# Canada Weekly

Volume 8, No. 40

121

iber

per

oly 2

oalan

linton

emen

tart

ted

ply

al co

mpany lopme

. Crow

of Sho

11 beg

c tons

runs

of neg

cross

ira Fall

gasoli

e headil

October 22, 1980



National Research Council fosters scientific advances, 1

Brazil Minister of External Affairs meets With Canadian officials, 3

Mediating role foreseen, 3

Development agency assists technology transfer, 3

<sup>Canada</sup> calls for changes at UN, 4

Unique wool treatment sparks world interest, 4

<sup>Gold</sup> coin wins share of market, 5

Veterans Affairs minister dies, 5

Stamps depict Inuit spirits, 6

Search for oil in Bay of Fundy, 6

Drought aid provided, 6

<sup>Canadians</sup> help Chinese mine gold, 6

 $N_{\text{ews}}$  of the arts — theatre, award, tour, gned purchase program, 7 sortiu

News briefs, 8

# National Research Council fosters scientific advances

The year 1979-1980 was a time of high productivity in scientific and industrial research for the National Research Council of Canada, according to the Council's 1979-80 Report of the President. During the year continuing priority was given to industrially-oriented research and development, to energy research and development and to technology transfer and assistance to the industrial sector, says the report, excerpts from which follow:

A significant milestone for Canadian science was the official inauguration of the Canada-France-Hawaii telescope (CFHT) on Mauna Kea in Hawaii on September 28, 1979. Located at one of the best observing sites in the world, this telescope provides Canadian astronomers for the first time with access to a major optical telescope with the most up-to-date instrumentation. According to the Tripartite Agreement between the National Research Council (NRC), le Centre national de la recherche scientifique (CNRS) of France and the University of Hawaii, the design and construction of the telescope was the joint responsibility of NRC and CNRS with the University of Hawaii providing the site and local services. Canada and France will each have 42.5 per cent of the observing time of the telescope, with 15 per cent allocated to the University of Hawaii, which will contribute the same percentage to the on going operational costs.

The entire project is being managed by a non-profit corporation set up by the three founding partners and incorporated in the state of Hawaii with headquarters at Waimean, Hawaii. NRC's share of the capital cost of the telescope was \$17.6 million and its share of the annual operating cost (in 1980 dollars) will be approximately \$1.05 million. A scientific advisory council having proportionate representation of astronomers from the three founding members, as provided for under the Tripartite Agreement, assists the CFHT Corporation in the scientific exploitation of the new telescope facility.

The Remote Manipulator System (RMS) for the NASA Space Shuttle, for which NRC has responsibility and which is being developed and constructed by a Canadian industry consortium, is in its final stages of completion.... The delay in schedule does not affect the over-all schedule for the Space Shuttle which itself has had delays and the first Shuttle flight is now tentatively scheduled for late 1980 or early 1981. Unfortunately, the delay in the completion of the RMS has resulted in an increase of the total project cost from \$100,083 million to \$118,186 million.

#### Marine research

Two major projects, which had been approved in 1978, were reviewed last sum-



One of the first photographs taken with the Canada-France-Hawaii telescope which was inaugurated officially in September last year. Taken at the prime focus by a Canadian astronomer, the photo shows a group of distant galaxies, the dominant member of which is the giant spiral galaxy NRC 7331.

ne in the Margaret Meagher became the first Candidat Woman to hand to an ambassadorial large. s a dian wargaret Meagher became the first emperation of the bost; she was to be named to an ambassadorial to be named to Israel. nge the woman to be named to an ambassadoric she was appointed Ambassador to Israel.

denturis know per befo nd low 00 in

mer as part of the government's comprehensive review of all government programs. These were the Arctic Vessel and Marine Research Institute to be established in St. John's, Newfoundland, and the Industrial Materials Research Institute to be located at Boucherville, Quebec. Following the review, approval of both projects at their original cost estimates was confirmed in September, 1979. Engineering and architectural planning for the Arctic Vessel and Marine Research Institute is well under way with start of construction planned for April 1981. Completion of the ice tank facilities is scheduled for April 1983, with the remainder of the installations to be completed the following year. The Industrial Materials Research Institute is also in the engineering and architectural planning stage. A 35-acre site in an industrial park adjoining the Trans-Canada Highway at Boucherville, Quebec, has been procured for the laboratory. Start of construction is scheduled for early 1981 with completion expected in 1983. Temporary quarters for the institute's staff now being recruited are being provided at Longueuil and in St. Henri, a district of Montreal....

#### Fire research

Fires in Canadian buildings cost around one-quarter of a billion dollars each year, not counting social costs. The expense of providing fire protection roughly equals this amount. Designing the fire protection of buildings involves many considerations and because an actual fire is the only true measure of effectiveness, safety judgments are largely qualitative. The tasks of assessing fire hazard to life and property and planning effective fire safety systems are further complicated by changes in building materials and components, in the patterns of use of buildings, and in architecture, particularly increasing building height, size and complexity. Current major concerns are the hazards presented by smoke movement in high buildings, the fire and smoke hazards associated with plastics and evaluation of systems for ensuring life safety when fires occur.

Because of these complexities, theoretical and laboratory studies on fire safety must often be complemented by experiments in realistic, though controlled, fire situations that simulate real life conditions. To improve Canada's very limited capabilities in this area, NRC's Division of Building Research is constructing a fire research field station, to be completed in

November 1980. Located near Ottawa, the station will comprise an experimental high-rise building, a "burn hall", and a small ancillary building housing support services.

The ten-storey tower contains, in a minimum plan area, the structural features and mechanical systems needed to reproduce smoke movement patterns found in high-rise buildings during fires. It is designed as an experimental tool to endure without damage the many controlled fires that will be conducted during the course of a major research program. The purpose of this work is to produce design data for smoke movement control measures referenced by the National Building Code of Canada....

#### International activities

The National Research Council is responsible for Canadian representation in several international scientific and technical organizations through national committees that reflect Canadian interests in almost every discipline, with members drawn from industry, government and universities.

NRC is the Canadian member for the International Council of Scientific Unions (ICSU) and for 16 of the 18 constituent unions, for six of the scientific committees and four of the ICSU scientific associates: the International Federation for Documentation, the Pacific Science Association, the International Union of Quaternary Research and the International Federation for Automatic Control.

Since last year, NRC has represented the Canadian scientific community in the International Union of Physiological Sciences, the International Union of Pharmacology and the International Mathematical Union, succeeding the Medical Research Council of Canada and the Canadian Mathematical Society in this role.

In the field of engineering, NRC is the Canadian adhering member to eight international associations and shares with the Canadian Engineering Societies' Committee in the activities of the World Federation of Engineering Organizations (WFEO) and the Pan American Federation of Engineering Societies (UPADI).

In addition, this year, following the disbandment of the Associate Committee on Heat Transfer, NRC has authorized the formation of a Canadian National Committee on Heat Transfer to maintain existing links between the Canadian scientific community, the International Heat

Transfer Conferences and the International Centre for Heat and Mass Transfer.

Last summer, NRC hosted the general assemblies and international meetings of two ICSU members: the International Astronomical Union, which met in Montreal in August 1979 and the International Biochemical Union which met in Toronto in July 1979.

These events benefited from the enthusiastic co-operation of the Canadian Astronomical Society and the Canadian Biochemical Society.

On January 1, 1980, the co-operation agreement between NRC and the Centre national de la recherche scientifique de France was renewed automatically, as provided by clause 14 of the March 1971 agreement.

Increasing contact between Chinese and Canadian research institutions has been reflected in the number of Chinese visitors to NRC laboratories and in the number of NRC scientists and engineers visiting China, often at the request of Chinese authorities. In response to a request from the Department of External Affairs and in concert with the Council of Ministers of Education of Canada, which manages a program that allows scholars from the People's Republic of China to come to Canadian universities, laboratories and research centres, NRC has accepted the responsibility of finding accommodation for Chinese scholars in federal government laboratories and industry, as the need will arise.

## Canada/Saudi Arabia agreement

Under a co-operative agreement between NRC and the Saudi Arabian Centre for Science and Technology, an NRC astronomer has designed instrumentation to test the quality of "seeing" in Saudi Arabia. Instrumentation is currently being manufactured to test four sites in the Kingdom simultaneously. These sites have been selected on the basis of an initial reconnaissance mission by a team from NRC's Dominion Astrophysical Observatory near Victoria, British Columbia.

The year 1979-80 saw the signing of an agreement between Canada (represented by NRC and Environment Canada's Atmospheric Environment Service) and the U.S.A. for co-operation in research on weather modification.

NRC scientists and engineers participated as members of official Canadian delegations to the United Nations Con-(Continued on P. 8)

#### Brazil Minister of External Affairs meets with Canadian officials

Brazil's Minister of External Affairs Ramiro Saraiva Guerreiro met with Secretary of State for External Affairs Mark MacGuigan and other federal Cabinet ministers during his official visit to Canada from September 29 to October 1.

During their meeting in Ottawa, the two External Affairs Ministers agreed that relations between the two countries should continue to expand in all areas, especially in regard to political and cultural matters as well as in the economic field. Dr. MacGuigan and Mr. Saraiva Guerreiro also exchanged views on the world situation, particularly on North-South issues and on questions relating to their common region.

During his visit, Minister Saraiva Guerreiro paid a courtesy call on Prime Minister Pierre Trudeau, and met with the Minister of Agriculture Eugene Whelan, Minister of Industry, Trade and Commerce Herbert Gray, Secretary of State and Minister of Communications Francis Fox and Minister of State (Finance) Pierre Bussières.

Minister Saraiva Guerreiro also visited Montreal where he met with Quebec's Minister of Economic Development Bernard Landry and addressed a joint luncheon meeting sponsored by the Canada-Brazil Chamber of Commerce, the Canadian Association for Latin America and the Caribbean, and the Canadian Institute of International Affairs.

Dr. MacGuigan and Mr. Saraiva Guerreiro expressed satisfaction at the successful third meeting of the Canada-Brazil Joint Economic Committee which took place in Ottawa in June, and the successful meetings of the sub-groups on agriculture and industrial co-operation. They noted that these meetings had identified a number of areas for co-operation in the trade, industrial and agricultural fields and they agreed that officials of the two governments should continue to develop even further relations in these areas.

#### Cultural exchanges

The two Ministers agreed that greater effort on both sides should be devoted to the implementation of the Canada-Brazil cultural agreement in order to increase cultural and information exchanges between the two countries. They reviewed the possibilities of exchange and co-

operation in the area of the cinema and noted with satisfaction, the preliminary contacts already under way between the "Embrafilme" and the National Film Board to establish a regular program of co-operation with emphasis in documentary and animated films.



Ramiro Saraiva Guerreiro

Dr. MacGuigan and Mr. Saraiva Guerreiro agreed that bilateral co-operation in science and technology is an important element of social and economic development. They agreed that officials of the two governments should examine ways of enhancing this co-operation, including the possibility of negotiating an agreement or establishing other mechanisms to consolidate bilateral scientific and technological co-operation.

The Ministers exchanged views on energy, in particular the role that renewable sources can play in providing liquid fuel. Both countries have large forest reserves which could be used for the production of energy. Dr. MacGuigan and Mr. Saraiva Guerreiro agreed that collaboration in the development of technologies for exploiting new and renewable energy sources would be of mutual benefit, and they supported the exchange of technical delegations as a first step in strengthening contacts between Brazil and Canada in this area.

The two Ministers also referred to ongoing negotiations on a bilateral agreement to avoid double taxation and agreed that those negotiations should be concluded as soon as possible.

#### Mediating role foreseen

Canada is destined to play a leading role in restructuring world relations, Secretary of State for External Affairs Mark MacGuigan told delegates of the twelfth international conference on international relations held in Quebec City, September 25-27.

Canadian, American and French experts met at the invitation of Laval University's centre of international relations to discuss international problems such as East-West relations, military co-operation between Europe and the United States, Soviet intervention in Afghanistan and recycling petro-dollars.

In his address to the conference, Dr. MacGuigan said that Canada would be able to contribute best to the world economy and security during the next ten years in the area of energy in which its expertise and technology is recognized.

Canada intends to strengthen its network of bilateral relations to attempt to bring together East and West, North and South, and to serve as an intermediary between these parties, the Minister said.

Dr. MacGuigan added that Canada would be more determined and more active in promoting its interests in these areas.

# Development agency assists technology transfer

The Canadian International Development Agency (CIDA) will contribute \$1 million to Technonet-Asia, an international corporation assisting small industry in Southeast Asia with technical advice. This is the first time that CIDA has entered into this type of agreement.

Technonet-Asia, based in Singapore, was established by the International Development Research Centre (IDRC) in 1973 to provide technical advice appropriate to the level of development of growing industries in Southeast Asia and to train industrial extension workers. IDRC, in co-operation with CIDA, will continue its support of Technonet during the next three years.

The CIDA contribution will permit Technonet to make business in its member countries aware of opportunities for potential joint-venture relationships with the Canadian public sector.

## Canada calls for changes at UN

The United Nations General Assembly must break away from the patterns of the past, adapt to change and improve its collective machinery, Secretary of State for External Affairs Mark MacGuigan said in an address to the thirty-fifth regular session of the Assembly in New York, September 22.

Dr. MacGuigan said that world events indicate there is a need to abandon prevailing methods and to resolve conflicts through collectively-developed machinery rather than by reverting to force. The United Nations needs to "break away from old patterns of approach and attitude", he said.

With reference to the North-South dialogue, the Minister said that the UN must "recognize its global responsibilities but resist the notion that every problem must have a global, generalized solution". There are issues, he said, such as the Law of the Sea, where bloc-to-bloc negotiations would be less useful.

#### Law of the Sea

A complicated array of different country groupings arranged to correspond to differing economic, political and even geographic interests have wrestled with long-standing questions of principle and traditions regarding the Law of the Sea, said Dr. MacGuigan. "This method has enabled them to draft, in effect, a new constitu-



Secretary of State for External Affairs Mark MacGuigan (left) meets with Chinese Vice Premier and Foreign Minister Huang Hua while at the United Nations.

tion for two-thirds of the world's surface in the more pragmatic, realistic, and I believe productive way, which a pluralistic approach can afford," he said.

However, it is necessary for parties interested in the Law of the Sea treaty to come to some consensus on the vital question of seabed mining, the Minister added. Dr. MacGuigan said that the treaty might be compromised if the "interests of the land-based mineral producers, including Canada and many developing countries are ignored or overridden by the desire of some states to secure unrestricted access to the mineral riches of the seabed". The problem could only be compounded, he said, "by states stepping outside of the internationally agreed framework to play the game by their own set of rules".

In order to bridge the gap between producing and consuming countries and find a common basis of agreement on this issue, Canada has joined a number of developing countries in initiating an independent UN study to determine the impact of the seabed production formula proposed by the major mineral-consuming states. Dr. MacGuigan said that he hoped the study would encourage a "fresh look" at the question.

#### Disarmament

The Canadian government attaches special significance to disarmament, the Minister told the Assembly. He said he regretted the "lack of specific and ratified agreements on further measures of arms controls and disarmament". Canada is committed to "breaking the pattern of madness which spiralling rearmament represents", said Dr. MacGuigan.

Canada's recently-appointed special ambassador for disarmament will be working during the current UN session to restrain and cut back the competition in strategic nuclear weapons, he said. As a first step, Dr. MacGuigan said the Canadian government would vigorously pursue the cessation of the production of fissionable material for nuclear weapons.

# Unique wool treatment sparks world interest

A Canadian company with federal government assistance has improved the antishrinking process used by wool manufacturers.

Wool provides a unique warmth and comfort which cotton and linen fabrics do not have, but its special properties also cause wool fabrics to mat and shrink, particularly in clothing that is laundered repeatedly. Although Kroy Unshrinkable Wools Limited has had a shrink-proofing process which has been used continuously in Canada for over 30 years (and to a lesser extent in the United States for approximately the same length of time), the company had been aware that the treatment was not completely uniform — some of the fibres seemed to be treated satisfactorily, while others were not.

The presence of these two differently treated wool fibres restricted the use of the process and the washability claims that could be made, particularly in 100 percent wool garments. It was evident that in order to expand the use of the process, especially outside Canada, refinements were necessary.

Kroy's Vice-President and General Manager Norman Cruickshank, brought his problem to the National Research Council's Industrial Research Assistance Program. Under the terms of an IRAP agreement, NRC provides financial assistance by paying the salaries of the company research staff working on approved projects. The company pays for all other aspects of the research costs and retains all titles and rights to the results of the jointly-funded research. The Kroy project was approved in September 1966 and work, which began two months later, was to continue for the next seven years with IRAP financial support.

#### Uneven wetting a problem

During the study it became apparent that the basic problem was one of uneven wetting of the wool fibres by the treatment liquors. Up to this time, the wool was treated in a long horizontal bath, fed with a cold acidified sodium hypochlorite solution containing wetting agents, where it was subjected to numerous squeeze rolls and mechanical agitators which were designed to promote uniform wetting of the fibres with liquor.

The individual wool fibres had to be exposed to a solution containing a certain concentration of chlorine, at a specific pH, for a certain length of time.

During the course of the project, it was determined that in order to obtain uniform treatment the air within and surrounding the wool fibres had to be first

removed, and that, in production, if instead of using a long shallow horizontal bath the wool were passed through a deep vertical bath this might be accomplished. Using this method, the research team was able to obtain an evenly treated wool. This technique, combined with an earlier discovery consisting in the use of a simple solution of chlorine in water instead of acidified sodium hypochlorite for the necessary chlorination of the wool, provided the basis for the new process.

Equipment developed

The final step was the development of equipment to execute the process satisfactorily on a production basis. The result



Kroy's versatile machine is compact and simple to operate: it processes faster and cheaper than conventional machines.

is a new deep immersion machine designed and built by Kroy. Its outstanding characteristic is the uniformity of the processed material — the key to successful treatment, with a minimum amount of chemical damage to the wool fibre. The machine can replace the first two stages of the conventional five-stage operation necessary for the process for attaining full machine washability. Principal financial savings are in lower chemical and labour costs and the unit takes up less floor space than equipment currently in use.

#### **International interest**

The first commercial prototype machine was installed in Kroy's Toronto plant where it has performed with complete satisfaction. Last year, licences were signed up and machines installed in the

United States and Australia, and this year, it is expected that machines will be sold to wool combers in England, Switzerland and Italy. Strong interest has also been shown in many other countries including New Zealand, South Africa, Germany, France and Japan (the Japanese are the largest wool users per capita in the world). Kroy has also entered into an agreement with the International Wool Secretariat (IWS), funded by the world's wool growers, and a machine has been installed at their Technical Centre in Ilkley, England, to further develop its use throughout the world. Kroy and the IWS are co-operating in the installation of machines and in supplying technical service and quality control back-up.

(Article by Joan Powers Rickerd in Science Dimension 1980/3.)

#### Gold coin wins share of market

Canada's gold maple leaf coin has been on the market for one year and has won a secure position in the world's bullion coin markets with sales of nearly two million coins since September 1979.

Yvon Gariepy, master of the Royal Canadian Mint, said the maple leaf "has won an important share of the world bullion coin trade in its first year, a respectable accomplishment in view of the fact that it is a newcomer in competition with well-established, widely known coins".

Europeans have been the major buyers of the Canadian coins, accounting for 50 per cent of total sales, with sales in the United States coming in at 36 per cent and Canadian sales at 14 per cent.

Although gold markets, after a fast start last October, have been only moderately active in the period from the 1980 first quarter until recently, Mr. Gariepy said that investors have continued to purchase the gold maple leaf coin in substantial quantities.

"Now that the market appears to be warming up again, we would hope for an even higher level of sales in the next few months," he said.

The Mint continues to broaden its distribution system, particularly in the United States where, unlike Europe, a highly complex retail system exists. A network of more than 1,200 coin and bullion dealers has been established and dealer listings are now tagged onto maple leaf advertising in the major United

States markets.

The maple leaf program called for a maximum of five million coins to be minted and sold during a three-year period with a possible extension to be determined by the federal government, following an evaluation of the results.

#### Veterans Affairs minister dies

Daniel MacDonald, the Minister of Veterans Affairs, died in hospital of heart failure, October 1.

Mr. MacDonald, 62, was born in Bothwell, Prince Edward Island and was a farmer and war veteran who lost an arm and a leg as a sergeant in the Canadian Army in which he served from 1940 to 1945.

He represented the riding of 1st Kings in the P.E.I. Legislature from 1962 to 1972, from 1966 onward as Minister of Agriculture and Forestry. Then he made the switch to federal politics and captured the Cardigan seat in the House of Commons.

He was appointed to the Veterans Affairs portfolio that year and held the post until 1979, when he lost his seat in the May federal election. He regained his seat in the election this past February and was again named to the Veterans Affairs portfolio.

Prime Minister Trudeau, who learned of the death while in a cabinet meeting, expressed his sorrow at losing a colleague whom he described as "a great human being".

Mr. MacDonald is survived by his wife, four sons and three daughters.



Daniel MacDonald

## Stamps depict Inuit spirits

"Inuit spirits" is the theme of a set of four new commemorative stamps released by Canada Post, September 25.

"The spirituality of a people is often the foundation for its way of life," said Postmaster-General André Ouellet. "This is especially true of the Inuit people living in Canada's northland. To the Inuit, spiritual force is present in each phenomenon of nature, not just in living creatures."



The Inuit spirit stamps, designed by Reinhard Derreth of Vancouver, feature prints and sculptures by Inuit artists. On the 17-cent stamps, the sculpture Sedna, a woman believed to be living on the sea bottom and controlling the supply of sea animals, is by artist Ashoona Kiawak; the print Return of the Sun representing animal species greeting the sun in a spirit of festivity is by Kenojouak. On the 35cent stamps, the reproduction of the sculpture Bird Spirit, a bird with a human face indicating the presence of a spirit in the animal, is the work of Doris Hagiolok; the print Shaman, the intermediary between Inuit and the spirit world, is by Simon Tookoome.



This set of stamps completes a four-year series on the Inuit, with previous sets on themes of hunting, shelter and community life, for a total of 16 stamps. The series is presented in a heritage stamp collection entitled, Singing Songs to the Spirit.

# Search for oil in Bay of Fundy

Two Canadian oil companies have launched a \$1-million search for oil and gas in the Bay of Fundy.

Irving Oil Limited and Chevron Standard (Canada) Limited, working with Axford and Associates Limited of Nova Scotia, announced that the 45-metre (150-foot) exploration ship Western Narrows started seismic testing recently in water between Digby Neck and the isthmus that connects Nova Scotia and New Brunswick.

Arthur Irving of Saint John, New Brunswick, chairman and president of Irving Oil, said past exploration off Nova Scotia has indicated geological formation under the Bay of Fundy may hold oil and

Jerry Henderson, executive vice president of Chevron Standard, said he is cautiously optimistic about the chance of finding oil in the bay.

The survey work is expected to take about a month but it will take several months more to analyze all the data.

## Drought aid provided

Agriculture Minister Eugene Whelan recently announced a program which will provide up to \$13.4 million to help livestock producers deal with the effects of this year's drought.

The program complements a \$41-million federal commitment to a herd maintenance assistance program announced in July by Mr. Whelan and Senator Hazen Argue, Wheat Board Minister. The herd maintenance assistance program ensures that basic breeding herds are not sold off because of feed shortages.

The new program has four parts:

- a straw feed procurement program which will pay drought-area producers \$10 a ton for purchased straw to an amount equivalent to one ton a cow in the basic breeding herd. It is estimated that straw purchased under this part of the program will cost the federal government \$6 million;
- a straw ammoniation program in which producers will be paid \$10 a ton for the treatment, which renders straw as palatable, digestible and nutritious as good-quality hay. The \$10 payment represents about half the cost of the treatment. It is expected that the cost to the federal government will be \$2 million;

- a green-feed-for-silage procurement program, which will pay \$10 a ton for purchased silage to a maximum of two tons a beef or dairy cow and one-half ton a ewe. It is estimated that this part of the program will cost the federal government \$5 million; and
- a nutritional advice and management program will begin, at a cost of \$150,000, to help producers who will be forced to feed their livestock unfamiliar or lower than normal-quality feeds. This part of the program will involve preparation of booklets, regional meetings and direct consultation with Agriculture Canada experts.

#### Canadians help Chinese mine gold

A team of Canadian mining experts has returned from China after completing the first phase of a major engineering services contract with the Chinese government.

The contract requires Wright Engineers Limited of Vancouver to carry out a feasibility study for a gold mine in Shandong Province in which there are two operating gold mines and which has a long history of gold mining.

A group of Chinese mining engineers have travelled to Canada as part of the project team to provide background data during the various phases of the study.

In addition to assessing the currently available data and information on the mine site, Wright Engineers Limited is expected to evaluate the requirements for further data, the methodology for collecting the information, and based on this information (and Chinese approval to proceed) to plan the design and operating procedures of the mine and other facilities required to extract gold from the ore body.

While the size of plant required will not be determined until all the data is assembled and analyzed, it is expected to be in the 1,000-2,000 ton-a-day size.

To date, almost 80 test holes have been drilled at the site and assay work and assessment of results are underway.

In addition to the mine and mill, Wright Engineers Limited is expected to provide material handling advice and design, the latest in pollution control equipment, an assessment of the use of sea water for treating the ore, as well as mine drainage and water supply and treatment.

(Canada Commerce, June/July 1980)

# News of the arts

# Theatre used to report police story

Two Quebec City reporters have turned to theatre in an attempt to "report" a story from a different perspective.

Guy Dubé of the daily *Le Soleil* and Frank Fontaine of CFTM-TV, both covering police and court beats, had thought separately for some time about how to get around the limitations of daily journalism.

"I was thinking of a novel and Frank wanted to write a play," says Mr. Dubé. "He finally persuaded me."

Their play, L'Enquête (The Inquest), opened at the Bois de Coulonge summer theatre.

The action unfolds around a coroner's inquest into the death of a young man found hanged in police cells. It recalls a recent Quebec City case that gained notoriety, but the authors emphasize that the play is fictional.

Mr. Dubé had no theatre experience, but Mr. Fontaine is a graduate of London's Royal Academy of Dramatic Arts. Dubé is happy that Fontaine convinced him to collaborate on a play.

"It's the ideal medium," he says. "There are many dimensions you can't get into a novel."

The two men wrote their first draft in three days with great enjoyment, Mr. Dubé recalls.

"We wrote what we thought, with the pleasure that comes from the freedom to make things up. We let everything out."

The two men, while continuing to work as journalists, are already considering other subjects for other plays.

#### Book designer honoured

Daniel Fowler of Amherst Island 1810-1894, a book designed by Peter Dorn, director of graphic design at Queen's University in Kingston, Ontario, has been chosen as one of the best North American books of 1979 by the American Institute of Graphic Arts (AIGA) in New York.

Dorn's design was one of 100 books selected from over 800 entries from both the United States and Canada. It was part of the AIGA show which recently opened in New York. No award for best-of-show was given, but all designers whose work was chosen for exhibition received Certificates of Excellence from the AIGA.

#### Canadian art tours Europe

The Art Gallery of Ontario has sent a show of works by major contemporary Canadian artists on tour in Europe during 1980-81. The exhibition *Ten Canadian Artists in the 1970s* was previewed at the gallery from September 6 through October 19, before it began a tour of art centres in Denmark, Germany, Luxembourg and Belgium.

Fifty-seven works produced or conceived in the 1970s by Iain Baxter/N.E. THING CO., Jack Bush, Peterson Ewen, Murray Favro, Garry Neill Kennedy, Ron Martin, Guido Molinari, David Rabinowitch, Royden Rabinowitch and Michael Snow comprise the exhibition.

The gallery's chief curator Roald Nasgaard, organized the exhibit to arouse broader awareness of the achievements of Canadian artists. Dr. Nasgaard said he chose to present a group show, composed of individuals, which was large enough to indicate the variety and richness of artistic production in Canada, but small enough to include a substantial body of work by each artist.



A partial view of the work Ocean Currents, by Paterson Ewen.

Works shown are on loan from the collections of the Art Gallery of Ontario, the National Gallery of Canada, and Canada Council Art Bank and from the artists themselves. Some works have been produced especially for the exhibition, such as drawings by David and Royden Rabinowitch and a new summary piece by Garry

Kennedy.

Some of the artists shown are already known to European viewers. "The exhibition opens with Jack Bush," says Dr. Nasgaard, "whose inclusion was of special interest to European participants. Despite his death in 1977, he has continued to be a central figure in Canadian art and one of the rare Canadian artists to gain a major international reputation. The unique achievement of Montreal painting is represented by the most recent work of Guido Molinari. Michael Snow and Iain Baxter are also artists who made significant and international impact before the 1970s and who continue to produce original and innovative art."

#### Art purchase program planned

A major program designed to foster the purchase of art and exhibitions will begin early next year in Ontario.

The program, entitled Future Traditions: Ontario '81, will have a budget of \$162,500, to which the Allstate Foundation has pledged \$95,000 and Wintario has given \$67,500.

The main aims of the project are to present throughout the province major works by leading Ontario artists, and to offer Ontario public galleries an opportunity to acquire the major works of these artists.

Art Gallery of Hamilton director Glen Cumming, who organized Future Traditions in co-operation with eight Ontario gallery curators and the Toronto firm of Art and Communications Counselors, said that works on canvas and paper by 25 Ontario artists will be exhibited. The show will open in Hamilton in January 1981, then tour Ontario for the next two years.

#### Gallery consortium

The nine galleries in the consortium will be granted \$6,000 each to buy works from the exhibition for their permanent collections. Financing also will be provided for a conference by Visual Arts Ontario on the future of art, and for publicizing and documenting the exhibition. Consortium members will choose the works to be shown.

Future Traditions will be shown at galleries in Oshawa, London, Windsor, Stratford, Kitchener, Kingston, St. Catherines, Sudbury and Toronto, at no cost to participating galleries.

#### Scientific advances (Cont'd from P. 2)

ference on Science and Technology for Development, the United Nations Scientific Committee on the Effects of Atomic Radiation and the UNESCO International Co-ordinating Council for Man and the Biosphere.

At the request of the Secretary of State for External Affairs, the President of NRC headed the Canadian delegation to the Scientific Forum held in Hamburg, Germany, to enhance co-operation between the scientific communities of Eastern Europe and the West, and at the meeting in Moscow of the Mixed Commission for Canada's General Exchanges Agreement with the Soviet Union, NRC's Vice-President (External Relations) chaired the Canadian scientific sub-committee.

NRC continues to co-operate with other countries in International Energy Agency research and development projects in the fields of renewable energy, conservation and nuclear fusion. During the current year, co-operative projects were initiated in forest biomass energy. advanced heat pumps, and central solar heating plants with seasonal storage. The number of projects in which NRC is inolved now totals 14.

As in the past, members of NRC staff continue to serve on interdepartmental committees concerned with policy towards scientific and technical co-operation with other countries, such as Germany, China and Japan, and with the scientific and environmental activities of intergovernmental organizations such as the Organization for Economic Co-operation and Development (OECD), the North Atlantic Treaty Organization (NATO) and the United Nations and its associated organizations....

Canada Weekly is published by the External Information Programs Division, Department of External Affairs, Ottawa K1A 0G2.

Material may be freely reprinted. A credit would be appreciated. Photo sources, if not shown, will be provided on request to the editor.

Cette publication existe également en français sous le titre Hebdo Canada.

Algunos números de esta publicación aparecen también en español bajo el título Noticiario de Canadá.

Alguns artigos desta publicação são também editados em português sob o título Notícias do Canadá.

# 

**News briefs** 

Prince Philip recently attended the twenty-first triennial conference the British Commonwealth Ex-Services League held in Ottawa. During his threeday visit, the Prince, who holds the office of grand president of the league, officiated at the meeting and laid a wreath at the foot of Canada's war memorial in honour of the Commonwealth's dead. The league ties together veterans' organizations from 47 countries, acting as a post office for them and helping needy veterans, their widows and children. There are about 800,000 Canadian veterans, of whom 40,000 all past the age of 80 are survivors from the First World War.

Indian and Northern Affairs Minister John Munro recently returned from a five-day visit to Denmark and Greenland. Mr. Munro was accompanied by Peter Ittinuar, member of Parliament for Nunatsiag, Northwest Territories and by Deputy Minister for Northern Affairs Paul Tellier and his Assistant Deputy Minister Neil Faulkner. During the visit, the Canadian delegation met with Jonathan Motzfelt, Premier of Greenland and Jorgen Peder Hansen, the Danish Minister for Greenland. They also met with members of the Greenlandic Home Rule Cabinet and the Legislative Assembly to discuss the Arctic Pilot Project and the recent Inuit Circumpolar Conference.

Vietnamese groups from across Canada have formed a national organization to co-ordinate efforts to help immigrants and refugees adjust to life in Canada and to preserve their culture. The Canadian Federation of Vietnamese Associations held its founding convention in Ottawa recently with delegates from eight groups across Canada attending. The federation hopes to have 20 member groups within a year.

A consortium of five Ontario companies has won an \$80-million contract for the final planning and design of a \$2.86-million university complex in Jeddah, Saudia Arabia. The five Ontario companies in Campus-Consortium Consultants Limited, the group which won the bid, are: Webb, Zerafa, Menkes, Housden; Mechanical Consultants Western Limited; Quinn, Dressel Associates; Arthur Erickson Associates Limited and Project Planning Associates Limited.

The Export Development Corporation (EDC) announced the conclusion of a

\$4.7-million (U.S.) financing agreement to support the sale of a flight simulator by CAE Electronics Limited of Montreal to Singapore. The loan, to Singapore Airlines Limited (SIA) supports the \$5.5million (U.S.) sale of an A-300 Airbus simulator unit, including on-site installation, calibration, support services and spare parts. The simulator will be installed at the airline's new training centre at the Changi Airport. In addition to its own use, the simulator will be used to train pilots from other Southeast Asian airlines.

The Melbourne University Press in Australia recently published the prison journal of the exiled Canadian patriote François-Maurice Lepailleur. The book entitled, Land of a Thousand Sorrows, recounts the exile of Lepailleur, who was one of the popular leaders of the Canadian rebellion of 1838. Exiled from Lower Canada and sentenced to two years in an Australian prison, Lepailleur kept a journal from the date he learned of his exile until he was reunited with his family over five years later. The journal provides new and detailed information of life in the convict settlements - the daily routine, the corruption of the prison authorities, the brutality of the police, the hate inspired by collaborators and the loneliness of exile.

The Alberta government has collected more than \$620 million in bonus payments for petroleum and natural gas rights in the first half of the year. In 1979 the industry paid a record \$996 million for the full year in bonuses for oil and gas leases and licences.

The Royal Bank of Canada is expanding its present corporate banking activities in West Germany into the consumer finance area. Through an existing West German subsidiary, Burgardt and Nottebohm Bank AG, it has bought an interest in Bankhaus Bohl of Freudenstadt, which operates in the area of consumer finance.

Dr. Solbert Permutt of Johns Hopkins University in Baltimore, Maryland has been named the 1980 recipient of McGill University's Louis and Artur Lucian Award for research into circulatory disease. The \$40,000 prize is awarded annually by the university for the best published research on circulatory problems. Dr. Permutt was selected for his work on the physiology of pulmonary circulation. Dr. Permutt is serving as a consultant to the cardiovascular division of McGill's Faculty of Medicine until December 15.