

MG17, Vol 20, #29

# DALHOUSIE

A L U M N I M A G A Z I N E



**Women at Dal: a special issue**

Winter 1985



**OUR COVER** features a reproduction of *Self Portrait* (1937), a watercolor on paper by the Russian-born Paraskeva Clark, who left France and settled in Toronto in 1931. The work belongs to the Dalhousie Art Gallery, which in 1982-83 mounted the first chronological exhibition of paintings this remarkable artist had created in the '30s and '40s. It was a donation from the woman's division of the Dalhousie Alumni Association that enabled the university to purchase *Self Portrait*. That was back in 1954. Now, 31 years later, the watercolor appears on a new Dalhousie poster, bearing the slogan, "Dal Women, Celebrating 100 Years." For \$5, you can get the poster from either the Dalhousie Art Gallery, or the Alumni Office, Dalhousie University, 6250 South Street, Halifax, N.S., B3H 3J5.

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For more information about any of these Alumni Holidays travel programs sponsored by the Dalhousie University simply check the box adjacent to the trip(s) you are interested in and fill in the form.



If there seems to be an awful lot of women in this issue of Dalhousie Alumni Magazine, it's because it was in 1885 that the university first awarded a degree to a woman; and in the 100 years since then an awful lot of women have enjoyed triumphant moments at an awful lot of convocations. So we're celebrating the history and achievement of women at Dalhousie.

You will therefore find in this issue stories about the life of that first woman graduate; about the Dalhousie grad who, on the eve of the university's centenary celebrations, became the first American woman to walk in space; about the strong-willed women who managed to excel at Dalhousie despite the prejudices of the male-dominated campus; and about being a woman student here in the oh-so-sexist '50s.

Nor is that all. In 1955, *Chatelaine* magazine carried an article that declared only one Canadian scientist in 50 was a woman. Now, 30 years later, the subtle discouraging of young women in the sciences still means society is losing a massive pool of potential scientific talent. To show this does not have to be the case, we feature in the centre of this issue stories about seven women faculty at Dalhousie whose scientific research is making waves that matter. We'd like to see this package reach not only alumni, but also smart high-school girls who are considering entering university just as Dalhousie swings into its second century of graduating an awful lot of women.

**UPCOMING IN FUTURE ISSUES:** A profile by Douglas How of Dalhousie's most generous and flamboyant benefactress, the late Dorothy Killam. Plus, a group portrait of modern women graduates who are making their mark in a score of fields.

**W Dal  
Women**  
CELEBRATING 100 YEARS

# DALHOUSIE

## ALUMNI MAGAZINE

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She was only a farmer's daughter but, exactly 100 years ago, she became the first woman ever to earn a degree from Dalhousie University. She was Margaret Florence Newcombe, a schoolteacher who won prizes and made history.

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Nationally celebrated author Sandra Gwyn eloquently recalls what it was like to be a girl at Dalhousie 30-odd years ago. It wasn't all that good, but it wasn't all that bad, either. She's glad she came.

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### 13 She walked in space, and remembered Dal

No Dal grad has ever flown higher than Kathy Sullivan, the first American woman ever to walk in space. Among Dalhousie women, she's as good a symbol of the future as Newcombe is of the past.

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A 12-page package of seven profiles by Harry Bruce about Dal faculty whose internationally respected research disproves the hoary notion that women can't measure up as scientists.

### 27 They had a tough row to hoe

It's all very well to honor Dalhousie's first woman graduate but what about the other exceptional pioneers among Dalhousie women? Here, history professor and author Judith Fingard shows that the treatment they endured on the campus was far from fair.

### 30 Dalumni

Dalhousie Alumni Magazine is published by the university as the official periodical of the Dalhousie Alumni Association, and appears three times a year. Deadline for the next issue is June 1, 1985. Send material to: Alumni Office, Dalhousie University, 6250 South Street, Halifax, N.S., B3H 3J5; or to Public Relations Office, Old Archives Building, Dalhousie University, Halifax, N.S. B3H 3J5.

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# Eayrs wins the big one

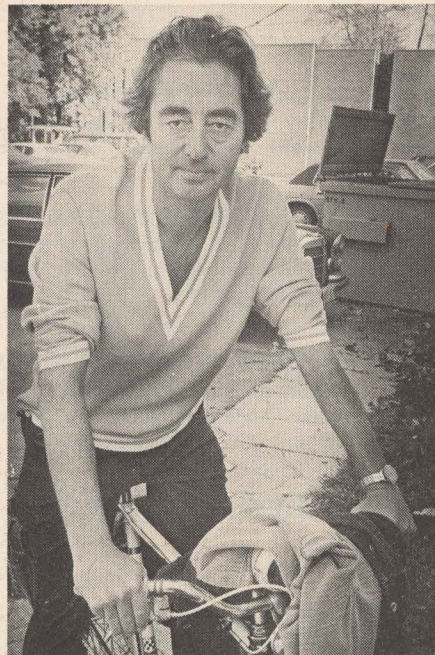
*It's a prize worth \$50,000*

While accepting the \$50,000 Canada Council Molson Prize in November, Dalhousie political science professor James Eayrs, 58, said one of his favorite fantasies had long been to win this very award and then to declare publicly that it had been "richly deserved and long overdue." But when he considered the previous winners, "I realized that my fantasy speech wouldn't fly for the real thing . . . Listen. In music: Glenn Gould, Lois Marshall, Maureen Forrester. In painting: Jean-Paul Lemieux, Jack Shadbolt, Michael Snow. In literature: Morley Callaghan, Hugh MacLennan, Margaret Atwood. In scholarship: Donald Creighton, Marshall McLuhan, Northrop Frye . . . Reading that roster brought for me new meaning to the expression: *Que diable faie-je dans cette galère?*"

The jury that chose Eayrs remarked his "astonishing abundance of scholarship . . . Through his numerous books and articles analyzing Canada's position on foreign policy issues, he has contributed significantly to the understanding of Canada's role in world affairs. Through a variety of magazines and journals, his sane and articulate discussions of these important and complex issues have reached an unusually wide readership."

What particularly impressed the jury was Eayrs's *In Defence of Canada*, a five-volume study of Canadian foreign policy from the First World War to 1957: "We are honoring a man for prodigious productivity and scholarship, of new and exciting interpretation, who has rewritten our history of international relations."

Eayrs was pleased to see the award as recognition of Canadian studies, which had "recently taken a beating at the hands of a troika of hatchet-men," presumably the authors of *The Great Brain Robbery*. He then quoted Professor T.H.B. Symons' statement that, "If a Canadian is to seek the self-knowledge that is essential for both health and wisdom, he must have access to a wider self-knowledge of his historical com-



*Will Eayrs buy a better bike?*

munity and its contemporary circumstances. That is the answer to the question, 'Why be concerned with Canadian studies?'"

Eayrs is Eric Dennis Professor of Government and Political Science at Dal, having arrived on the campus in 1979 as a Senior Killam Fellow. In *Atlantic Insight* (August, 1980), Jill Cooper Robinson wrote, "I can't think of another writer who could keep me fascinated — 12 years after the fact — with an account of General Curtis LeMay's bid to attain the vice-presidency of the United States. Whether his subject is men, movements or mistakes, Eayrs tackles it as if he's writing a suspense thriller."

"At the mention of James Eayrs," Toronto author Kildare Dobbs has said, "deputy ministers shudder and clench their teeth. The resentment excited by his comments seems to go beyond the normal irritation of men who get things done against men who in their view merely snap at their heels." Political columnist Douglas Fisher calls him, "Crotchety, erudite, sardonic, patronizing, elitist, anti-establishment, lonely, brave."

Eayrs, in 1980, called himself "a refugee from two too-large teaching classes at the University of Toronto. I heard the classes are much smaller at Dalhousie." He lives in the north end of Halifax — "When I mention that, some people look at me as though I'd dropped out of a horrible bottle" — and reports to the campus by bicycle.

How will he spend the \$50,000? Well, as he said in his acceptance speech, "My ancient typewriter's had its time. I've kept it for its presumed totemic powers. Now, I can trade up to something more state-of-the-art than a 1916 Remington. I want to add to our collection of work by four of Canada's best artists: Kay Graham of Toronto, Jack Donovan of Halifax, Peter Jansons of Brackley Beach, Prince Edward Island, Donna Clouston of Flatrock, Newfoundland.

"I'll make a small but to me significant donation to Dalhousie's fundraising campaign. And I'll make a small but to me significant donation to the renovation fund of Holy Trinity Church, Georgetown, Prince Edward Island. After that, we'll see." □

## Want a grant? See Nielsen

*She didn't want to be a university scientist herself, but Christine Nielsen doesn't mind helping scientists track down research dollars. At Dal, that's her job*

Thanks partly to a lanky post-graduate drop-out named Christine Nielsen, research grants to Dalhousie faculty jumped from \$10 million to \$20 million in only three years. Some of the rise reflects inflation, but a lot is due to Nielsen's work as the university's official bloodhound for



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research funds. As Director of Research Services, a position that Gerald Klassen created while vice-president (academic and research), Nielsen has other duties, but for three years her major professional obsession has been to tell would-be researchers where the money is, and to help them fashion their applications so they'll be sure to get it.

"This office was started because research had no explicit home at Dalhousie," she says. "I see its role as providing assistance of any kind to faculty who want research money." How much of that \$20-million-a-year does she herself help to bring to Dalhousie? "It's hard to measure my part," she says. "Some faculty don't need any assistance from me. For the most self-sufficient, my help can be as minimal as sending out the application forms, or distributing memos when I hear of a new source of funding."

Faculty get so immersed in their Dalhousie duties that "they often have no access to this information unless I send them the blurbs." She also spreads the word on exchange programs, fellowships, and opportunities faculty might exploit during sabbaticals. "Maybe it's the first time in ten years they've wanted research money. They're really out of the picture." Nielsen puts them in it.

The picture includes literally hundreds of granting agencies, public and private, in Canada, the U.S., and throughout the Commonwealth. The major government-backed outfits in Canada are the Natural Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council (SSHRC), "But the other agencies run the gamut from, say, the Diabetes Foundation, to the Multiple Sclerosis Society, to the Fitness and Amateur Sports program. There's a lot of money in oddball federal sources."

As just one example, she mentions a program in the Secretary of State's department that offers \$35,000-fellowships for research in Canadian ethnic studies. She broadly distributes news of such opportunities, but she also targets the information at the faculty who'll be most interested in it.

Once, she was well on the road to becoming a scientist herself. She earned her BSc (summa cum laude) in biology and chemistry at Union College, Schenectady, New York, and from 1975 to 1978 was enrolled in a PhD program in ecology and systematics at Cornell. Her

thesis subject was the physiology of garter snakes.

But she did not like the idea of spending her life as a professor: "It didn't take me long in grad school to realize the lab was not for me." Cornell was dedicated to churning out faculty members, and she didn't want to be one. She'd seen so many of them close up. The compulsion to publish or perish, the fear that colleagues would steal your ideas, the drive to excel in a narrow field all seemed to add up to intolerable loneliness. "The really successful ones," she recalls, "had little time for other people, not even their families. They were essentially isolated from the world."

She never got her PhD. But when she arrived in Halifax in 1979 — her husband, George White, who has since joined the federal government in Fisheries and Oceans, had come to Dalhousie to teach mathematics — her background was sufficiently impressive to land her a job as a research assistant in the university's Department of Physiology and Biophysics. Within months, she was assistant director of the department's medical biophysics and bioengineering research lab, and her duties there included "preparation of grant and contract proposals, and negotiations with granting agencies." When she saw the posting for her current job, "I certainly knew that was for me."

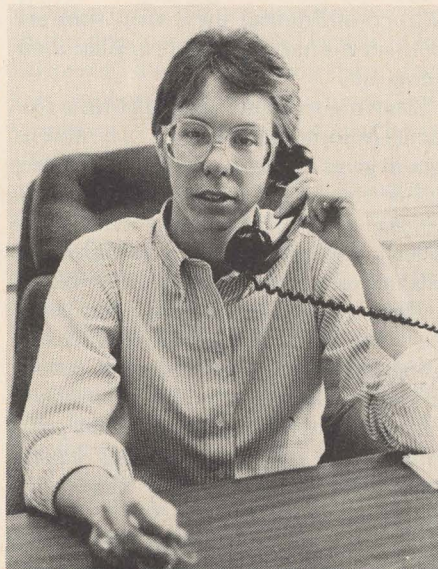
During consultation with grant applicants she helps turn an idea, or an ill-defined interest, into a firm research proposal. She encourages applicants to consider exactly what hypothesis they

want to test. She doesn't actually write anyone's application, "But I redraft. I read their applications and comment on whether they're approaching the right agency in the right way. And I edit." Experienced faculty might never ask for Nielsen's editing services, but in other cases she may vet an application a dozen times. Once she worked on 20 drafts of the same application before recommending its submission.

Entire careers rise or fall according to "whether or not they get this money," and the most gratifying part of Nielsen's work is seeing someone enter her office wreathed in smiles because an application has opened some agency's coffers and a cheque is in the mail. ("Of course, there are the tears, too.") But she also enjoys the diversity of her work: "Here, I am a generalist, rather than finding myself locked into a specialty for the rest of my life."

It's part of her job to compile statistics and analysis of all research projects for the president, vice-presidents, deans and department heads. She also negotiates research contracts with private companies and Supply and Services Canada. "This takes an amazing amount of time," she says. "The number of contracts has gone up 100 per cent in each of the three years I've been here." The increase is partly due to an increase in federal contracting-out accompanied by a shrinkage of certain grants, and partly to Dalhousie's adopting "a more businesslike attitude" toward contracts. The businesslike attitude includes the establishment of Nielsen's office. She says, "It's got to the point where Supply and Services will call us to find out if Dalhousie wants to do this or that." One reason for this may be that, "I give a 24-hour turnaround, no matter what service I'm providing."

When Nielsen's not negotiating contracts, helping net research dollars, or acting as a buffer between faculty and administration, she's often to be found stretching her long, lean physique in a racing shell on the Northwest Arm. Competitive rowing disappeared from the Arm decades ago, "but we're bringing it back. Our membership has gone from 20 to 200 in three years." Headquarters for the movement is the St. Mary's boathouse, and Nielsen rows in a women's coxed four. In October, the team competed in a racing event called "Head of the Charles" at Cambridge, Mass.



Nielsen: a generalist at peace (Paul Chislett photo)



Her squad finished 30th out of 40 but since it consisted of Halifax novices of assorted sizes, shapes and ages, and since the competitors included young, Olympic-class Amazons, they figured they did pretty well. "It's the world's biggest event of its kind," Nielsen says. For her, the tournament was sheer joy. "Those were the best two days of my life," she asserts. She might never have known them if, back at Cornell, she'd dedicated herself to becoming the world's greatest authority on, say, the physiology of garter snakes. □

## Continuing education gets a boost

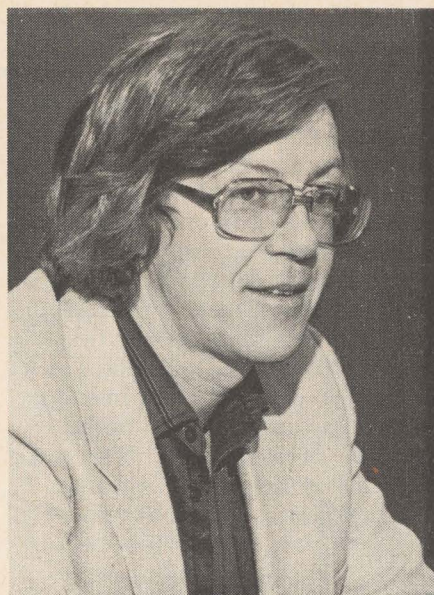
*Soon, students may get degrees by studying entirely at night*

In continuing education and part-time degree programs, a minor revolution is at last under way at Dalhousie. President W. Andrew MacKay calls the new thrust in continuing education "one of the most exciting possibilities" for development at Dalhousie, a movement that offers "great promise" to students in both credit and non-credit programs.

How do other Halifax universities feel about Dalhousie's stepped-up role in continuing education? "Reaction is mixed," Dr. Michael Cross says. In October the university appointed Cross, a history professor, as the new dean of continuing education. "There's an enormous amount of excitement that we're moving in this direction," he continues. But there are also fears "Dal will engross the field."

That, however, is unlikely. In continuing education, some universities "have done a better job" than Dalhousie, and, "It's going to take us a very long time to catch up."

The catching up starts with organization. Dalhousie has begun to establish a senior academic unit with two divisions: one to develop part-time, degree-credit programs; the other for continuing education, non-credit courses, and community development. Cross is head of the first division but he's also director of the Institute of Public Affairs, which



*Cross: some catching-up to do (Carlos photo)*

is absorbing non-credit and special program elements of the Office of Part-time Studies and Extension. The director of that office, Douglas Myers, now becomes director of policy development at IPA, and John Dougall becomes assistant director.

The new arrangement, Cross believes, should benefit part-time and mature students in the community. Previously, "There had been no specific group concerned with overall credit programs for part-time students. If classes were available to them, it was because of individual departments. There was no co-ordinated effort." Cross had been talking with university departments about their increasing night classes and also co-ordinating these with summer courses to enable students to plan their programs.

Starting in September, part-time students in some disciplines will be able to get degrees at night. Those in science, however, may have to wait a while longer. Cross wants to see some basic science programs offered at night, but it's not easy to set up night-time labs.

In the beefed-up role for continuing education, Lloyd Fraser remains as program director of the summer school and co-ordinator of student services, while Stephen Frick co-ordinates part-time degree programs, handles departmental liaison and develops news credit programs.

An association for adult students is in the making, and plans are under way to give part-timers assorted university ser-

vices at night. A writing workshop may open in September, for instance, and some offices may offer basic academic advice at night. Cross is not happy with the night-time atmosphere on the campus: "By and large, it's a dark and dismal place. I hope to convince the administration that lighting is important."

Most part-time students are women, and in phase two of the re-organization Cross wants to examine the requirements of women students. He thinks Dalhousie needs a special centre, "where women's activities could be focussed." The Maritime Provinces Higher Education Commission blocked implementation of a program of women's studies, but Cross says other women-related programs could be organized.

He intends to report to the Senate this Spring on activities in continuing education, seek a permanent mandate, and start the search for a dean with a five-year term. (His own two-year term expires Oct. 1, 1986). He'd like to see credits more transferable than they are now, and to abolish the ten-year time limit for getting a degree, but feels he can't negotiate such changes without a permanent mandate from Senate.

Meanwhile, he's trying to get everyone at Dalhousie to think continuing education. "A certain amount of cheer-leading has to be done," he says. "We have to establish credibility inside and out." □

## For women, Dal's better than ever

*But still not as good as it should be*

Dalhousie paid women faculty less than men, discriminated against them in its hiring, and promoted men much faster. Those were among the conclusions of a campus committee on the status of women, but that was in the late '70s. Now, after a slew of recommendations, the formation of another committee, and the birth of the Dalhousie Faculty Association, the university has corrected many injustices. "Things are not totally



## UP FRONT ON CAMPUS

rosy," says Nicole Trèves-Gold, a French professor who heads the women's faculty association, "but some anomalies have been repaired." She's a pleasant, vivacious woman with a lyrical French accent.

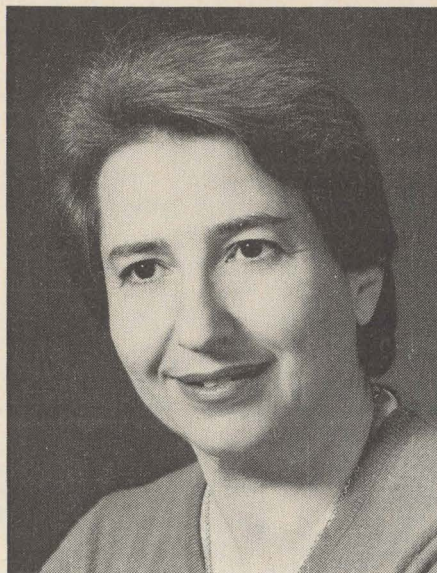
The anomalies included salary differences that in 1977-78 averaged \$4,185 between male and female full professors, and more than \$2,000 between male and female assistant professors. Women were concentrated in the low salary ranges: 71.2 per cent of women — but only 29.1 per cent of men — earned less than \$22,000 a year. Trèves-Gold says some of the discrepancies no longer exist. She credits the Dalhousie Faculty Association, a 728-member union formed in 1978, for rationalizing salaries.

A formula called "the Y value" assigns a numerical value to faculty members' education and experience, and sets a minimum salary. "Everyone has been brought up to a minimum scale," she says. Some faculty members, however, surpass their Y value substantially. In high-demand disciplines such as computer science, it's impossible to attract faculty at just the Y value. Trèves-Gold says a study is in order.

The original study by the President's Committee on the Status of Women showed that marital status affected income. In medicine, men gained \$3,104 by being married while women lost \$5,505. "Today marital status has no effect on income," Trèves-Gold says.

The promotion process has also become better organized, for both men and women. With a collective agreement, "All promotions follow a strict procedure." That wasn't always the case.

But even with improvements in the promotion process, women remain poorly represented in top decision-making positions. All seven deans of faculties are men. The president and all the vice-presidents are men. Only 12 of the 45 governors are women. "This under-representation is one of our concerns," Trèves-Gold says. More women than ever before, however, are participating in campus affairs at the committee level. Search committees for five important positions were meeting late in 1984, and the Dalhousie Women's Faculty Association wanted them to know its position. "We want the chance to have an impact," Trèves-Gold says, "so that the persons hired, if not



Trèves-Gold: still too few women in top jobs (Carlos photo)

women, would be sensitive to the concerns of women."

The situation is the U.S. in the '70s wasn't much better. As late as 1976, the French department at the University of California in Los Angeles, where Trèves-Gold taught, had yet to boast a tenured woman professor. Arriving at Dalhousie in 1981, she found the hiring procedures fair, and the atmosphere in the French department co-operative. Indeed, by comparison with UCLA, "This was almost like paradise. I have been very lucky to have found such a congenial group of colleagues."

The number of women with tenure at Dalhousie is uncertain. For that matter, so is even the number of women faculty. Of the 728-member faculty bargaining unit, 209 are women, but the union does not include all faculty. The influence of women among those outside the bargaining unit, Trèves-Gold suggests, "remains to be carefully studied."

Obviously, women are still under-represented, but affirmative action could help change that. Now in its second year at Dalhousie, affirmative action has a bad name in some quarters. Some associate it with mediocrity and call it reverse discrimination. But, Trèves-Gold explains, "It never implies that females less qualified than male applicants should be hired. Such a policy would be both unnecessary — because women are as capable as men — and undesirable. It would reflect negatively on women, lower standards and cause hostilities." What affirmative

action *does* mean is simply "active recruitment of qualified female academics."

Dalhousie has a policy to increase the proportion of female faculty members, but no one knows how effective it is. It may need more teeth to ensure its enforcement.

In some departments, Trèves-Gold believes, the ratio of men to women faculty closely reflects the number of graduates in the relevant disciplines. This is true of the French department, for instance. But she doubts if the same can be said for all the humanities, and knows it's not the case in some of the sciences. Part of the problem is the shortage of women science students at the doctoral level, and she feels younger females must be encouraged to enter under-represented disciplines.

But more women *are* flocking to two traditionally male domains, law and medicine. In the 1984-85 academic year, women held 142 of the 285 seats in medicine; in 1974-75 they accounted for only 80 of the 373 students. In the law school, women account for 195 of the 450 students in undergraduate and graduate programs. In 1977-78 they numbered 129.

Women still have a long way to go before they're fairly represented, but they've made big jumps in recent years. Still, Trèves-Gold warns them to avoid complacency: "This is not a one-shot action. It's a matter of constantly ensuring we don't go back." Meanwhile, since the *Dalhousie Alumni Magazine* interviewed her, the university has appointed Trèves-Gold Assistant Dean (Special Projects), Faculty of Arts and Science. —Roma Senn

## Farewell, Jennie. Goodbye, Florence

Two faces, long familiar to students, faculty and administration staff alike, have disappeared from the campus. President W. Andrew MacKay recently held small tea parties in his office to say thank you and farewell to Jennie Dobbin and Florence Evelyn Logan. Before her retirement, Mrs. Dobbin had been on the cleaning staff of the Arts and Administration Building for 31 years. Mrs. Logan, also a cleaner, came to Dalhousie in 1968, and in recent years was president of local 1392, Canadian Union of Public Employees.



## Fournier becomes assistant VP

Dr. Robert O. Fournier, chairman of the Department of Oceanography at Dalhousie University for the past four years, has been appointed assistant vice-president (research).

Fournier's three-year appointment, which took effect Jan. 1, will encourage further development of research at Dalhousie. He will seek the support of the public, business and industry, and government for research activities at Dal, and will promote co-operation in research between the university and other institutions, corporations and government.

Dr. Alasdair M. Sinclair, vice-president (academic and research), says Fournier is well-equipped for his new job. In addition to being a highly respected oceanographer, researcher and teacher, Fournier is known outside academic circles for his down-to-earth commentaries and reports about science on CBC's national radio program, *Morningside*, and CBC Halifax's *Information Morning*.

Born in Fall River, Mass., Fournier graduated from the University of Rhode Island (BSc, PhD) and the College of William and Mary (MA). In 1966 he served as an oceanographic adviser to U.S. Senator Claiborne Pell and as assistant secretary for science at the Smithsonian Institution. Afterwards he was a post-doctoral fellow at the University of Oslo's Institute for Marine Biology in Norway, and then at the laboratory of the Marine Biological Association in Plymouth, England. He then spent one year at Dalhousie's Institute of Oceanography.

From 1969 to 1971, Fournier taught botany at the University of Hawaii. Then, after a summer stint in 1971 as a visiting professor of oceanography at Stanford University's Hopkins Marine Station, he rejoined Dalhousie as an assistant professor.

He was promoted to associate professor in 1973 and to professor in 1979. Between 1972 and 1982 he was an instructor in the introductory oceanography summer course at Huntsman Marine Laboratory in St. Andrew's, N.B. In 1980 he became chairman of Dal's Department of Oceanography.

Fournier, who has taken part in international conferences on oceanography, is a member of the Science Council of Canada, chairman of the Canadian national committee for the Scientific Committee on Ocean Research. Some of his previous activities include membership on the board of directors of the Huntsman Marine Laboratory, and service as Canadian editor of *Marine Biology*, and on the editorial boards of *Marine Ecology: Progress Series* and *Pacific Science*.

He has also been a member of the board of directors of the Ecology Action Centre and a Beaver leader with Scouts Canada. He has made more than 400 radio broadcasts and TV appearances, written a number of popular magazine articles and hosted a one-hour TV documentary, *Iceberg Alley*. He has also lectured widely to lay groups and scientific organizations, and holds an impressive list of research publications.

—Derek Mann

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## How did she get into the picture?

*By earning the first degree Dalhousie ever granted a woman, that's how. She's Margaret Florence Newcombe, and she got her BA one hundred years ago*

*By Harry Bruce*

Surrounded by thirteen solemn young men in the photo of the class of 1885, little Miss Newcombe doesn't look as though she knows she's made history. Her hair is short, her high collar ruffled, her posture erect, her expression non-committal. But perhaps that's a ghost of a smile on her lips. She looks satisfied. She has done what no woman has ever done before. Margaret Florence Newcombe, age 28, has graduated from Dalhousie University. On April 29, 100 years ago, she got her BA. Moreover, she showed the 190-odd students and the tiny faculty at the little red college by the sea that a woman could more than hold her own academically. She snared prizes in English Literature, History, German and Political Economy.

Prizewinners in 1884 had included Charlotte Mary McNeill (BA'87) for first-year Mathematics and English, Eliza Ritchie (Bachelor of Letters'87) for Metaphysics, Maria F. Saunders for German, and Catherine MacKnight who captured the Shakespeare Society's Prize. "Uproarious cheering greeted the announcement of prizes won by the lady students," the *Dalhousie Gazette* declared in its convocation issue. Women, in Newcombe's time, were still sufficiently novel at Dalhousie to

inspire such outbursts of raucous gallantry among the men students. By January, 1881, the university had yet to admit a women degree student, and the *Gazette* announced, "Dartmouth College has decided to admit females. Sensible."

Such endorsements, however, did not mean the *Gazette* spared women from the male prejudices of the time. "Were our fair classmates justified in assuming that injured air when the professor remarked that the epithet 'wife' was a proud title and one much sought after by the ladies?" the paper coyly asked in 1884. *Gazette* jokes habitually ridiculed the notion that a woman could be a good science student. A zoology professor asks a "lady student" what effect "has an exterior object on the retina? Yourself, for instance, how do you appear on the retina of my eye?" The sweet young thing dumbly answers, "I should think that I appear inverted." A poem entitled "After the Last Science Lecture, What She Said On the Way Home," ended like this:

"Oh, I perfectly dote upon science;  
I think it's just jolly good fun



And I wish I was going on your expedition

With knapsack and gun."

The *Gazette* declared, "Girls, as a rule, do not *think* as well as do young men; but they can *talk* and *write* with five times the adroitness and skill." The statement must have been as depressing for "boys" with literary ambitions as it was for "girls" who thought they could think. The paper reported that "Vassar girls" consumed 13,402 ounces of chewing gum in one year, and it regularly printed such boffo one-liners as, "He read that the census embraced 17 million women, and ever since he has wanted to be a census."

Newcombe was a plainly determined woman in her mid-20s while at Dal, but we'll never know how she felt about the attitudes that prevailed on the male-dominated campus. Thanks, however, to recent research by Mrs. Henry D. Hicks (BA '37, MA '50, LLD '80) wife of the former president, we do know a fair bit about Newcombe's background. Born at Grafton in the heart of the Annapolis Valley on Dec. 10, 1856, she was the daughter of John C. Newcombe, a farmer. He was 47 when she was born, and he dropped dead at his own birthplace, West Cornwallis, when she was only nine.

The Newcombes were descendants of John Newcomb, a master mariner from Massachusetts. With his wife and sons, and his sons' families, John arrived at Cornwallis around 1760. He was probably 72 at the time. The Newcombe crowd was part of the first wave of New England Planters who settled on the juicy farmland the Acadians abandoned when they suffered the Great Expulsion of 1755. These New Englanders later came to be known as "the Puritan fathers" of the Annapolis Valley, and John Newcomb, a staunch churchman, organized the first Presbyterian Church in Cornwallis. Later, John C. Newcombe, Margaret's father, was a deacon of the Reformed Presbyterian Church, West Cornwallis, and also its treasurer. Margaret, as a little girl, undoubtedly knew the Bible well, and the Shorter Catechism.

As a big girl she attended the Normal School in Truro, earning her diploma in 1876 with a mark of "superior 83." The school awarded only two Governor General's Prizes that year, and Newcombe won one of them. To teach, she got a provincial license "B," the highest Nova Scotia issued in 1876. Five years later, she entered Dalhousie.

The Dalhousie Matriculation Book for 1881-82 listed her as having come not from the Annapolis Valley but from River John in that most Presbyterian of all counties, Pictou. It's likely she'd been teaching at River John, and possible she'd used her salary to build a nestegg for her Dalhousie years. In any event, by 1884 when she earned the Senior Munro Bursary at Dal, the Matriculation Book listed her home as Cornwallis. She was a member of the fifth generation of Newcombes in the Valley, and the eighth in North America.

After graduation, she did what so many educated women of her time did. She taught school, got married. Newcombes were continually moving back and forth between Nova Scotia and New England, and Margaret may have taught briefly in the States. She seems also to have taught at a Young Ladies School in Saint John, N.B., and her husband, Professor James Star Trueman was a Saint John man. They married in Grafton in 1890. He died in 1892. Orphaned at nine, widowed at 35, she had ample evidence of the frailty of man.

If her husband had not died, Margaret Florence Newcombe Trueman might well have stayed home, raised children. Now, however, she returned to one of the few respectable occupations open to the unmarried women of her time. The young widow Trueman settled into her life's work as a teacher at the Halifax Ladies College and Conservatory of Music. Early HLC brochures list her as having been a staff teacher as early as the school's birth in 1887. Like so many of Dalhousie's early women graduates, she was not satisfied with merely one degree. In 1898, 13 years after she got her BA and six years after her husband's death, Dalhousie granted her an MA in History. She became the sixth principal of the Halifax Ladies College in 1911.

"She was a very sedate little woman, very prim and proper," Lola Henry recalled, "just a little bit of a person." Lola Henry (LLD '68), who served as secretary to no fewer than four Dalhousie presidents, well remembered her girlhood at the ladies' college. "I was late one day for school, and Mrs. Trueman called me into her office. I'd never been in there before, and I was scared to death. She was a very severe woman, with a severe countenance. She wanted to know why I was late and I said the first thing that popped into my head. I said, 'I'm sorry, Mrs. Trueman, but I

think the college clock must be a trifle fast this morning.' She said, 'Well, Lola, I'm going to give you the benefit of the doubt, this time.' I don't think she was as severe as she pretended to be."

It may have helped that Lola Henry, who regarded Trueman as "an excellent Latin teacher," was the only girl in her class who knew a rule for Latin pronunciation. "It went like this: 'If the peanut is long, accent the peanut. If the peanut is short, accent the antipeanut.' She used to ask me to stand up and recite that for the class. Of course, I had no idea what it meant."

Margaret Newcombe Trueman stunned the college by slipping into retirement early in 1918 at the age of 61. (Only weeks before, the Halifax Explosion had devastated the city.) After more than 30 years at the school, she gave no one a chance even to say good-bye. "For Mrs. Trueman's modesty had decreed that she should go quietly away without giving to anyone the opportunity to say how much her presence had meant to the school as a whole, and to each member of it," the school journal, *Olla Podrida*, reported.

*Olla Podrida* said she'd accomplished "almost superhuman tasks. Not only did she supervise the school and teach four hours a day, take a keen interest in athletics, Alpha Gamma and the *Olla Podrida*, but she kept up her interest in the affairs of the city and country, and of her own Alma Mater, Dalhousie; and in spite of these varied distractions, she was always to be found and relied upon to solve with sympathetic advice and keen criticism, any problem or difficulty. Perhaps it is only with the loss of a personality so wholly unassuming and devoted to the service of others that we realize how great a place it has filled in our lives and in our hearts."

Margaret Newcombe Trueman had gone home to the Valley. She spent her last years in Berwick, not far from her birthplace, and amused herself by reading Greek classics in Greek. It was there, at 78, that she died on September 19, 1935, after an attack of pneumonia. She left \$1,000 to the women's alumnae organization of the university where, 50 years before, she and 13 men had graduated. The money went for the construction of tennis courts. Now, the Women's Division of the Dalhousie Alumni Association is establishing a scholarship fund in the name of the farmer's daughter who made campus history in the spring of 1885. □





## Hey there, you with the stars in your eyes!

*The way we were 30 years ago*

*By Sandra Gwyn*

*Illustrations by Derek Sarty*

**W**e had to capture a starfish. We also had to bring back a 1924 penny. The other dozen or so items on the list for the scavenger hunt I do not recall, but somehow these two linger in the memory. I remember further, how my hair, long and flowing after the manner of June Allyson's pageboy, was dank and greasy with mineral oil under the black and gold beanie, and that later that night, all of us Frosh got together and sang "Sweet Violets" and "Glory Glory to Dalhousie."

The distance we've all travelled from the world in which we entered college has been on my mind quite a bit lately, prompted partly by the editor, asking me to write a piece on how it felt to be a girl on campus in the Fifties, prompted further by a notice about the 30th reunion of my class, which provoked me

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to realize that I'm now as far distant from the time I entered Dalhousie, in 1951, as that time was from 1917, the middle of the First World War, the overthrow of the Tsar.

Think of it. When we arrived on campus, that long-lost autumn, Harry S. Truman was still in Washington, George VI was King. Winston Churchill, born 1874, was just about to come back to power. Television had yet to arrive in Halifax, and wouldn't until the year after we graduated. Dalhousie still had a football team; the Tigers, that '51 autumn, swept all before them, including a 50-0 shutout over a bunch of tough navy types from Cornwallis. Saturday's Hero was Andy MacKay, the team captain, a dashing, second-year law-student. At least it's a comfort to realize that MacKay, all these years later, remains the Biggest Man on Campus.

That campus we came to, architecturally speaking, still resembled a pioneer village. No Dalplex, no Rebecca Cohn auditorium, no Student Union Building. The place to hang out, between lectures, was the grungy canteen on the ground floor of the Men's Residence that also shared quarters with the bookstore. (Coffee was ten cents a cup). Even that heritage landmark, the Arts and Administration Building, wasn't quite finished, the tower still surrounded by scaffolding, the eagle not



yet set on top. We who were studying Arts took our first few months of lectures in what was soon to become the law school, and is now the Faculty Club.

The real landmark, and centre of energy, in those days was the gym, on the Morris Street fringe of the campus. (No one had quite yet got the hang of saying University Avenue.) In its cavernous bowels dwelt the legendary Butsy O'Brien, the cheeky, chatty stringbean of a fellow who was technically the janitor but who, as we all knew, really owned the place. The gym, with Butsy and the dreaded Sophomores making rude remarks, was where Dalhousie began for us, the place we assembled to pick up our beanies and have that horrible mineral oil poured over our hair. Four years later, the gym was where Dalhousie ended on a windy day in May, as we sat in serried rows in the rented black gowns and tatty ermine neckpieces that signified *Baccalaureatus in Artibus* — degrees were still printed in Latin, and in order to get them we had to be able to construe Horace and Catullus — and listened awed, as Hugh MacLennan (BA'28) gave the Convocation Address.

It was in the gym, further, that we gathered for Friday night dances, to bunny-hop and foxtrot to the mellow old tunes of the Fifties, played by the orchestra led by the fabulous Don Warner who studied philosophy on the side. Indeed, Warner and his music run as *leitmotiv* through those years. *Take My Hand, I'm a Stranger in Paradise, P.S., I Love You, Hey There, You With the Stars in Your Eyes*. And can you remember, as I remember, the words to the sad, scorchy torchsong, *Everything Happens to Me*, that Warner's vocalist, the exquisite Grace Boutilier, used to sing?

Come December though, and come April — the cruellest month, as we repeated to one another, *ad infinitum* — entering the gym was like entering Purgatory, or even Hell. We wrote all our exams there, seated at trestle tables stretched in long intimidating rows across the basketball floor, peering anxiously at questions printed in smudgy, blue gestetner ink. (I see it now, much too frequently, that particular stomach-churning scene, in a pesky anxiety dream that pops up whenever I'm late for a deadline, in which God and Professor Pierre Trost of the Chemistry Department get at me one more time for skipping lectures.)



For those of us who were female there was, of course, another organizing principle of our young lives. I speak now of Shirreff Hall. The last time I stayed there, for a couple of nights in 1980, while tripping down memory lane at my 25th reunion, I was astonished to discover that the Life President of our class, by then a stalwart QC, was checking into the room next to me. We both thought this hysterically funny. In our day, when the fearsome Miss Mowat was Warden (this title alone was terrifying) everything above the ground-floor parlor with the *Cries of London* prints on the walls was as sacrosanct as a nunnery. Nor in the parlor dared we — awful, repressive word — *neck*. We kissed our dates goodnight in the alcoves outside under the portico. When they put on the new wing in the '60s, they managed to destroy all the really good shadowy alcoves.

Life at Shirreff Hall involved, among other things, baked-bean suppers on Saturday Nights, carol sings in our tartan dressing-gowns at Christmas, and a lot of elementary bridge. ("If I open two clubs, you *can't* say 'Pass'.") It also involved a lot of anxious waiting around for the phone to ring. There was just one phone on each floor, I recall, and if the week got as far as Friday without your name being bellowed out, followed by the stage-whisper "It's a Man," as you were handed the receiver, you were plunged into the depths of humiliation. Except for Sadie Hawkins night (box lunches, lumberjack shirts and the only public occasion for which I can ever remember wearing jeans), the notion of taking the plunge and phoning a man simply never occurred to us.

The kind of date that was rated Triple A, and gave you a sense of belonging to the elite, was a Saturday-night fraternity party. The Sigma Chis were mostly jocks, the Zets were mostly Upper Canadian guys who went in for tweed jackets and pipes, the Phi Delt's had a reputation for being, well, a bit racy, the Phi Kapp's were the most fun. A pretty good date involved whatever was playing at the Capitol (with luck, it might be Tyrone Power) followed by coffee at the Cameo. A mediocre date, for me at any rate, who loathed spectator sports, would be an interfac hockey game, and a hot turkey sandwich at Gus's Grill.

Also at the Hall, while knitting Argyle socks in the nook that looked down the Arm, we spent much time discussing the question that dominated our lives: Could We or Couldn't We? This question popped up most frequently when one of our number appeared at breakfast with a cat-that-swallowed-the-canary expression and a fraternity pin blossoming in the approved place, just over the left bosom. Invariably — nice girls in kilts and Helen Harper sweaters — we decided we couldn't. Sex obsessed us — Burt Lancaster and Deborah Kerr rolling around in the surf in *From Here to Eternity* was the beckoning, frightening image — but sex was also a dark continent that those few who'd dared visit didn't talk about.

"More stimulating individuals per square inch in Dalhousie than at any other campus I've been." The quote is from *The Gazette*, Tuesday, October 2, 1951. The speaker is Professor Peter B. Waite, newest and most junior member of the History department, who arrived the same year we did. Maybe it was the exuberance of youth for even I, a freshman, was vaguely aware that Dalhousie left something to be desired as a centre for learning. Later, when I met colleagues who'd studied, say, Honors English at the University of Toronto at the same time, I marvelled at how hard they'd been pushed to be excellent. Truth to tell, in those days Dalhousie was a provincial liberal arts college of about a thousand students, with an exceptional law school and a good medical faculty. Dalhousie's president in our era, Alexander Enoch Kerr was a dour, teetotalling Presbyterian Scot of the breed John Kenneth Galbraith would later satirize. Hugh MacLennan has since recounted how, at that 1955 convocation, Kerr told him, "If you would just develop a sense of the reli-



gious, you could become a great writer."

Yet Dalhousie's glory — this was what Waite was really getting at, and eloquently described in his article, "Allan Bevan's Dalhousie," in this magazine last summer — was a cadre of truly exceptional teachers. Our professors cared less about publishing and about peer-group approval than about their students. Bevan of English I remember fondly, not for the brilliance of his lectures which, except on the subjects of Dryden and Henry James, were rather dry, but as having been the most approachable of professors. C.L. Lambertson, moody and sardonic and all the more exotic because he wrote the librettos for musical comedies on the side, introduced us to the mysteries of T.S. Eliot. None of us who took Lambertson's tough Modern Poetry seminar in our senior year will ever forget the intellectual fencing that went on between him and a remarkable student named Simon Gray, who later became an internationally famous playwright and who produced for our ears some of the one-liners I recognized years later coming out of Alan Bates's mouth in *Butley*.

Doyen of English, and most memorable of all was C.L. Bennet, an expatriate New Zealander with a cane and great shock of silver hair. Those who gained admission to English 9, History of Drama, the single best course I ever took, also gained entry to Bennet's living room, in which we acted out the plays we were studying, from Aristophanes to *Streetcar Named Desire*. Meanwhile in English 5, Victorian Literature, he pounded a lot of heavy stuff like *Sartor Resartus* and *Stones of Venice* into our resistant skulls.

Other icons in other departments flash back to mind. James Aitchison, the entire Political Science Department in his own stereotypically absent-minded personality, implanted Sections 91 and 92 of the BNA Act so firmly in my mind that decades later, writing about the new constitution, I found myself reeling off the Peace, Order and Good Government clause word for word, without needing to check. But Aitchison's most famous lecture, in which he would throw his notes right across the room, was the one on Senate Reform. George Wilson in History, who held us all spellbound with tales of intrigue at the Court of Versailles, made us see that the point of history isn't dates and battles, but people dealing with people. Years later, when I myself

began to write history, I remembered Wilson often, and with gratitude.

Above all, like a great flaring beacon on a hilltop, there was George Grant. Even the most prosaic among us couldn't emerge from Philosophy 1 without a sense of excitement at having beheld a world more challenging than the one we knew. Of all our professors, it was the splendor of Grant's mind and the grace of his humanity that touched our lives the most.

Time now, from this late-blooming feminist, for a couple of consciousness-raising cavils. How is it that my honors list of professors contains not a single woman's name? How is it that all of our professors, even the splendid Grant took their women students a good deal less seriously than they took the men, even though — even at the time this made us cross — we generally made the better marks. "You really ought to get married," Grant once informed a friend of mine, who was one of his best students, certainly the single most brilliant mind I have ever encountered. "You could probably pass them," said Aitchison to another friend, when she asked for advice about writing the exams for External Affairs. "But you would never get much further than being Consul in Chicago." In my graduating spring I flirted briefly with the notion of going on to law school, but I met with a similar rebuff. The best I could ever hope for in a self-respecting Halifax law firm, I was told, was getting to write up mortgages. I wonder if anyone ever said that to a young minister's wife from Scotland who'd embarked on the study of law the year before. You will recognize her name: Madam Justice Bertha



Wilson of the Supreme Court of Canada.

But of course it was not quite that simple, for nothing ever is. Now that the grievance is out in the open, it has to be seen in the light of its time, for if there's one thing I've learned as a social historian it's that you make judgments not by the standards that right-thinking people adhere to now, but by the standards that applied in the era of which you write. If women were second-class citizens in the Fifties, so also were plenty of others: Jews, blacks, French-Canadians and, in fact, just about everyone who wasn't a WASP male. I wince to recall how we accepted as a fact of life the blatant anti-semitism that flourished on the campus. We took classes with Jewish students, we acted with them in plays, and passed the time of day with them in the canteen. But we would never have dreamt of going out with them. In the winter of '53 when a Jewish girl I knew well was blackballed by the women's fraternity I belonged to, it simply never occurred to me that I ought to resign in protest.

Other years, other tears. Most of us, in any event, greatly enjoyed being girls. We mixed sugar and water together to iron our crinolines so that our skirts would stand out like stiff and sticky bells, and we cut our hair with nail-scissors to look like Audrey Hepburn. We read *The Prophet*, *The Fountainhead*, *The Man in the Gray Flannel Suit*, *The Plague*. "He thinks he's lovely," we would say of figures around campus too full of themselves. "Don't think it hasn't been fun, just because it hasn't," we would say on leaving Saturday night frat parties, killing ourselves at our wit. We went to *On The Waterfront* four times, mooned over Marlon Brando, were much too sophisticated to be shocked when David Niven said "virgin" in *The Moon is Blue*, were much too innocent not to be shocked by Ophuls' *La Ronde* when it played a one-night stand in Halifax.

As to the shape of our own futures, when we thought about them at all, we saw ourselves as wives and mothers, yes, but also as *enhancers* and *enrichers*. We would cook meals and iron shirts for the lawyers and doctors and naval officers we would marry, but we would also add all the grace notes. We would fill our houses with books and flowers and records, we would read poetry to our children, take them to art class, sign up for the symphony series, maybe even think about working on our Masters



when the last little one went to school. For some of us, as I discovered at my 25th reunion, it really did work out that way. That for others, including myself, it would turn out quite different — not better, necessarily, but different — would never have occurred to us.

Males and females alike, we who are now lurching uneasily towards the doom-laden half century landmark, were a transitional generation. We were too young to have had our lives restructured by the Second World War, and too old to have been touched, except peripherally, by the apocalypse of the Sixties. Neither then nor now have we been given to daring greatly. At the time, we were apolitical. Now our politics, for the most part, are small “c” conservative. Not to put a fine a point on it, we have tended to be timorous, unimpassioned and just plain dull.

And yet. There is more to us than all the things we weren't. For one thing, as I discovered at that 25th Reunion, we in

the class of '55 were *nice*; nicer somehow than I'd remembered, nicer somehow than most of the people I encounter now. To be sure, we'd all put on our best faces for the occasion, as we shall also do for our 30th, but I couldn't detect under the smiles any meanness of spirit, nor self-serving artifice. Perhaps, in the end, the quality that best defines our crowd is a certain, well, *self-respect*. As Joan Didion, herself Berkeley '56, has put it, “People with self-respect know the price of things.” As she goes on, “If they choose to commit adultery, they do not then go running, in an access of bad conscience, to receive absolution from the wronged parties . . . They exhibit a certain toughness, a kind of moral nerve; they display what was once called *character*.”

As to the part Dalhousie played in inculcating this, I'm not certain. Maybe it was just the temper of those times, but our college years have surely left their mark, because this was the first time

that we'd had to compete, intellectually, socially and sexually. In my own case if, as one of our professors used to say, education is what you have left when you've forgotten everything you ever learned, I keep on discovering, lately, more Dalhousie residue than I'd realized was there.

One last thought about the Fifties. When I started to write this piece, I felt a bit blue. *Where is the schoolgirl who used to be me?* and all the rest of it. Then just as I was arriving at the last paragraph — it was lunchtime on Saturday — I switched on the radio. There, out of the blue, came the voice of Don Warner, of all people, talking about jazz. No more than the rest of us, I suspect, does Don Warner look now the way he looked thirty-odd years ago. The thing is, *he still sounds exactly the same*. Buoyant, enthusiastic, above all, *optimistic*. I returned to the typewriter humming away to myself. *Hey There, You With the Stars in Your Eyes*. □

## Hit Songs Show 1955 Hard on Hearts

**T**he old folk smile sentimentally at the undulating by-roads of young love. Yet they little remember in their senile acceptance the pangs and aching that accompany that many-splendored thing.

Statistics for the year prove that 1955 was a hard one on the hearts of the young blood of Halifax. There are the records of the hit parade to prove it.

It might have been expected, of course. The year started off badly. The younger set in the city had been seeing too much of each other. Around this time last year they were crying piteously: “Let me go, Lover.” Truth to tell they were sick of the sight of one another.

Yet nothing is so fickle as the young at heart. A few weeks later they were begging the Sandman: “Bring me a Dream,” and complaining bitterly over air-waves and juke boxes of “Stoney-hearted Lovers,” whose only form of conversation was “No, No, No.”

So it went through the cold winter months. Sick of the sight of one another, longing for a dream-girl to bring everything right. It wasn't until the first pale buds of spring were breaking that things took a turn for the better.

Somehow the sight of the girls in their spring frocks made the young men feel better about the situation. Now their theme song was “Cherrypink and Apple Blossom Time” when their true lovers came to them.

It didn't last long, of course. Spring is when school and college closes and young men must make their way in the world for a while. Forgetting their women they turned to a sterner challenge. Soon the strains of the “Ballad of Davy Crockett” were ringing round the city in ballroom, bathroom, barroom and bedroom.

This seemed the answer for a while. Hard work and joyous living was the keynote. With Davy Crockett, the young men “Rocked Around the Clock” for most of the summer. Yet something seemed to be missing. Life seemed empty. When the day's work was done and the last rock and roll rhythm had died into the lonely night, they found they were blue. They could not forget the fair sex. Not with all the cigarettes they smoked — one after another. With Frank Sinatra they were “Learning the Blues.”

Sorrow breeds an appreciation of true values. “Ain't that a Shame” they sang

but they also sang “Sincerely” and pledged undying love. So the summer waxed and waned. Pleased by the new attention they were getting the girls asked “Dance with Me, Henry,” and with new enthusiasm the boys boasted of their loves. “The Yellow Rose of Texas beats the Rose of Tennessee,” they crowed to one another.

At this point it seemed everything was to have a happy ending. Life was a “Medley of Love” and Love itself a Many-splendored Thing.

Yet if love is fickle nothing dies so quickly as summer love. The party was over, the couples broke up. Back to college and school, the grim necessities of life. Melancholy reigned. As “Autumn Leaves” began sadly to fall, they thought regretfully of ended splendors.

All in all it had been a hard year. The routine of the daily round closed over them. And the future offered no promise. The harder they worked the worse it got. They loaded “Sixteen Tons” and what did they get? Another day gone, deeper in debt. — *Malcolm Smith, The Dalhousie Gazette, Jan. 25, 1956.*



# She walked in space and remembered Dalhousie

*No woman graduate  
has flown higher than Kathryn Sullivan PhD'78,  
the first American woman ever to walk in space*

"Oh, twist my arm," Kathryn Sullivan pleaded when fellow spacewalker David Leestma asked if she wanted to float for one extra minute in the open cargo bay of the Space Shuttle Challenger. They'd already been out there, making history in their \$2.15-million space-suits, for 3½ hours while the Challenger, 140 miles up, zoomed round Earth at 17,500 mph. Earth was a bright, blue ball, and beyond the white whirls of cloud that surrounded it Sullivan had clearly seen the Atlantic coast from her native New Jersey ("There are a lot of Sullivans down there") all the way up to Nova Scotia ("It's sort of a second home").

It was at Dalhousie in 1978 that she'd earned her PhD in Geology. That degree, and voyages aboard research vessels of the Bedford Institute of Oceanography, had helped her qualify as an astronaut and now, on Oct. 11, 1984, as the first American woman ever to walk in space. Though Dalhousie has been producing women graduates for a full century, none has earned more fame (or flown higher) than Kathryn Sullivan. A loyal alumna, she had the university's crest with her aboard the shuttle.

While Sullivan and Leestma worked, Commander Robert Crippen kept Challenger's hold facing Earth to shade them from the sun. The shuttle shot from daylight to night and back to daylight every 90 minutes. Sometimes the spacewalkers saw brilliant Earth scenes. Sometimes the background was pitch black, and they worked by the light of helmet-mounted flash-



*That's a Dal crest she's proudly displaying. (NASA photo)*

lights. Their bulky suits maintained pressure on their bodies, and also contained a water-circulation system to keep them cool during hard work. The work was so absorbing that only occasionally did they glance down at their home planet.

"You actually need to stop to take all that in," Sullivan explained later at a press conference in Halifax. "You have so many duties on your mind. You have these special handholds, and you need to be thinking all the time. It's a little like going up a ladder. The higher you go, the more careful you are about where you put your feet and your hands. It's only when you're all set that you decide to look around and see Halifax."

Was the adventure frightening? "Driving on the Houston freeway is more dangerous," she replied. "Some of the drivers are drunk and none of them know you. I'll take my chances on the launch pad any day."

Before the launch, she said, a thousand technicians had inspected every one of the Challenger's nuts and bolts. Moreover, spacewalking "wasn't at all disconcerting. It was great. It was fun . . . A little voice keeps saying, 'Bear in mind, you're actually doing this in space.'" What she and Leestma were doing was simulating the refueling of a satellite, and among all the experiments and duties of the Challenger's crew this demonstration was the most commercially significant.

The propellant for satellites is hydrazine. It is toxic, caustic, and so flammable, Sullivan said, "That the conventional wis-



dom is that if you can smell it, it's too late." She went on to explain the fueling of a satellite: "You've got a valve. You stick a hose in, pump in the hydrazine, and pull the hose out. You tighten the valve, and put a crush cap on top of it. Then you screw a B-nut on top of that, and safety-wire the B-nut down. Then you put a dust cap over the whole thing, and you wire *that* down." In the past, that was that. Caps, nut and wiring were in place for good. When the fuel ran low, the satellite was moved into a harmless orbit and became space garbage.

But Sullivan and Leestma proved such waste was unnecessary. They tested refueling techniques that could keep satellites orbiting indefinitely. "We showed you could go up there with a complex set of tools, strip off all that gear, and refuel," Sullivan said. "The engineers said, 'Look at what they could do. We should be able to make it easier for them.' So they're working on a new design for the caps." On land, she'd rehearsed her part in the refueling exercise literally hundreds of times.

The refueling however was not the only service the astronauts performed. "Dangling over the side at a 90-degree angle to the spaceship," the *Halifax Mail-Star* reported, "Sullivan helped Leestma align a loose antenna, so that pins could be driven into two holes electrically from inside the cabin. The fix made it possible to obtain additional radar pictures of the globe . . . 'Orbital repair strikes again!' said Sullivan as they completed the job."

Though the U.S. National Aeronautics and Space Administration (NASA) has invested billions to perfect the ultimate in equipment, Sullivan and Leestma showed that for certain jobs nothing yet beats human hands wielding the right tools. The two astronauts were like mechanics or plumbers in space. "But in between hooking up pipes that mimic those that would be used to refuel satellites in space and pinning down a troublesome Shuttle antenna," reported the *Florida Daily Today*, "the pair took turns pointing out Earth features."

"I'm going to sit back and watch the world go by," Sullivan said at one point. Sounding quintessentially American, she drawled about one view of Earth, "That is real superb." Other times, she exulted, "Amazing . . . this is really great . . . I love it."

The mission was historic not only for Kathy's spacewalk but also because the

two-woman, five-man crew was the biggest ever to travel into space and included Marc Garneau, the first Canadian astronaut. In Halifax, Sullivan couldn't say enough good things about him: "A really super guy, very personable and easy to work with, a super professional." Garneau worked so hard "we had to drag him to the window to look at the Earth."

Sullivan has green eyes, brown hair. She's 33, five-foot-six, weighs 150 pounds. She's chunky. "That's one reason she was chosen," Roberta Bondar, a more slender astronaut, explained. "She could fit into the suit." Sullivan wears the same size spacesuit as David Leestma, and Bondar felt it was time the space industry designed suits specifically for women. "I'm not your basic, weak, frail female and never have been," Sullivan cheerfully allows. "It's nice to find a place where qualifying for the Rams front four is an asset rather than a liability."

She has a direct, confident manner with a pleasant edge of humor, and handles herself with the press as well as she does with, say, hydrazine. In Halifax last December a male reporter sidled up to the theory that women may be more prone than men to suffering the bends during depressurization. The idea that women are less fit than men for work in space is a touchy subject among female astronauts.

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*"I'm not your basic, weak, frail female"*

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"I don't quite know how to put this, Miss Sullivan," the reporter began, "but wouldn't you say that there are, well, um, physiological differences between men and women, and that . . . ?"

"If you're asking if there are physiological differences between men and women," Sullivan broke in, "the answer is yes. If you're asking whether these make any difference with respect to one's ability in space, the answer is no."

"No difference?"

"Absolutely none."

She was equally decisive when someone asked if NASA didn't spend massive amounts of money that might be better used to cure social ills. "The space program is costing Americans one half-cent out of every dollar," she said. "Americans spend far more than that on liquor or, for that matter, on pizza."


Born in Paterson, New Jersey, she considers Woodland Hills, California, her hometown. She earned her BSc in Earth Sciences at the University of California, Santa Cruz, and spent 1971-72 as an exchange student at the University of Bergen, Norway. While there, she read about research that Dalhousie and the Bedford Institute of Oceanography were carrying out in marine geology, and decided Halifax would be the ideal spot to study for her doctorate. Thus began, in 1973, five of the best years of her life.

"The stuff I was looking at was the structure of the oceanic crust," she said. "I was trying to understand the things that go on when continents split apart." She studied with research associate Charlotte Keen, who's now with the Bedford Institute of Oceanography; Michael Keen, the chairman of Geology at Dalhousie in the mid-'70s, and now director of the Atlantic Geoscience Centre at the institute; and, among others, with Barrie Clarke, winner of the 1984 Alumni Award for Teaching Excellence. Clarke taught her geochemistry and petrology which, Sullivan explains, is "all the devious methods by which rocks come into being."

But what impressed NASA about this athletic Dal student in 1978 wasn't just her knowledge of the ocean's floor. It was also her experience as a sea-going scientist. She'd spent months aboard research vessels of the Bedford institute. Scientific voyages demand meticulous preparation, advance inspections of equipment, inventories of spare parts and, Sullivan says, "the drawing up of Plan B, Plan C, and Plan D." To get the most out of an ocean expedition, scientists must be ready to adjust their aims in midstream to exploit the unexpected; and in all these respects space missions are the same. The difference, she explains, is that preparations for an ocean voyage "are only about a tenth as rigorous." For a space shuttle, "you've got to be 130 per cent prepared."

What's next for the first American woman to walk in space? She'd like to be part of NASA's plan to build a platform 150 miles up. Shuttles would service the space station from Earth, "and it would be the hub for everything further out." From the hub, "space tugs" might haul ships toward outer space, "and then let them off." Meanwhile, Sullivan has a decidedly more down-to-earth dream. She wants to strap on a backpack, hop on a bike, and really get to know Nova Scotia. □





Aquatic ecology . . .  
ocean weather  
forecasting . . .  
computer conferencing  
. . . solid-state chemistry  
. . . infant-adult  
communication . . .  
hormone research to  
increase understanding  
of the cause of breast  
cancer . . .

In these and other  
science fields, women  
faculty at Dalhousie  
University attract  
international  
recognition.

**INSIDE:**  
A 13-page report  
by *Harry Bruce*  
Photography  
by *Paul Chislett*

**Who says  
women can't be scientists?**



# Can breast cancer be beaten?

*Hormone research by biochemist Catherine Lazier may result in a treatment breakthrough*



Lazier: "It's a fast-moving field, and fun to work in"

On the eighth floor of the Tupper Building, Catherine Lazier experiments with chick liver in a continuing research program that may one day lead to dramatic improvements in the treatment and understanding of breast cancer. You'd have to be a fellow biochemist to understand precisely what she's doing but it relates to estrogen, which is the sex hormone that develops and maintains the female characteristics of the body.

A hormone is a substance that an endocrine gland secretes. The bloodstream carries it to other parts of the body, usually to a specific organ, where the hormone stimulates action. Hormones have fascinated Lazier for more than two decades. Indeed, her research project for her MSc in Biochemistry at the University of British Columbia in 1963 was "Estrogen metabolism in mammalian liver."

She was 23 then. Now she's 45, and her stature in her field is such that she can look back on workshops and seminars in the Netherlands, Switzerland, Israel, Australia, Texas, and the United Kingdom. "I just returned from a marvellous conference in Wisconsin," she said last October. It was called "Workshop on Anti-estrogens, Satellite Conference to the International Con-

gress of Endocrinology." Not everyone's cup of tea, but certainly Lazier's.

"My work is fundamental," she said in 1980, after delivering the Ajai Haksar Memorial Lecture at the world-renowned Worcester Foundation for Experimental Biology, Shrewsbury, Mass. "It concerns the basic biochemistry of the action of estrogen, the female sex hormone. The chick is a very good model system for this sort of analysis." Putting the research connection between chicks and estrogen more technically, she explained in a recent grant application that, "Our aim is to understand the molecular mechanism of action of estrogen, using as a model system the induction of egg yolk protein synthesis in chicken liver."

One reason why it's vital to understand how estrogen works is that although the hormone is important to normal development in females it also seems to be important to abnormal development, such as breast tumors. "It's thought that these tumors are stimulated by estrogen," Lazier explains. "Many patients with breast cancer have tumors which appear to be growing in response to estrogen. If you interfere with the estrogen stimulation then you stop the growth of the tumor." Anti-estrogenic drugs, such as Tamoxifen,

appear to do just that but they aren't perfect.

Imperial Chemical Industries of Britain manufactures Tamoxifen and, Lazier says, "makes lots of bucks out of it." It has proved effective in the treatment of breast cancer among post-menopausal women, and one thrust of Lazier's research has been to determine "what it is that makes it work. If we knew how it worked we might be able to modify it to make it even better." That's why she continues to carry out research that results in her writing papers with titles such as "Triphenylethylene Anti-estrogen-Binding Sites in Cockerel Liver Nuclei: Evidence for an Endogenous Ligand."

To a layman, that's an incomprehensible mouthful. To hormone scientists, however, the studies that such articles describe are thrilling stuff. For Lazier and her colleagues believe they may be on the track of some unknown substance that exists naturally in the chick liver and actually competes with Tamoxifen in the assault on estrogen. Scientists already knew Tamoxifen and similar drugs killed tumor cells but, Lazier says, "We now have reason to believe that this may not be related to the drug's anti-estrogen effects but to some other action."

She refers to the possibility of "an unknown natural anti-estrogen" and "a hitherto unknown natural regulating factor." She writes about "a strong case for the existence of a natural analogue (parallel) for the drugs, something that's 'in vivo' (in the living body of a plant or animal).

Lazier's not yet sure what the substance is. "We could have a dead artifact," she says, "but we could also have a new hormone. It's very exciting." It could be the key to improved treatment of hormone-responsive breast cancer; and the Medical Research Council, which has backed Lazier's research for a dozen years, wants to know more about it. Her current grant from the MRC amounts to \$62,170.

Born in Galt, Ont., Lazier held a Dalhousie Graduate Award in 1963-64, and earned her PhD here in 1968. Then, in 1968-71, she was a Medical Research Council fellow at Southampton University, U.K. She is married, the mother of two daughters and a son. The boy is a diabetic, and Lazier has done volunteer work for the Halifax branch of the Canadian Diabetes Association for 13 years. In 1981-82, she was branch president. She took ballet classes as a girl in Galt,



and her passion for the dance has not died. She's a supporting member of both the Royal Winnipeg Ballet and the National Ballet, and she's been active in assorted dance groups in Halifax. Moreover, one of her daughters is in the Royal Winnipeg Ballet School.

In addition to her estrogen studies, Lazier carries out research on prostatic cancer with S.J. Lannon of the urology department. Lannon, in this case, is the principal investigator. So far as international recognition went, 1984 was a fine year for Lazier. *The Journal of Biochemical and Biophysical Methods* published a paper by her and her graduate student, Alex Elbrecht. *Endocrinology* published the article that suggested a mysterious natural enemy of

breast tumors. *Science*, the journal of the American Association for the Advancement of Science, carried the report of an experiment conducted by her, Elbrecht, and two pharmacological scientists at State University of New York.

Since *Science* rejects 85 percent of the articles scientists submit to it, Lazier and her colleagues had a right to feel good about its accepting their "Independent Developmental Programs for Two Estrogen-Regulated Genes." Indeed, she still feels good about the area of research that's preoccupied her all her adult life. "It's a fast-moving field," she says, "and it's fun to work in." □

they did, nor in "their total rate of vocalizing." But the *quality* of the sounds they made did differ. The babies who were talked *at* produced what Bloom has called "effortful sounds with greater nasal resonance and glottal closures (nonvocalic)." But the babies exposed to turn-taking made "relaxed, vowel-like sounds (with) greater oral resonance," sounds that resembled speech. Moreover, the first group made more attempts at "gaze aversion." The second, in addition to uttering more vowel sounds, were more attentive, better at maintaining eye contact.

"We are finding that infants detect the communications properties of adult speech," Bloom says. Moreover, she suspects babies quickly learn to make sounds that adults like to hear and, cute little devils that they are, actually use these sounds to keep the conversational ball rolling. (Bloom notes that passers-by, who know nothing about her work, sometimes overhear her videotapes of infant participation in turn-taking conversations, and say "those are nice sounds" or "that baby sounds happy.") Within seven weeks of a baby's birth, an adult may start to respond reliably to the infant's vocal signals, "and at this point we may have the beginnings of infant-adult 'conversations'." Certainly, "The baby is becoming more social."

Bloom's research is difficult because, as she said in a recent grant application to the Social Sciences and Humanities Research Council (SSHRC), "Infants do not concern themselves with dependability. Sometimes they fail to show up, very often they cry, most often they fuss, and two have had the audacity to fall asleep during our magnificent stimulation." But tricky as the work is, it's also both fascinating and important.

"At the centre of the discussion," she wrote in a recent paper in *Journal of Experimental Child Psychology*, "is a seemingly universal phenomenon: a young infant and an adult engage in a brief episode of mutual regard, smiling and vocalization. The event occurs many times each day in the life of a young infant and most adults have had the pleasure of being participants. Developmental psychologists of all theoretical perspectives suggest (for differing reasons) that this early social interaction is an important building block in the structure of human development." The interaction between an infant and adults may well be crucial to the social, emotional, cognitive and

## The significance of chirping, "Hi, Baby!"

*Kathleen Bloom explores the earliest communication between infants and adults. She's also interested in "disturbances in mother-newborn interaction." They may sow seeds of damage*

**H**ow old does an infant have to be to carry on a conversation with an adult, and who cares anyway? Kathleen Bloom cares. Indeed, she's been caring about such mysteries ever since 1968 when — at the University of Carolina where she later earned her PhD — she began to research "the social reinforcement of infant vocalization." She believes that if you define conversations as "exchanges of messages between partners," then healthy babies may converse with adults when they're as young as seven weeks.

Bloom is better qualified than most to know about such matters. After a decade at Dalhousie, she's not only an associate professor in the Department of Psychology, a lecturer in the Department of Pediatrics, a staff fellow at the Grace Maternity Hospital, and an affiliated scientist at the Izaak Walton Killam Hospital for Children, she's also an internationally recognized authority on infant-adult conversations.

Much of her research requires adults to talk to two groups of three-month-old babies in two different ways. One way is to talk randomly *at* the baby. You keep right on talking independently of whatever noises the infant makes. The other is "turn-taking," or talking *with*

the baby. After each little outburst of gurgles, bleats and other baby utterances, you say something back, then wait for a response. In one turn-taking experiment, the adult contributions to the "discussions" consisted only of "Hi," and the child's name. "Hi, Mary Lou... Hi, Peter... Hi, Linda." And so on.

The two groups of infants did not differ in the amount of crying or fussing



Bloom: Harvard's fine, Halifax is better. The co-operation is "fantastic"



language development of the child in later years.

For the same reasons, Bloom's research preoccupations also include the relationship between mothers and newborn infants. The relationship is "a cornerstone for human development"; and "disturbances in mother-newborn interaction are thought to have profound deleterious effects on the psychological growth and behavior of the child." But "in spite of great clinical, theoretical and research interest, health-care professionals have yet no *single, standardized, reliable and valid* procedure for predicting or identifying disturbances in mother-newborn interaction." The task of establishing such a procedure "can best be described as awesome." But with the help of another SSHRC grant, Bloom is making a start.

She believes studies of the mother's contribution to the relationship have tended to concentrate either on "how good the mother is at supplying what the child needs to develop" or on "how a mother's anxiety, insecurity, depression or schizophrenia affected her pregnancy, delivery and attitude to the new infant." Bloom feels it's not enough to look at the mother only from child-development and psychopathological perspectives. Researchers should also consider her simply as "a social adult." Is she an extrovert or an introvert? Is she a risk-taker? "Concepts and methods from social psychology, which explain the individual's role in group dynamics . . . should be included in the analysis of mother-newborn interaction."

Since the field is new, Bloom says, "I concentrate a lot on methodology." As a student, she'd once confided to a professor that she liked methodology. "Don't ever say you want to be a methodologist," the professor warned. "People will think you're boring." It's unlikely anyone finds Bloom boring these days. A small woman with a large, frequent smile, she has the energetic manner of someone who's crazy about her work, and happy to be doing it in Halifax.

She chose to be a Canadian, and to live in Nova Scotia. She earned her undergraduate degree, majoring in psychology, at Loyola University of Chicago in 1965, and her graduate degrees at the University of North Carolina. Bloom joined Dalhousie in 1974 with US research grants, and since '76 has steadily won SSHRC funding for her research on the social development of infants. Her papers appear regularly in

such professional journals as *Pediatric Research*, *Acta Paediatrica Scandinavica*, and *Journal of Experimental Child Psychology*; and it's a tribute to her reputation that last year she joined both SSHRC's Grant Review Adjudication Committee and the review committee of the National Health Research and Development Program.

As a research consultant in pediatrics at Harvard University, Bloom worked at the Children's Hospital Medical Centre in Boston in 1978-1980. She might

have joined Harvard permanently, but she preferred the research environment of Halifax. In some children's hospitals, friction and rivalry sour relations between obstetricians and pediatricians, and the doctors regard child psychologists as a nuisance. But in Halifax, Bloom says, the interdisciplinary atmosphere among Dalhousie departments, the Grace Maternity Hospital and the Izaak Walton Killam Hospital for Children is more than merely cooperative, "It's fantastic." □

## She studies aquatic ecosystems from the Arctic to Jamaica

*Some people want to build a better mousetrap. Pat Lane wants to build a better way to measure the impact of water pollution*

**I**f I come around this desk right now and push you so hard you fall out of your chair, the *direct* effect might be that you'd break your arm," Patricia A. Lane amiably explained. She is a renowned aquatic ecologist, and she is putting things as simply as she can for a man so ignorant of biology he scarcely knows what "trophic" means. (It means "concerned with nutrition.") "But there might also be all kinds of *indirect* effects," she continues. "The president of this university might fire me. You'd have to go to a hospital. You might charge me with assault."

The direct effect of putting enough DDT on a bottled-up bug to kill it is that, "You achieve the completely recognizable state of death in that bug." But the indirect effect of spraying DDT over an entire forest could be both incalculable and disastrous. The poison might kill off the bug's predators, for instance, and result in the proliferation of the very insect the DDT was meant to destroy. "Modern science has been good on direct effects," Lane says, "but not so good on indirect effects. It has tended to be what we call 'reductionist.' You break things down into smaller and smaller systems, but when you do that you lose the essence of what you're studying."

The essence of what Lane's studying is water pollution or, more correctly, improvements in methods of assessing its environmental impact. Her research has ranged from the Davis Strait to Jamaica, from Chesapeake Bay to Bea-

verskin Lake, Nova Scotia. Her work is so important that in the past dozen years it has attracted research grants totalling more than \$2 million to assorted universities. Much of this money has come to Dalhousie from agencies of both the Canadian and U.S. governments.

Lane's chief teaching position is as a biology professor at Dalhousie, but her international stature is such that she's also a visiting lecturer in the Department of Population Sciences, Harvard School of Public Health; a visiting professor at the Graduate School of Oceanography, University of Rhode Island; and a director of Caribbean Fisheries Research Foundation in the U.S. Virgin Islands. She's been listed in *Who's Who in American Men and Women of Science* since before she was 30, and now she has so many addresses, titles, positions and distinctions they fill a 23-page *curriculum vitae* without a gram of padding.

Born in Waterloo, New York, Lane earned her PhD in ecology at the State University of New York, Albany, in 1971, then did postdoctoral studies at the University of Chicago as a Ford Fellow, and joined Dalhousie in '73. Her professional commitments include lecturing, supervising graduate students, sitting on Dalhousie committees, heading research teams, preparing grant applications, attending workshops, seminars and conferences from coast to coast, writing scientific papers for learned journals, and also writing a



book (Qualitative Ecosystem Analysis). Moreover, she's an environmental consultant to private industry.

A divorced mother of four, she has somehow found time to write a prize-winning story for children, lecture school-children on aquatic life, serve as a Scout leader, and join the Halifax Women's Network. As world-class women scientists go, she's unusually community-minded. After all, how many others can the Halifax Board of Trade boast as members?

But Lane's professional obsession remains water pollution. Most people know oil spills are bad for seagulls, acid rain kills fish, and sewage causes noxious algal growth that chokes off preferable life. Such examples, however, don't begin to suggest the immense complexity of reactions that reverberate through an aquatic ecosystem after a "perturbation." That's a disturbance humans have introduced to the ecosystem.

An ecosystem is a unit of biological organization. It consists of all the organisms in an area and the environment in which they live, plus the non-living components. Interactions between the living and non-living parts force energy from the sun to flow through feeding levels among creatures, and also cause a cycling of minerals and other inorganic matter.

An ecosystem such as a small lake may have 20 lumped "variables" including, for example, an inorganic nitrogen pool, a group of phytoplankton species, fish that eat invertebrates, fish that eat fish, and so on. Since each variable can have three possible effects (positive, negative, zero) on another variable, Lane explained, the "possible networks" of interactions can often be numbered in the billions or beyond. In a paper entitled "Plankton of an acid-stressed lake (Kejimikujik National Park, Nova Scotia, Canada)," she and colleague Anthony C. Blouin said, "In addition, there can be several thousand causal pathways between the node of entry of an impact and the affected variables in a single food web. Variables that are not adjacent to each other, for example a fish and a phytoplankton species, can nevertheless profoundly influence each other. *Ecological theory is not developed enough to predict which causal pathways will predominate in a given situation. Even when some pathways are identified empirically (which rarely happens), the ramifications of corrective management strategies are not obvious.*"



Lane: trying to make sense out of billions of interactions

The Kejimikujik experiments were at Beaverskin Lake. "You have to go in by four-wheel drive," Lane says. The scientists wanted a location so remote there'd be no danger of motorboats wrecking their equipment. It consisted of "enclosures in the lake, large plastic bags . . . Essentially, you capture a whole community in a bag. Then you perform different manipulations. You put in lime, for example. You enrich things with nutrients. And you watch what changes occur over a season or two." The experiments "enabled us to make food-web models of lakes undergoing acid deposition. We were able to show experimentally the changes in food webs that occurred after we'd introduced the perturbations."

Central to this work is "loop analysis." What's that? "Loop analysis," Lane says, "is a qualitative network technique based on knowing the effect of one variable on another as a plus, minus, or zero sign." Then, remembering her visitor is a science illiterate, she explains, "Well, it gives me an ecosystem skeleton, the bare bones. It allows me to predict, for instance, what will happen to fish several trophic (feeding) levels away as a result of a certain perturbation . . . It tells you what's important to measure." You simply can't measure everything in an ecosystem. Knowing what's *important* to measure among all those billions of possible interactions lies at the heart of Lane's work: "I am trying to find the minimum level of complexity it takes to find out what's going on."

The current stage of her search, which the Environmental Protection

Agency in Washington has recently backed with a grant of \$80,000 (U.S.), "will focus on modelling marine plankton communities of coastal regions of the western Atlantic. This environment is subject to many human perturbations, from offshore oil exploration to toxic waste disposal." Lane hopes to marry two methodologies of environmental impact assessment — "a theoretical ecological network technique (loop analysis)," and "a practical environmental assessment technique (Adaptive Environmental Assessment)" — to come up with one that's better than any that environmental managers have ever had before.

"Ecologists lack a comprehensive theory of cause and effect needed to predict the effects of stresses to aquatic ecosystems," she told the EPA, "and consequently, without the necessary ecological understanding, we cannot expect environmental assessment to be wholly satisfactory . . . If loop analysis and the computer simulation techniques of AEA can be successfully integrated then a major theoretical stumbling block will be overcome, and the development of an improved environmental impact assessment methodology will be straightforward."

The best news would come later: "When fully developed, tested and made available to government and industry, the integration of loop analysis and AEA could . . . save millions of dollars in data-collection costs and yet simultaneously enhance the understanding of stressed ecosystems." □





## Jennifer Bankier pioneers the headache-free conference

**T**ry to imagine a year-long, trans-continental "conference call" with 265 topics, 7,744 comments from 381 participants, and a printed transcript of every word they expressed. By last September that's what *Law: Forum* had become, but because the participants saw their discussion printed on screens rather than hearing one another talk, it wasn't exactly a conference call. It was something far newer, and perhaps far more revolutionary. *Law: Forum* was an electronic discussion group. It was a computer conference, and its organizer was a brilliant computer freak named Jennifer K. Bankier.

A law professor at Dalhousie, Bankier is a chunky woman with a helmet of dark hair. Her small office looks as though she's opened her window on a hurricane. Her clothing is functional rather than fashionable, her manner that of someone who's got no time for small talk. But if you want her to talk about computers, or show you how a  
*A version of this article appears in the March issue of Canadian Business.*

word-processor works, she's the soul of charm. Bankier is a Canadian pioneer in the immensely promising field of "computer conferencing." Some day, it may replace a whole lot of boring, expensive, time-wasting conventions, assemblies, and all manner of professional get-togethers, but only if the computer-communications industry wakes up to its possibilities soon.

Bankier believes communications technology has polarized itself. At one extreme are letters, telephones, and electronic mail. These usually allow only one person to communicate to another, preventing group discussion. Then there are the mass media. Press, radio and television enable a few to communicate to millions, but the millions remain passive consumers who can't reply quickly. "What is clearly lacking," Bankier says, "is a technique by which large groups of people can exchange information or express ideas in situations where face-to-face meetings are impractical."

Anyone who's ever tried to get busy people together on a day that suits them

all knows that face-to-face meetings are often impractical, even among residents of one city. National conventions are worse. Some require years of planning. The price may include organizing costs, membership and registration fees, air fares, hotel bills, bar tabs, hangovers, jet lag, time off work. Moreover, the benefits that flow from a hotel conference are often questionable, and later leave many wondering what all the spending and blather actually achieved.

Bankier argues that, in certain circumstances, computer conferences would be cheaper, more convenient, more efficient and more fruitful. Even she, however, does not foresee the business world totally abandoning conventional annual meetings and conferences. "Computer conferencing," she allows, "is not a solve-all for everything." Some insist it's impossible to close a gaping rift in any group unless everyone gathers to hash things out in a room where antagonists can instantly react not only to one another's arguments but also to faces, voices, jokes, insults, and body language. Bankier



doesn't really dispute this. She suggests computer conferencing is better at settling arguments than its skeptics understand, but she nevertheless acknowledges, "We'll still need live meetings — periodically."

Since computer conferencing is embryonic and the prices charged by the high-speed, high-capacity networks that transmit computer data are complicated, variable and unpredictable, no one can estimate its precise cost advantage. But if rates were both reasonable and stable, businesses and professional associations might well decide that, in tough times, low-cost computer conferences made a whole lot more sense than high-cost live conferences.

Computer conferences might also serve not as replacements for live ones but as allies. "They're useful to permit a more continuous discussion," Bankier says. They enable people to converse cheaply and conveniently *between* live meetings. Indeed, she has seen the conversations on her screen so intrigue participants that they've decided nothing will do but to organize a live conference. But computer conferences have virtues all their own. In an early one (1981), Bankier squared off against skeptics who insisted nothing could ever beat a good, old, face-to-face meeting. "Blurred out" may be inappropriate to describe someone's contribution to a computer conference, but nevertheless here's what Bankier blurred out:

"I find it hard to find any resemblance between the face-to-face meetings that all you people who favor them are describing and the ones I spend most of my time in. Quite apart from anything else, written submissions are much more precise, you have much less time-wasting politicking and showing off and talking for the love of showing off, in CONFER. And it's harder for one or a few people to dominate the proceedings. Perhaps the difference is that, as a lawyer I spend most of my time in face-to-face meetings. All I know is that I am much more efficient in getting things done in CONFER, and in getting the advice and assistance of other people on problems."

A participant in that same discussion, who proved he was either a neophyte or an enthusiast by typing his contribution entirely in capital letters,

SAID, "I AM FASCINATED BY THE FLOW OF RESPONSES TO MY QUESTIONS . . . THE HANDY THING ABOUT IT IS THAT YOU CAN CHOOSE WHETHER OR NOT YOU WANT TO BE AT THE MEETING. THERE'S NO BOREDOM. SO FAR, THE clearest advantage to confer is that it is a powerful tool for collaboration on specific ideas."

Participants need not be "on-line" all at the same time. They can call up the previous discussion on their screens whenever it suits them, in their home or office. They can enter an opinion, go out to lunch, return to their computer

*"Face-to-face meetings are often impractical, even among residents of one city. National conventions are even worse"*

terminal, read whatever rebuttal their opinion has inspired, think about it overnight, enter a counter-rebuttal the next morning. Moreover, all the other participants — hundreds in the case of *Law: Forum* — can not only follow the debate but also "speak" at their leisure without doing handstands to catch some chairman's eye.

Without efficient group communication, Bankier believes, society can't function properly. If given a chance, computer conferencing might therefore "help to meet a major social need." But its techniques are so new they're a mystery even to much of the computer-communications industry, and in recent years she feared the technology would be imprisoned by the old polarization before the new computer conferencing could prove itself. Before it was too late, she wanted "to explore, document and publicize the potential of computer conferencing," and in 1983 she approached the John and Mary R. Markle Foundation, New York City, for enough money to get *Law: Forum* rolling.

She could not have chosen a more apt angel. The Markle Foundation distributes roughly \$2 million (U.S.) a year to improve "all media including services growing out of new technologies for the processing and transfer of information." Bankier's approach was so com-

pellent that although the foundation had never before supported research in computer conferencing, it awarded her \$125,000 (U.S.) for use in fiscal '84 and '85. *Law: Forum* was off and running.

To join a computer conference, you need a telephone, and a gadget called a "modem." It allows a computer to communicate by phone. You'll also need a computer terminal, or a micro-computer with software to enable it to serve as a terminal, or a word-processor with communications capabilities, plus a special cable to connect your modem to the terminal, microcomputer, or word-processor. But the terminals cannot "talk" to one another without using a "conferencing system," and Bankier chose CONFER because it's "the state of the art" and it's easy for computer greenhorns to learn. Dalhousie has no computer conferencing facility of its own (though Bankier's lobbying may get it

one some day), but CONFER is available at certain other universities, including Wayne State, Detroit.

It had been there that computer conferencing had first intrigued Bankier. A graduate of the University of Toronto in Modern History, she later studied at Laval and Carleton, and in 1974 earned her law degree, and a silver medal, at Osgoode Hall Law School, Toronto. As an undergraduate, she won seven scholarships. As a law student, she won three scholarships and seven prizes. Called to the Ontario Bar in 1976, she briefly served as law clerk to Chief Justice Willard Estey of the Ontario Supreme Court, then as researcher and consultant to the Ontario Law Reform Commission, specializing in class-action law. But from 1979 to 1982, she taught at Wayne State University Law School, and after she reached Dalhousie she naturally turned to Wayne State as the host computer centre for *Law: Forum*.

She figured lawyers would be ideal for a demonstration computer conference. As legislative and administrative regulators, some are already at the heart of the interaction between society and communications technology. Surely they need first-hand experience with the technology. Moreover, there are a few "computer literate" lawyers spread across the continent, and hundreds of



thousands who are "non-literate." Bankier wanted to see how both groups might make out in a computer conference. Law touches so many fields — psychiatry, technology, the media, for example — that it was "a natural choice for an experiment in computer conferencing if the intent is to encourage multidisciplinary discussion." Finally, lawyers are a talkative, argumentative lot.

Like any "live" conference, a computer conference needs someone to recruit the right participants, plan the agenda, and resolve disputes. Before inviting everyone and his uncle to jump into *Law: Forum*, Bankier organized *Law: Startup*, a small computer conference to get the big one off on the right foot.

*Law: Startup* was an electronic discussion among a select group of computer-wise lawyers, computer scientists, and others she knew would make useful advisers. "It seemed likely," she explained, that new users would be more likely to take the trouble to master the system if active discussions of interesting topics were already taking place when they first joined the conference."

Once under way, *Law: Forum* attracted practising lawyers, law professors and students, law librarians, computer scientists, social scientists, civil servants, a couple of judges. In eight provinces, 31 states, and Washington, D.C., they tapped in their information, opinions, comments, and responses, and all this material popped up in little green letters on the screens of all the participants. The printout of the conference, which reads like the transcript of a live meeting, fills two fat ringbinders.

*Law: Forum* continued for more than a year, and in an article for the U.S. *Journal of Survey Engineering*, Bankier said, "The subjects discussed include computer applications in law (e.g. artificial intelligence, computer-aided instruction, legal research and retrieval systems, support systems for law schools and law offices), social consequences of computerization (e.g. impact on privacy, legal employment, computer crime), and substantive law governing computers (e.g. software protection, computer contracts, consumer protection in the computer field, transborder data flow, antitrust and tax law relating to computers, etc.)."

Along with her article, Bankier submitted to the *Journal of Survey Engineering* a sample printout of the conference, but she firmly warned the editor not to correct spelling or grammar because the conference participants wanted to preserve "the flavor of the discussions." The most interesting thing about the flavor was its informality. The act of typing out your contribution to a debate may force you to clarify your thoughts but it doesn't necessarily cause verbal stuffiness. Moreover, as the discussion continues, participants thousands of miles apart seem to get to know one another, and even enjoy one another's company.

*"You tap in a few instructions,  
and out goes your troublemaker. You don't even  
have to look at his ugly face"*

Bankier made friends just by conversing with them through *Law: Forum*, and the transcript shows people casually addressing others by their first names ("This is where I disagree, Peter"); confessing blunders ("Due to a keyboard error — do I hear chuckling across the country? —I was unable to finish my description of a typical sketch"); and making jokes ("But surely we can all agree that the best way to save closing costs is to shoot all the real estate brokers").

During a discussion of computerized land titles, a young Toronto lawyer playfully reminded a Los Angeles attorney of the mudslides, erosion, quakes and fires that threaten California real estate. "How can anyone living in California not comprehend owning land which could disappear overnight?" the Torontonian asked. The reply was instant and, like everyone in *Law: Forum*, the Californian was talking to everyone in *Law: Forum*, "Just remember, when I'm owning this delightful piece of an island just west of the coast of Nevada/Arizona, all of you guys are going to be insanely jealous. Just think of the land values then. Hawaii, look out!"

*Law: Forum* spawned offspring, conferences called *Law: Labour*, *Law: Library*, *Law: Contracts*, *Law: Caned*, and others. It's a relief to Bankier that

out of the mother conference came new organizers for these "second-generation" discussions. Running a computer conference gobbles time. Organizers, she says, "must answer a steady stream of private inquiries from individual participants. . . . I generally have to spend three quarters of an hour answering messages before I am free to read the group discussions in *Law: Forum*."

For those susceptible to the charms of eavesdropping, computer conferences could be seductive. Through the Wayne State system, for instance, it was possible at the Dalhousie Law School in October to call up what might be called "hobby conferences." You could read the discussions of people from all over

the continent as they chatted away about everything from Mexican restaurants to railroads, from Shakespeare to jazz. Skydivers chummily confessed to one another how terrified they had felt before their first jump.

Bankier says *Law: Forum* is a success. Its goal was "to create a viable computer conference composed primarily of non-scientific professionals (lawyers) that achieved a respectable level of discussion and activity and that was multidisciplinary and multinational in scope." She feels it did just that, and, "If lawyers can make successful use of this medium . . . it seems likely engineers, accountants and lay people in a wide variety of backgrounds would find this technology helpful in overcoming the problems created by high travel costs, declining budgets and 'telephone tag' exchanges of unsuccessful phone calls among busy people."

If she's right, at least some businesses, professions and institutions may well choose to abandon national meetings — with all the flesh-pressing, carousing and grandstanding that go along with some of them — in favor of the calm, convenience of computer conferences. Speaking of convenience, a minor beauty of computer conferencing is the ease with which the organizer can eject what Bankier calls "a very disruptive individual" or "a really freaky person." You tap in a few instructions, and out goes your troublemaker. You don't even have to look at his ugly face. Harmony and intelligence return to the deliberations on hundreds of screens across a continent. □



# She wants to answer “the fundamental questions”

*That's a university's job, says chemistry professor Mary Anne White. But her research may also lead to improvements in the way we all keep warm in winter*

Chemistry professor Mary Anne White believes it's a university's job “to answer fundamental questions,” and nothing could be more fundamental than her own research obsession. “My major thrust,” she says, “is trying to understand how solids are held together, why they're not gases, for instance. Why do they stick together as solids?” To enlarge understanding of the forces inside solids, she measures the thermal properties of certain chemical compounds, and also how well they transmit heat. “It's partly a matter of putting different amounts of heat to solids to see how their temperatures rise.”

In a cold country like Canada, highly practical benefits may one day flow from such research. Makers of solar-energy equipment, for instance, impregnate bricks and flooring with pure chemicals. “We're measuring how much heat different materials absorb,” White says, “and, of course, in solar energy the sun shines on materials, and you want something that can store energy and enable you to recover the heat storage later.”

Her aim, however, “is not really to make a million dollars, it's more to understand fundamental concepts. These might be taken over by engineers to develop new materials . . . If something came out of (her research) that was truly practical, I'd probably put it in somebody else's ballpark.”

Dalhousie's first graduate in chemistry, in 1900, was a woman but it took the university another 83 years to hire White, its first woman chemistry professor. She arrived in 1983 as a Natural Sciences and Engineering Research Council of Canada (NSERC) research fellow and as an assistant professor (research). Her credentials were simply too good to be denied. At the University of Western Ontario, where she got her BSc in 1975, she won the alumni gold medal, the Chemical Society Industrial Merit Award, and the Chemical Institute of Canada Silver Medal. She earned a string of scholarships in the '70s, and her PhD in physical chemistry at

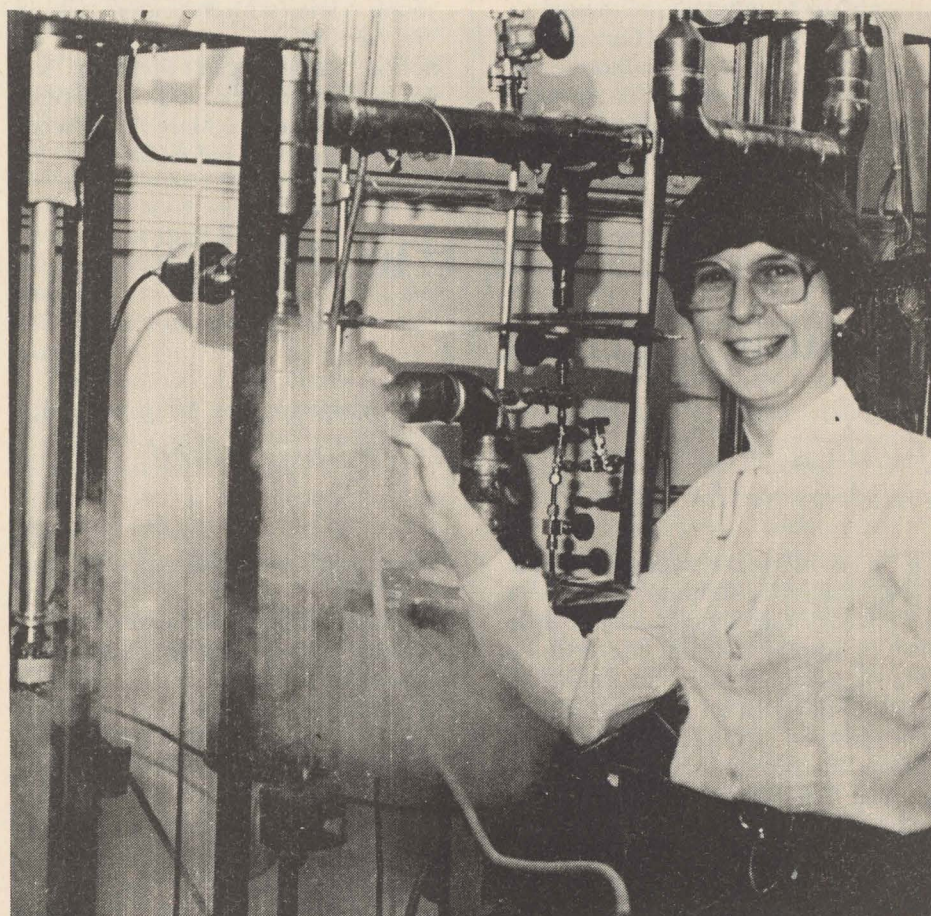
McMaster in '79. For the next two years, she was a junior research fellow at St. Hilda's College, Oxford.

At Oxford, she worked in both the physical chemistry and inorganic chemistry labs, and experienced what she calls Oxford's “unique system of individual instruction.” She then taught for two years at the University of Waterloo, where she designed and built her own calorimeter, which “gives heat capacity measurements in the temperature range from 10K to 400K, and allows definitive detection and thermal characterization of phase transformations.” When she came to Dalhousie, she brought with her both the calorimeter, and her status as a NSERC university research fellow. NSERC has supported her work since 1981.

White uses two experimental methods to explore the thermal properties of solids. One is thermal conductivity, and the other is calorimetry. The calorimetry experiments employ liquid helium, not because it's hot but because it's incredibly cold. The colder a solid is the less energy it contains, and the more useful it becomes to test certain theories. “Some of the theories are in the limit approaching absolute zero,” White explains. Absolute zero is  $-273.15^{\circ}$  Celsius. That's a theoretical limit. In reality, nothing gets that cold. But liquefied helium does exist at  $-268.93^{\circ}$  Celsius.

White gets the liquefied helium, which is made by compressors “from helium gas with a refrigeration cycle,” from Dalhousie's physics department. “You have to keep it in something with a vacuum jacket, like a thermos,” she says. “Otherwise, it'll just boil away.” The solids she uses are chemical compounds. “They're a special type of solids that are weakly bound. It's these weak interactions we're interested in. They're called ‘van der Waals interactions.’”

She puts the compound into a sealed calorimeter, inserts the calorimeter into the thermos flask. The flask contains



*White works with liquefied helium that's incredibly cold*



the liquefied helium which, to anyone but a scientist, is unimaginably cold. A typical experiment starts at  $-263^{\circ}$  Celsius. The action comes when an electric pulse zips into the solid. "A computer actually judges when it's time to put a heat pulse in," White says. "It takes all the electrical measurements, and does all the calculations." What White's doing is testing theory. "There are many theoretical models that relate to these weak interactions, and we do these experiments to see which theoretical model is closest to reality."

A Millar from London, Ont., she married Robert White, a fellow chemist. They have one son, David. Robert is from Eastern Passage, N.S., and graduated from Dalhousie with a BSc (honors chemistry) in '74. Like Mary Anne, he got his PhD in 1979 at McMaster, only his was in organic rather than physical chemistry. He, too, then went off to Oxford, where he worked in the lab of Sir Edward Abraham at the Sir William Dunn School of Pathology. Later, he was an NSERC industrial research fellow at a pharmaceutical company in Mississauga, Ont. When the Whites came to Dalhousie, Robert managed to have his industrial research fellowship changed to a university fellowship, a feat he believes no one in Canada had pulled off before. Thus Dalhousie got two NSERC fellows in one package and, through its own research development fund, has supported the

research of both. (Robert is now an Assistant Professor at Acadia.) One suspects that little David White, a preschooler, already plays with test tubes and Bunsen burners.

Mary Anne believes Canadian universities employ a maximum of only about 30 women as chemistry professors. Shortly after arriving at Dalhousie, she noted that out of 218 professors in the natural and physical sciences on the campus only nine were women. Across Canada, the natural sciences, engineering, and math employed nine times as many men as women; and White, along with such organizations as the Canadian Association of Women in Science and Canadian Women in Science and Engineering, wants to see the imbalance corrected.

The fault lies partly in the pervasive myth that girls are naturally inferior to boys at grasping scientific and mathematical principles. A high-school physics teacher once warned White she "wouldn't make it." She went on to finish at the top of her class, and she's been making it in science ever since.

"Personally," she says, "I think girls are turned off science at an early age. We need role models who can influence young women's career decision-making. We have to neutralize or dispel the notion that 'girls can't do math.' And parents have to be supportive." Speaking of role models, Mary Anne White makes a good one herself. □

enduring treatment — intravenous injections, to take only one example — and the daily routine of long confinement in hospital. In the application's words, "The incentive for the project was the researchers' clinical experience that young chronically ill children who required long or repeated hospital stays developed behavioral changes that were difficult to monitor, to understand or to change."

"Difficult behavior is a child's attempt to cope with a situation," Ritchie explains. "But they get stuck. It's as if they get stuck in a certain pattern of behavior that's the only one that gets reactions (from parents, doctors, nurses)." What kind of behavior? "Well, perhaps the child won't do anything you ask him to, specially if the nurse isn't familiar. You ask him to brush his teeth, and he throws the toothbrush at you. Or maybe he'll try to make the nurse run a merry chase, like a kid with a new baby-sitter. Sometimes they bite, or scream, or even totally withdraw."

Ritchie's grant application includes "The Children's Strategies Checklist," which lists no fewer than 59 "behavior items" in six categories of coping. The strategies include nail biting, picking at skin, bossiness, wary vigilance, throwing a tantrum, breaking a toy, hiding, running away, pretending to sleep, asking to kiss everyone in sight, a return to bedwetting, a return to a nursing bottle, a return to a parent's side "to lean against parent as in 'refueling,'" and wishful but false statements such as, "Soon I'll be better" or "I'm going home tomorrow."

Ritchie's interest in how children adapt to medical treatment goes back 15 years. Born in Saint John, N.B., she earned her graduate degrees at the University of Pittsburgh, and both her Master of Nursing thesis and her PhD dissertation concerned the way children cope with tough medical circumstances, such as amputations. By the mid-Seventies she was at the University of New Brunswick but mostly as a teacher and supervisor. She arrived at Dalhousie in '78, "and this appointment meant I could get over to the hospital with my own practice. I could do patient care myself instead of teaching others patient care." Among her patients were children under six suffering from kidney disease that sometimes proved fatal.

"What hit me was that it was important to get some reliable way of keeping

## She's tracking the antics of sick children

*And for very good reasons. "The benefits of this study," Judith A. Ritchie says, "will be for hospitalized children in the future"*

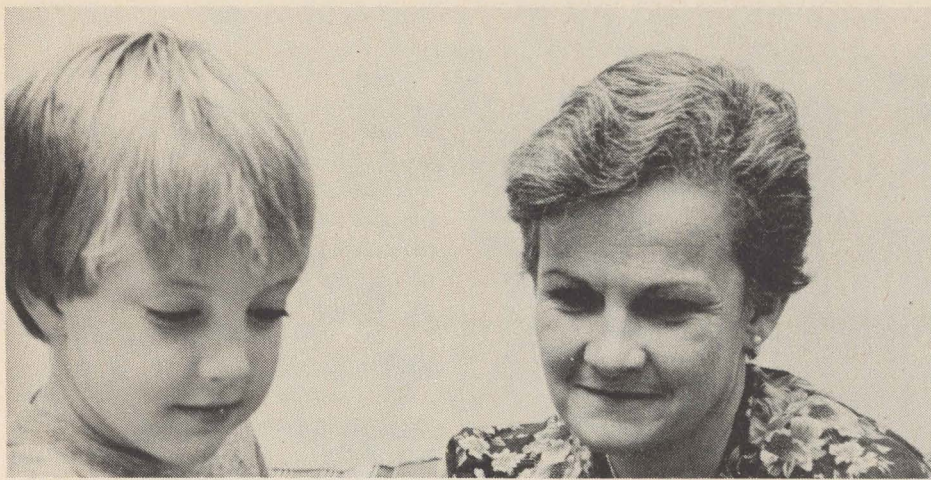
Recording the sometimes frantic behavior of children who are so sick they spend much of their lives in hospital may not be everyone's idea of palatable work, but Judith A. Ritchie knows it has to be done. So does The Hospital for Sick Children Foundation in Toronto, and that's why it granted \$36,788 for a project Ritchie calls "Testing a Coping Observation Instrument for Preschool Hospitalized Children." The project is the latest stage in research that may one day improve nursing practices in every hospital

where frightened children lie chronically ill.

Ritchie, one of Canada's few PhDs in nursing, is an associate professor at the Dalhousie School of Nursing, and with her colleagues Suzanne Caty and Mary Lou Ellerton, she conducts her research at the Izaak Walton Killam Hospital for Children.

What inspired their grant application was no abstract theory. It was firsthand observation of the way children, aged two to five and a half, try to cope emotionally with both the distress of





Ritchie's trying to make sense out of "difficult behavior"

track of their behavior," she recalls. "How do they start to get into these patterns? Are they changing? If we knew, we might then be able to change our treatment to nip the negative behavior in the bud, to get the child into a more adaptive behavior pattern." This would obviously benefit nurses.

But it might also guarantee a better future for countless youngsters. Chronically ill children who do survive their years of visiting hospitals are more likely than other children to become disturbed adolescents who perform poorly at school. "If they live, and in order for them to go on to be mentally healthy," Ritchie says, "I see it as one of nursing's major tasks to get them through this earlier period."

The first phase of the project began in 1980. "We were pretty much going on a shoestring then," she says. "We were using ourselves as data collectors, and for some of the earlier stages we had no computer analysis, but we did get a small grant for our 'play-interview project.'" They used a "playkit," a suitcase full of toys, and also "a bag of tricks" full of puppets. The toys included family dolls, tiny beds and tubs, and also stethoscopes, bandaids, tape, syringes, and other medical equipment. The idea was to observe "what kind of concern they were playing out."

The chronically ill children, by comparison with those not so ill, engaged in more of what Ritchie calls "intrusion play." An "intrusion" is "anything that has to do with infringement of body boundaries"; and these unfortunate youngsters were regularly enduring tubes in their nostrils and bellies and, in the graphic description of one nurse, "injections up the ying yang." Another significant difference in the play habits of the chronically ill was that they were

less interested than the other kids in "autonomy play," play that leads to learning and a sense of independence, play that inspires a child to say, "Look, I drew that picture." The play research suggested to Ritchie that she was on the right track. After all, "independence and pride in what you can do are essential ingredients" of the North American society in which the survivors among the children would one day have to take their place.

Ritchie's team has been working up its "category system of coping behavior" for three years. The theoretical base is "the Lazarus (1980) stress and coping paradigm." Richard Lazarus is a noted U.S. authority on the psychology of coping, and Ritchie met him while using her sabbatical from Dalhousie in 1982-83 to serve as Visiting Associate Professor at the University of California, San Francisco. Lazarus is now a consultant to the Halifax research, and "We'll use him more when we have data ready."

The purpose of the current grant, Ritchie adds, "is really only to test the instrument," and the instrument is the 59-part children's strategies checklist. Before it can go into general use, its reliability and validity must be assured. The sample consists of 200 hospital patients, aged two to five and a half. "The children will be observed in one high-stress situation and one low-stress situation on each of two days," Ritchie's grant application explained. "High-stress situations include . . . injections, fingerpricks, venipunctures . . . bone marrows . . . enemas . . . dressing changes . . . insertion of tubes . . . Low-stress situations are those that children encounter in their everyday routines, such as baths, meals, and play situations involving another person." The

observations of 20 of the children will be on videotape.

Only after the system has proved itself will Ritchie, Caty and Ellerton turn to the next stage — trying to discover "what it all means." Even further down the road, as late as 1990, Ritchie says, "We can then take a look at what kind of nursing interventions we can make to encourage more adaptive behavior." Her current research will help none of the 200 children in the sample. The last statement in the form that asks for parents' consent to the observations says it all: "The benefits of this study will be for hospitalized children in the future." □

## You need numbers to foresee gales

*Statistician Jean Thiébaux works in a windowless, fourth-floor office with data from storm-tossed buoys and oil rigs on the Grand Banks*

Only a fellow mathematician could even begin to understand the grant applications of statistician Jean Thiébaux, but it is fair to say that the long-range purpose of her current research is to improve short-range weather forecasts for mariners. Such forecasts, in a three-to-24 hour time scale, are crucial to the safety of everyone who uses the sea. Fishermen and pleasure sailors need to know when it's prudent to leave harbor. Captains of massive freighters and tankers need to know what storms to dodge. "And oil rigs need to know when to fold up and protect themselves." Thiébaux says.

She's a professor in the Department of Mathematics, Statistics and Computing Science, and also in the Department of Preventive Medicine. Preventive medicine may seem a far cry from meteorology, but the common denominator is her expertise as a statistician. Thus her articles appear in learned journals for the disciplines of statistics, mathematics, atmospheric science, and biomedical and public health research. She's written regularly for periodicals as varied as *Atmosphere-Ocean*, *Canadian Journal of Statistics*, *Applied Math*



*Notes, Sexually Transmitted Diseases Journal, and Journal of Climate and Applied Meteorology.*

Thiébaux has a big map on her wall. For nine years, she's had an office without a window on the fourth floor of the Killam library. "That's my substitute for a window," she smiles, looking at the map. One of the more visually dramatic productions of the Geological Survey of Canada, it's called, "Physiography Eastern Canada." On the map, the high Arctic nudges her ceiling, and far south of Nova Scotia the ocean laps her floor.

At roughly eye-level when you're sitting, three evenly spaced yellow pins punctuate the southern edge of the Grand Banks off Newfoundland. Northeast of these, in the Hibernia oil field, there's a clump of three green pins. The yellow pins represent moored buoys and the green ones Mobil Oil drilling rigs. In the winter of 1983-84, both the buoys and the rigs carried equipment that ceaselessly measured barometric pressure. Satellites, orbiting on routes over the poles, transmitted the measurements, which were then recorded on tape for analysis by Thiébaux.

"You can spend years analyzing such data, asking different questions of it," she quietly explains.

Speaking of questions, here are some that her work may one day answer:

"Can the addition of a few moored buoys on the continental shelf offer significant improvements in nowcasts and short-range forecasts there . . . ?

"Can such additional observation sources significantly improve the resolution of estimates of the strength and movement of weather systems for purposes of modeling ocean waves and currents?

"Can resultant data be used to establish at what scales we should be measuring barometric pressure, winds, etc. . . ?

"Can the addition of (only) a few observing platforms enable the detection of storms which 'back onto' the continental shelf, which are clearly missed in the absence of this equipment?"

Thiébaux's reputation is both high and international. In 1983, she not only won a contract to advise the European Centre for Medium Range Weather Forecasts, Bracknell, England, but also served as a major participant in a workshop at the U.S. National Centre for Atmospheric Research in Boulder, Colorado. Just last October, the U.S. Naval Environmental Predictions



*Thiébaux: pins on the map matter, and so do weather buoys at sea*

Facility invited her to Monterey, Calif., to lecture meteorological researchers from three continents. She reviews research-grant applications to both the Natural Sciences and Engineering Council of Canada (NSERC) and the National Aeronautics and Space Administration of the United States.

Born in Washington, D.C., in 1935, Thiébaux got her MA in Mathematics and Biology at the University of Oregon in 1960, and her PhD in Statistics at Stanford University, California, in 1964. After teaching stints at the universities of Connecticut, Massachusetts and Colorado, she worked as a consultant to the National Centre for Atmospheric Research, and then in 1975 came to Dalhousie. Now she's associate editor of *Canadian Journal of Statistics*; secretary of the Scientific Committee, Canadian Meteorological and Oceanographic Society; and a fellow of the Royal Meteorological Society.

More importantly to Dalhousie, however, she's been earning research grants from NSERC for a decade, and most years the Atmospheric Environment Service (AES) has also supported her work. In fiscal 1984-85, the AES is backing her with \$6,000, her NSERC operating grant amounts to \$32,000, and her research contract with the Bedford Institute of Oceanography is worth \$54,004.

The short title of her NSERC-sponsored project is "Field Dependent Estimation Schemes for Analysis and Network Design." In one application, she began her description of her work in this fashion: "The proposed research will develop and test stochastic, ensemble structural models whose parameterizations are conditioned on synoptic situations via proximal observations." (After that, of course, her prose got diffi-

cult.) In conversation, however, Thiébaux uses simpler language.

Ocean weather, she explains, is not naturally more unpredictable than land weather. But the stations that observe atmospheric conditions around the world are concentrated "where the people are." Though the oceans cover 70 per cent of the Earth's surface the people, on the whole, are not on them. So the problem in predicting ocean weather boils down to a shortage of observations.

Thiébaux suggests that humans, like the creatures under pressure at the bottom of the ocean, live at the bottom of "a fluid envelope" of atmospheric pressure. There, it's easy to get myriad surface observations, but "weather prediction needs observations through the full depth of the atmosphere, not just at the bottom." The U.S. and Canadian governments formerly shared the cost of keeping weather ships on the Atlantic and Pacific oceans. The ships released balloon-borne instrument packages to measure pressure, temperature and windspeed all the way up to the stratosphere.

The arrival of satellites, however, meant the decline of weather ships, "There used to be a lot more weather ships on both oceans," Thiébaux says, "but when everyone got excited about satellites, they took ships out . . . . When you remove an ocean weather ship, you lose the only source of accurate pressure and wind information that goes through the whole atmospheric column." The satellites provide temperature and Earth radiation observations with a uniform coverage that's far better than that of conventional systems. But the satellites can't observe pressures and winds throughout a section of the atmospheric column that stretches from the low cloud level all the way up to the heights where jet aircraft record weather data.

The hot issue then is this: What is the most cost-effective way of getting the information we need to provide offshore predictions, "in real time?" It's in this context that the importance of the pins on Thiébaux's map becomes clear. The buoys are cheap ways to collect meteorological data. Might they and the satellites combined improve offshore weather predicting? "The question is," Thiébaux says, "how much better can we do in short-range forecasting if we put these buoys out rather than weather ships?" □





# They had a tough row to hoe

*It's fine to honor the memory of Dalhousie's first woman grad but let's not forget the other female pioneers at the little college by the sea*

*By Judith Fingard*

When Margaret Newcombe and Lillie Calkin entered Dalhousie in October 1881, men students had already grown used to seeing skirts in the college halls. For although Newcombe and Calkin were the first women Dalhousie admitted as formal degree students, the college had been accepting women as occasional students for almost a decade. As early as 1872, Professor George Lawson had inaugurated a modest extension program by offering a class in botany to local women at their own request. For the rest of the century this custom of non-degree study supplied a large proportion of the female students. At the same time, regular female undergraduates such as Newcombe and Calkin increased in

numbers until by the turn of the century they amounted to about twenty per cent of the undergraduates.

The small classes of the 1880s and 1890s included women notable for their dedication to learning. They were usually "mature" students bent on making good use of the degrees or knowledge they acquired. Lucy Maud Montgomery, later the author of *Anne of Green Gables*, was one of them, and in 1896 she described "A Girl's Place" at Dalhousie. Women, she noted, had distinguished themselves in Mathematics, Physics, English, Philosophy, and Medicine. At least a third of the women graduates had embarked on brilliant careers, sometimes with graduate degrees not only from Dalhousie but also from American institutions, particularly coeducational Cornell, and Bryn Mawr, a women's college. They included the first PhD in Arts (Eliza Ritchie, BL'87, LLD'27), the first PhD in Science (Agnes S. Baxter, BA'91, MA'92), and the first medical doctor (Annie I.

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*History professor Judith Fingard is Chair of the Women's Centenary Committee, and co-ordinator of the Dalhousie University History Project.*





Women of the class of 1905 solemnly ham it up for posterity

Hamilton, MD, CM'94). These pioneer Dalhousians, together with Montgomery herself, represent four important styles of turn-of-the-century college womanhood.

Eliza Ritchie obtained her PhD at Cornell in 1889 and for eight years pursued an academic career in Philosophy at Wellesley, a women's college in Massachusetts, before returning to Halifax to devote her energy to the improvement of women's place at Dalhousie and in society at large. She was an early supporter of the Dalhousie Alumnae Association, established in 1909, and she labored to secure an alumnae-sponsored women's residence. It opened as Forrest Hall in 1912, and Ritchie donated her services for a year as the first warden.

She was the first female member of the Board of Governors (1919-25). In 1927 she became the first female recipient of an honorary degree, 35 years after Dalhousie had granted its first such degree to a man. Moreover, she was the first female member of the editorial board of the *Dalhousie Review* when it was launched in 1920. Ritchie also has a claim to the distinction of being the first faculty woman because she participated in a series of non-credit college lectures on fine arts in 1910. She regularly donated books to the library, and remembered it in her will in 1933. Her outstanding contribution to the university was partly due to her status as a

single woman from a prominent family. She had the time and resources to devote to such causes as higher education and suffrage for women. Ritchie ranks as a first-generation Canadian feminist.

Agnes S. Baxter, a brilliant graduate in Mathematics and Mathematical Physics as well as a Sir William Young Gold Medalist, followed Ritchie to Cornell, earned her PhD in 1895, then succumbed to that perennial occupational hazard, marriage to a fellow student. Her husband, A. Ross Hill, was also a Dalhousian (BA'92, LLD'09) who studied at Cornell. Baxter gave up her academic prospects and died in 1917. By then, her husband was president of the University of Missouri.

He was not unmindful of her sacrifice. He accompanied a bequest in her memory (again for library books) with appreciative reference to "the fact that Mrs. Hill gave up the making of an independent record for (sic) scholarship for herself in order to assist him in his educational work." Behind every successful man . . . . Like Agnes Baxter, many Dalhousie alumnae have chosen wifedom, motherhood and denial of self-achievement in the public sphere for the more intimate satisfaction of providing support for their menfolk in the private sphere.

If Ritchie was a feminist, and Baxter a woman who sacrificed a career to keep a husband happy, then Annie I. Hamil-

ton, Dalhousie's first female medical doctor, was an example of evangelical womanhood. Motivated by religious convictions, she was eager to serve humanity and in 1903, after undertaking a mission to the sick, poor people of Halifax, she joined the female exodus to exotic lands. She served China as a teacher and medical missionary from then until her death in 1941. As a medical missionary she was readily accepted in China, and as a doctor she had far more scope there than she'd have enjoyed in Canada. A life-long spinster like Ritchie, Hamilton avoided the limitations that married life would have placed on her mobility, adventure, and promotion.

Lucy Maud Montgomery, unlike the other three, was one of the non-degree students who comprised the majority of women at Dalhousie during the first generation of women's study. She attended the college in 1895-96 specifically to study with the well-known professor of English, Archibald MacMechan. Montgomery was already a teacher and had also embarked on the writing career for which she would become famous. Her early writings, including *Anne of Green Gables*, an instant bestseller, were produced in her family's home in Cavendish, P.E.I. That was before her marriage.

After 1911, as the Reverend Ewan Macdonald's wife and the mother of two sons, she continued to write. Few other occupations provided enough flexibility for a woman to combine domestic responsibilities with the pursuit of an independent career. Like other literary women, Montgomery maintained a "room of her own" and, through the continued use of her own name, her own identity. But the strain and contradictions of a dual role took their toll, and she suffered from mental illness before her death in 1942.

Ritchie, Baxter, Hamilton, Montgomery — such talented but diverse products of coeducational Dalhousie in the nineteenth century. Yet the college did not accord them equality with men within its precincts. Barred from the study of law, and from the gymnasium and library reading room, women developed their own collective talents in separate women's organizations like the Delta Gamma women's club, debating teams, and sports.

Their professors, including MacMechan, believed they were sharing the college with men only temporarily, that they would eventually achieve the more



desirable goal of a separate women's college. This spectre of segregation haunted the second generation of Dalhousie women, especially for a decade or more after 1912 when the first women's residence opened. But the ambition remained largely a male one. Women saw it as backward. Even a feminist like Eliza Ritchie was not a separatist. "We do not propose," she wrote in the *Dalhousie Gazette* in 1911, "to open a teaching college for girls, nor prepare the way for anything of the kind, but to provide a suitable home for earnest and intelligent young women."

The dreams of the Alumnae Association were realized in 1923 with the opening of the palatial Shirreff Hall, a women's residence made possible through the generosity of Genevieve (Mrs. E.B.) Eddy (nee Shirreff). She was Dalhousie's most generous private benefactor up till that time. (So much for all that fuss about George Munro!)

The 1910s and 1920s were marked by considerable achievements for women at Dalhousie. The female percentage of enrolment increased steadily until 1929 (40 per cent in Arts and Science, 30 per cent overall), except for a wartime surge when the percentage of women in Arts and Science increased from 33 to 54 and in the whole university from 22 to 38. The administration also worked out a scheme by which the number of women students was augmented by Catholic teaching sisters studying for degrees through a co-operative arrangement with Mount Saint Vincent Academy. This was the period when the first women graduated in the male preserves of Law, Pharmacy, Dentistry, and Commerce. As a result of the war and the Halifax explosion in 1917, a short-lived diploma course in Public Health Nursing was established from which nine women graduated in 1921.

By this time the attendance of young women straight from high school reflected the ready acceptance of higher education for women among families for whom education was traditionally important: Scots Presbyterians and newly arrived European Jews. First-generation college-trained men such as Graham Creighton (BA'04) and his wife's brother, the Reverend Robert Murray (Arts 1894-97) — and their teacher-wives, Catherine (Murray) Creighton and Isabel (Sproull) Murray — sent their daughters to university as readily as their sons.

Four Creighton daughters and two Creighton sons graduated between 1915

and 1927. Two Murray daughters and four Murray sons graduated between 1919 and 1931. The women in these families never felt inferior to their brothers, and whether or not they married they all pursued careers. Edith M. Creighton (BA'15) and Lois S. Creighton (BA'16) became teachers, Frieda I. Creighton (BA'21) (Mrs. Creelman) an artist, and Anna St. C. Creighton (MD,CM) (Mrs. Laing), an ophthalmologist. Florence J. Murray (MD, CM'19) and Anna I. Murray (MD, CM'29) (Mrs. Musgrave) both pursued careers in medicine. Florence was a celebrated missionary in Korea.

Jacob and Ethel (Levy) Resnick were Jewish immigrants who made their



*Martha Ellen Dewis, BA'10: a "spectre of segregation haunted the second generation of Dalhousie women"*

way to Halifax from Lithuania via South Africa, Saint John, Springhill, Lower Economy and Five Islands. They had no sons but they launched their three daughters upon independent careers by sending them to Dalhousie. The daughters were Mildred (MD, CM'21) (Mrs. Glube); Rebecca (BA'22) (Mrs. Glass); and Rhoda S. (BSc'26) (Mrs. Leffe).

None of these families was affluent. The Creightons and Murrays worked their way through college. Neither they nor the Resnicks would have been at Dalhousie without the moral support and financial sacrifice of their parents.

Another major achievement for Dalhousie women during these decades was their admission to the faculty. But their appointments were few and far

between, and the university treated women faculty as cheap labor and an inferior caste. Merle P. Colpitt (BA'17, MA'18) began to teach in the Physics department at the end of World War I, but resigned in 1926 after her marriage to fellow physicist and head of the department, H.L. Bronson. Margaret Butler (BA'24, MSc'30) (Mrs. Morrison) began as a demonstrator in the Biology lab in 1928, and after obtaining her PhD at Toronto worked with Professor Hugh Bell (BSc'12, MSc'14) as a lecturer. But her employment coincided with the Depression-based reaction against women during the Dirty '30s. She was barred from advancement both in rank and salary and prompted to resign in 1937, fleeing the male-dominated university to the more congenial occupation of marriage.

While the Depression was a bleak period for the whole university, it was especially bleak for women. The female percentage of enrolment dropped between 1929 and 1937, and a moral campaign against sexuality affected women's rights and freedoms. The parents of female students achieved the dismissal of the Freudian psychologist in 1929. In 1930 a faculty woman was dismissed for divorcing her husband, and a female student was barred from further study in the university because of her involvement with a married professor. In 1938 dances were prohibited at Shirreff Hall.

On the credit side of the balance sheet, women won an impressive range of awards: National Research Council fellowships, IODE scholarships, Rockefeller Foundation awards, Canadian Federation of University Women scholarships, travelling fellowships made available through the university's own Genevieve Eddy Foundation, and graduate awards at such universities as Toronto, Harvard, Columbia, and Edinburgh. In 1928 Dr. Mabel A. Borden (BA'27, MA'28) (Mrs. Nicholls) became the first woman in Canada to receive the prestigious 1851 Exhibition Science Scholarship for studying in England; and in 1930 Dr. Elizabeth G. Frame (BA'28, MA'29) became the first woman in Canada to be awarded a research grant by the Banting Research Foundation.

Many award winners distinguished themselves despite the inadequate level and short duration of their awards. The Maritime region benefited in particular from the work of Constance I. MacFarlane (BA'29, MA'32, LLD'75) and Margaret E. Ells (BA'29, MA'30) (Mrs. Rus-



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sell), the former for her contribution to marine biology, especially the harvesting of regional seaweeds, the latter for her research and writings on Nova Scotia history, particularly relating to the loyalist period.

Women also became more prominent in student affairs, on the *Gazette*, on the Student Council, and as life presidents of their classes. Although the people they confronted on the other side of the lectern continued to be predominantly men — the prevailing philosophy as expounded by President Carleton Stanley in his inaugural address in 1931 was that only men could teach men — the exceptions to that rule are important. Foremost was Dr. Dixie Pelluet (LLD'65), a Bryn Mawr graduate who took up an appointment in the Biology Department the same year that Stanley proclaimed women's inability to instruct men. Her dedication to teaching and research provided much needed inspiration for women students. She even introduced them to women's rights, discussing Virginia Woolf's *Three Guineas* with the girls of Delta Gamma at Shirreff Hall in 1939.

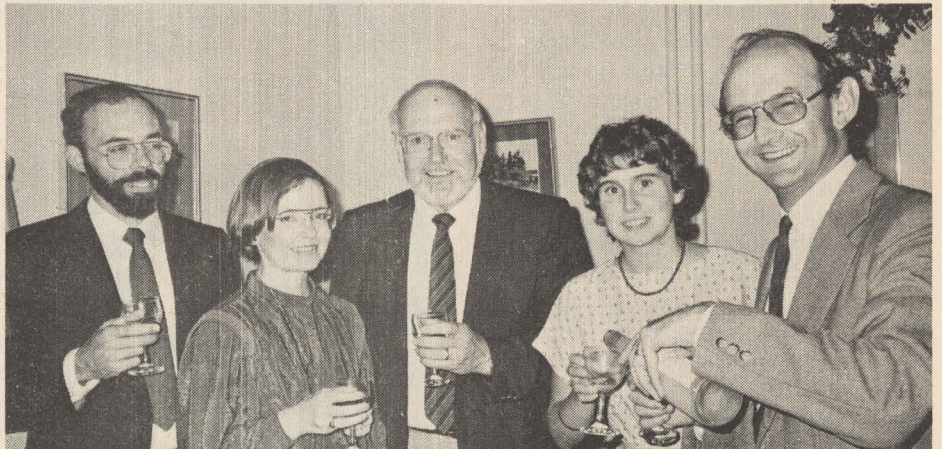
By the outbreak of World War II female enrolment had begun to edge up again, but women still had a long way to go to root out sexism and inequality at Dalhousie. Against the wider background of the return-to-the-home, post-war propaganda, the feminine mystique of the '50s, and the blatant sexism of the '60s, Dalhousie conformed with campus queens, fraternity elitism, and engineers' stag parties.

Women often succeeded in spite of the system. Scholarships for post-graduate study continued to be inadequate in size and number. The professional schools, confronted with escalating enrolments, discriminated against women on the ground that they would waste their training by marrying. Moreover, the administration relegated faculty women who were married to faculty men to short contracts, junior rank, and marginal pay.

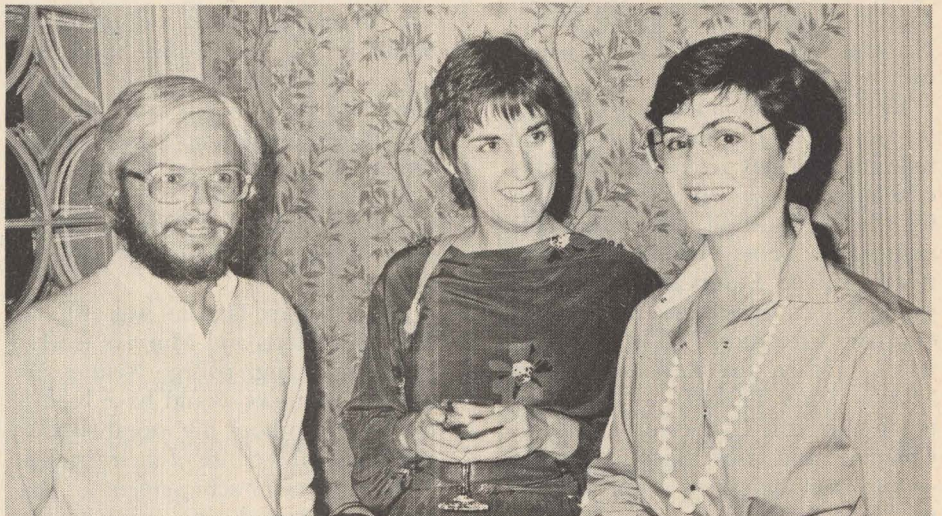
The intimacy of a small university — described by its male enthusiasts over the years, from MacMechan to Professor Peter Waite, as exhibiting an essential kindness — did not benefit women. Only with the expansion of the late '60s did women at Dalhousie begin to move towards equality with their male counterparts. Only in the last twenty years have women been able to reap the real benefits of coeducation. □



The alumni women's division held a corn boil in September at the Halifax home of Jean Harrington. Above (left to right) are Heather Marriott, Katherine MacKeigan, Willena Angus and Christeen Russell (Wamboldt-Waterfield photo)



Guest-speaker at an alumni wine-tasting evening in the faculty club was law professor Alastair Bissett-Johnson (far right). With him are (left to right) Don Sheridan, Deborah Ryan-Sheridan, Judge Robert Anderson, and Sally Anderson



Library alumni held a student reception in September at the home of President W. Andrew MacKay. Here, Linda Pearse (centre), president of the library alumni, chats with Tim Ruggles and Heather Creech



## Class notes

**CORRECTION:** In our last issue, we identified Hugh B. Bell, Engineering'18, as the father of James L. Bell, BA'47. James Bell has advised us we erred. Hugh B. Bell was his cousin, not his father. His father was Hugh P. Bell, MSc'12, who taught biology at Dalhousie.

**23** **Dr. Murray B. Emeneau, BA, LLD'70**, had two books published in 1984. One is *Toda Grammar and Texts* (Philadelphia, American Philosophical Society). Toda is a Dravidian tribal language of South India. The other book is *A Dravidian Etymological Dictionary* (2nd edition, with Prof. T. Burrow, Oxford University, Clarendon Press). Emeneau was president of the VIth World Sanskrit Conference, held in October 1984 at the University of Pennsylvania, Philadelphia. He is a director of the Canadian Association of Rhodes Scholars, 1981-85. From 1940 to 1970 he was a professor of Sanskrit and General Linguistics at the University of California, Berkeley, where he is now Professor Emeritus.

**28** **Dr. Benjamin Guss, BA, LLB'30**, of Saint John, N.B., a retired judge, was elected to The Fellows of the Royal Society of Arts (London).

**Dr. Hugh MacLennan, BA, LLD'55**, read from his novel, *Barometer Rising*, at the gala concert in aid of the Halifax Explosion Memorial Bell Tower in Halifax on October 27, 1984.

**30** **Dr. Donald M. MacRae, BSc, MD'34**, of Halifax, announces his retirement from the practice of ophthalmology.

**Hon. Mr. Justice Roland A. Ritchie, BA, LLD'65**, a native of Halifax, has retired from the Supreme Court of Canada.

**37** **Dr. Dennis W. Watson, MSc**, professor and head, Department of Microbiology, Medical School, University of Minnesota, Minneapolis, Minn., retired June 30, 1984.

**38** **Dorothy J. Linkletter, BA, DipEd'39**, of Bay View, P.E.I., formerly of Montreal, was recently presented with a Solicitor General Crime Prevention Award in recognition of her many years working for community responsibility for the prevention of delinquency on the West Island of Montreal.

**39** **Dr. Zeck Kasloff, DDS**, retired from U of Colorado, School of Dentistry, in 1982, as director and coordinator of Dental Materials Science, Clinical Research and Dental Morphology, and was awarded status of Professor Emeritus. Dr. Kasloff is directing Clinical Research in Dental Material at the University of Manitoba.

**40** **John H. Dickey, LLB**, was recently appointed to the Misener Financial Corporation board of directors. He is a senior partner in the McInnes, Cooper & Robertson law firm, Halifax.



*More than half the Dental Hygiene Class of '79 returned to Dalhousie in September for a reunion that focused on a continuing education course. They were (left to right, back row) Nola Levesque, Pat Phelan, Sheila Levy, Jeanne Saulnier, Sandra Burrell, Ruth Harris, Cynthia Show; and (left to right, front row) Ann Lord, Karen Pace, Donna Wearing, Betty Ann Forrest, Brenda Dickie.*

**48** **Robert C. Bezanson, BSc, DipEng**, has been appointed vice-president, Marketing and Development, of Picou Industries Limited.

**Dr. N. Kenneth MacLennan, MD, Sydney, N.S.**, has been elected chairman of the University College of Cape Breton's board of governors.

**49** **Gerald C. Foster, BA**, retired in December 1983 from the Department of Consumer and Corporate Affairs after 36 years of service in the Armed Forces and Public Service.

**50** **Dr. Charles Oler, DDS**, has returned to the practice of dentistry in association with **Dr. Barry Pass, DDS'76**, in Halifax.

**Jerome J. Garson, BA, LLB'55**, has a law practice in Windsor, Ontario.

**52** **Gerry (Grant) Dayton, BA, BE (U.N.B.)**, is teaching in the English Department of the University of Moncton.

**David T. Janigan, BSc, MD'57**, a pathologist at the Victoria General Hospital in Halifax, has been named Professor of the Year by Dal's Medical School spring-of-1984 graduating class.

**54** **Nancy Wickwire Fraser, BA**, has been named consultant for French for Leeds and Grenville County Board of Education, Brockville, Ont., a definite "step up" from her previous position of French resource teacher.

**55** **K. Gordon Chisholm, BA, DDS'59**, has maintained a general practice in Vancouver since 1964. Dr. Chisholm received the Academy of General Dentistry's Fellowship Award during a special ceremony at the AGD's Annual Meeting, July 27-August 1.

**Betty Gruchy, BA**, is president of the Children's Aid Society and Family Services of Colchester County, N.S.

**57** **Diana (Eager) Kent, BA**, has been elected vice-president/president-elect of the Canadian Health Libraries Association. Ms. Kent is a librarian at the Woodward Biomedical Library, University of British Columbia.



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**58** **Innis M. Christie, BA, LLB'62**, law professor and associate dean of the Dalhousie Law School, has been appointed dean of the Law School effective July 1, 1985.

**59** **Alexandra (Sandra) Smith Carter, Arts**, was appointed administrative assistant for Public Relations at the Grace Maternity Hospital, Halifax in October 1984.

**60** **Reid Morden, Arts**, after 20 years with External Affairs in Ottawa and abroad, has been Assistant Deputy Minister, Native Claims, Indian and Northern Affairs Canada since July 1984.

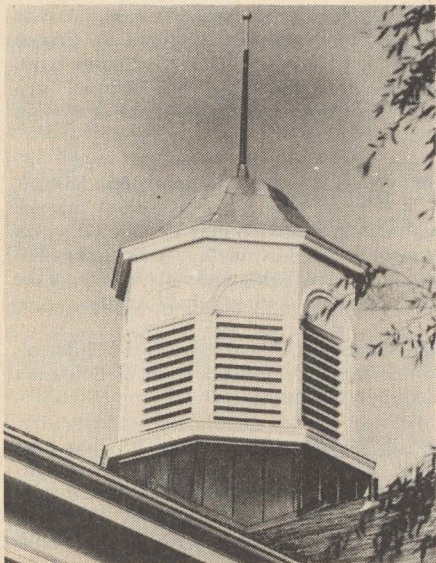
**The Rt. Rev. Arthur G. Peters, BA(K)**, was installed as the 13th Anglican Bishop of Nova Scotia on November 29, 1984.

**61** **Peter B. MacDougall, M.R.A.I.C., Engineering, BArch(TUNS)'65**, is acting manager of Architectural Services for the Atlantic Region, Federal Department of Public Works. He is married to Prof. M. Gail MacDougall, Family Medicine, Dalhousie, and they have two children.

**62** **Charles J. Elliott, BScEngPhys, MElectEng'76 (Carleton U)**, is manager, Magnetic Components, Bell Northern Research, Ottawa. Mr. Elliott, his wife, and family reside in Kanata, Ont.

**64** **Signe (Frihagen) Thornhill, BSc, BEd'65**, was awarded her Masters of Education (in Mathematics Curriculum and Instruction) from the University of New Brunswick in the spring of 1984. She is teaching mathematics at Saint John High School, and is vice-president of the Provincial Mathematics Council. Her husband, **George M. Thornhill, MD'69** is practising Family Medicine in Saint John.

**66** **Donna (Unwin) Kidd, BA**, has recently been appointed service coordinator of the Kitchener-Waterloo Children's Treatment Centre, a rehabilitation facility for the physically handicapped.



**67** **Frances (Pullen) Gregor, BN, MN'79**, has been elected president of the Nova Scotia Heart Foundation.

**Robert S. Yorston, BSc(Pharm)**, has been appointed vice-president, Operations, Shoppers Drug Mart, Atlantic Region in Moncton, N.B.

**68** **Matthew K. Lee, BSc, BSc(Pharm)'71**, has been appointed to the Board of Directors of Pharmaservice Inc. in Toronto, Ont.

**Reginald F. MacAusland, BA, BEd'69, MBA'73**, has been elected corporate secretary of L.E. Shaw Limited.

**Janice Zatzman Orlansky, BA**, is the produce manager in the Test Division of the Charles E. Merrill Publishing Co. in Westerville, Ohio. She recently spent four months in Yugoslavia where her husband was a lecturer under the Fulbright Senior Lectureship plan.

**Dr. David W. Rackham, BSc, MA'72, PhD'77**, has taken a position as professor of Psychology at International Christian University in Tokyo, Japan. In this capacity he will be serving as a missionary assistant sponsored by the United Church of Canada. Dr. Rackham, his wife, **Zenora (Rampersad), BSc'71**, and two children, Andrea and Graeme, will spend at least two years in Tokyo.

**69** **Ilga Leja, BA, MLS'77**, formerly Nova Scotia Provincial Legislative Librarian, is now on contract with the Ontario Legislative Library.

**Fred D. Morash, Commerce**, has been appointed general manager, Administration, with Maritime Tel & Tel.

**Bruce N. Walker, BSc, BEd'74**, a science teacher at Prince Andrew High School, has, with his wife, Jane, won the husband-wife golf championship at Brightwood Golf Club. They are living in Dartmouth with their two children, Shaun, 9, and Suzanne, 6.

**70** **Ian E. Deakin, BA**, is appearing in Toronto at the St. Lawrence Centre in the Centre Stage production of Noel Coward's "Tonight at 8:30," directed by Robin Philips. Mr. Deakin was seen last year at Neptune Theatre as Romeo in "Romeo & Juliet."

**Peter G. Fraser, BComm**, is teaching English in Kofu, Japan.

**Goldie (Stax) Trager, BSc, BEd'71, LLB'83**, has joined the firm of Green Spencer as an associate.

**71** **M. Jacqueline Guyette, Arts**, is the assistant superintendent of schools, Cumberland County, N.S.

**72** **Jean B. Lavalley, BSc, BEd, MEd'80**, is teaching grades ten and twelve Biology at Charles P. Allen High School, Bedford, N.S. In 1983-84 Ms. Lavalley took a sabbatical to study special education at Mount Allison University.

**Cherry G. Ferguson, LLB**, has opened a law practice in Halifax.

**Hank H. Scarth, BSc**, was appointed chief of the Resource Allocation Division of Fisheries and Oceans.

**73** **Paul Budreski, BComm, MBA'75**, "Chip" to friends and associates and also president of the Nova Scotia Aquaculture Association, now has his own mussel operation.

**John F. Edwards, BA**, has been appointed Keeper of Maritime History with the Department of Art Galleries and Museums, Aberdeen, Scotland in May 1984.

**Daniel M. Hughes, MD, PostGradMed'79**, is an assistant professor of Paediatrics at Dalhousie with a specialty in paediatric pulmonary medicine. He is also an associate director of the Intensive Care Unit of the I.W.K. Hospital in Halifax. Since 1980 Dr. Hughes has spent two years in Toronto and two years in Australia. While in Toronto he was a Fellow in Respiratory Physiology at the Hospital for Sick Children. In Australia, he studied in the department of Thoracic Medicine, Royal Children's Hospital, Melbourne, an opportunity made possible by the MacLaughlin Travelling Fellowship. Dr. Hughes is married to the former **Elizabeth Morrison, BA'71, BEd'73**, and they have three children, Michael, 8, Stephanie, 6, and Katherine, 2.

**James I. Livingstone, BA**, has moved to Inuvik, N.W.T. with Gulf Canada Resources as manager of Community Affairs, representing the Beaufort Sea region. He is responsible for implementing the company's northern benefits program.

**Joseph J. Southall, BSc**, moved back to Yarmouth, N.S. from Ottawa in late 1983 and is now area inspection chief for the Federal Department of Fisheries and Oceans for Western Nova Scotia.

**74** **Dr. Drew C. G. Bethune, MD**, was elected president of the Dalhousie Medical Alumni Association for the year 1984-85.

**Robin Campbell, LLB**, a lawyer in Sydney, N.S., is president of the Children's Aid Society of Cape Breton.

**W. Brent K. Cotter, LLB, LLM'79**, an associate professor of law, has been named associate dean of the Dalhousie Law School effective January 1, 1985.

**Paul M. Fennell, BComm**, recently received a diploma of Canadian Residential Appraiser.

**Susanne (Beaton) Lewis, DipDent, DDS'84**, and her brother, **Eric M. Beaton, DDS'84**, have opened a joint practice in New Glasgow, N.S.

**Dr. A.G. Patrick McDermott, MD**, a Halifax orthopaedic surgeon, recently performed a successful bone transplantation. In the future he hopes to see a bone bank, essential for major transplants, set up in Eastern Canada.

**75** **Sheila C. Cameron, BA, BScPhysio'83**, is on the physiotherapy staff of Western Memorial Regional Hospital in Corner Brook, Nfld.



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**M. Wayne Duncan, BSc, and George A. Cotaras, BSc'76**, are associates of the firm Fowler, Bauld & Mitchell Ltd. in Halifax.

**Dr. Brian H. Harpell, BSc**, is senior pastor of the First Baptist Church in Massillon, Ohio, where he lives with his wife and two children. Dr. Harpell received his master of divinity degree from Southern Baptist Theological Seminary in Louisville, Kentucky and his doctorate of ministry degree from Ashland Theological Seminary, Ashland, Ohio.

**D. Alan Jones, MBA**, has been appointed president of The Canadian Association of Business Valuators. Mr. Jones is chief valuator for Revenue Canada, Taxation.

**Gary K. MacPhee, BSc(Pharm)**, has been appointed director of Operations of Shoppers Drug Mart, Atlantic Region.

**Ian C. Parsons, BSc, BArch'79(TUNS)**, has been living in Toronto since graduation from TUNS and has started practising architecture there.

**Dawna J. Ring, BA, BAHonrCert'77, LLB'80, Flora I. Buchan, LLB'80, and Anne S. Derrick, LLB'80**, have recently opened Halifax's only all-female law firm, Buchan, Derrick & Ring.

**Miles T. Sweeney, BComm**, received his C.A. designation in 1979. He is a partner with MacKenzie & Company, Chartered Accountants, located in Dartmouth.

**76 Paul D. Dicks, LLB**, was elected president of the Newfoundland and Labrador Liberal Party at a Convention held on October 13, 1984.

**Catherine (Sutherland) Emmerson, BComm**, has recently been awarded Fellowship in the Insurance Institute of Canada. She has been employed with Guardian Insurance, Saint John, N.B. since graduation.

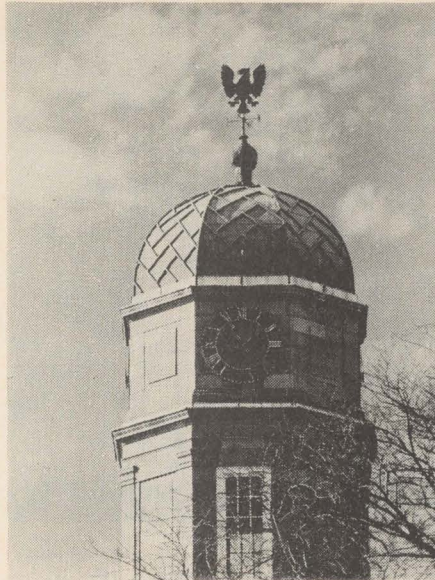
**Diana Hudson-Whalen, BA, MBA'79**, an associate consultant with Touche Ross Services Pty. in Sydney, Australia, has recently completed the final three examinations for the Registered Industrial Accountant designation.

**Walter J. Kunicki, LLB, Donald B. Ellsworth, BComm'80, and Robert A. Levings, BComm'83**, are enrolled in the MBA program at The University of Western Ontario, London, Ont.

**Douglas C. MacRae, BSc(Hon)**, is now owner of Forest Lawn Cycle in Calgary and has ventured into "Supercross" sports events in large stadium facilities.

**Mike Perry, LLB**, was recently elected vice-president of the Yukon Law Society.

**77 Ann Brimer, MA**, director of the Canadian Learning Materials Centre, Killam Library, Dalhousie University, has been granted a six-month leave from February 1-July 31, 1985. Ms. Brimer will be living in Oslo, Norway where she will be studying the influences of the new technology on education in Scandinavian countries. She is particularly interested in how these countries develop and maintain their national identities.



**Cathy Enright, MSc**, a researcher at Dalhousie, and is trying to determine the best diet for juvenile oysters in hatcheries.

**David B. Hogan, MD**, a specialist in Internal Medicine in Halifax, has been elected to Fellowship in the National Medical Speciality Society.

**Sybil A. Shore, BN**, president of Aloette Cosmetics of the Maritimes opened the franchise in October 1982, and since then has been making it into a leading cosmetic company in the Atlantic Provinces.

**Ralph A. Simpson, BSc in Biology**, has obtained a permanent position with Environment Canada as a forest pathology technician.

**78 David B. Barnhill, BComm**, assistant general manager of Phinneys Co. Ltd. in Halifax, has been appointed treasurer and a member of the Board of Directors of the Company.

**Mel D. Bartlett, BSc, MBA'80**, has been named a Fellow of the Society of Actuaries. Mr. Bartlett is an actuary in charge of special projects with the Maritime Life Assurance Company, Halifax, and resides in Lower Sackville, N.S. with his wife, Maureen, and daughter, Mackenzie.

**Wadih M. Fares, DipEng**, has been elected president of the Heritage Language Association of Nova Scotia.

**Sam B. King, BMusicEdu, MLS'78**, has taken a job as librarian for the Victoria General Hospital Library.

**Dr. Robert B. McClure, LLD**, of Toronto, is keeping family traditions at Dalhousie. His granddaughter, Miriam Busby, is enrolled in the first-year Arts program.

**Anne (Meldrum) Raslask, BA**, has been appointed coordinator, Information and Public Relations, Lethbridge Community College in Lethbridge, Alta. Previously she was assistant coordinator, Information Services, at the University of Lethbridge.

**Rosalie C. Starzomski, BN**, has graduated from the University of Calgary with a Master of Nursing degree and is employed at the Vancouver General Hospital as a nephrology clinical nurse specialist. She has recently been appointed to the Board of Directors of the Canadian Association of Nephrology Nurses and Technicians.

**79 David J. Guinan, BSc(Pharm)**, is pharmacist and manager of MacQuarries Drugs Ltd. in Truro, N.S. He is married to Janice Burns of Truro and they have two young sons.

**Jim W. Bottomley, BA**, is coach of the Halifax Lions Hockey Club.

**Charles W.F. Hunter, BEd'79**, has been appointed dean of students at Mount Allison University.

**Donald P. LeBlanc, BSc**, has returned to Nova Scotia from Alberta to work as a consulting engineer to the international offshore oil industry with EPI Offshore Resources.

**Christopher S. Lemphers, BN**, has completed his MEd from the University of British Columbia and has taken a position in occupational health nursing with Health and Welfare, Medical Services in Edmonton, Alta.

**80 Tom P. Coolen, BPhysEd**, has been appointed to the staff of the Ferris State College Bulldogs, Michigan as an assistant coach.

**Bonnie G. Deakin, Costume Studies**, has been appointed assistant professor at York University's Theatre Department, where she will head the costume program. Mrs. Deakin was the head of wardrobe for the Nova Scotia Tattoo for 6 years and Neptune Theatre for 2 years, before her recent appointment.

**Bill McIntyre, MPA**, is living in Sydney, N.S. where he is employed by the Cape Breton Development Corporation as development officer for Television Industries.

**Dr. Laurier L. Schramm, PhD**, formerly research scientist, has been promoted to senior research scientist in the division of Oil Sand Processing with Syncrude Canada Limited's research department in Edmonton, Alberta.

**Dr. Catherine R. Slaunwhite, BScHealthEd, MD'84**, is a member of the Armed Forces. She and her husband, Christian Robart, have moved to Mississauga, Ont. where she will do her internship year in the Toronto area.

**81 Ann P. Baker, MBA**, won a race of six miles through Lincoln Park, Chicago, where she has been living for the past three years, to raise money for cancer research and to honor the memory of Terry Fox. Ann also participated in the New York Marathon in the fall of 1984.

**John D. Begin, BSc, DipEng'82**, received a degree in Electrical and Electronic Engineering, with distinction from TUNS and is now furthering his studies at the University of Waterloo, for his Masters degree and PhD.



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**Freeman T. Churchill**, BPhysEd, a fitness and training consultant at the Nova Scotia Sports Medicine Clinic, was race director for the Halifax Marathon in October 1984. He has completed eight marathons, including those at Boston and Ottawa where he set a personal best time of 2:32.17 in 1983.

**Bruce MacGowan**, BComm, has accepted a position with Revenue Canada as a Federal Sales Tax Auditor in London, Ontario.

**Paul E. Rand**, BA, DipPublicAdm'83, MPA'84, is chief financial officer of the Guysborough County District School Board.

**Bruce G. Stephen**, DipPublicAdm, is chairman of the Nova Scotia Boxing Authority.

**James D. Wiswell**, MBA, is a real estate analyst, Finance and Administration, Special Projects with the Bank of Nova Scotia in Toronto.

**82 Stephen D. Adams**, BSc, has founded a miniconglomerate of three small businesses in the Halifax area.

**Lawrence G. Dobranski**, BSc(Hon)EngPhys, was awarded an MSc(Eng) in Physics at the recent fall convocation of Queen's University. He is now a scientific analyst with I.P. Sharp Associates in Ottawa.

**Joann (Williams) Slaney**, BSc, has been named an associate of the Society of Actuaries. She is with the Prudential Assurance Company in Kitchener, Ontario.

**Carole M. Thompson**, BA, and her twin brother, **Andrew G. Thompson**, BA, have received Duke of Edinburgh gold awards from His Royal Highness The Duke of Edinburgh in Moncton, N.B. on September 26, 1984 for their involvement in community service.

**83 Jennifer L. Bates**, BSc(Hon), after working with the Nova Scotia Department of Mines and Energy for 1½ years, has recently joined Ocean Chemical Limited as a trace metal geochemist.

**Elsie L. Blake**, MPA, has been appointed executive director of the Nova Scotia Family and Child Welfare Association.

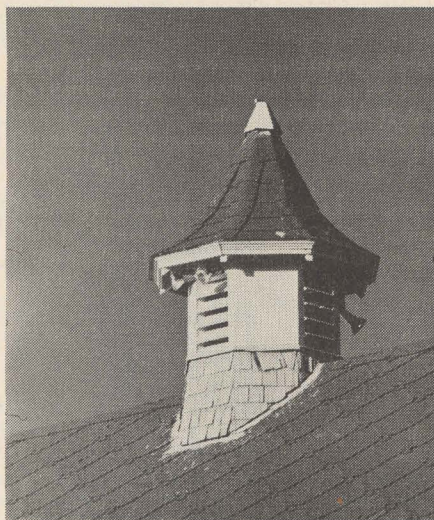
**David G. Harris**, BComm, MBA'84, is employed by the Continental Bank of Canada in Halifax and is nearing the completion of his R.I.A.

**Bonnie J. MacDonald**, BEd, was appointed high school liaison officer by Saint Francis Xavier University in August 1984.

**Anna M. Pendergast**, BPhysEd, was named senior female player of the year by Basketball Nova Scotia.

**Karen J. Robicheau**, BN, is presently working in the field of acute oncology at the Foothills General Hospital in Calgary, Alta.

**Gary Ryan**, BComm, has been appointed sales executive for the Maritime provinces with Claude Neon Limited.



**Gwen M. Whitford**, MLS, is now the regional libraries cataloguer for the Nova Scotia Provincial Library.

**84 Karen A. Cameron**, BSc(Pharm), is employed with Queen Elizabeth Hospital in Charlottetown, P.E.I.

**Lisa Baron**, MLS, has moved to Beeville, Texas where she is a reference librarian.

**Kay F. Desborough**, MA in education administration, has accepted the position of manager of the Microcomputer Information Centre (MIC) in the Killam Library at Dalhousie. The MIC will provide advice on the use and purchase of microcomputer equipment and software and answer questions on such topics as communications.

**Blair F. Joudrey**, BPhysEd, has accepted a position as physical education teacher in Gillam, Manitoba.

**Brenda K. Taylor**, BN, has successfully completed her RN examinations and is employed at the Vancouver General Hospital.

**Dr. Charles George Drake**, LLD, London, Ont., was installed as the 65th president of the American College of Surgeons on Oct. 25, 1984.

## Births

**Paul A. Arnold**, BSc'79, and **Jean (Armitage)**, BMusEd'80, on February 15, 1984, their first child, Devon Scott.

**Wanda V. (Donigiewicz) Brown**, BN'75, and **Kelvin Brown**, their first child, a daughter, on February 2, 1984.

**Peter M. Bryson**, BA'76(K), BAHonrCert'77(K) and **Patricia (Morris)**, BA'80, on October 18, 1984, their second child, Barbara, a sister for James. Patricia is teaching piano and Peter is practising law in Halifax.

**Janice (Hawkins) Bull**, BN'76, and **Edward W. Bull** of Woodstock, N.B., a daughter, **Laura Emily**, a sister for **George Warren**, on December 29, 1983.

**Gordon L. Campbell**, MPA'77, and **Barb Campbell** in Charlottetown, P.E.I.; fall 1983, a daughter, **Sarah**.

**Kevin M. Cody**, BComm'80, and **Donalda (MacDonald) Cody**, Halifax, on September 25, 1984, their first child, **Neal Patrick**.

**J. Robert Bentley**, BComm'80, and **Dr. Patricia K. Dauphinee**, BSc'78, MD'82, Halifax, on August 26, 1984, a daughter, **Jennifer Michelle**, a sister for **Christopher**.

**C. William Denyar**, BSc'81, and **Sue (Eaman) Denyar**, Calgary, Alta., on October 25, 1984, their first child, a son, **Charles William "Chad"**. Bill is a geologist with Petro-Canada.

**Michael S. Dickie**, BSc'80, BComm'82, and **Martha (Cluett) Dickie**, MSVU'79, St. John's, Nfld., on August 26, 1984, a son, **Craig Alexander**. The proud grandparents are **Dr. William K. Dickie**, DDS'54, and **Kathryn Dickie**, DipTeaching'50(Teacher's College, Truro), of Halifax.

**Dr. Robert C. Dunphy**, DDS'83, and **Nancy Dunphy**, Antigonish, N.S., a son, **Adam**.

**Bill Fioratos**, BSc'76, and **Joanne (Hines) Fioratos**, Dartmouth, on October 23, 1984, a daughter, **Natalie Joanne**, a sister for **Vicki**.

**William M. Fitch**, MD'77, and **Linda Rowe**, BSc'76(MSVU), Moncton, N.B., on May 1, 1984, a son, **William Rowe**.

**Colin H. Fox**, BComm'82, and **Cathy (Fisher)**, BA'82, Halifax, on November 9, 1984, their second son, **Craig Andr w**. Craig is their third child.

**Lindon H. Garron**, BSc'76, and **Jo-Anne Garron**, Ottawa, Ont., on March 17, 1982, their first daughter, **Kelly-Anne Lynn**, a sister for **Jeffrey** and **Jonathan**. The family is now living in **Gondola Point, N.B.**

**Doug N. Keeling**, MD'79, and **Dalyce Keeling**, Moncton, N.B., on October 20, 1984, **Kaley**, a sister for **Alexis**.

**Larry M. Langley**, BComm'75, and **Joan (Selig)**, BPhysEd'75, Halifax, on June 9, 1984, a daughter, **Jean Marie**.

**Drs. Ross**, Md'79, PostGradMed'83, and **Peggy (MacRae) Leighton**, MD'77, in Toronto, Ont, on October 14, 1984, a daughter, **Jennifer Laura**.

**Nancy Kimber MacDonald**, BA'70, MSc'74, and **Wayne P. MacDonald**, BPhysEd'72, Halifax, on December 18, 1983, a son, **Kirk**.

**Ian R. MacIntosh**, BA'75, MLS'77, and **Kathy (Jackson)**, BSc'76, Sydney, N.S., on August 28, 1984, their second child, **Jackson Edwin**, a brother for **Adrienne**.

**Nancy (MacLaggan) McKay**, DipPhysio'75, BScPhysio'80, in Bathurst, N.B., on August 5, 1984, **Melissa Dawn**, a sister for **Bradley**.

**Heather (Killam) McNutt**, BA'70, and **David McNutt**, Campbell River, B.C., on September 1, 1984, a daughter, **Amanda Gael**.



## DALUMNI

**Kimberly (Henderson) Nixon**, BSc'75, BEd'76, and Terry L. Nixon, Kentville, N.S., on March 22, 1984, a daughter, Shawwna Leigh. Both Kim and Terry teach in Kings County, N.S.

**Ray I. Oake**, BPhysEd'74, and Marie Doyle Oake, Sydney, N.S., on October 21, 1984, their second child, a son, Christopher Raymond, a brother for Natalie Marie.

**Jim E. Oliver**, DipPublicAdm'76, MPA'77, and Margot Beck, Halifax, on May 24, 1984, a daughter, Kathryn (Katie) Anne.

**Carol Dubinsky Pascoe**, BA'72, MPA'75, and Lawrence S. Pascoe, BComm'72, LLB'75, Ottawa, on July 3, 1984, a son, Noah Gabriel, a brother to Byron Ethan.

**John W. Randles**, BA'74, BComm'75, MBA'77, and Judi Randles, Windsor Junction, N.S., on November 3, 1984, their third son, Joseph Charles, a brother for Timmy and Jeremy.

**Mary (MacCara) Reid**, BSc(Pharm)'74, and David Reid, Halifax, on June 5, 1984, a daughter, Elizabeth MacCara.

**Claudette (LeBlanc) Robichaud**, BSc(Pharm)'80, and Paul Robichaud, Saint John, N.B., on June 13, 1984, a daughter, Nicole Josee.

**Perry M. Sisk**, BSc'78, and Mary Anne (Wade), Halifax, on August 30, 1984, a son, Jonathan Patrick, a brother for Tiphannie Anne.

## Marriages

**APOLOGIES TO:** David P. Harris, BPhysEd'76, who was married to Beverley Haas in June 1984, not Beverley A. Canaan, as was previously printed.

**Joanne E. Anderson**, BSc'81, to Gary J. Schmidt, BA'79, recently in Halifax.

**Claude M. Arsenaault**, BSc(Pharm)'82, to Susan J. Hall, '82(MSVU), on August 6, 1983. The couple are living in Bathurst, N.B.

**Lorne W. Astle**, BSc'77, to Theresa M. Gillis recently in Sydney, N.S.

**Janet E. Bailey**, BSc'77, DDS'83, to Ronald A.M. Buckley, BSc'77, DDS'82, in Dartmouth, May 19, 1984.

**Glenn R. Baker**, BPhysEd'83, to Mary Jane Hart in Dartmouth in the summer of 1984.

**Mary F. Barron**, BA'73, to Wayne H. Schram in Halifax, August 18, 1984.

**Joseph H. Beaton**, BA'72, to Deborah A. MacInnis in Halifax in the summer of 1984.

**Judi A. Bedley**, Arts'71, to George Williams in Halifax on December 21, 1984.

**Charles T. Berryman**, BSc'79, to Linda A. McSwain recently in Halifax.

**Carla M. Bork**, BN'84, to John A. Forbes recently in Dartmouth.

**Robin Dean Browne**, BSc'79, to Beverley M. Lawlor in Dartmouth, N.S. in the summer of 1984. The couple reside in Saskatoon, Sask.

**Helen C. Campbell**, BSc'78, to David C. Ryan recently in Bridgewater, N.S.

**James L. Chipman**, Commerce'78, to Carol M. Bethune on September 29, 1984, Wolfville, N.S.

**Hilding (Danny) Christianson**, BSc'83, Dip Eng'83, to Debra C. Lowe in Dartmouth in the fall of 1984.

**Janet Cleary**, MPA'82, to Charles Steele on April 18, 1984.

**Delbe L. Comeau**, BEd'73, to Mary E. Guptill in Halifax on December 29, 1984.

**Dr. Roy A. Crow**, BSc'79, MD'83, to **Dr. Michael R. Murray**, BSc'75, BScHonrCert'79, MD'83, PostGradMed'83, recently in Halifax.

**Brenda J. Currie**, LLB'84, to Terry Czechowsky, LLB'84(U of Alberta), on August 10, 1984. The couple are living in Calgary, Alta.

**Nancy Davidson**, BA'77, MPA'81, to Eric Lerhe in Halifax, June 30, 1984.

**Todd A. Dickey**, BComm'81, to Sharon D. Rushbrook in Fredericton, N.B., September 29, 1984.

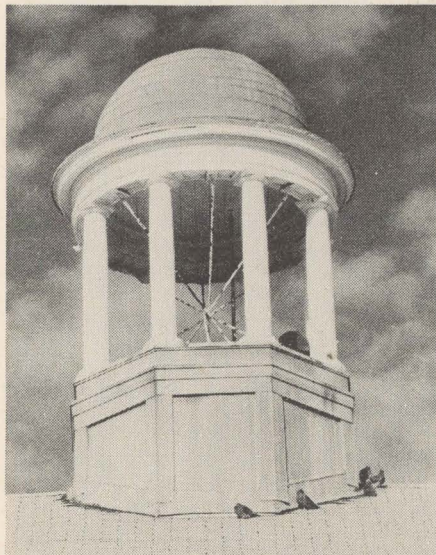
**Carolyn L. Drysdale**, BSc'81, to Roderick G. Buhr recently in Halifax.

**R. Alan Edward**, BSc'77, to A. Marie MacNeil in Montreal, P.Q., July 13, 1984.

**Ann F. Fear**, BComm'82, MBA'83, to **Andrew D. Parsons**, BComm'81, MBA'83, in Halifax, on December 22, 1984.

**Christopher G. Flinn**, BSc'73, MSc'76, PhD'79, to Clare L. McLevey recently in Dartmouth. The couple are living in St. John's, Nfld.

**Dr. Marguerite A. Flinn**, MSc'66, to **Dr. Carlos A. Ruiz**, MD'63, recently in Halifax. The couple are living in Vancouver, B.C.



**Ronald G. Fougere**, Science'78, to Roberta M. Macorig in Halifax in the summer of 1984.

**Debra S. Geddes**, BSc(Pharm)'83, to Scott A. MacLeod in Lower Sackville, N.S., October 5, 1984.

**Neil A. Gillespie**, DipEng'80, to Margaret L. Pearson in Halifax, October 6, 1984.

**Dr. David A. Grant**, BSc'78, MD'82, to Ellen R. O'Neill of Saint John, N.B., on September 1, 1984. The couple are living in Kentville, N.S.

**Margaret E. Gunn**, MLS'84, to William Robertson in late October 1984. The couple now lives in Espanola, Ontario.

**Dr. Marilyn F. Harris**, DipPharm'55, to Dr. Bruce D. Martin in Pittsburg, Pennsylvania.

**E. Charlotte Harvie**, BA'70, to Wilbur Starratt, (Acadia'52), of Halifax, in August 1984.

**Patricia L. Helm**, BSc'82, BSc(Hon)'83, to **Paul G. Neima**, BSc'82, BSc(Hon)'83, Amherst, N.S. in the summer of 1984.

**Gary M. Henderson**, BSc'79, DDS'83, to Linda R. Wenborne in French River, Ont. in the fall of 1984. They reside in Barrie, Ont.

**Susan M. Herson**, Arts'74, to Ross N. Cooley, Halifax, in the summer of 1984.

**Sharon B. Himmelman**, BSc'78, MSc'80, to W. Andrew Heighton, Amherst, N.S. on July 14, 1984. They are living in Saint John, N.B.

**Margaret R. Huxtable**, BComm'78, to Raymond V. Faulkner recently in Halifax.

**Catherine D. James**, BA'80, BEd'80, to **John C. McKenna**, BComm'77, in Paget, Bermuda, on October 26, 1984.

**Susan M. Janega**, BComm'84, to Daniel F. Baird recently in Dartmouth.

**Lisa A. Jeans**, BSc'79, to Donald E. Mingo, Sutherland's River, N.S. in the summer of 1984.

**Bernard J. Kelly**, BSc'79, to Karen E. Haines, BEd'81(Acadia), on August 11, 1984. They live in Windsor, N.S.

**Raymond F. Kelly**, BSc'79, to Nancy McDevitt, BA'84(Guelph), in Toronto, Ont., June 9, 1984.

**Wanda L. Knapman**, Science'78, to Graham W. White in Halifax, October 6, 1984.

**Michael C. Laing**, Science'74, to Linda H. Galpin recently in Dartmouth.

**Catherine M. Li**, BSc'83, to Stephen Lunn in Dartmouth, August 18, 1984.

**Joanne M. Livingstone**, DipPubHlt'67, to **Michael S. Hughes**, BComm'76, in 1983. Michael, in 1983, was appointed to a senior internal auditor position with the Department of Veterans Affairs in P.E.I.

**Kim J. Lloyd**, BSc'79, to **James C. Day**, BSc'79, in Halifax, October 6, 1984.



## DALUMNI

**Marie I. MacDonald**, BSc'81, to **Michael F. Chisholm**, BSc'81, in Halifax, October 6, 1984.

**Grant A. MacLeod**, BSc'79, to Constance E. Baker in Fredericton, N.B., October 6, 1984.

**Eleanor G. Mader**, Science'78, to **John B. Power**, MBA'79, Halifax, in the summer of 1984.

**Katherine E. Mantin**, Arts'77, to John D. Gouchie in Halifax, summer of 1984.

**Stewart D. McInnes**, BA'58, LLB'61, to Shirley M. Bowness in Halifax on December 29, 1984. Mr. McInnes, a Halifax MP, has been named a parliamentary secretary and will assist International Trade Minister James Kelleher.

**A. Susan McIntyre**, BA'82, BAHonrCert'83, to **Peter R. Rans**, PhD'84, in Halifax, July 20, 1984. Peter was awarded the Malcolm Honor Award during the fall convocation. The couple are now living in Kingston, Ont.

**Christopher S.F. McKee**, BComm'81, to Donna MacRyan in Halifax in the summer of 1984.

**Drs. Rebecca F. McKenzie**, MD'82, and **Donald G. MacIntosh**, PostGradMed'83, in Middleton, N.S., autumn of 1984.

**Stewart G. Moen**, BComm'73, to Eunice-Hope MacEwen recently in Halifax.

**Judith L. Morash**, BSc(Pharm)'75, to Gerald M. Doucette recently in Dartmouth.

**Maynard (Sandy) Morrison**, BSc'81, BSc(Hon)'82, to Judith A. Cruickshank recently in Marion Bridge, N.S.

**Frances I. Norris**, BPhysEd'78, to Brian Gifford in Edmonton on December 29, 1984. In September 1984, Frances moved to Victoria, B.C., where she is continuing her consulting business in management and communications.

**Stephen G. Ogden**, BComm'75, to Deborah M. Wilson in Halifax in the summer of 1984.

**Susan A. Perry**, Science'80, to **Stephen D. Wilcox**, BSc'82, recently in Dartmouth.

**M. Linda Reid**, BA'80(K), to Peter A. Moreau in Amherst, N.S., on August 2, 1984. Both are attending Acadia University where Linda is taking a BSc(Psychology) and Peter is taking a BMusic.

**Mark L. Richardson**, LLB'81, to Edith Truax in Halifax, July 28, 1984. Mark is enrolled at the Atlantic School of Theology.

**Paula L. Robb**, Arts'78, to Michael J. Alexander in Halifax, December 15, 1984.

**Lynn L. Rodgers**, BN'84, to John T. Russell in Dartmouth, October 6, 1984.

**Maurina M. Rose**, BA'79, MPA'81, to Brian Fleck in Sydney, N.S., September 8, 1984. They are now residing in Ottawa.

**Shawn C. Russell**, BComm'83, to Erma L. Robar in Halifax, November 17, 1984.

**Carol E. Scott**, DDH'76, to **Greg A. Burk**, BSc'77, DDS'81, in Chester, N.S., September 8, 1984.

**Wayne W. Sumarah**, BComm'82, to Sandra Holingum in Moncton, N.B., November 10, 1984.

**David V. Sutherland**, BSc'79, to Mary E. Sutherland in Whycomagh, N.S. in the fall of 1984.

**David J. Sweett**, BComm'80, to Trina I. Chaffey in Halifax in the summer of 1984.

**Bryan F. Theriau**, Science'73, to Cheryl L. Acker in Kingston, N.S. in the summer of 1984.

**Paula R. Todd**, BSc'81, to Douglas M. Barrett recently in Halifax.

**Shirley E. Todd**, BN'81, to Gordon R. Brunt in Halifax, October 6, 1984.

**Robert J. Tordon**, BSc'80, to Sandra Dyer recently in Halifax.

**G. Elizabeth Tuck**, BA'82, BAHonrCert'83, to **Jonathan M. Eayrs**, MA'80, in Georgetown, P.E.I., October 6, 1984.

**Irma VanStavel**, BSc'81, to **Daniel J.M. Vaughan**, BSc'80, in Barrington, N.S. in the summer of 1984.

**Richard D. Wiseman**, Commerce'73, to Karen A. Vienneau in Pictou, N.S. in the fall of 1984.

**Leesha Paul Zed**, BA'77, to Judith-Anne Irving in Buctouche, N.B. in the summer of 1984.

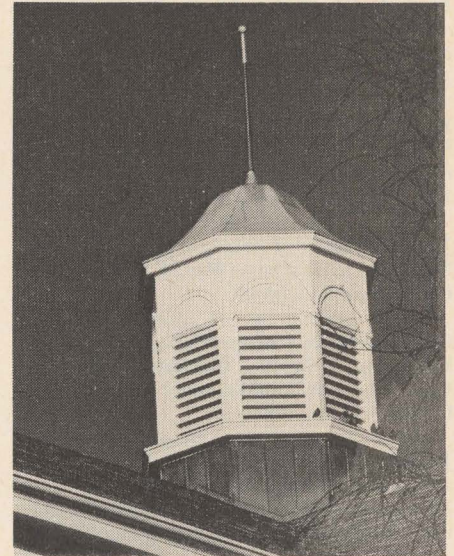
## Deaths

**Judge Robert E. Inglis**, Q.C., BA'09, LLB'20, of Halifax, on September 20, 1984. He was a former member of the Dalhousie Board of Governors, and for 12 years (1947-59) a provincial magistrate. After his retirement from the bench he continued to fill in for 15 years when incumbent judges were absent. Following graduation from Dalhousie with his BA, he taught at Pictou Academy, returned to Dal to get his law degree. World War I interrupted his studies. After the war he studied briefly in England and in 1920 returned to Dalhousie for his LLB. Judge Inglis was the first lay chairman of the Halifax Presbytery and a member of many community organizations.

**Bertha Ogilvie Archibald**, Pharmacy'17, in Halifax, on October 8, 1984. She was the first female graduate of Dalhousie's School of Pharmacy, and worked as a pharmacist for 29 years at the Victoria General Hospital. She was a contributing member of the Nova Scotia Poetry Society, past-president of the Women's Temperance Union and a founding member of Mulgrave Park Baptist Church.

**Mary Parker Freeman**, Licentiate in Music'17, of Halifax, on October 18, 1984.

**Dr. Solomon J. Turel**, MDCM'17, in Miami Beach, Florida, on October 24, 1984. Dr. Turel, a member of the New York Dalhousie Club, was a general surgeon in New York City from 1924 until his retirement in 1970.



**June Irene Pace**, Arts'18, in Windsor, N.S. on July 1, 1984. Ms. Pace taught school in Halifax for many years before moving to Wolfville, N.S.

**Mary E. (Cox) Archibald**, Arts'20, of Truro, N.S., on November 30, 1984. She was a former teacher in Truro, N.S. and at the School for the Blind in Halifax.

**Dr. Alexander S. Murray**, BA'20, MA'21, of Montreal, on November 20, 1984. Dr. Murray served in parishes in Prince Edward Island, New Brunswick and Quebec. At the time of his retirement he was port chaplain in Quebec.

**Rev. Dr. Victor B. Walls**, BA'21, in Blackville, N.B., on September 19, 1984.

**Edward T. Lloyd**, Arts'23, in Lindsay, Ontario, on October 14, 1984.

**Frances E. (Sharp) Pearce**, DipPubHlt'23, in Halifax, on December 6, 1984.

**Willett James Mills**, Arts/Science'24, in Halifax, on September 21, 1984. Mr. Mills was partner and secretary treasurer in Mills Brothers Ltd., Halifax, with his brother, H.O. Mills.

**William G. Ormond**, DipPharm'24, in Amherst, N.S., on December 18, 1984. He was owner of a drugstore in Amherst, and an active member of the community, serving on many committees.

**J.A.C. (Jack) Lewis**, BSc'27, in Kentville, N.S., on December 6, 1984.

**Dr. Douglas F. MacDonald**, MD'29, on November 30, 1984, in Yarmouth, N.S., where he practised medicine for 50 years. He was past-president of both the Nova Scotia Medical Society and the Yarmouth Rotary Club.

**Frederick C. Zinck**, BSc'31, of Cedar Grove, New Jersey, on November 17, 1984. After graduation he returned to the United States where he served with the FBI for 28 years.

**Margaret A. MacDonald**, BA'34, MA(Columbia University), in Halifax, on October 29, 1984. Ms. MacDonald taught for many years in the Halifax



## DALUMNI

City schools and briefly in Halifax County, Saskatoon and LaMacaza, P.Q.

**David Cunningham Guildford**, Engineering '41, in Halifax, on November 19, 1984. An early and lifelong love of music led Mr. Guildford to form his own band and over the years he was a popular volunteer pianist at many gatherings. Mr. Guildford served as a lieutenant in the Royal Canadian Artillery in Italy and Europe during the Second World War. On return from overseas he joined Guildford's Ltd. and later formed his own chemical supply business.

**John Harold MacAdam**, LLB'41, in Ottawa, on August 29, 1984.

**Andrew E. McManus**, Arts'41, in Halifax, on September 15, 1984. He was a former employee of the Motor Vehicle Branch, Department of Highways. Mr. McManus, a well-known musician during the early 1930s and 50s, played with the late Gerry Naugler's and Donald Low's orchestras. He was also a member of the early Halifax Symphony.

**Rev. William C. Amey**, BA'42, in Sydney, N.S., on December 9, 1984. He served in pastoral charges in the Maritimes and retired in 1982.

**Dr. Arthur W. Titus**, BSc'42, MD'47, in Halifax, on December 1, 1984. Dr. Titus was a well-known Halifax physician and former director of Maritime Medical Care Inc. While at Dalhousie he was president of the Student Council and the Society of Medical Students, and served terms as president of the Sigma Chi and Phi Chi fraternities.

**Dr. Edwin M. Banks**, DDS'50, on August 27, 1984, Whitehorse, Yukon. Dr. Banks was first employed by the Nova Scotia Department of Health and then entered private practice in Shelburne, N.S., before moving to Whitehorse.

**Joseph Clarence Dooley**, Engineering '50, in Halifax, on September 24, 1984. Mr. Dooley worked as an engineer with Maritime Tel & Tel for 35 years.

**Hector McInnes Porter**, LLB'52, BA'54, in Halifax, on December 11, 1984. Mr. Porter was president of Scotia Chevrolet Oldsmobile Cadillac Limited. He was active in various professional automobile associations.

**Dr. John Edward Campbell**, MD'58, in Toronto, on October 18, 1984. One of Canada's leading radiologists, Dr. Campbell was a former chairman of the department of radiological sciences at Sunnybrook Medical Centre and a professor of Radiology at the University of Toronto.

**Terrance R. Nifort**, BSc'71, of Dartmouth, on September 28, 1984. He was an elementary school teacher in Dartmouth.

**Dr. Elizabeth Catherine Weld**, MD'81, on October 11, 1984, while serving as a travelling physician with the Grenfell Mission, based at Melville Hospital, in Goose Bay, Labrador. She's the daughter of **Peggy**, BA'54, BEd'55, and **Gordon Weld**, DipEng'53, of Halifax. The friends of Elizabeth C. Weld have founded a memorial fund to establish scholarships for female medical students at Dalhousie.

**Ian Joseph MacEachern**, BSc'83, of Halifax, formerly of Port Hawkesbury, N.S., on December 12,

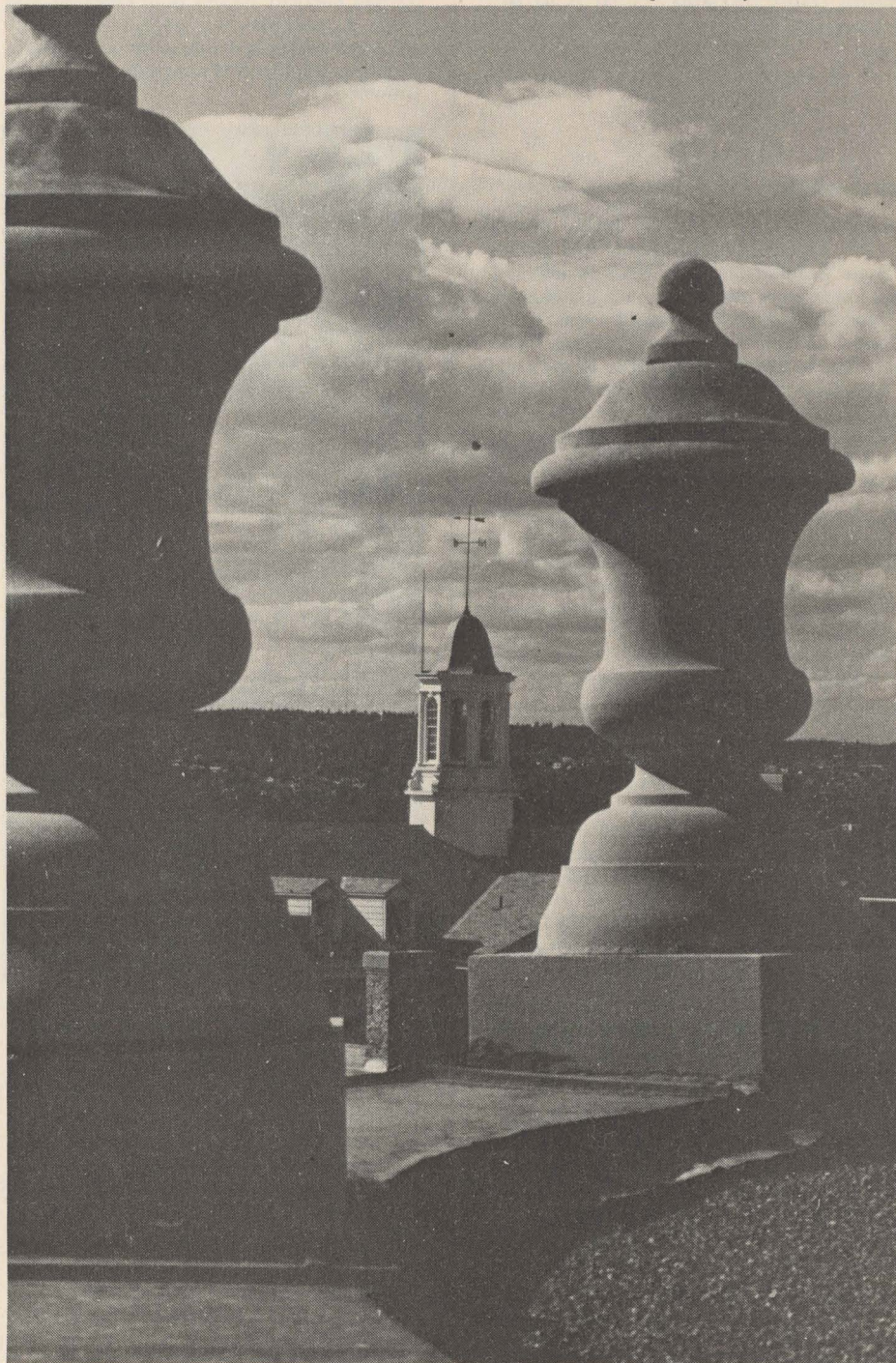
1984. He was a geologist, owner and president of Tillex Consultants Inc. and was currently employed with the federal and provincial Mines and Energy Department. He was studying part time for a MSc in Geology at Dalhousie.

**Mark Anthony Peter Ponsford**, BSc(Hon)'81, of Halifax, on December 12, 1984. He was a geologist with the provincial Mines and Energy Department.

## Wanted: old photos

Get out your family photo album. The Dalhousie Art Gallery wants to borrow old photographs of women students and grads for a special exhibition to mark DAL WOMEN — 100 YEARS, the centenary of the first graduation of a woman at Dalhousie. Call Ann Bernier, 902 424 2403.

*Tower photos by Paul Chislett*





## Ballot 1985

Dalhousie Alumni Association Election of members to:

The Board of Directors of the Association.

The Board of Governors of the University.

Following are brief pen pictures of the candidates in this year's election.

Read them carefully, then mark your ballot (page 39) and return it to the Alumni Office not later than April 30, 1985.

### BOARD OF GOVERNORS

**Mrs. Margie Cooper** (Baxter), BA'64, BEd'65; former member, YWCA Board and Junior League Board and member, volunteer organization committees; member, Nova Scotia Museum Board; involved in student activities when at Dalhousie; member, Alpha Gamma Delta; works part-time as practicum supervisor in the Child Study Department of Mount Saint Vincent University; currently serving a two-year term on the Board of Directors of the Dalhousie Alumni Association, committees: reunion, program, student relations; leisure: skiing.

**Peter Doig**, BA'51, BComm'53; manager of corporate insurance for National Sea Products; life president, Class of '51, active in community affairs; member, Ashburn Golf Club and Halifax Board of Trade; currently president, Dalhousie Alumni Association; served on various Alumni Association committees; serving a two-year term on the Dalhousie Board of Governors; leisure: golf.

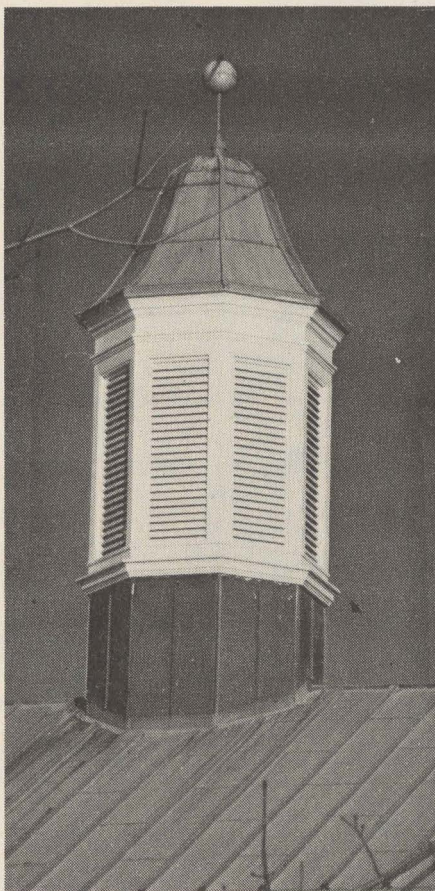
**Brian Flemming**, Q.C., BSc, LLB'62, LL.M., Diploma International Law; partner, Stewart, MacKeen & Covert, Halifax; founding president of the Dalhousie Law School Alumni Association; was a part-time professor in various international law courses at the Law School and continues to lecture on a periodic basis for the Law School and the Faculty of Arts and Science; former member, Dalhousie's Board of Governors; director, Noranda Incorporated, First Choice Canadian Communications, and other companies; president, Symphony Nova Scotia.

**Mrs. David Fraser** (Jean Turner) BA'55; involved in church and community organizations; serves on the executive of the Stitchers of Nova Scotia; teaches crewel; served on organizing committee for the 1982 Canadian National Volleyball Tournament; volunteer, Dalhousie Classic (Volleyball) Tournament; currently serving a two-year term on the Board of Directors of the Dalhousie Alumni Association and committees include program and quality of student life; alumni representative on the Dalhousie Art Gallery Advisory Council.

**David Ritcey**, BA (Honours) '63, LLB'67; lawyer, McInnes, Cooper & Robertson; has been involved with the Dalhousie Alumni Association since 1980, serving two years as the Association's treas-

urer; currently completing a three-year term on the Board of Governors of Dalhousie University; member, Nova Scotia Barrister's Society, Canadian Bar Society, the Waegwoltic and Halifax Clubs, and the Royal Nova Scotia Yacht Squadron.

**Chester B. Stewart**, BSc'36, MDCM'38, LLD'79, Master of Public Health (Johns Hopkins'46), Doctor of Public Health (Johns Hopkins'53); past president, Dalhousie Alumni Association; Professor Emeritus of Epidemiology, Dalhousie; Dean Medicine, Dalhousie, 1954-71; vice-president of Health Professions, 1971-76; holds fellowships in the Royal College of Physicians of Canada and the American Public Health Association; has received honorary degrees from UPEI, St. FX, Mount A., and Dalhousie; an Officer of the Order of Canada (1972); currently completing a three-year term on the Board of Governors of Dalhousie University.



### BOARD OF DIRECTORS

**George Thompson**, BComm'33, LLB'36; life president, Class of '33; Malcolm Honor Award '33; president, Acadian Lines Ltd.; director, Nova Scotia Safety Council; director, Greyhound Sightseeing Network; honorary vice-president, Canadian Institute for the Blind; director, Canadian Bus Association; member of reunion committees and currently serving a two-year term on the Board of Directors of the Dalhousie Alumni Association; leisure: golf, stamps.

**Dr. Albro MacKeen**, DipPharm'53; MD'59; while at Dalhousie, a member of Student Council, Dalhousie Athletic Club, varsity swim and basketball teams; manager, football team; member,

executive of the Black and Gold Club; member, editorial board of *MeDal* (Medical Alumni magazine); currently serving a two-year term on the Board of Directors of the Dalhousie Alumni Association; alumni representative on the teaching award committee; Tiger supporter, skier.

**Jim Kinley**, BSc'46, DipEng'46; life secretary, Class of '46; Bob Walter Award from Engineering Society, 1946; president, Lunenburg Foundry; president, Lunenburg Foundry Garage; president, Lunenburg Marine Railway; volunteer for the Nova Scotia Fisheries Exhibition Association of Lunenburg; past national president, Navy League of Canada; former member, Advisory Board for Canadian military colleges; leisure: farming and family.

**Mrs. David Chipman** (Carolyn Christie), BA'53; member, Women's Division Shirreff Hall committee; member, Glee and Badminton Clubs while a student at Dalhousie; member, Joan M. Crosby Scholarship Foundation Board; past vice-president, Junior League; currently serving a two-year term on the Board of Directors of the Dalhousie Alumni Association; leisure: golf, bridge.

**Michael D. Casey**, CA, BA'74, employed as a chartered accountant with Barrow Nichol Limited; associate member, Canadian Association of Business Valuators; member, finance committee of Meals on Wheels, Halifax Division; member, Halifax Board of Trade, Oil, and Gas Committee; serves on the Board of Directors of the Offshore Trade Association of Nova Scotia, chairman, of its policy committee; serves on the program committee of the Dalhousie Alumni Association; volunteer, Dalhousie Development Office phonathon; member, Waegwoltic Club.

**Vivian Layton** (Thomson), BA'57; BED'58; teacher at the Convent of the Sacred Heart; past secretary, Women's Division of the Dalhousie Alumni Association; served a three-year term on the Board of Directors of the Dalhousie Alumni Association as a representative of the Women's Division and served on the reunion and program committees; involved with the United Church serving on several local and national committees; co-founder and past president, Bedford Basin University Women's Club; volunteer, UNICEF; leisure: music, piano, organ, tennis, skiing.

**John Russell**, BA'81, Certificate in Public Administration '82; appointed for one-year terms in 1983 and 1984 for the Board of Directors of the Dalhousie Alumni Association, served on publications and by-laws committees, and presently chairs program committee; past vice-president, Dalhousie Student Union, active in identifying issues relating to student attrition during his term; presently employed as Dalhousie University's first administrative trainee and has continued his interest in student issues; attempting to increase programs of interest for younger alumni; member, Board of Directors, Saint Joseph's Day Care Centre, serving on fund raising and personnel committees; served as campus coordinator for the most recent United Way campaign.

**Eric Demont**, LLB'56; lawyer in Wolfville and partner, Demont, Dewar; member, Canadian Bar Society, Nova Scotia Barrister's Society, and Kings County Barrister's Society; president elect, Wolfville Rotary Club; member, Executive Board of Associated Alumni, Acadia University; active in provincial and federal politics; former director, Wolfville Inter-Church Housing Society;



# DALUMNI

treasurer, Wolfville Inter-Church Council.

**Cherry Ferguson**, LLB'72; a lawyer in private practise in Halifax; previously served as general counsel for a public corporation for six years; received LLM in Health Law at the Case Western Reserve in Cleveland; teaches part-time in the Faculty of Medicine a course on law and medicine; taught at the annual refresher course for physicians and hospital administrators; legal columnist for the Canadian Hospital Journal; serves on the Editorial Board for the Canadian Hospital Journal; member, Nova Scotia Barristers' Society; member, Canadian Bar Association and serves on its Health Law Committee; committee member and joint-liaison between the Canadian Bar and Canadian Medical Associations; director — Help Line, Canadian Paraplegic Association, and the Board of Stewards of St. Andrews United Church.

**Ruth Pulsifer** (Murphy), BA'57, BEd'58; married to Orville B. Pulsifer, BA'57; while at Dalhousie active in basketball, yearbook, Shirreff Hall student government; previously taught at schools in Liverpool, Halifax, and Truro; employed by Colchester East Hants District School Board as guidance counsellor at Cobequid Educational Centre in Truro; appointed for a one-year term on the Board of Directors of the Dalhousie Alumni Association in 1984; hobbies: handicrafts, skiing, volunteer work.

**John Chappell**, BComm'79; account executive, Merrill Lynch Canada Corporation; Halifax native; served four years in the RCMP in British Columbia; past administrator and materials manager for the city of Fort McMurray; past purchasing manager of Dalhousie University; member, Purchasing Management Association of Canada; volunteer, Development Office Phonthon; leisure: sailing.

**Miles Sweeney**, BComm'75; chartered accountant with MacKenzie and Company; member, Armadale Kiwanis Club; active member, Nova Scotia Institute for Chartered Accountants; interested in Dal's involvement in community affairs and the quality of student life.

## DALHOUSIE ALUMNI ASSOCIATION BY-LAWS

Changes in the by-laws of the Alumni Association as passed by the Board of Directors in March 1984. Alumni who wish to see all the by-laws of the Dalhousie Alumni Association may do so by contacting the Director of Alumni Affairs, Alumni Office, 6250 South Street, Halifax, N.S. (902) 424-2071.

### 1. NAME

1.1 The office of the Association is at Dalhousie University

### 3. MEMBERSHIP IN THE ASSOCIATION

- 3.0 (1) Any person who has received a degree, diploma or certificate from Dalhousie University;  
 (2) Any person who has been registered at Dalhousie University for the equivalent of one year or more as a full-time student and is not in attendance as a student of the University;  
 (4) A part-time student who has completed five full credit courses and is not in attendance as a student of the University.

### 3.1 Life Members

A Life Member is a member who has paid to the Association an amount determined by the Board of Directors as the Life Membership fee. A Life Member shall be exempt from the payment of annual dues.

*This is dropped due to the fact that anyone who meets the criteria of 3.0 automatically becomes a Life Member of the Association.*

### 6. OFFICERS OF THE ASSOCIATION

#### 6.5 Executive Committee

The Executive Committee shall consist of the President, Vice-President, Secretary, Treasurer, one representative of the Women's Division and the Director of Alumni Affairs, with power to add.

### 7. GOVERNORS

7.0 The Association shall nominate twelve persons as representatives on the Board of Governors of Dalhousie University, as follows:

- (1) The Association shall elect annually three alumni to be its nominees as its representatives on the Board of Governors of Dalhousie University for a three-year term.

### 8. ELECTION OF OFFICERS

#### 8.0 Nominating Committee

Before the first day of December in each year, the Board of Directors shall appoint from its members, a Nominating Committee consisting of a Chairman and two or more other persons.

#### 8.1 Duties of the Nominating Committee

- (1) From among the members of the Association, the Nominating Committee shall nominate as candidates for election:

- (a) twelve Alumni as Directors  
 (b) six Alumni representatives on the Board of Governors

- (2) The Nominating Committee shall present its report to a meeting of the Board of Directors, prior to the first day of February of each year.

8.4 To now read 8.3

8.5 To now read as 8.4

8.6 To now read as 8.5

# Ballot 1985

Please mark choices clearly with an 'X'. Return the ballot form by April 30, 1985, to The Alumni Office, 6250 South Street, Halifax, N.S., B3H 3J5.

## BOARD OF GOVERNORS 1984-87 (two to be elected)

1. Peter Doig, BA'51, BComm'53
2. Brian Flemming, LLB'62
3. David Ritcey, BA'63, LLB'67
4. Chester B. Stewart, BSc'36, MDCM'38, LLD'79

(one to be elected)

1. Mrs. Margie Cooper (Baxter), BA'64, BEd'65
2. Mrs. David Fraser, BA'55

## BOARD OF DIRECTORS 1984-86 (six to be elected)

1. George Thompson, BComm'33, LLB'36
2. Albro MacKeen, DipPharm'53, MD'59
3. Jim Kinley, BSc'46, DipEngin'46
4. Mrs. David Chipman, BA'53
5. Michael D. Casey, CA, BA'74
6. Vivian Layton, BA'57, BEd'58
7. John Russell, BA'81, CPA'82
8. Eric Demont, LLB'56
9. Cherry Ferguson, LLB'72
10. Ruth Pulsifer (Murphy), BA'57, BEd'58
11. John Chappell, BComm'79
12. Miles Sweeney, BComm'75



# DALUMNI

## 9. VACANCIES

### 9.0 Members of the Board of Directors and Officers

Any vacancy of the Officers of the Association shall be filled by the Board of Directors for the unexpired term.

### 9.1 Board of Governors

In the event of a vacancy of any Alumni representative on the Board of Governors, the Board of Directors shall nominate a successor for the unexpired term.

## 10. MEETINGS

### 10.1 Special Meetings

#### 10.1 (4) The meeting shall be conducted under Robert's Rules of Order.

### 10.4 Meeting of the Board of Directors

#### 10.4 (5) The first meeting of the newly elected Board of Directors shall be called by the President and shall be held after the Annual Meeting of the Association.

### 10.5 Absence of the President

#### (1) Add clause

#### 10.5 (2) In the absence of the President and the Vice-President from any meeting of the Association or the Board of Directors, the members present shall elect a Chairman of the Meeting.

*Removal of both clauses. Procedure for conducting meetings in the absence of the President and Vice-President is covered in Robert's Rules of order.*

#### 10.5 (2) The absence of any director from more than three consecutive meetings may result in removal from the Board at the discretion of the Executive Committee.

## 11. OFFICIAL PUBLICATIONS

### 11.0 The official publications of the Association are "Dalhousie Alumni News" and "Dal Memo," issued at the direction of the Board of Directors.

### 11.1 The financial control, the editorial management, the publication and the circulation of the "Dalhousie Alumni News" is vested in the Board of Directors.

*Removal of clause. This is now part of the Director's responsibilities.*

## PROPOSED CHANGES, DECEMBER 1984

## 5. BOARD OF DIRECTORS

### 5.0 (8) President of the Student Union of Dalhousie University. In the absence of the President, the Vice-President may attend the meeting.

*The Vice-President is permitted to be a director in the absence of the President*

### 8.2 Candidates for Elections

#### 8.2 (2) Three Alumni to be nominees of the Association as its representatives on the Board of Governors of Dalhousie University, to be elected for a three-year term.

### 8.3 Nominations in Writing

The Board of Directors shall place on the ballot as nominees the names of all members who have been nominated in writing by at least ten members of the Association, provided such nominations are received by the Secretary on or before the first day of February.

*This clause is to be dropped. This provision is covered by 8.1(5).*

(4) If any representative to be nominated under article 7.0 (3) is already a member of the Board of Governors of Dalhousie University, the Executive Committee shall nominate a member of the Board of Directors to fill that position on the Board of Governors.

*The change is housekeeping in nature. "Executive Committee" replaces Association and "Board of Directors" replaces Association in order to reflect what actually happens in such a case.*

(5) The Nominating Committee shall invite suggestions for nominations from among members of the Association, prior to the first day of February of each year.

*This is a new clause. This provides a vehicle for the Committee to receive nominations from as many avenues as possible, eg. Board of Directors, individual alumni.*

## 10. MEETINGS

### 10.4 (6) All Meetings shall be conducted under Robert's Rules of Order.

*A new clause. Board of Directors meeting are required to be conducted under generally accepted and standard rules of order.*

### 10.5 Absence of the President

#### (1) Text.

(2) In the absence of the President and the Vice-President from any meeting of the Association or the Board of Directors, the members present shall elect a Chairman of the meeting.

*Removal of clauses. Procedure for conducting meetings in the absence of the President is covered in Robert's Rules of Order.*

### 15.1 Any proposed amendment shall, before being presented in 15.0, be considered at a duly called and constituted meeting of the Board of Directors.

### 15.2 Written notice with a copy of the proposed amendment shall be mailed to each member of the Board of Directors at least 3 weeks prior to the meeting of the Board of Directors at which the proposed amendment is to be considered.

*15.1 and 15.2 are new clauses. They define the procedure for introducing to the Board of Directors proposed changes to the By-Laws.*

## Go ahead. Spoil yourself

### *Up the Volga, down the Rhone*

The Golden Ring of Russia! Doesn't that pique your curiosity? Imagine all the wealth of the czars and the spectacular Peter's Palace — an ensemble of 20 royal mansions and pavilions, surrounded by 800 hectares of parks containing more than 140 fountains. Spend four days in Moscow investigating St. Basil's Cathedral, Lenin's Mausoleum, the Kremlin, and the famous Red Square before embarking on a four-day cruise along the Moscow Canal and the mighty Volga River. Visit Yaroslavl, founded in 1010, and its group of 17th-century cathedrals; Vladimir; Suzdal, the one-time capital of Russia and historical fantasyland which preserves the atmosphere of an 18th-century village; Pereslavl-Zalessky. And finally, Leningrad, the "Venice of the North," where the Hermitage contains over two million works of art and may just be the greatest art museum in the world. Leningrad is truly lovely.

But if Russia doesn't tickle your fancy, how about a European holiday, with a river cruise to boot! First, for three nights, it's Paris. From there travel to Lyon via the world-famous, high-speed TGV train to board the M/S *Fleur de Rhone* for your six-night cruise meandering through the lovely Rhone River Valley. Experience Roman ruins firsthand — the baths, aqueducts, mosaics — as you stroll through Lyon and Vienne. Valence, built on a series of terraces rising from the Rhone, offers the St. Apollinaire Cathedral, Renaissance houses, Maison des Têtes, and the Art Gallery. There's Viviers, Orange, and Avignon, the 14th-century seat of the Popes in France. Disembark in Avignon and motorcoach to the French Riviera and Cannes, the radiant city of the French Riviera with its five miles of sandy beaches, three casinos, gardens — and the Mediterranean. What a way to go! Try one of these carefree holidays. Spoil yourself and be spoiled. You can. Just contact the Alumni Office for detailed brochures. □



# C'mon Back!

The dates are set:  
May 10-12

Special gatherings for classes of '25, '30, '35, '40, '45, '50, '55, '60, '65, and '70. But *everyone* is welcome, so c'mon back to Dal for reunion weekend!

## Reunion '85

# Live

### OXFORD STRING QUARTET

Thursday, March 7, 8 pm  
Regular \$12.50 Students/Senior Citizens \$11

### UZEB

Saturday, March 9, 8 pm  
Regular \$10 Students/Senior Citizens \$9

### MARY O'HARA

Friday, March 15, 8 pm  
Regular \$12 Students/Senior Citizens \$10

### FERRANTE & TEICHER

Thursday, March 28, 8 pm  
Regular \$15.50 Students/Senior Citizens \$14

### BREATH OF SCOTLAND

Friday, March 29, 8 pm  
Regular \$9 Students/Senior Citizens \$8

### JUDY COLLINS

Thursday, April 4, 8 pm  
Regular \$17.50 Students/Senior Citizens \$16

## The Cohn

Nova Scotia's Arts Centre.



# W Dal Women

CELEBRATING 100 YEARS

If undeliverable, please return to the following address:




## Dalhousie Alumni News

Alumni Office, Dalhousie University, Halifax, NS, B3H 3J5 (902) 424-2071

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