

ROUNDEL

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Season's Greetings



ROUNDEL

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ON THE BREAK

Merry Christmas and Happy New Year from the staff and editorial committee to ROUNDEL readers around the world. With this traditional season's greeting goes our annual request for contributions of material.

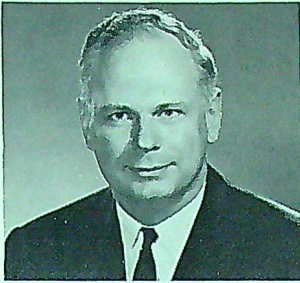
There is a degree of urgency about this appeal not apparent in years past. Frankly, we are alarmed by the drastic reduction of incoming stories and illustrations. While we know full well the reasons for this "drying up" process, we are still charged with producing and maintaining the editorial standards of this magazine. And even if, as seems likely, the integration axe falls on us in 1965, whatever publication takes our place will need your support just as much as does ROUNDEL.

Why not make a New Year's resolution to break into print — here in your own service magazine?

At Tatum s/l
Editor.

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CHRISTMAS MESSAGES - 1964 - MESSAGES DE NOËL



DURING the year which is now drawing to a close, a great many changes have taken place both within the armed forces of Canada and throughout the world. No doubt each of you feel that the most noteworthy events are the ones which affect you personally.

"The old order changeth", and I trust that the new which is embodied in the integration of the Canadian Forces Headquarters and other establishments, will help us to provide the most streamlined and responsive force possible to preserve the peace.

The preservation of peace in the world today can best be achieved by each and every one of us being prepared to make the sacrifices necessary to ensure that all nations live in harmony one with another.

Christmas is the time of year when thoughts turn to home, family and loved ones, particularly when one is far from home as some of you are, and unable to participate in the festive celebrations which are so much a part of our tradition and way of life.

As Minister of National Defence, it gives me great pleasure to extend to each and every one of you and your families, my most sincere wishes for a Very Merry Christmas and a Happy New Year.

PAUL T. HELLYER,
Minister of National Defence

ON THIS, the first Christmas of the new Canadian Defence Forces Headquarters, it is a particular privilege for me to extend the very best wishes for a full and happy Christmas to every Canadian sailor, soldier and airman and their families, wherever they may be serving.

I am confident that we in the Services will go forward together into 1965 with a high resolve that our responsibility - the defence of Canada - will be met with all our dedication and energy.

Again to all a Merry Christmas and a Happy New Year.

F. R. MILLER,
Air Chief Marshal,
Chief of the Defence Staff

C'EST UN grand plaisir pour moi que d'adresser mes meilleurs vœux d'un Très Joyeux Noël aux membres des forces armées du Canada, au personnel du Conseil de recherches pour la défense de même qu'au personnel civil de notre ministère.

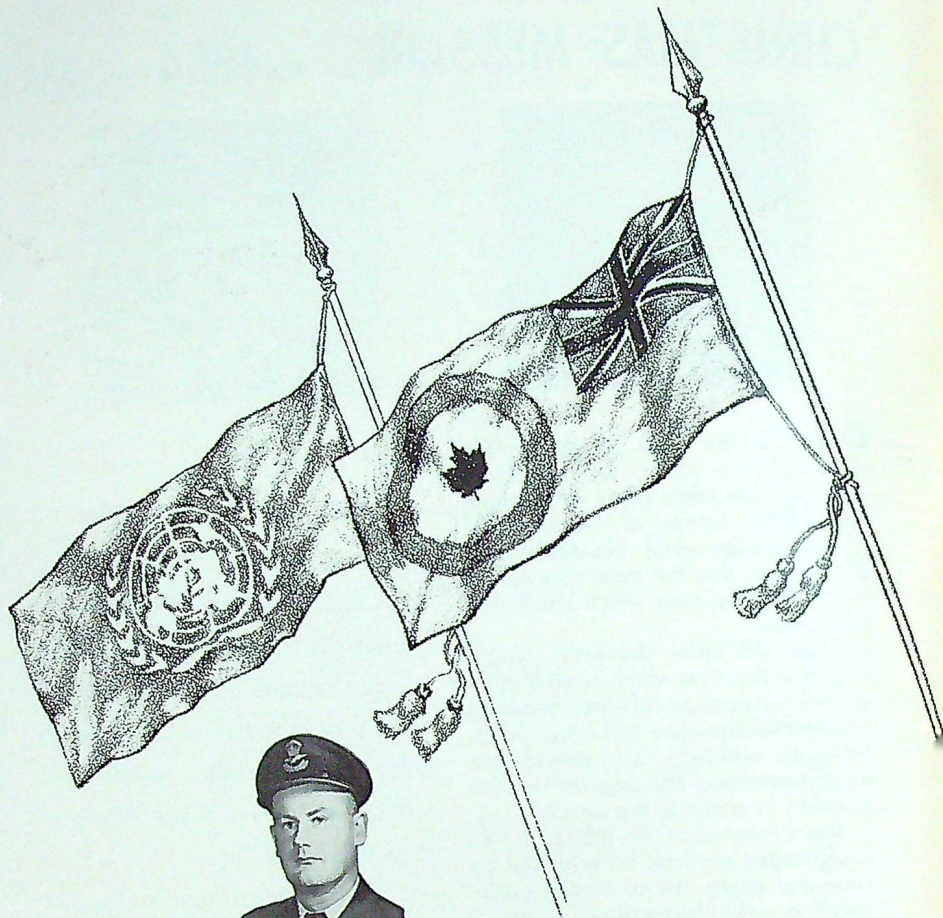
Vous participez tous à l'effort commun en vue du maintien de la paix dans le monde. Je sais que cela comporte parfois des difficultés et des sacrifices, et que pendant cette joyeuse période de l'année certains d'entre vous seront séparés de leurs familles et des êtres qui leur sont chers parce qu'ils sont cantonnés dans des pays étrangers.

Durant la sainte saison de Noël, le message divin de la paix promise sur la terre aux hommes de bonne volonté s'exprime de façon concrète dans les efforts que vous faites pour apporter la paix et la compréhension à plusieurs régions troublées de l'univers. La sanctification de la naissance du Sauveur nous fournit à tous et à chacun l'occasion de revaloriser nos intentions et nos buts à la lumière des exigences de la vie dans le monde actuel.

Pour chacun d'entre vous, où que vous soyez, que la saison de Noël soit une période de réjouissances et que le Nouvel An nous permette à tous de nous rapprocher davantage de la paix et de la prospérité.

LUCIEN CARDIN,
Ministre associé de la
Défense Nationale.

the UN and the RCAF



By **FLIGHT LIEUTENANT T. G. COUGHLIN**
Assistant Editor, **ROUNDEL**

CLUSTERED together, the letters below look like the ingredients for alphabet soup. But, to the RCAF these groups of initials represent thousands of operational hours flown in several foreign countries throughout the years on behalf of the United Nations.

UNEF (United Nations Emergency Force), UNYOM (United Nations Yemen Observer Mission) and UNMOGIP (United Nations Military Observer Group in India and Pakistan) are but three of the many peace-keeping activities in which the RCAF has participated since the end of

World War II. Canada has always expressed faith in the UN as the best hope for world peace. On 10 occasions during the past 14 years this faith has been transformed into RCAF action to back-up UN peace-keeping or special emergency operations.

On 25 June 1950 North Korean Communist armies struck south across the 38th parallel. Early in July, Prime Minister St. Laurent announced that No. 426 (Transport) Sqn. had been offered for service with the UN forces. On the 25th of that month, six *North Star* aircraft

took off from Dorval heading for UN duty in the Orient. When "Operation Hawk" was concluded four years later, on 9 June '54, the squadron had completed 599 round trips, carrying 13,000 personnel and 7,000,000 pounds of freight and mail during 34,000 flying hours. During those four years the Canadian contingent (navy, army and airforce) became the third largest in the 16-nation UN force in Korea.

But transport flying was not the only contribution made by the RCAF on behalf of UN operations in Korea. Canadian fighter pilots also flew

into battle. In an arrangement with the USAF, 21 RCAF pilots served tours with various USAF squadrons. The Canadians contributed their share to the UN objective of ending hostilities, by shooting down nine enemy aircraft and damaging many more. With the end of the Korean campaign, on 27 July '53, the world returned to a more normal state of cold war. But just a little more than a year later, the RCAF was once more spreading its wings in support of an uneasy peace.

On 27 Aug. '54, a *North Star* aircraft from No. 426 Sqn. took off on a trip which extended more than halfway around the world. The war in Indo China had come to an end and Canada, along with India and Poland, was appointed to the International Commission for Supervision and Control in Indo China, set up by the Geneva Accord of 1954. Although not under UN jurisdiction, this supervisory operation has continued for a decade. While the RCAF has provided the airlift for the Canadian component of the Truce Commission, a number of RCAF personnel have also been part of the three-nation teams which travel on foot, by jeep and in boats through rice paddies, hill country and waterways in the troubled countries of Laos, Vietnam and Cambodia.

On every occasion upon which it was called, the RCAF demonstrated not only that it could handle the particular assignment but also that it could react quickly. Seldom in peacetime does a military formation find itself faced with the conditions of wartime emergency caused by the eruption in the Middle East in the fall of 1956. At the height of the Suez crisis Canada's then-minister of external affairs, the Hon. L. B. Pearson, conceived the idea of a United Nations Emergency Force (UNEF) to supervise the cessation of hostilities. This imaginative plan,



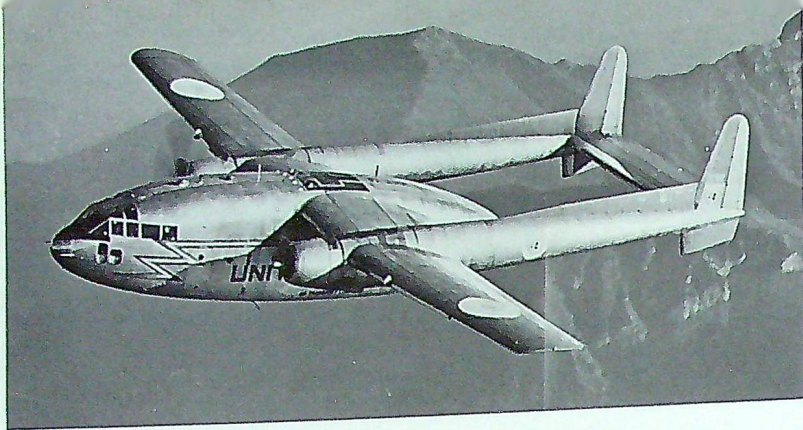
Familiar sight to No. 426 Sqn. North Star crews on the Korean airlift of the early 1950s was Mt. Fujiyama, towering sentinel of Japan.



LAC R. Y. Nakamura chats with labourers at an airfield in South Korea. RCAF participation here was first of ten UN assignments in past 14 years.



En route to South Viet Nam for rotation of Canadian UN truce commission members, RCAF transport stopped in Fiji. Here F/O A. P. Greening shows camera to Fiji police Cpl. V. Viliame.



No. 435 Sqn. Flying Boxcars were taken off Arctic duty and assigned to Middle East when UNEF was formed in 1956.

originated at a critical moment in world history, won for Mr. Pearson the coveted Nobel Peace Prize.

Canada's decision to provide the UNEF with an air transport support element afforded the RCAF a live exercise in mobility and flexibility. One Monday night in November 1956, No. 435 Sqn. was told that it might have to move from its base at Namao to the Middle East. Early next morning the order was confirmed and two hours later the first *Flying Boxcar* was on its way to Toronto. There RCAF markings gave way to the blue and white insignia of the UN and, in short order, 12 aircraft loaded with men and equipment were winging their way across the Atlantic. Within five days, No. 435 Sqn. had transferred its operations from the Canadian Arctic to southern Italy. Shuttling between Capodichino, Italy, and Abu Suweir, Egypt, on logistic missions for the UNEF, the squadron carried troops of the several nations contributing to UNEF and airlifted thousands of tons of mail and equipment.

The early months had their trying moments. Because of the tense international situation, aircrew had to observe complicated procedures when flying over Egypt. These stipulated that requests for clearance be made to Egypt 18 hours in advance of takeoff. Because Souda Bay, then a refuelling point, provided only visual operations with limited night-landing facilities, it was necessary

to take-off from Naples (Capodichino airport) at 0200 hrs. to ensure a first-daylight landing at Souda Bay and arrival just before sunset at Abu Suweir. Communications at that time were poor and entry to and departure from Egypt could only be made at one point, Rosetta. From there a narrow corridor had to be navigated without deviation to and from Abu Suweir.

The completion of the airlift early in 1957 did not mean the end of RCAF participation in the UNEF. When No. 435 Sqn. returned to Canada it was replaced by No. 114 Communications Flight, also based at Capodichino. This organization, in turn, was replaced by No. 115 Communications Flight at Abu Suweir. This unit later changed its designation to No. 115 Air Transport Unit and its location to El Arish. But, by any name, service in the Middle East meant that for the first time since World War II Canadian personnel were serving in an area

No. 115 Air Transport Unit operates from El Arish in the Sinai Peninsula.



where they were beset by blowing sand and blistering heat.

Now in its eighth year of operations on behalf of the UN, No. 115 ATU, commanded by W/C P. A. Hartman, DFC, AFC, has two main roles: reconnaissance and re-supply. In the reconnaissance role the unit's *Otter* aircraft make daily trips along the armistice demarcation line which separates Israel from the Gaza Strip and along the international frontier

An RCAF Otter, returning from UNEF patrol, swoops along the Mediterranean shore.



which runs from the western border of the Gaza Strip to the southern tip of the Sinai Peninsula. In the re-supply role white-painted *Caribous* carry mail and men to the UN outpost of Sharm El Sheik, mail and rations from Beirut and sometimes Cairo and an occasional special trip to Port Said. An additional RCAF contribution to stability in the Middle East is an air staff officer (now W/C J. E. Hanna) at UNEF HQ, Gaza.

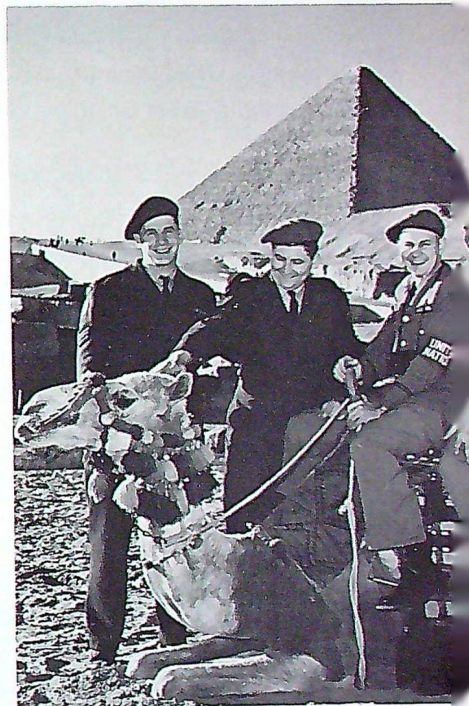
The only operation in which Canada participated on behalf of the UN but did not call upon the RCAF to play a part, occurred in 1958. In that year UNOGIL (United Nations Observer Group in Lebanon) included representatives from the Canadian external affairs department but no military personnel.

During 1960 the RCAF, on behalf of Canada, was called upon three times to render assistance for the UN. On two occasions RCAF aircraft winged their way to far corners of the earth on works of mercy; the third was a peace-keeping mission. The first operation got underway when the World Health Organization, a specialized agency of the UN, asked that medical supplies be flown to Morocco to aid the survivors of a disastrous earthquake. The RCAF responded quickly. On 6 March a *North Star*, carrying a doctor, six Red Cross nurses and over three tons of medical supplies took off from Montreal on the first leg of the trip. At Stephenville, Newfoundland, the aircraft was re-fuelled then flown to Lajes in the Azores. A second crew took the aircraft on the final lap to Rabat, Morocco, where it landed safely after its 3,200-mile, 21-hour flight from Montreal.

In July nature caused another disaster when earthquakes, tidal waves and belching volcanoes combined to create widespread destruction in Chile. Again the UN specialized



While Yugoslavian soldier stands guard over RCAF aircraft, some Canadians go sightseeing. L. to r.: Sgt. L. P. Dopp, LAC J. D. Bovell, F/O G. C. Foster and F/O R. P. Howard. The camel is called Canada Dry.



In the Yemen in 1963, Canadians formed part of UNYOM. Here some off-duty RCAF airmen observe local transportation methods. L. to r.: Cpl. A. H. McKee, LACs D. R. Stronach, W. C. Desimone, H. Herbert and friend. The donkey is unnamed.



agencies sent out an appeal for help. Within 12 hours of receiving an operational order, five *North Stars* were on their way bringing Canadian aid to the devastated area. From Trenton the aircraft, loaded with medical supplies and food, took off for Puerto Montt, Chile. It was a 25-hour flight via Charleston, Panama City, Lima and Santiago. One of the *North Stars* went to Victoria, Chile, where a complete 30-bed hospital was off-loaded. The other *North Stars* flew a shuttle service for the Chilean government carrying relief supplies from Santiago to the disaster area.

In the same month Canada became one of the more than 30 countries which offered the UN its services to help restore peace and order in the strife-torn Republic of the Congo. Thus, for a number of RCAF personnel, flying over steaming jungles and living south of the equator, became a way of life. Because of Canada's experience in air transport work (the RCAF was the UN's only airlift in the Middle East) Canadians were asked to control air movements within the Congo and to provide air transport from the outside world to Leopoldville. After a survey made by A/C F. S. Carpenter, AFC, to determine the airlift requirements of the Organisation Nations Unies du Congo (ONUC), a cargo-laden *North Star* took off from Trenton on 18 July '60. In less than one hour, three more *North Stars* followed. The airlift grew until it became Air Transport Command's largest operation since the Korean war.

The *North Stars* flew from Trenton to Gander, to Lajes, then to Pisa. At Pisa the RCAF aircraft were put at the disposal of the UN and carried whatever cargo the UN requested. From Pisa it was a long haul to Leopoldville via Idris, Libya, and Kano, Nigeria. For the



W/C J. O. Maitland, OC of No. 437 Sqn., and A/C F. S. Carpenter, AOC of Air Transport Command, welcome Chilean Ambassador Mario Rodriguez to RCAF Stn. Trenton. His Excellency presented Chilean Air Force honorary pilot wings to RCAF fliers who took part in emergency operations in his country in 1960.

first few months the flying operations were particularly difficult because of the shortage of maps, radio facilities, spare parts, etc. In spite of a multitude of problems, every pound of freight and every UN soldier were safely delivered to their destinations. The logistics problem

of bringing men and material from the outside world to the Congo was greatly simplified in November 1961 when the RCAF replaced the aging *North Stars* with *Yukon* aircraft.

RCAF personnel stationed in the Congo had an equally trying time with the Congo's internal airlift.

A North Star en route from Canada to the Congo is refueled at RAF Stn. Idris near Tripoli in North Africa. Yukons replaced North Stars on Congo airlift in 1961.



The air transport force consisted of 13 different types of aircraft, flown by a mixture of civilian and military pilots from a number of different countries. Maintaining such a wide variety of aircraft and coping with the multi-language barrier was a challenging task. After nearly four years of service on behalf of the UN forces in the Congo, the operation came to an end. On 30 June '64 the RCAF flew its last trip from Leopoldville to Canada, thus ending an airlift which consisted of 392 flights and resulted in more than four million pounds of freight and 11,746 passengers being carried.

While the Congo operation was going on, three other trouble spots required the attention and intervention of the United Nations. On 15 Aug. '62 representatives of the Netherlands and Indonesia signed an agreement concerning the future of West New Guinea (West Irian). The agreement provided that the administration of this territory be transferred from the Netherlands to Indonesia after 1 May '63, thus ending the 13-year dispute between these two UN members. In the interim period the UN was to administer the area and to maintain law and order with an international security force. The UN turned to Canada with a request for air support.

On 30 Aug. '62 two *Otter* aircraft and a number of RCAF personnel were loaded into two *Hercules* transports at Stn. Trenton. The long trip to Biak, New Guinea, was begun. Three days later the *Hercules* arrived in a torrential downpour and the RCAF contingent went on duty with the United Nations Temporary Executive Authority (UNTEA). In addition to three pilots, eight groundcrew and the *Otters*, an RCAF officer, Acting W/C R. G. Herbert, DFC, went to New Guinea as air adviser on the staff of the commander of the UN Force. For the



Cpl. I. F. Thow, LAC D. Buhlman and LAC J. A. Hamilton dicker for ivory souvenirs in Leopoldville market.

next 10 months the *Otters* were flown over jungle, swamp and mountains and landed on coral strips and quiet lagoons as UN personnel carried out their various tasks. In the early summer of 1963 the work of the UN in New Guinea ended and in June of that year the RCAF contingent returned to Canada.

While one group of RCAF personnel was sweating it out in the steaming jungles of New Guinea, another was preparing itself for the burning deserts and jagged mountains of Yemen. This trouble spot became a matter of great concern to Canada in June 1963 when the RCAF was asked to form an aerial

RCAF officers of the UNTEA in West New Guinea in 1962 examine native dug-out canoes. L. to r.: F/Ls R. A. Bell, F. S. Stover and A. E. Richards.



contingent for the eight-nation UN team which was to observe and verify the disengagement of Egyptian and Saudi-Arabian forces. Accordingly, No. 134 Air Transport Unit, was organized on behalf of the United Nations Yemen Observer Mission (UNYOM).

Approximately 50 RCAF officers and men, plus two *Caribou* and six *Otters*, were sent to that Middle East Republic. The aircraft were used for logistic support and for aerial reconnaissance along the vague border separating Saudi Arabia and Yemen. Duty in Yemen was possibly the most difficult assignment that Canadian airmen were asked to perform on behalf of the UN. In addition to the constant wear and tear of desert conditions there were the added distractions of contaminated drinking water and an abundance of various tropical diseases. Approximately 15 months after its inception, the UNYOM operation came to an end. On 15 Sep. '64 the last RCAF aircraft left Yemen and returned to Canada.

Fifteen days before the RCAF's last flight out of the Congo an RCAF aircraft made the first flight to India and Pakistan. This flight, on 15 June '64, was on behalf of the United Nations Military Observer Group in India and Pakistan (UNMOGIP) which is charged with supervising the truce in Kashmir. Although Canada has participated in this work since 1949 it was not until 1964 that the RCAF became involved. This summer one *Caribou*, three pilots and five groundcrew, left Canada for duty with UNMOGIP. The task is a familiar one to RCAF aircrew, i.e. supplying air support to UN members on a peace-keeping role.

During their tour of duty in Kashmir the RCAF personnel have joined with nine other Canadians already serving in the 40-man observer



Canadian soldiers deplane at Nicosia to take up UN peace-keeping duties in Cyprus in 1964.

group. The three RCAF pilots, including detachment commander S/L F. E. Haley, spend part of their time as observers in addition to their flying duties. Because of the extremely mountainous terrain along the India-Pakistan demarcation line, the time-tested *Caribou* is proving to be a most valuable asset to the observer group.

Early this year it became increasingly apparent that, if international peace and security were to be preserved, international intervention on Cyprus would be necessary. Canada was the first country to respond to Secretary-General U Thant's request for a United Nations Force in Cyprus (UNFICYP). On 13 Mar. '64 an RCAF *Yukon* flew to Cyprus with the advance party. Then, on 15 Mar. '64, "Operation Snowgoose" got underway. From Station Trenton ten *Yukons* and four *Hercules* aircraft flew to Ancienne-Lorette airport, near Quebec, where they picked up the Royal 22nd Regiment and its equipment and departed for

Cyprus. The operation, which consisted of 20 *Yukon* flights and eight *Hercules* flights, resulted in 861 soldiers and 800,000 lbs. of equipment being airlifted from Canada to the Mediterranean island. Air Transport Command was able to complete the airlift in eight days.* The Canada to Cyprus airlift still goes on, although on a reduced basis. Each Thursday a *Yukon* flies from Trenton to Cyprus on a logistics mission.

One reason why Canada is selected by the UN for so many peace-keeping operations is that, because by tacit agreement the great powers usually do not participate, the UN secretary-general looks to the ranks of the broadly-respected middle powers to fulfil the required func-

*In October the "Van Doos" were replaced by the 1st Btn., Canadian Guards, and a recon. sqn. of the Royal Canadian Dragoons was replaced by a similar unit of Lord Strathcona's Horse, due to an extension of the UNFICYP's mandate until 26 Dec. '64. The troops were moved in RCAF transport aircraft.

tion. Canada is particularly well prepared to take part in any UN operation because the Canadian Army maintains on standby duty a battalion specially trained for peace-keeping duties, while the RCAF's Air Transport Command has built up a wealth of experience in providing fast, efficient airlift to anywhere in the world as a result of its extensive participation in UN operations over a period of years.


In addition to its eagerness to serve the UN cause and its unquestioned ability to do so, Canada is often sought for UN operations because of this country's record of paying its share of the costs. Since 1956 the inability or unwillingness of some UN members to pay their assessed share of peace-keeping costs has caused serious financial difficulties for the United Nations. Canada has not only consistently

paid its assessed share of all UN costs but has written-off transportation billings which could have been charged to the UN, became the first country to subscribe to the bond issue which allowed the UN to overcome a severe financial crisis, and voluntarily contributed extra funds to compensate for the reduced assessments made by underdeveloped countries.

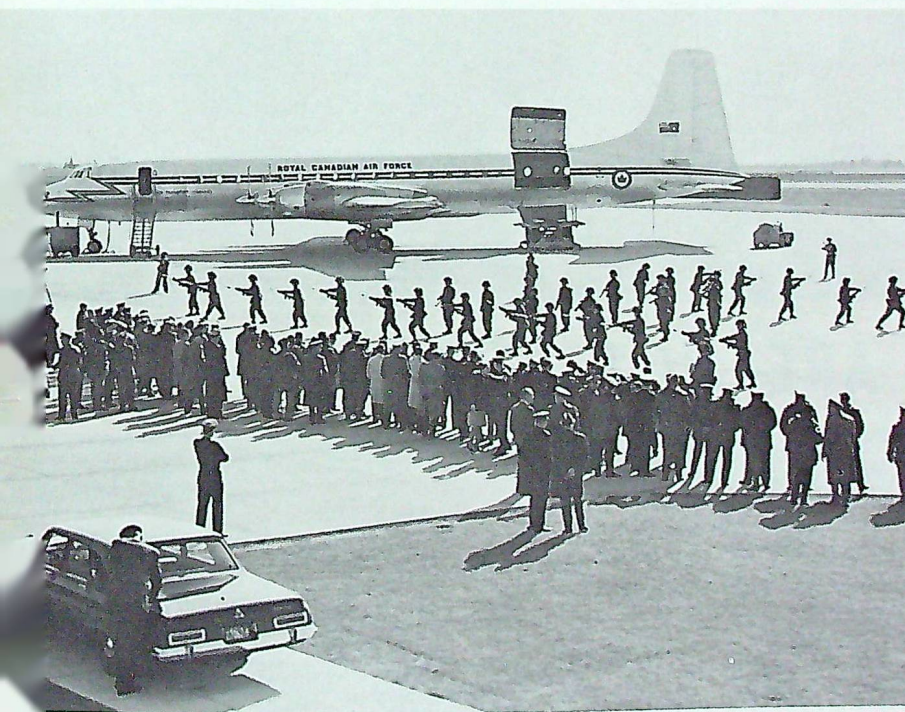
Canada's readiness to contribute to world peace by wholeheartedly supporting UN operations has not gone unnoticed. Mr. Harlan Cleveland, the U.S. Assistant Secretary of State for International Affairs, paid tribute to Canada's achievements when, speaking recently at the United Nations, he said,

"Canada has pre-eminently served as a source of wisdom and a fount of courage. Since 1948, Canada has assigned Canadians to every peace-keeping operation of the UN. . . . It is the only

country to have done so. Canadians have jounced in white jeeps along the sensitive borders of Israel. Canadians have policed the tender armistice line in Kashmir. Canadians have fought and died for collective security in Korea. Canadians helped zip up the Sinai borders after Suez; helped put out the fuse which could have blown Lebanon apart two years after that; and two years later again, were assigned to the dusty wastes of Arabia to observe the cease-fire in Yemen. And now in Cyprus you have sent your famed Van Dooos to account for one-sixth of the UN force which polices that tense and troubled island. As often before, you Canadians got there first and got there in your own planes".

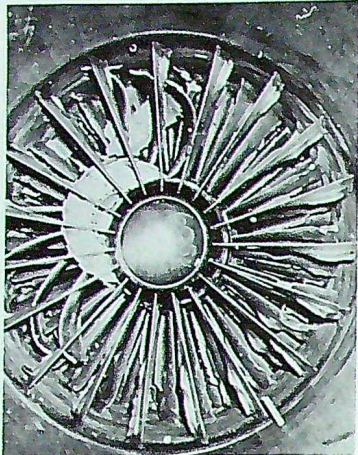
Canadian support for United Nations activities is a matter of proud record. In and out of uniform, Canadians have served and are serving around the world in the defence of peace. When the history of Canada's military participation in UN peace-keeping missions is written, the RCAF's contribution will occupy a large part of the story. 

UN PEACE-KEEPING CONFERENCE IN OTTAWA



Senior military and civilian representatives from 23 nations attended a week-long conference on international peace-keeping, sponsored by the Canadian government in Ottawa last month.

On the second last day of the conference delegates went to RCAF Station Uplands where they were briefed by RCN, Canadian Army and RCAF officers on how Canadian forces organize for and conduct peace-keeping operations. A *Yukon*, two *Hercules* and various army vehicles were used to illustrate the air movement procedures carried out at an advance army base. A company group from the 1st Battalion Queen's Own Rifles (pictured at left) demonstrated how they would defend their position from a hostile mob. The 1st Battalion QORs are now Canada's standby battalion for any UN peace-keeping request.



Jet engine damage caused by pheasant ingestion. The zero stage of the low pressure compressor was torn off shaft.

AIRPORTS ARE NOT FOR THE BIRDS

By YVONNE McWILLIAM

Written by the editor of "News on the DOT", this article is reprinted with permission from the Department of Transport. In addition to bird-watching and producing DOT's official staff magazine, Yvonne is the wife of a newspaperman-turned-lawyer and the mother of two charming daughters.



FOR centuries birds, especially pigeons, have shown their contempt for man's finest architectural achievements (Nelson's nose in Trafalgar Square is a choice example). Now they have taken issue with jet aircraft, with the results in some cases far more serious than unsightly, indeed, perhaps even fatal.

The problem is called bird strikes.

In the early days of the rag and stick aircraft bird collisions were rare, and even when they did occur a propeller aircraft could ruffle enough feathers to win its freedom!

But the introduction of the jet aircraft brought other problems: almost immediately the number of strikes rose significantly, and damage on a world-wide basis became, in contrast to the "recip" era, alarming.

Because of air intake and the design of the jet engine, birds are ingested whole instead of being fought off by propellers. The meal is often incapable of digestion in the complex turbines and can cause considerable damage and power loss.

The high speeds of jet and turbo prop make it virtually impossible for birds flying lemming-like courses to avoid collisions with aircraft. Also, of course, they hit harder with greater resulting damage.

Greatest bird danger is the loss of engine power at or just after take-off. A Lockheed Electra at Boston crashed after ingesting starlings. A Vanguard at Turnhouse, England,

managed to circuit and land on an engine and a half after swallowing seagulls. A DC-8 at Vancouver lost two engines on the same side after sucking in pheasants during its take-off roll. (Luckily this take-off was aborted.) A crash occurred near Baltimore when a majestic swan on a Roman galleon-like ram course sheared off part of a Viscount's tail.

The military, too, have a file of bird collisions that is alarming. In fact, on many military aircraft one of the reasons for the bullet-proof glass is protection against birds.

Complete cost figures to Canada, however, are not easy to compile. Interrupted flights, provision of replacement aircraft, unearned revenue from standby planes, all amount to a considerable, if hard to estimate, amount.

Three Types of Solution

The cost can be accepted. But the possibility of fatal crashes is not so easy to dismiss.

What to do about it? Generally there seem to be three types of solution:

Built-In Birdproofing: This solution would make aircraft invulnerable to damage from bird strikes. It is a neat answer, theoretically. But such built-in characteristics are beyond our present knowledge. The necessary modifications to existing aircraft would impose too many weight, performance and economic penalties. Regarding models still on the drawing boards, unless existing design criteria and tests are made conformable the world over, there seems little hope for a "total solution".

We, Too, Have Bird Troubles

Last month ex-Golden Hawk S/L J. L. Frazer was flying a *Super Starfighter* routine reconnaissance training flight over Troyes, France, when he collided with an unidentified type of bird. The bird flew into one of the CF-104's air intakes, causing a flameout. Although he was at an altitude of only 2,000 feet and at 200 knots airspeed, S/L Frazer managed to glide the *Super Starfighter* away from the town and bail-out. Fortunately he landed safely, but more than one million dollars worth of aircraft was destroyed in the ensuing crash.

Not all RCAF aircraft bird strikes have such a costly ending. Nevertheless, some degree of the seriousness of the problem is revealed by the fact that since 1 Apr. '64 there have been 44 bird strikes against CF-104s alone, according to the RCAF's directorate of flight safety.

However, efforts are being made through ICAO (International Civil Aviation Organization) to convince governments and aircraft manufacturers that birdproofing should be included as a criterion in the design of all future generations of aircraft and that components should be subjected to standard tests to make sure they can stand up to hazardous damage from bird strikes.

Keeping Aircraft out of the Way of Birds: Even if a relatively bird-proof plane should be conceived, it is unlikely that it would be able to fly through big flocks of birds, such as ducks or geese in the migration season without damage.

Research has been done to see if migrating flocks can be picked up on radar. If they can, and their movements are proven predictable, then pilots can be warned.

Through time-lapse photography, such flocks have been spotted and scientists are hopeful this technique will teach radar operators how to recognize bird targets. Notams warning of mass bird movements could then be issued and airlines advised regarding routing and scheduling.

Keeping Birds Out of the Way of Aircraft: This approach allows for the most to be done right now to reduce the bird/plane collision statistics.

Canadian figures show that nearly 80 percent of all civil aircraft strikes occur at or near airports. This then is the obvious place to attack the problem – by reducing the number of birds in airport areas. Since D.O.T. owns and operates most major and many minor Canadian airports, the department is vitally concerned with the problem.

NRC Committee Formed

A little more than a year ago, Deputy Minister Baldwin asked the National Research Council to undertake a study of the bird problem.

From all that's been said so far it's obvious that such a study was to be no easy task. A good deal of research and a great amount of work lay ahead of the committee.

The first step was to line up a good work force. Drawing its members from organizations and companies that already had a great deal of knowledge of the problem, the

Associate Committee on Bird Hazards to Aircraft was formed along the lines of other NRC committees. Being advisory, it cannot enforce its recommendations but there is little doubt that most of them will be implemented. In fact, as outlined further on, many already have.

The committee – made up of representatives of the Canadian Aeronautics and Space Institute, Canadian Pacific Airlines, the Canadian Wildlife Service, Rolls-Royce of Canada Limited, RCAF Directorate of Flight Safety, Trans-Canada Air Lines, NRC and D.O.T. – attacked the problem directly by using the theory that birds will not frequent or remain in areas where food, water and shelter are scarce. The wildlife experts were asked to come up with ways to remove the “goodies”.

Smorgasbord Specialties

In the summer of 1963 they started an ecological survey of several airports to find out where and how much of a problem the birds are in any particular area. It will be a year or so before all the facts are in, but in the meantime many of their re-

Airport Attractions – Farming operations close to airports offer many delicacies for birds. At left, clover, providing nesting facilities and food for pheasants, is thrashed at Vancouver International Airport. A Chinese market garden on Sea Island (centre) furnishes ample food for ducks, pheasants, blackbirds, starlings and others. Old pilings (right) in river south of Vancouver Airport attract nesting swallows, as well as gulls and herons, which roost on the pilings.



At Victoria International Airport Wildlife Service and D.O.T. people, along with Falconer Frank Beebe (right), view a young peregrine falcon in pursuit of a gull.



commendations are already being carried out to eliminate the "attractions" from a five mile radius around airports.

Bird menu could vary from vegetable crops, to grain and cereal crops, to berry bushes, garbage dumps, piggeries, sewer outfalls, seedbearing weeds, worms, mice or insects. Home sweet home might be in trees, weeds, aquatic vegetation, hedge-rows or old buildings. And water, of course, could settle in any depression in the ground, in culverts or gulleys.

People flock to good restaurants and birds are no different.

Among the "advertised" specialties of various airports are mice which inhabit the area bordering flight strips. They attract owls, blue herons and other birds.

Again, sometimes it's an abundance of grasshoppers which serves as an appetizer for the birds. In still other instances, nice fat juicy earthworms coming up for air after a heavy rainfall provide a delicious smorgasbord for our fine feathered friends.

By eliminating such attractions the department hopes to make its airports biological deserts — a sort of a scorched-earth policy for birds.

Falcons As Jet Age Aid

Bird hazards exist right across the country. At Patricia Bay Airport, Victoria, the committee is experimenting with peregrine falcons to chase gulls away. The peregrines, which come from the nearby Queen Charlotte Islands, were bought by NRC and trained under a Canadian Wildlife Service contract by local Falconer Frank Beebe.

The birds are all young females and it is hoped that after this year's training they will be adept at ridding the airport of gulls — perhaps not completely, but at least significantly.

Tests conducted last October went like this: A flock of 100 or more gulls was seen on the runway and a falcon released. It went after them and the birds took to the air. The falcon didn't appear willing to finish off the attack but followed the flock flying through it time and again.

The gulls milled about, "towered" and left the area and the falcon was recalled easily.

Substantially the same thing happened on four later tests. The falcons were anxious to press the attack but seldom made a strike or kill. It is known that a kill makes

gull-scaring even more dramatic and may have a longer lasting effect, but since the peregrines used in the experiments were only five months old they may not have been sufficiently mature. As experiments continue it looks as though the falcons will be making their contribution to the jet age.

From Bizarre to Blitzkrieg

Scaring methods and devices range from the almost bizarre to blitzkrieg. They include dogs to disperse birds in much the same manner as the falcons do, the plain old-fashioned scarecrow and a vast variety of psycho-acoustic equipment — distress cries, alarm cries, shot shells, cracker shells, Verry cartridges, thunderflash, and acetylene exploders.

In all these things a basic understanding of the reactive behaviour of problem species is vital to success. Like humans, some birds are intelligent, others rather stupid. Some react to one form of stimulus, others to another.

One interesting piece of research which might soon be carried out could be termed an electronic Mickey Finn. It is the use of wave frequencies on flocks of birds.

If a wave generator powerful enough to affect birds some distance ahead of an aircraft can be developed, it could be mounted on a plane's nose to clear a path. It is known that birds disturbed in flight by an unseen or unknown stimulus tend to dive or fold their wings and drop toward the ground. With such a generator disturbing or alarming them, bird flocks would need to drop only a few feet to be out of the collision path.

But, perhaps the biggest breakthrough – next to ridding the airports of birds – in the fight to avoid strikes will come from tracking their movements on radar and scheduling aircraft flights accordingly.

This, of course, would only be practical when large numbers of birds are migrating and biologists can accurately predict their path according to weather fronts. Right now not all airborne radars are suitable for bird detection but the time might not be too far off when air traffic controllers will be able to perform this task and contribute even more than they already do to the safety of the sky.


Bird Talk

Canada is not alone in its war on the birds. Most countries have similar problems and the full international exchange of information that is continuously taking place is most

important.

However, even this has its difficulties such as one of language. People of various nationalities understand each other – translators and interpreters take care of that – but it's the birds that don't.

It seems birds from different countries "speak" different languages. For all we know, migratory birds wintering in Florida tweet with a southern twang. It is a fact that distress calls recorded in Holland fail to alarm birds of the very same species here in Canada.

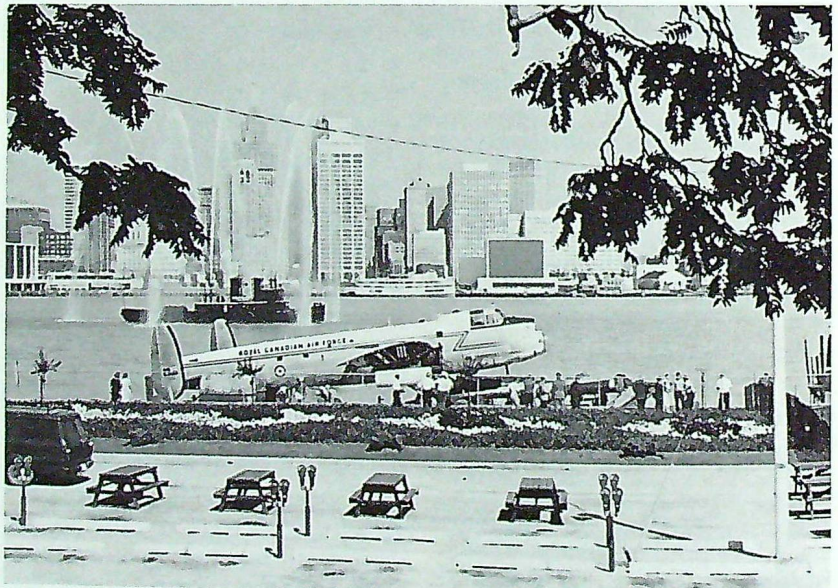
Perhaps the committee should turn to the Royal Commission on Bilingualism and Biculturalism for that problem! 

LANC SAILS INTO PORT OF WINDSOR

A marine salute from passing ships greeted the arrival in Windsor, Ont., of a World War II *Lancaster* – now mounted on a concrete pylon in Dieppe Gardens as a memorial to a bygone era.

The final trip for the veteran bomber, from Dunnville to Windsor by barge, was a stormy one. Twice the odd convoy was forced by high winds and waves on Lake Erie to seek harbour, but Capt. G. Dilts of the tug "Paula M" brought the cargo to its final resting place unscathed.

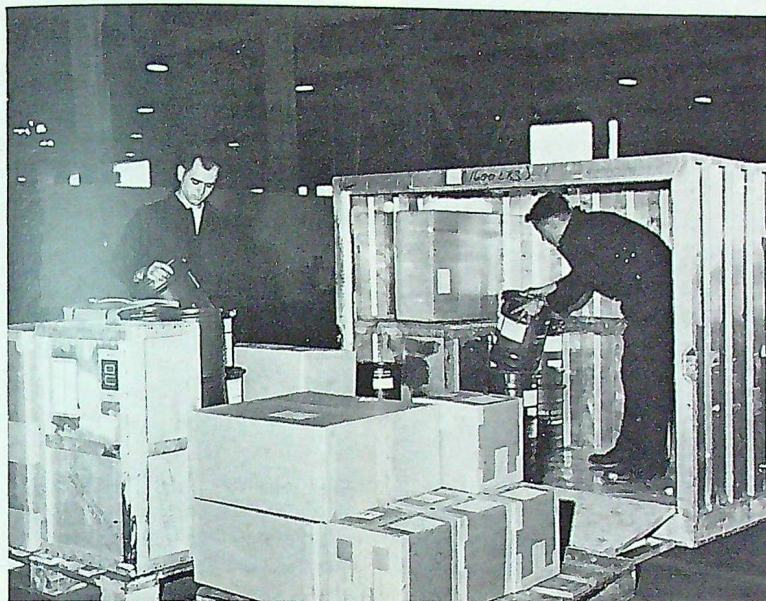
The retired aircraft was purchased by the City of Windsor and a citizens' committee, chaired by Joseph Mencil, raised funds by various means to have it shipped and mounted. The accompanying photo of the *Lanc's* arrival was taken by F/L Rev. D. Irvine, a padre in the RCAF Reserve.



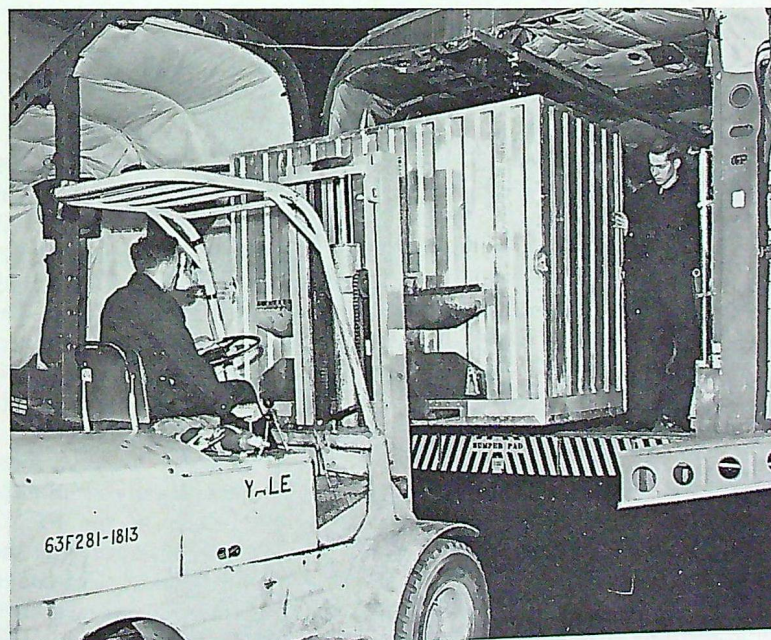
Against the background of the Detroit skyline, that city's fireboat gives a welcome to the Lancaster on its arrival at Dieppe Gardens, Windsor, where it now is mounted as a World War II memorial.

CONTAINERIZATION

By F/L D. G. FRY,
No. 1 Air Div. HQ.



Packing "Paul Bunyan" containers at RCAF Stn. Uplands are (l. to r.) LACs J. P. R. Paquette and E. M. Tremblay. Below, LAC Tremblay and AC J. C. Guite load container into hold of Flying Boxcar.



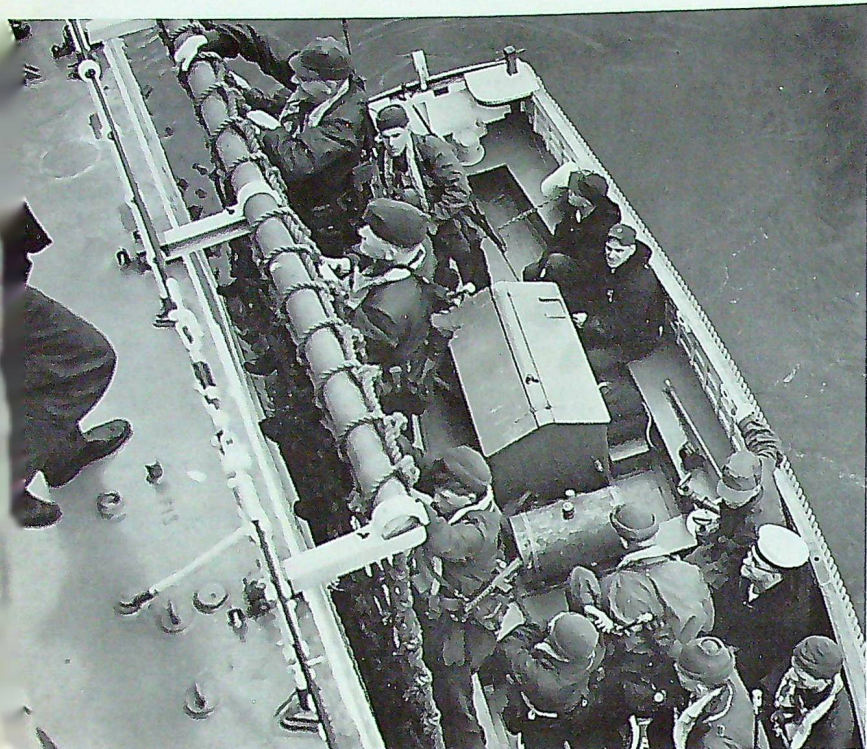
CONTAINERIZATION is a new – and rather ugly – word for an art which is being profitably exploited in the business of moving goods. Basically it means the use of large standard containers in place of many small packages that are costly to pack, handle and transport.

An unusual small-scale container is the printed paper label issued free by the Post Office for bundling "local" and "out-of-town" Christmas cards. This simple form of containerization saves enormous amounts of time and effort in the sorting offices and more than justifies the annual production of 40 million such paper strips.

A medium size example of a container is the RCAF's 110 cu. ft., 3000 lb. capacity, aluminum box used to consolidate routine shipments to common destinations. These boxes do more than save on time and effort in the sorting and handling of individual packages. They help prevent pilfering of small items in transit; they reduce the amount of rough handling to which small parcels are prone; they save on packaging materials; and they make for big savings through reduced bulk shipment rates.

But the advantages of containerization don't always dictate how a shipment will travel. For instance, a rush item such as an aircraft-on-ground (AOG) spare would no more be delayed for containerization than a special-delivery letter would be bundled with Christmas cards.

While we may not give containerization another thought until the time comes for wrapping bundles of Christmas cards, there are specialists at AMCHQ whose year-round job is to devise safer and more economical ways of packing and moving RCAF materiel. More than most of us, these people can claim to be really wrapped up in their work. ☉



Soldiers of 2nd Battn., Queen's Own Rifles of Canada, flown from their Alberta base to Patricia Bay airport in RCAF transport aircraft, board ocean-escort HMCS "Jonquiere" for trip to northern Vancouver Island - scene of Exercise Canlex '64.



RCAF helicopters proved valuable in rugged Here a Vertol H21 makes rendezvous with a

CANADIAN COASTLINES CONQUERED

EARLY in November both the east and west coasts of Canada were invaded, as navy, army and air force units combined to carry out tri-service operations.

Operation Yeoman, on the east coast, had an international flavour as seven different forces from Canada and the U.S. participated in the four-day land portion of the scheme. The operation got underway when more than 300 troops of No. 3 Canadian Infantry Brigade Group boarded RCN vessels at Saint John, N.B., and Halifax, N.S., and sailed for Argentina, Nfld.

Before the flotilla arrived at Ar-

gentia, "saboteurs" (known as Orangelanders) theoretically destroyed a radar tower near the USN base there. On arrival, the friendly forces (Bluelanders) landed and set up a defence perimeter. In addition to RCN, Canadian Regular Army and Militia, RCAF and RCMP, the U.S. Navy and U.S. Marines contributed personnel and equipment. The RCAF contribution was provided mainly by aircraft from Air Transport and Maritime Air Commands.

Almost at the same time as Yeoman was being carried out on the east coast, the rugged northern tip of Vancouver Island was being invaded

by Canadian tri-service forces. Designed to train Canadian sailors, soldiers and airmen in the art of combined operations, Exercise Canlex '64 presented problems in communications and tactical procedures. The exercise was also designed to prepare these servicemen for any role they may be assigned anywhere in the world.

In the west coast exercise illustrated by the accompanying photos, ocean escort vessels of the RCN's Pacific Command plus aircraft of the RCAF's Air Transport Command and infantry from the Queen's Own Rifles of Canada took part. ☉

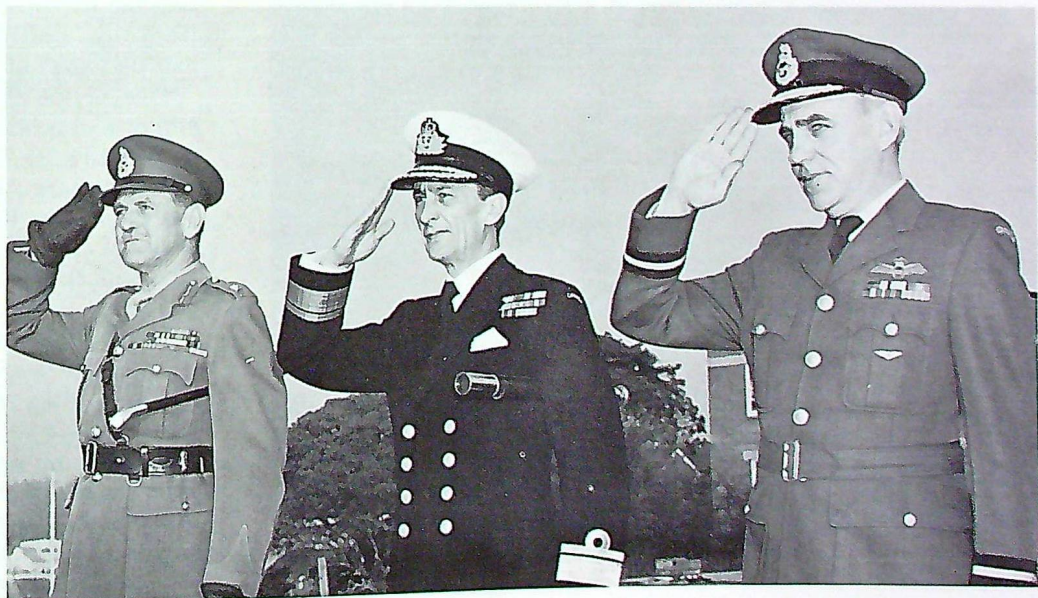


try where roads are almost non-existent, in small forest clearing during Canlex '64.



It may be hard to spot them, but there are eight men in this photo. The tri-service exercise was conducted in almost steady rain in some of Canada's most rugged terrain.

Maj.-Gen. J. J. Rockingham, GOC Western Command, who directed Canlex '64; R/Adm. M. G. Stirling, Flag Officer Pacific Coast; and A/C R. G. Weston, Deputy Maritime Commander Pacific, take the salute from returning Canlex '64 participants at HMC Dockyard, Esquimalt, B.C.



EVOLUTION OF RCA

Second of Three Parts: World War II



In a World War II Ops. Room "somewhere on Canada's east coast", RCAF WDs relied on telecommunications to keep up-to-date plot of aircraft and ship movements.

THE YEARS 1939-45 witnessed a substantial increase in the responsibilities and importance of the Signals Branch in the RCAF. For example, communications landline and radio facilities were expanded; training schools (Nos. 1, 2, 3 and 4 Wireless Schools at Montreal, Winnipeg, Calgary and Guelph respectively) were established to provide for the increased requirement for signals-trained personnel; radar, which was virtually unknown in the early stages of the war, was introduced into service use, occasioning the need for trained personnel to maintain and operate equipment using new techniques. At the outbreak of war, less than 100 officers and airmen were listed in the signals trade; by the time the war-time peak was reached, there were nearly 20,000 RCAF signals personnel of all types.

One of the first tasks after the outbreak of hostilities was to expand the limited RCAF facilities, both landline and radio, to link defence installations on the east and west coasts of Canada and in Newfoundland with their respective command headquarters and AFHQ.

Goose Bay was developed as a base for submarine patrol aircraft, and as a main staging post on the important North Atlantic air route. There were no landline communications serving the area, so Goose Bay was entirely dependent on radio communication for regular contact with the outside world. Through the

TELECOMMUNICATIONS



By **GROUP CAPTAIN E. J. GAUTHIER,**
Director of Telecom Management and Control, CFHQ

combined efforts of the RCAF, RAF, Canadian Army and the USAAF, a very large communications and navigation aids complex evolved which continued to expand to the end of the war.

On the Pacific coast the considerable increase in the number of defence installations required the provision of reliable communication facilities. Communications between these installations and their headquarters were at first restricted to inefficient and unreliable handspeed Morse radio circuits. As a joint venture of the three armed services, government communication agencies and commercial companies, reliable landline and radio link communication facilities were constructed in the early '40s through this rugged part of the country.

RADAR

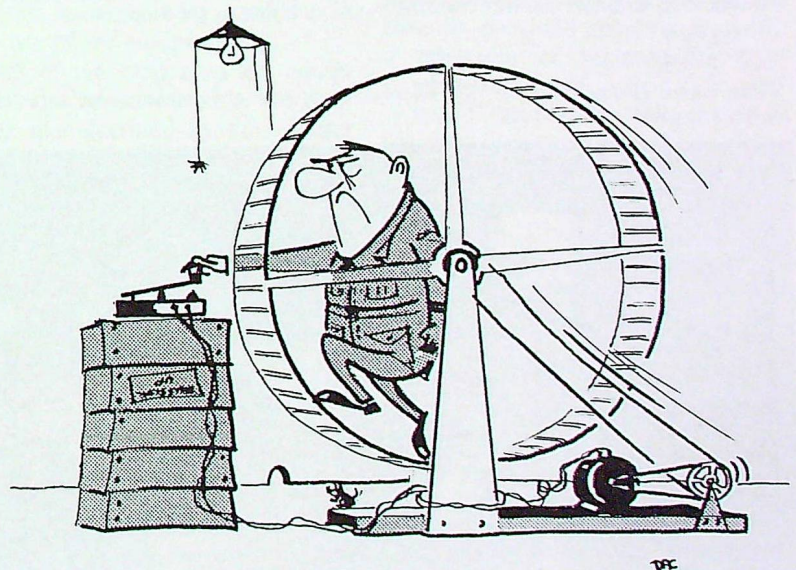
Radar, or Radio Direction Finding as it was known in the early days of the war, was developed out of the need for early or long range warnings of the approach of enemy aircraft. Dr. Robert Watson-Watt, at laboratories near Slough in England, while studying the ionosphere using a cathode ray oscilloscope, discovered that echoes from aircraft were being picked up at the same time. An experimental station to investigate the possibilities of using radio to locate and track aircraft at long dis-

tances was set up in 1935 on the east coast of England (Oxford) and in 1936 Bawdsey research station was established. By the end of 1936 there were four long-range, high-looking stations, all reporting grid reference plots and heights to Bawdsey where an experimental filter room was operated. These stations and filter room formed the radar early warning system in England at the commencement of the war. Radar equipment first produced for defence purposes finally was developed

for both defensive and offensive use and also as an aid to navigation and for air-sea rescue work.

The radar organization in the RCAF can be broadly divided into ground and airborne services, and further into operations and training. Although these paragraphs deal primarily with the birth and growth of radar in Canada, mention must be made of the many thousands of officers and men of the RCAF who served with RAF squadrons in Fighter, Coastal, and Bomber Commands,

"Communications at first were restricted to inefficient and unreliable handspeed Morse radio circuits."



and ground radar stations in every corner of the world. These personnel received very little public acclaim due to the secret nature of the work. In June 1940 a request was received from the Air Ministry, England, for experienced personnel to service and operate radar equipment. By October, Canada was literally stripped of her professional and amateur radio personnel who went directly to the UK to receive instruction on devices then unknown on this side of the Atlantic.

In November 1940 the RCAF sent three signals officers, F/L G. M. Fawcett (G/C ret.), F/L C. J. Campell (G/C ret.) and F/O G. H. L. Norman (S/L ret.), to the UK to receive complete training in radar. These three, and another RCAF officer, F/L C. B. Limbrick (G/C dec.) who returned from duty with the RAF, assisted greatly in the organization and application of radar in Canada.

In 1941 the British Air Ministry announced that recruiting for radio mechanics had ceased in Britain and sent an urgent message to Canada requesting Canadian mechanics by the end of the year. As a result it was decided to build a radar training

school at Clinton, Ont. Opened as No. 31 RAF Radio School in Jul. '41, in the ensuing years Clinton graduated thousands of trainees, British, Canadian and American, who served in theatres of war all over the world. In 1943 W/C K. R. Patrick became the first RCAF commander of Station Clinton. From that time on the RCAF maintained complete control of the station and it became known as No. 5 RCAF Radio School.

GROUND EQUIPMENT

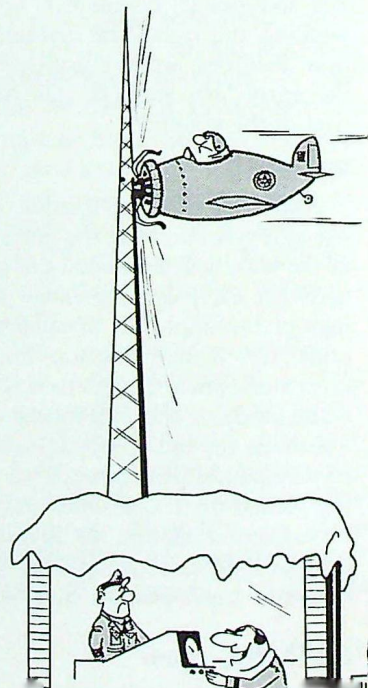
To overcome the acute shortage of radar equipment, the Canadian government decided in Aug. '40 to open a factory, Research Enterprises Limited (REL), at Leaside, Ont. Here ground and airborne radar equipment was produced – sufficient to supply a considerable portion of the military requirements of Canada, Great Britain and the USA.* Several

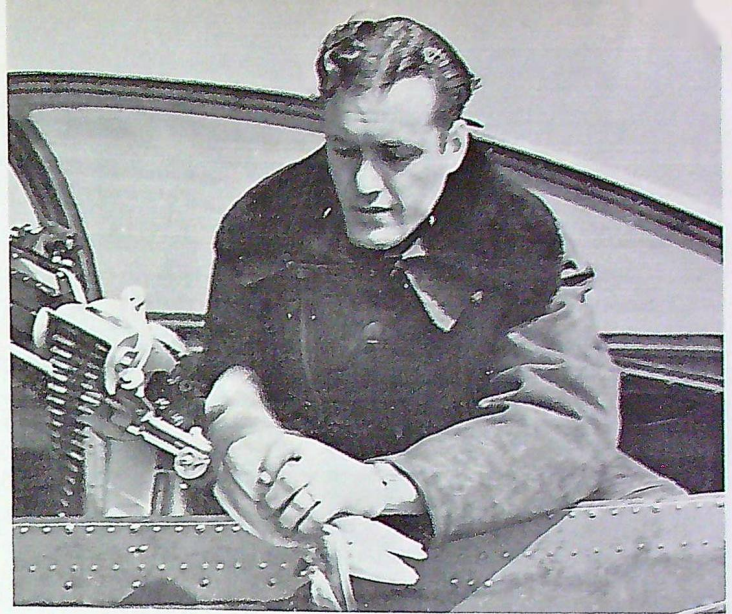
*An interesting sideline on the Canadian production of early warning radars is that the first off the production line was diverted to the U.S. to be installed to protect the Panama Canal. This was made at the personal intervention of Mr. C. D. Howe, and not only was sent with our compliments to help the Americans but with it went a crew of Canadian experts to site it and to get it operating.

RCAF personnel were employed at REL as engineers and inspectors, the majority of these having received training in the UK.

The plan for a radar early warning system in Canada, which became the responsibility of the Directorate of Signals, was based on the premise that the enemy might attempt air attacks on vital areas in Canada and the USA by means of long-range bombers taking off from Norway or by carrier-based aircraft. Ground radar units were installed for the primary purpose of early warning of the approach of enemy aircraft to vital areas and for the control of night fighters. Actually, there was little or no operational use made of the radar units in Canada for this purpose. Few hostile tracks were ever reported to the filter rooms; however, there were many thousands of unidentified tracks which required investigation. The radar chain proved not only to be our front line of defence warning against air attack, but of immense value as an aid to lost aircraft. A system was introduced so that flying control could request aid from radar units to locate and track lost air-

"Filter rooms (below) and . . . the radar chain proved of immense value as an aid to lost aircraft."





Despite advent of telecommunications, homing pigeons were carried in some aircraft until 1943 as search and rescue emergency messengers.

craft. Many aircrew owe their lives to the existence of radar ground units who were able to locate and track lost aircraft and pass bearings and ranges to flying control through the filter room. Ground radar also functioned in two ways in the submarine war: as an aid to the bomber reconnaissance patrols when they were in difficulty, and for the detection of surfaced submarines near the coastline.

The peak number of radar detachments in operation, totalling 35 units, was reached in February 1945.*

AIRBORNE EQUIPMENT

Commencing in May 1944, Mk III Interrogation Friend or Foe (IFF) ground installations were completed at all ground radar units. This system consisted of a transmitter, receiver, display unit with plan position indicator, and a special aerial mounted on a 30-foot tower.

Airborne radar installations included search equipment for air to surface vessels (ASV), interception

of enemy aircraft (AI) and IFF. The policy of AFHQ was to place emphasis on the installation of ASV equipment, at first used reluctantly by aircrew due mainly to the lack of operational training in its use. With the installation of ground beacons and blind approach beacon systems (BABS) which could be used for homing and orientation with ASV, aircrew became more confident in the use of the equipment.

All of the early type ASV equipment and beacons used in the RCAF were manufactured by REL. Latter types of centimeter ASV, beacon transponders and IFF equipments were made in the USA. In May 1943 the first complete operational aircraft fitted with radar were delivered to the RCAF from the USA. From time to time, as they became available, other secret radar devices produced in Great Britain and the United States were fitted to RCAF aircraft for the purpose of maintaining vigorous action against the enemy submarines.

In the field of navigational aids, suitable beacons were designed and

manufactured in Canada to respond to radiations from the airborne ASV equipment for homing purposes. Beacon chains were installed on both coasts and proved to be of inestimable value to aircrews on operations. By January 1945 the chain on the East Coast numbered 25 beacons, and on the West Coast 12 beacons. These beacons proved quite successful technically and consistently provided good ranges with a minimum of maintenance and breakdowns.

Based on pre-war thinking, the use of high frequency direction finding (HF/DF) stations to assist aircraft was another policy implemented in Canada but which was never really used to any great effect. Other forms of navigation took over. The HF/DF stations installed and calibrated at a considerable expense and difficulty were seldom called upon to help. Their main use turned out eventually to be in helping to track enemy submarines.

AIRCREW TRAINING

From the beginning of World War II, and even before that to a lesser

*ROUNDEL, Jun. '59. "The Lonely Watch".

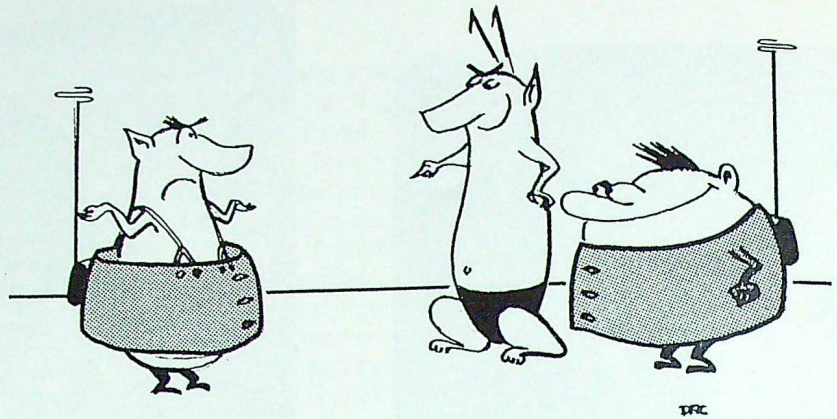


"Sparks" at his key in a Stranraer on a patrol over the Atlantic.

extent, wireless operators ground (WOGs) and wireless electrical mechanics (WEMs) had been flying in RCAF training and maritime operational aircraft acting both as crewmen and radio operators. Gradually, as the Commonwealth Air Training Plan produced increasing numbers of aircrew, the role of radio operator in maritime patrol aircraft off Canada's coasts was assumed by wireless operator air gunners (WOAGs) and the WEMs returned to their more conventional, if less glamorous, work bench tasks.

Flying evidently appealed to many WEMs and WOGs, judging from the number of applications for remuster to aircrew submitted by them. Because they were already trained for their ground duties and because they were needed there, very few applications were approved. For a few, however, 1942 brought them nearer to their goal.

By today's standards, the electronic equipment in the *Digby*, *Catalina*,



"Were the WEM/AGs WEMs or WOAGs?"

Canso and *Liberator*, to name only some of the RCAF's World War II maritime patrol aircraft, was very simple and very basic. Nevertheless, much of it had been newly developed and was plagued with teething troubles. Furthermore, the WOAGs had been trained only in the operation of the equipment; they had a very limited knowledge of what went on inside the black boxes. Consequently, an alarming number of missions were aborted because of electronic equipment failures. Pleas for help from the operational commanders resulted. This combination of circumstances gave birth to the WEM/AG.

Selection was made at AFHQ from "A" Group, Sgt. or below, volunteer WEMs, during the summer and fall of 1942. Those accepted were sent to No. 9 Bombing and Gunnery School at Mont Joli, P.Q., where they received AG wings and, subsequently, were posted to maritime patrol squadrons on both coasts of Canada, as WEM/AGs.

Within the squadrons a WEM/AG was assigned to each crew. His duties were to fly with the crew, as an integral part of it, to carry out airborne trouble-shooting on the elec-

tronic equipment and to do his share of the operating function.

Results were immediate. The number of missions aborted because of electronic airborne equipment failure dropped sharply and before long the WEM/AGs became proficient operators as well as technicians.

Were the WEM/AGs WEMs or WOAGs? An academic question, perhaps, but not to the WEM/AGs who became aircrew for all purposes except promotion. For them there were no promotions, either as aircrew or groundcrew. Not unnaturally, this apparent lack of recognition resulted in a certain amount of discontent among the WEM/AGs but it was not until early 1945 that something was done about it. At that time, the WEM/AGs were given the choice of reverting to their basic trade of WEM and returning to ground duties or of becoming WOAGs. Almost all chose the latter alternative and, within a very short time, were commissioned as WOAGs. A few remained in the service following the war, some in the Tech/Tel branch and others as Air/ROS.

It was one way to become airborne.

(to be concluded)

GROSTENQUIN REVISITED

By **NORMAN AVERY**

Now aviation editor of the *Ottawa Citizen*, ex-Sgt. Norm Avery was one of the first airmen posted to 2 Wing, Grostenquin, when that No. 1 Air Division base was opened in 1952. After serving a tour at Air Div. HQ in Metz, he transferred to the public relations branch and returned to Canada where he was stationed at Air Defence Command HQ, St. Hubert. This fall he revisited "The Big Swamp" (literal translation) and witnessed the RCAF withdrawal from 2 Wing after 12 years occupancy.



UPI Photo

IT IS unlikely in times of peace that RCAF personnel ever put up with, and eventually enjoyed, more hardships than those associated with the opening of 2 Fighter Wing at Grostenquin, France.

Certainly the first winter there left a scar on my psyche: no heat, no light, no sun and no water for drinking, laundering or bathing . . . all the problems of adapting to a mild but bone-chilling French winter. It was a victory just to survive the endless moaning of the married-unaccompanied men who amused

themselves by waging psychological warfare on we single types, still hoping for the "joie de vive" French travel brochures had promised.

This fall I returned to Grostenquin and with shattering nostalgia recalled a once-facetious slogan: "Some day we'll laugh about this." We with the "mud on our boots" will laugh all our lives about it.

In September GT was in the painful throes of death and the morticians were laying her out as gracefully as possible. No scream of *Sabres* wafted over the hills and no

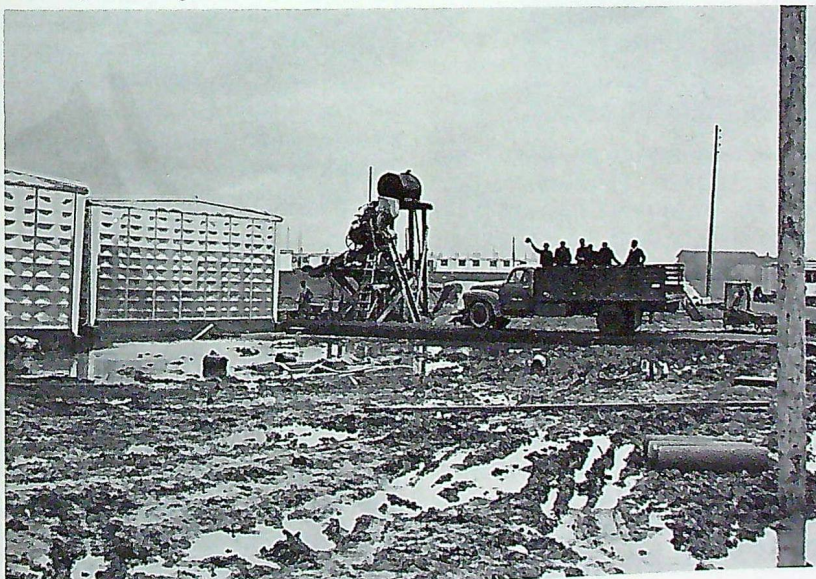
fragrant whiffs of JP4 garnished the pleasant odors of the soil. Instead, the magpies were shooting circuits on the dandelion-decorated grass, only interrupted occasionally by a shepherd and his 500 lawn-mowing sheep.

The street scene made me feel like the discoverer of some recently-vanished population . . . just like a modern ghost town. Driving around the station was an eerie experience. Desertion was everywhere and even the spacer cracks in the runway concrete were sprouting neat rows of weeds. Apart from the poplar trees that have shot up some 30 feet all over the base, things looked much like they did in the spring of 1953. That was after the cruel winter of '52 and the station was beginning to take some semblance of military shape.

The years had not upset my memories of the first day on camp at the end of September, 1952. Our group arrived on the first *North Star*-load of groundcrew for No. 430 Sqn. We lost track of the days in the long, numbing haul from North Bay to Goose, Keflavick, London, Paris and finally Grostenquin.

The evening meal was anticipated enthusiastically after a succession of awful box lunches. Disembarked, stiff from inactivity and reeling deafly with *North Star* ears, we walked

Men waged war against mud as they settled in at Grostenquin in 1952.





F/O D. H. McRae and F/L J. P. R. Fortin untangle cable for flying control van as Gros. nquin is readied for operations.



S/L T. C. Newton and LAC J. Lavery set up temporary shop for first pay parade.

the planks through the drizzle to the temporary mess hall set up in the carpenter shop.

There was no electricity. Our lighting was provided by shop mules driven up inclined planks and parked with their headlights glaring inside. Heating was by Herman-Nelsons whose powerful firepots belch-

ed the driest and hottest air we felt all winter. By shielding our eyes from the lights we could make out the food which was served on catch-all aluminum trays loaned by the U.S. Army. The food was also supplied by the U.S. Army in those days and we often suspected they decorated the Quartermaster GI who got rid

of all those dried lima beans on us.

After this crude but welcome repast we took the plank route to the barracks. The planks, incidentally, offered some insurance that we would not go over our boot tops in the mud. When it rained it was murder. And it rained all winter. The barracks were heated (in theory) by a portable Rube Goldberg device that devoured coal and gave little in thanks for it. After its French attendant had filled it up and twiddled a few knobs and checked his gauges we would sit in the darkness with our hands on the radiators waiting for the heat. But before it could reach along the wings of the building, someone would attempt to fix the system behind the Frenchman's back. This usually resulted in a burst of Gallic scorn and a short, sharp lesson in central heating from the airman who had upset the delicate machinery. We rarely felt the proof of either's theory.

Our first morning was spent getting outfitted with rubber boots. The supply section had been thrown into utter chaos and so it became less painful to buy the boots from a local merchant who showed up with a truck load of them. Supply men ran in circles trying to find articles from a giant pile on the tarmac. But the combination of facilities, weather and help forced them to all but abandon approved supply procedures and we were weeks getting fitted out for anything like flying operations.

Meanwhile, we slogged through the mud and delighted in greeting the planeloads of fellow squadron members who followed at two-day intervals. The rallying cry of the old timers was "Get some mud on your boots!" We also delighted in hearing the standard first question, "What's it like?" But nobody could exaggerate enough to concoct an answer that was anything but the truth.



Sabres arrived at GT in Oct. '52 and were flown from this base for more than a decade.

Usual standards of dress and deportment went by the board. Keep warm and keep dry was the only aim. But other discipline and morale (discounting the barracks binding) remained high. About a week later, an all-ranks mess was opened for a one-night stand in what later became the armament section. Canned beer from Scotland was the fare. It helped the conversation as we poked through the candlelit, half-built shed looking for familiar faces.

Then some of 430's more resourceful scouts discovered a bullet-riddled cafe in the manure-bedecked hamlet of Hemmering a couple of miles away. They brought back the word and the whole squadron descended on the Cafe Klein Charles and made the acquaintance of "Ma Hemmering."

This kindly lady had laid in a huge stock for the boom that just hit town and manned the pumps for long hours helping fill the sudden void that had befallen the airmen. She learned a form of commercial English and played host to a standing-room-only crowd each night. Somebody got the idea of donating publicity photos of squadron members to her and she pinned them on


the wall in acknowledgement of proprietary rights.

Twelve years after I first entered Ma's establishment, and a good ten years from my last visit, I dropped in to renew acquaintances in September. My eyes had not adjusted to the darkness when she pointed her finger at me with a broad grin and shouted "Norman!" There followed a two-hour chat in which I learned where many of my squadron buddies were. I got the full rundown on when and whom they married, where they are now and how many kids they have. Her own family has grown up since our days, and I was brought up to date on their present status, too. She talked of Pete (Peters) and Yak (Yakowitch), Pinky (Humphrey), Howard (Portman) and "the other Norman" (Sgt. Roy Norman) and many others. She hears regularly from some of them and at Christmas from others.

Ma Hemmering provided a variety of services. Apart from her duties at the bar, she changed money, made sandwiches, tutored French and German, broke up fights and sent remorseful husbands home with a bouquet of flowers from her back gar-

den. But everything is finished, she conceded. Taxes and the closing of the air base make further business not worth the bother. October was her final month of operation. She is now 54. Her memories span the 12-year life of the base and its many faces but the 430 gang stand out most. The photos she plastered all over one wall have crumbled and had to be removed but she keeps the pieces as souvenirs.

For those local Frenchmen whose tranquil way of life was shattered by the roaring jets and the occasional impatient Canadian, things have taken a serious turn. Some 500 of them worked at the base at one time and local merchants built a brisk trade with the Canadians. In September only 27 civilians remained to help the 44 servicemen close the base. This number was dwindling steadily.

Two Wing was never the beauty spot among the four No. 1 Air Div. fighter bases but its spartan comforts contributed to the high morale of its troops. GT will be fondly remembered by thousands of Canadians long after it has again sunk into the mud. 

TO PROTECT OURSELVES



By CAL SMITH

Now an account executive with an Ottawa public relations firm (and as such PR consultant for Automotive Industries Ass'n), Cal Smith left the RCAF last March after 13 years service – first 11 of which were spent as a communications technician and the last two as a PR assistant.



Safe Driving Week at RCAF Stn. Vancouver a few years ago was emphasized by this display, arranged by Cpl. S. Keays.

IN MARCH 1963 the RCAF loaded a borrowed, mobile safety-check lane aboard a *Hercules* transport at RCAF Stn. Downsview and sent it overseas for a three-month tour of the Air Division. The compact, two-ton trailer carried enough equipment to make a thorough 38-point safety inspection of all vehicles belonging to either the service or its personnel. The aim of the tour: to determine the effectiveness of the mobile safety lane checks as compared to the "service station type" of tests.

The results were startling. Fifty-one percent of the 4500 vehicles tested proved defective for one reason or another. Fully 12% of those rejected were for mechanical faults capable of causing serious accidents. Under normal investigation procedures, these accidents would have been attributed to something other than a defective vehicle. Faulty brakes proved the major cause of rejection during the tour, with improper headlight alignment coming a close second.

F/L J. A. Bancroft, RCAF accident prevention officer at Canadian Forces Headquarters, who negotiated the loan of the mobile safety unit from the Ontario Department of Transport, feels the unit proved its worth. "The checks picked up mechanical defects ranging from missing tail-lights to worn-out king-pins," he stated.

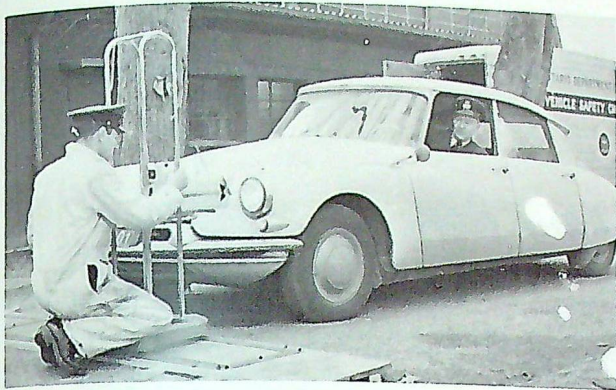
In fact, RCAF safety officials were so pleased with the results that a trailer and equipment were purchased and the mobile test unit was put into operation overseas full time. Safety checks for all privately-owned motor vehicles are now mandatory, with station licenses depending on the vehicle passing the inspection.*

The cost of the inspection and the safety sticker, which is expected to be around \$1.50, will be largely due to the wages paid for specialists who

will have to be hired after normal working hours to operate the lane. "Even so," F/L Bancroft claims, "the cost is expected to be less than similar programs being operated in Vancouver – the only city in Canada where periodic motor vehicle inspections are compulsory."

In the United States, according to the Automotive Service Industry Association, the average motorist pays – directly or indirectly – 12½ cents a mile for accident costs. Projecting these figures to Canada, the Automotive Industries Association (AIA), an organization which represents the majority of automobile manufacturers, wholesalers and auto part rebuilders in Canada, estimates mechanical failure as the cause of more than ten percent of all highway accidents in this country. It is, therefore, obvious that elimination of vehicle failures would cut the cost of driving by nearly two cents a mile: a saving to the motorist of between \$100 to \$160 per year.

*Mobile test units of the Ontario DOT conducted safety checks at 12 RCAF stations in Ontario this year.



Service and privately-owned motor vehicles in the Air Div. were checked through this mobile safety unit loaned by Ontario government last year.

The acquisition of the mobile test unit puts the RCAF far ahead of the rest of Canada in its periodic motor vehicle inspection (PMVI) program. In Newfoundland, only vehicles over four years old have to be checked to get registrations. Quebec has only a token voluntary program in operation in Montreal. Ontario's mobile inspection units cover a tremendous amount of territory and have checked nearly 150,000 cars in the two years of their operation, but they too are voluntary. Vancouver's program – while compulsory and effective – is limited to the city itself.

Many governments seem to feel that an enforced program of vehicle inspection would be unpopular, but the reaction of RCAF personnel in Europe indicates the opposite. Said F/L Bancroft, "The vast majority of car owners were very grateful for the opportunity of having a comprehensive check made on their vehicles. Ninety-four percent of the civilians in Vancouver agree and public polls in the USA show that a whopping 97% of the people interviewed favor safety checks for all vehicles.

And no wonder! In the 18 states and the District of Columbia where PMVI was in operation at the time of the survey, the highway fatality rate was 50.54% lower than those

without statutory inspection programs. The AIA says that Canadian motorists, in the course of racking a formidable 48 trillion miles each year on their collective five and one-half million automobiles, kill each other off at the rate of 350 per month. Last year 25,000 were injured in more than 336,000 less tragic accidents.

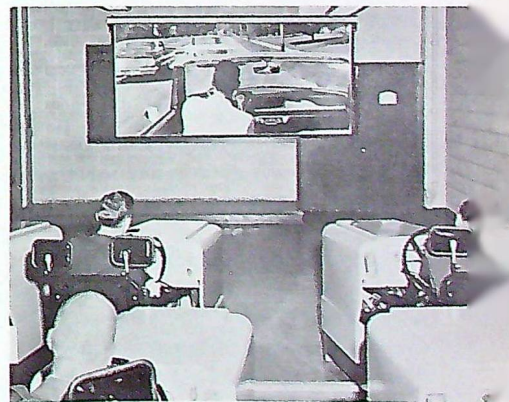
Approximately 20 RCAF personnel die in private motor vehicle accidents each year. In 1962, 19 airmen were killed on the highways in Canada and four in Europe. Last year the death rate stood at 18 and four. And by July this year, eight airmen had been killed in their cars in Canada and four died in Europe.

While it is a fact that very little can be done about the accidents caused by "the other guy", the RCAF is doing everything it can to make its own personnel better drivers. Vehicle control courses have been set up at most units throughout Canada, and in Europe all personnel are required to take special RCAF driving courses on arrival. Exams are based on the different road signs and regulations on the continent. In fact, the initiation of periodic motor vehicle inspection at RCAF units in Europe and at home is one of the most important vehicle safety programs the

airforce has initiated in recent years.

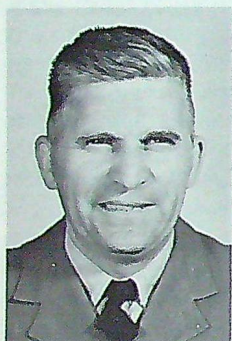
"In our ultra-modern society where we are protected from everything from homicide to plagiarism, we still find ourselves vulnerable to the motorist who neglects his automobile," says F/L Bancroft. Unless something can be done to reduce the present accident rates the AIA claim that every person who drives a car in Canada has a better than even chance of being involved in an accident costing anywhere from \$100 to death during the next 20 years. ☉

Driver training school at RCAF Stn. Camp Borden stresses safety precautions and vehicle maintenance.



The Suggestion Box

The following individuals have received awards from the Suggestion Award Committee, Department of National Defence, for suggestions which have been officially adopted by the RCAF. Photographs of winners of \$100 or over appear below. Proper procedure for submitting suggestions is detailed in AFAO 99.00/01.



WO2 N. J. Terrio of Stn. Lac St. Denis made a suggestion concerning the use of hydraulic fork lifts at GATR sites.



Sgt. G. E. Ans of Stn. Pagwa suggested a modification to KY-118 Decoder and KY-120 Coder cabinets.



Cpl. W. J. Jones of Stn. Comox made a suggestion concerning a modification to the CF-101B flap trailing edge.



Cpl. W. A. Howie of Stn. Trenton suggested a shear pin for Yukon aircraft passenger seats.



Cpl. L. E. Nielsen of No. 43 Radar Sqn. Penhold made a suggestion concerning a modification to the T282E transmitter cover to facilitate removal of the filter for cleaning.

Other award winners:

F/L D. H. Inglis
F/L J. R. Cheetham
WO2 G. S. M. Steele
FS M. R. Woods
Sgt. G. P. A. Morin
Sgt. W. Gotzman
Sgt. D. J. Baldock
Sgt. J. K. Brinacomb

Sgt. F. G. Heather
Sgt. R. E. Brown
Sgt. A. F. Savage
(2 awards)
Cpl. R. G. McLelland
Cpl. J. O. R. Dumoulin
Cpl. G. J. Charlton
Cpl. A. Lesperance

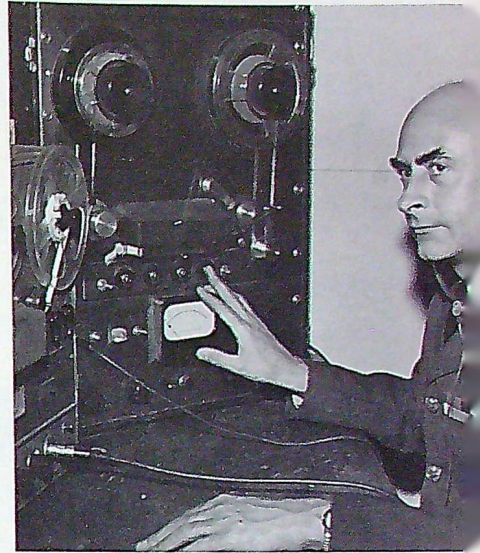
Cpl. W. G. Tullock
Cpl. O. H. Stevens
Cpl. W. I. Edmonds
Cpl. L. H. Riddle
Cpl. W. W. Chiki
Cpl. G. B. Delaine
Cpl. N. J. Bellemare
LAC J. G. R. Tetreault

LAC H. E. Burke
LAC N. H. Cooper
LAC W. A. Whiston
LAC A. C. Street
LAC H. J. Scott
Mrs. L. Therien

"RCAF Report" signs off the air

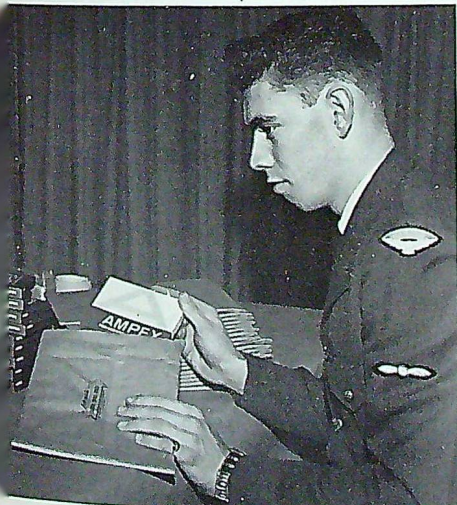


F/L Henrietta Robadey and F/L Don Pengelly, last "voices" of RCAF Report, present final broadcast.



Cpl. Ron Power "mixes" voice recording and musical background on master tape.

LAC Mike Percy packages completed tapes for shipment to more than 220 radio stations in Canada and Europe.



LAST MONTH the final program in the RCAF's weekly radio series, "RCAF Report", was shipped to radio stations across Canada and overseas. An integration casualty, the "voice" of the RCAF said farewell to its many listeners.

Conceived originally in 1958 and put on a regular weekly basis in 1961, the five-minute taped program ran through 191 consecutive weeks without a miss. These radio programs described almost every facet of RCAF activity at home, with NORAD, the UN and NATO, and were used regularly by 180 English and 40 French stations in Canada as well as by armed forces radio outlets in No. 1 Air Division.

Most programs were scripted in the radio section of the directorate of public relations at CFHQ while others originated with command and field units. For special events involving the RCAF, an attempt was made to gain on-the-spot coverage. Such events as the Congo airlift and

the Iranian earthquake relief flight were handled in this manner.

Under the direction of F/L D. B. Pengelly, the radio section first decided on a program topic and then researched the material. After editing, the script was timed, sound effects were added and the complete program was put on a master tape. Duplicate copies of the master tape were made and were then mailed out to radio stations across the country. Over the years many people contributed to the acceptance of RCAF Report. Besides F/L Pengelly, F/L J. R. Mungham, F/L J. A. Morchain, F/L M. A. H. Robadey, F/O B. J. Pauls, F/O R. P. Stone, FS M. Perry and LAC B. Germa took turns at the microphone, while sound specialists FS R. Tipple and Cpl. R. Power kept the finished product at a professional level.

The accompanying photos were taken during production of the final program a few weeks ago.



RCAF ASSOCIATION

This section of ROUNDEL is prepared by Association Headquarters, 424 Metcalfe St., Ottawa, Ontario.

NATIONAL PRESIDENT'S YULETIDE MESSAGE



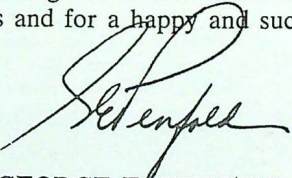
IT is traditional at year's end to sum up the accomplishments of the past year and to make resolutions for the future. The RCAF Association has had an active year and has accomplished much at local, group and national levels.

Many wings have done much for their own benefit, particularly by acquiring or improving their own quarters, and for the benefit of their communities, by donating wheel chairs to the Red Cross, donating university bursaries, assisting veterans' hospitals, sponsoring Air Cadet squadrons and by many other means.

Group executives have encouraged increased activities in the wings and have promoted new wings. Nationally, we have contributed constructive criticism and suggestions to the government on national affairs, notably those of our own immediate and particular concern, such as veterans legislation and national defence.

In the coming year we are hoping for and planning towards an even better performance, and to accomplish it we shall have to utilize the missionary zeal of all our members so that they may carry the word of our Association to all potential new members and to the public at large.

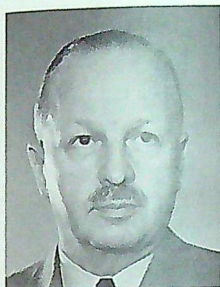
I think that the RCAF Association has proved its worth once again in 1964. Therefore, as national president, I wish to extend to all who give of their time and effort so generously, including our friends in the RCAF, my best wishes for a very Merry Christmas and for a happy and successful New Year.


GEORGE E. PENFOLD
National President



INTRODUCING THE NEW ADVISORY COMMITTEE

The RCAF Association in convention at Charlottetown, P.E.I. announced the appointment of its Advisory Committee, the formation of which was recommended at the 1963 convention in Vancouver. The purpose of the new committee whose chairman is A/M W. A. Curtis (ret.) and whose members are all ex-RCAF, is to advise the members of the National Executive Committee on various matters that are of interest to the Association.



A/M W. A. Curtis
Toronto, Ont.
Business executive, Chancellor York University; Former chief of the air staff; Grand president RCAF Ass'n.



G/C L. N. Baldock
Windsor, Ont.
Business executive, Toledo Scale Company of Canada; Former RCAF national president.



Mr. Roy F. Begg
Vancouver, B.C.
Vice-president, Begg Motors, Past president, Vancouver Air Force Officers' Association.



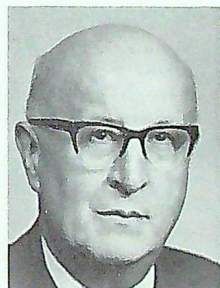
Mr. Philip F. Connell
Saint John, N.B.
Investment executive; Former RCAF national president.



Mr. V. P. Cronyn
London, Ont.
Business executive; Chairman, Canada Trust Co.; Chancellor University of Western Ontario.



Mr. R. W. Ganong
St. Stephen, N.B.
Business executive; President, Ganong Bros. Ltd.; Past president, Atlantic Provinces Economic Council.



Mr. H. E. Langford
Toronto, Ont.
Business executive; President, Eastern and Chartered Trust Co.; President, RCAF Benevolent Fund.



Mr. G. R. McGregor
Montreal, Que.
Business executive; President, Air Canada.



Mr. G. H. Sellers
Winnipeg, Man.
Business executive; President, Federal Grain Ltd.; Chairman, TransAir Limited.



Mr. Arthur Smith
Calgary, Alta.
Partner, Advertising and Public Relation Co.; Past president, Air Cadet League of Canada.

Front exterior of 700 Wing Club, new home of the largest RCAF wing in Canada, in Edmonton, Alta. The \$400,000 building was officially opened by A/M Hugh Campbell, immediate past national president, last September. Its facilities include a large dining room, spacious lounge, games rooms, swimming pool and outside patio and tennis courts. Family memberships at nominal rates are featured, with free swimming instruction for the children a popular added attraction.

AIRCRAFT ALBUM

Short Sunderland	Jan-Feb.
De Havilland Mosquito	Mar.
North American Mustang	Apr.
Vickers Wellington	May
Noorduyn Norseman	June
North American Mitchell	Jul-Aug.
Westland Wapiti	Sept.
Lockheed Ventura	Oct.
Douglas Boston	Nov.
Grumman Goblin	Dec.

AWARDS

Air Force Cross Winner	Jan-Feb.
Red Cross Salutes No. 103 Rescue Unit	Jan-Feb.
Awards for Gallantry	June, Oct.
New St. John Ambulance Awards	Sept.
Greenwood Bowling Champs	Sept.
No. 412 Sqn. Standard	Nov.
The Suggestion Box	Jan-Feb., Apr., June, Jul-Aug., Oct., Nov., Dec.

CURRENT OPERATIONS - IN CANADA

Electronic Warfare	Jan-Feb.
Nuclear Warheads: Peril or Protection	Mar.
Operation Douala	Mar.
Farewell to the Hawks	Apr.
Operation "The Thing"	Apr.
Conserving Our Natural Heritage	Apr.
B.C. Mountain Rescue	May
Workhorse of Air Transport Command	May
Tutors Roll on Monorails at Canadair	May
Mu Sigma	May
On the Skids	June
Big Bang at Suffield	Jul-Aug.
What Happens to a Community When an Air Base Closes	Sept.
Testing the Tutor	Sept.
Transplant!	Sept.
Faster Freight	Oct.
Camping at Crystal City	Nov.
"Seek and Save"	Nov.
Airports Are Not for the Birds	Dec.
Containerization	Dec.

CURRENT OPERATIONS - OVERSEAS

Around the World in 80 Hours	Jan-Feb.
Candid Congo	Jan-Feb.
RCAF Social Welfare in Europe	Mar.
The Reluctant Volunteer	Mar.
Canadian Photo Eyes Over Europe	Apr.
Dusseldorf Detachment	Apr.
Ode to the Sabre	Apr.
Airlift to Cyprus	May
Conversion Year for Aircent	June
RCAF Sends Caribou Crew to Kashmir	Jul-Aug.
Caribous Go Down Under	Jul-Aug.
A Day with a Super Starfighter Pilot in Europe	Oct.
The UN and the RCAF	Dec.

HISTORY

In Korean Skies - Part Two	Jan-Feb.
Requiem for a Giant	Mar.
The Journey Back	Mar.
Salute to the Auxiliary	Apr.

Memories of a Canadian Airman - Five Parts	May to October inclusive
Mediterranean Mission	May
Blenheim Occasions	Jul-Aug.
Scenes from 20 Years Ago	Jul-Aug.
Evolution of RCAF Telecommunications - Parts One and Two	Nov., Dec.
Genesis Guideposts	Nov.

PEOPLE

The Air Force Four	Jan-Feb.
Wingless Wonder	Jan-Feb.
Frozen Football	Jan-Feb.
Canadians at McChord	Mar.
Airwomen in the RCAF	Mar.
An Air Force Earl	Mar.
Down Under With the CAS	Apr.
Wartime Commanders' Re-union	Apr.
Mahogany Sculptor	May
RCAF Diver Finds Sunken Ship	June
A/M Dunlap Succeeds A/M Slemon at NORAD	Jul-Aug., Sept.
Unique Sports Car	Jul-Aug.
Barbershopping - A Man's Recreation	Jul-Aug.
World's Lowest Window	Jul-Aug.
To Move or Not to Move - Take Me Along	Sept.
Missile-Man	Oct.
The Gift of Life	Oct.
Top Guns	Oct.
In Flanders Fields	Nov.
Royal Visit 1964	Nov.
What You Think of Roundel	Nov.
"RCAF Report" Signs off the Air	Dec.
To Protect Ourselves	Dec.

RCAF ESTABLISHMENTS

I. A. M.	Jan-Feb.
White House of the RCAF	Jan-Feb.
Fingerprinting the Forces	May
Flight Feeding in the RCAF	June
AMC Logistics School	June
Cooking at Clinton	Oct.
Reflections on Fort Churchill	Oct.
Grostenquin Re-Visited	Dec.

TRAINING

Test Pilot Training	June
Preparing for Civvy Street	June
Transport Training	Jul-Aug.
Machines or Instructors	Sept.
New Survival Handbook	Nov.
Ici, On Parle Français	Nov.
Nigerians Finish Canadian Tour	Nov.

TRI-SERVICE AND INTEGRATION

CAS Statement to All RCAF Personnel	May
Canadian Servicemen in Britain	June
"New Look" at NDHQ	Jul-Aug.
Introducing the Men at the Top	Jul-Aug.
"The Old Order Changeth . . ."	Sept.
Khaki in the Blue	Oct.
Canada's Flying Sailors	Oct.
Integration Takes Shape	Oct.
Canadian Coastlines Conquered	Dec.



AIRCRAFT ALBUM:

Grumman Goblin

In 1937 Canadian Car and Foundry acquired a license to build the Grumman FF-1, and subsequently manufactured 57 of these aircraft. One was exported to Nicaragua, one to Japan, and 40 were acquired by Turkey. The latter was acting as an agent for the Spanish Republican Government, for these 40 aircraft subsequently flew in Spain where they fought on both sides. The remaining 15 aircraft were delivered to the RCAF, the last biplane fighters in Canada (though not the last operational biplane used by the RCAF, an honour reserved for the Fairey Albacore torpedo bomber).

In December 1940 "A" Flight of No. 118 Sqn. equipped with *Goblins* at Rockcliffe, and subsequently became No. 118 (Fighter) Sqn. Later the unit moved to Dartmouth where its *Goblins* for a time constituted the sole fighter force on Canada's east coast. Late in 1941 they were supplemented by *Kittyhawks*, but they were not replaced completely until May 1942. No. 123 (Army Co-operation) Sqn. flew five *Goblins* for a time, but disposed of them by the end of March 1942.

The *Goblin* was powered by a Wright Cyclone of 770 h.p. and had a top speed of 216 mph. Armament was one .30 Browning machine gun firing through the prop arc and two Brownings in the observer's cockpit. Wingspan was 36 feet 6 inches and loaded weight was 4,800 lbs.