says. "You can pretty well count the instances where it has worked in North America on the fingers of one hand. For instance, there is just no way you can raise apples that are not wormy unless you use insecticide. But, on the other hand, you can, provided you accept a reduced yield, raise potatoes, tomatoes and carrots essentially without chemical sprays."

The effectiveness of biological controls depends on the type of insect pest and where it attacks a given plant, says Professor McEwen. For those insects that feed directly on the edible portion, as is the case with some pests in apples, biological controls are of little value. But where insects feed on the foliage, as occurs with potatoes, such controls can work very well, provided the farmer is content with a smaller crop.

But whether a crop is protected through insecticide or by some biological control, he says, its food value is the same.

"Without pesticides you can't make a commercial go of farming."



C. B. Kelly

other prejudice — because it is delightful, not because it is true. It gives us pleasure to believe in the blessedness of the organic and the evil of the chemical. Nevertheless, such a prejudice is, as the following interviews show, very much at odds with the realities of agriculture.

Pesticides are not always the creations of recent technology: several of them have a long and checkered history.

Sulphur — plus various types of magic — were used by the ancient Romans in the hope of controlling wheat rust, says Professor C. B. Kelly of the Department of Environmental Biology. However neither the chemical nor the occult means appears to have worked particularly well.

Then there is Bordeaux mixture, a spray that is prepared from copper sulphate and lime: a single spraying with this substance at the right time assures almost complete control of peach leaf curl. Yet Bordeaux mixture was originally used in France in the late nineteenth century in an attempt to repel people — specifically, passersby who would help themselves to the fruit of the vine. It began with a French farmer who mixed it up as a scare device; he daubed it on his grapes in the hope that people would recognize it as a poison and leave the fruit untouched. The farmer was surprised to discover that the substance killed mildew and permitted him to harvest a superior crop.

On the other hand, says Professor Kelly, the Indians who long ago carried on farming in Ontario had no pesticides that would destroy insects and diseases, and keep away the bears and the coons. Their method of agriculture could only support a small population and often they faced starvation. Without pesticides, says Professor Kelly, you can't make a commercial go of farming.

"Chemicals are essential if agriculture is going to produce enough to feed the world's population."



J. W. Riekels

The quality of food is the same whether grown organically or with the aid of chemical fertilizers and pesticides, says Professor J. W. Riekels of the Department of Horticultural Science. In fact vegetables can be raised in water that is treated with the proper chemicals

and be in all respects identical to vegetables grown in soil.

There are advantages to organic matter: it can either be spread over the surface as a mulch or mixed in as a soil conditioner. Through these means it reduces compaction, and helps the soil retain moisture. Such manufactured products as plastic and paper can make excellent mulches for fruit and vegetable crops.

Pesticide chemicals are essential if agriculture is going to produce enough to feed the world's population, says Professor Riekels. The large-scale farmer can't hire a hundred people to pick worms from his tomatoes. He must protect his crops with pesticides applied as directed, and at the right time. And if one is a hobby farmer, one may prefer to tend ones crops without them.

"Many chemical fertilizers are natural products as pure as any that can be found."



T. E. Bates

The nutrients that plants get from "chemical" fertilizers are identical to those that are formed naturally, says Professor T. E. Bates of the Department of Land Resource Science. For instance, the muriate of potash that comes from Saskatchewan looks like any other chemical fertilizer. Yet it is a fully natural product: it is mined from the ground, where it was originally formed through the evaporation of sea water, and is generally sold without having been chemically processed.

Anhydrous ammonia, one common type of nitrogen fertilizer is, on the other hand, manufactured synthetically; but it is identical to naturally-formed ammonia. And anhydrous ammonia is 80 per cent nitrogen, compared to only one per cent for barnyard manure. Therefore, when crops require fertilizer, it is vastly more convenient for the farmer to spread 50 pounds of ammonia than two tons of manure.

However, there are benefits to such organic fertilizers as straw and manure, says Professor Bates. They release nutrients into the soil more slowly; and there is relatively little concern over the compounds they contain. But sewage sludge, a material that is also used as a fertilizer, is more suspect in this regard: "It is beyond imagination what goes into sewage sludge," says Professor Bates. There can be substantial amounts of zinc and cadmium as well as many other elements. By comparison many chemical fertilizers are natural products as pure as any that can be found.

Organic foods: do they make a difference?

Changing attitudes toward foods are perhaps a regular feature in social history. One interesting recent trend is toward the "health foods" that now appear in stores and supermarkets. Such foods inspire an almost religious devotion among some of us. But most nutritionists look on them with considerably more detachment as is shown by the interviews below.

"The books on diet that appear in many health food stores can be full of half-truths and, in some cases, of outright falsehoods."



Mabel Sanderson

Health foods are no doubt quite harmless; like other foods they have to comply with Canadian food and drug regulations, says Professor Mabel Sanderson of the Department of Consumer Studies.

But the books on diet that appear in many health food stores can be full of half-truths and, in some cases, of outright falsehoods, she says. For instance, books have appeared advocating the Zen Macrobiotic diets originally developed by Buddhist monks in Japan. Unfortunately, these diets are in complete disregard of scientific knowledge. They subscribe to the eccentric theory that unpolished brown rice is the perfect food and should, under ideal circumstances, be the only article of diet. Yet the American Medical Association's Council on Foods and Nutrition reported last fall that individuals who rigidly follow such a diet are risking serious nutritional deficiencies, which may in some cases result in death.

Yet such a diet is an extreme example of food faddism, says Professor Sanderson. Health foods in general are neither going to kill or cure anyone. Every few years they are promoted in some new form: such foods as black strap molasses, and bran (the outer layer of the wheat kernel) have had their day.

"The term 'health food' is a misnomer which deludes the consumer."



J. H. Sabry

The term 'health food' is a misnomer which deludes the consumer, says Professor J. H. Sabry of the Department of Family Studies. Products sold in health food stores have no special quality that makes them either superior to other foods, or necessary for a balanced diet.

Many of the cereals, seeds and dried legumes that are sold as health foods are low-cost staple items in eastern countries, she says. Yet in North America, perhaps because of a certain mysticism that envelops these products, they have become fashionable and high-priced. One health food product, sea salt, is potentially hazardous: it contains little or no iodine, so that people who use it in place of normal (iodized) table salt may develop goiter.

The present health food fad has two disadvantages: it promotes products that are more costly, yet no better in quality; and it sometimes deludes people into thinking that its products have medicinal powers when in fact they have none.

"The products sold in health food stores are in no way nutritionally superior."



Dan Cumming, left, and David Stanley

"The products sold in health food stores are in no way nutritionally superior to conventional foods", says Professor David Stanley of the Food Science Department. "But because they are advertised as organically grown they are expected to be free of pesticides and food additives, as well as satisfactory in other respects."

The federal government is now doing analyses of these so-called health foods and comparing them with similar items sold in the supermarkets, he says. If items labelled as organically grown have really been raised and processed by conventional methods, then the people selling them are guilty of misrepresentation.

"Health foods are more expensive and, in

some cases at least, superior in taste, but they are in other respects similar to conventional food products," says Dan Cumming, a Ph.D. student in the Nutrition Department. "We tested prunes from a conventional grocery store and from a health food store; the price for the grocery store was 51 cents a package, 20 cents below the health food price. For both samples the quantity of pesticide was negligible, but we were surprised to find slightly more in the health food sample."

"There are various reasons why people seek out health foods," says Professor Stanley. "Products bought from a roadside stand, for instance, are fresh and therefore superior in color, texture, taste etc. People also buy health foods because they fear too many chemicals in conventional products. I personally think they are wrong in this regard: the food and drug laws that regulate chemicals are very stringent and guard against abuses."

"The health food movement has focussed attention on the nutritional value of food products."



Mary Alton-Mackey

Some of the points made by health food advocates are worth taking seriously, says Mary Alton-Mackey, Ph.D. student in the Nutrition Department, and part-time public health nutritionist with the Wellington-Dufferin-Guelph Health Unit.

They have drawn attention to such questionable food additives as brominated fats and cyclamates (which are now off the market), she says. Cyclamates had previously been in products such as soft drinks, jams and jellies, so that people consumed significant amounts of them.

Health food stores stock products that are usually not available elsewhere, she says. They stock brown rice which is nutritionally better than polished white rice, as well as black beans which are not, in Guelph at least, sold in other stores. Yet other products, such as celery pills, don't have any special nutritive value. Moreover health food stores don't always label things: there is no guarantee that products are organically grown unless specifically labelled so.

The health food movement has focussed attention on the nutritional value of food products. For instance, the orange drink that is widely sold is considerably inferior in nutrients to traditional orange juice: it lacks the potassium that is a valuable element in the original.

FACULTY ACTIVITIES

Professor William J. Vail, Microbiology, has been invited to present a seminar to the Department of Biochemistry, Ohio State University, Columbus, Ohio. Dr. Vail will discuss his research on mitochondria, sub-mitochondrial particles, and the complexes of the electron transfer system in mitochondria using the freeze fracture technique of electron microscopy. This technique enables the determination of size, shape and orientation of large proteins and lipoprotein complexes in the electron transfer system.

Professor O. P. Miniats, Clinical Studies, and Professor V. E. Valli, Pathology, jointly presented a paper on, The gastro-intestinal tract of gnotobiotic pigs, at the IV International Symposium on Germfree Research, entitled Biological effects of gnotobiotic environment at Louisiana State University Medical Center, New Orleans.

Professor H. D. Geissinger, Biomedical Science and Professor O. P. Miniats, Clinical Studies, jointly presented a paper on, Erysipelothrix rhusiopathiae infection in hypersensitized gnotobiotic pigs and SEM examination of the lesions, at the IV International Symposium on Germfree Research, on Biological effects of gnotobiotic environment, at Louisiana State University Medical Center, New Orleans.

Professor O. P. Miniats, Clinical Studies, and Professor V. E. Valli, Pathology, jointly presented a paper on, Morphological and hematological characteristics of conventional, colostrum deprived contaminated and germfree pigs, at the Proceedings of the 2nd Congress of the International Pig Veterinary Society, Hannover, Germany.

Professor C. A. V. Barker, Clinical Studies, was re-elected for another four year term to the Standing Committee responsible for organizing the International Congresses of Animal Reproduction and Artificial Insemination during the VI Ith Congress held in Munich, West Germany in June. These Congresses have been held in various countries of Europe since 1948. The VII Ith Congress will be held in Poland in 1976. Over 50 countries were represented with an attendance of over 1000 scientists.

Professor D. J. Blackburn, Agricultural Economics and Extension Education, and Professor M. G. Freeman, Animal and Poultry Science, attended the annual conference of the Canadian Society of Rural Extension of the A.I.C. at Charlottetown, where M. Kopalasuntharam presented a paper, Dairy Farmers' Participation in Extension Activities, co-authored by Professor Blackburn and Professor Freeman. Dr. Kopalasuntharam, Animal and Poultry Science, is from the Ministry of Agriculture and Lands in Sri Lanka, Ceylon.

T. A. Crowley, Lecturer, History, attended the annual Canadian Historical meeting at McGill in June and presented a paper, France, Canada and the beginnings of Louisbourg: In search of the great fortress myth.

Professor D. C. Jordan, Chairman, Microbiology, has accepted an invitation to spend one month in India on a lecture and study tour this October. Dr. Jordan's tour is sponsored by the Indian National Science Academy and the Indian Agricultural Research Institute (New Delhi) and financed by a special grant to these agencies from the Commonwealth Foundation of London, England. The subject of the study relates to symbiotic nitrogen-fixing bacteria and represents an effort on the part of the Government of India to consolidate knowledge concerning increasing the yield of leguminous food crops through artificial inoculation of seed with such bacteria. The interest in seed inoculation has steadily increased in India because leguminous food crops are the main source of protein among the bulk of the population who are vegetarians. Also, the supply of nitrogenous fertilizers is low and all the available nitrate is fed to high yielding cereals. As a result the agricultural use of nitrogen-fixing bacteria has become a matter of considerable importance.

Professor W. K. Bilanski, Engineering, delivered a paper on, Application of the theories of solid mechanics to biological materials, at the Symposium on Application of Solid Mechanics, University of Waterloo.

Dean Janet Wardlaw, College of Family and Consumer Studies, and Professor Elizabeth Upton, School of Hotel and Food Administration, attended the biennial convention of the Canadian Home Economics Association in Halifax. Dr. Wardlaw participated as a

member of a panel discussing the research contribution of home economics and chaired a meeting of the Canadian University Teachers of Home Economics.

Professor J. H. Lumsden, Pathology, returned recently after spending seven weeks on study leave in England, Denmark, Sweden, Norway, Austria and Germany.

Professor O. Slocombe, Pathology, was a principle discussant of a paper at the annual meeting of the Canadian Society of Zoologists' Symposium on Parasites of the Environment, at York University.

Professor Willson Woodside, Political Studies, has returned from a visit to European Economic Community Headquarters in Brussels, where he talked with Commissioners and others about the problem of enlarging the European Community; and to Bonn, where he discussed the German political scene and also German university problems.

S. C. Puri, Lecturer, Mathematics and Statistics, has returned from England after spending four weeks with Professor P. R. Freeman at the University College, London. While there, he attended various Royal Statistical Society meetings and visited the Universities of Cambridge, Oxford and Reading to look at their Biostatistics programs.

Professor Joan Budd, Pathology, was chairman of a session on fish diseases at a meeting of the Wildlife Disease Association in Ann Arbor, Michigan. Later she travelled to Madison Wisconsin to give part of a course in the Pathology of Bacterial Diseases of Fish.

Professor R. G. Thomson, Pathology, travelled to Nigeria to be an External Examiner at the University of Ibadan.

Chairman of Languages retires

The first Chairman of the Department of Languages, Dr. R. A. Barrell, has retired from the position after seven years of administrative service. He will continue in the Department as Professor of French.

Dr. Barrell's academic career spans more than three decades. Possessing a B.A., M.A. and B.Sc. degree from the University of New Zealand, and a doctorate in comparative literature from the University of Paris, Dr. Barrell has been the recipient of numerous awards and honors amongst which can be listed a Nuffield Foundation Travelling Fellowship (1958), a Carnegie Grant (1962) and several Canada Council Research Grants (1964-1972).

This was not Dr. Barrell's first administrative appointment. He was Head of French at the University of Otago, New Zealand, from

1954-1955 and pioneer Head of the Department of Languages at Monash University, Australia, from 1960-1962. While a specialist in the field of comparative literature and linguistics, he has taught in all fields of French and German at both graduate and undergraduate levels. In 1958 he was named Honorary Research Assistant at University College, London, England.

Since coming to the Guelph campus Dr. Barrell has increased his publication list by two books (he is presently writing a third) and some eight articles. He holds membership in some 15 professional associations and was recently elected a Fellow of the International Biographical Association. His name appears in six Biographical reference works. His hobbies include the piano (in which he has two diplomas) and the organ.

New team leader for Ghana Program

Professor Kathleen H. Brown, Family Studies, recently attended a workshop on Social Indicators held in Montreal.

When the Canadian Phytopathological Society met in London, the following reports were presented by members of Environmental Biology: Z. Solel and Professor L. V. Edgington, Transcuticular movement of fungicides; Professor L. V. Edgington and J. Schooley, The effect of structural changes on the systemicity of thiabendazole.

Professor Walter Wilde was the guest speaker at the recent Annual Summer Meeting of the Ontario Beekeepers Association, held at the Apiculture Field Lab, at the University.

A. Adie, Professor P. W. Burke, and Professor G. F. Townsend, participated in the Annual Summer Meeting of the Ontario Beekeepers' Association, held at the University.

The following faculty and students of plant pathology from the Department of Environmental Biology attended the Annual Meeting of the Canadian Phytopathological Society in London: S. Alexander, M. Boxall, Professor L. V. Busch, K. Commissiong, Professor I. Evans, Professor L. V. Edgington, Professor S. G. Fushy, A. McFadden, D. Good, Professor B. H. MacNeill, W. McHardy, J. Schooley. Mary Boxall, received the Society's



Professor Douglas Pletsch, School of Agricultural Economics and Extension Education will, as of September 1, take over duties as team leader for the University of Guelph's cooperative program with the University of Ghana.

Professor Pletsch is presently serving with the Extension Division of the University of Ghana's Faculty of Agriculture. He has been in Ghana with his family since last September.

award for the best research paper presented by a student.

Professor L. V. Edgington was invited to give a seminar on benzimidazole fungicides to the research group of the Biochemicals Department of E. I. DuPont de Nemours in Wilmington, Delaware.

Retiring as team leader is Professor Jack Tanner of the University of Guelph's Crop Science Department. He is returning to Guelph this summer after two years as both team leader, and head of the Crops Division of the University of Ghana's Crop and Soil Science Department. Professor David Hume of Guelph's Crop Science Department will take his place as crop scientist on the team and on the faculty of the University of Ghana.

Another aspect of the program concerns the enrolment of Canadian graduate students at the University of Guelph. "We hope to have eight students coming on campus, some this fall and some in January," reports Professor James Shute, the program's University of Guelph director.

The Guelph-Ghana cooperative program was started in 1970 under a two-year contract, which is being renewed this summer on approximately the same terms as originally arranged.

APPOINTMENTS

Dr. Donald E. Heald has been appointed Assistant Professor in the Department of Human Kinetics in the School of Physical Education.

Professor Heald is interested in physiology with a cellular approach. He will be teaching courses in human biology to students in Human Kinetics, as well as in the Department of Zoology. His research is concerned with the area of nerve-muscle physiology, and specifically in how muscle responds during exercise and training programs.

Prior to coming to Guelph, Professor Heald spent a year teaching Physiology to nursing students at Emory University in Atlanta, Georgia. He has also taught physiology at the University of Vermont and at St. Michael's College in Vermont. Immediately after his graduation with a B.S. from the State College at Slippery Rock, Pennsylvania, he taught high school.

Dr. Heald has a Ph.D. in Physiology from the University of Vermont in Burlington, Vermont. He is married and has one child.



Donald E. Heald

McKeown, B. A., 1972. Effect of 2-Br-x-Ergocryptine on fresh water survival in the teleosts, *Xiphophorus hellerii* and *Poecilia latipinna*. *Experientia* 28: 675-676. (Zoology)

PUBLICATIONS

Waywell, E. B., and S. Corey, 1972. The occurrence and distribution of pteridines and purines in Crayfish (Decapoda, Astacidae). *Crustaceana* 22 (3): 294-302. (Horticultural Science)

Eyre, P., 1972. Anaphylactic (skin-sensitising) antibodies in the horse. *The Veterinary Record*: 36-37. (Biomedical Sciences)

Wells, P. W., and P. Eyre, 1972. The pharmacology of passive cutaneous anaphylaxis in the calf. *Canadian Journal of Physiology and Pharmacology* 50 (3): 255-262. (Biomedical Sciences)

Lillie, L. E., and R. G. Thomson, 1972. The pulmonary clearance of bacteria by calves and mice. *Can. J. comp. Med.* 36: 129-137. (Pathology)

Rodd, Stephen R., 1971. Small-area migration experience in Southern Ontario, 1951 to 1961. *Demography and Educational Planning*. O.I.S.E., Toronto. (Agricultural Economics and Extension Education)

Sykes, J. T., 1972. Propagation and Collection Techniques for Fruit Germ Plasm. *The Plant Propagator* 18 (2), 15-19. (Horticultural Science)

Michalos, A., 1972. Review of Gerald E. Myers, Self: An Introduction to Philosophical Psychology. *Theory and Decision*, Vol. 2, No. 3: 301-302. (Philosophy)

Miniats, O. P. and C. L. Gyles, 1972. The significance of proliferation and enterotoxin production by *Escherichia coli* in the intestine of gnotobiotic pigs. *Can. Jour. Comp. Med.* 36: 150-159. (Clinical Studies)

Lewis, A. J., and P. Eyre, 1972. Some cardiorespiratory effects of Histamine, 5-Hydroxytryptamine, and Compound 48/80 in the calf. *Canadian Journal of Physiology and Pharmacology* 50 (6): 545-553, June. (Biomedical Studies)

Korte, D. M., 1971. Smollett's Advice and Reproof: apprenticeship in Satire. *Studies in Scottish Literature* 8: 239-252. (English)

Barnes, E. A., G. C. Mead, D. A. Barnum, E. G. Harry, 1972. The intestinal flora of the chicken in the period two to six weeks of age, with particular reference to the anaerobic bacteria. *British Poultry Science* 13: 311-326. (Barnes, Mead and Harry — Food Research Institute, Norwich, Barnum — Veterinary Microbiology and Immunology)

NEXT WEEK AT GUELPH

THURSDAY, JULY 20

T.V. — SPOTLIGHT ON UNIVERSITY OF GUELPH. Cable 8 at 2 and 5:30 p.m.
 Art — NEW ACQUISITIONS TO THE UNIVERSITY COLLECTION. McLaughlin Library. Continues to July 27.
 Exhibit — CHINESE JADES FROM THE ROYAL ONTARIO MUSEUM. McLaughlin Library. Continues to July 27.

FRIDAY, JULY 21

Worship — MUSLIM JUMA PRAYER. 1 p.m., Room 315, Arts.
 T.V. — SPOTLIGHT ON UNIVERSITY OF GUELPH. Cable 8 at 4

SUNDAY, JULY 23

Worship — ANGLICAN EUCHARIST. 9:30 a.m., 9th floor lounge, Arts.
 Worship — R.C. MASS, 11 a.m., War Memorial Lounge.
 Worship — MUSLIM ZUHR PRAYER. 1 p.m., 9th floor lounge, Arts.

MONDAY, JULY 24

Film — A DOUBLE LIFE, starring Ronald Colman. Sponsored by the Guelph Free Film Theatre. 8 p.m., Room 105, Physical Science. Admission free.

WEDNESDAY, JULY 26

Worship — ANGLICAN EUCHARIST. 1 p.m., 2nd floor lounge, Macdonald Hall.

Pool Schedule

JULY 29 — AUGUST 4

Saturday, July 29

11:00 — 12:00 noon Recreational Swim
 5:00 — 6:00 p.m. Recreational Swim

Sunday, July 30

2:00 — 3:00 p.m. Recreational Swim
 3:00 — 4:00 p.m. Family Swim-Children must be accompanied in the pool by at least one parent

Monday through Friday

7:30 — 8:30 a.m. Early Bird Dip
 12:00 — 1:00 p.m. Recreational Swim
 5:00 — 6:00 p.m. Recreational Swim

Saturday, Sunday, Monday, August 5, 6, 7
 CLOSED

AUGUST 8 — SEPTEMBER 3

Monday through Friday

7:30 — 8:30 a.m. Early Bird Dip
 12:00 — 1:00 p.m. Recreational Swim
 5:00 — 6:00 p.m. Recreational Swim

Saturday and Sunday

CLOSED

Monday, September 4

All facilities will be closed for Labour Day Holiday.

Bottlebrush buckeye

Bottlebrush buckeye shrubs at the entrance of the Faculty Club will blossom next week, displaying white flower clusters, resembling bottle brushes. Like other buckeyes, the *Aesculus parviflora* has coarse foliage and chestnut-like fruits.

The News Bulletin is published every Thursday by the University of Guelph's Department of Information. News items must reach the Information Office, Room 361, McLaughlin Library (Ext. 3863) by noon Friday. Articles and news items may be quoted or reproduced in full.



At the recent meeting of the Canadian Institute of Food Science and Technology in Toronto, the University of Guelph sponsored an exhibit, showing the role of teaching, research and extension in the University's Department of Food Science. Gail Evans, a graduate student in Food Science, answers questions and talks with an interested visitor.

PERSONALS

HOUSING

For Rent: 4 bedroom townhouse, Ext. 2771; 3 bedroom, 2 storey home, Willow Rd. area, close to shopping, schools, etc. or would sell, 821-0041; New 3 bedroom house, 1½ baths, immediate occupancy, 822-3219; 3 of 4 bedroom house for 11 months starting mid-August. Available furnished or unfurnished. Ext. 2165 or 822-1553.

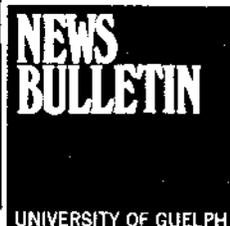
FOR SALE

Grand piano, 821-0041; Hoover spin-dry washer, dinette set, bunk bed, 821-0875; Bell Helmet, size TA, 824-9449; Wooden folding chair, men's Kletts rock climbing boots, size 8Y, fan heater, baby kit, kitchen scales, beauty case, 824-9787; 2 6.50 x 13 tires, baby stroller, car bed, carriage combination, 824-8393; '69 Datsun Ext. 3577; '69 Austin America

standard, Ext. 2526 or 821-0085; Single bed, Ext. 3824; '70 Volks, 843-3020; Roll-away bed, 3 months old, Ext. 3864 or 821-9552; Single bed, underpad for rug, antique drop leaf table, 822-3832; Stove and frig, 821-8174; Pfaff portable sewing machine, ladies' 3-speed bike, Ext. 3782; New ladies' 3-speed bike, 822-3832.

MISCELLANEOUS

Will trade LPs for new rock, folk, jazz, Ext. 3504; Wanted, qualified person to give piano lessons to boys in University Village area, 821-2737; Free, 2 female rabbits, large hutch, bale of straw, 821-2737; Wanted to buy Child's Tricycle, Pedal Car and other similar toys, Mrs. Morris, 823-2787, Oak dining room table, 822-3832; For rent for August, hardtop trailer with icebox and propane stove, Ext. 3063.



Postage-Paid-In-Cash At Third Class Rates Permit 721, Guelph, Ontario.

D. Nightingale,
 243 Speedvale Ave. E.,
 Guelph, Ontario.