

# UNIVERSITY NEWS

VOL. 7 NO. 8

DALHOUSIE UNIVERSITY

JAN. 6, 1977

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A bust of Senator Norman MacKenzie, gift of the U.B.C. Alumni Association, was unveiled at the Arts Centre last month.

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PLUS the Winter line-up of Cultural Activities

4-page centre section

## The Image of Man in Modern Thought

...a series of lectures dealing with the reality that men and women go out of their way to develop knowledge in particular areas, often at the expense of other areas and that the results often have an effect on the meaning of humanity.

See Page 3 for more information on this year's series of Killam Memorial Lectures, beginning at Dalhousie next month.



— Poster by Derek Sarty

'WHO'S WHO' in FISHERIES MANAGEMENT — Pages 6, 7

## The diversity of ocean studies

The interests of members of the Department of Oceanography at Dalhousie reflect the diversity of the field and the opportunities open to the young scientist who chooses to major in the program:

**Dr. Christopher Garrett** (Dalhousie's second Steacie Fellowship winner — see Page 3) does research in geophysical fluid mechanics;

**Dr. Anthony Bowen and Dr. David Huntley** work on beach programs;

**Dr. Christopher Beaumont** studies earth rheology;

**Dr. Robert Cooke** tests the physical chemistry of sea water;

**Dr. Lloyd Dickie** investigates fisheries biology;

**Dr. Robert Fournier** does phytoplankton ecology and systematics;

**Dr. Eric Mills'** field is benthic ecology;

**Dr. Carl Boyd** looks at zooplankton distribution;

**Dr. D.J.W. Piper** is a marine geology expert and sedimentologist;

**Dr. Gordon Riley** studies phytoplankton ecology;

**Dr. Peter Wangersky** studies chemical oceanography; and

**Dr. Joe Wroblewski's** area is the computer modelling of biological systems.

## \$51,000 research equipment grant for dental scientists

A grant of \$51,000 for equipment which will mechanically test corrosion fatigue and other failures of amalgam, the "silver" filling for teeth, has been awarded to two researchers in the Faculty of Dentistry.

The grant, from the Medical Research Council, is to Dr. E.J. Sutow and Dr. D.W. Jones, experts

in dental biomaterials science in the dental school's Department of Restorative Dentistry. It is the largest research grant awarded to members of the dental faculty, and the Dalhousie school will be the first to have the equipment it will buy.

(Continued on page 2)



## Economics faculty active in community and elsewhere

Many of the 22 full time faculty of Dalhousie's Department of economics made important contributions to the community over the past two years in the "applied advisory" role.

Professors Michael Bradfield, Robert Comeau and Barry Lesser are noted in the department's biennial report (1974-76) for actively participating in the public discussion of current economic issues including media interviews and statements.

Others in the department have done various economic studies for government agencies in both Canada and the United States, and a large number of faculty have participated in the Ghana Project with which Dalhousie is associated. Membership on community boards and involvement with professional journals applies to most academics, and the economics department is no exception; John F. Graham's contributions include chairing the Nova Scotia Royal Commission of Education, Public Services and Provincial-Municipal Relations and sitting on the advisory committee for the Royal Commission on Property Taxation in British Columbia.

The report lists workshops, departmental lunch hour seminars and several items concerning students such as thesis proposals and new regulations for the doctoral degree program.

(Continued from page 1)

## \$51,000 grant

The award is for the purchase of a servo-hydraulic mechanical testing system, which will be used initially in the development of a predictive test for the marginal deterioration of dental amalgam. Amalgam, better known to patients as the "silver" filling used in back teeth, is one of the oldest and most widely used restorative materials; deterioration of the filling around the edges is one of the most common causes of the alloy's failure and has been associated with the occurrence of secondary caries -- tooth or bone decay.

At present, say researchers Sutow and Jones, no generally accepted 'in vitro' test (study of tissue or material removed from a living organism, in this case in a laboratory and not the patient's mouth) for this serious biomaterials problem.

In addition to the mechanical and corrosion-fatigue testing of metals and alloys, the apparatus will have extensive use in the study of hard and soft tissue dynamics.

The acquisition of the equipment will put Dalhousie in the forefront of dental biomaterials research in Canada. Says Dr. Jones: "Dentistry is perhaps the only profession in which the success or otherwise of most treatment procedures depend on the materials associated with the treatment. For a long time the only testing laboratory was the mouth of the long-suffering patient."

## UNIVERSITY NEWS

Volume 7	Deadline (all Tuesdays)	Publishing Date (all Thursdays)
No. 9	Jan. 11	Jan. 20
10	Jan. 25	Feb. 3
11	Feb. 8	Feb. 17
12	Feb. 22	March 3
13	March 8	March 17
14	March 22	March 31
15	April 5	April 14
16	April 19	April 28

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Registered as third class mail; permit number (Dartmouth, N.S.), 59.

# Modest 4-year rise in summer enrolments; N.S. busiest

A survey of summer school enrolments in degree credit programs offered by Atlantic provinces' universities for the period from 1972-1976 has been released.

The survey was designed to give an overall picture of the size and distribution of the summer school courses and is the fourth such annual survey produced.

In 1976 university summer schools in the Atlantic region offered over 1,000 courses on 15 campuses and 18 off-campus centres for 16,766 students.

The report indicates that the increase in the enrolment figure for the past summer over 1975 is only marginal. Over a four-year period the increase for the entire areas was modest, with much of the increase being attributed to a substantial 27 per cent increase experienced by institutions in Nova Scotia.

Enrolment in New Brunswick and Prince Edward Island has levelled off in the past four years and Nova Scotia's summer school enrolment may be about to experience the same process according to the survey compiled by Dr. Tom Parker, director of Dalhousie's Summer School.

Ten universities offered off-campus classes either through their satellite institutions or at locations other than at the parent university this year. Most of these were courses given in second summer sessions. The major exceptions are Saint Mary's and U.P.E.I.

Satellite courses were given at Bathurst and Edmunston (U. of Moncton); Cornerbrook and Grandfalls (Memorial). Total enrolment for off-campus classes in 1976 was 2119, down from the 2,573 figure set last year.

## Time management seminar Jan. 20, 21

Dalhousie University's Advanced Management Centre and the Halifax Board of Trade will co-sponsor an executive development seminar Jan. 20-21, on the subject of Time Management.

The workshop will be led by author and teacher Dr. Alec Mackenzie, an internationally renowned expert in the area of managing manager's time. The author of *The Time Trap*, he has presented his management principles to executives of some of the largest firms in the world.

The sessions are designed for all executives who want to save every member of his team one or two hours per day; managers, administrators and executive secretaries from all levels who are attempting to get more done with fewer people; manager-secretary teams interested in better utilization of time; as well as sales personnel faced with heavy demands on their time.

## Ali takes over Printing Centre, copying review

Intab Ali, Director of the Computer Centre has assumed responsibility (effective last month) for the management of the University's Printing Centre. Vice-President Louis Vagianos (University Services) has announced.

In addition, Mr. Ali will be evaluating the present system of duplicating and copying machines.

"Changes in techniques and equipment introduced in the duplicating and copying field in the last few years have a direct bearing on the university's operations," said Dr. Vagianos.

# Easy bruising and headaches

Family physicians will have the opportunity to update their knowledge of hematological problems Jan. 20 and 21 during a short course sponsored by the Department of Medicine, the Division of Family Medicine and the Division of Continuing Medical Education at Dalhousie.

Short, didactic presentations of a practical nature will be combined with panel discussions on bleeding and clotting problems, hematological malignancies (e.g. bruising) and the proper use of a hematologist.

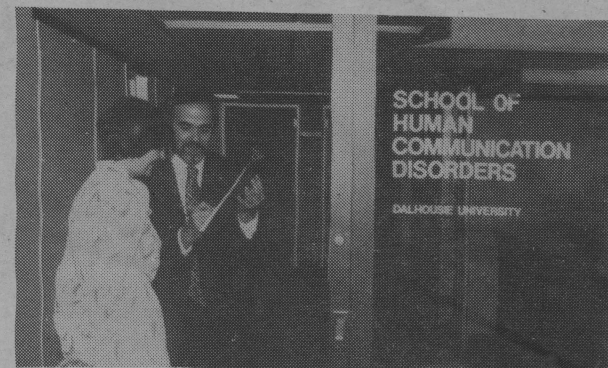
A short course in neurology is scheduled for Feb. 10 and 11 at the Tupper Medical building. It's designed for family physicians and internists.

This past summer four schools had over 2,000 students taking classes. Moncton led with 2,720 students, followed by Dal-MSVU with 2,448 students. Memorial and UNB were close behind.

Only three summer schools have shown a substantial growth rate over the 1972-76 period. College of Cape Breton has a 144 per cent reading; Dal-MSVU, 56 per cent; and Saint Mary's, 19 per cent.

In his concluding remarks, Dr. Parker indicates that the survey represents a quantitative study only. There is much additional data that perhaps should be put together in a number of areas: i.e. number of traditional versus experimental and/or interdisciplinary courses each year; the number of "repeat" courses and new courses offered each year; the quality of the components of programs offered by institutions.

Whatever direction further studies may take, he says, it would seem clear that the improvement of university continuing education programs, their acceptance as a university priority and, indeed, recognition of the practice of continuing education itself as a profession will increasingly depend on the continuing educator's commitment and measure of involvement in such studies.



Professor and director of the School of Human Communication Disorders, Dr. Michael Webster (shown here) has been elected as a Fellow of the American Speech and Hearing Association. He was one of 25 elected this year from approximately 25,000 members, and joins approximately 400 other Fellows elected since 1926.

The honor is for consistent and significant contributions to the profession of speech pathology and audiology. Dr. Webster has written over 60 articles, books, book chapters, and many papers. While executive director of the Speech and Hearing Institute in New York City, he was author of government and foundation grant proposals totalling over a quarter of a million dollars during a two-year period.

At Dalhousie, Dr. Webster is also an associate professor with the Faculty of Medicine's department of otolaryngology.

## Sherwin speaker

If you're not part of the solution, you're part of the problem: Attribution of Blame for Socially Pervasive Practices.

That's the title of a reading-discussion to be led tomorrow by Dr. Susan Sherwin, professor of philosophy at Dalhousie, when the Halifax Philosophy Circle meets at Saint Mary's University (7.30 pm, Faculty lounge, 5th floor, Administration building). The meeting is sponsored jointly by Saint Mary's and Dalhousie's departments of philosophy.

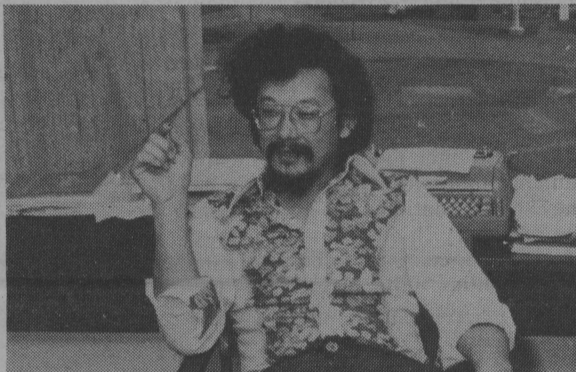
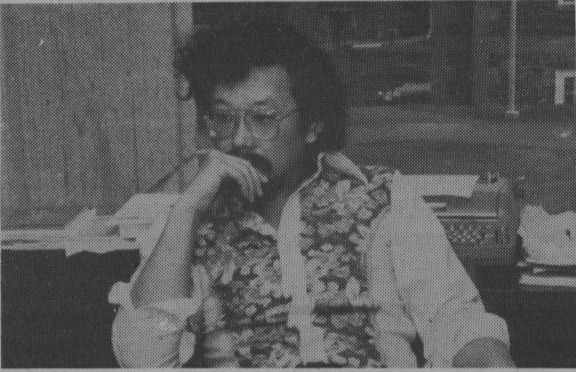
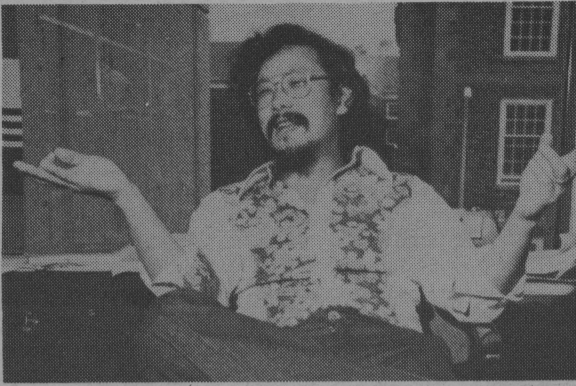
The first day will concentrate on the common sense approach to the investigation, diagnosis and management of patients with headache problems. The second day will focus upon the management of common neurological problems as seen in family practice.

Visiting speakers supplementing Dalhousie faculty input included Dr. John Edmeads, medical director of the Migraine Foundation of Canada, Dr. John Graham, director of the Headache Research Foundation of Boston, and Dr. Robert Nelson of the University of Ottawa.



## The 1977 Killam Memorial Lectures:

# The Image of Man in Modern Thought



David Suzuki, geneticist and demystifier of science through the electronic media, will be the lead speaker in the 1977 four-part Dorothy J. Killam Memorial Lecture series. The subject of his talk is *The Titans' Return: Science in the Modern Age*.

*Men and women go out of their way to develop knowledge in particular areas, often at the expense of other areas. The resulting knowledge, or speculative hypotheses, often have an effect on the definition, or meaning of humanity and, especially, of what it is to be a human being.*

*This changing definition affects not only the individual in his most private existence, but also affects the society, often by way of the University, the central purveyor of ideas in which he lives now and in which his children will live in the future.*



The *Image of Man in Modern Thought* will be the recurring theme of the Killam Memorial Lectures as it is reflected through their special interests.

David Suzuki, Henri Peyre, Richard Hoggart have accepted invitations to speak. The announcement of the fourth, to be made shortly, will complete the roster for the series which begins on Feb. 4.

Professor David Suzuki, geneticist who is well known as a host of science programs on CBC radio and television, will consider in his address *Science in the modern age with special reference to genetic engineering*.

Richard Hoggart, a man of many parts- educator, author, communicator, assistant director-general of UNESCO and now Warden of Goldsmith's College at the University of London, will focus attention in his public lecture on Feb. 11 on *The uncertainty of values in many important intellectual areas*.

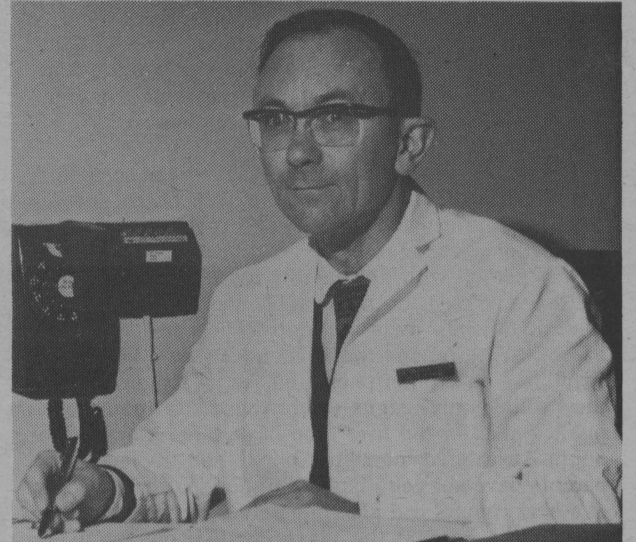
Dr. Henri Peyre, for 25 years chairman of Yale's Department of Romance Languages, author of works touching on literary topics, education and political thought will look at *Broad issues of human liberty and the need for imaginative and ethical solutions*, on March 3.

## The Killam Lectures

The Dorothy J. Killam Memorial Lectures were instituted by Dalhousie University several years ago in recognition of the generosity of Mrs. Killam.

Her bequests have made it possible to support highly specialized research and scholars at a level which could not otherwise have been achieved.

The income from the Killam Trust funds goes to the support of professors' salaries, Killam Research Professorships, Senior Fellowships, and pre- and post-doctoral scholarships.



Chairman Robert S. Tonks and his Killam lecture series committee of John Flint, Ken Heard, Fred Matthews, Alan Kennedy and Ed Belzer have put together a distinguished lecture series to be given by renowned scholars. The speakers represent a group of leading thinkers who will address a topic showing how their field of endeavour defines or re-defines the meaning of being a person within the general theme of the series — *The Image of Man in Modern Thought*.

The committee expresses their appreciation to all departments, and individuals who submitted theme ideas and names of suggested speakers which did much to help the committee to make its choices.

## Pharmacy goes ahead

The *Chronicle of Higher Education* recently reported that pharmacy education "is struggling to find its rightful place among the health sciences; controversies surround degree requirements, curriculum, and the pharmacist's role".

While these questions were vigorously debated by those attending the American pharmacy-colleges association meeting in Minneapolis, there doesn't appear to be any hysteria on the matter as far as the deans of Canadian pharmacy schools are concerned and certainly not within the Dalhousie college. In fact many of the issues which appeared to be highly controversial at the sessions have already been considered at Dalhousie, with action taken in a number of areas.

Director Dr. Robert Tonks says that his college's objectives have been defined and the four-year program reviewed, with recommendations going before the faculty this month. The emphasis will be to provide a program that will produce a more patient-oriented pharmacy graduate.

The college is also working closely with the three

licensing bodies in the Maritimes to structure the best method for evaluating professional competency of the student during the practical training phase of the program. How to design a patient-pharmacy counselling demonstration on drug medication for training purposes is also being explored.

While the Dalhousie course of study is an undergraduate one, the college is anxious to establish an advanced degree program in pharmacy practice. There is a growing need for pharmacy specialists in the Maritimes, according to Dr. Tonks.

Pharmacy manpower needs have not been overlooked. A study has been carried out in the region to ascertain what the enrolment level should be if the college is to provide licensed pharmacists to meet the needs of the Maritime population.

There is keen competition for entrance in the college; the enthusiasm is high among the other professions that we work with and Prof. Tonks is confident that college's graduates can fill the bill in any role they undertake in the health profession's field.

## Tips for budding journalists Jan. 14

Mike Bradfield, chairman of the DFA's Community Relations Committee, invites potential faculty journalists to an informal discussion about "Tips, Topics, Style -when writing for the Media", to be held at 4 pm on Jan. 14, in the Faculty Club.

The committee proposes that faculty interested in writing occasional newspaper articles gather for an

informal discussion prior to mid-January Twofers. Faculty who have already had successful experience in this field (like History Professor Mike Cross, former editor of *Canadian Forum*) will be present.

More information is available by contacting Dr. Bradfield, Department of Economics, local 2448.

## 'Jewish Experience' art exhibition at Mount until Jan. 16

A unique art exhibit, "Jewish Experience in the Art of the Twentieth Century" is at the Art Gallery, Mount Saint Vincent University, until Jan. 16.

The core of the exhibit comprises major works shown last year in the exhibit bearing the same name as the Jewish Museum in New York City. The remaining works will be on loan from such distinguished Canadian sources as the Winnipeg Art Gallery, Canada Council Art Bank, the Montreal Museum of Fine Arts, the Beaverbrook Gallery, the Confederation Art Centre as well as from private collections.

The intent of the exhibit is to demonstrate the richness of the tradition of Jewish religion and life as well as to show the wide variety of artistic expression of Jewish artists. Including works by American, European and Israeli artists, the exhibit also features a cross-section of some of the work done by contemporary Canadian artists.

The exhibit is funded by grants from the Bronfman Foundation as well as individual donors. A special program of lectures, films, music and readings is being planned to accompany the exhibit. Included are the following:

**Thurs., Jan. 6, 12 to 1 p.m.** - The Halifax duo of Stephen Feuer and Dave Hayes on acoustic guitars--a program of folk, country and rock music.

**Sun., Jan 9, 3:15 to 4 p.m.** - Shimon Walt, cellist and Monique Gusset, pianist, both of the Atlantic Symphony Orchestra, with works by Bruck, Beethoven and Ben Haim.

**Tues., Jan. 11, 12:30 and 8 p.m.** - Toronto poet Joe Rosenblatt reads selections from his current work.

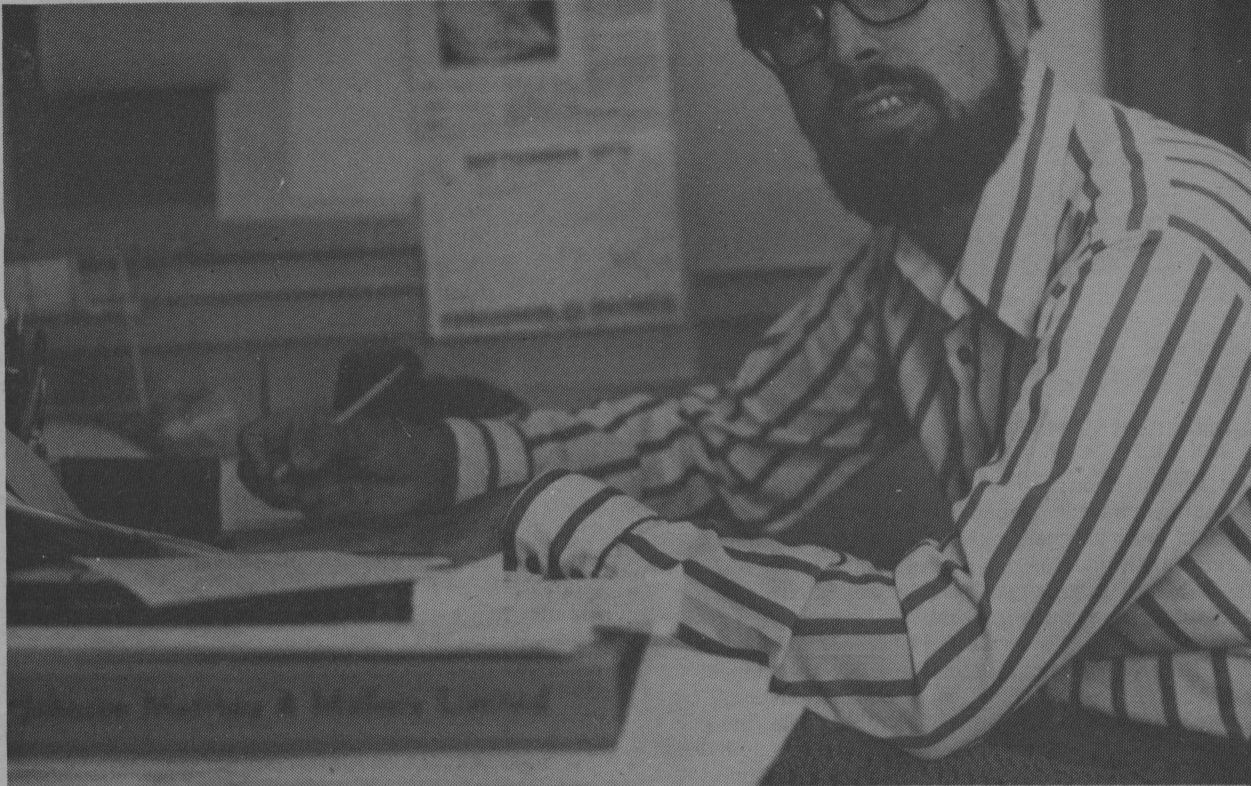
**Wed., Jan. 12, 12:15 to 1:45 p.m.** - Film biography, "Gertrude Stein--When This You See, Remember Me."



# Who's Who in Fisheries Management

**Dr. WILLIAM SILVERT**

Project co-ordinator



Professor William Silvert is orchestrating a fisheries management project under a grant awarded to the Institute of Environmental Studies at Dalhousie. He and his associates have been holding a series of workshops and conferences, out of which will come a number of reports for the Canadian fisheries and marine services towards the end of March.

Both an advisory committee of Dalhousie professors of economic, biology, and mathematics and another group of consultants (government personnel, economists, scientists, and fisheries research personnel from the Atlantic provinces) work with Dr. Silvert.

Phase One was oriented to general theoretical studies and produced six reports: The Ikthyian Gad Fishery: A Management Pseudo Study; Economics of Over-Fishing; Optimal Exploitation of a Multi-Species Community; Bio-energetic Model of Fish Population Dynamics; Adaptive Fishing; and, the Problem of a Shared Fishery.

The emphasis in Phase Two, now nearing completion, is related to specific Atlantic fisheries problems--from socio-economic and biological perspectives.

Dalhousie people involved in the project at various stages have been Bill Smith and David Gray (Math), Norman Morse and Melvin Cross (Economics), Doug Johnston (Law), Lloyd Dickie and Niels Daan (Oceanography), Chris Pielou (Biology), R.C. Plowright (now at U. of T.), along with scientists from the Bedford Institute and research stations at St. Andrew's, N.B. and St. John's, Nfld.

Having looked at the scope of the problems, Dr. Silvert hopes that the reports will lead the way for some new management approaches.

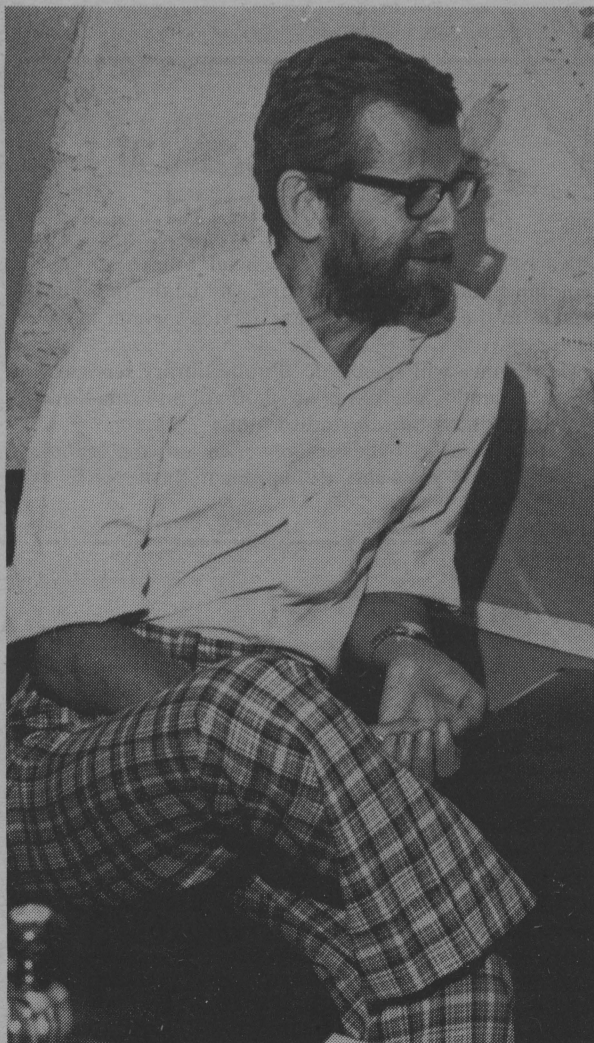
*Maximum sustainable yield, maximum economic and social-economic yield, fishing mortality, total allowable catch — this is the language of the fisheries managers.*

*They are men and women of the federal government who have jurisdiction by virtue of the BNA Act. Having been given the mandate and being aware of the economic and biological constraints, the federal fisheries staff must face the complexities that are part and parcel of fisheries management:*

*What are the different species, and how many fish; what is the variety of catch methods, how much effort is desirable and how can fishing be standardized, how many vessels, what kind of gear, how much productivity, should there be subsidies and if so, what kind and for whom, quotas, closures, restrictions, regulations, enforcement?*

*UNIVERSITY NEWS offers a profile on Dalhousie people who have a connection with fisheries management.*

## Expectations unrealistic, problems remain



Because of our traditional interest in biological conservation we have built up expectations about fisheries management which are not realistic. The problems of redistribution of benefits of fisheries are still with us, says oceanographer Lloyd Dickie.

Not that biological science isn't important. It's just that it can't be considered as the only prediction system for management purposes. It must be tied to a number of other factors, all of which must be deliberately managed in such a way as to get some benefits back to the people in the industry.

We also have different perceptions on what effect the '200-mile limit' will have on the fisheries industry, says Dr. Dickie. There is a notion shared by many that by ridding foreigners from this zone we will have a prosperous fishery. This isn't so. Prosperity will depend on how the social system distributes the benefits.

Dr. Dickie asserts that management of marine fisheries has always been based on too simple a view of the way natural systems work. This was an acceptable assumption when fish populations were not heavily exploited. As stocks became depleted; as abundance of fish became dependent not only on their own reproduction but their interaction; as economic systems and technology became more complex; as social factors came more and more into play; there was the realization that a simple management model could not work.

"We cannot continue to look at the fisheries in a segmented, piecemeal fashion. It's far too costly. Our objective has to be to gain knowledge of properties of the management system as a whole so that fisheries will be cheaper to manage."

To this end, Dr. Dickie is trying to build a fisheries program closely linked to other disciplines, designed to train a new breed of managers who have an overall comprehension of the entire system.

**Dr. Lloyd Dickie**  
Chairman, Department of  
Oceanography





DALHOUSIE CULTURAL ACTIVITIES PRESENTS  
*Ooooh-Whatta Way to  
Wile Away the Winter...*  
Winter/Spring 1977

**Dalhousie University  
Cultural Activities'  
Winter/Spring  
program...**

**...See following  
pages**

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**INFORMATION --- 424-2298**





DALHOUSIE CULTURAL ACTIVITIES PRESENTS

*Ooooh-Whatta Way to  
Wile Away the Winter...*

Winter/Spring 1977

**Karr & Lewis\***

Sunday, March 6, 3:00 p.m.

The double bass turns to gold in the hands of Gary Karr. His talent reigns supreme in North America today and is superbly complimented by the mastery of harpsichord/pianist, Harmon Lewis.

reg: \$1.00  
stu.-sr. citizens: Free

**the Omega  
Guitar Quartet**

Thursday, March 10, 8:30 p.m.

What could make more fascinating listening than four well-matched classical guitars? Richly textured and sensitive, the music of The Omega Guitar Quartet from Great Britain makes great listening.

reg: \$5.50/4.50  
stu.-sr. citizens: \$4.50/3.50

**Anna Russell**

Friday, March 11, 8:30 p.m.

Anna Russell, "the world's funniest woman," is the madcap Queen of musical buffoonery. You will roar at her crack shots at

**Eugenia  
& Pinchas  
Zukerman**

Thursday, March 31, 8:30 p.m.

Pinchas Zukerman is one of the world's brilliant violinists. When joined by his wife, Eugenia Zukerman on flute, the Cohn stage hosts two of the most important musicians of our time.

reg: \$6.50/5.50  
stu.-sr. citizens: \$5.50/4.50

**Victor Borge**

Friday, April 1, 8:30 p.m.

Saturday, April 2, 8:30 p.m.

Sunday, April 3, 8:30 p.m.

The "clown prince" of musical wit is back! Victor Borge, master pianist and master comedian, can always be accused of breaking up an audience.

reg: \$7.00/6.00  
stu.-sr. citizens: \$6.00/5.00

**Opera As  
You Like It**

Wednesday, April 13, 8:30 p.m.

Thursday, April 14, 8:30 p.m.

Friday, April 15, 8:30 p.m.

the  
**Richards  
Quintet**



# the Toronto Consort\*

Sunday, January 16, 3:00 p.m.

Bawdy drinking songs from the court of Henry VIII and love ballads sung from the bedchambers of the Medici. All done by The Toronto Consort in fyne olde style.

reg: \$1.00  
stu.-sr. citizens: Free

## Gary Graffman

Thursday, January 20, 8:30 p.m.

"A Master of Romanticism", this eloquent pianist is among the elite of international concert performers. It is a rare treat indeed when Halifax hears the timeless piano voice of Gary Graffman.

reg: \$5.00/4.00  
stu.-sr. citizens: \$4.00/3.00

## Moe Koffman

Saturday, January 22, 8:30 p.m.

Known everywhere as the best "reed man" in jazz circles today, it is Moe Koffman's incredible wizardry with jazz-classical interpretations that brings his name to the lips of jazz buffs.

reg: \$6.00/5.00  
stu.-sr. citizens: \$5.00/4.00

## Otto Armin

Tuesday, January 25, 8:30 p.m.

Mozart, Grieg and Bloch are brought to life at the Arts Centre by Otto Armin, one of today's most exciting and versatile violinists. Warmth and clarity are the keynotes of this man's talents.

reg: \$4.00/3.00  
stu.-sr. citizens: \$2.00/1.00

## Ernesto Bitetti

Saturday, February 5, 8:30 p.m.

"An heir to Segovia". Universally praised as a Master Craftsman of emotion, Ernesto Bitetti flashes from lilting romance to fiery intensity. This is classical guitar — flawless and fresh.

## Quintet

Wednesday, February 9, 8:30 p.m.

Woodwind quintets are a treat, heard far too seldom. The oboe, flute, clarinet, bassoon and French horn of The Richards Quintet weave a pattern of sounds delightfully unique and pleasurable to the ear.

reg: \$4.00/3.00  
stu.-sr. citizens: \$3.00/2.00

## Marion Williams

Friday, February 11, 8:30 p.m.

Singing with all her heart and soul, Marion Williams will move your spirits to their highest. A spine-thrilling evening of gospel singing at its hand-clapping best!

reg: \$5.00/4.00  
stu.-sr. citizens: \$4.00/3.00

## Dalart Trio

Tuesday, February 15, 8:30 p.m.

Dalart Trio gives the marvellous musical impression of being "one superb instrument". Three of Canada's performers par excellence are at their creative best here at the Arts Centre this season.

reg: \$3.00/2.00  
stu.-sr. citizens: \$2.00/1.00

## Dizzy & 'Fatha'

Friday, February 18, 8:30 p.m.

With that King of jazz piano, Earl "Fatha" Hines PLUS jazz-trumpet extraordinaire, Dizzy Gillespie — now THAT'S an unbeatable jazz combination. A momentous occasion — an unforgettable concert.

reg: \$8.50/7.50  
stu.-sr. citizens: \$7.50/6.50

## Elly Ameling

Saturday, February 19, 8:30 p.m.

This lyric soprano has captivated audiences all over the world. Elly Ameling weaves enchantment with lieder and Mozart alike, coloring them with her bright personality and caressing voice.

reg: \$6.00/5.00  
stu.-sr. citizens: \$5.00/4.00

everything sacred in music. She is, in a word — hilarious!

reg: \$5.50/4.50  
stu.-sr. citizens: \$4.50/3.50

## Dalart Trio

Tuesday, March 15, 8:30 p.m.

reg: \$3.00/2.00  
stu.-sr. citizens: \$2.00/1.00

## Toronto Dance Theatre

Friday, March 18, 8:30 p.m.

A warm reception heralds the return of the Toronto Dance Theatre. The pure harmony of their dance movements reaches you in the audience, and explains their phenomenal success as a contemporary dance company.

reg: \$4.50/3.50  
stu.-sr. citizens: \$3.50/2.50

## Ricercare

Saturday, March 19, 8:30 p.m.

Old World romance is the essence of Ricercare. Famed throughout Europe, this wind ensemble will take you back through the centuries with their authentically reproduced Renaissance music.

reg: \$4.00/3.00  
stu.-sr. citizens: \$3.00/2.00

## Preservation Hall Jazz Band

Wednesday, March 23, 8:30 p.m.

Thursday, March 24, 8:30 p.m.

"When The Saints Come Marching In" your body won't stay sat! From New Orleans comes the joyous, *foot-stompin'* sounds of jazz with the Preservation Hall Jazz Band.

reg: \$6.50/5.50  
stu.-sr. citizens: \$5.50/4.50

## Larry Coombs + the Dalart Trio

Friday, March 25, 8:30 p.m.

Live musicians in your living room — this is the atmosphere surrounding the Dalart Trio. This special concert features Larry Coombs, renowned clarinetist with the Chicago Symphony.

reg: \$3.50/2.50  
stu.-sr. citizens: \$2.50/1.50

Saturday, April 16, 8:30 p.m.

The name, Opera As You Like It, says it all. Even if you've never liked it, this company of six experienced opera performers will convince you it's easy to get close to opera.

reg: \$6.00/5.00  
stu.-sr. citizens: \$5.00/4.00

## World's Greatest Jazz Band

Thursday, April 21, 8:30 p.m.

The World's Greatest Jazz Band — a group of jazz greats from the famous "Gibson parties" days will bring it all back for today's jazz lovers.

reg: \$6.50/5.50  
stu.-sr. citizens: \$5.50/4.50

## Chet Atkins

Friday April 22, 8:30 p.m.

This great guitar picker pleases all of the people all of the time. Chet Atkins is sure-fingered in every music category, and is bound to please you.

reg: \$7.00/6.00  
stu.-sr. citizens: \$6.00/5.00

## Joe Williams

Friday, April 29, 8:30 p.m.

Take blues ballads with a perfect combination of sound and emotion. Add the flavour of Count Basie or Buddy Rich and you have... one Joe Williams.

reg: \$7.00/6.00  
stu.-sr. citizens: \$6.00/5.00

## Canadian Brass

Saturday, April 30, 8:30 p.m.

Canadian Brass stands out as being one-of-a-kind. Chuckles and lively repartee spice an excellent show of musicianship. France loved them — Dalhousie Cultural Activities brings them back to Halifax.

reg: \$4.50/3.50  
stu.-sr. citizens: \$3.50/2.50

## Maynard



# Almanac January - June, 1977

(including Cultural Activities Calendar)

## JANUARY, 1977

**Monday, 10**

4 p.m. — Senate meeting.

**Sunday, 16**

3 p.m. — *The Toronto Consort, Cohn.*

**Monday, 17**

Last day for adding "B" classes. *Arts and Science, Commerce, Business Administration and Public Administration.*

**Thursday, 20**

8:30 p.m. — *Gary Graffman, Cohn.*

**Saturday, 22**

8:30 p.m. — *Moe Koffman, Cohn.*

**Tuesday, 25**

8:30 p.m. — *Otto Armin, Cohn.*

**Friday, 28**

Munro Day — no classes (date subject to confirmation).

Last day for application for supplemental examinations for "A" classes.

**Saturday, 29 to Sunday, Feb. 6**

Winter Carnival

**Monday, 31**

Last day for withdrawing from full-year or "C" classes without academic penalty. *Arts and Science, Commerce, Business Administration and Public Administration.*

Last day for receiving applications for admission, *Physiotherapy.*

## FEBRUARY

**Saturday, 5**

8:30 p.m. — *Ernesto Bitetti, Cohn.*

**Sunday, 6**

3 p.m. — *Valleau and Tritt, Cohn.*

**Monday, 7**

4 p.m. — Senate Council.

**Wednesday, 9**

8:30 p.m. — *The Richards Quintet, Cohn.*

**Friday, 11**

8:30 p.m. — *Marion Williams, Cohn.*

**Monday, 14**

4 p.m. — Senate

**Monday, 14 to Saturday, 19**

Examinations, 1st-year *Physiotherapy.*

**Tuesday, 15**

8:30 p.m. — *Dalart Trio, Cohn.*

**Friday, 18**

8:30 p.m. — *Dizzy and Earl 'Fatha' Hines, Cohn.*

**Saturday, 19**

8:30 p.m. — *Elly Ameling, Cohn.*

Last day for receiving applications for admission to advanced standing commencing in September — *Dentistry.*

**Monday, 21**

Study break commences.

**Friday, 25**

Last day for receiving applications for admission to basic baccalaureate degree of *Nursing* programme.

**Monday, 28**

Classes resume.

## MARCH

**Saturday, 5**

8:30 p.m. — *Woody Herman, Cohn.*

**Sunday, 6**

3 p.m. — *Karr and Lewis, Cohn.*

**Monday, 7**

Last day for withdrawing from "B" classes without academic penalty, *Arts and Science, Commerce, Business Administration and Public Administration.*

4 p.m. — Senate Council.

**Wednesday, 9**

Last day for those expecting Ph.D. degrees in May to submit unbound theses to departments.

**Thursday, 10**

8:30 p.m. — *The Omega Guitar Quartet, Cohn.*

**Friday, 11**

8:30 — *Anna Russell, Cohn.*

**Monday, 14**

4 p.m. — Senate.

**Tuesday, 15**

8:30 p.m. — *Dalart Trio, Cohn.*

**Thursday, 17**

Last day for receiving theses in temporary binding from those who expect to receive an LL.M. degree in Spring.

**Friday, 18**

8:30 p.m. — *Toronto Dance Theatre, Cohn.*

**Saturday, 19**

8:30 p.m. — *Ricercare, Cohn.*

**Wednesday, 23 and Thursday, 24**

8:30 p.m. — *Preservation Hall Jazz Band, Cohn.*

**Friday, 25**

8:30 p.m. — *Larry Coombs and the Dalart Trio, Cohn.*

**Sunday, 27**

3 p.m. — *Danny Beckerman, Cohn.*

**Thursday, 31**

8:30 p.m. — *Eugenia and Pinchas Zukerman, Cohn.*

## APRIL

**Friday, 1, Saturday, 2 and Sunday, 3**

8:30 p.m. each night — *Victor Borge, Cohn.*

**Monday, 4**

4 p.m. — Senate Council.

**Friday, 8**

Good Friday — University holiday.

**Saturday, 9**

Last day of classes:

*Arts and Science, Nursing, Pharmacy, Physical Education, Commerce, Business Administration, Public Administration.*

Last day for those expecting Masters degrees in May to submit unbound theses to departments (except LL.M. candidates, March 17).

**Monday, 11**

Last day for receiving applications for entrance to 1st year *Dental Hygiene* commencing September 1977.

Examinations begin:

*Arts and Science, Nursing, Pharmacy, Physical Education, Commerce, Business Administration, Public Administration, Graduate Studies.*

4 p.m. — Senate.

**Wednesday, 13 to Saturday, 16 inclusive**

8:30 p.m. — *Opera As You Like It, Cohn.*

**Wednesday, 13**

Examinations begin, *Library Service.*

**Thursday, 14**

Last day of classes, *Dentistry* (4th year), *Dental Hygiene* (2nd year), *Law* (2nd and 3rd years).

**Friday, 15**

Examinations begin. *Law* (2nd and 3rd years).

Last day of classes, *Social Work* (2nd year).

**Monday, 18**

Examinations begin. *Dentistry* (4th year), *Dental Hygiene* (2nd year).

**Monday, 18 — Friday, May 20**

Clinical practice, *Physiotherapy* (1st year).

**Thursday, 21**

8:30 p.m. — *World's Greatest Jazz Band, Cohn.*

**Friday, 22**

8:30 p.m. — *Chet Atkins, Cohn.*

Last day for Faculty receiving theses from those expecting a graduate degree in May.

**Monday, 25 — Saturday, 30**

Examinations, *Physiotherapy* (2nd year).

**Friday, 29**

8:30 p.m. — *Joe Williams, Cohn.*

Last day of classes, *Social Work* (1st year).

**Saturday, 30**

Last day for receiving applications for admission to the *School of Library Service* and *College of Pharmacy*, session beginning in September, 1977.

Last day of examinations. *Law* (3rd year).

Last day for receiving applications for admission from foreign students (other than Americans) *Arts and Science.*

8:30 p.m. — *Canadian Brass, Cohn.*

## MAY

**Monday, 2**

Last day for receiving applications for entrance to 1st year *Dentistry*, commencing in September, 1977.

4 p.m. — Senate Council.

**Wednesday, 4**

Examinations end. *Law* (2nd year).

**Friday, 6**

Senate meeting to consider candidates for the award of degrees, Spring 1977.

**Monday, 9**

Registration and beginning of classes, *Chemistry 240*: (1st session of *Summer School*).

**Wednesday, 11 — Friday, 13**

Examinations, *Medicine* (4th year).

**Thursday, 12**

Convocations.

**Friday, 13**

Convocations.

Last day of classes, *Medicine* 1st, 2nd and 3rd years, subject to change), *Law* (1st year).

**Saturday, 14**

Examinations begin, *Law* (1st year).

**Monday, 16**

*Summer School* registration (1st session).

Second year begins, *Outpost Nursing.*

**Tuesday, 17**

*Summer School* begins (1st session).

**Friday, 20**

Last day of classes, *Dentistry* (1st, 2nd and 3rd years), *Dental Hygiene* (1st year).

Examinations end. *Law* (1st year).

Faculty of *Law* Convocation. (To be confirmed.)

**Saturday, 21**

8:30 p.m. — *Maynard Ferguson, Cohn.*

**Monday, 23**

Victoria Day — University holiday.

**Tuesday, 24**

Examinations begin. *Dentistry* (1st, 2nd and 3rd years), *Dental Hygiene* (1st year).

**Tuesday, 24 - Saturday, 28**

Examinations. *Physiotherapy* (1st year).

**Friday, 27**

Last day for receiving applications to: *Bachelor of Nursing for Registered Nurses, Diploma in Public Health Nursing Programme.*

**Tuesday, 31**

Last day for receiving applications for admission to *Graduate Studies* from overseas (i.e., outside North America).

## JUNE

**Monday, 6**

Senate Council

**Wednesday, 8**

Faculty of *Medicine* Convocation. (To be confirmed.)

**Monday, 20**

Last day for receiving applications for supplemental examinations in *Law.*

**Wednesday, 29**

*Summer School* ends (1st session).

**Thursday, 30**

Registration, post-graduate *Medicine.*



## Who's Who in Fisheries Management

# Conflict of interest inevitable

Because fish stock is common property there will always be a conflict of interest, according to economist Norman Morse.

With the advent of powerful engines of capture has come the depletion of traditional species, followed by administrative action in a regulatory form. Industry on the other hand must increase its productivity to remain in a competitive position. Whichever route is taken, there are bound to be repercussions.

An adviser to the Silvert project Dr. Morse is also a member of the Canadian Council on Rural Development. The council, through one of its committees, has held a series of hearing in the five Atlantic provinces in an effort to determine the role of fisheries in rural development. This committee, on which Morse serves, will report its findings to the federal DREE ministry.

A colleague of his, Melvin Cross, is also providing some input to the Silvert team. Much of his expertise in fisheries management is related to his PhD research.

Cross examined in hypothetical fashion what effect

the imposition of certain institutions would have on individual fishing firms as decision units.

These factors were: open access, restriction on outsiders, co-operative reduction of effort, restrictive licensing, private ownership of stock. One of his findings suggests that if 'outsiders' (i.e. large vessels, foreign ships) are excluded, a co-operative reduction in effort may not have to be implemented.

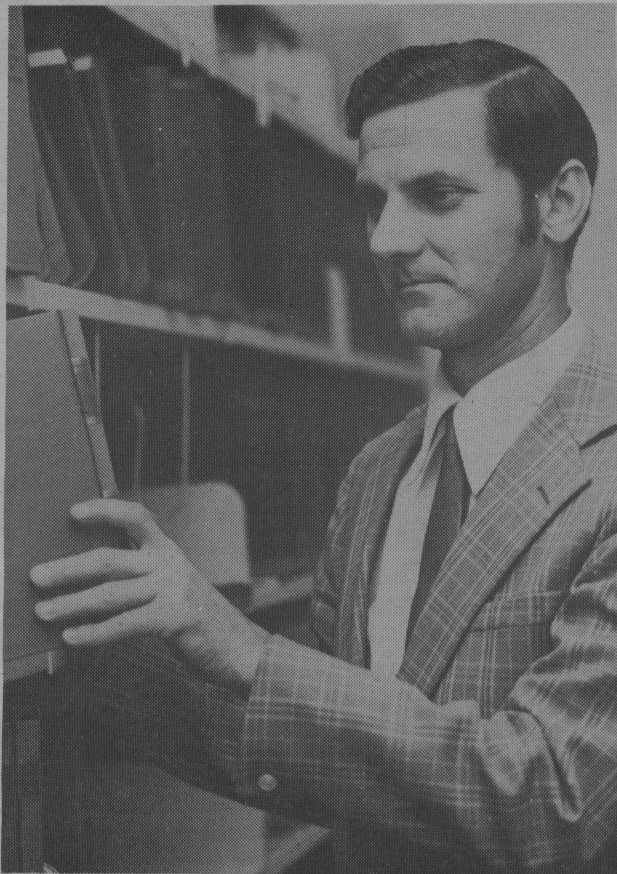
The question that must then be raised is whether enforcement costs are worth the benefits to be gained.

### Hard bargaining and major enforcement problem ahead

Wilma Broeren is a political science researcher on the law of the sea. The 200-mile fishing zone became fact of life as of Jan. 1, and she foresees a major enforcement problem ahead for the Canadian government, with the real possibility of hard bargaining with other coastal states in the years to come.

In an effort to offset this Canada has already entered into bilateral arrangements with five nations—Poland, Norway, the Soviet Union, Spain and Portugal. These countries together account for 88 per cent of the catch taken within the 200-mile Canadian Atlantic coastal zone by foreign fishermen other than those of the U.S. The agreements set out the rights of access and the share of the expected surplus within the 200-mile limit.

We can probably expect joint venture operations with these nations in an effort to compete in world markets. It is also most likely that coastal provinces will demand a greater share in the decision-making arrangements that up to now have been in the federal bailiwick, says Ms. Broeren.



**Prof. Douglas Johnston**  
International fisheries law expert

### Boundary, authority issues outstanding

Douglas Johnston has been a student of international law of fisheries for close to 20 years. From his vantage point he sees a number of issues that will require serious attention.

With the emergence of 200-mile fishing zones, the establishment of the zone will not be challenged he says, but one of the problems that may arise is how far a coastal state can go in imposing the right of access of others.

In the Northwest Atlantic, bilateral agreements have already been negotiated by Canada with five other nations. How these will fare and the kinds of arrangements yet to be made with other major fishing states will have to be watched closely.

Another question appears to be what role ICNAF will have now that coastal states have authority over a 200-mile zone.

And another question has to do with ICNAF, which up to now has been the sole managerial authority over fisheries stock in the northwest Atlantic. Much of its work will be phased out.

Still to be considered are boundary issues between Canada and the U.S. Along with this will come negotiations on a joint management system.

Johnston has a personal interest in public administration and constitutional problems. The changes that are occurring now in economic zone management will involve more than just fishing: maintenance of fixed installations, regulation of scientific control, exploration of oil and gas, pollution problems. It cannot help but mean a re-adjustment of the public administrative structure of coastal states. For Canada it will mean greater provincial demands for a share in how resource management will be conducted.



**Dr. Norman Morse**  
Economist-adviser

### Math research aids assessment

Professor Bill Smith is a specialist in applied mathematics. He's an exponent of improved resource assessment techniques as a guide for development of fisheries and should have some results from his own research work (funded by IBM) by mid-summer.

Using adaptive control theory, he is looking at changes in the environment which account for yearly fluctuations in survival of larvae and eggs. Along with this he's taking into consideration the time lag which occurs between the spawning period and the time it takes for stock to grow to a 'catchable' size (in cod it's about four years).



**Wilma Broeren**  
Political science researcher on the law of the sea



**Prof. Bill Smith**  
Applied mathematics specialist



## Scientists must see their work in social context — Dainton

Scientists must see their work in a social context and communicate to the public in a way that the public can understand, Sir Frederick Dainton, chairman of Britain's University Grants Committee, said in Edinburgh recently.

Sir Frederick, speaking in one of the "Elizabethan Age" lecture series organized by Heriot-Watt University as part of the Queen's Silver Jubilee celebrations, said there had to be changes in the school curriculum so that young people would be better prepared for adulthood in an age when science would inevitably affect their welfare.

Scientists had to see their work in a social context and, when risks were involved, should tell the government and be conscious of the pros and cons.

They should not resist demands that society be allowed to take a hand in directing the course of science, and they must improve their communication with the public.

## Alberta pledged to full equality for women

Canada's universities were in many ways experimental laboratories in the field of social reform, but it was unfortunate that they had not shown leadership in instituting full equality for women.

This view was expressed by Dr. Harry Gunning, president of the University of Alberta, when he spoke at the university's convocation ceremonies.

Progress toward eliminating the "cultural malignancy" of discrimination against women had been unjustifiably slow, he said.

His university intended to develop a community of academic staff, non-academic staff and students in which "pernicious, sex-linked discrimination will be progressively eliminated and thereby provide a model for the larger society that we serve."



The Musica Antiqua Ensemble perform music and poetry of Elizabethan England Jan. 27 in the Faculty Club's Great Hall. The program begins at 8 p.m. It's free and open to the public.

(Wamboldt-Waterfield)

## Renaissance music and dance 'reborn' by Dalhousie ensemble

Attired in elaborate costume as colorful as their viols, crumhorns, zinks, lutes, and harp, Renaissance minstrels and dancers wandered the Faculty Club's Great Hall, charming an overflow crowd obviously enthusiastic about music and dance of the 16th century.

The Musica Antiqua Ensemble, comprised of Dalhousie students and faculty, and several local musicians, has been in existence about four years.

Professor David Wilson, who teaches music history and has particular interest in the Medieval Renaissance period, has been director since the beginning when the concentration was on recorders.

When Carol vanFeggelen joined the music department in 1974, he took up with the Ensemble as well, and introduced new scores. Prof. vanFeggelen has a private collection of "retired" instruments of the period, and some authentic music. He plays the Renaissance lute and the vihuela, a 16th century Spanish double stringed instrument considered to be the forerunner of the modern guitar.

The Ensemble expanded again last spring. The Department of Music received about \$250,000 from the estate of Elsie MacAloney, \$10,000 of which was earmarked to supplement the collection of Renaissance instruments. Custom-made copies came from Boston (the viols) and from Germany (crumhorns, zinks) in the fall. As with the originals, everything is done by the musician; the skills, talents and intellect of the player must come together to produce intonations. "It's easy to get a sound," says David Wilson, "but hard to play well."

The audience at the Ensemble's first concert seemed pleased with the sounds they heard, and delighted with the dancers. Co-ordinated by Pat Richards (Theatre Dept. and Physical Education), several couples performed the graceful dances from the courts and the countryside of the period. Costumes were borrowed from the wardrobe departments of Dalhousie's theatre department and Neptune.

The Musica Antiqua Ensemble will be back in the Great Hall for another evening on Jan. 27 when, with the English Department, "Music and Poetry of Elizabethan England" will be performed. David Wilson and the Ensemble will also be giving a workshop at Acadia University Feb. 12, followed by a performance. Back at Dalhousie, "Music from the Court of Burgundy and the Republic of Venice" will be spotlighted April 7 in the Faculty Club.

Is Renaissance entertainment enjoying a "rebirth" in the Maritimes? "There is a recently revived interest in this style of musical entertainment," acknowledges Professor Wilson. "I think for some it is a means of getting away from the tensions of contemporary life. For the Ensemble musicians, it renews the relationship between the human hand and the melody it creates."



An exercise aimed at developing skills in survey research methods revealed some data on current political issues that could be of interest to politicians at the federal and provincial level.

A telephone survey using a small random sample (89 persons) in the Halifax-Dartmouth area was carried out by a group of second-year political science students at Dalhousie under the supervision of Professor Don Munton.

The four general areas covered reflect the interests of the students: wage and price controls and federal party support; provincial issues and party support;

corruption in the government; attitudes toward Quebec.

The government could be in trouble on the first two counts. There was concern about corruption in government but only a slight majority could name a specific case. The question of Quebec separation revealed that for the rest of Canada there were about as many in favor of trying to keep Quebec in as there were for separation.

The team (above) consisted of Anne Thompson, Diane Robinson, Murdoch Buchanan, David Coles (seated), Jody Clark and Prof. Munton. (A/V Services)



# Canadian universities' fund-raising campaigns

The following report and the accompanying table contain information, as of May 1, 1976, on public appeals to non-governmental sources which universities and colleges are making, or plan to make in the near future.

Institutions invited to report include all members and affiliates of members of the Association of Universities and Colleges of Canada [AUCC].

Other institutions with degree-conferring powers, unless these are confined to the field of theology, were also invited to report.

Information in this report is organized in two sections; the first shows the progress of campaigns that are currently underway; the second outlines plans for campaigns that are to be launched in the near future.

The need for private support of universities and colleges continues. However, in recent years, the areas in which this support is most needed have changed. In the past most university campaigns appealed only for capital building funds.

Today many appeals seek aid not only for capital building projects, but for research, student aid and library holdings as well.

This report provides information as to the nature of each campaign. This information is found in column 2 of Sections I and II. The following explanation of column 2 will assist the reader:

1. Capital building fund:
  - a. Instructional and research facilities, including libraries and museums.
  - b. Student residential, recreational and service facilities.
  - c. Other facilities.
2. Research or other type of appeal for operating funds.
3. Scholarships and / or bursary aid.
4. Other.

For details concerning a specific campaign, the development officer of the institution concerned may be consulted.

Universities and colleges which are currently conducting campaigns

Institutions	Objective	Type of campaign	Success to date	Solicitation began	End of solicitation	End of pledge period
*Acadia University	\$ 2,500,000	1	\$ 1,900,000	3.1974	3.1977	1978
*Alberta Universities	25,000,000	1, 1a	15,000,000	11.1968	Continuing	Continuing
*Bishop's University	3,000,000	1, 1a, 1b, 1c, 2, 3, 4	1,819,230	10.1975	When completed	10.1980
*British Columbia, The University of	3,500,000 <sup>1</sup>	1	5,800	6.1976	5.1977	5.1980
	2,225,000 <sup>2</sup>	1b	1,002,000	1.1976	10.1976	1981
*Calgary, The University of	850,000	1a, 2, 3, 4	1,017,000	9.1974	Continuing	...
Camrose Lutheran College	3,550,000	1	75,000	6.1975	...	5 years
Canadian Mennonite Bible College	365,000	1a, 1b	200,000	1.1974	Continuing	Open
Canadian Union College	700,000	1, 1a	115,000	9.1974	12.1975	12.1978
*Carleton University	5,500,000	1a, 2, 3	2,153,751	9.1974	9.1979	9.1979
Conrad Grebel College	900,000	1a, 1c	675,000	1974	1979	...
*Concordia University	450,000	1a, 1b, 2, 3, 4	...	6.1976	12.1976	...
*Dalhousie University	11,100,000	1, 1a, 1b, 1c	7,573,545	1.1970	12.1971	1975
Emmanuel and St. Chad, College of	675,000	1, 2	236,848	6.1972	6.1979	12.1979
*Guelph, University of	1,150,000 <sup>3</sup>	1a, 2, 3	1,360,275	4.1968	5.1975	1973
Iona College	500,000	4	...	11.1974	12.1977	12.1977
*Lakehead University	1,800,000	1, 2, 3, 4	...	6.1976	1979	1979
*Laval University	35,000,000	1	16,852,360	1967	1977	...
Lutheran Theological Seminary	100,000	2	20,000	3.1976	3.1977	...
*McGill University	25,300,000 <sup>4</sup>	1, 1a, 1b, 2, 3	20,000,000	Fall 1973	1978	3-5 years
*McMaster University	1,200,000	2, 3, 4	28,400	5.1976	12.1977	12.1977
*Moncton University	50,000 <sup>5</sup>	1c	25,000	1976	10.1976	...
*Montreal University	19,000,000	1b, 1c, 2, 3, 4	15,083,000	4.1968	12.1975	...
*New Brunswick, University of	760,000	1, 1b, 4	480,719	5.1975 <sup>6</sup>	Indefinite	One year
				5.1976 <sup>7</sup>	2 months	One year
				6.1976 <sup>8</sup>	Indefinite	One year
				5.1976 <sup>9</sup>	2 months	One year
Noire Dame College of Canada	1,500,000	1, 1a, 1b, 3	...	Fall 1976	1978	1981
*Nova Scotia Technical College	3,150,000	1, 1a, 2	399,672	7.1971	Indefinite	Indefinite
*Ottawa University	450,055	1a, 1b	190,430	11.1969	12.1971	12.1975
*Prince Edward Island, University of	2,900,000	1	2,047,293	11.1972	10.1977	10.1978
Quebec University (Chicoutimi)	1,250,000 <sup>10</sup>	2	1,199,983	10.1973	...	1978
*Ryerson Polytechnical Institute	125,000	2, 3, 4	5,500	3.1976	4.1977	3.1977
St. Andrew's College	250,000	1, 1a, 1b, 1c, 2	...	6.1976	6.1977	...
*Sainte-Anne College	85,000	1, 1b, 1c	...	6.1976	6.1977	...
*St. Francis Xavier University	3,035,000	1	2,054,673	1972	1977	...
*Saint Mary's University	4,570,000	1, 1a, 1b, 3	...	6.1974	Indefinite	Indefinite
*Saskatchewan, University of	1,000,000 <sup>11</sup>	1a	290,000	4.1974	12.1975	Up to 5 years
*Sherbrooke University	3,400,000	1, 4	2,775,021	10.1972	12.1974	12.1977
*Simon Fraser University	300,000	1, 2, 3, 4	...	4.1976	When completed	Continuing
*Toronto, University of	25,000,000	1, 1a, 1c, 2, 3	2,000,000	4.1976	On going-program	3-5 years
*Trent University	3,500,000	1, 1a, 1b, 2, 3, 4	2,126,551 <sup>12</sup>	3.1975	12.1978	12.1978
*Victoria, University of	419,000	1a, 2, 4	...	1.1976	12.1976	1978
*Waterloo, University of	5,500,000	...	4,050,000	10.1967	1970	1976
*York University	10,000,000	1 <sup>13</sup> , 2, 3, 4	3,100,000	1975	1979	1979

Universities and Colleges which are planning campaigns

Institutions	Objective	Type of campaign	Solicitation to begin	End of solicitation	End of pledge period	Date of public announcement
*Brock University	...	...	...	...	...	1.1977
*Guelph, University of	To be determined <sup>14</sup>	Multi-purpose	To be announced	Indefinite	...	Early 1977
*King's College, University of	...	...	...	...	...	Fall 1976
*Lethbridge, The University of	...	1a, 1b, 1c, 3, 4	...	...	...	1977
*McGill University <sup>15</sup>	7,600,000	1, 4	Fall 1976	1980	3-5 years	Fall 1976
*Memorial University of Newfoundland	10,000,000	...	To be announced	To be announced	To be announced	...
*Montreal University	10,000,000	Not determined	1978	...	...	1977
*Ottawa University	200,000 <sup>16</sup>	1a, 1b	1976 /or 1977	1977 /or 1978	...	...
*Queen's University	10,000,000	General purpose	...	...	...	1978
*Windsor, University of	10,000,000	1a, 1b, 2 <sup>17</sup> , 3, 4	March 1977	Open	Open	Open
*Winnipeg, The University of	500,000	3	Fall 1976	...	...	...

**Key**

.. No report given

— Nil

\* AUCC member institution

1. Asian Centre Fund
2. Aquatic Centre Fund
3. Hospitality Industry Founders' Fund
4. McGill Development Program
5. Sale of chairs for the new Centre for Physical Education and Sports
6. Aitken University Centre
7. Summer Music Festival
8. Fredericton / UNB Rowing Club
9. Creative writing
10. The Université du Québec, a member of the AUCC, is not itself conducting a campaign. A foundation, created to raise money for the university's constituent campus at Chicoutimi, is conducting the research project on regional development noted in this report
11. The Right Honourable John G. Diefenbaker Centre (includes the Diefenbaker Library and the Institute for Northern Studies)
12. Includes Wintario grant of \$985,000 on a "two for one" matching gift basis
13. Capital Debt Retirement
14. Proposed Development Fund Campaign
15. Macdonald College Campaign
16. Purchase and renovation of property which serves as a summer camp for the child psychology program
17. The Fund for Excellence will be seeking support for research which will not include operating funds



## International relations changing

We are now in a state of revolutionary change in our perception of international relations and world politics. This was the view expressed by Seyom Brown, who spoke to Professor Dennis Stairs' political science class while visiting Dalhousie.

Brown is author of *New Forces in World Politics* and an authority on contemporary trends in foreign policy and origins of the cold war.

The most important variable to examine was still the balance of military power in the world, but Brown maintained that other tools of power were beginning to rival the military.

The trump card in the arsenal of the west had always been the superiority of the U.S. military capability. However since the early 1970s the world had been adjusting to a new situation—Soviet military parity. With it had come an erosion of American's ability to respond to Russian threats.

Brown, formerly with the Brookings and Rand 'think tanks' and now with the Carnegie Institute, said we were not only witnessing a loosening of the alliance system but a shift in U.S. diplomatic mentality as an incentive to ensure its power leverage over Russia (i.e. detente; agricultural and technological exchange).

There were other power plays that were as important as the military one, said Brown. The economic ability of lesser nations which controlled essential resources had become an effective force to use against a superpower. In addition there was the realization that there were other issues such as 'have-not' problems, planetary issues that made interdependent globally—"these issues can't be resolved by force."

## Computer classes begin next week

Classes at the Dalhousie Computer Centre get under way again on Jan. 10 with an elementary class in COBOL programming for data processing application. The following day a course in APL and an introductory one on computing concepts and terminology will begin. Classes in introductory and intermediate fortran, SPSS, PLOT-10 Graphics will commence Jan. 12. There will be a class on COMPASS in February and QDGS in March.

Introduction to computing and Fortran programming as well as a class in COBOL for non-members of the Dalhousie community will be offered during evening sessions beginning this month.

## Registrar keeps computer busy

Computer usage of the CDC 6400 for the month of October has been released. The largest user is the Registrar's Office. The unit of measure (resource unit) was based on the active use of machine resources for executing programs. The resource unit for the Registrar's Office was 54.56 and represents 45 per cent of the Dalhousie total.

Next in line is undergraduate use with close to 10 per cent of the Dalhousie total, followed closely by the Computer Centre itself. There was a total of 37 users of the machine resources for that month. Included in the resource demands were CPU time, central memory area and input/output operations.

**The Canada Council** has published its 1976 directory of doctoral fellowship-holders.

Designed to help find jobs for students who are completing their PhD studies under council fellowships, the directory lists the names of 537 doctoral candidates in the humanities and social sciences who are now in their third or subsequent year of studies.

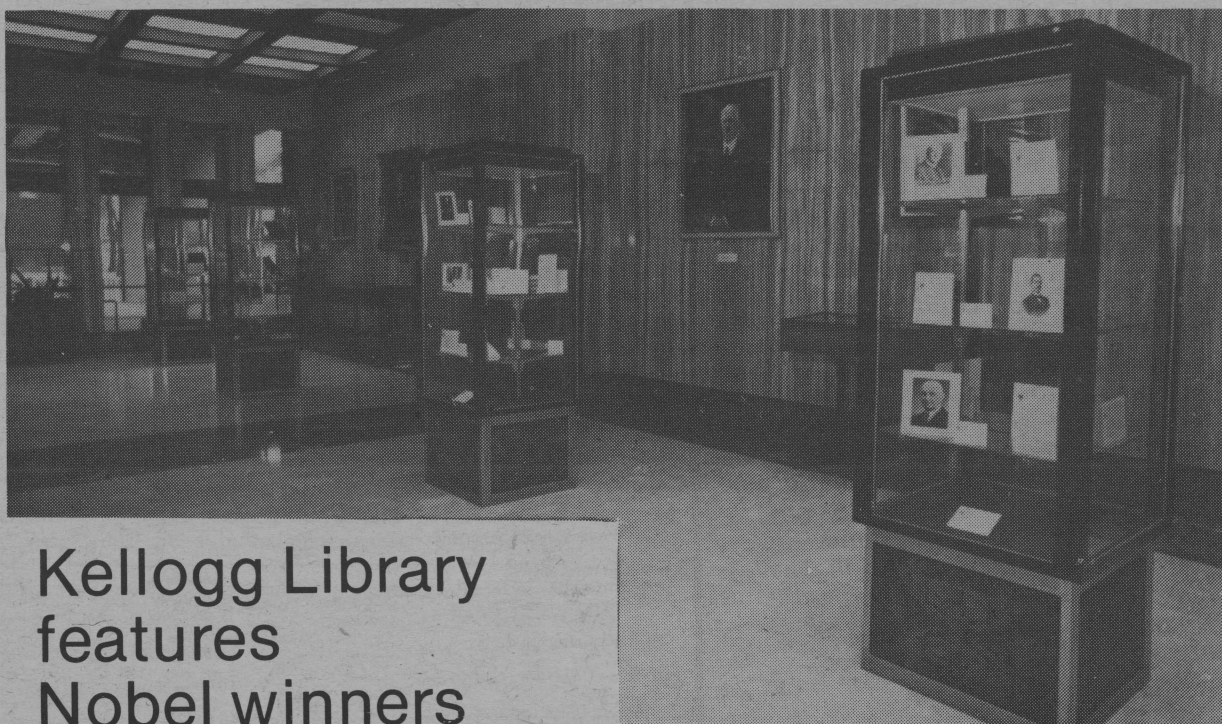
Copies are being made available to more than 2,000 potential employers, including those in university departments, libraries, private firms and the public service.

**The Banff School of Fine Arts** will offer drama, voice, dance, musical theatre and a music performance program during its 1977 summer schedule.

Auditions for admission to the program will take place during February. Persons in the Atlantic region who are interested in applying should contact Erik Perth (424-2267-Halifax) the regional co-ordinator. Auditions for this region will take place in Halifax on Feb. 12.



Dr. Lloyd Macpherson, whose term as Dean of Medicine ended last year, was honored at a dinner in Shirreff Hall recently. Left to right: Dr. Henry D. Hicks, president; Mrs. Macpherson; Dr. Macpherson; and Mrs. Hicks. (A/V Services)



## Kellogg Library features Nobel winners

The W.K. Kellogg Health Sciences Library has instituted a series of exhibitions in the lobby of the Tupper Medical Building. The main theme is the Nobel Prize winners since 1901 when the first laureate in physiology (or medicine) was awarded by the Royal Caroline Institute in Stockholm.

The displays include a picture and biography of each winner, a bibliography of his published works for which the prize was awarded and related materials (books, journals) from the Kellogg collection.

The present display includes the winners from 1901-1912. This includes such important figures in the history of medicine as Paul Ehrlich known as the father of chemotherapy who received the prize in 1908 for his "work on immunity," and Ivan Pavlov who received the prize in 1904 for his "work on the physiology of digestion." The displays will be changed at regular intervals. A complete list of winners and information about Alfred Nobel and the prize are contained in the central case.

This year's prize winners, Baruch Blumberg and Carlton Gadjusek are currently features in a display in the library proper. Their citation reads:

"For their discoveries concerning new mechanisms for the origin and dissemination of infectious disease."

Specifically, Dr. Blumberg is credited with discovering the "Australia antigen" in persons with hepatitis B, the most severe form of the disease. His discovery and subsequent work has led to a method of screening potential blood donors for hepatitis and to an experimental vaccine against hepatitis. Dr. Gadjusek found the cause of a fatal degenerative brain disease called Kuru to be a "slow virus". Such viruses may incubate in the body for long periods. Dr. Gadjusek's work may provide the key to other neurodegenerative diseases such as Creutzfeldt-Jacob disease. The library display traces the course of Gadjusek's and Blumberg's researches through their published articles.

Library staff are not overlooking our own Dalhousie researchers in the health sciences in their enthusiasm for Nobel Prize winners. A series of displays featuring the publications of Dalhousie researchers has been started.

The first highlighted microbiologist J.A. Embil's work on cytomegalovirus. The current one is on cancer immunology, a research interest of pathologist T. Ghose. Since joining Dalhousie, Professor Ghose has published over 40 papers on this and related subjects.

All members of the Dalhousie community are invited to submit the names of persons they would like to see honored in this display series.



## Phys Ed staff aiding sports research company

Sports Research Ltd. (SRL), a Halifax-based company, was formed for the purpose of publishing and disseminating information on sports that would be of benefit to physical educators and coaches. It is also involved in research dealing with equipment construction and design. SRL contracts the services of Dr. Larry Holt and Alan Alexander of Dalhousie's applied anatomy and biomechanics laboratory at the School of Physical Education.

An example of the firm's endeavors involves CCM, which was concerned that hockey sticks were not designed for children. Adult sticks were being used, inhibiting the practising of basic skills such as shooting. Holt and Alexander employed scientific technology and designed several different stick possibilities.

"Detailed studies of sports skills, utilizing ultra high speed cinematography and computer analysis, increase understanding of athletic performance," says Dr. Holt. "We have published several books through SRL that illustrate important factors involved in a skill and include specific coaching strategies. In the films we produce, crucial motions are isolated and explained in clear, concise terms."

Books dealing with cinema-computer analysis of punting, placekicking and centring have been written by the duo and films such as the "biomechanics of softball pitching" are available to coaches, too.

Their research has been featured on national television; specifically, programs dealing with passing and kicking were presented at half time during CFL games. Holt's *Scientific Stretching for Sport* [3S] is also distributed through SRL.

Sports Research Ltd. contributes funds to the university through rental of cinematographic and computer equipment, and employment of graduate students. At the same time there is direct benefit from the research findings for the profession of physical education.

## \$200,000 grant for Olympic swimming pool

A \$200,000 grant from the federal Health Department will enable Dalhousie to complete the international-class swimming pool within the Physical Education, Recreation and Sports Centre being built.

Dr. Larry Holt, associate professor of Physical Education and equipment co-ordinator for the centre under construction, said the federal contribution will pay for furnishings needed to make it a top class pool suitable for recreation, instruction, competition and research.

Dalhousie was worried about having to eliminate a number of accessories due to financial troubles, but now timing devices, specialized underwater equipment and other items needed to make it an Olympic pool will be included. It will be the first such pool in the province.

A condition of the federal support was that the facilities be available, as much as possible, to serve the recreational, competitive and instructional needs of the surrounding communities, said Dr. Holt.

## Universities not appreciated enough — Donald McInnes

Not enough people appreciated the contribution made to the life of Halifax by Dalhousie and the other universities and colleges.

This was the view expressed by Donald McInnes, QC, chairman of the Board of Governors at Dalhousie for many years, and a partner in the Halifax law firm of McInnes, Cooper and Robertson, when he was honored by his associates with a dinner last month to mark his 50 years as a member of the Nova Scotia Bar.

Mr. McInnes said that Dalhousie — along with the other universities and colleges — was perhaps the greatest influence on the life and industry of Halifax, providing education for people from all over the world and cultural activities and other events for the public.

Mr. McInnes, whose law firm employs more than 70 — nearly three times the number in his 1924 law school class at Dalhousie — said he was proud of the large number of esteemed lawyers, businessmen and politicians and law school had produced.

The

# Gossip

Column

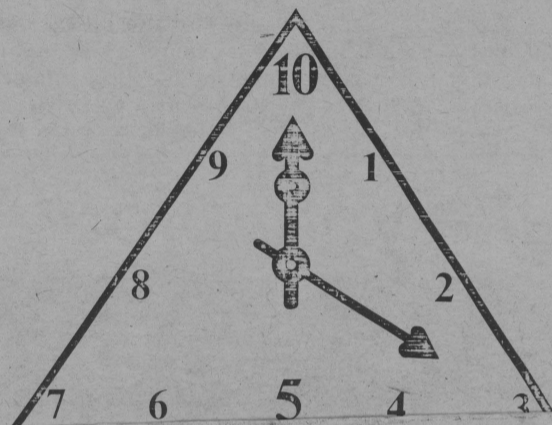


## It's decimating

"A fine title" is what we reported in this column over a year ago had been bestowed on Physical Plant Director Art Chisholm. He had been designated by the President as Dalhousie's Metric Conversion Co-ordinator.

Being an engineer, going from pints and miles to litres and metres is clearly not a difficult task for Chis and other bright scientists and mathematicians.

But for ordinary working non-academics, the switch is all very confusing. And Chis didn't help by sending us a sketch and article (plagiarized from where he knows not) on metric time:



The sketch is self-explanatory; the article, really a skit, was not. In fact, it was so gobbledygookish that it might be believable. Here are some excerpts from it:

"Doubtless you will have read in the national press that from... Jan. 3, the whole of Canada except Ottawa will be converting to metric time.

"From that date there will be 10 seconds to the minute, 10 minutes to the hour, 10 hours to the day and so on..."

It goes on to delineate millidays, centidays, decidays, days, decadays, hectodays and kilodays and, after having given examples of new working hours, vacation entitlements etc., it ends, appropriately, by saying that "your immediate supervisor has been allotted three centidays per capita to clarify any points which may arise prior to Deciday."

## Of swimming rabbits and aching muscles

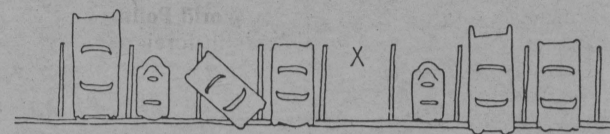
Baboon birth in the Tupper basement. The Dean of Men's dog producing a litter of eight.

They are not the only animals in the news. Ten swimming rabbits are helping an American researcher in human performance to examine what mechanism makes muscles ache after exercise. After swimming, the rabbits have excess Lyosome enzymes in their muscles; in excess, the enzymes are known to attack actin and myosin filaments in muscle tissue. The researcher is now trying to show that the link proves why muscles ache.

## More differences

According to *Perception* magazine (as reported in *The Sunday Times*), men and women are different.

A British psychologist, Diane McGuinness, now at the University of the Pacific Medical School in San Francisco, reports that unfamiliar differences include: women's hearing is sharper than men's; women can tolerate brighter lights, see objects better in dim lights, and are more sensitive to red and orange, long-wavelength lights. Men, though, are better at reading small print. No anatomical differences explain these findings.



The spot marked 'X' (above) is an artist's impression of that extremely rare commodity — the empty parking space.

The sketch was kindly donated by Director of Physical Plant Art Chisholm (another of whose contributions is helping to fill this column), who once was responsible for the Traffic Office but cleverly manoeuvred himself out of the parking problems on campus.

With the sketch came the anonymous caption that the 'X' spot is neither flora nor fauna, but is classified as 'wanna', but due to excessive hunting by licensed parkers and mis-parkers who don't know or care what the parallel yellow lines mean (see also above), it is now almost extinct.

## Faculty timekeepers

Members of the academic staff at the Palermo University engineering faculty in Italy have decided to clock themselves in and out of the university premises.

The purpose is to provide a record of whether they actually put in the required 12 hours a week on campus apart from their lectures; they are expected to use the

## Houses for rent — but not here

"Staff are informed that there are currently several University-owned houses close to the campus available for renting. These are, in the main, three-bedroom unfurnished houses, renting in the vicinity of \$45 per week...Mrs. Kelly, Estates Office, extension 2827."

That was a note appearing recently in *University News* — but it wasn't Dalhousie's. It was the University of Western Australia.

## Special status plea revived in Britain

Arguments in favour of the revival SISTER concept for universities in the United Kingdom have been revived.

SISTER is the acronym for 'Special Institutions for Scientific and Technological Education and Research', and the designation of a number of universities as SISTERS was proposed in Britain 13 years ago.

Recently, the government's Select Committee on Science and Technology issued a report which argued again for the concept.

Professor R.H. Haszeldine, principal of the University of Manchester Institute of Science and Technology, was one university head who backed the report, saying the government should immediately endorse the committee's view and designate a number of institutions as SISTERS.

Universities were in a state of uncertainty about their futures and finances, he said, and had no sure basis on which to plan creatively; they were even being compelled to plan for possible contraction.

He added it was impossible for Britain to revive its economy or to restore its position in the world until it was realized that investment in innovation was the only rewarding policy for an industrial society.





Old times were remembered and acquaintances renewed last month when Pugwash-born Senator Norman A.M. [Larry] MacKenzie, a Dalhousie student before and after the First World War, was at Dalhousie to see the unveiling of a bust of him. The bust was a gift

to Dalhousie of the University of British Columbia Alumni Association. In the first picture, left to right: James L. Denholme, president of the UBC Alumni Association, and Donovan F. Miller, Chancellor of UBC, unveil the bust as the Senator looks on. In the



second picture, Donald McInnes, QC, chairman of Dalhousie's Board of Governors, congratulates Senator MacKenzie as Dr. [and Senatorial colleague] Henry D. Hicks watches. [A/V Services]

## Does shopping make your blood pressure go up?

### DAL NURSES WILL TEST YOU

Is shopping a stressful experience for you?

Shoppers visiting centres in Halifax and Dartmouth in January and February (see schedule) will have the opportunity to have their blood pressure checked by Dalhousie nurses participating in a Blood Pressure Awareness Project. Their aim is to increase public awareness about hypertension and its related health problems.

A display on high blood pressure and pamphlets provided by the Canadian Heart Foundation and the Canadian Kidney Foundation will depict hypertension as the condition where there is excessive pressure of the blood against the walls of the arteries, and explain that it is often an indication there is something wrong, either physically or emotionally, that must be corrected, as it tends to weaken other systems of the body.

Factors affecting hypertension include: a person's age, sex and race; the degree to which a person has atherosclerosis or arteriosclerosis; any familial history of hypertension; the amount of emotional stress one is experiencing; any pre-existing damage to major organs; obesity or the degree to which one is overweight; and, one's smoking habits.

Have your blood pressure checked to see if you're experiencing stress while shopping:

Jan. 7	1 pm - 5 pm	at the Downsview Shopping Mall
Jan. 14	10 am - 2 pm	at the Halifax Shopping Centre
Jan. 28	noon - 4 pm	at the Dartmouth Shopping Centre
Feb. 4	11:30 am - 3:30 pm	at Scotia Square
Feb. 11	11 am - 3 pm	at Simpson's Mall



Sheila King, who received her RN from Montreal General Hospital 10 years ago, has her blood pressure checked by Sandra Geary, a nurse from Halifax Children's Hospital with 13 years experience who turned to Dalhousie to upgrade her education. Looking on is Cathy Hundt, who trained at St. Michael's Hospital in Toronto, and originally came to Dalhousie for the Out-Post Nursing program. All will be checking shoppers' blood pressures in area shopping centres as part of a Blood Pressure Awareness Project they are conducting for their Community Health Nursing course, taught by Prof. M.J. Horrocks.

The nurses, students in Dalhousie School of Nursing's post-R.N. Bachelor of Nursing program, will be available to answer questions about high blood pressure as well as general health care. All persons will

be told their blood pressure readings and if these are below or above normal values they will be advised to have their blood pressures re-checked by their family physicians.

### University Calendars

General Undergraduate which includes Faculty of Arts and Science, Faculty of Administrative Studies, Faculty of Health Professions, Part of Faculty of Dentistry and School of Dental Hygiene NOW available. (Dentistry will have separate calendar; administrative studies and health professions will not)

Faculties of Medicine, Law, Dentistry and Graduate Studies calendar will be available middle-end of January.

## Visiting Scholars

The Canadian Bureau for International Education is a resource centre for persons involved or wishing to become involved in international education. Its resources include information, publications, conferences, workshops and international contacts.

To facilitate contact between Canadian and visiting scholars from abroad who are in Canada and whose presence here might otherwise not be widely known, professors, research associates, post-graduate students and other academics. It lists the following scholars who are, or will be, visiting professors at Dalhousie:

R. Eden, political science (U.S.); M.S. Epelman, math (U.S.S.R.); B. Fuerst, chemistry (Switzerland); V. Gerard, biology (U.S.); I.L. Gordon, geology (England); F.H. Harrington, psychology (U.S.); A. Kom, languages (Cameroun); I. Kurobane, biology (Japan); S. Leach, chemistry (England); J. Nedelsky, Pol. Sci./Law (U.S.); C. Newbury, International Studies (U.S.); D. Phillips, biology (England); S. Power, math (Scotland); M. Price, biology (U.S.); H. Segal, history (U.S.); B. Timney, psychology (England); M. Tyler, biology (U.S.); S. Tyler, biology (U.S.); W.G. Wickham, English (England); M. Woolridge, psychology (England).

Copies of the report may be borrowed from the Information Office, Vice-President MacLean's Office of Graduate Studies.

## Envious surplus

In this age of deficits, Harvard must be the envy of most university purse-string holders.

Their balance sheet at the end of the 1975-76 academic year showed a **surplus**. It was \$900,000, not a great deal relative to the multi-million budget Harvard has, but it was a change from the previous year, when there was a deficit of almost \$1.6 million.

The university said the improvement was due to the lessening of inflation and the increasing effectiveness of strong management in the Faculty of Arts and Sciences, which reduced a deficit of \$2 million in 1974-75 to a mere \$249,000 last year.