



Bulletin

Vol. 24, No. 6

February 5, 1969

MR. TRUDEAU REPORTS ON COMMONWEALTH LEADERS' CONFERENCE

The opportunity for regular discussion of problems by the "men of good will" who represented the 850 million people comprising the Commonwealth was perhaps its greatest strength, Prime Minister Pierre Elliott Trudeau said in a statement to the House of Commons on January 20, on his return from the Commonwealth Conference in London.

Further in his statement he said:

"...My impression is that this meeting was not only successful as Commonwealth meetings go, but significantly so. Indeed this conference may have marked some kind of watershed for the Commonwealth. For one thing, the Commonwealth is now close to its maximum size, and future meetings will not note the presence of many new members. For another, the scope of the secretariat seems now to have been defined and its services identified. But most important, and here I rely not simply on my own observations but on the comments of several veteran heads of government, the Commonwealth meeting appears to have attained a new plateau of maturity. Those who anticipated dramatic events at this meeting were incorrect; those who forecast an emotional confrontation over racial issues have been proved wrong...."

AGREEMENT TO DISAGREE

Referring to Rhodesia, Mr. Trudeau stated that no easy solution existed for the problem in that strife-torn country. He said that, after considering all the aspects of the situation, various Commonwealth representatives who held opposite views, understood better the nature of Rhodesia's difficulties. Some members were even capable of modifying their "rigid attitudes". "Of most importance, however," the Prime Minister continued, "honourable men agreed honourably to disagree."

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VISIT TO THE VATICAN

After his report on the Commonwealth Conference, Mr. Trudeau made the following statement regarding his audience with Pope Paul VI and his meeting with President Saragat of Italy:

"At the close of the Commonwealth conference, I went to Rome where, after a most cordial interview at the Quirinal Palace with His Excellency the President of the Italian Republic, Mr. Saragat, I was received at the Vatican by Pope Paul VI.

"We spoke of peace in the world, the difficulties of maintaining it, for instance in Vietnam and in Nigeria, and of the importance of promoting it more particularly through the respect of human rights and international aid.

"In the course of the conversation, I informed the Holy Father that Canada was considering setting up diplomatic relations with the Vatican. The Pope welcomed the idea, stating that the Vatican would be honoured by such relations. But he added that he would leave it to Canada to decide on taking that initiative.

"Pope Paul VI spoke very warmly of Canada, the problems and the tremendous possibilities of which he is well acquainted with. Speaking of our

fellow-countrymen, the Holy Father said he was convinced, and I quote: 'What unites them is stronger and more important than what divides them.'

CANADA A PACIFIST COUNTRY

"And, speaking of the great cause of peace in the world, he added:

'Your country, Mr. Prime Minister, is basically a pacifist country, and we like to think that it will continue, under your leadership, to bring with authority its precious contribution to so vital a cause to the future of humanity.'

"After this most cordial interview, I also had the pleasure of conversing with the Prime Minister of the Italian Republic, Mr. Mariano Rumor, and several of his ministers.

Together, we reviewed the international situation. We also talked about the relations between Canada and Italy. In this regard, we noted the real progress that has been accomplished in the last few years, and we expressed the hope that this progress will continue.

That, in brief, sums up that day in Rome."

NRC TESTS SKI SPEED

Tests conducted in Ottawa by the National Research Council of Canada and the Canadian Amateur Ski Association may give Canada's National Ski Team a split-second edge over competitors at the 1972 Winter Olympics at Sapporo, Japan.

Important, and sometimes startling, results were achieved in the tests, which were conducted in a six-by-nine-foot horizontal wind tunnel operated by NRC's National Aeronautical Establishment.

The objective of the tests, called "Operation Sapporo", is to find ways of reducing the "drag", or wind-resistance, experienced by skiers competing in downhill races. Any decrease in drag could result in a corresponding increase in a skier's speed.

The tests were proposed by Jean-Pierre Picher, of Toronto, alpine coach for the Southern Ontario zone of the Canadian Amateur Ski Association. Others involved from the skiing world are Alan Raine, of Nelson, British Columbia, administrative head coach for Canada's National Ski Team; Dave Jacobs, of Montreal, former head coach of the National Ski Team, and Normand Bureau, of Pointe Gatineau, Quebec, of the Pointe Gatineau ski zone.

The tests were conducted on a weekend by a team of engineers from NRC, who donated their time to the project.

The wind tunnel simulated actual drag conditions experienced by skiers travelling up to 80 miles an hour in downhill races. Skiers who took part in the tests wore their own racing equipment and their skis were mounted on a board attached to the wind tunnel's system for measuring aerodynamic forces.

Simulated drag experienced by the skiers as wind generated by the tunnel's fans whipped by them at various speeds was recorded automatically by electronic equipment for later analysis. For the purposes of the tests speeds of up to 111 miles an hour were simulated.

Drag was measured for some 14 body positions, including the "egg" position, a crouch which has proved the fastest riding position for high-speed skiers. Drag created by a skier's helmet, slacks, boots and the skis themselves also was measured.

POSSIBLE POSITION CHANGE

Mr. Raine says he thinks these tests have produced a new racing position, a crouch he calls the "DJR" position - named after G.A. Dobrodzicki, an NRC engineer, Mr. Jacobs and himself. He believes this position may shave as much as two seconds a minute from times achieved with the "egg" position.

Since only 9/100ths of a second separated the Gold and Silver Medals during the 1968 Olympics, the "DJR" position could be an important asset to the Canadian team in 1972.

Tests also were made with skiers wearing a streamlined helmet, fairings attached to the back of the leg and boot and with the buckles of the ski boot taped. These tests also indicated that changes in the design of ski equipment and clothing can reduce drag.

COMMENTS OF CHAMPION

Olympic skiing champion Nancy Greene said she was delighted to see the National Ski Team and NRC co-operating in a programme to streamline ski-racing equipment.

"I hope there can be the same type of co-operation in other areas of sport so that Canada can be original and not do just what everybody else is doing," she said. "I would like to see such bodies as the National Research Council involved in the design of other sports equipment which could help improve Canada's competitive position in sports."

REPORT-CARDS BY COMPUTER

By June of next year, report-cards will be compiled by computer in the Calgary Public School Board's 12 senior high schools.

The board will have its own Honeywell H-200 computer system in January. Meanwhile, rented computer time is being used to work out reports for two schools.

This means a big saving in time for the teacher, since the data-processing equipment will be used to bring the marks of an average of seven different subjects onto a common report-card - a chore previously performed by teachers.

The new system calculates class averages for each subject, selects the honour-role and marked-improvement candidates and posts them on the report. The computer will also identify for the school-guidance department those students whose grades are below a satisfactory level. A confidential list of these students will help school counsellors in follow-up work.

Although educational benefits are the main consideration in using the computer, the cost of doing report-cards in this way, the Calgary board says, promises to compare favourably with traditional methods.

CANADA SURVEYS THE SEAS

The first world-wide oceanographic project in which Canada has taken part will be launched next November when the Canadian scientific ship *Hudson* sets sail from Halifax on a voyage of 41,000 nautical miles round North and South America.

Energy, Mines and Resources Minister J.J. Greene, who announced the programme in a statement to the House of Commons recently, described the expedition as of one great value to the development of Canada's undersea resources and those of the entire world. The programme, he said, carried global implications that could be of direct benefit to all nations in meeting the scientific and economic challenges of the day.

"Apart from domestic interest," Mr. Greene declared, "all mankind has a great interest in the development of undersea resources, if the challenge of meeting the needs for food and economic progress ... is to be met."

The project, to be known as *Hudson 70*, will involve a 12-month expedition through the Atlantic, Antarctic, Pacific, and Arctic Oceans. Aboard the survey vessel will be scientists from the federal Department of Energy, Mines and Resources and other federal departments, Canadian universities and American oceanographic institutes and universities. Investigations will range from ocean circulation studies to geological surveys of Canada's continental shelf on its east, west and northern coasts, and will include biological, geophysical, chemical and other oceanographic studies.

The expedition is viewed as evidence of Canada's increasing competence in oceanographic research and of this nation's growing contribution to international studies of oceans. The expedition is of a kind strongly urged by various international bodies, among them the United Nations which has endorsed the designation of the period, 1970 to 1980, as the International Decade of World Ocean Exploration.

The *Hudson 70* project also provides an indication of Canada's continuing involvement in the development of scientific techniques for the further development of its resources and those of the world.

In his statement to the House, Mr. Greene acknowledged that "in this age of science, a country of Canada's size must deploy her scientific resources wisely". He said Canada could "not afford to be in the vanguard in all aspects of science and must choose wisely the disciplines wherein we have the capacity and which will be of greatest benefit to Canadians". Oceanography was an area, the Minister continued, "where Canada does have the capacity and where research can be of great benefit in Canada's future".

LATIN AMERICAN INTEREST

Stressing the global context of the project, Mr. Greene said that the study and development of undersea re-

sources throughout the world would aid in alleviating problems arising from increasing population and food shortages. He also noted the likelihood that the project would serve as an area of common endeavour for both Canada and the countries of Latin and South America - a development that would, he said, be "in keeping with the Government's intent to achieve closer ties" with those nations.

Mr. Greene said that Latin American countries with an interest in these studies and themselves possessing facilities in this sphere would be asked to participate "to the extent that is possible in keeping with the objectives of the mission". He added that Canadian scientists had already begun discussions with Chilean scientists regarding a possible programme off the coast of Chile.

While the international implications of the project are evident, the national impact is equally significant. Canada's resources in this regard belong to all the people of Canada, irrespective of geographical location. Development of these resources is seen as a direct benefit to the entire nation.

Mr. Greene compared the exploration of the world's oceans to the exploration of outer space. "It may well be that underwater research in the realm of the oceans will be as important to the future of mankind as the exciting developments in the realm of space," he said.

"It is our belief," Mr. Greene concluded, "that Canada can play a full and worthy part in this realm of science."

The potential economic benefits of the project can be exemplified by resulting knowledge of the mineral wealth of Canada's continental shelves on the Pacific, Arctic and Atlantic coasts.

The programme is all the more urgent in view of the major oil discovery on the Arctic coast of Alaska near the Yukon border.

In addition to economic advantages, experience has shown that scientific advances resulting from such expeditions can be expected to lead eventually to practical applications.

A study of the geological and geophysical features of Canada's continental shelves is the prime objective of the northern part of the voyage.

The geological and geophysical studies planned for the Arctic will help assess the mineral and other resources of the area, extend understanding of the evolution of continents and ocean basins, such as Baffin Bay, and test the theory of continental drift.

The surveys will form part of the extensive programme of geological and geophysical exploration in Canada by the Department of Energy, Mines and Resources; scientists from the Observatories Branch and the Geological Survey of Canada will be involved in the operations and planning.

The *Hudson* will return to Halifax in October 1970.

STAFF CHIEF VISITS FRANCE

Canada's Chief of Defence Staff visited establishments in France recently after attending the Military Committee in Chiefs of Staff sessions at NATO meetings in Brussels.

General J.V. Allard, who went to Brussels on January 14, spent five days in Paris from January 19.

General Allard accepted an invitation from France's Chef d'Etat-Major des Armées last November to visit armed forces Navy, Army and Air Force technical trades schools following the Brussels meetings.

His special interest in this type of training establishment follows the decision announced last spring to set up French-language trades-training centres in Canada as a means of improving the rate of retention of French-speaking Canadians in the Armed Forces.

IJC MEETINGS ON POLLUTION

The Canada-United States International Joint Commission held public meetings on January 21 and 22 in Sault Ste Marie, Michigan, and Windsor, Ontario, to enquire into the adequacy and effectiveness of the Canadian and U.S. Programmes for abatement of the pollution of the St. Mary's Detroit and St. Clair Rivers.

In 1950, specific water-quality objectives were recommended for the St. Clair, St. Mary's and Detroit Rivers by the Commission and were subsequently approved by the Governments of Canada and the United States for purposes of the Boundary Waters Treaty. It was agreed in that treaty that boundary waters should not be polluted in either country to the injury of health or property in the other. A recent report by the Commission's Advisory Board on control of pollution of boundary waters, however, indicated that the established objectives for these three rivers were not being met.

LOAN TO BRAZIL

Canada will lend \$847,000 to Brazil for a technical and economic study of the feasibility of building South America's first airport for supersonic and "jumbo" jet aircraft.

In his announcement of the loan, the Secretary of State for External Affairs, Mr. Mitchell Sharp, stated that it would be administered through the Inter-American Development Bank and would be interest-free and repayable over 50 years with a ten-year period of grace. The contract for the study has been awarded to a consortium consisting of two Canadian firms: Parkin Associates Limited and Acres International Limited of Canada and the Brazilian firm of Hidroservice.

Canada's move to the forefront in airport development is evident in the fact that the successful Canadian consulting companies won the contracts

despite strong competition from prominent firms from other countries. The Canadian group will study the feasibility of expanding existing airports as an alternative to constructing a new airport; determine the most suitable location of a new airport from the technical, economic, town-planning and tourist viewpoints, if that alternative is chosen; evaluate Brazil's present network of international airports and prepare a short-term programme to expand and improve them.

The feasibility study is the first step in a programme that will eventually call for the preparation of blueprints and construction of the airport — a project that will probably exceed \$110 million.

CANADA COUNCIL GRANTS

Two major organizations in the Maritimes are among the recipients of 18 Canada Council grants to the performing arts. The Neptune Theatre in Halifax receives \$120,000 for 1969; and the Charlottetown Summer Festival, receives \$115,000 for its 1969 season of musical theatre, which will include a new Canadian production based on Molière's *Le Bourgeois Gentilhomme*.

Totalling \$552,500, the grants are part of a Council programme of assistance to the performing arts expected to amount to over \$6.5 million during the current year.

OTHER GRANTS

Included in other grants are:

\$50,000 to l'Institut International de Musique du Canada for the 1969 Montreal International Competition in June. This year's competition will be for violin, and a special feature will be the commissioning of an original work by a Canadian composer.

\$50,000 for 1969 operations of the Canadian Music Centre, an organization that promotes and makes available the work of Canadian composers.

A supplement of \$40,000 to the National Ballet of Canada, Toronto, for pre-production costs of two new ballets by Roland Petit to appear in the 1969-70 season. These works will be given their Canadian première at The National Arts Centre. (The Ballet received an earlier grant of \$350,000.)

A supplement of \$30,000 to the Stratford Shakespearean Festival towards costs of a pre-season tour of two new productions in Montreal, Chicago and Ann Arbor, Michigan. (The Festival received an earlier grant of \$350,000.)

A supplement of \$25,000 to the Théâtre du Nouveau Monde, Montreal, towards costs of an original Canadian production of a musical version to be given its première at The National Arts Centre. (The Théâtre received an earlier grant of \$270,000.)

\$25,000 to enable the members of the Orford String Quartet, Toronto, to continue working as an ensemble in 1969.

FUTURE OF ROYAL ONTARIO MUSEUM

According to Toronto newspapers, the Director of the Royal Ontario Museum, Mr. Peter Swann, disclosed on January 21 that he had asked the Secretary of State to declare the ROM a national museum.

The ROM, situated in Toronto, is financed mainly by the Ontario Government, whereas the national museums in Ottawa are a federal responsibility under the Department of the Secretary of State.

Mr. Swann said he had proposed the recognition of the ROM as "the National Museum in Canada and had asked for \$1 million a year, for those activities which serve Canada as a whole at home and abroad".

During 1969, Mr. Swann said, about 400,000 children would receive instruction from the museum - "more than at any other museum in the world". The ROM, he declared, "must expand, for it is leaking at every joint". Sufficient room existed for a new wing to house art collections now suffering from lack of temperature control. The natural history departments could expand, Mr. Swann added, and there were plans for a "proper" children's museum.

Included in the plans for improving the service of the ROM are travelling exhibitions and lectures, the opening of the museum five nights a week, a new restaurant, the renovation of certain galleries and new research facilities, all of which require fresh financial sources.

HOME-BUILDING RECORD IN 1968

Canada's housing output received a tremendous boost in 1968 as the production of new dwellings climbed to a level beyond that of any previous year and outstripped actual annual needs.

A total of 196,878 dwelling units was started, including housing for low-income families, housing for the elderly, the handicapped and the underprivileged, housing for students and housing in support of the private market.

In addition, hostel and dormitory accommodation was provided for some 12,000 persons.

Housing starts in 1968 were some 32,800 units, or 20 percent more than in 1967 and surpassed by 30,313 units the previous record of 166,565 established in 1965.

All types of dwelling shared in the increase. It was, however, more pronounced in starts on apartment dwellings, which totalled 103,383, or 39.2 percent more than the 1967 total of 74,258. The starts on row-dwelling units increased to 8,042, or 8.8 percent over those of 1967. Single-detached, semi-detached, and duplex units were up by 3.6 percent to 85,453 units, from 82,473 units in 1967.

DECEMBER RECORD

Final figures for December also show a record level of activity for the month. Housing starts in urban centres during December totalled 15,095 dwelling

units, compared to 8,761 in the same period last year. All types of dwelling contributed to the increase, with starts of single-detached dwellings up by 46.0 per cent, and apartment dwellings by 84.5 per cent.

When seasonal influences are taken into account, December starts at an annual rate of 240,700 units were almost at the same level as in November. While the total rate changed little, starts of apartment and other multiple units continued to rise from a seasonally-adjusted annual rate of 137,800 units in November to 141,600 units in December. The rate for single-detached dwelling starts eased between the months.

ECC TARGET IN VIEW

"This represents a remarkable achievement for the entire Canadian house-building industry," said H.W. Hignett, President of Central Mortgage and Housing Corporation, in releasing the figures recently. "It is an even more remarkable achievement when one realizes it was accomplished in the face of rising interest costs. It represents the first step in reaching the target set by the Economic Council of Canada of an annual house production of 200,000 units by 1970. For the first time, we can say this target is within reach."

CANADIAN CENTRE AT JOHNS HOPKINS

A Centre of Canadian Studies, for postgraduate study and postdoctoral research on Canada and Canadian-American relations, has been established at Johns Hopkins University, Baltimore, U.S.A.

The Centre will be part of the School of Advanced International Studies in Washington and will enrol students from the United States and Canada in the autumn.

The centre was made possible by a \$1-million grant over a five-year period, from the William H. Donner Foundation and the Donner Canadian Foundation.

CONSERVATION TROPHY

The Canadian Tourist Association has awarded the Julian T. Crandall conservation trophy to Dr. David A. Munro of Ottawa. Dr. Munro, who was recently director of the Canadian Wildlife Service, is now director of the new community affairs branch, Department of Indian Affairs and Northern Development.

The CTA conservation trophy has been awarded annually for 16 years. It is presented to the Canadian citizen who is considered to have contributed most to the conservation of the renewable resources of forest, field and stream in Canada.

Dr. Munro, joined the Canadian Wildlife Service in 1948. He served as a wildlife management officer in western Canada until he went to Ottawa as chief ornithologist in 1953.

As director of the service from January 1964, until September 1968, he made significant contributions to the conservation of natural resources. Among the programmes are the leasing and buying of wetlands, a national hunting permit and harvest survey of migratory birds, the education of hunters in wildlife identification, and the development of wildlife interpretation centres across Canada.

Dr. Munro conceived and prepared the national wildlife policy and programme which was tabled in the House of Commons in April 1966.

AUTO PACT AID EXTENDED

The authority of the Adjustment Assistance Board, which administers the federal Automotive Assistance Programme, has been extended to the end of June 1970.

In announcing the extension, Mr. Jean-Luc Pepin, Minister of Industry and Trade and Commerce, explained that the Automotive Manufacturing Assistance Regulations, made in 1965, established the Government's programme to help manufacturers and workers adjust to the new market conditions resulting from the Canada-United States automobile pact. The programme provides:

- (1) loans to manufacturers of auto parts and manufacturers of specified commercial vehicles and buses, who have been affected by the agreement and who are unable to obtain financing on reasonable terms to restructure their operations;
- (2) transitional assistance benefits to workers laid off by eligible manufacturers owing to restructuring of their operations resulting from the pact;
- (3) remission of customs duties paid by eligible manufacturers on machinery and equipment which they are unable to obtain from Canadian production in time to meet their commitments under the pact.

The AAB's extended authority will co-exist with the second phase of the automotive industry's restructuring under the automobile agreement. During the first phase, from the 1966 car model-year to the end of the 1968 model-year, the industry underwent reorganization and expansion resulting in rationalization of operations and substantial improvements in productivity. The second phase of restructuring is a continuation of the same process.

Since 1965, the Adjustment Assistance Board has authorized 70 loans, totalling \$56 million, which are expected to result in increased annual production of \$100 million and 3,000 new jobs. It has certified that almost 8,000 workers were eligible for transitional assistance benefits, and it has recommended remission of customs duties and sales taxes of \$3.2 million.

WORKING MOTHERS

Mothers of pre-school children are 30 percent less likely to work than wives without children. Married women with university education are about 20 percent more likely to be working than wives with only elementary schooling. These facts are contained in a special study of the labour force released by the Special Manpower Studies Divisions of the Dominion Bureau of Statistics.

In 1961, 22.5 per cent of married women in Canada were working and, by 1967, the proportion had increased substantially to 30.5 per cent. With the younger age groups of married women, children are a major factor bearing on whether a married woman works. After age 44 her education exerts the greatest influence with the husband's education (and therefore probably his income) the second most important factor. Area of residence is another strong influence. Very young wives (up to 24 years) are 15 percent more likely to work if they live in cities — and for all married women cities claim 6.5 percent more in the labour force than do rural areas.

BEAUTY IN BOULDERS

If you happen to be in British Columbia's hinterland, don't be surprised if the ring of a hammer violates the silence. The chances are that, while you have been captivated by the scene, another human being was equally engrossed in an entirely different way.

Members of a hardy breed called lapidaries are probing farther and farther into the rich earth of British Columbia. Their finds of rocks, minerals, and semi-precious materials make an impressive list.

Jade, the semi-precious mineral that has evoked man's reverence since earliest times, is abundant in B.C. Some years ago a 5,000-pound boulder was discovered some 150 miles northwest of Fort St. James. Another chunk, reported to weigh about 20 tons, was found in the Lillooet area. Elsewhere in the province, more than 100 tons of jade have been taken from the lower Fraser River and its tributaries, and another estimated 50 tons have been sold to dealers throughout North America. Bulk shipments of still larger amounts have gone to merchants in Canada, Europe, and China. Depending on the quality, jade sells for 10 cents to more than \$10 a pound.

Unique in Canada, British Columbia's equitable climate allows lapidaries to pursue their hobby all year. Hence, they see the changing seasons, derive plenty of exercise and, as well, experience the suspense of never quite knowing what sort of trophy the next hammer blow will bring.