

c18  
march 27/74  
e.2

# Canada Weekly

Volume 2, No. 13

March 27, 1974



Ottawa, Canada.

LIBRARY DEPT. OF EXTERNAL AFFAIRS  
MINISTÈRE DES AFFAIRES ÉTRANGÈRES

APR - 5 1974

**Flight recorder centre probes possible causes of air crashes, 1**

**New Assistant Under-Secretary, 3**

**Criminal law reform urged, 3**

**Pickering hydro station leads the way, 3**

**Defence Research laboratory to be built in the West, 4**

**Construction contracts for communications satellite, 4**

**New device sees through lead shield, 4**

**Another role for Celia Franca, 5**

**Re-election to Berne Union, 5**

**Special Chilean immigration program, 5**

**CBC extension accelerated, 5**

**IJC new Canadian chairman, 5**

**Pensions up next month, 6**

**Hockey standings at March 18, 6**

**Quarterly index January to March 1974, 6**

## Flight recorder centre probes possible causes of air crashes

One of the first concerns of accident investigators when a commercial aircraft crashes in Canada is to locate the flight recorder. If the recorder is functioning properly at the time of impact and is relatively intact, the investigating team can be sure that its task will be simplified significantly. This was demonstrated in the major crash of a DC8 aircraft at Toronto in 1970 when the recorder revealed the primary cause of the accident within 24 hours.

By contrast, in an earlier DC8 accident at Ste. Thérèse, Quebec, in 1963, in which 118 lives were lost, the aircraft did not carry any flight recorders. The investigators spent more than six months searching for clues in the wreckage both in the main crater and in the "scatter" area that extended for 1,500 feet.

It was largely as a result of this investigation that the Ministry of Transport (MOT) formulated requirements for comprehensive flight data and cockpit voice recorders on all Canadian-registered commercial transport aircraft. These came into effect in 1969, though Air Canada had already equipped most of its aircraft with advanced data recorders several years earlier.

### Importance of voice recorders

In addition to the data recorders, there is also a requirement that the aircraft be fitted with cockpit voice recorders that retain the previous 30 minutes of information. These normally record three or four separate channels that include all radio and aircraft interphone communications and, most important, all conversation and sounds detected by a microphone on the flight deck. These voice recorders proved invaluable in many accident investigations. As with the data recorders, several different types of voice recorder are currently in service in Canadian-registered aircraft.

The Canadian Armed Forces have

also undertaken a program to fit their transport aircraft with a combined data and voice recorder that retains the previous 30 minutes of information. Unlike the civil aircraft recorders that are fitted in an armoured container and surrounded with insulation for survival in an accident, the Armed Forces recorders are mounted, with a radio-locator beacon, in lightweight aerofoil devices that are designed to separate from the aircraft if it crashes and lands nearby. This system was originally developed in the Flight Research Laboratory of the National Aeronautical Establishment of the National Research Council of Canada.

There is little standardization among the various data and voice recorders; playback facilities vary considerably in their availability and capability. Inadequate monitoring of the recorders has led to a high occurrence of un-serviceability when, as the result of accidents or incidents, the data are urgently required.

### Role of NRC

In an attempt to improve on this situation, MOT and the Department of National Defence (DND) asked National Research Council (NRC) to set up a flight-recorder data playback centre at the National Aeronautical Establishment at Uplands Airport near Ottawa.

MOT and DND are providing annual grants of \$20,000 each for two years to finance the centre acquisition of equipment not already in the possession of the Flight Research Laboratory.

The Laboratory has undertaken a program designed to permit the gradual build-up of an ability to process original digital flight data into computer-compatible IBM format for print-out and subsequent processing on the NRC IBM 360 computer. Facilities are also being developed to handle all types of cockpit voice recorders, to make recorded conversation more in-



craft after these flights and sent to the centre, where the information will be played back without removing the tape. This will help to ensure that the systems are continuing to function satisfactorily.

It is hoped that the existence of the centre will encourage operators to provide recordings of any unusual in-flight occurrences, such as flight through moderate to severe turbulence, large wind variations during the approach to land, or encounters with wake turbulence from other aircraft. The Flight Research Laboratory has done extensive work in such areas and hopes that the information gleaned from such incidents will provide an insight into ways of coping with and preventing future incidents.

*Wreckage of Air Canada DC8 that crashed at Toronto July 5, 1970. An arrow shows the stainless steel shell housing flight recorder.*

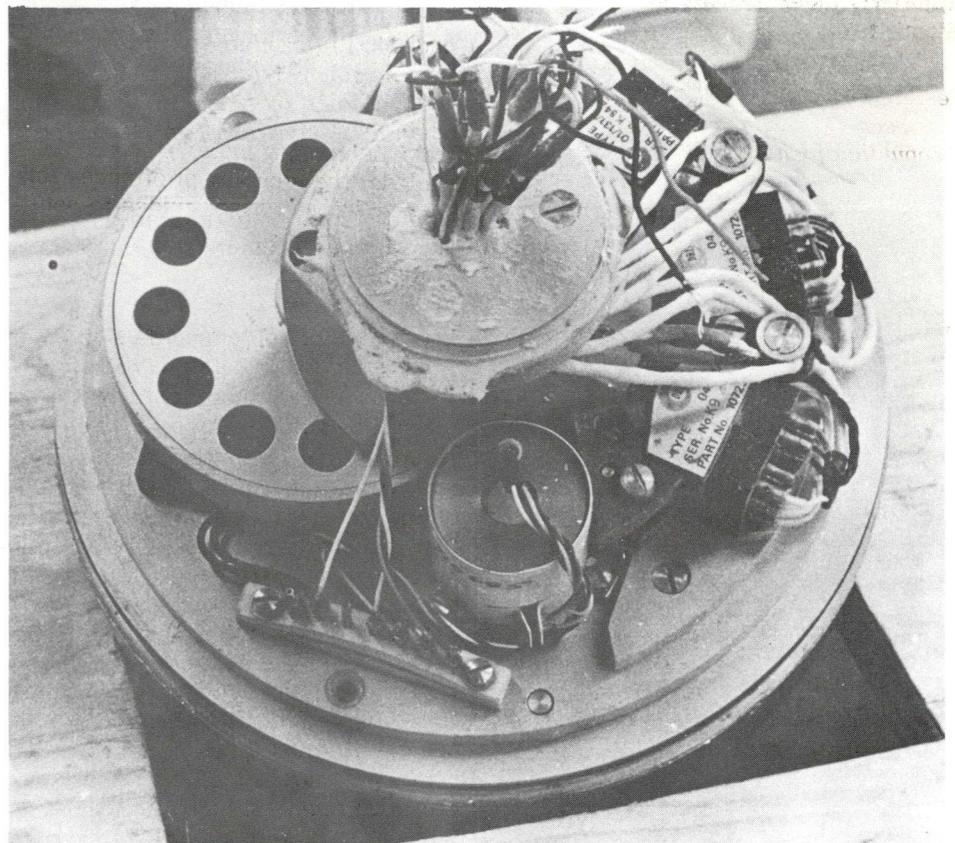
*The flight recorder after shell had been removed by examiners.*

telligible, and to analyze background noise that may be of interest.

According to A.B. (Tim) Wood, head of the Flight Research Laboratory, a strong national need existed for a centrally-located small laboratory specializing in flight-recorder data retrieval, verification and interpretation, staffed by persons whose expertise would be acknowledged and who would be part of a neutral agency.

Particular emphasis is being placed on handling tapes that may have been damaged by heat or impact. According to Mr. Wood, even in the case where the tape is undamaged, it takes considerable skill to extract the information and then decide whether the data obtained can be relied upon to produce a true picture of the events leading up to the accident.

Under the agreement setting up the centre MOT and DND send recorders from aircraft involved in accidents or incidents to the centre for dismantling and playback of the information. DND is also arranging routine test flights under controlled conditions. The recorders will be removed from the air-





New Assistant Under-Secretary

*The Secretary of State for External Affairs, Mitchell Sharp, recently announced the appointment of Arthur Andrew (above) as Assistant Under-Secretary of State for External Affairs, replacing Ralph Collins, now Principal Air Negotiator in the Department. Mr. Andrew had been Director General of the Bureau of Asian and Pacific Affairs since 1970. Previously, while he was Canadian Ambassador to Sweden, he represented Canada in the negotiations which culminated in the establishment of diplomatic relations between Canada and the People's Republic of China.*

### Criminal law reform urged

The Canadian Criminology and Corrections Association (CCCA) has made wide-ranging proposals for the reform of criminal law that include more orderly sentencing, involvement of the public directly in the administration of justice, and consolidation of federal criminal law relating to adults.

The association made its brief, *Toward a New Criminal Law for Canada*, public shortly before meeting the Law Reform Commission of Canada to discuss its proposals. The Canadian Criminology and Corrections Association is a national voluntary body of persons interested in promoting the better administration of criminal justice. It is an affiliate of the Canadian Council on Social Development.

### Recommendations

In its brief the CCCA favours retention of the adversary system, while at the same time recommending changes in some procedures under it so as to reduce "the game element" in which the skill of the parties in taking advantage of legal technicalities detracts unduly from the search for truth. (One of the most significant of these changes in procedure being proposed is that there be full disclosure by both prosecution and defence at an early stage prior to the preliminary hearing or trial.)

The CCCA also favours retention of the right of trial by jury, although it would accept the agreement of a specified majority of a jury as sufficient for a verdict.

The association advocates changes in the law and its administration to recognize the value of restitution and compensation by an offender in "restoring the *status quo* by reducing the harm suffered by the victim". Restitution should apply not only to individual criminals but to corporations as well, and should always be related to the offender's ability to pay.

Other recommendations urge that the federal and provincial governments enter into cost-sharing arrangements to help finance diagnostic and treatment facilities for offenders, and that research in the field of criminology be greatly increased.

The brief suggests that efforts to make sentencing more orderly should include: the grouping of offences for sentencing purposes; guides to sentencing in the Criminal Code; and the requirement that courts give written reasons for imposing sentences — reasons which should be made public.

"Next to conviction, the sentence is probably the most crucial step in the criminal justice process. At present, the courts are given little assistance or guidance in carrying out this heavy responsibility," the brief states.

**Involvement of the public**  
Efforts to involve members of the public directly in administering justice would include the use of specially qualified lay assessors to assist a judge or magistrate with sentencing, and, in more serious cases where there is no jury, with the verdict as well.

The public would also be involved

through participation in citizen advisory committees to courts and, as in the past, jury duty.

The advisory committees could help the courts press for services they need and would have a role to play in carrying out sentences of the court. They would also help build an informed public by giving people a chance to observe first-hand the operation of criminal justice.

Such involvement of the public demands an active program of information about the criminal justice system, the CCCA says. Simplification of laws and procedures would follow. "There is no good reason why criminal law cannot be written in simple, clear language understandable to the average citizen."

Bringing all federal adult criminal legislation into a single act containing a criminal code, a code of criminal procedure and a corrections guide would help people become more knowledgeable about the criminal justice system, says the CCCA. Public opinion as to the relative seriousness of the various offences set out in the Criminal Code should be scientifically determined and seriously taken into account when legislation is being framed or amended.

### Pickering hydro station leads the way

Ontario Hydro's generating station at Pickering set the pace for the world's nuclear power plants in 1973.

The 2,000-megawatt station supplied 14,278,610 megawatt hours of electricity to the provincial grid. During the 12 months four Candu units achieved net capacity factors of 93 per cent, 70 per cent, 86 per cent and 90 per cent, respectively. The value of the power is estimated at \$87,695,985.

The nearest nuclear competitors to Pickering in electricity output in 1973 were the Dresden (1,888 megawatts) and Quad Cities (1,664 megawatts) plants in the United States, both of which supplied about 10 million megawatt hours.

Ontario Hydro would have had to burn about 5 million tons of coal to produce the power turned out by Pickering last year.

The gross energy produced from Pickering since startup would be equivalent to burning about 8.3 million tons of coal.

### Defence Research laboratory to be built in the West

A new laboratory for the Defence Research Board is to be built in Winnipeg at a cost of \$11.5 million. Construction, which will begin next year, will be completed in 1977.

The new facilities, to be known as the Defence Research Establishment Manitoba (DREM), will cost about \$6 million in annual operating costs.

Some 70 scientists, with a support staff of about 130, will staff the new establishment. Its role, said Defence Minister James Richardson, would include northern operations and advanced research in search-and-rescue methods, as well as improved training techniques. Radar and electronic countermeasures also will be tested.

Several factors led to the Government's decision to locate the new research establishment in Winnipeg, Mr. Richardson said, including the Government's policy of decentralization of industry and the desire to develop an industrially-related elec-

tronics capability in Western Canada. Winnipeg's location as a gateway to the North was also a factor.

The Department of Communications is joining in the development of the new facility by moving to Winnipeg its entire program of radar research, presently carried on at the Communications Research Centre in Ottawa.

The move entails transfer of some 30 researchers and about 60 per cent of the roughly \$2-million worth of research being conducted annually by the research centre in Ottawa for the Defence Research Board.

The establishment of the new Manitoba laboratory, with its strong communications-research presence, will help to stimulate the growth of high-technology secondary industries in western Canada. Mr. Richardson also said that the requirement for highly-trained personnel would increase employment opportunities for university graduates in Manitoba.

### Construction contracts for communications satellite

Communications Minister Gérard Pelletier and Minister of Supply and Services Jean-Pierre Goyer announced recently that Spar Aerospace Products Limited of Toronto and RCA Limited of Montreal had reached agreements with the Department of Supply and Services concerning payment for the last phase of construction of the Communications Technology Satellite (CTS), an experimental spacecraft.

The CTS, to be launched in late 1975 under a joint Canada/United States program, will test both the technology and applications of a new generation of satellites to meet communications needs of the 1980s. Canadian industry, which is building the spacecraft, is gaining valuable experience in design and manufacture of advanced technology satellite subsystems.

Spar Aerospace is supplying the structure of the satellite, its attitude control subsystem and solar power arrays. Since inception of the CTS project in 1970, Spar has completed its contributions to the conceptual, project-development and design stages of the program.

The total price for the current construction phase has now been set at about \$12.5 million. Final payments will be determined on the basis of contract provisions which would compensate Spar for superior performance in such areas as weight control, cost reduction and delivery schedules.

RCA Limited, the supplier of the electronics and antennas for the satellite, will be paid about \$11 million for the construction phase. As in the case of Spar, the RCA contract contains clauses to provide incentives to reduce costs and control the weight of the hardware being produced.

These agreements will complete the main procurement part of the CTS project. The Government has set a target of some \$56 million for the satellite, with about 80 per cent of the total going to Canadian industry. The CTS program is being managed by the Communications Research Centre (CRC) of the Department of Communications. Assembly of the spacecraft, testing and launch preparations will be carried out in 1975 at the CRC near Ottawa and at National Aeronautics and Space

Administration (NASA) centres in the United States.

The United States, in addition to supplying the satellite launch, is providing a novel, 200-watt travelling wave tube (TWT). The European Space Research Organization (ESRO) is also participating, by providing two 20-watt TWTs and by sharing the cost of newly-developed solar cell blankets.

### New device sees through lead shield

A neutron generator, an instrument that can peer through thick lead shielding and determine amounts of thorium, uranium or plutonium in spent fuel will be installed at Atomic Energy of Canada's Whiteshell Nuclear Research Establishment (WNRE) within the next few months to aid wide-ranging research programs. Its major use will be in the development of automated, non-destructive testing of fissile and fertile materials, to replace costly and time-consuming chemical methods.

The recently-developed technique uses a beam of neutrons to cause fissions in fissile or fertile material. Neutrons and gamma rays produced by the fissioning reveal the quantity and type of material contained in a sample.

The device, which measures about seven feet long and four feet high, accelerates deuterons, the proton-neutron nucleus of deuterium (heavy hydrogen) against a target containing tritium, a second isotope of hydrogen whose nucleus contains a proton and two neutrons.

The collision produces high energy neutrons which are directed at the material being analyzed, causing fissions to occur. The number of fissions although few in comparison to the number of fissile atoms present, is an accurate indication of the amount of fissile material.

Because the elements of interest to WNRE researchers fission under neutrons of different energies, the accelerator can be used to select the neutron energy most appropriate to the material being studied.

Besides analyzing new and used fuel, the accelerator can be used to determine amounts of uranium, thorium or plutonium in chemical streams such as would be produced in fuel reprocessing systems.



Another role for Celia Franca

The artistic director of the National Ballet of Canada, Celia Franca (above) has decided to relinquish her position at the end of the season and concentrate instead on teaching and coaching members of the company she has been with for the past 22 years.

David Haber, co-artistic director, who joined the National Ballet last April, will take over Miss Franca's responsibilities on July 1.

In accepting Miss Franca's decision to change her role, Ian H. McLeod, president of the National Ballet, expressed to her "the deep appreciation felt by all Canadians" for her contribution in creating and developing Canada's largest dance company and "in achieving for the National Ballet an international reputation that has greatly enhanced Canada's cultural image throughout the world".

### Re-election to Berne Union

Canada has been re-elected for a three-year term to the executive committee of the International Union for the Protection of Literary and Artistic Works — known as the Berne Union — an international committee that oversees the protection through copyright of intellectual property in the form of literary and artistic works. An official of the Canadian Department of Consumer and Corporate Affairs Intellectual Property Bureau was chosen to serve as chairman of the committee.

The Berne Union, which involves 60 countries, is one of the major international treaties governing intellectual

property. The treaty is administered by the World Intellectual Property Organization (WIPO) in Geneva.

The Bureau is responsible for all legislation dealing with patents, trade marks, copyright and industrial design.

### Special Chilean immigration program

An estimated 600 to 800 people affected by the military coup in Chile on September 11 are expected to arrive in Canada under the Special Chilean Immigration Program, Manpower and Immigration Minister Robert Andras announced recently. Mr. Andras pointed out that the most urgent cases had been dealt with and that the need for special efforts was past. Under this program, as of February 20, 577 persons had been authorized to enter Canada and another 592 were awaiting the results of background and medical checks. Some 300 had arrived in Canada by the end of February.

Immigration officers posted to Latin America to deal with the Chilean refugees had received applications as of the end of February on behalf of 1,654 persons from Santiago and other centres. About 15 per cent of these were withdrawn by refugees who had applied to more than one country. Some 300 were found inadmissible under Canadian law. Of the 1,654 "special" applications, 545 were on behalf of people staying in the refugee centres.

The applications have been treated according to Canada's standard practices for refugees — that is they are dealt with as if the refugees were sponsored by Canadians. The "point system", which measures capacity of the immigrants to be self-sustaining, is not taken into account, but character and background are.

### Regular immigrants

While in Santiago, immigration officers also received 8,874 ordinary immigration applications. Of these, 3,626 failed to meet the selection criteria, 520 have withdrawn, and 350 have been authorized to enter Canada. These newcomers are treated as regular immigrants; for example, they do not receive assisted passage loans as may be the case with refugees. The average immigration movement from Chile to Canada during the past three years has been about 350 annually.

### CBC extension accelerated

The national television and radio service of the Canadian Broadcasting Corporation (CBC) will be extended to more than 300 unserved or inadequately served communities across Canada during the next five years under a \$50-million accelerated coverage plan involving over 600 engineering projects announced recently by Secretary of State Hugh Faulkner.

The Government will make available the necessary additional funds to enable the CBC to more than double the rate at which it would normally have been able to extend the service to unserved areas.

Completion of the five-year operation will make the CBC's radio and TV service available to 99 per cent of the population.

Service will be provided in English or French, or both, as required.

Of the \$50-million capital cost, about half would have been included in the CBC's normal requirements during the period of the plan.

The operating cost of the new stations and transmitters, when completed, will be some \$12 million a year.

The plan, first enunciated in the Speech from the Throne in 1972, does not call for production facilities for local programming from the new stations but does include facilities which will make intra-provincial broadcasting possible.

The percentage of the population now being served by CBC English and French television is 97.4. Radio service is available to 98.7 per cent.

### IJC new Canadian chairman

The Prime Minister recently announced the appointment of Maxwell Cohen of Montreal to the Canadian section of the International Joint Commission, to succeed the former chairman, Louis J. Robichaud.

Dr. Cohen, who has been Professor of Law at McGill University, Montreal since 1952, has had a long and close involvement in international affairs, including work in 1951 with the United Nations Technical Assistance Administration and membership in 1959-60 on the Canadian delegation to the UN General Assembly. Since 1948 he has

been a member of the National Executive of the United Nations Association in Canada.

A former Canadian president of the International Law Association, he has also served since 1956 on the Association's International Rivers Committee (now the Water Resources Committee). He has written extensively on issues involving international rivers, in particular the Columbia River Basin. For the past two years he has been chairman of the External Affairs Department's Advisory Committee on Marine and Environmental Conferences. For seven years until 1971 he was chairman of the Constitutional and International Law Committee of the Canadian Bar Association.

Dr. Cohen has been involved in a number of Royal Commission inquiries at both federal and provincial levels. With the Glassco Royal Commission on Government Organization he directed the study of the External Affairs Department. He was chairman of the Special Committee set up by the Minister of Justice to study hate propaganda in 1965-66. He was also chairman of a royal commission study of the Military College at St. Jean, Quebec, in 1967-68, and of a Newfoundland Royal Commission on Labour Legislation in 1969-72. Since 1972 he has been chairman of the Quebec Advisory Council on the Administration of Justice.

He was a member of the Board of Directors of the Canadian Broadcasting Corporation from 1966-68, and is a former president of the Royal Commonwealth Society.

### Pensions up next month

Old Age Security pension and Guaranteed Income Supplement payments will rise in April – the second quarterly escalation based on the cost of living.

The basic Old Age Security pension will rise to \$110.09 from \$108.14; the maximum Guaranteed Income Supplement for a single person or a married person whose spouse is not a pensioner will go up to \$77.22 from its current \$75.85. Added to the basic OAS pension, this payment will produce a monthly total of \$187.31.

The maximum supplement for a married couple, both pensioners, will increase to \$68.58 each from the pre-

sent \$67.37. Added to the basic pension, this will give each pensioner \$178.67 for a combined payment to the couple of \$357.34.

### Hockey standings at March 18

#### National Hockey League

East Division	W	L	T	F	A	P
Boston	47	13	9	311	190	103
Montreal	40	20	9	251	203	89
NY Rangers	37	19	12	260	203	86
Toronto	31	24	14	243	203	76
Buffalo	29	30	10	218	227	68
Detroit	25	34	10	223	278	60
Vancouver	18	39	11	189	261	47
NY Islanders	15	38	15	157	222	45

#### West Division

Philadelphia	42	14	10	230	138	95
Chicago	34	13	21	231	143	89
Los Angeles	27	30	11	190	207	65
Atlanta	26	31	12	180	207	64
St. Louis	24	33	11	183	200	59
Minnesota	20	31	16	205	231	56
Pittsburgh	24	37	7	207	246	55
California	13	46	9	175	294	35

#### World Hockey Association

East Division	W	L	T	F	A	P
New England	40	29	3	272	245	83
Toronto	35	32	4	273	245	74
Quebec	35	33	3	275	256	73
Cleveland	32	30	8	233	238	72
Chicago	34	32	3	237	243	71
New Jersey	30	36	4	234	272	64

#### West Division

Houston	43	21	5	281	187	91
Minnesota	39	30	2	297	256	80
Edmonton	34	33	1	234	238	69
Winnipeg	32	35	5	241	268	68
Vancouver	25	44	0	255	299	50
Los Angeles	23	47	0	208	293	46

### Quarterly index January to March 1974

#### Agriculture (see also Science)

Eight calves, one donor, No. 10, P. 6

#### Animals see Miscellaneous

#### Arts (see also Exhibitions and Trade)

Canadian Indian art, No. 9, P. 5

New role for Celia Franca, No. 13, P. 5

#### Aviation see Museums and Science

#### Belgium see Exhibitions

#### Berne Union see External Affairs

#### Brazil see Construction and Natural Resources

#### Britain see Nuclear Energy, Trade and Visits

#### Bulgaria see Trade

#### Canada Council see Labour

#### Canadian Association for Latin America (CALA) see Grants and Awards

#### Canadian Broadcasting System see Communications

#### Carnival see Festivities

#### Chemicals see Industry

#### Chile see Immigration

#### China see Immigration and Science

#### Communications (see also Post Office and Science)

Attitudes towards computers, No. 4, P. 4

CBC extension, No. 13, P. 5

CBC to phase out radio commercials, No. 7, P. 6

Satellite construction contracts, No. 13, P. 4

#### Conservation

Of the polar bear, No. 2, P. 6

Protection of national heritage, No. 10, P. 4

#### Constitution and Government

Throne speech, No. 11, P. 1

#### Construction

CP to help build railway in Brazil, No. 9, P. 2

Defence research laboratory, No. 13, P. 4

Design contract for Hawaii observatory, No. 11, P. 4

Housing starts, No. 7, P. 5

Vancouver airport expansion, No. 11, P. 4

Vancouver federal office building, No. 8, P. 5

#### Consumer Affairs

Consumer indexes, No. 12, P. 6

Family incomes, No. 8, P. 5

Fish prices, No. 6, P. 6

#### Consular Assistance see External Affairs

#### Defence (see also Construction and Peace-keeping)

New anti-tank weapon, No. 4, P. 6

- Economy *see* Trade
- Education (*see also* Labour)  
Free book kits, No. 1, P. 4  
Summer school in Europe, No. 4, P. 4
- Energy (*see also* Natural Resources)  
Electricity and the energy gap,  
No. 6, P. 6
- Europe *see* Education, External  
Affairs *and* Visits
- Exhibitions  
Art loaned to U.S. exhibit,  
No. 7, P. 5  
Painting exhibition to Paris and  
Brussels, No. 12, P. 3  
Photo exhibit in San Francisco,  
No. 10, P. 3  
Silver in New France exhibition,  
No. 11, P. 3
- Exploration *see* Natural Resources
- External Affairs (*see also* Visits)  
Canada/Mexico exchange program,  
No. 12, P. 4  
Canada/Mexico Ministerial Meeting,  
No. 7, P. 1  
Canada/New Zealand Consultative  
Committee, No. 12, P. 4  
Canada/Switzerland exchange drug  
information, No. 10, P. 2  
Canada/U.S.S.R. general exchanges,  
No. 1, P. 3  
Consular assistance abroad,  
No. 6, P. 1  
Diplomatic relations with Arab  
states, No. 8, P. 5  
New Assistant Under-Secretary,  
No. 13, P. 3  
Pact with Greenland, No. 1, P. 4  
Possibility of embassy in Saudi  
Arabia, No. 3, P. 5  
Re-election to Berne Union,  
No. 13, P. 5  
Relations with Germany and European  
Community (address by Mr. Sharp),  
No. 12, P. 1  
Trinidad and Tobago foreign invest-  
ment pact, No. 11, P. 4  
World Population Year, No. 12, P. 5
- External Aid (*see also* Science)  
Alberta matches aid dollars,  
No. 8, P. 4  
Assignment in Kenya, No. 4, P. 6  
Books for developing countries,  
No. 6, P. 4  
Contributions increase, No. 7, P. 4  
Nigerian census, No. 8, P. 4  
Saigon medical assignment,  
No. 11, P. 6  
Srilanka, No. 8, P. 6
- World food and control of drug abuse,  
No. 10, P. 4
- Festivities  
Carnival guests, No. 8, P. 2  
Quebec Carnival, No. 8, P. 1
- Finance  
Public expenditures indicators,  
No. 9, P. 6
- Fisheries *see* Science
- Franca, Celia *see* Arts
- France *see* Exhibitions *and* History
- Fuller, Alfred  
Fuller Brush founder dies,  
No. 2, P. 5
- Germany *see* External Affairs, Grants  
*and* Awards, Trade *and* Visits
- Governor General  
Duties and responsibilities,  
No. 4, P. 2  
Farewell new year's message,  
No. 1, P. 1  
List of, since Confederation,  
No. 1, P. 2  
Miles travelled, No. 1, P. 2  
Mr. Léger becomes Governor General,  
No. 4, P. 1
- Grants and awards  
Coaching grant, No. 2, P. 5  
Contribution to CALA, No. 5, P. 3  
Convocation honours, No. 8, P. 3  
Japan prize for school broadcast,  
No. 5, P. 3  
Leipzig Gold Medal winner,  
No. 2, P. 5  
Nurses' memorial fund, No. 12, P. 6  
Order of Canada winners, No. 2, P. 1  
Quebec literary prizewinner,  
No. 1, P. 3  
Steacie prizewinner, No. 8, P. 4
- Greenland *see* External Affairs
- Health and Welfare (*see also* External  
Affairs *and* Science)  
Campaign to improve old age  
pensions, No. 9, P. 4  
Device to help paralyzed children,  
No. 11, P. 3  
Health-care expansion, No. 7, P. 5  
Motor-vehicle safety rules,  
No. 5, P. 3  
Pensions increase, No. 13, P. 6
- History  
Disraeli letters uncovered,  
No. 2, P. 2
- Housing *see* Construction
- Human rights  
Co-operation cited by human rights  
body, No. 7, P. 4
- Hydro Power  
James Bay inhabitants reject offer,  
No. 8, P. 3  
James Bay project to continue,  
No. 2, P. 4  
Pickering station leads way,  
No. 13, P. 3
- Immigration  
Chilean program, No. 13, P. 5  
Chinese families, No. 1, P. 3  
Increases, No. 11, P. 3  
New regulations, No. 11, P. 3
- Indians and Eskimos (*see also* Arts  
Hydro Power *and* Post Office)  
Hope for claim settlement,  
No. 6, P. 5
- Industry (*see also* Trade)  
B.C. buys Westcoast shares,  
No. 10, P. 2  
Expansion of steel production,  
No. 4, P. 6  
Foreign investment guides,  
No. 3, P. 5  
Petrochemical complex in Alberta,  
No. 6, P. 3
- International Joint Commission  
New Canadian chairman, No. 13, P. 5
- James Bay *see* Hydro Power
- Japan *see* Grants and Awards
- Kenya *see* External Aid
- Korea *see* Trade
- Labour  
Canada Council helps students find  
jobs, No. 8, P. 5  
Minimum wage, No. 8, P. 3  
Occupations, No. 5, P. 4  
Staggered hours, No. 10, P. 6
- Law  
Criminal law reform urged,  
No. 13, P. 3
- Lieutenant Governor  
First female, No. 6, P. 3
- Metric system  
Standard paper sizes, No. 5, P. 5
- Mexico *see* External Affairs *and* Trade
- Miscellaneous  
Maker of "crooked knives",  
No. 6, P. 5  
Man and the animal, No. 9, P. 6

## Museums

- Plan for aviation museum, No. 3, P. 4

Natural Resources (*see also Conservation and Pollution*)

- Alberta tar sands exploration, No. 5, P. 4
- Centre for Resource Studies, No. 12, P. 4
- Energy conference, No. 6, P. 3
- Mineral production, No. 4, P. 5
- Nickel project in Brazil, No. 3, P. 4
- Nickel project in Japan, No. 9, P. 4
- Oil prices, No. 3, P. 4
- Oil sands ripe for development, No. 9, P. 1
- Pipeline plan, No. 9, P. 4

New Zealand *see* External AffairsNigeria *see* External AidNorthern Affairs *see* Science and TransportationNuclear Energy (*see also* Trade)

- Candu possibility for Britain, No. 9, P. 3
- Heavy water plant, No. 2, P. 4

## Olympics

- Coin sales, No. 7, P. 4

## Peace-keeping

- Extended service in UNFICYP, No. 2, P. 2

## Pollution

- Auto-emission control, No. 5, P. 3
- Control devices and gas mileage, No. 1, P. 4
- Implications of oil spills, No. 4, P. 3

## Post Office

- Mail bags, No. 4, P. 5
- Pacific Coast Indians stamps, No. 4, P. 4

*Canada Weekly* is published by the Information Division, Department of External Affairs, Ottawa, K1A 0G2. An index appears quarterly.

Material may be freely reprinted, for the use of which credit would be appreciated; photo sources, if not shown, will be provided on request to (Mrs.) Miki Sheldon, Editor.

*Cette publication existe également en français sous le titre Hebdo Canada. Certains numéros de esta publicación aparecen también en español bajo el título Noticiario de Canadá.*

*Ähnliche Ausgaben dieses Informationsblatts erscheinen auch in deutscher Sprache unter dem Titel Profil Kanada.*

- Royal Canadian Mounted Police Appointment of new Commissioner, No. 3, P. 5

Saudi Arabia *see* External Affairs

## Science

- Arctic sewage-disposal device, No. 9, P. 2
- Artificial cells to help kidney problems, No. 9, P. 2
- Canadian salmon research to aid Southeast Asia, No. 2, P. 5
- Computers and medicine, No. 12, P. 4
- Device sees through lead shield, No. 13, P. 4
- Drainpipe cleaner for farms, No. 12, P. 5
- Flight recorder centre, No. 13, P. 1
- McGill experiments against tooth decay, No. 3, P. 3
- New method to detect arthritis, No. 10, P. 5
- Study of acupuncture in China, No. 9, P. 4

Senegal *see* VisitsSharp, Mitchell *see* External AffairsSport (*see also* Grants and Awards and Olympics)

- Canadians and hockey, No. 2, P. 6
- CFL tries to block new league, No. 11, P. 4
- Hockey results, Nos. 1, 2, 3, 5, 7, 8, 9, 10, 12, Pp. 6; standings, Nos. 4, 6, 11, 13, Pp. 6
- Ski marathon, No. 6, P. 4
- World record at Commonwealth Games, No. 8, P. 5

Switzerland *see* External AffairsTar sands *see* Natural Resources

## Tourism

- Canada and, No. 4, P. 3

Trade (*see also* Transportation and Visits)

- Agreement with Bulgaria, No. 3, P. 5
- Beef import surtax off, No. 3, P. 4
- Books on world markets, No. 1, P. 4
- Canada/Mexico agreement, No. 6, P. 5
- Cologne Fair, No. 6, P. 4
- Economy review and outlook, No. 3, P. 1
- Energy materials, No. 5, P. 6
- Flight simulator to British Airways, No. 10, P. 4

- Korea/Ontario possibility, No. 5, P. 5

- Manitoba mink, No. 3, P. 3
- New Brunswick/Massachusetts, No. 3, P. 4

- Nuclear reactor to Korea, No. 1, P. 6
- Sale of hogs to Korea, No. 1, P. 6
- Skim milk to Mexico, No. 6, P. 5
- Telephones to Venezuela, No. 9, P. 4

Transportation (*see also* Construction and Health and Welfare)

- Baggage conveyor, No. 2, P. 3
- Navigation aids in the North, No. 1, P. 5
- Ontario commuter service, No. 4, P. 6
- Ottawa "dial-a-bus", No. 6, P. 4
- Year-end review, No. 5, P. 1

Trinidad and Tobago *see* External Affairs

## Trudeau, Pierre E.

- Second Christmas baby, No. 2, P. 2

United Nations (UN) (*see also* Peace-keeping)

- Repatriation of UNHR refugees, No. 8, P. 5

United Nations High Commission for Refugees (UNHR) *see* United NationsUnited States (*see also* Construction, Exhibitions, External Affairs, International Joint Commission and Trade)

- Music gift to Mount Allison University, No. 3, P. 5

U.S.S.R. *see* External AffairsVenezuela *see* Trade

## Visits

- Economic Commission for Europe Executive Secretary, No. 5, P. 5
- Energy Ministers to Britain, No. 9, P. 3
- Princess Anne and Mark Phillips, No. 7, P. 3
- Professor to 125th German Parliament, No. 5, P. 5
- Tannery mission to Europe, No. 12, P. 5
- Visitors from Senegal, No. 2, P. 4

## Vital Statistics

- Deaths and causes, No. 10, P. 6
- Population, No. 8, P. 4

## Women

- Measures to improve status, No. 2, P. 3