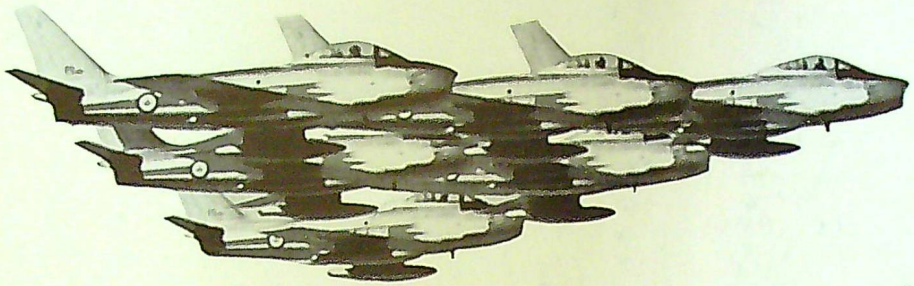
THE Roundel

VOL. 14, NO. 4
MAY 1962



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Published on the authority of the Chief of the Air Staff, Royal Canadian Air Force

VOL. 14, NO. 4 MAY 1962

THE ROUNDEL is published ten times each year. Annual subscription rate is $2.00 in Canada, U.S.A. and Mexico, $3.25 elsewhere. Orders should be sent direct to the Queen's Printer, Ottawa, Ont. RCAF Association correspondence should be mailed to Ass'n Hdqts., 424 Metcalfe St. Ottawa, Ont.

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THIS MONTH'S COVER

The Golden Hawks and their mascot — appropriately enough, a hawk. The story of the Golden Hawks' 1962 tour begins on page 2.

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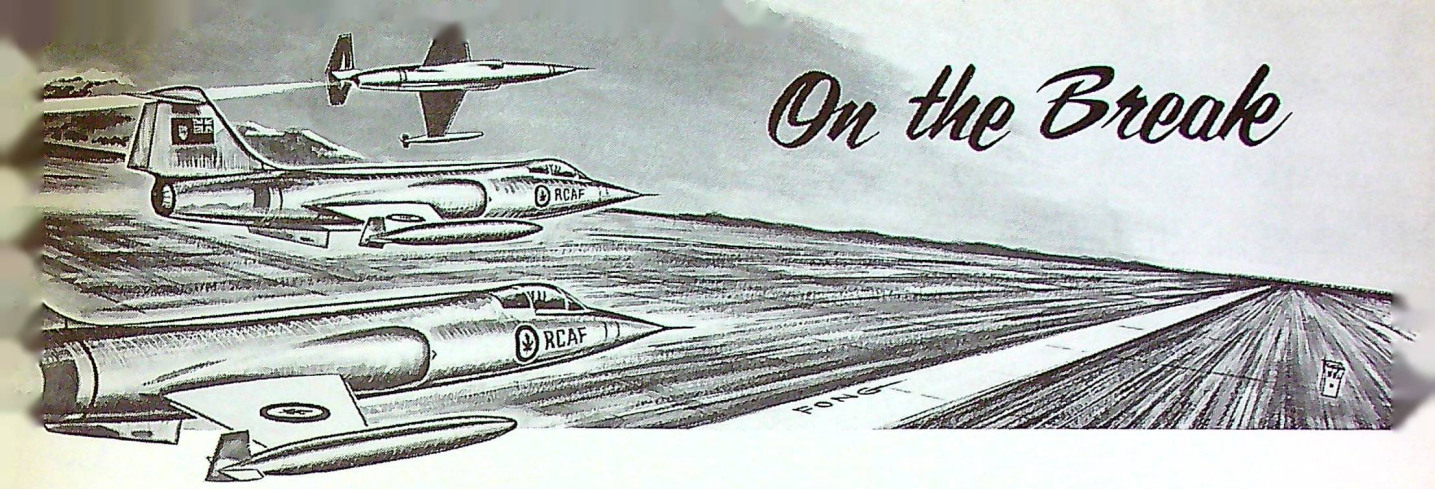


On the Break

"In a constantly changing and growing military organization such as ours, THE ROUNDEL fills a definite need for an accurate historical record which is readily available to all members of the air force." So wrote one of our readers last month. The same sentiment was expressed by A/V/M C. L. Annis as he handed us the manuscript for "The Evolution of Air Materiel Command" (page 4).

We had suggested to the air officer commanding that his article be divided roughly into one-third evolution and two-thirds current status of AMC. During the course of his research he discovered that the historical story was one which had never been written. Hence, A/V/M Annis offered to prepare two articles; the second (on the RCAF's logistics management techniques) will be published this fall.

A/V/M Annis, a native of Pickering, Ont., joined the air force in 1936. At the outbreak of World War II he was flying in No. 10 Bomber Reconnaissance Squadron, a squadron with which he was to serve on three occasions during his wartime career. While on anti-submarine operations, A/V/M Annis captained the first aircraft to attack a German U-boat in North American waters. The encounter took place 25 October 1941, about 150 miles outside the Straits of Belle Isle. Several senior administrative posts in Air Defence Command preceded his appointment in 1958 as AOC AMC.

This month, for our Stations of the RCAF series, we journey down east to "herring-choker" country. Nova Scotia's Annapolis Valley has long been famous for its apple harvest. More recently it has become well-known for a much different type of activity — the anti-submarine operations carried out from RCAF Station Greenwood. The Greenwood story, beginning on page 11, was written by a man who is actively employed on anti-submarine patrols: F/L W. J. Read, a radio/navigator with No. 404 Squadron.

When he's not navigating an *Argus* or serving as station intelligence officer, F/L Read keeps busy at his secondary duty as unit public relations officer. We'd like to doff our editorial hat to him and all the other UPROs in the RCAF who do such a fine job on the community level and on ROUNDEL assignments like this one.

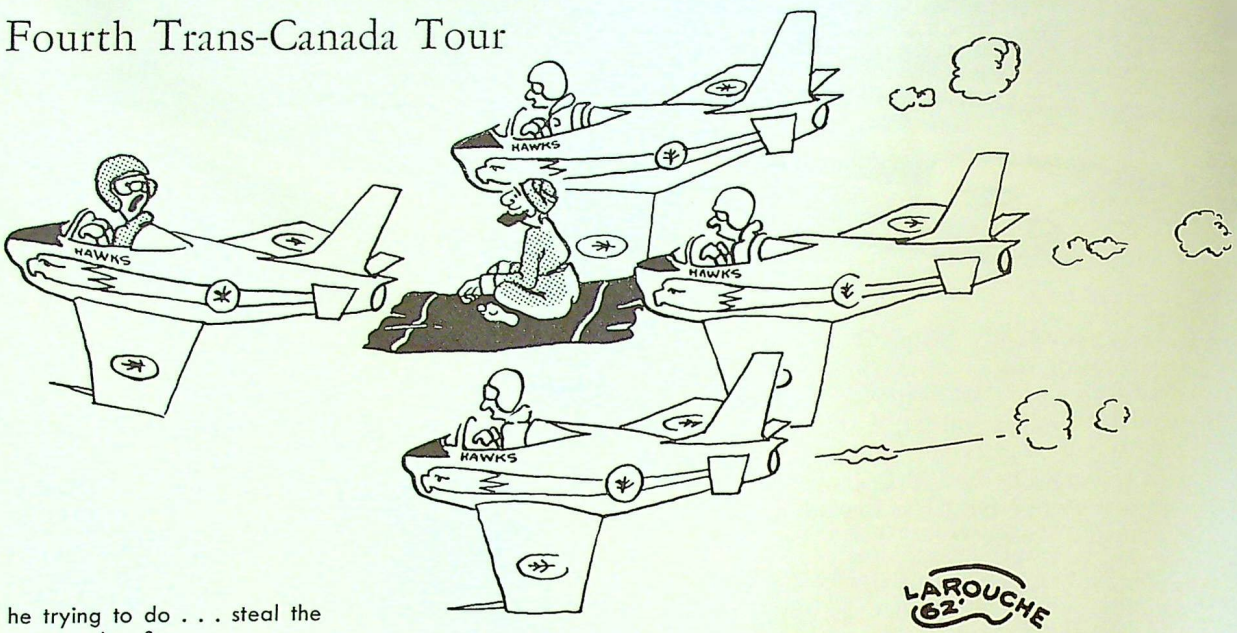
The photos of the *Jenny* (page 23 and back cover) and the *Starfighter* (page 16) dramatically illustrate how far aviation and Canadian military aviators have come over the years. The JN-4, which was considered to be a very fine aircraft in its day, had a ceiling of 8,000 feet and top speed of 95 mph. The RCAF's newest acquisition, the *Starfighter*, has a speed of 1400 mph and has reached 91,243 feet.

A. F. Paterson S/L

Editor

GOLDEN HAWKS

On Fourth Trans-Canada Tour



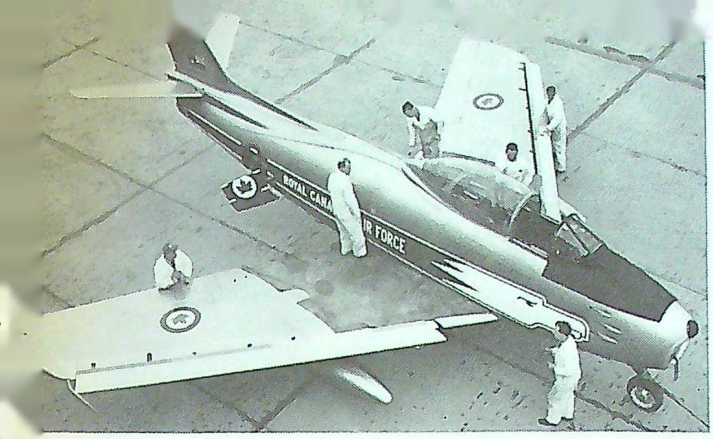
What's he trying to do . . . steal the show?

As THIS issue of THE ROUNDEL is distributed another "name product" of the RCAF is making its presence known across the country — the RCAF's famed Golden Hawks.

With a tight schedule consisting of more than 70 performances in approximately 60 places, the Golden Hawks will cross Canada from west to east and will also appear several times in the USA. Their 20-minute sequence of tight formation maneuvers and high speed solo aerobatics will demonstrate the high level of skill and precision demanded by the RCAF of its fliers.

The team was formed in 1959 to mark the 35th anniversary of the RCAF and the golden anniversary of flight in Canada. Their public appeal has brought them back for

The men behind the men behind the stick (l. to r.): LACs E. R. Harnum, G. R. Homer, J. W. P. Brenton, M. Marceau, J. J. St. Pierre, J. B. L. Racine, D. A. Osmun, F. E. Cloney, and I. M. Elmose.

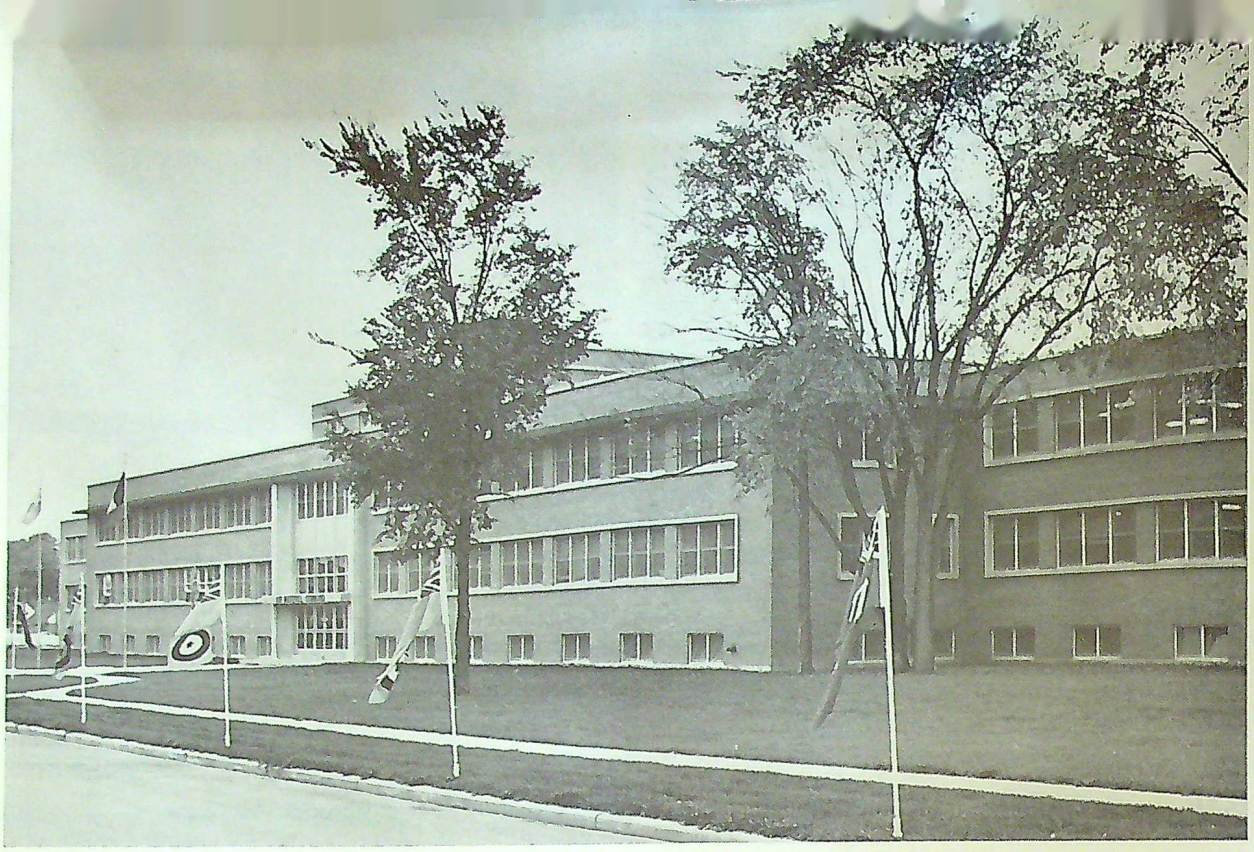


a fourth international tour this year.

The commanding officer of the display team is W/C J. F. Allan and the Golden Hawk team consists of S/L L. Hubbard (leader), F/L B. R. Campbell, F/L J. Fraser, F/L M. Garriock, F/L A. MacDonald, F/L G. Miller and F/L E. McKeogh. The maintenance group is commanded by F/O R. S. Perry and is composed of FS O. J. Tousignant, maintenance superintendent; Sgt. J. A. G. Latraverse, NCO i/c servicing and Sgt. H. C. Hewitt, base maintenance.

The following schedule, subject to change, has been approved up to press-time:

DATE	PLACE AND EVENT
12-13 May	Andrews AFB (Washington DC)
19 May	L. G. Hanscom Field (Massachusetts)
20 May	Otis AFB Mass.
26 May	Vancouver Air Force Day
27 May	Victoria Centennial Air Show
1 June	Lethbridge Air Show
2 June	Lincoln Park AFD
3 June	Penhold AFD
5 June	Lloydminster Air Show
9 June	National Air Force Day Rockcliffe
13 June	Prince Albert Air Show
15 June	Minot AFB, North Dakota USAF Air Force Day
16 June	Moose Jaw AFD
17 June	CJATC Rivers Air Show
23 June	Namao AFD
25-28 June	Red River Exhibition Winnipeg Air Show
29 June	Gimli AFD
30 June	Portage La Prairie AFD
1 July	Flin Flon Trout Festival Air Show
2 July	Brandon Exhibition Air Show
4 July	Cold Lake AFD
6 July	Brandon Exhibition Air Show
7 July	Lakehead Air Show
8 July	Sault Ste Marie Air Show
11 July	North Bay AFD
13 July	Falconbridge AFD
14 July	Timmins Air Show
15 July	Sherbrooke Air Show
16 July	Owen Sound (Wiarton) Air Show
18 July	Pembroke Air Show
21 July	Trenton AFD
22 July	Camp Borden Air Show
25 July	Peterborough Air Show
26 July	Kingston Flying Club Air Show
28 July	St. Hubert AFD
31 July	Shawinigan Falls Air Show
1 August	Three Rivers, P.Q.
4 August	Seven Islands — Moisie AFD
5 August	Quebec City Air Show
6 August	Bagotville AFD
8 August	Val d'Or — Senneterre AFD
10 August	Chatham AFD
11 August	Greenwood AFD
12 August	Saint John, N.B., Air Show
14 August	Fredericton Air Show
15 August	Halifax (Shearwater) Air Show
18 August	Shediac Lobster Festival Air Show
19 August	Charlottetown Air Show
22 August	Sydney AFD
31 Aug-1Sep	CIAS Toronto (CNE) Air Show
3 September	Kitchener-Waterloo Air Show
5 September	Chatham, Ont. Air Show
8 September	Centralia-Clinton AFD
9 September	Sarnia Air Show
10-16 September	Seattle Washington, "Century 21" (Canada Week)
27 September	RCAFA Convention — Halifax Air Show



Air Materiel Command Headquarters, Rockcliffe, Ont.

The Evolution of...

AIR MATERIEL COMMAND

By AIR VICE MARSHAL C. L. ANNIS, OBE

Air Officer Commanding, Air Materiel Command

I SPENT the first 22 years of my RCAF career in a variety of operational and staff appointments far removed from Air Materiel Command or its forbears. The four years I have since passed within AMC itself have been fascinating years of discovery. It is mostly having in mind our RCAF personnel who have never served a tour in AMC that I am composing this article at the request of THE ROUNDEL.

Expressed in the most modern terms, the role of AMC is to accomplish, with utmost economy, an adequate materiel logistic support of the RCAF's operating and training commands, i.e. of the stations and other units which comprise them. In tabloid form, we in AMC express it as "the right thing in the right place at the right time — with utmost economy".

It is the US Armed Forces who, from the old French term "logistique', have in recent years developed highly for the West both the art of logistics and the meanings the term now generally conveys. One trend is that whereas 'logistics' used to convey also the idea of food and quarters it now tends, unless qualified, to denote material goods and services.

In US practice the four broad fields which are combined to produce a logistics organization are maintenance, supply, transportation and procurement. It has been RCAF

practice, so far, to regard transportation as an element of supply; and thus logistics to be the product of grouping maintenance, supply and procurement into a package under one head.

The RCAF, however, has only a limited though essential part to play in procurement. In 1921 there was a technical directorate in the Air Board which conducted air force engineering, supply and procurement. The responsibilities for contracts and purchasing were transferred in 1923 to a director of contracts outside the air force. The only parts of the procurement function which have remained with the RCAF have been provisioning and quality control. Provisioning is the computing, specifying and budgeting for what the procuring agency is to procure; quality control is the inspection and other technical precautions to ensure that the specifications have been met before the materiel is accepted into RCAF inventory and paid for.

Because logistics comprises maintenance, supply and procurement it will be apparent that it is anything but a function exclusive to AMC. Almost every component of the RCAF from AFHQ downwards and outwards is also engaged in some or all elements of logistics. It will be obvious, then, that AMC's role is distinctive not so much because almost its entire pre-occupation is with logistics as that the *portion* of RCAF logistics which AMC performs is distinct.

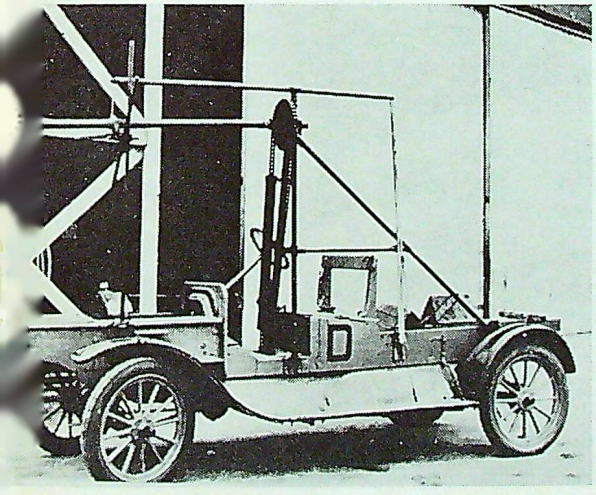
To generalize, it can be said that what AMC does is too specialized and complex technically for the operating and training commands to do without deflecting them unduly from their main roles; and too much an "operating" function for AFHQ to be involved in without vitiating AFHQ's duty of thinking out and providing policy guidance to the field.

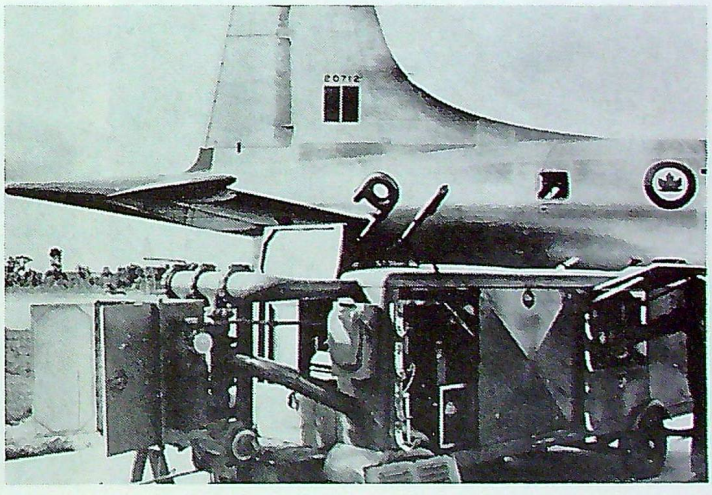
Air Materiel Command was born out of Maintenance Command merely by changing the latter's name. Maintenance Command came into being in 1945 by the creation of a new unit — one eventually to become its largest, namely Maintenance Command Headquarters — through withdrawing from AFHQ not only the major portion of the detailed responsibilities for maintenance engineering, supply administration, materiel provisioning and direct control of all the specialized logistics units then existing, but also most of the actual personnel who had been performing these functions at AFHQ; and by grouping all the specialized logistics units in the RCAF under the command and control of the MCHQ thus fashioned. It will therefore be obvious that to trace the maturing of the RCAF towards the formation of Maintenance Command, it will be necessary to review both the previous history of the pertinent elements of AFHQ as well as of the types of units which eventually came under the control of MCHQ. Let us first examine the types of units.

The first purely logistics unit of the Air Force in Canada precedes the RCAF. It was an (un-named) Air Stores Park of the Canadian Air Force (CAF) located at Camp Borden about 1921. Little seems to be recorded about it except that it burned down early in 1923. The place where it stood can still be seen in the form of a rather large concrete-paved gap near the north end of the old line of Besserer hangars at Camp Borden.

This fire apparently induced the CAF in 1923 to take over from the Department of Public Works a site on Victoria Island in Ottawa, which had been successively a mica factory,

Engine starters — then and now. On the left is a Huck starter at Camp Borden Air Stores Park in 1922. On the right is an *Argus* starter unit in 1962.





carbide plant and boatyard; and there to establish what became the RCAF's No. 1 (Aircraft) Depot.

It is interesting to note that the RCAF's first logistics unit was a Depot; and that it was both a Repair and Supply Depot. Its terms of reference read:

1. Repair all aeronautical equipment which could not be undertaken by other Air Force stations, and,

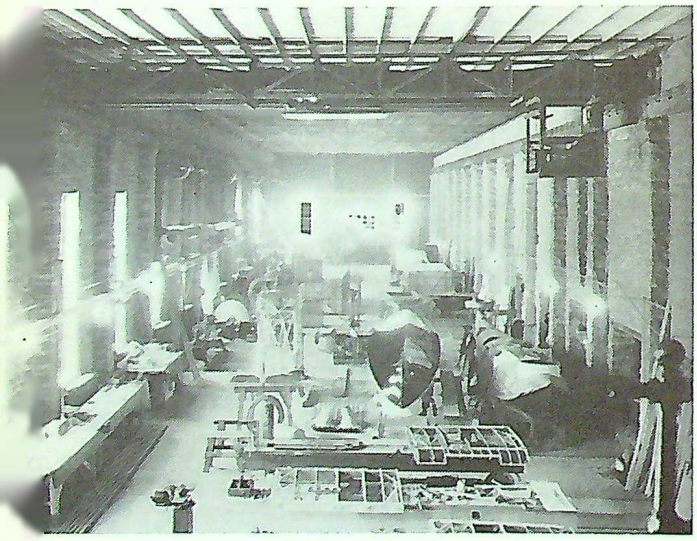
2. Receipt of technical stores off contract, and issue of same to all Air Force stations.

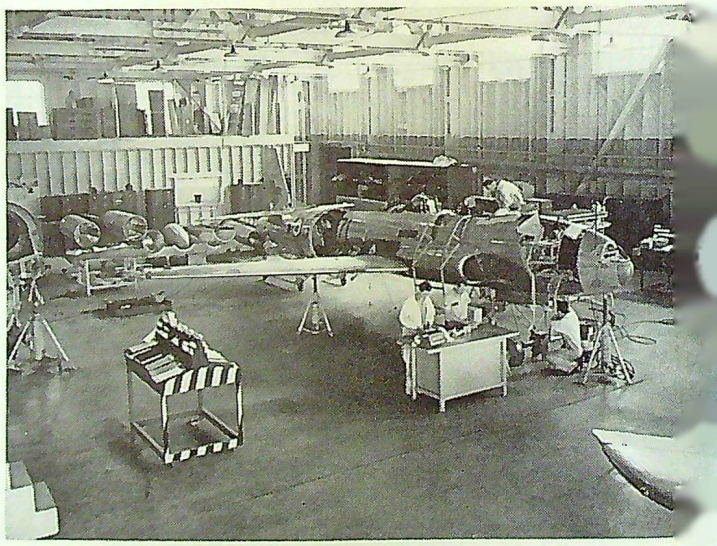
Reference 1, above, is even today a fairly accurate statement of the role (and the relation to the maintenance work done by RCAF stations) of AMC's No. 6 Repair Depot at Trenton and repair contractors. The precise extent of "repair . . . which could not be undertaken by . . . stations" has changed with the years and circumstances, but the *spirit* has remained the same. This is that the main purpose of squadrons and sections on stations is to operate equipments rather than to maintain them. Thus front line or "first line" maintenance is, in principle, confined to such processes as servicing, testing by operating, minor inspections, simple repairs-by-replacements, etc., of the aeroplanes, vehicles, radars, kitchen equipment and so on which they may be operating. The "second line" or station level is more complex, requires more costly and specialized tools, test equipments and personnel, and takes longer. In principle it comprises such things as major inspections, repair-by-replacement of major components, embodiment of moderately complex modification kits, simple repair-by-rebuild and the like. The "third line" or "depot level" maintenance is so complex as to require returning the equipment to AMC for major repair, modification, rebuild, etc; and having it replaced at the station by equipment which is in running condition.

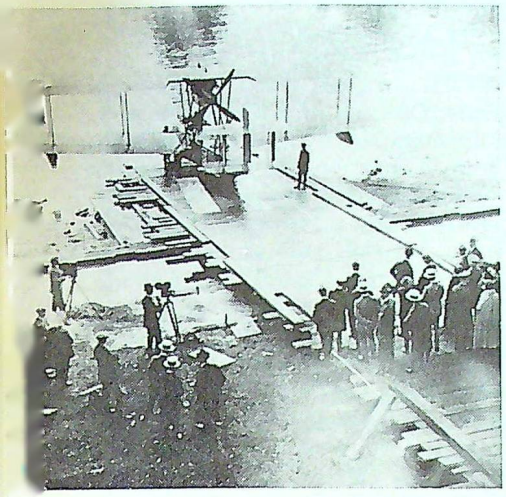
Reference 2, above, is also still a fairly accurate statement of the role of AMC's supply depots, although there have been changes. No. 1 Depot did not receive or stock other than technical spares. The few RCAF stations then existing made demands for their barracks equipment, clothing, motor transport and such on the nearest Army Ordnance Depot. It was not until about 1939 that the RCAF began to stock and issue such equipment through its own provisioning. Another change is that AMC's supply depots issue spare parts not only to RCAF stations but also to repair depots and repair contractors for embodiment into RCAF materiel being repaired. From 1923 to 1936 No. 1 (Aircraft) Depot remained the sole permanent wholly-logistics unit of the RCAF. In 1936 the first supply depot, No. 2 (Equipment) Depot, was formed at Winnipeg. In 1937 the first repair depot, No. 3 (Repair) Depot, came into being at Vancouver.

The RCAF's repair contractors are commercial firms, the first of which entered into contract in the early 1920s. Their number grew steadily through the late '20s and the '30s; and since World War II they have displaced all but one of the RCAF's repair depots. The intimate and detailed planning, control

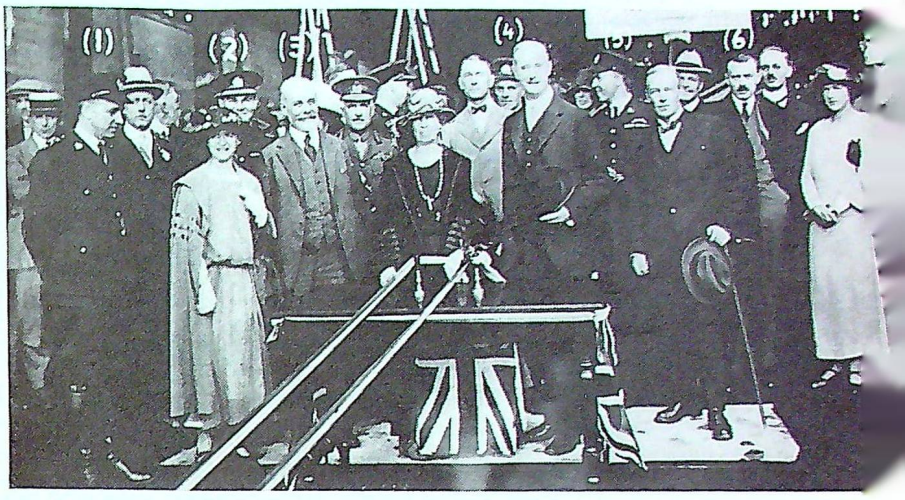
Repair shops — then and now. On the left, an interior view of No. 1 Aircraft Depot, Victoria Island, in the mid-1920s. On the right, aircraft repair shop at No. 6 RD, Trenton, today.







Launching a Vickers *Viking* at Montreal on 25 July 1923. Canadian Vickers Ltd. was one of the first of many civilian firms to handle RCAF repair and overhaul contracts.



At the launching were (1.) F/L (later A/C) A. L. Johnson, RCAF resident inspector; (2) W/C (later A/V/M) E. W. Stedman, RCAF acting director; (3) Mr. Desbartes, deputy minister of national defence; (4) Mr. A. R. Gillham, managing director of Canadian Vickers, Ltd.; (5) S/L (later A/M) G. O. Johnson, RCAF headquarters staff officer; (6) Brig. (later Lt. Gen.) A. L. McNaughton, director of training.

and surveillance which AMCHQ must exercise over the RCAF materiel entering and leaving their plants, and over operations within them, is very similar to that applied to AMC's own units. Among the 103 different companies which now have contracts for repairing our materiel are many who have been thus engaged continuously for decades — so long that they have become in many ways a part of the AMC "family of units".

The emergence in growing quantities of companies having production or repair contracts with the RCAF was the cause of bringing into being two additional types of logistics units-to-be in AMC. One was what is now our Materiel Laboratory; the other our Technical Services Units.

Late in 1927 an aeronautical inspection Test House was set up as a separate element of No. 1 (Aircraft) Depot. Its purpose was to preside over the inspection of all military aircraft construction and maintenance with the Test House having a master gauge section and other devices to enable verification of the quality of the materiels and their processings. After a varied history of locations and names it became an element in Maintenance Command in 1945 and a full-fledged unit of AMC in late 1954. The present roles of the Materiel Laboratory are directed more towards assessing the capabilities and performances of the laboratories of companies having production or repair contracts than in the direct sampling of those companies' materiel. Our laboratory also does, or arranges to have done at other specialized government laboratories, "arisings" from within the RCAF itself which require analyses.

By 1938 the amount of production and repair for the RCAF had so grown in volume that it was decided to set up RCAF units in the areas where contractors were most concentrated in order that technically experienced RCAF personnel could assist the contractors in interpreting specifications, report technical progress back to AFHQ, inspect the quality of work as it progressed, safeguard the Crown in RCAF materiel being supplied to the contractor, etc. The first such unit, No. 11 (Technical) Detachment, was formed in Montreal in 1938 and shortly after No. 12 TD was formed in Toronto. During the war this type of unit was re-named "Aeronautical Inspection District" and is now known as "Technical Services Unit".

Until the mid-1930s the RCAF stock of ammunition and bombs was tiny. But the rise of Hitler accelerated the RCAF towards a more military posture. Among other steps it brought into being in 1938 the first RCAF explosives depot, No. 21 (Magazine) 226 Detachment at Kamloops B.C. These depots combined the roles of a repair and a supply depot but, of course, for explosives only.

During the war years four additional kinds of units which still are represented in AMC came into being. The decision to transfer the re-

sponsibility for receipt, custody and issue of publications, forms and stationery from DND's Printing and Stationery Branch direct to the RCAF caused No. 1 (Publications and Forms) Store to be formed at Victoria Island in April 1941. Today its descendant, now at Rockcliffe, is called No. 3 (Supply) Depot, even though its role and stock-in-trade are unchanged.

As the volume of aircraft production and repair and opening of new RCAF stations, schools, and repair depots rose so did the need for a unit to conduct the specialized role of ferrying aircraft. Accordingly in January 1942, No. 124 (Ferry) Squadron was formed at Rockcliffe under the direct control of AFHQ. Responsibility for aircraft acceptance and ferry operations was transferred to AMC in January 1949. Our No. 129 (A&F) Unit formed in February 1953 now performs this role.

The huge construction program, much of it in quite remote areas, compelled the RCAF to undertake certain portions itself, using men in uniform. The major role of the Construction and Maintenance Units which grew out of this need was to carry out actual construction or major maintenance where civilian contractors were not practicable; and to administer contracts where they were. The first to become established was No. 9 CMU at Vancouver in July 1942. The only RCAF CMU which remains in AMC today had its name changed just a few weeks ago to No. 1 Construction Engineering Unit to reflect a greater emphasis on engineering.

From the early months of the war onwards the RCAF received increasing amounts of materiel by way of the US Army Air Forces and the US Navy; and by the fifth year it became necessary for AFHQ to provide focal points for close-to-hand liaison with the US agencies concerned. Thus in August 1944 No. 1 (Requirements) Detachment was established at the HQ of the USAAF's Air Services Command — the direct parent of the later USAF AMC, and recently re-named Air Force Logistics Command — near Dayton, Ohio; and a second at the US Navy's Air Stores Depot in Philadelphia. Today they are called Requirements Units.

As World War II drew towards a close the physical management of the vast stocks of materiel which had been accumulated became a major problem. Accordingly Reserve Equipment Holding Units (and satellites) for storing aircraft and vehicles, and Surplus Equipment Holding Units (and satellites) for other materiel were located on many of the flying stations from which aircrew training was withdrawn. There was a peak of 23 such units in 1945/46. The REMUs later became called Storage Sites. There are still five in AMC today: Lethbridge, Alta; Macdonald, Man; and Mountain View, Dunnville and Picton, Ont.

In the late 1940s RCAF activity in the Arctic increased, largely through the mapping and joint weather station programs. Each summer AMCHQ sent a detachment to Montreal to marshal and ship the freight being assembled from various sources for these remote stations. When the RCAF's European Air Division began build-up, the detachment was employed year-round. Therefore, in 1952 No. 1 Materiel Movements Unit was organized in Montreal. In 1955 its name was changed to No. 4 Movements Unit (Materiel).

This completes our quick review of the times and circumstances which brought into being each of the types of field units which are fully organic to present-day AMC.

Let us now look at the origins of Maintenance Command Headquarters. To do so we must delve into the beginnings and growths of the pertinent technical staffs at AFHQ.

As already mentioned, the history of technical staffs in the RCAF began in 1921, with the technical directorate of the Air Board located in Ottawa. This directorate consisted of a technical section and a stores

AIR MATERIEL COMMAND UNITS

Supply Depots

1 SD, RCAF Stn. Downsview, Ont.
3 SD, RCAF Stn. Rockcliffe, Ont.
5 SD, Moncton, N.B.
7 SD, Namao, Alta.

Repair Depots

6 RD, Trenton, Ont.

Stations

RCAF Stn. Rockcliffe, Ont.
RCAF Stn. Lincoln Park, Calgary, Alta.

Requirements Units

1 RqU, Wright Patterson AFB, Dayton, Ohio.
2 RqU, Philadelphia, Pa.

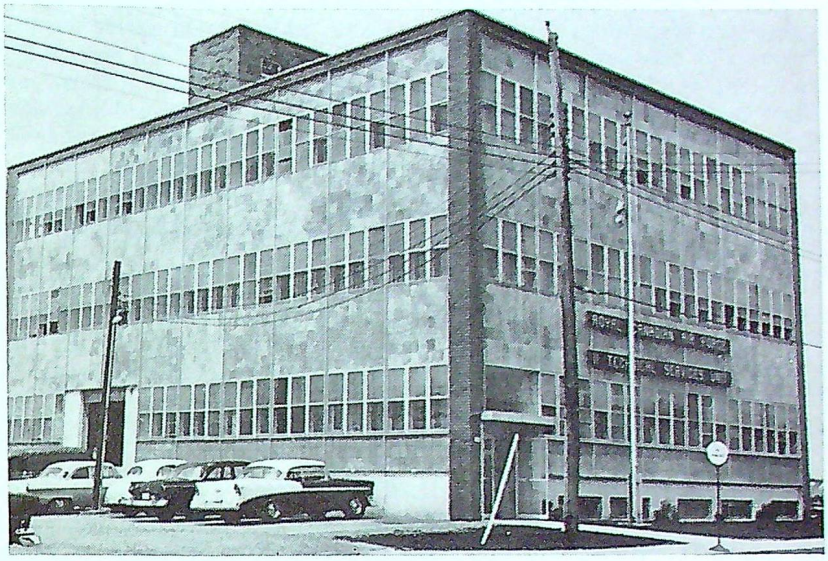
Technical Services Units

10 TSU, Calgary, Alta.
11 TSU, Montreal, Que.
12 TSU, Toronto (Weston), Ont.

National Defence Medical Centre, Ottawa.

Materiel Laboratory, Rockcliffe.

section, and in 1932 was named the directorate of aeronautical engineering, its two components becoming branches. In 1936 a signals section was established with the AE branch of this directorate; in 1937 a works and building section was formed within the supply branch; and in 1938 an armament section within DAE. In November 1938 the directorate gained the new status of division with the title of aeronautical engineering and supply division, and its two directorates became sub-divisions. In May 1939 works and buildings also became a directorate and that September the three main components of logistics appeared together, as staff entities for the first time. They were formed with the supply sub-division with the status of directorates and the titles of procurement, equipment administration and equipment maintenance, respectively.

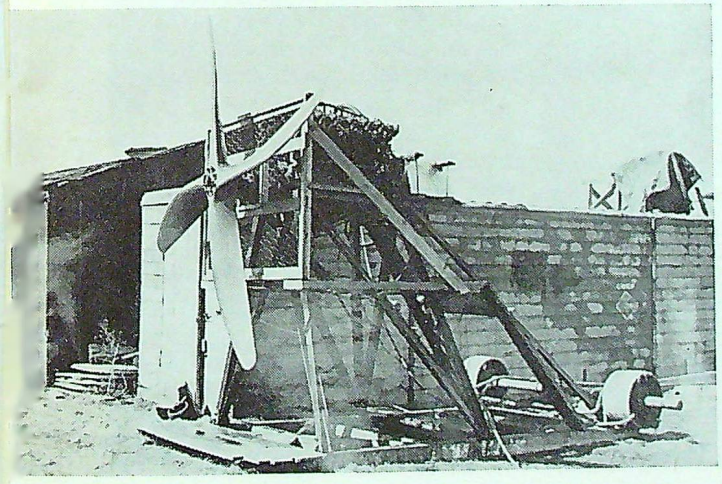


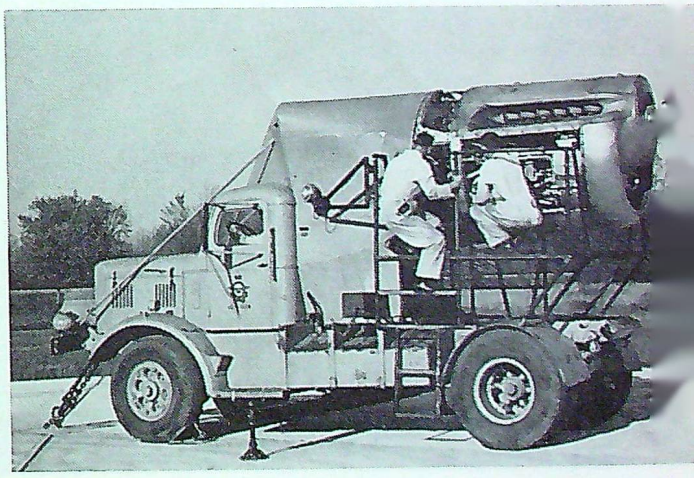
No. 11 Technical Services Unit, Montreal, Que., is the oldest logistics unit still existing in the RCAF.

In November 1940 the two sub-divisions were each raised to division status and two years later the works and buildings directorate gained the same AFHQ staff rank. By November 1944, in line with the general contraction being applied to the RCAF, the aeronautical engineering, supply and construction engineering divisions were merged, together with the organization division, all as sub-divisions under a single Air Member (AMSO).

At least one each of most of the types of field units which now comprise AMC had been created before or early in the war. Because all of them were controlled directly from AFHQ, their effect was to involve AFHQ's staffs deeply in the detail of technical and supply operations; and thus to generate large staffs. Although administrative control at least of the depots and CMUs was later decentralized to the six air commands, AFHQ was unable to relegate functional control except by forming some appropriate sort of functional command — a step con-

Engine test stands — then and now. On the left is a test stand of the early 1920s. On the right an engine is tested on a mobile stand, nicknamed "Oscar", at No. 6 RD, Trenton.





sidered too disruptive to be ventured during the mid-war years. But by July 1945 the pressures to form a Maintenance Command Headquarters were intense, partly to help achieve a sizeable reduction in the physical size of AFHQ and partly to help free AFHQ's hands of much detail in the immense task which lay ahead in the transition of materiel management from all-out war and huge, precipitously-assembled inventories of materiel back to a peacetime air force — then planned by the government to be a mere 14,000 in personnel and eight squadrons. AFHQ wished to devote as much of its energies as possible to policies and planning for the post-war period. Intentions in the technical field had taken shape. They were to retain at AFHQ the management of design, development and procurement of major equipment and capital plant and to decentralize to Maintenance Command the provisioning and supplying of technical instructions, spares and other direct and indirect support materiel to the other commands which would enable them to do their own first and second-line maintenance; managing and performing the RCAF's third-line maintenance; inspecting and accepting all contract materiel into the RCAF's inventory; and operating for the RCAF its third-line (or wholesale level) supply system.

To this end first an R&D Division was created at AFHQ in May 1945 from AE elements in the AMSO Division, and preparations were then begun to form MCHQ by extracting and transferring the majority of the remaining technical elements from AMSO. Thus when MCHQ was established its principal functional staffs were maintenance engineering, construction engineering and supply.

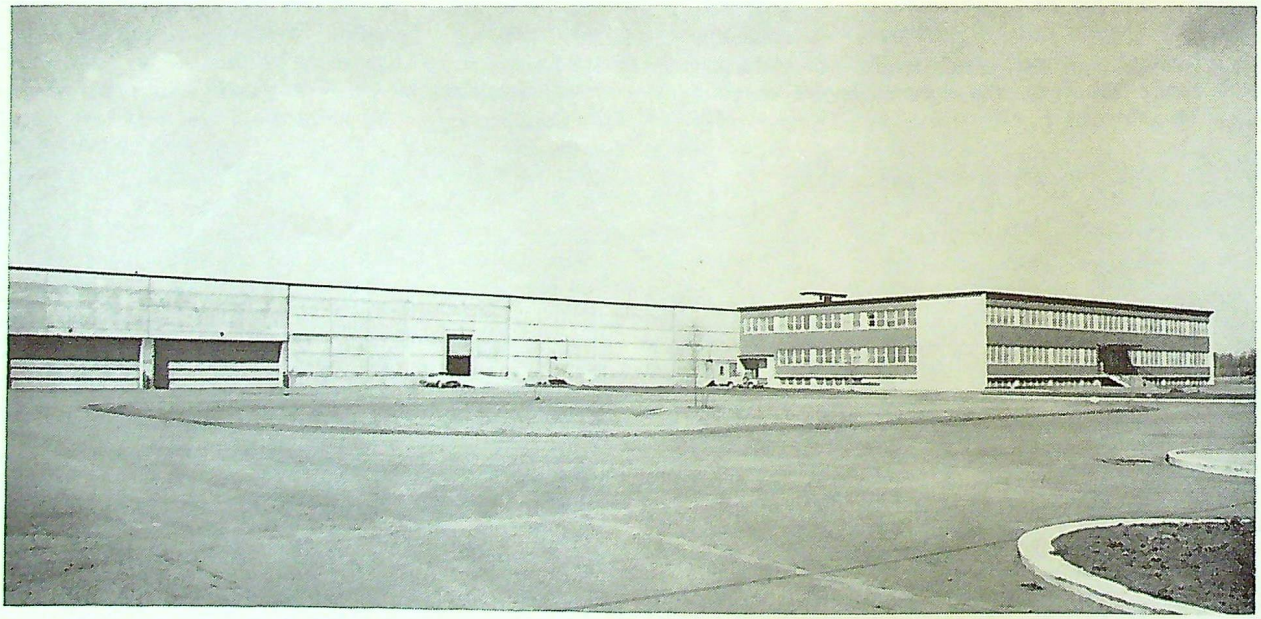
Maintenance Command was established to become effective 6 August 1945 — the same date the first atomic bomb was dropped on Hiroshima. I think the latter event got a wider notice.

The first day MCHQ officially functioned was on 1 Oct. 45. It had required the intervening period to rehabilitate wartime buildings at Uplands, to make and implement detailed organization establishment and procedural decisions, and to segregate and shift the appropriate elements of the various AFHQ staffs and voluminous records from their longtime AFHQ offices.

Maintenance Command moved to No. 8 Temporary Building, in downtown Ottawa, on 1 April 1947. Exactly two years later Maintenance Command was re-named Air Materiel Command and, on 1 September 1954, AMC moved to its present location at Rockcliffe. It would appear, therefore, that AMC can rightfully claim to be not only the RCAF's oldest *functional* command continuously extant as such but also the RCAF's oldest command, in original terms of reference.

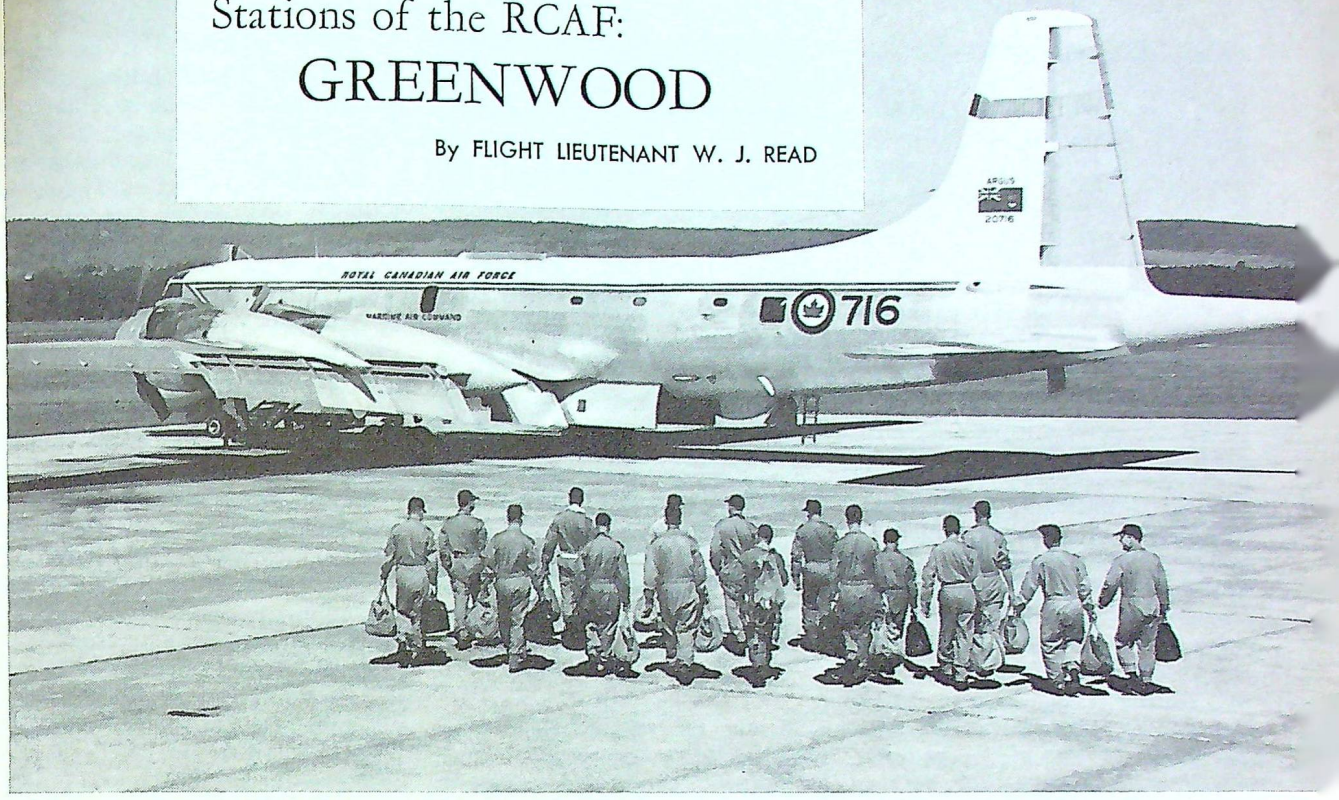
(In a later issue A/V/M Annis will trace the evolution of AMC's logistics management techniques and examine their future.—Editor.)

No. 7 Supply Depot, Namao, Alta.



Stations of the RCAF:
GREENWOOD

By FLIGHT LIEUTENANT W. J. READ



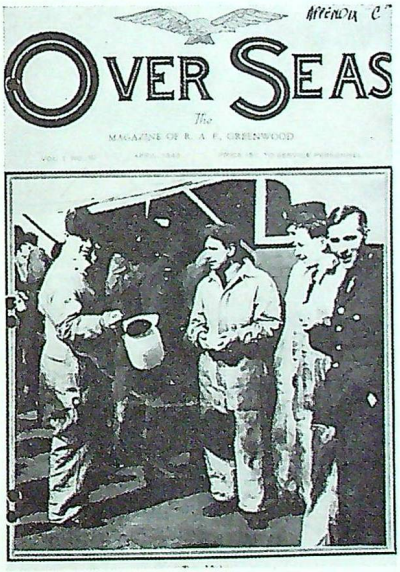
"*You may sleep well tonight,*
your Maritime Air Force is awake."

NESTLED unobtrusively in Nova Scotia's Annapolis Valley, RCAF Station Greenwood offers little more than a quick glimpse of distant hangars to the passing motorist on the Digby-Kentville highway, as he passes through the village of Kingston, N.S. Few are aware that this air station has become, since its post-war re-activation in 1947, not only the largest station in the RCAF, but also the biggest and most populous community in western Nova Scotia.

With the advent of the *Argus* aircraft into maritime patrol squadron duty in 1958, a veritable population explosion has occurred. At present the number of service personnel and their dependents totals 7,000, or about 2,000 more than the town of Kentville, its closest rival, about 30 miles away.

Historically, Greenwood is a young air force station — built during World War II as part of the British Commonwealth Air Training Plan. In May 1942 Greenwood opened, as a Royal Air Force station under the functional control of Eastern Air Command, primarily for the operational training of personnel prior to overseas duty. The first unit to operate out of Greenwood was No. 36 Operational Training Unit, using *Hudson* and *Anson* aircraft. The first course of students graduated in July 1942.

Station Paper, April 1943



Mosquito aircraft arrived at Greenwood in 1943 and soon became a familiar sight in the valley skies. After 27 months of RAF operations, No. 36 OTU was re-organized, and on 1 July 1944 became No. 8 OTU, RCAF. Certain refinements were introduced to the syllabus of training at this time, but basically the original RAF training schedule was adhered to until the school ceased training shortly after VE Day.

The station was once again re-

organized in July 1945 when it became the assembly point for the "Tiger Force", the RCAF's proposed contribution to the war in the Far East. This force was to be equipped with the *Lincoln*, at the time considered to be a very powerful long range aircraft in terms of bomb-carrying capacity. Tiger Force was disbanded soon after the explosion of the first atom bombs at Hiroshima and Nagasaki, and activities at RCAF Station Greenwood were greatly reduced.

For a short time after the war Greenwood operated on a minimum care and maintenance basis. However, in October 1947, Greenwood's post-war role became clear and a steady program of development, reorganization and operations has continued since that date. Greenwood's first post-war unit was No. 103 Rescue Unit, moving from Dartmouth, N.S., that month. Although search and rescue was (as is today) the primary role of No. 103, prior to the formation of the maritime squadrons the unit was frequently called upon to exercise with the Royal Canadian Navy.

In November 1949 No. 2 (Maritime) OTU formed at Greenwood. This unit was equipped with modified *Lancasters* and began training crews for the as yet unborn patrol squadrons. The first course began in December 1949 and three crews

G/C R. A. Gordon, DSO, DFC, Greenwood's Commanding Officer

graduated to become members of No. 405 (MP) Sqn. which formed the following April. Twelve months later, additional crews became the nucleus of the re-activated No. 404 (MP) Sqn.

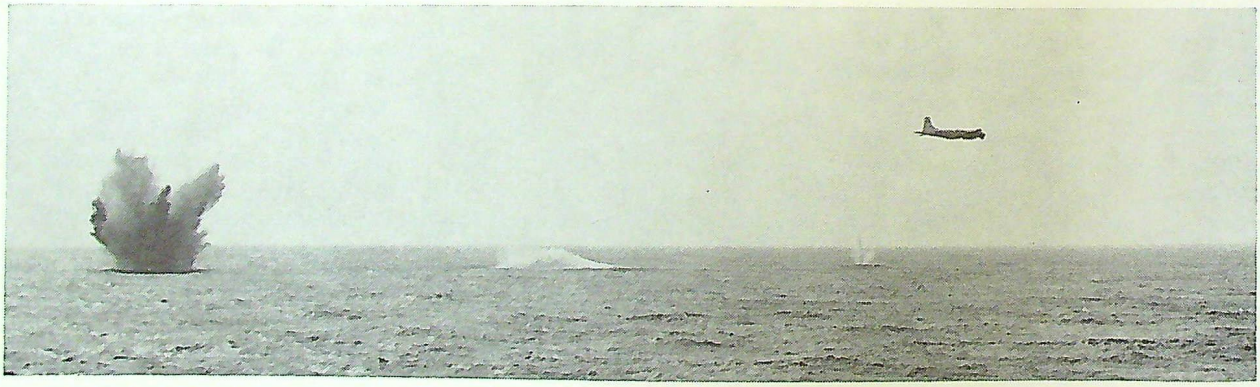
In the initial stages of post-war maritime operations the two squadrons were called upon to perform a variety of roles. One of the first tasks assigned No. 405 Sqn. was that of ice reconnaissance for the arctic resupply vessels. It was on one of these northern flights that Greenwood suffered its first post-war casualties when a crew and aircraft from No. 405 Sqn. were lost at Alert, Canada's most northerly settlement.

In addition to ice reconnaissance the squadrons carried out simulated bombing runs on air defence exercises, fighter affiliation with aircraft from Chatham, searches both simulated and actual, and training in their maritime reconnaissance role. Long range navigational and tactical exercises, training visits to Bermuda, the Azores, Gibraltar and Great Britain further built up the squadrons' capabilities.

As the station started to expand it became necessary, in November 1953, to move No. 2 OTU to RCAF Stn. Summerside, PEI, where today it continues to provide trained crews for the operational squadrons.

A new phase of operations began at Greenwood on 30 March 1955, when the first *Neptune* arrived to replace the *Lancaster*. This new aircraft gave the maritime patrol squadrons a much greater anti-submarine potential. With its more modern equipment and the various courses that its aircrews took to improve their efficiency, the *Neptune* did much to bolster the defences of the east coast. The new plane, however, was an interim aircraft employed on maritime operations until the arrival, in May 1958, of the long range *Argus*. Yet another phase had been

An *Argus* attacks a simulated submerged enemy.

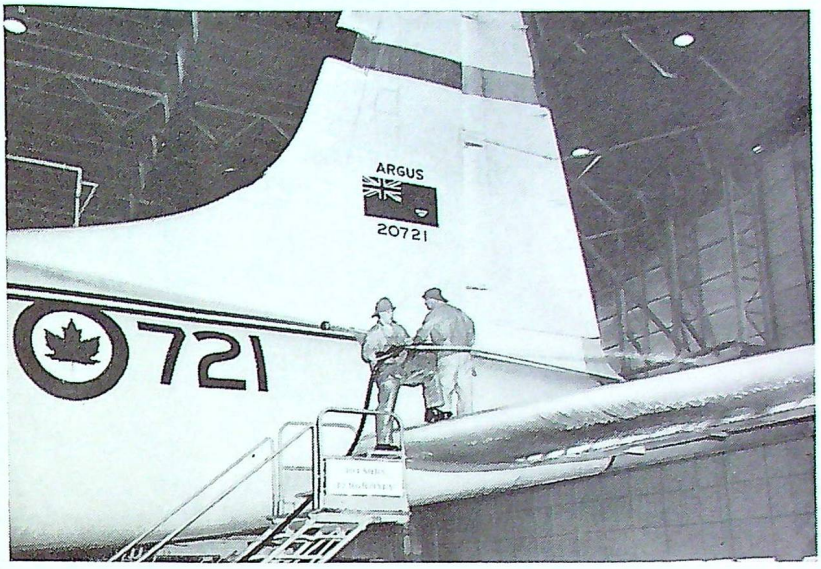


added to Greenwood's history.

The present commanding officer, G/C R. A. Gordon, DSO, DFC, has under his command more than 2,500 service and civilian personnel. Group Captain Gordon actually is responsible to two commanders. He is responsible to the Air Officer Commanding, Maritime Air Command, in the normal RCAF chain of command and is also responsible to the Maritime Commander Atlantic. The latter command has been set up to provide integrated operational control of forces assigned to the maritime defence of the Atlantic coast of Canada and in wartime would be responsible to Supreme Allied Commander Atlantic (SACLANT), under NATO agreements*.

The station is physically divided into two sections; the operational area comprising a weapons storage site, fuel compound and five new cantilever style hangars, including a wash-down hangar and an alert hangar; and the administration area which is basically the old wartime site. These two areas, together with the airfield itself and the PMQ area, cover a total of 2,400 acres.

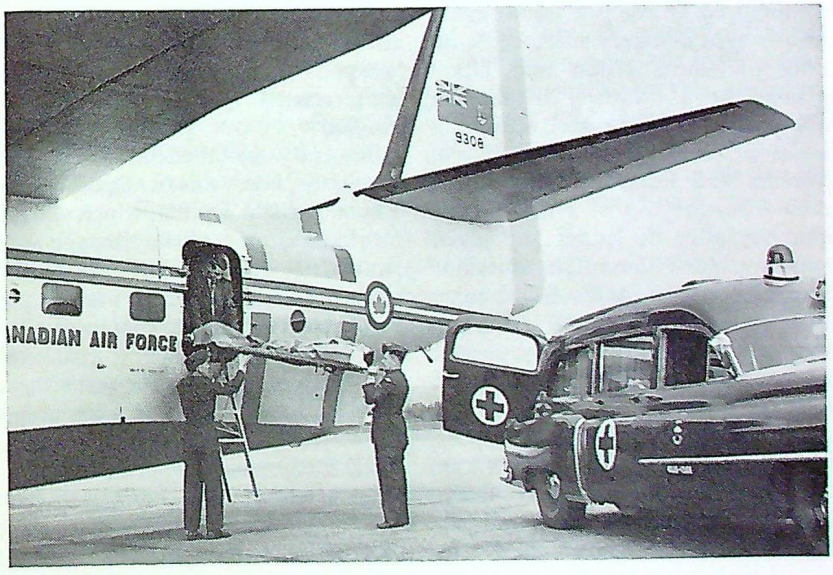
The major effort of the station is directed toward the operation of the two maritime patrol squadrons, Nos. 404 (Buffalo) and 405 (Eagle) Sqns. These two squadrons, along with No. 415 at Summerside, are charged with the responsibility of protecting eastern Canada and USA from possible attack by missile-firing submarines. To carry out this role the squadrons are equipped with *Argus* aircraft, recognized as the most formidable search, strike and kill weapon in maritime warfare. The operation continues around the clock, seven days a week. In addition to maintaining a 24-hour patrol in their area of responsibility, both squadrons annually participate in a number of NATO exercises, both from Greenwood and from bases in other NATO countries.



A salt-encrusted *Argus* is washed down in an anti-corrosion hangar.

The third flying establishment at Greenwood is No. 103 Rescue Unit which, as already mentioned, has been there since the station was reactivated in 1947. It is equipped with *Albatross*, *Otter*, *Dakota*, and *Expeditor* aircraft as well as helicopters. The unit, as part of the search and rescue organization in Canada, is responsible under ICAO agreements for providing search and rescue facilities for all international air traffic over the Atlantic regions of Canada

No. 103 Rescue Unit completes another mercy mission.



*THE ROUNDEL, Vol. 13, No. 8, Oct. 61.

Married Quarters at Greenwood.

Recreational facilities include swimming.

and the adjacent oceanic areas. In addition, these facilities are extended to all domestic air traffic, both military and civilian, as well as to the Canadian Coast Guard. In this latter role No. 103 RU is often called upon to render assistance to fishing vessels in distress.

The activities of the unit are co-ordinated by the rescue co-ordination centre at Halifax. Crews from No. 103 RU have also been called upon to carry out just about every known type of mercy mission. Dropping of whole blood and blood plasma to a critically ill seaman aboard a merchant vessel, searching isolated areas for lost children, hunters and fishermen, rescuing a man from the top of a tall factory chimney after its ladder had given way are but a few of the missions recorded in the unit's log books. Like most rescue units, No. 103 maintains a 24-hour standby, as well as para-rescue teams and ground search parties.

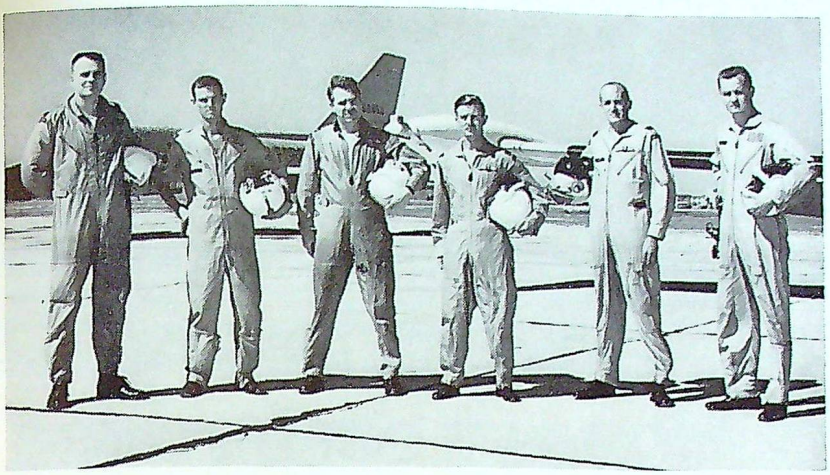
Realizing that although given the latest equipment and facilities, no force can operate efficiently unless its personnel are thoroughly trained, Maritime Air Command has established certain training units at Greenwood. The Argus Conversion Unit is responsible for converting to the *Argus* aircraft aircrew who have graduated from the OTU at Summerside, where they received their training on *Neptunes*. A four to six week course is necessary to fully understand the complexities of this "hundred-eyed monster". At No. 9 Field Technical Training Unit groundcrew receive special instruction in telecom, aero engine, airframe, electrical, instrument, and weapons peculiar to the *Argus*. This unit recently graduated its 2,000th student.

Recently installed is an *Argus* simulator, known as the Operational Flight Tactical Trainer, which allows an *Argus* aircrew to run through any simulated operational or tactical situation. The trainer, housed in an actual *Argus* fuselage, is complete in every detail and allows all members of a crew to perform the tasks they would normally carry out in actual flight.

Situated outside easy reach of any large urban centre, the station has developed its own recreational facilities from non-public funds. Because Greenwood is on a 24-hour operational basis, and with continuous flying sorties over the Atlantic being maintained by crews averaging 18 hours a patrol, most of these facilities are of a type intended to maintain the physical fitness and morale of groundcrew and aircrew alike.

The married quarters area is operated under much the same conditions as on any other RCAF station. Due to lack of accommodation in the local area, additional PMQs are being constructed. Within the PMQ area are two trailer courts containing privately-owned mobile homes with the owners paying for the various facilities provided. There are two schools, containing 47 classes, from primary to grade eight. Four more classrooms are to be added to the newer school, and another 20-room school will be completed by the fall.

The reputation of Station Greenwood as a modern, well-equipped, well-trained air base is far-reaching. It is through continuing effort and teamwork that the station continues to meet its various operational commitments and to maintain its position as a bulwark of defence on Canada's Atlantic seaboard.



The pilots and navigators of Operation Lookout Phase three (l. to r.): F/L G. Skinner, F/L J. Watson, F/L G. Brown, F/L J. Sorfleet, S/L R. West DFC, AFC, detachment commander, and F/L B. Hope.

MISSILE MONITORS

When Lt. Col. John Glenn of the US Marine Corps was launched into orbit, millions watched the launching through the medium of television. Of all the spectators few had a better view of the proceedings than four RCAF aircrew whose job it was to measure the infra-red emission from the Mercury capsule's Atlas booster.

Operation Lookout, which is a joint RCAF-Defence Research Board project carried out on behalf of the US Advanced Research Projects Agency, is now in its third phase. Phase One of this project took place on Ascension Island, a small volcanic area in the South Atlantic and lasted for a year (January 1960-61).* During that time specially instrumented CF-100 aircraft recorded the radiation from rocket nose cones re-entering the earth's atmosphere.

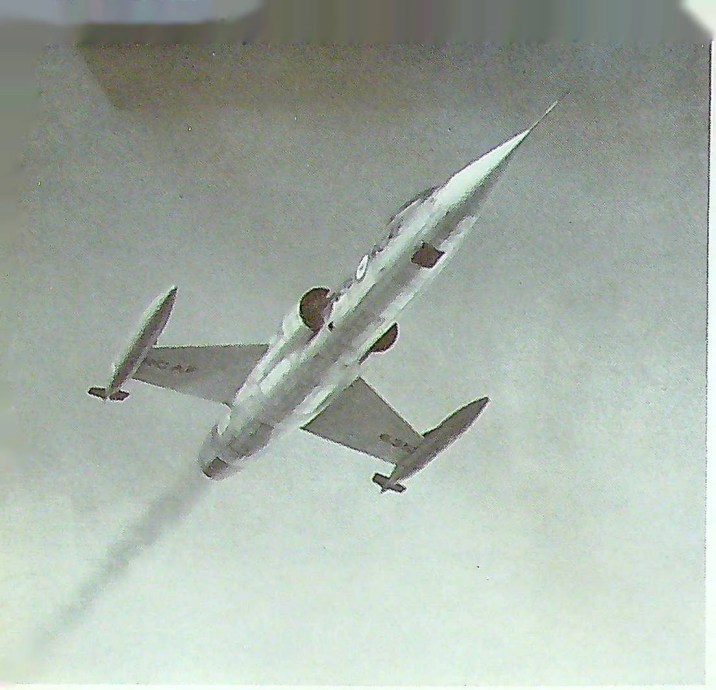
*ROUNDEL, Vol. 12, No. 3, Apr. 60 and Vol. 13, No. 2, Mar. 61.

At the request of American authorities, the Canadian team of airmen and scientists went to Patrick Air Force Base, Florida, in April 1961 to begin the second phase of Operation Lookout. This work, while still concerned with radiation measurements, involved the opposite end of rocket firings. At Ascension Island the RCAF fliers had been interested in rockets arriving after a journey through space. At Patrick they were interested in rocket departures. Phase Two of the project ended in June 1961 and Phase Three started last September.

At present there are 30 RCAF and seven DRB or DRB-sponsored personnel in the Canadian contingent at Patrick. Their job is to measure both the infra-red emissions from rockets and the sky background radiation during ballistic missile launchings from Cape Canaveral. In order to accomplish this task, the CF-100s carry wing pods housing instruments designed by the Canadian Armament Research and Development Establishment. The CF-100s operate in pairs. One aircraft obtains a reading from the exhaust of the departing missile. The other CF-100 measures the sun's radiation to determine how much is being absorbed by the atmosphere. This reading gives the scientists a correction factor to apply to the reading from the rocket's exhaust.

The CF-100s generally fly at 40,000 feet and may be anywhere from a few miles past the launching pads to several hundred miles away. When they are required to operate down range the aircraft fly out of Eluthera, Mayaguana or San Salvador in the Grand Bahama island chain. Because rockets are temperamental, causing frequent "holds" in the countdown process, the CF-100 crews never know how long they will be airborne when they take-off on data collecting missions. The crews may have to orbit for over an hour before a missile finally departs the launching pad. But the actual infra-red measuring process lasts only a few minutes, then the rockets are gone into outer space. Since they have only moments to obtain their vital readings, the CF-100s have to be navigated and flown with great precision.

The CF-100 aircraft are, literally, in the middle of things. Below them are USAF C-119 aircraft and above them are U-2 aircraft, all doing the same work. Together with their American colleagues, the RCAF-DRB team in their missile monitoring role are making a valuable contribution towards the day when a defence against inter-continental ballistic missiles becomes a reality.



STARFIGHTER CONVERSION AT COLD LAKE

Photostory by Flight Lieutenant K. Coleman.

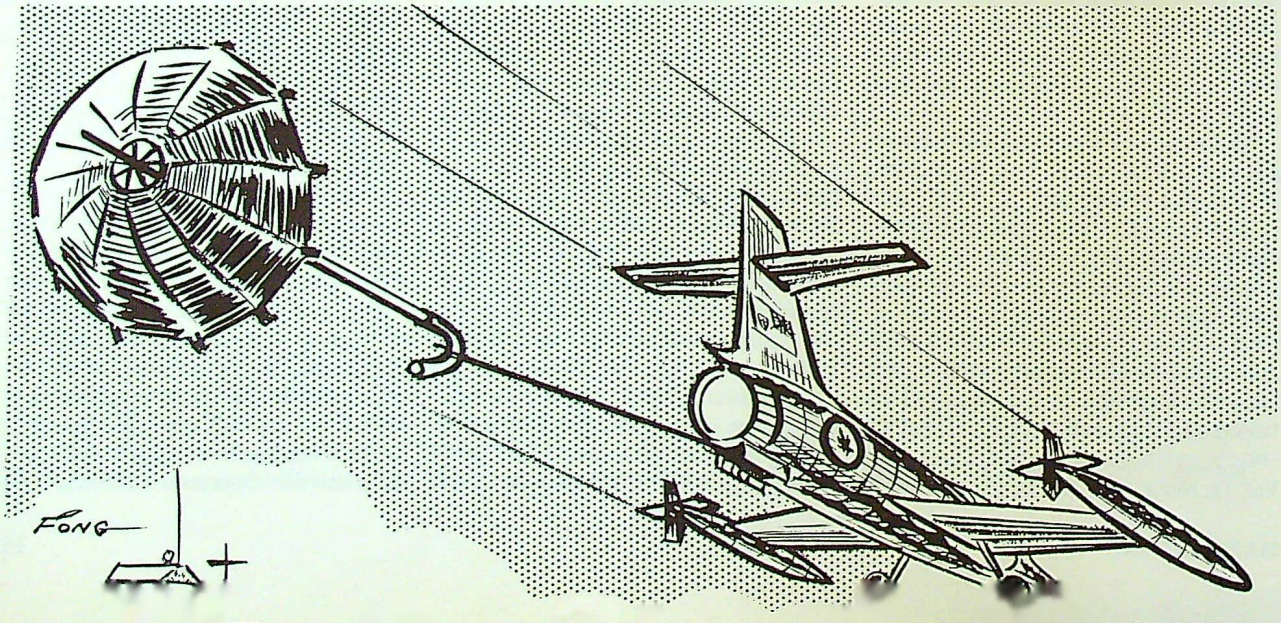
NEW wings are silhouetting the sky in the vicinity of RCAF Station Cold Lake as No. 6 Strike/Reconnaissance Operational Training Unit gets underway.

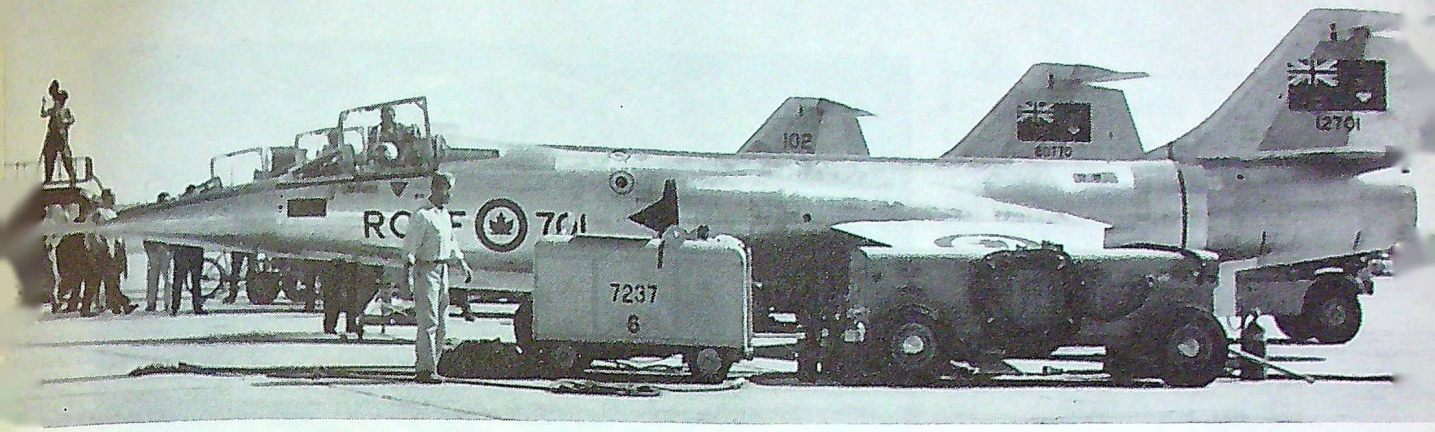
This OTU is in the process of converting RCAF pilots to Mach. two *Starfighter* aircraft. The first eight courses to go through the unit are training at an accelerated pace but the course will normally take 27 weeks. At present the students are all veteran jet pilots but, from the fifth course on, pipeline pilots will be sent to Cold Lake for training. The OTU's aircraft consist of both CF-104D dual-seaters and the single-place model being produced by Canadair Ltd. in Montreal.

In keeping with the role to be played by RCAF's *Starfighters* in Europe, the armament range at Cold Lake has been modified. During the era of CF-100 aircraft radops were towed behind T-33s as aerial targets. With the advent of CF-104s and the strike/reconnaissance role, ground targets have been set up in the range area.

The other half of the *Starfighter* training program is being carried out by No. 10 Field Technical Training Unit. This organization is conducting 15 different types of courses, ranging from three weeks for munitions and weapons technicians to 14 weeks for armament systems superintendents.

At present all the tradesmen undergoing instruction at No. 10 FTTU are experienced technicians. Eventually airmen will be accepted directly from the basic trade school at Camp Borden.





The CF-104 demonstrator serves as a training aid for Corporal W. N. Lamond, in black coat, at No. 10 FTTU.

The intricacies of a CF-104's air conditioning and pressurization system are explained to a class by Corporal J. Essex.

MAN'S ADVANCE INTO SPACE

Part III:

The Potential Uses of Space

By Dr. J. C. ARNELL,
Scientific Advisor to the Chief of the Air Staff

ACTIVITIES in space are still so new that it is extremely difficult to foresee what the potential uses of space, even within the next decade, will be. It was only four and a half years ago that the first earth satellite was put into orbit; the achievements from more than 100 attempted launchings since then almost stagger the imagination. In addition, the newness of space operations means that we have no background to act as a guide, to point the directions which future developments are likely to take.

This situation has an analogy in the field of radio. If anybody had attempted, five or ten years after Marconi's trans-Atlantic experiment, to predict the future uses of radio waves, they could not have conceived the developments which have taken place in the last half century. It is almost certain that the same situation will apply to space. As radio waves were found to provide far more than the basis for wireless communication and radar, so space activities will progress far beyond the first generation satellites and space probes of the present time. In the ultimate, perhaps mankind will develop the ability, forecast by Franz Werfel in his book "Star of the Unborn", to travel through space by a thought process and thus eliminate the need of space ships and the limitations imposed by the speed of light.

Every day, as results are relayed to earth from the research satellites, answers are obtained to some of the many unknowns. From these will gradually develop a useful understanding of the upper regions of the earth's environment, pointing the way towards the real potential of space. Not the least of these problems is the biological one. This was examined in the second article of this series*, but must again be noted here. Radiation in the fringes of near space which is dangerous to life is

*THE ROUNDEL, Vol. 14, No. 3, Apr. 62.

known to exist. This may well interfere with manned operations too far away from the earth's atmosphere. Much more data must be collected before manned explorations into the solar system can be contemplated. After all, the manned satellites which have been launched have all been at altitudes of about 100 miles. This is a region inside the van Allan radiation belts where the first real difficulties may be anticipated.

Although too little is known about space to be able to look far into the future, there are a number of obvious uses for satellites. The Americans have chosen a few areas of potential use and are vigorously developing prototype satellites to test the value of the concepts. The major areas of interest are:

- Navigation aids
- Meteorological and climatological observations
- Military reconnaissance
- Communication relays
- Defensive systems directed mainly against ballistic missiles.

With these areas of interest come future problems of satellite intercept or rendezvous which have both military and peaceful implications. Finally, there is the matter of preparing man for space activities, which have been discussed previously.

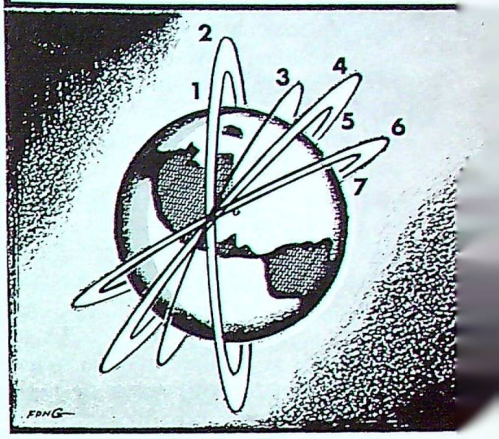
The above areas divide naturally into two distinct types. In one, a very small number of orbiting satellites will provide all the information required by any nation, group of nations or the world at large. The other type requires a number of satellites for an effective system. Examples of the first type are satellites for meteorological observation and other forms of reconnaissance, where periodic coverage is sufficient. Typical of the second type is a ballistic missile warning system where every point on the globe, from which a missile might be launched, must be kept under constant surveillance.

The first and least complicated of these experimental systems appears to be the navigation satellite. It is planned that such a satellite will carry a number of transmitters operating on different frequencies. By monitoring one or more of these transmissions, during a satellite's pass overhead and with the previous knowledge of the precise orbit of the satellite, it will be possible to pinpoint the position of the monitor. The experimental work resulting from the five successful TRANSIT satellites, out of seven attempted launchings, has proven the feasibility of this system for ships. However, its value to fast-moving vehicles, such as aircraft, is still open to question. Because of a ship's speed a navigation check every 12 to 24 hours is quite adequate for most operations. In the case of jet aircraft, such a check must be made every 15 to 30 minutes to be useful. It is clear that two navigation satellites in polar orbits 90 degrees out of phase would provide adequate world-wide coverage for shipping. A minimum of 15 to 20 such satellites, equally spaced in polar orbits, would be essential for air navigation. In addition, the considerable weight of data processing equipment which must be carried in the monitoring vehicle might be too great for aircraft.

The TIROS meteorological satellites are of particular interest at the present time. These satellites are equipped with various combinations of narrow-angle and wide-angle cameras and store pictures of cloud cover over the earth for transmission, via television to a readout station on command. Four of these satellites have been launched to date and all were successfully placed in orbits at altitudes of more than 400 nautical miles. TIROS III and TIROS IV are transmitting pictures routinely. When TIROS II stopped transmitting near the end of November 1961 after a year in orbit, over 30,000 pictures had been received. As these pictures are taken on a continuing basis to provide some overlap for a mosaic, this represents a major data reduction problem. To exploit this technique to the fullest, the U.S. invited more than 100 nations to send one or two meteorologists each to a workshop held in Washington last November. The purpose of the workshop was to disseminate information both on the satellite system itself and the methods of deriving useful weather information from the transmitted data.

Canada is just beginning to take an active part in this program. The TIROS laboratory revealed that pictures taken with a wide-angle camera did not show sufficient detail to be able to differentiate between certain types of cloud and ice-covered water. This is obviously a major

U.S. satellites for studying uses of *SPACE*



SATELLITES IN ORBIT

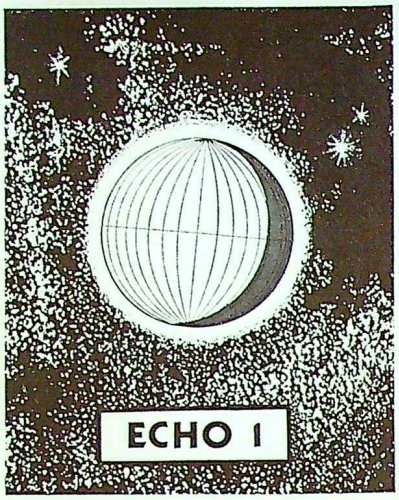
Orbit	*Satellite*
1	Midas 2
2	Samos 1
3	Transit 2
4	Echo 1
5	Tiros 4
	Transit 1
6	Courier 1
	Transit 1
7	Midas 1
	Score 1
	Transit 1

problem in northern latitudes in winter. Because of our knowledge of ice, owing to our geographical location, last year we were asked to analyze both narrow- and wide-angle pictures taken by TIROS I and TIROS II as they passed down the St. Lawrence River and across the Gulf regions. This study is being furthered by a comprehensive program of aerial coverage of the Gulf of St. Lawrence on a joint basis with the Americans. Within hours of the launching of TIROS IV on 8 February 1962, aircraft of the US Navy, RCAF and on charter to the Department of Transport were providing photographic, visual and radar coverage of the Gulf of St. Lawrence area concurrently with a satellite crossing. Daily coverage was provided for five days until the satellite passed out of range and was re-instituted in April when the satellite again viewed the region.*

Although the problem of differentiating between cloud and ice sparked this study, it is now more an investigation of the use of a reconnaissance satellite to study the ice situation in navigable waters. There seems little doubt that it will be found that ice observation by satellite is feasible. The resulting economic benefits to a shipping area, such as the Gulf of St. Lawrence, are immense if it is possible to provide year-round shipping operations through the use of icebreakers aided by satellite ice maps.

A military satellite system quite similar to TIROS is the one for reconnaissance. Because of the sensitive nature of this subject, little information is available on the SAMOS development program. Three attempts were made to launch experimental satellites and of these only the second one was successful. In its experimental configuration SAMOS is much larger and heavier than TIROS, having an orbiting weight of 4100 lbs. compared to the latter's 270 lbs.

*THE ROUNDEL, Vol. 14, No. 3, Apr. 62.



This is understandable as much greater picture detail is required for reconnaissance than for general configuration of cloud patterns.

Probably communications satellites will be the first to be put into commercial operation. The feasibility of communications relay, via satellites, has been established by a number of experiments conducted by the Americans in the past several years. These satellites fall into two distinct classes, those which are simple passive reflectors of radio waves and those which carry active repeating equipment. Of the first type, perhaps the simplest design is that of ECHO I. This satellite consisted of a very thin mylar sphere coated with aluminum which, when inflated, had a diameter of approximately 100 feet. The sphere carried two small solar-powered beacons for tracking purposes. Studies have shown that this form of reflecting satellite is rather inefficient and to ensure the greatest return of signal, it seems certain that any operational passive communications satellite will have to carry large specially-designed reflecting antennae. Some special applications for passive satellites at relatively low altitudes will undoubtedly be found.

A different approach to passive reflection was Project West Ford. Here it was planned to release millions of small dipoles of wire from an orbiting package. It was expected that these would spread out to form a reflecting belt around the earth. On 21 October 1961 this was attempted as part of the launching of MIDAS IV. The satellite was successfully placed in orbit, but no trace of the West Ford dipoles was found. This failure was a great relief to the international scientific community which believed that they would interfere with such research as radio astronomy, although calculations had shown otherwise.

The major effort in the field of communication relay is on the active repeater-type of satellite. In the basic form of this system, a compressed signal is sent to the satellite as it passes over a transmitting station. This is stored until the satellite passes over a readout station at which time the message is automatically retransmitted in compressed form. While such a satellite produces a very marked reduction in the amount and scale of the ground equipment, this advantage is offset by hazards of placing continuously working electronic equipment in orbit. The success or failure of the system will depend on the reliability of this equipment.

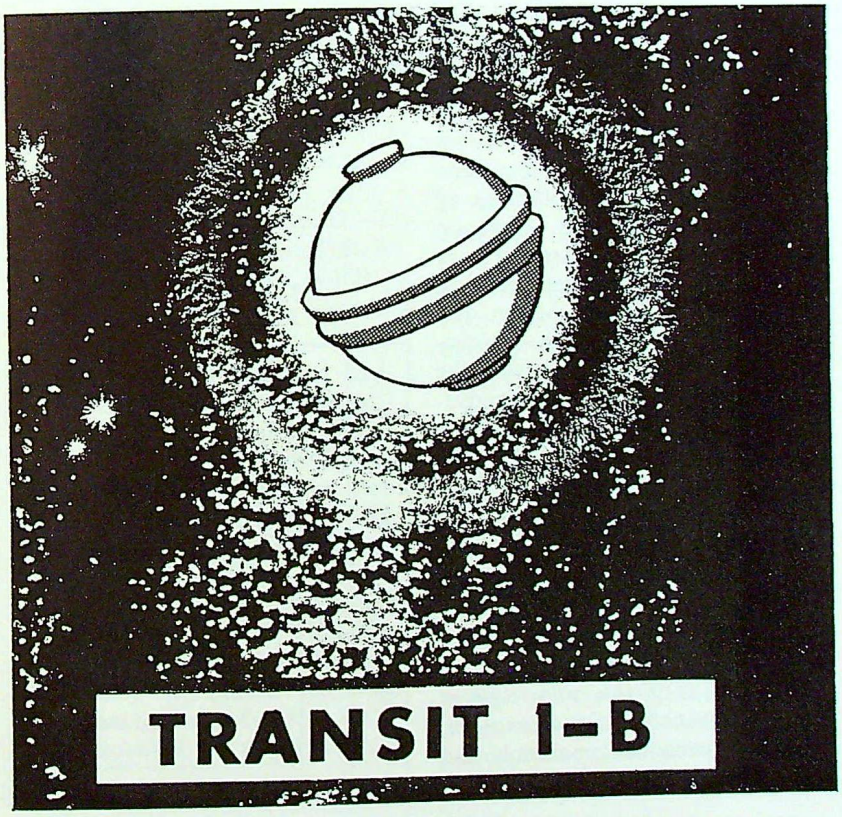
In order to get this development underway, the National Aeronautical and Space Administration (NASA) held a competition in which industrial concerns were invited to make proposals for active communications satellite systems. The winner of a contract was the Radio Corporation of America with its Project RELAY. The satellite, weighing about 100 lbs., will be launched into an elliptical orbit at 900 to 3000 miles altitude with a 48 degree inclination to the equator. It will be powered by solar cells and will have duplicate transponders set to receive or transmit on 1725 and 4170 mcs. respectively. The first launch attempt is expected this year. Britain and France

will co-operate in this program by operating some of the ground stations.

The American Telephone and Telegraph Company was one of the six losers in the competition and refused to accept defeat. It has decided to go ahead at its own expense and build at least two satellites. These will be quite similar to those of RELAY. This decision to proceed placed NASA in a slightly embarrassing position as it found itself more or less obligated to participate by providing the launching facilities. This will be done in a type of mutual aid arrangement.

Another type of active communication satellite is that which moves in a synchronous equatorial orbit. This is a circular orbit at an altitude of 22,300 miles where the speed of the satellite exactly balances the speed of rotation of the earth with the result that the satellite appears to be stationary overhead. In this system there is no need for storing the signal between receipt and transmission. However, the total signal path is of such length that a finite time is required for the passage of the signal. This makes it doubtful that the system will be used for two-way telephone conversations, but it is admirably suited to be a submarine cable replacement for such one-way traffic as trans-Atlantic television signals. Satellites to test the feasibility of this system are due to be launched late this year.

Because of the intense competitive interest among the various electronics and communications firms, President J. F. Kennedy issued a policy statement on communications satellites. This statement recognizes the inherent rights of private enterprise, but tempers this with the need for government control of launching facilities. The international aspects of such an operational system are also recognized and foreign participation is called for.* This matter is also the subject of a bill before the present session of the U.S. Congress. This bill is the first attempt to formulate the regulations covering the development and use of space communications systems within the U.S.



Probably the greatest problem facing the military today is that of finding an adequate defence against the ballistic missile. The first step in any such defence is that of receiving the warning of a launch. The first generation of ballistic missile early warning has taken the form of the large radars which are in operation at Thule, Greenland and Clear, Alaska, with a third under construction at Fylingdales Moor in northeastern England. These radars are so located that their fans stretch out over the Soviet Union and will detect a missile when it rises above the radar horizon. With their range of over 2000 miles each, these radars' horizons are hundreds of miles above the earth. As a result, a significant amount of the total time of flight occurs before initial detection. The MIDAS satellite system is an attempt to detect a ballistic missile during the actual launch stage and thus provide an additional five to ten minutes warning time. It makes use of infrared sensors which will detect the heat produced by the exhaust gases of the burning rocket motor. Several experimental MIDAS satellites have been launched and one report has been issued that MIDAS IV detected a TITAN missile during its burning stage on launching from the Atlantic Missile Range from Cape Canaveral a few months ago.

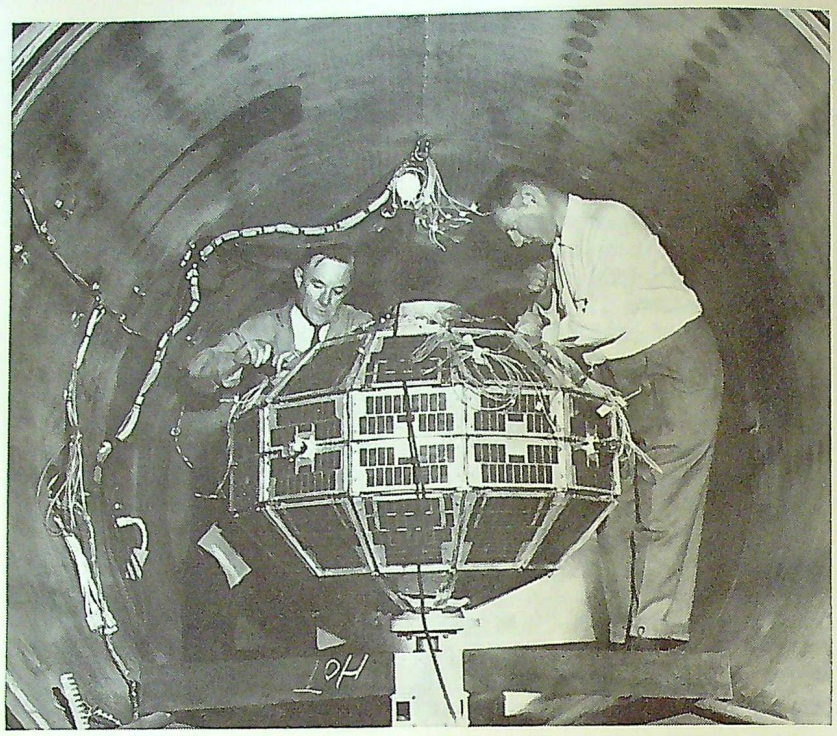
Tentative proposals have been made in recent years for an active

*Following the successful U. S. manned earth orbit in February, U. S. and Soviet representatives have held meetings to investigate areas of possible space exploration co-operation.

anti-ballistic missile defence system employing satellite vehicles, each containing a number of interceptors. Each satellite would contain an infra-red device designed to detect a rocket engine rising above the atmosphere and to make a rough estimate of the missile's future path. This information would be used to lock an infra-red homing device contained in an interceptor onto the target missile and launch the interceptor at it. The interception would be made by homing on the target prior to burnout and it has been stated that a kill could be obtained with a simple non-nuclear warhead. This type of proposal has been studied in detail and does not appear to be feasible, primarily because of the very short time available for detection, the launch of the interceptor and the homing flight.

Paralleling these latter proposals and to meet a somewhat different problem, have been the studies on satellite rendezvous or intercept. This problem is somewhat simpler than the previous one because there is sufficient time for accurate tracking of the satellite by ground sensors to predict precisely its track for the proposed interception. Nevertheless a great many problems exist, particularly if the interceptors are to be used on an "as required" basis, rather than at the times when a satellite passes within range of a given intercept complex. Satellite intercept will be a requirement as long as there is no system of international inspection of all launching facilities. There are a number of military activities such as reconnaissance which might be undesirable from one country's point of view and so lead it to take active measures to destroy the unwanted satellite. Satellite rendezvous will be necessary whenever a space operation is of such magnitude that multiple launchings are required.

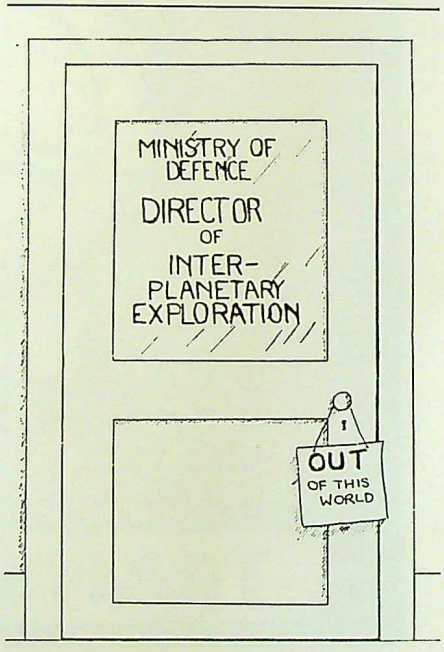
For the immediate future, much of the space activity will be research.



The Defence Research Board's Topside Sounder is placed in the environmental chamber by two DRB technicians. If all goes well, Canada will be the third nation to have a satellite in orbit.

However, an ever-increasing amount will be directed towards some end use, rather than the collection of fundamental knowledge. High on the list of future projects are such items as an orbiting astronomical observatory and a space station. The first of these is to make observations of the universe, free from the aberrations produced by the movements of the earth's atmosphere; the second is to provide the means of placing in orbit vehicles larger than could be launched in one piece. The various components would be launched separately and assembled in space by using rendezvous techniques. Such a space station might serve as a base from which manned expeditions into the solar system would be launched. Space exploration is a foregone conclusion and only the timing is in doubt.

Courtesy RAF Association Annual



A CANADIAN JENNY COMES HOME

By K. M. MOLSON,
Curator, National Aviation Museum

Mr. Edward Faulkner and the JN-4 which he stored in his barn for over 30 years

THE search for items of Canadian aviation historical significance is often long and difficult, involving the pursuit of many non-productive leads to procure one suitable specimen. Such is the background story of the National Aviation Museum's latest prize acquisition: an authentic Canadian *Canuck** JN-4 aircraft, popularly known as a *Jenny*.

In this case, the lead that proved successful came from a gentleman in Connecticut who has an interest in old aircraft and who is currently restoring a JN-4D of his own. He suggested we contact Edward Faulkner of Honeoye Falls, N.Y. It should be mentioned that quite a number of American-built JN-4Ds have survived in the United States, in museums and in the hands of private collectors. The Canadian JN-4, however, is a rare bird and until our search was completed the only known specimens were held by Paul Mantz in California and the Pioneer Museum in Wetaskiwin, Alta.

The National Aviation Museum is continuing to investigate the possibility of acquiring other aircraft of interest to Canadians. Any help that can be provided by ROUNDEL readers would be greatly appreciated. Located in temporary quarters at Ottawa's International Airport since October 1960, the museum is expected to become eventually a branch of the National Science Museum, soon to be formed on a permanent basis.

Exploratory correspondence having proved unsatisfactory, we visited Honeoye Falls, just south of Rochester, last September and found that Mr. Faulkner's aircraft was indeed a Canadian JN-4. It was in excellent condition, having been stored in his barn for over 30 years — due to the economic conditions of the time and not because of any accident.

Another trip was made in early November and at this time Mr. Faulkner agreed to sell us his aircraft. In due course, when all the necessary papers and formalities had been gone through, it was arranged that we would pack the aircraft and bring it to Ottawa early in February.

It had been agreed that we would take the aircraft down from the barn and pack it ourselves and for this purpose two of the museum staff went to Honeoye Falls. Sometime during the past 30 years the barn in which the JN-4 was located had been moved, with the aircraft inside it, across the road. In the moving the barn had been turned around and the original large rolling doors had been boarded up, replaced by a smaller door on the opposite side. This meant that one set of upper and lower wings, which had been hoisted to the rafters as a complete assembly with flying wires and inter-plane struts still in place, could no longer be brought down in that condition. Thus they had to be taken apart about 15 or 20 feet in the air, — a difficult task. Finally, the wings were crated so that they would travel in the upright position and the whole aircraft loaded in pieces into a large moving van.

Present plans for this aircraft are to show it in the stripped condition, much in the way that it arrived, during the Air Force Day celebrations at Rockcliffe on 9 June. Following this it is intended to re-condition and re-cover the machine for display at the National Aviation Museum.

We feel very fortunate at having acquired this specimen for the Canadian national aviation collection as the JN-4 may be said to be the one which established aviation in most of its branches in Canada. It was this aircraft that provided the training for pilots in Canada during World War I. In June 1918 Capt. Brian Peck flew Canada's first air mail from Montreal to Toronto in a JN-4.

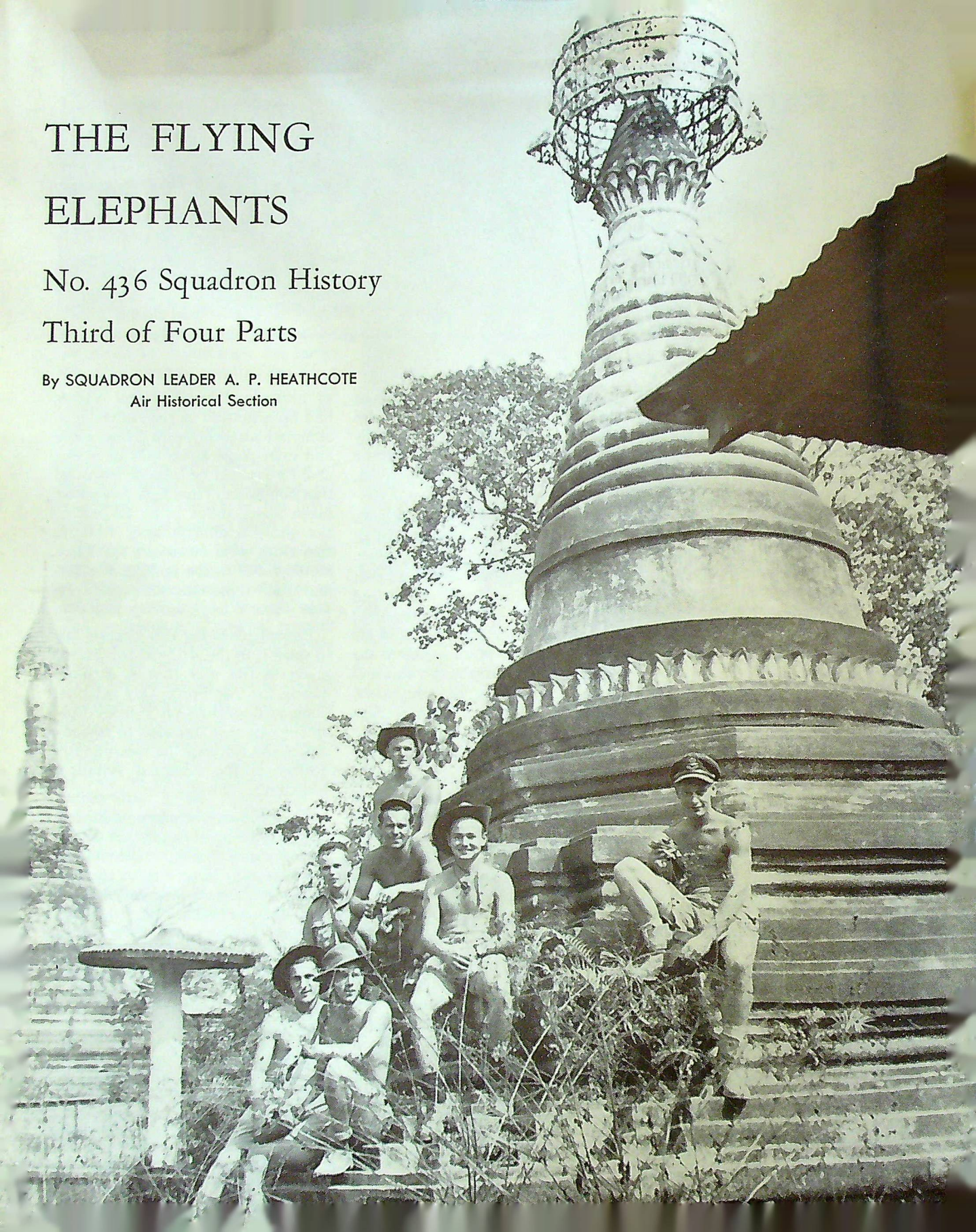
While those are the highlights of its career, it in addition was the mainstay of the barnstormers in Canada in the years which followed World War I.

THE FLYING ELEPHANTS

No. 436 Squadron History

Third of Four Parts

By SQUADRON LEADER A. P. HEATHCOTE
Air Historical Section



THE monsoon season in Burma continued unabated during June 1945. Hardly a day passed without at least a temporary washout of flying or a swamping of Kyaukpyu airport, causing partial or wholesale cancellations, recalls and diversions for No. 436 Sqn's *Dakotas*.

The violence of a monsoon storm is apparent in F/L R. W. Cornell's description of an experience in one:

". . . I was brushing through the cloud-tops, alternating between clear and instrument flying. I had entered what appeared to be a small layer of cloud when it began to rain. After . . . about a minute three sudden bursts of extremely heavy rain, possibly hail, hit the aircraft, giving the impression that it would break the windscreen, and severe bumpiness started. I immediately put the aircraft into a turn to starboard, intending to turn 180 degrees, but had completed only half of it when the force of the (CB) cloud hit . . .

My recollection of what happened at that instant is rather hazy. Both gyro horizons toppled and I had to rely on needle, ball and airspeed and a directional gyro which very fortunately remained working. The next thing I knew, we were in a terrific dive. The control column was absolutely frozen, so . . . I had to rely entirely on elevator trim to . . . pull out. The airspeed indicator was reading 300 m.p.h., the vertical speed was at 6,000 feet-per-minute down, and the altimeter was unwinding at a frightful rate. I can't say how much altitude I lost, as my one idea was to pull out of the dive before the aircraft went into the ground. It finally did pull out, and in a fraction of a second the vertical speed read 6,000 feet-per-minute up. I frantically applied more "Down" trim and forward pressure on the control column, but (by then) the aircraft was on its back and I was hanging on my safety belt. I applied full aileron and kicked the rudder and . . . the aircraft must have half-rolled and ended up in another dive. This time I was able to level out, and I suddenly came into a clearing . . ."

Effective 15 June the normal payload per aircraft was reduced from 6,000 to 5,500 pounds to allow for more fuel and an increased safety-margin for bad-weather flying. The Elephants' hides may have been dampened, but not so their enthusiasm, which is reflected in the following extract from their diary, dated 22 June:

". . . 'A'-Flight started off today with 17 aircraft, determined to get a few more sorties than they've had in the past week. However, the weather once again stepped in, and, after the second wave, the base strip became more suitable for submarines, take-offs and landings being prohibited until late in the afternoon. Nevertheless some of the still-airborne crews landed at Akyab and did a lift from there . . . to Meiktila, Kinmagon, Mingaladon, and Myingyan."

Their zeal was not always matched by their co-workers'. On 27 June, for example, 15 crews were airborne at 0600 hours, after waiting for the green light from Watchbird.* All flew to Kinmagon, there to find they were the only people yet awake! Consequently they had to unload the aircraft themselves. They returned to base disgruntled at having lost precious time on the turn-around.

The hazards, hardships and problems born of the monsoon and its rain failed to prevent the Elephants from carrying more payload in June 1945 (3954 tons) than in any other wartime month. This figure was realized by a squadron operating from a base acknowledged to be one of the hardest-hit by the monsoons and repeatedly inactivated because of flooded runways; and achieved with a perfect safety record, matched by no other squadron operating in Burma. It gave special meaning to the alias "Canucks Unlimited",** assumed by the unit some months before.

Undoubtedly a big contributing factor was Watchbird, but also important were other preparations for bad-weather aviation. In the fair-weather days of January a special program of instrument-flying had been initiated. All aircraft were equipped with blind-flying hoods made by the parachute section, and pilots were ordered to fly under the hood on all homeward flights when west of the Chindwin or Irrawaddy Rivers.* Practice let-down procedures were formulated, every pilot being required to perform one blind let-down per flying day. Navigators were to use "Rebecca-Eureka" (the only homing-aid then available to them) even in perfect weather, and wireless operators were instructed to practice HF homings daily. As a further check, written examinations were sprung on all aircrew to see what they knew and did not know about operating procedures; anyone below standard wrote a supplemental. An extra load of responsibility fell on the instrument section, charged with maintaining the instruments and gyros. Periodically, rather than relying on replacements through normal channels, instrument mechanics journeyed 950 miles to Cawnpore to service the instruments themselves. Finally, Kyaukpyu tower's obsolete radio equipment was replaced by a VHF transmitter from one of the *Dakotas*; thereby range was increased to over 100 miles and another homing-facility was provided.

The stocking of rear airfields continued as the main project in July, the most frequent points of call being Meiktila, Toungoo and Myingyan. There were also a number of paradrops to the 4th Corps near the Sittang River north-east of Pegu. On the 5th, near one of the DZs in the latter area, at least one *Dakota* was an intended target for enemy anti-aircraft fire and an unintended target for our own artillery fire. When some "friendly" shells began coming too close for comfort, the

Sightseeing among the pagodas are: front row (l. to r.): FS E. M. Waring and Cpl. D. H. Miller, middle row (l. to r.): LAC D. L. McIntosh, LAC W. F. Minnie, LAC A. E. Nunns and F/O H. H. Perry. At top of photograph: AC K. Bennett.

*Airborne weather surveillance.

**A popular name acquired early in the squadron's history and painted on its aircraft.

*This included an area of moderate-to-severe turbulence over 6000-foot mountains.

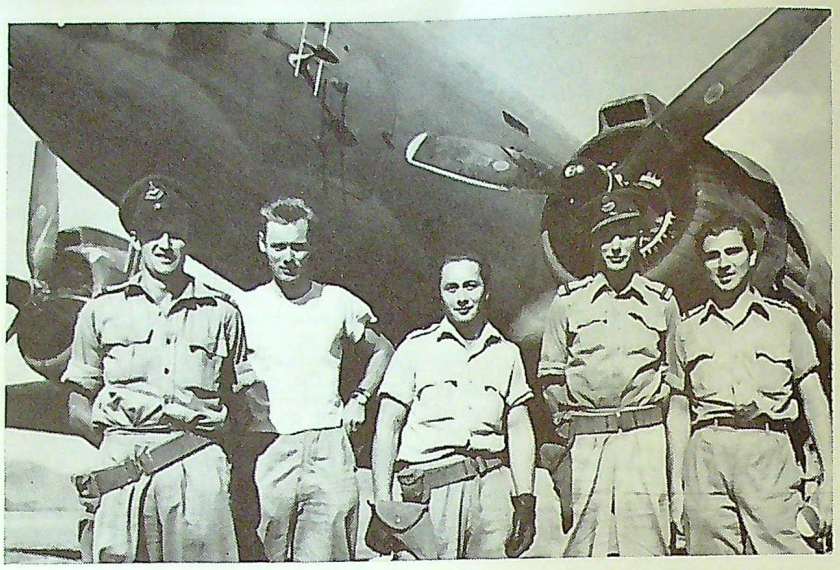
skipper quitted the scene until the fire subsided. The next day the drop was repeated, this time to the tune of *Thunderbolts* beating up adjacent Jap positions. It was exciting to do a para-drop while sneaking a look at their strafing stint and listen to their pilot's patter on VHF.

One of the above drops had an unfavourable aftermath. The Japanese managed a break-through to one of the DZs and commandeered the supplies. Another drop was requested and carried out. This time, despite some small-arms fire from a point near the DZ, the operation went as planned; those on the receiving end of the drop were unquestionably Gurkhas.

That day an aircraft making the unit's 7,559th operational sortie, a routine run to Toungoo, did not return. The Elephants searched for six days, mostly over the Shan Hills in weather that made aerial spotting extremely difficult. They found the wreckage on 13 July* about 20 miles north-east of Toungoo. The crew members, all dead, were F/L A. R. W. Harrison, F/O W. J. Friesen, F/O W. C. Campbell and FS S. H. L. Smith. The reported absence of enemy air or ground activity around Toungoo or along the route thereto gives rise to a strong presumption that the crew were victims of the monsoon. They were the squadron's only casualties directly attributable to wartime operations.

The monsoon persisted, but operations had to go on. An order from Group had stipulated a daily airlift of 90 long tons per squadron to keep the Army well stocked. The order was qualified by the words, "Air Command South-East Asia appreciates, however, that the monsoon may not permit this target to be achieved every day."

*Unbeknown to them, it had been discovered by a ground search party three days before.



Some elephants and a Dakota (l. to r.): F/O W. H. Nichols, FS J. D. Evans, FS C. S. Davis, F/O M. E. Falloon and F/O H. A. Berry.

In spite of itself the monsoon did permit. The Elephants' daily output during the remaining period of their all-out effort was some 22 percent above quota, thanks partly to an early-July moderation in the weather. It should, however, be noted that during the monsoon's six-week peak there were 22 days on which operations were appreciably curtailed by impossible conditions aloft or flooded airfields. In other words, on more than every second day the airlift was substantially reduced by condensation in some form or other.

The relatively favourable period in July enabled the squadron to forge ahead with its principal commitment, the stocking of rear airfields. By mid-month substantial inroads were made into unfulfilled commitments, RAMO* happily proclaiming that it was only 50 sorties behind on its Army demands. Though pleased with their progress, the more senior Elephants had good cause to be annoyed at the incredulous rookie aircrew who were brash enough to inquire, "What's all this talk about monsoon-flying?"

By late July 1945, after seven months of intensive operations, one Elephant crew or another was being pronounced tour-expired almost daily. Among those screened from further operations was the squadron commander, who departed for the UK on the 29th. Early in 1946 there was to appear in the LONDON GAZETTE promulgation of the only Distinguished Service Order awarded a member of 436. Its recipient was W/C Ralph Gordon, DFC, referred to in the accompanying citation as "an exceptional leader who organized, and often personally operated aloft, an airborne weather-observation system which proved of the greatest assistance to the transport services in Burma." He had earned his DFC in October 1945 for his many supply flights across the Arakan's mountains and jungles into Central Burma.

*Rear Airfield Maintenance Organization, an Army body responsible for supplying the daily loads and scheduling the priorities and delivery points for each day's operations.

Gordon's successor was S/L Dick Denison, who was also to put up a DFC late in the year. He was in turn replaced as flight commander by F/L F. A. (Ab) Aikman,* DFC, and Bar, in the diarist's parlance "a reformed fighter pilot".

Group operational statistics for July placed the Elephants again well to the fore among Burma's transport squadrons. They led in hours flown (5000), tonnage delivered (3708), and percentage of completed sorties (98.6).

In the vital department of flying safety they topped their Group. Contributing along with Watchbird to their safety record was Kyaukpyu's "approach control system", adopted in mid-July. Before then, with the airfield closed in by low ceilings much of the time, several 436 aircraft and other units could be in the circuit simultaneously without knowing one another's whereabouts. In the interests of safety, and with Wing's blessing, a liaison transmitter and receiver operating on a special approach-control frequency was installed in the control tower. An aircraft captain entering the zone within a 25-mile radius of the airfield would call the tower on this frequency, giving his distance from the field and his ETA** over the beacon. Flying Control would then either clear his aircraft to the field, or, if another aircraft had the same ETA, give holding instructions and a new approach time. Thereby the danger of mid-air collision was virtually obviated for both inbound and outbound aircraft. Credit for originating and organizing the system was due S/L F. E. W. Smith, AFC, whose flying on supply and Watchbird operations was to earn him a DFC.

*Aikman flew number two to W/C "Paddy" Finucane on the latter's last flight and saw his flak-damaged *Spitfire* crash and sink in the English Channel.

**Estimated time of arrival.

Although the natural enemy, the monsoon, was becoming relatively tame, the fanatical human enemy was still full of fight. He was providing stiff opposition in, among other places, the Shan Hills, where small, isolated groups of the 14th Army were engaged in guerilla warfare with his pockets of resistance. In this connection the crews of F/L H. W. Pearson and WO D. A. Parker, together with eight ground-crew, were sent on three weeks' detached duty to Toungoo on 1 August to undertake special para-drops for our forces in the area.

Their operations were hardly facilitated by a monsoon revival lasting five days. They nevertheless discharged their tasks ahead of schedule. About two months later were to be announced awards of the DFC to both captains, the reasons being readily perceivable in the joint recommendation, excerpts from which follow.

"F/L Pearson and WO Parker . . . undertook one of the most difficult tasks ever assigned a transport crew. Our . . . guerilla fighters were operating in the most difficult terrain . . . in purely defensive positions surrounded by the enemy, and were dependent entirely upon these two pilots for their very existence.

Their work presented the greatest difficulties. Based at Toungoo, an airstrip with the worst general weather conditions in the whole area, without adequate radio-aids and lying close to the Shan Mountains, Pearson and Parker were required to find difficult DZs in the valleys and on the slopes of the monsoon-obscured hills. They often spent hours . . . endeavouring to find their DZs through occasional breaks in the heavy clouds. On locating our troops . . . these pilots faced the continuous threat of casualty from enemy ground-fire . . .

. . . They carried their project to successful conclusion . . . after 22 days of hazardous operations, both flying daily without relief.

The admiration and appreciation by the British troops . . . is amply displayed in the following words: 'Please convey our thanks and admiration to the air force for their splendid drops. We were dead scared they would hit some cloud-covered hill. Good show, Canucks.' "

During the third week of August a larger detachment consisting of 16 crews and servicing personnel operated their *Dakotas* from Kinmagon and Meiktila, moving all the

Two elephants meet beauty in the Burmese jungle (l. to r.): FS J. D. Evans, Nursing Sister Lt. E. M. McComish and F/O W. H. Nichols.

squadrons and headquarters of 221 Group to Rangoon.

The fact that 14 August meant the end of hostilities with Japan actually meant nothing to the Elephants in an operational sense. The ever-hungry Army still had to be steadily supplied by air to make possible a build-up of great stocks of food and materiel before the release of yet more transport aircraft for service elsewhere. With the main body concentrating on the rear airfields and the two detachments busily occupied, the first three weeks of August could compare favourably, in point of sorties, with any three weeks in 436's history.

Upon the return of the detached crews the squadron was concerned primarily with the evacuation of casualties from Ramree and Akyab to Chittagong. This was completed on 29 August.

The Elephants were active in their air supply function for CCTF* until 31 August 1945, thereby sharing with their "Chinthe" co-workers (No. 435 Sqn.) the honour of being the RCAF's last squadron to carry out operations in the Second World War period. On that day, for the record, they flew seven trips, airlifting 29,400 pounds and seven passengers. With these flights they bowed out as an operational entity in the South-East Asia theatre. How typical was their last diary-entry for the Burma period:

"Rainfall at base during August has totalled 57.34 inches."**

In a short but highly intensive operational tour of eight months in South-East Asia the Elephants piled up a most impressive set of statistics. Logging some 32,000 hours while covering about 4,000,000 air miles, they airlifted nearly 29,000 tons of food, military necessities, and "treats and comforts", among other things, to sustain soldiers and civilians alike. In addition, they transported more than 15,000 troops, casualties and passengers. Having no protective armament other than mere sidearms, they were wide open to enemy ground-fire and aerial attack. Moreover, they faced the constant threat of forced landing or bail-out over impenetrable jungle inhabited by wild animals, unpredictable natives, and a merciless enemy. On half their flights they were assailed by their most formidable foe of all, that being, of course, the tropical monsoon. No squadron had better fulfilled its motto than the Elephants, with their "Onus Portamus". They truly did *carry the load*, and in some of the most adverse conditions imaginable.

In something like 11 months of corporeal existence in the India-Burma theatre No. 436 Sqn. lost only two aircraft and four aircrew on operations. One aircrew officer and a groundcrew airman died through misadventure on the ground and another airman died of natural causes.

Awards for valour or efficiency, in the air and on the ground, included one DSO, 18 DFCs, one AFM, three MBEs, three BEMs, two Commendations for Valuable Services in the Air, and numerous mentions in dispatches.

Apart from operations, the most significant event of August was the start of the unit's self-airlift from Burma to England. The first of the UK-bound Elephants, led by S/L Smith, departed on 25 August. The route was via Chittagong, Allahabad, Karachi, Masirah Island, Aden, Wadi Halfa, Cairo, Lydda (Palestine), El Adem (Libya), Sardinia, and finally Down Ampney, in Gloucestershire — an 8,000 mile trip of 44 hours' flying time.

(To be concluded)

A Dakota crew climbs over ice bags to their positions in the aircraft. In foreground W/C R. Gordon DFC. In background (l. to r.): F/O G. B. Coyle, F/O F. V. Cooper, F/O C. O. Simpson and F/L J. W. Dolphin.

*Combat Cargo Task Force.

**This is slightly more than Vancouver's yearly average over the past half-century.

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.

LAC B. E. Bland of Stn. Clinton suggested an improved method for connecting the wiring of the flux-valve gyrosyn compass 6B/987 which was adopted officially by the promulgation of EO 20-25DC-6A/3 dated 10 Feb. 61.

Other award winners:
S/L G. E. Thomas
F/C W. R. Trowhill
FS E. J. Huestis
Sgt. R. G. Yeoman
Cpl. D. M. Setters
Cpl. W. K. Hockin
Cpl. J. A. Laliberte

RCAF Inventors

S/L W. E. Morse of MACHQ invented a Sonobuoy Air Trainer.

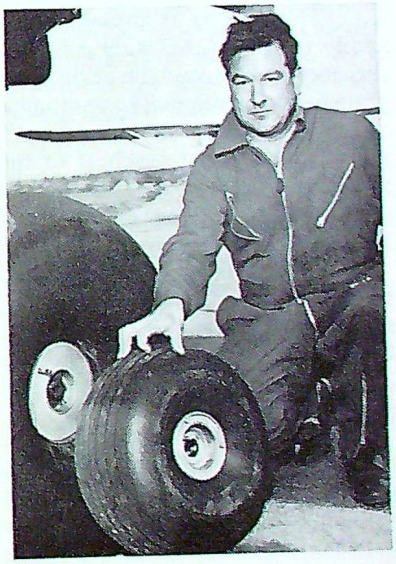
Cpl. J. W. Roy invented a saw for cutting sheet metal.

1961 McKEE TROPHY WINNER

THE McKee Trophy, awarded annually to the person who does most to advance the cause of Canadian aviation, has travelled full circle.

For the first few years after its inception in 1927, the trophy was awarded to some of Canada's most famous bush pilots. Later, the trophy winners came largely from the aviation industry and from the RCAF. Now a civilian pilot, Mr. Weldy Phipps, has become the latest winner of the McKee Trophy.

Mr. Phipps will be awarded the trophy for his development of light aircraft flying in the Arctic. As a result of large low pressure tires which he designed, light aircraft can now be landed on terrain which would wreck other aircraft. A *Super Cub* aircraft equipped with Mr. Phipp's large tires enabled government geologists to greatly increase arctic surveys which has resulted in the current drilling operations. Mr. Phipps also flew two mercy missions with his specially-equipped



Cub out of areas where neither RCAF nor USAF aircraft could operate. Mr. Phipps flew as a flight engineer with the RCAF during World War II.

RCAF ASSOCIATION

This section of THE ROUNDEL *is prepared by Association Headquarters, 424 Metcalfe St., Ottawa, Ont.*

AWARDS FOR SERVICE

Elsewhere in this section mention has been made of trophies and awards sponsored by the Association or in which sponsorship is shared by the RCAF.

This points up the fact that there are a number of other awards which the Association makes on a national basis and which could be listed here just as a reminder to our members. It is probably not a generally known fact that in any one year the Association can present as many as twenty awards and trophies to individuals and organizations across Canada.

Following the RCAF Association Air Cadet Award there is the Mynarski Trophy donated by the Polish Wings of the Association in memory of Pilot Officer A. C. Mynarski, V.C. This trophy is presented annually to the RCAF station having the most effective recreation program for the youth of its community.

The Association also presents annual awards (wrist-watches) to the top RCAF cadet at two of the service colleges; Royal Roads and Royal Military College.

Within its own organization the RCAF Association awards trophies to the two Wings having the best bulletin adjudged according to the established classes, based on area, population and Wing membership.

Also, a maximum of 15 Awards of Merit may be made annually to retiring members of the National Executive Council and to group presidents and secretaries on retirement. Also, any Wing may recommend a member for this award in recognition of outstanding work within the Wing.

In addition to these approved national awards Wings and Groups of the Association have originated many fine trophies and awards which are open for competition in local areas.

RCAF PRESENTS TWO NEW ASSOCIATION TROPHIES

The National President, Mr. L. N. Baldock, has announced that two of the Association's highest awards have acquired added stature through the presentation of representative trophies by the RCAF.

This year when the parchments signifying the awards of "Member of the Year" and "Wing of the Year" are made they will each be accompanied by an attractive trophy which the winner will hold for one year. The purpose behind the RCAF's donation of the trophies is to enhance the significance of these much sought after awards.

"The generous action on the part of the RCAF has added much to the meaning of the two awards," said Mr. Baldock. "I feel sure that the winning 'Member' and 'Wing' will be doubly proud to receive recognition for services to the Association in this manner."

The trophy for the "Member of the Year" will be awarded in recognition of outstanding achievement in Association activities. It will acknowledge superior performance throughout the year in which it is presented, or continuous outstanding performance over a longer period. The "Wing of the Year" will be that one which achieves most in furthering the aims and objectives of the Association in any one year or over a period of years.

Mr. Robert Wilkin, Alberta Chairman, Air Cadet League, presents the RCAF Association Trophy to F/L G. D. Holland, Commanding Officer No. 526 Squadron. Warrant Officer Jack Yuill and Mr. George Esdale, National Chairman of the Association, look on.

Since the RCAF will have strong representation on the selection committee which will consider both awards, the choice of recipients will be impartial.

The first presentation of the trophies will be made by Air Marshal Hugh Campbell, Chief of the Air Staff, at the Association's Annual Convention, which will be held in Halifax this year.

RCAFA TROPHY PRESENTED TO BARRHEAD AIR CADET SQN.

It was a red letter day for No. 526 (Barrhead-Elks) Squadron when the RCAF Association Trophy was presented to them for being the most proficient Air Cadet Squadron in Canada for 1961.

The trophy, designed to depict the spirit of modern flight, was presented by Mr. Robert L. Wilkin, Chairman, Alberta Provincial Committee of the Air Cadet League; and Mr. George Esdale, National Chairman of the Association to F/L G. D. Holland, commanding officer of the award-winning squadron. In addition to the trophy the winning squadron receives from the Association, for permanent possession, a framed scroll and also a cash grant.

Special guests of honour at the presentation, which included the Honourable J. Percy Page, Lieutenant-Governor of Alberta; Honourable Gordon Taylor, Minister of Highways; and the Honourable R. D. Jorgenson, Minister of Public Welfare, were high in their praise of the smallest town in Canada to ever win the National award.

The highlight of the evening was the reading of a letter of congratulations from the Prime Minister, John Diefenbaker, to the C.O. of the Squadron, F/L G. D. Holland.

The keen competition which is so evident among the squadrons for possession of this trophy and the splendid arrangements which are made for its presentation at squadron level are most gratifying to the RCAF Association.

RCAFA AT CANADIAN CENTENARY COUNCIL MEETING

The Secretary-Manager, J. C. Gray, attended the two-day conference as a voting member of the Centenary Council. The 172 member organization aims to co-ordinate non-governmental interest in planning and promoting the 100th Anniversary of Confederation in 1967. It is anticipated that planning for Canada's 100th birthday will shift from the planning stage to action during this year.

The recommendations of the nine workshops, which were presented to the executive council, will be screened by the board of directors for priority and value. It was strongly felt that community planning would be the key to success; ideas which would be of interest to hometown people would be most likely to prove entertaining and enjoyable to our visitors.

Directives covering recommendations will be forthcoming.

An item of interest to the Association was the need to make arrangements now for any function to be held during 1967. With this in mind the Association will immediately invite Wings to bid for the 1967 National Convention to ensure that they will have the necessary accommodation available when the time comes. Groups and Wings should also make similar arrangements now.

The conference closed with the premiere showing of the film "Quality of a Nation". His Excellency the Governor-General and Madame Vanier attended this premiere. Fifty copies of the film, sponsored by the E. B. Eddy Company, will be available for distribution soon through the Canadian Film Institute, 1762 Carling Avenue, Ottawa.

A/V/M A. L. Morfee, Honorary Chairman 1962 Annual Convention Committee, was accorded a real Association "Bon Voyage" on his departure recently for a holiday in the U.K. (L. to r.): A/V/M Morfee and Mr. Allen Neily, president, No. 101 Wing, Halifax.

WING MEMBERSHIP DUES

Wing members are reminded that their 1962-63 dues were payable April 1st. To ensure continued receipt of your publications please ensure that your dues are paid promptly.

•

The cooing usually stops when the honeymoon is over, but the billing goes on forever.

Letters to the Editor

MOTTO MUDDLE

Dear Sir:

In your reply to Mr. Soper's query (in the Mar. 62 issue), you give "Through difficulties (or adversities) to the stars" as the generally accepted translation of the RCAF motto. You could have gone on to say that no official translation exists. Even the College of Arms, when appealed to by the Air Ministry during World War II, could only say "no authoritative translation is possible". (Hering — "Customs and Traditions of the Royal Air Force").

Your quotation of the CAF's motto, "Sic atue . . . " should have read, "Sic itur . . . ".

F/L J. A. McCormick,
RCAF Stn. Cold Lake,
Alta.

AIR FORCE POETRY WANTED

Dear Sir:

I am assembling a collection of poetry and light verse written exclusively by armed forces personnel to describe their roles as members of flight crews or working in the many activities in support of military aviation. I am looking for material that reflects individual observations which, taken together, describes the progressive development of military aviation.

I have several pieces written by members of the RCAF, as well as the air arms of some of the other Commonwealth countries. I am particularly anxious to obtain additional material from RCAF personnel.

The anthology is to be published under the auspices of the USAF Book Program, with specific credit given to each contributor. I would like to emphasize my desire for material written by support personnel as well as flight crew members. For example, material from armament personnel, tower operators, fire fighters, ground crew, etc., all have an important place in the anthology.

Please send material to Major Roy H. Stewart, 27426A, Box 853, 303rd Air Refueling Sq., APO 856, New York, N.Y.

Roy H. Stewart,
Major, USAF.

(*We have collected an assortment of poems from back* ROUNDEL *issues and sent them along.—Editor.*)

FLIN FLON INVITATION

Dear Sir:

In conjunction with the opening of Flin Flon's new airport and the 50th anniversary of this part of Manitoba being incorporated into the province, No. 503 Wing RCAFA is sponsoring "Operation Flypast" on 26 May.

The wing has arranged a large program of flying through the courtesy of the RCAF and private companies and wishes to extend an invitation to all your readers to attend. We suggest you combine this with a pre-season camping holiday. If you've never visited the Flin Flon lakes area, well, it may sound a little like boasting, but, you've never lived.

Frank Dembinsky,
No. 503 Wing RCAFA,
P.O. Box 666,
Flin Flon, Man.

TROPHY TROUBLE

Dear Sir:

A picture caption in your March, 1962 issue (Winnipeg Unit Again Wins Trophy) announces the award of the "RCAF Telecommunications Efficiency Trophy" to No. 3 Communications Unit, Winnipeg.

The correct title for the award is MCRN Efficiency Trophy and it is competed for annually by only the six coast-to-coast Communications Units of the Main Communications Relay Network, headquartered at CCHQ.

To dub the award an RCAF-wide trophy is to imply that it is competed for by all components of the Air Force's Administrative and Operational Communications Systems which is not correct.

FS W. Anderson,
Editor, CANAIRCOMMENTARY,
CCHQ, Rockliffe.

NOSTALGIA NOTED

Dear Sir:

Your decision to print a full page picture suitable for framing of different World War II aircraft each month is a splendid idea.

Regarding squadron histories, have you published the wartime story of No. 424 Sqn. yet? I am a proud ex-member of that unit.

C. W. Paddock,
Reston, Manitoba.

(*No. 424's exploits are still in the air historian's "pending" file.—Editor.*)

ON LOOKING BACKWARD

Dear Sir:

I submit that perhaps a general up-dating of your articles might improve reader relations. For example, "Man's Advance Into Space" is a series which I personally have found most enlightening. "The Evolution and Current Status of Air Transport Command" (Mar. 62) is another example of excellent reading — dealing with the present and giving a glimpse of the future.

The RCAF has a glorious history. This fact cannot be disputed. Nor do I wish to play down the part so many of our still-active members of the service played during World War II.

No doubt many personnel find your articles dealing with the history of the various squadrons most interesting. However, to a great many others this is all "old hat". For example, I've been in the RCAF 14 years. The war took place when I was just a kid. While it is all very well to be reminded of the past now and again, is it necessary to subject us to a steady diet of history?

Articles such as the two I have mentioned give the younger element of the service something to think about, to show what we are working for and toward. You must not lose sight of the fact that the main body of service personnel is of a relatively young age, and as such are much more interested in things to come than past records.

Let's have more of "now" and "tomorrow", and let the past remain there.

Sgt. B. D. Stanley,
RCAF Stn. Cold Lake.

(*We feel the key to a successful table of contents is balance. Past, present and future all have a place in* THE ROUNDEL.—*Editor.*)

LLOYDMINSTER RE-UNION

Dear Sir:

On Friday, 1 June, No. 186 Sqn., Lloydminster Air Cadets, will hold its first re-union since formation of the squadron in 1941. All former training personnel and ex-air cadets are invited to join us on this occasion.

The program will commence at Chapman Field at 7:15 p.m. with the annual squadron inspection. A parade to the Legion Hall will be followed by a banquet and social events. Arthur Smith, MP, DFC, president of the Air Cadet League, has been invited to speak.

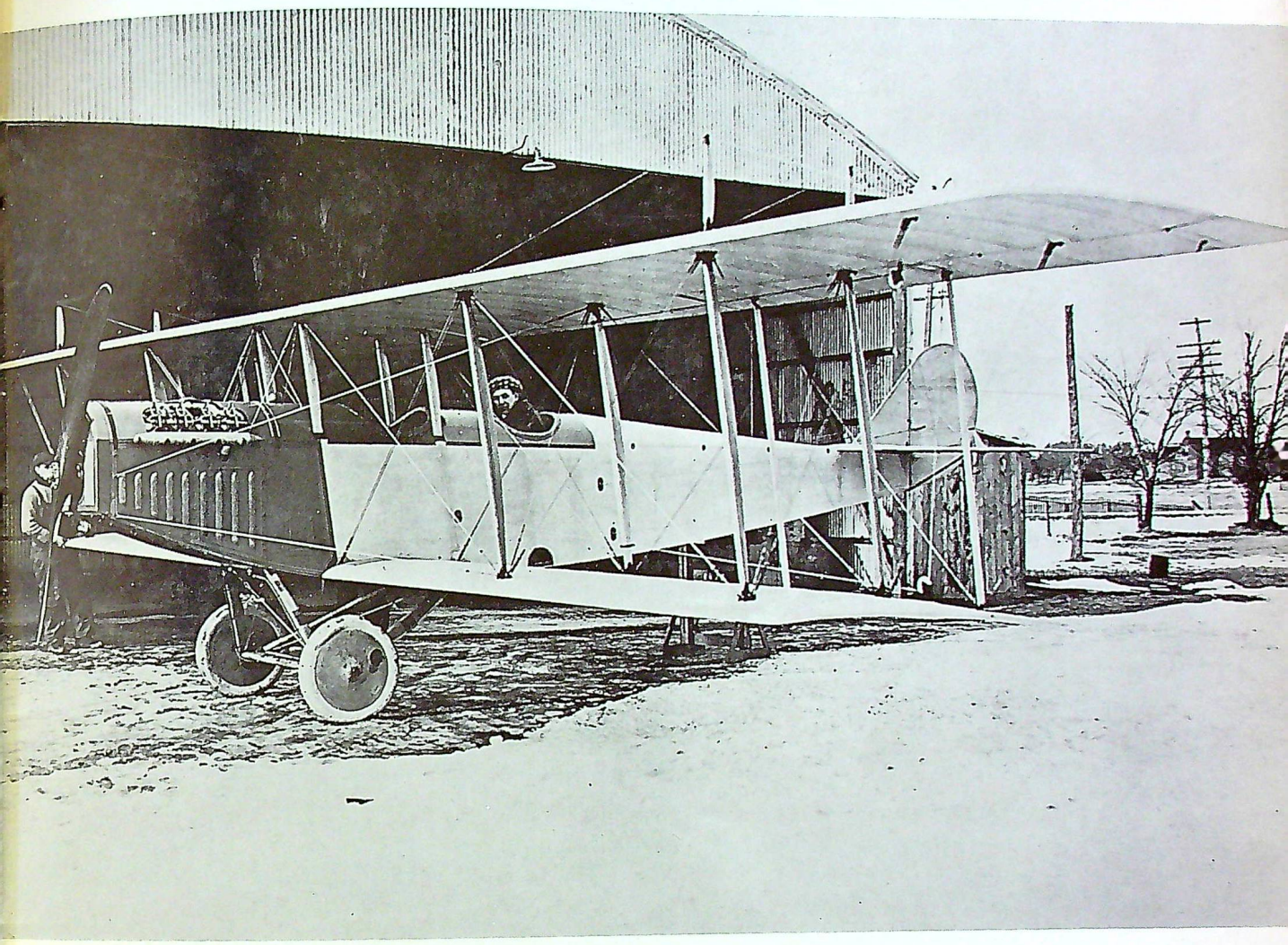
All interested in attending this reunion are asked to contact the undersigned as soon as possible.

F. W. Bolton,
Secretary,
Civilian Committee,
No. 186 Air Cadet Sqn.,
Lloydminster, Sask.

Wolf: a man who whistles while he lurks.

Smart girl: one who can hold a man at arm's length without losing her grip on him.

Aircraft Album: JN-4 Jenny



AFFECTIONATELY known as the "Jenny", from the initials in the designation, this airplane was the most widely used trainer of World War I, being used by the U.S. Army, the RFC, RNAS, and the RAF. Some 3000, including spares, were built in Canada by the Canadian Aeroplanes Company in Toronto in 1917-18, and of these 680 were sent to the U.S.

Following the war the type was used in the Canadian Air Force training and civil operations until 1923. In the latter role they carried civil Air Board markings rather than military roundels, and their crews, many of whom were to gain future fame in the RCAF, wore civilian clothing.

Captain Brian Peck carried Canada's first airmail in a JN-4 in 1918. A nice aircraft to fly, it was not fast, even for its day, and strong headwinds could reduce its speed to near zero. Top speed was about 95 miles per hour, and it cruised at 65. One has recently been obtained by the National Aviation Museum and will be displayed at Station Rockcliffe on Air Force Day this year.

Roger Duhamel

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