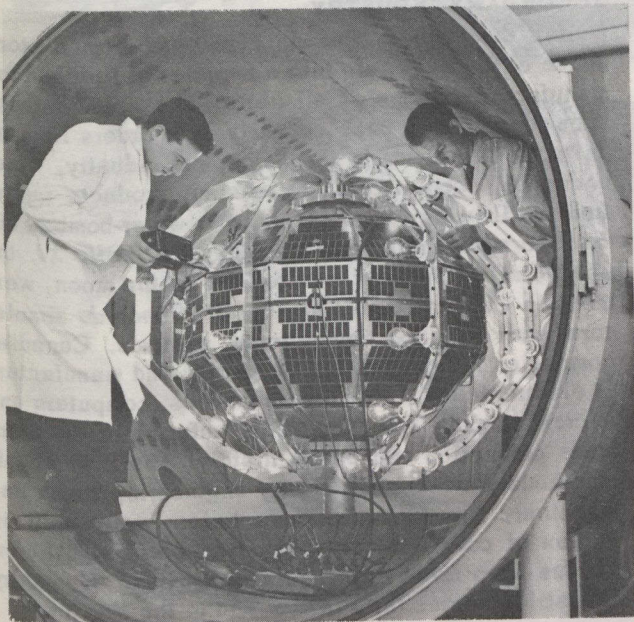


Bulletin

Vol. 25, No. 4

January 28, 1970

CANADA IN THE SIXTIES



Canada's first artificial satellite undergoing testing in 1961.

Science, natural resources, engineering projects, secondary industry and population were the diverse factors that more than doubled Canada's gross national product and enabled the country to achieve during the 1960s an increased stature among the major industrial nations of the world.

SCIENCE

In the early years of the decade Canada's first radio-telescope was set up near Penticton, British Columbia, a location that provided natural shelter for the big dish against most of the chaos of radio noise. While federal astrophysicists trained their antennae on the remoter stars, other government scientists launched *Alouette I* into orbit and Canada became the third nation to have its own satellite in opera-

tion. Equipped with seemingly inexhaustible solar batteries and expanding antennae of revolutionary design, *Alouette* chattered on in scientific language for the rest of the decade. And, though *Alouette* was joined by two more Canadian satellites of even more complex design, nothing could diminish the prestige of that first success.

Also providing credits in space were the *Black Brant* Canadian rockets, designed to investigate the upper atmosphere and the nearer reaches of space, the solid performance of which soon led to further development and eventual use by scientists of several nations. Another space probe, known as HARP, that started at McGill University, Montreal, ended on a beach in Barbados, West Indies, where a group of Canadians adapted a large-calibre naval gun to fire experimental "packages" into space at a comparatively small cost.

But the excitement of technology was not all in the sky. Some Canadians were finding the oceans just as challenging, and the building of the Bedford Insti-

CONTENTS

Canada in the Sixties	1
Guyana Aviation Aid	4
Sea Shells Gift to Museum	4
Pilot Training	4
Machinery Program Analysis	4
Jobs for Summer Students	5
Hygiene Laboratory Renamed	6
Fishing Vessel Insurance	6
New Idea for Animal Clinic	6
Family Figures	6
Monthly Index	7

tute of Oceanography in Nova Scotia, with research ships capable of navigating them from the Arctic ice-fields to the tropics, meant Canada was entering the forefront of this international study. Other scientists probed down and accumulated knowledge of the earth itself and, across the rim of the vast Canadian Arctic, a task force known as the Polar Continental Shelf Project was studying what had hitherto been a scientific *terra incognita*.

During this period, government and private industry, research and development, were acquiring a momentum that was instrumental in raising the gross national product to an estimated \$77 billion.

Oil, metals and minerals kept the headlines throughout the Sixties. Big gains were made in the forestry, fishery and wheat industries.

The search for oil continued unabated in Alberta, the Northwest Territories, Saskatchewan, British Columbia and the Yukon. Its impetus extended into the Pacific Ocean, across the Gulf of St. Lawrence and as far into the Atlantic as Sable Island and the Grand Banks. Finally, it carried as far as the desolate Arctic islands, where, as the decade closed, and spurred by nearby successes in northern Alaska, it continues to lure explorers and speculators.

The story of metals in the Sixties began with the search for such space-age elements as columbium, cobalt and cesium. Then, with the decade not yet half over. Timmins, Ontario, became the focal point of a massive copper-zinc-silver discovery. Other important developments occurred in the East and in the West. A railway was built to Pine Point, NWT, to carry out the base metals found there in abundance and, near Edmonton, the employment of a new technique permitted production of the first nickel blanks made in Canada for the Royal Canadian Mint in Ottawa.

The big Saskatchewan mineral story involved the discovery and extraction of potash. Special railway hopper cars and loading facilities were built to move large amounts of this valuable fertilizer to Vancouver for shipment abroad. Alberta and British Columbia discovered a ready market for their sub-surface soft coal and preliminary operations began for sending large shipments to the Orient, where its derivative, a high-grade metallurgical coke, is an important industrial fuel. Asbestos became a part of Newfoundland's awakening economy, and the advent of color television spurred the search for the "rare earths" needed in the manufacture of receiving sets.

Water pollution became one of the gravest problems in North America and, near the end of the decade, the first efforts were made to clean up Canada's lakes and rivers.

ENGINEERING PROJECTS

During the 1960s, great Canadian dams – Peace River, Manicouagan, South Saskatchewan, Mactaquac, Churchill Falls – were built, which blocked the channels of mighty rivers, created vast lakes rivalling those of nature and changed whole landscapes. Before these projects, which added millions of kilowatts to the nation's power reserves, the wilderness frontier retreated step by step.

The early part of the decade saw the opening of the Trans-Canada Highway and many new airports (some of them international), and broad new expressways were constructed linking the larger population centers. The big cities rose ever higher; Montreal built a modern *métro*; everywhere construction materials in general were being used in unprecedented quantities.

SECONDARY INDUSTRY

During the Sixties, Canada developed from a storehouse of raw materials into a supplier of finished and manufactured items of all sorts. The steel industry boomed, reaching peak capacity with orders from all parts of the world. In the aerospace industry, which underwent sophisticated expansion, products ranged from a tilt-wing cargo plane to a water-bomber aircraft to spacecraft parts (the legs of *Apollo XI*, the spacecraft of the first men to land on the moon, were made in Canada), small hovercraft, *Concorde* simulators and complex navigational systems. Canadian companies led the field in the design and manufacture of electronic switching for telephones, computers and microsystems. The Canadian automobile industry made production and export history. The first aluminum houses were built. Heavy engineering items and machinery from Canadian factories were sold in scores of countries. During these years, significant strides were made in the establishment of secondary industries across the Prairies and in the Maritimes.

PEOPLE

Canadians passed the 20-million mark during the Sixties, and celebrated their nation's centennial with a gusto that surprised everyone – especially themselves. A steady influx of new citizens from many countries continued to alter the character of the country. Many Canadians moved restlessly from city to city and province to province.

Social services increased and living standards (which, during this decade were compared favorably with those of any other country) received practical study which resulted in such innovations as the Canada Pension Plan and the medicare programs established by the provinces.

Expo 67, the biggest candle on Canada's birthday cake during centennial year.



Some parts of Canada remained largely unchanged through the decade, like Sable Island where, despite the coming and going of an exploratory oil drill rig and its crew, during 1967, the wild horses continued to roam in isolated peace and tranquility.



In 1968 the search for oil reached the Arctic Islands and seismic explosions, shown here, were followed by exploratory drilling in 1969.



The snowmobile provided Canadians with a new sport during the Sixties and, up north, the machine replaced the dog-sled.

GUYANA AVIATION AID

A \$3,100,000-assistance project to develop civil aviation in Guyana was announced recently by the Canadian International Development Agency.

The primary object of the Canadian program is to increase the capacity of Guyana Airways Corporation, a wholly-owned subsidiary of the Government of Guyana, to transport equipment and materials throughout the interior, to create an all-weather flying capability across the country, and to expand the Corporation's air-freight service.

A grant of \$1 million will establish an instrument-flight capability by installation of non-directional beacons at 15 sites. At Timehri Airport, Guyana's international airport, new installations will include a meteorological forecasting center, a VHF system, runway maintenance equipment and a modified instrument-landing capability. Technical assistance to train air-traffic controllers, a civil aviation inspector, and experts to establish the meteorological services will be provided. An aeronautical information unit will also be expanded.

A development loan of \$1,700,000 will permit Guyana Airways Corporation to acquire two De Havilland *Caribou* aircraft. Grant funds amounting to \$400,000 will finance construction of a combined office and hangar building and provision of miscellaneous equipment required to improve the organization and management of GAC. Technical support to assist in this improvement will also be provided.

Previous assistance for civil aviation in Guyana has included provision of two *Twin Otters* for Guyana Airways Corporation.

SEA SHELLS GIFT TO MUSEUM

A collection of exotic marine shells has been donated to the National Museums of Canada by Mrs. C.A. Johannsen, whose late husband was a collector.

The 5,000 specimens were described by a museum scientist as "probably the finest amateur collection in Canada".

Dr. Arthur Clarke, curator of malacology for the National Museums of Natural Sciences, said that one group of shells in the collection was "probably the most complete in both Canada and the United States". He said that a number of individual shells were worth as much as \$100 each.

"The assembly of volutes, a group of shells that are both showy and expensive," Dr. Clarke said, "is the best I have ever seen. Our museum has only about one-third of the volutes contained in the Johannsen collection."

SPECIAL DISPLAY CASES

The late Mr. Johannsen, a Canadian contractor, had displayed his shells in specially-made cases,

which are also donated to the Museums.

"When the museum opens again," Dr. Clarke said, "we hope to be able to show the collection as one unit - probably in the same cases. Both the shells and cases are ideal for display purposes." The National Museum of Natural Sciences and the National Museum of Man are closed until the summer for renovations.

The museum already has a collection of 2.5 million specimens of molluscs, the largest in Canada and fifth or sixth in North America. Its Canadian collection is "by far the largest in the world" and there is a rich collection of molluscs from many countries.

PILOT TRAINING REDUCED

The Canadian Forces' pilot-training program was cut back during the autumn to meet the requirements of the new force structure.

The reduction reflects the re-configuration of the Canadian Forces announced last September 19 by the Minister of National Defence, which included the decision to reduce the size of the First Canadian Air Division in Europe in 1970 and the aircraft strength of Air Transport Command and Maritime Command between 1970 and 1973.

SOME OFFICERS UNAFFECTED

Officers now undergoing pilot training and pilot candidates attending the Canadian services colleges and universities under the regular officer training plan will not be affected by the cutback.

About 65 other persons, however, including pilot candidates now at the Canadian Forces Officer Candidate School at Esquimalt, British Columbia, and serving officers who have requested transfer to pilot duties, will not be trained as pilots as previously planned.

Pilot candidates are being offered alternative employment in the Canadian Forces in several different classifications, depending on their individual qualifications and preferences.

MACHINERY PROGRAM ANALYSIS

A new source of information, which will, it is hoped, stimulate further growth of Canada's machinery industry, has been made available by the Department of Industry, Trade and Commerce in its report *Machinery Program Analysis - 1968 Imports*, released last month.

IMPORTS EXAMINED

The report covers imports of \$190-million worth of machinery not produced in Canada, which could

provide new manufacturing opportunities. It includes a breakdown of the types of machinery being imported, their value and country of origin, for the calendar year 1968.

The identifying of imports of machinery not made in Canada was one of the ancillary aims of the Machinery Program, introduced in January 1968. The main object of the Program is to foster greater efficiency in Canadian manufacturing. It remits duty on imported machinery not available in Canada to allow Canadian industry to acquire capital equipment at the lowest possible cost. At the same time, machinery builders derive maximum incentive and encouragement from the tariff applicable to competing machinery imports.

ITEMS IN MACHINERY PROGRAM

The Machinery Program covers machinery and related equipment imported under Item 42700-1 of the tariff. Of the \$700-million worth of machinery imports under this item during 1968, some \$400-million worth were subject to duty. Ninety per cent of these competitive imports were dutiable at the most-favored-nation rate of 15 per cent. Duty remission was granted on some \$300 million, of which the report deals with about \$190 million. The balance represents, in the main, replacement parts.

The operation of the Machinery Program involves the assessing of the manufacturing capabilities of more than 900 Canadian machinery builders in connection with some 20,000 yearly applications for remission of duty. The resultant continuing interchange between the Department of Industry, Trade and Commerce and Canadian industry benefits domestic machinery manufacturers. It draws their capabilities to the attention of potential customers, and identifies the demand for specific types of machine made abroad that might be profitably manufactured in Canada. Machinery users also benefit as the Program alerts them to the full range of Canadian machines, which meets their requirements on a competitive basis.

JOBS FOR SUMMER STUDENTS

The Government of Canada provided jobs for 11,365 students last summer, an increase of nearly 27 per cent over that of the previous summer.

The Manpower Department was involved in a number of initiatives aimed at helping students find summer employment, one of which was to expand summer job opportunities in the Government service itself.

Mr. Alan J. MacEachen, Minister of Manpower and Immigration, recently reported an increase of 2,401 in the number of summer jobs provided in 1969, compared to the 1968 total of 8,964.

Efforts to increase student summer employment in the federal service followed a Cabinet directive in April of last year, which proposed that departments and agencies increase student summer employment by at least 10 per cent over the previous year.

"I am most pleased that the results have considerably exceeded the target," Mr. MacEachen said.

Departments and agencies have already been asked to canvass possibilities of student summer employment in 1970. In addition, Mr. MacEachen said, the Department was continuing its efforts to encourage greater student employment in the private sector, by co-ordinating the efforts of private industry through Canada manpower centers across Canada.

Students employed last summer by the 52 Federal Government departments, agencies and corporations earned a total of \$11,129,417. Male students accounted for 76 per cent of the total.

DEPARTMENTAL FIGURES

The largest number of students - 1,938 - was hired by the Post Office; National Defence hired 1,443; Indian Affairs and Northern Development, 859; Energy, Mines and Resources, 886; Agriculture, 682; Fisheries and Forestry, 785; National Revenue, 535; Public Works, 508; Transport, 760; Manpower and Immigration, 439.

Mr. MacEachen said reports from departments indicated that student summer employees performed worthwhile and valuable work and made a positive contribution. Of the total number, 21.5 per cent were engaged in professional and semi-professional occupations; some 27 per cent did clerical work, and 45 per cent were on manual jobs.

CO-OPERATIVE EFFORT

Mr. MacEachen paid tribute to the co-operation the Department had received in its summer student employment program from provincial authorities, universities, employees, and labor groups.

"In particular, I would mention the imaginative and energetic campaign devised by the Canadian Chamber of Commerce, 'Operation Placement', to interest their members and the general public in providing employment for students during the coming summer months."

The estimated population of Canada, as of June 1, 1969, was 21,061.0 million; of this total, 10,563.6 million were males and 10,497.4 million females. The age-group with the largest number in Canada was the 5-9 year-old group, with 2,325.7 million. The largest male group also was in the 5-9 sector (1,190.3), as was the largest female group (1,135.4 million).

HYGIENE LABORATORY RENAMED

Mr. John Munro, Minister of National Health and Welfare, has announced that his Department's Laboratory of Hygiene will be known from now on as the Canadian Communicable Disease Center.

Mr. Munro said that the new title would be more suited to the role provided by the Center on behalf of public health in Canada.

LABORATORY WORK

The laboratory, which was established in 1921, has been promoting better health services throughout Canada and has tested the quality of biological drugs (vaccines, etc.) under the Food and Drugs Act. In co-operation with provincial health departments, hospitals and research institutions, improved laboratory work requires the specialized operation of reference laboratories for both chemical and bacteriological services. Tuberculosis, venereal diseases, tick-borne fevers and viral diseases come under this immediate category.

Because of the biologics-control work undertaken by this service, safe and effective vaccines against such communicable diseases as poliomyelitis, measles, diphtheria, whooping cough and mumps have been available in Canada and the release of faulty vaccines has been avoided.

FISHING VESSEL INSURANCE

Changes in the Federal Government's fishing vessel insurance plan will make low-cost insurance a reality for most Canadian fishing vessels next April, Fisheries and Forestry Minister Jack Davis announced recently.

Large vessels of up to 100 feet registered length will be eligible for insurance coverage for the first time.

Mr. Davis also indicated that rate schedules were being changed in order to make the FVIP financially self-supporting and provide revenues sufficient not only to cover insurance claims but also to pay for administrative costs.

The new rate schedules for the categories of vessel are as follows: 1 per cent of appraised value up to \$5,000; 2 per cent of appraised value from \$5,000 to \$25,000; and 4 per cent of appraised value over \$25,000.

NEW IDEA FOR ANIMAL CLINIC

Livestock producers throughout Canada, the United States and Britain are watching with interest a new idea in assistance to veterinary medicine

being established as a pilot project in the Peace River area by the Veterinary Services Division, Alberta Department of Agriculture.

The project is designed to test a new method of attracting and maintaining private veterinary practices in livestock production areas and is being conducted by the Division in co-operation with the Peace River Livestock Association Ltd. and the Alberta Veterinary Medical Association. The plan, which was established in response to requests from livestock groups, service boards, local government and area planning groups, is expected to reduce the overhead of the animal practitioner, thereby reducing costs to the livestock producer.

The Association has agreed to build a \$50,000-veterinary clinic at Fairview, which will include livestock pens and chutes, sterilizers, obstetrical and surgical instruments and clinical laboratory equipment. This facility will be leased by the provincial government for a specified time, ensuring the Association full return of capital investment. The clinic will be made available to a practitioner provided through the Alberta Veterinary Medical Association.

In most provinces, assistance to veterinarians is in the form of annual subsidies, a method which has not proved completely successful. The new method should ease the financial burden on both the livestock producer and the practitioner while, at the same time, increasing the service. It will provide the environment and facilities to attract young graduates who will practise under the supervision of the AVMA.

The project, if successful, will help in attracting and retaining a veterinarian at a time when he is most needed — while the livestock industry is being developed.

FAMILY FIGURES

The estimated number of families in Canada (excluding Yukon and Northwest Territories) on June 1, 1968, was 4,696,000, an increase of 178,000 or 3.9 per cent since the 1966 census, and of 556,000 or 13.4 per cent since the 1961 census. The average number of persons in a family in Canada on June 1, 1968, was 3.9, the same as that shown in the 1961 and 1966 censuses. The population living in families on June 1, 1968, constituted 88.7 of the total population of Canada on that date. Average family size was largest in Quebec and the Atlantic Provinces at 4.2 persons a family, followed by the Prairie Provinces at 3.9 persons and Ontario at 3.7, while British Columbia had the smallest average size at 3.6 persons a family.

MONTHLY INDEX

(January 1970, Volume 25)

- Agriculture
Grains group established, No. 1, P. 6
- Bilingualism and Biculturalism
Third report of B and B Commission, No. 2, P. 1
- Britain
Gift of maple trees to, No. 1, P. 3
- Commerce *see* Trade
- Construction
Housing starts record, No. 2, P. 3
- Consumer Affairs
Price index, No. 2, P. 4
- Culture *see* Bilingualism and Biculturalism
- Economy *see* Consumer Affairs and Trade
- Education (*see also* Labor)
Guest student from Germany, No. 1, P. 5
- Eskimos *see* Indians and Eskimos
- Exhibitions
Sea shells gift to museum, No. 4, P. 4
- External Affairs (*see also* Vietnam)
Appointments, No. 2, P. 3
- External Aid
Grenada, No. 1, P. 2
Guyana aviation aid, No. 4, P. 4
- Fisheries (*see also* Exhibitions and Science)
International conference, No. 3, P. 6
Vessel insurance, No. 4, P. 6
- Forestry *see* Britain
- Germany, Federal Republic of, *see* Education
- Health and Welfare
Age and disability pensions, No. 1, P. 4
Drinking water standards, No. 2, P. 6
Eye damage, No. 1, P. 3
Hygiene laboratory renamed, No. 4, P. 6
Report on cigarette-smoking, No. 3, P. 3
- History
Logs of historical interest, No. 1, P. 4
Memorial to old Air Force plane, No. 3, P. 3
- Housing *see* Construction
- Indians and Eskimos
Indians eatn tourist dollars, No. 1, P. 2
Métis become mariners, No. 3, P. 4
- Industry (*see also* Labor and Trade)
Canadian fur industry, No. 2, P. 5
Canadian furs – the mink, No. 3, P. 5
Industrial fellowship program, No. 3, P. 4
Machinery program analysis, No. 4, P. 4
- Labor
Industry spurns women graduates, No. 1, P. 6
Jobs for summer students, No. 4, P. 5
- Métis *see* Indians and Eskimos
- National Defence (*see also* History and North Atlantic Treaty Organization)
Pilot training reduced, No. 4, P. 4
- National Research Council *see* Science
- North Atlantic Treaty Organization
Withdrawal from base in Italy, No. 2, P. 4
- Photo Features
Canada in the Sixties, No. 4, P. 1
- Post Office
Centennial stamps, No. 2, P. 4
Misregistered stamps, No. 2, P. 4
- Science
Animal clinic, No. 4, P. 6
Submarine fisheries research, No. 1, P. 5
- Sharp, Mitchell *see* Vietnam
- Trade
Wheat to Soviet Union, No. 2, P. 5
Year-end statement by Minister of Industry, Trade and Commerce, No. 3, P. 1
- Transportation
Coast Guard fleet changes, No. 3, P. 5
Electric car, No. 1, P. 3
- U.S.S.R. *see* Trade
- Vietnam
War crimes (statement by Mr. Sharp), No. 1, P. 1
- Vital Statistics
Families, No. 4, P. 6

