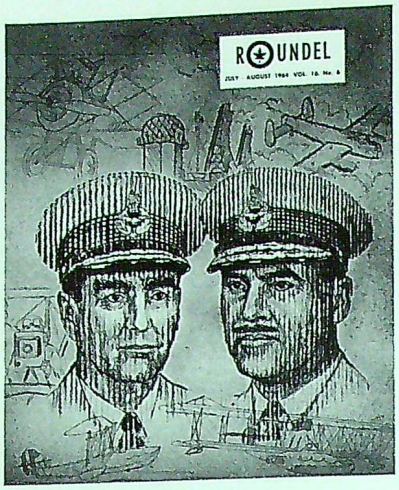
ROUNDEL

JULY - AUGUST 1964 VOL. 16, No. 6



COVER CAPTION

ROUNDEL's salute to A/Ms C. R. Dunlap and C. R. Slemon (pgs. 2 and 3) is introduced by artist Cpl. Claude Rousseau.

ROUNDEL

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

JULY - AUGUST 1964

VOL. 16, No. 6

ROUNDEL is published ten times each year. Views expressed are those of the writers and do not necessarily reflect official Royal Canadian Air Force opinion or policy.

Annual subscription rate is $2.50 in Canada, USA and Mexico; $3.50 elsewhere. Individual subscriptions, made payable to the Receiver General of Canada, should be sent to the Queen's Printer, Ottawa, Ont.

RCAF Association members, who receive ROUNDEL by virtue of such membership, should forward address changes and material for their section of the magazine to Ass'n Hdqts., 424 Metcalfe St., Ottawa, Ont.

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Ottawa 4, Ont.

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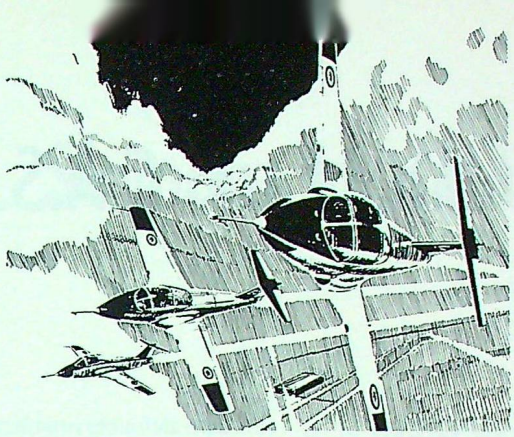


ON THE BREAK

THIS summer a military evolution is shaping up in Ottawa. The integrated national defence headquarters organization proposed in Bill C90 (which at press-time was still awaiting parliamentary approval) will replace the three separate service chiefs and their staffs with one chief of the defence staff and four functional chiefs. See pages 4 and 5.

WHEN the operators and observers gather at Suffield Experimental Station for the upcoming shock and blast research experiment (page 6), there to greet them will be Mr. Archie Pennie, chief superintendent of that DRB establishment. Twenty years ago he was F/O Pennie, RAF, and more concerned with the intricacies of a *Blenheim's* cockpit than with a sophisticated explosion involving 500 tons of TNT – as the story on page 8 clearly proves.

AIR Transport Command's safety record is impressive enough to persuade one large insurance company to offer the lowest passenger hazard rates in the world to ATC travellers. One of the most important means of maintaining such an enviable reputation is proper and extensive training – a task entrusted to No. 4 (Transport) Operational Training Unit based at RCAF Stn. Trenton.

Recently S/L Russ Bowdery, ATC public relations chief, and his photographer Cpl. Bill Whitehead went round the world on a *Yukon* from the OTU. See "Transport Training" (page 14) for further details.

THE THIRD instalment of A/V/M Raymond Collishaw's memoirs (page 20) deals with his hair-raising exploits in South Russia after World War I had ended. The accompanying aircraft photos have never appeared in any publication before, to our knowledge. As expected, this exclusive ROUNDEL series is attracting world-wide attention.

The picture below was taken in the author's garden at his West Vancouver home a few weeks ago.

THE ROUNDEL readership survey we mentioned here some months ago is finished, as far as the boys in the field are concerned. Now information from the completed forms is being "fed" to RCAF calculators in the AFHQ data centre and we in the little red shack are biting our nails in anticipation of the results.

Not since the retirement of Sgt. Shatterproof over six years ago have we subjected ourselves to such public scrutiny. But a promise once made must be kept. Detailed analysis of the survey will be published this fall. Meantime, our thanks to all who co-operated so enthusiastically with the pollsters.

A. M. Patten S/L

Editor

Mr. A. M. Pennie

S/L R. M. L. Bowdery

A/V/M R. Collishaw

A/M Dunlap, Last C.A.S., to Succeed

With the passing of Bill C90, Air Marshal C. R. Dunlap, CBE, will become the last chief of the air staff and an era in the history of the RCAF will come to a close – the third era to be terminated by fundamental organizational changes in the Department of National Defence since A/M Dunlap began his RCAF career in 1928.

As a flying officer operating *Vedette* and *Vancouver* flying boats out of Vancouver, A/M Dunlap in 1932 saw the end of the first era which began in 1924, when the newly-created RCAF came into existence under a director responsible to the chief of the general staff. Following the end of the RCAF directorate, under the dark cloud of depression that almost washed away its financial support, the RCAF began a re-organization which during the next few years converted it into a military, as distinct from a civil, air force – headed by a senior air officer who, like the previous director, was also responsible to the chief of the general staff.

Air Marshal Dunlap was attending his second armament course at Eastchurch in England when the era of the senior air officer came to an end. An expanding RCAF had outgrown the organization controlling it and, in November 1938, became an independent service headed by a chief of the air staff,* equal in status to the chief of the general staff and the chief of the naval staff.

In his career since 1938 A/M Dunlap has witnessed at first hand the developments that have provided the basic reasons for the demise of the era concluded this month. These were the introduction of jet aircraft of supersonic capability, the introduction of large, fast, long-range air transport aircraft, the introduction of missiles (and nuclear weapons), and the revolution in communications brought about by the advances in electronics. These developments had the effect of compressing time and space to the point where they could no longer be counted on as available assets in a modern war featuring speed, mobility and devastating striking power.

The defence organization that A/M Dunlap served from 1928 to 1938 met the defence requirement of providing an air arm for the extension of the army's tactical and artillery capability and the extension of both the army's and navy's reconnaissance capability; time and space had not yet been seriously restricted by an infant aviation technology. The organization he served from 1938 to 1964 met the additional requirement of providing an air force to meet the threat of other air forces. The organization of 1964 is recognition of the indivisibility of defence brought about by the compression of time and space and of the consequent requirement to provide forces capable of instant reaction in all dimensions under unified control.

Canadian servicemen have long been aware of the importance of keeping their organizations abreast of the times. From their vantage points as participators or observers they have acquired extensive knowledge of integrated operations and unified commands. None more so than A/M Dunlap. During the formative years of NORAD – an integrated organization – he served as vice chief of the air staff and was privy to all problems of policy and control that arose. Again, as deputy chief of staff (Ops) in SHAPE, he saw a unified command and integrated headquarters operating efficiently and effectively. To the knowledge he accumulated in these appointments must be added that acquired earlier while serving as commandant of the National Defence College, while attending the USA National War College, and while serving as the commander of an RCAF bomber wing operating under an integrated allied headquarters in North Africa during World War II.* A/M Dunlap thus over the years acquired a first-hand knowledge of the problems and benefits of services' integration and unification.

In August A/M Dunlap will become deputy commander of NORAD. In assuming the heavy responsibilities of this appointment he takes with him the best wishes of all RCAF personnel for a pleasant, rewarding tour of duty.

*A/M Dunlap was the seventh officer to hold this position. First CAS was A/V/M G. M. Croil, followed by A/M L. S. Breadner, A/M R. Leckie, A/M W. A. Curtis, A/M C. R. Slemon and A/M H. Campbell.

*ROUNDEL, May '64.

Retiring A/M Slemon at NORAD HQ.

A LONG and distinguished air force career terminates this summer for A/M C. R. Slemon, CB, CBE – the last "original" member of the RCAF still on active service.

While an undergraduate at the University of Manitoba, Roy Slemon became a member of the non-permanent Canadian Air Force in 1923. That summer he had the distinction of becoming the first post-World War I student pilot to fly solo. He was one of a class of nine provisional pilot officers but, in the summer of 1924, only four of the original class returned for the second training session. Slemon obtained his pilot wings at a personal sacrifice since, immediately following his summer training course in 1924, he continued his third training term by passing up his year in college – receiving his wings on the RCAF's first wings parade on 20 Dec. '24. It is interesting to note that today he has the same air force number originally allotted to him, No. 71.

In the spring of 1925 F/O Slemon was checked out on flying boats and, with the exception of two terms at university (where he graduated with a BSC degree) and the year 1929 which he spent in England undergoing a navigation course, he spent the next eight years on aerial photography work. Spring, summer and autumn of each year were spent flying over the isolated northland on mapping operations. During the winter, instruction of new pilots and preparations for the next season's work kept the photo pilots busy.

In the early days, a checkout on an aircraft was very brief. Slemon's logbook, for instance, shows that he only had three hours and ten minutes instruction before going solo on the HS2L flying boat. His logbook also records the many different types of aircraft which the RCAF flew throughout the years, including the *Viking, Tutor, Bellanca, Fairchild 51, Moth 60, Puss Moth, Vedette, Tomtit, Courier, Vancouver, Southampton* and *Stranrear*. Although he flew more than 100,000 miles while engaged on photo work, he never even so much as bent an undercarriage or damaged a hull – a record which remained unblemished throughout his many years of flying.

In the summer of 1926 F/O Slemon took a course on the Lynx engine which taught him how to cope with mechanical troubles in the hinterland. Three years later, after taking an advanced photo course at Ottawa Air Station (now RCAF Stn. Rockcliffe), he was promoted to temporary flight lieutenant. In 1933 F/L Slemon completed an instrument flying course and two years later he became a flying instructor at RCAF Stn. Camp Borden. In 1936 Slemon was promoted to squadron leader and shortly thereafter he was given command of No. 8 General Purpose Sqn.

A few years later he was to be given a far greater command when, in 1942, he went overseas to help organize the all-Canadian Bomber Group and for two and half years was second-in-command of this force of 15 heavy bomber squadrons. Following a short period in command of No. 6 Group, A/C Slemon was appointed deputy air officer commanding-in-chief of the RCAF Overseas for the last few months of the war in Europe. He was then named to command the RCAF forces destined for service in the Pacific, but the command was dissolved when the Japanese surrendered.

After the war A/V/M Slemon served as a member of the air council in Ottawa until 1949 when he became the air officer commanding, Training Command. In 1953 he was promoted to air marshal and appointed chief of the air staff, a position he held until his move to Colorado Springs in 1957 as deputy commander-in-chief of the newly-created North American Air Defence Command.

He is thus not only the last of the RCAF's "originals" but one of the last of the original members of NORAD. After retiring in August, A/M Slemon will remain in Colorado Springs as director of a foundation to create an aerospace education centre adjacent to the USAF Academy.

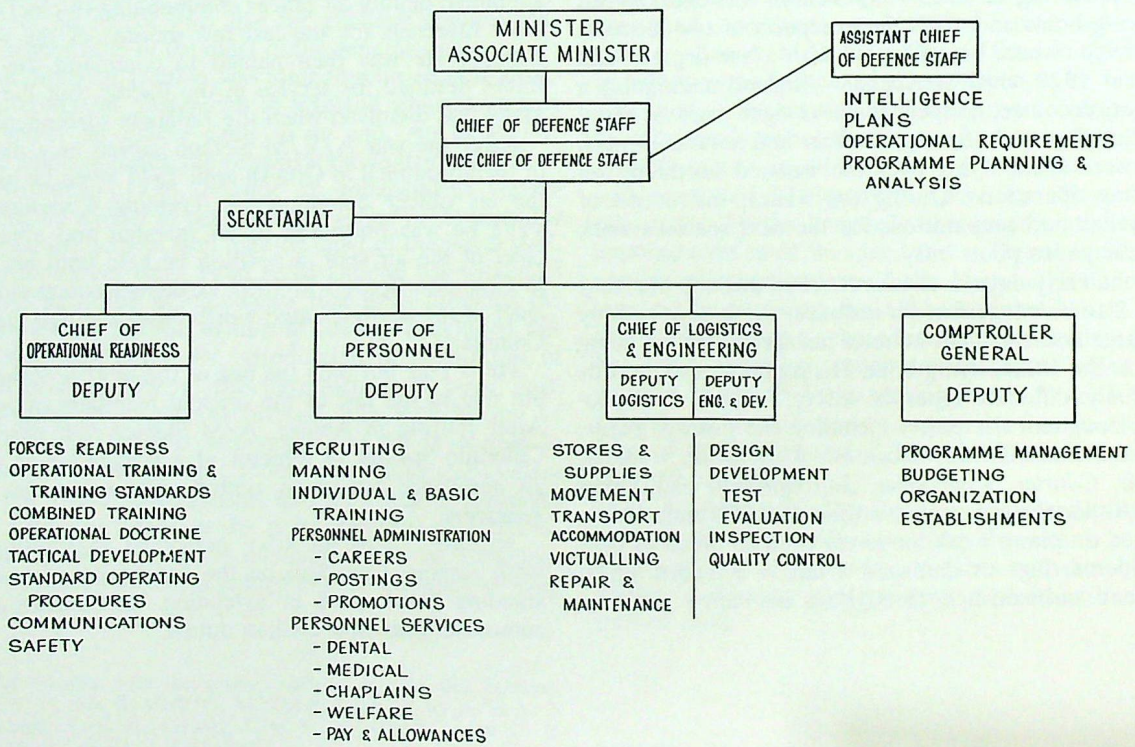
ROUNDEL joins all RCAF personnel in saluting this justly-famous Canadian on the conclusion of one outstanding career and in extending best wishes as he commences his new civilian duties.

"NEW LOOK" AT NDHQ

THE headquarters defence command proposed in Bill C90 is the first step towards unification of the armed forces, says the Hon. Paul Hellyer, minister of national defence.

Under the new command structure, the chief of defence staff, deputy minister and chairman of the defence research board report directly to the minister or associate minister of national defence. The accompanying chart outlines the organization to be set up under A/C/M F. R. Miller, chief of defence staff (formerly chairman of the chiefs of staff committee), and his vice-chief, Lt.-Gen. Geoffrey Walsh (formerly chief of the general staff).

The four functional heads, each with the rank of air marshal or equivalent, will be known as chief of operational readiness, chief of personnel, chief of logistics and engineering, and comptroller-general. To be promoted to assume these positions are Maj.-Gen. J. V. Allard, R/Adm. K. L. Dyer, A/V/M C. L. Annis and Maj.-Gen. Rt. Moncel, respectively. Their deputies (two in the case of the chief of logistics and engineering) will be air vice marshals or equivalent rank. Named to be assistant chief of defence staff is A/V/M W. W. Bean.



Introducing the Men at the Top

AIR Chief Marshal F. R. Miller's meteoric rise to the top has no parallel in the Canadian armed forces. He is the only man who has ever held both the senior military and senior civil service positions in Canada's defence establishment.

Both the officers whose pictures appear on the cover of this issue had been flying RCAF aircraft for some time when recently-graduated civil engineer Miller, a native of Kamloops, B.C., joined the non-permanent active air force in 1931. After winning his wings in Mar. '32, he was placed on leave without pay for the last six months of that year (during the big depression economy wave) but returned to active duty with a permanent commission in Jan. '33. When World War II began S/L Miller was a flying instructor.

By 1944 he had reached the rank of air commodore and the job of director of training; then took a drop to group captain so he could get overseas as commanding officer of a bomber base in No. 6 Group. The next year he was chosen to help organize "Tiger Force", the RCAF contingent being readied for the Pacific theatre, but after V-J Day he became chief staff officer and later AOC of Air Materiel Command. In 1951, after graduating from the U.S. National War College, he was appointed vice chief of the air staff, then was transferred to Paris as vice air deputy at SHAPE.

In 1956 A/V/M Miller retired from the RCAF when asked to come home from Europe and assume the job of deputy minister of national defence. Four years later, after distinguishing himself in this civilian role, he put on his uniform again (this time as a full air marshal and later an air chief marshal) to become chairman of the chiefs of staff committee – a position rendered obsolete by the creation of his new post.

* * *

Lieutenant General Geoffrey Walsh, new vice-chief of the defence staff, was born in Brantford, Ont., and was commissioned as a lieutenant in the Royal Canadian Engineers in Jun. '30. Thirty-one years later he had risen to the highest army assignment in Canada: chief of the general staff.

As a subaltern he served in various engineering posts in eastern Canada before going overseas in Jun. '40. Capt. Walsh commanded the 3rd Field Company, RCE, on the Spitzbergen expedition in 1941, then was appointed brigade major, HQ Royal Canadian Engineers Corps Troops. In Apr. '42 he was promoted to Lt/Col. and made commander, Royal Engineers, with the 1st Canadian Infantry Division, with whom he served during the Sicilian and Italian campaigns. Early in 1944 Brig. Walsh was appointed chief engineer, 2nd Canadian Corps, and in Sept. joined the 1st Canadian Army in the same capacity until the end of the war in northwest Europe.

Returning to Canada in Aug. '45, he served as deputy quartermaster general until Apr. '46 when he was made the first commander of the North-west Highway System. After attending NDC and commanding the Eastern Ontario Area, he was selected in 1951 as first commander of the newly-organized 27th Brigade, Canada's army contribution to NATO in Europe. Subsequent appointments included director general of military training, quartermaster general and GOC, Western Command. He became CGS on 1 Oct. '61.

A/C/M F. R. Miller, CBE

Lt. Gen. G. Walsh, CBE, DSO

BIG BANG AT SUFFIELD

This high explosive detonation, photographed from an RCAF Lancaster *over Suffield Experimental Station in August 1961, was one of the largest TNT explosions up to that time. The one-million pound blast this summer will be five times as big – the largest unconfined chemical detonation ever recorded.*

SCIENTIFIC teams from Canada, the U.S. and Britain will conduct more than 100 individual experiments in mid-July when 1,000,000 pounds of TNT are detonated at Suffield Experimental Station (SES), the Defence Research Board's prairie laboratory near Medicine Hat, Alberta. When this mammoth explosion is touched off, RCAF personnel will be involved in several vital capacities.

A *Neptune* aircraft from RCAF Stn. Comox will be equipped with special cameras to photograph the heart of the blast and the shock wave emanating from it. Special equipment is also being installed to record the effect of the shock wave on the aircraft. It will fly at 18,000 feet above the explosion.

To further support tests being carried out by the international team of scientists, the RCAF will provide two helicopters to work in the Suffield experimental area before and after the blast. The RCAF is also conducting a ground experiment to assess the blast effects on simulated tunnels at various distances from ground zero. Additional RCAF support for the experiment will be aerodrome control and project flying control.

Measurements to study the travel of sound waves in the atmosphere will be carried out in conjunction with the SES explosion. Working with officials from the Defence Research Board and the Department of Transport, RCAF personnel from the Central Experimental and Proving Establishment at Cold Lake, Alta., will fire three high altitude sounding rockets to record atmospheric conditions at the time of the blast.

One of the three rockets, scheduled to soar to about 250,000 feet, was test fired last month from Cold Lake. It took about four minutes to reach its altitude, then a 15-foot parachute opened and carried an instrumented package back to earth. Its descent was tracked by radar. The other two rockets will be fired on the day of the 500-ton explosion and will follow a similar pattern.

Approximately 175 Canadians are involved, including scientists, engineers and armed service personnel. More than 100 Canadian soldiers will occupy shelters almost a mile from the hemispherical-shaped charge. They will observe blast effects and experience the shock wave – both harmless at that distance.

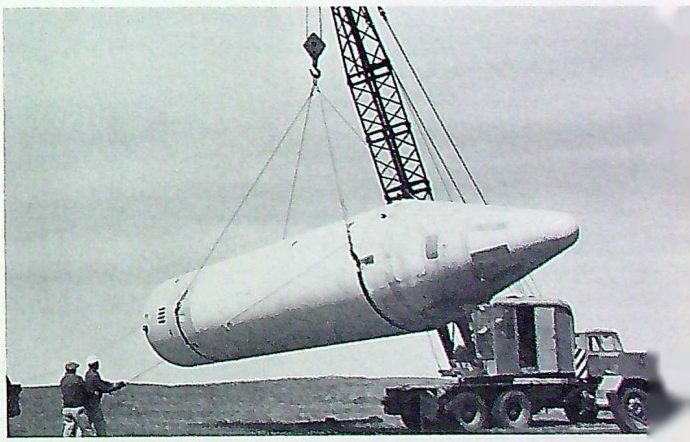
Other Canadian organizations involved will be the Emergency Measures Organization, the Meteorological Services, universities, oil companies and other interested agencies. Ten Canadian and U.S. teams will conduct seismic measurements at locales far distant from SES.

The detonation of the charge will be equivalent in its shock and blast effects to a one-half kiloton nuclear explosion. DRB officials emphasize that "because the SES experiment involves a chemical explosive only, radioactive fallout cannot possibly develop".

At RCAF Stn. Comox, No. 407 Sqn. Neptune *captain F/L D. Walkey (right) briefs crew for Suffield mission. L. to r. (standing): F/O N. Koziak, FS C. Ackland; (kneeling) Sgt. W. Produka, F/L D. Donaldson, F/L P. Taggart, F/O J. Ganderton, F/L D. Walkey.*

Helicopter crew of No. 121 KU, Comox, providing airlift support at Suffield (l. to r): F/L R. Hughes, Cpl. V. Hodge, Cpl. K. Mattson, F/L R. Rasmussen.

SES personnel prepare US Jupiter *rocket which will be set near ground zero, filled with water, and instrumented to measure pressures during detonation. (DRB photo.)*



BLENHEIM OCCASIONS

By MR. A. M. PENNIE
Chief Superintendent, Suffield Experimental Station

My introduction to a *Blenheim* came one New Year's morning midway through the war, and strangely enough my instructor on that occasion had trained with me as a pilot on the Canadian prairies. Both of us had seen the New Year in according to the best traditions, made the more appropriate and memorable since I was the lucky winner of a bottle of champagne in the mess raffle.

As we readied ourselves for the flight I must confess that I would have been happier and more comfortable dozing on my parachute in the crew room and I know that my instructor felt the same way. However, "need's must when the Devil drives", and we clambered up the rather steep wing into the cockpit of 213.

Johnnie ran through the cockpit drill and checks, and after a few wheezy coughs and gouts of blue smoke both the Mercury 25s caught and idled smoothly. I was immediately impressed by the *Blenheim,* by far the largest and heaviest aircraft I had yet encountered. The cockpit was roomy and the substantial dog-legged throttles "felt" comfortable and transmitted a distinct feeling of power and reliability. The large sliding roof gave adequate ventilation without draft and prevented that shut-in feeling so often experienced in other aircraft.

We had agreed that this first excursion would be short and simple and after clearance from the tower we headed down the runway. Johnnie demonstrated the take-off whilst I followed him through on the controls. I was impressed from the first motion as that fine old machine gathered speed smoothly and easily without any tendency to swing or yaw.

Once clear of the ground I leaned forward to raise the undercarriage. Those who flew *Blenheims* will remember that it almost required three hands for this operation and in a dual-control aircraft it was practically impossible to perform this simple task without giving the instructor a black eye or obscuring his vision. I had just unlocked the lever when I was conscious of a distinct loss of power and a terse obscenity from Johnnie that told me in no uncertain terms that the starboard engine had failed. I quickly glanced at the airspeed indicator and realized that we were just on the borderline for single-engine safety speed. With full power and pitch fully-fine on the port engine, we continued through the air on a slightly crabwise course and I could see that we were not gaining height, in fact we were gra-

dually losing it. At Spitalgate, the airfield is located on a hill just east of the City of Grantham. We had cleared the boundary of the aerodrome and were now gradually losing height from this hill down towards the city, and it was painfully obvious that our descent was going to take us into a large field apparently cultivated as a market garden. I can clearly recall noting the many small greenhouses dotted here and there.

Johnnie was holding the aircraft as well as he could under the circumstances and I must confess that I felt quite helpless and passenger-like, sitting in the left-hand seat just waiting for the forced landing to occur. This for me was a rather novel situation since I had just completed a long spell as an instructor on light aircraft and I felt that I should be doing something during this emergency. We continued to lose height into the valley and, since it now appeared as if a forced landing was inevitable, I tightened my straps and asked Johnnie if he wanted a spot of flap. Just as he answered in the affirmative the starboard engine, which had been windmilling (there were no feathering devices on the old *Blenheim*) gave two or three encouraging bursts of smoke and then roared into life. Taking full advantage of this return to power, we skimmed over the greenhouses and climbed gently out of the valley through the smoke and haze of early morning Grantham. By judicious nursing of the engine we regained circuit height, came in and landed, turned the aircraft in as unserviceable, hung up flying kit and retired to the comfort and safety of the mess.

The engineering officer and his crew were hard to convince that something *was* wrong with the engine since it would start easily, ran up well, and showed no mag drop. However, after it failed on two other occasions, fortunately before the aircraft left the runway, the engineering staff were finally satisfied that our adventure was not the result of poor engine handling. On dismantling they found an oversized push rod which tended to seize under load when the engine was operating at its maximum temperature. The rod, of course, contracted on cooling, and this fortunate physical property of metals had saved us at the last minute from an unscheduled landing in the market garden.

Despite this rather disturbing introduction to the *Blenheim,* it became a great favorite and was a joy to fly. After a few trips all of us began to display the *Blenheim* syndrome which consisted of skinned knuckles of the right hand. To reach the hydraulic controls the right hand had to be thrust into a channel between the seats. This channel was formed from sheet metal with rather sharp edges and repeated encounters with these edges soon played havoc with the knuckles. However, we bore these wounds proudly as if they were the equivalent of duelling scars.

After a very brief spell on day flying we found ourselves on the other side of the city at the satellite field of Harlaxton, attached to the night flight. Harlaxton, unlike Spitalgate, which had all the comforts

Embryo-pilot Pennie and Cornell *at No. 34 EFTS, Assiniboia, Sask., in 1943.*

The "Blenheim boys" entertain WAAF officers at RAF Stn. Hixon in 1944. Author is fifth from left.

and amenities of a peacetime RAF station, was a barren, hutted encampment and was primitive in the extreme. There was a supply of cold water from communal taps but the nearest source of hot water was at Spitalgate and we repaired there whenever possible for the general comforts of life, particularly the luxury of a shave in water other than ice cold, and a hot bath.

Our stay at Harlaxton coincided with one of the coldest snaps in many years and snow lay deep on the airfield and on the road system. The poorly constructed huts failed miserably to keep out the cold and frequently we slept in flying kit in an effort to defeat the elements. Each hut was equipped with a small cast iron stove which rejoiced under the romantic name of "Chattan Queen". These stoves, when properly coaxed, would burn anything and gave out a reasonable amount of heat. However, the fire box capacity was limited and during this cold snap they had to be fed continuously otherwise the room cooled off very rapidly. Water left in a jug on the hot stove overnight would turn to ice by morning. Official fuel for these stoves was non-existent and only the arch scroungers succeeded in keeping warm.

The airfield adjoined the extensive grounds of Harlaxton Manor, the home of the celebrated lady who so vehemently opposed capital punishment and who invariably turned up at prison gates to demonstrate whenever an execution was taking place. The perimeter fence of the estate was constructed of hewn oak timbers and many of these were appropriated and converted into calories. We had no axes and the only way to utilize the long timbers was to stick them through the small fire door of the gallant Chattan Queen and keep advancing the timber as it was consumed.

All through this cold spell we slept or tried to keep warm by day and flew the *Blenheims* by night. As a result of the cold, the night-flying aircraft were only shut down for refuelling and changes of pilot were made on the run with the engines running. It was a cold and difficult climb, with flying kit and parachute, up onto the wing against the cutting blast from the slipstream, particularly if the retiring pilot had a warped sense of humour and advanced the throttle just as his replacement, with snow on the soles of his flying boots, was battling his way over the wing root against the slipstream.

When the weather was really bad we had a stand-down. Transport to Grantham was infrequent and unreliable so we sought our relaxation locally. At the bottom of the hill lay the sleepy little village of Harlaxton, a quiet secluded hamlet which originally housed the estate workers and servants at the Manor. The one and only hostelry, the "Gregory Arms", became our home away from home. There we relaxed with large and copious pints of ale, the dart and cribbage boards and the local inhabitants. In addition, we found that the landlord's wife had a heart of gold and an almost endless supply of ham and eggs and homemade bread which she produced after closing time. Many a happy evening we had in this small and smoky pub and these after-hours' suppers in the family kitchen were the highlights of our stay at Harlaxton.

One of the salient points in the pre-takeoff check in *Blenheims* was to ensure that the cowling gills were closed. With the gills open and full power, the old *Blenheim* would sail down the runway and refuse to come unstuck. To every law and rule there are exceptions, of course, and our only American colleague proved to

us unintentionally one dark night that it *was* possible to get a *Blenheim* airborne with the gills open. His takeoff was miraculous to say the least. The *Blenheim,* with both Mercurys protesting vehemently, at full throttle and fine pitch burned up all the short runway, brushed through the long grass on the boundary and bounced into the air. The bounce was sufficient to provide initial lift and from there the aircraft shuddered over the living quarters, frightening the occupants out of their skins, and then disappeared down the hillside towards the village of Harlaxton. The gallant American by this time had realized what was the matter and managed to close the gills. With the air flow pattern proceeding over the wings, as planned by the Bristol designers, the faithful *Blenheim* raised its nose and climbed smoothly into the night. Our crewcut friend returned about an hour later still somewhat shaken by his experiences but inwardly rather proud and pleased that he had convinced us that it was possible to take off with the gills open.

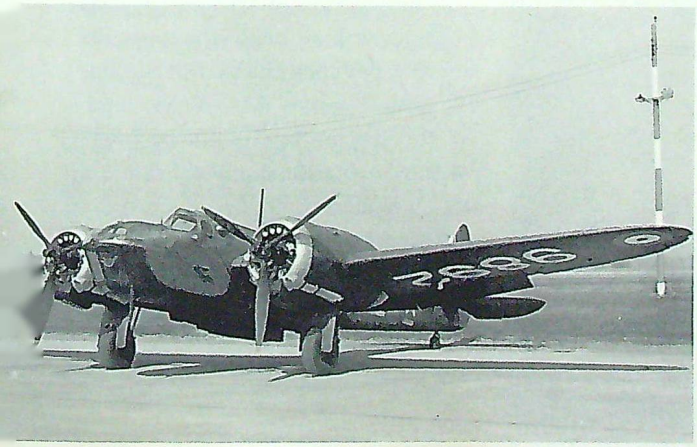
Our stay at Harlaxton was brief, and before we had completed our night flying time the whole unit moved to Hixon, near Stafford. All serviceable and, we suspected, semi-serviceable aircraft were readied for the great move and early one morning we departed as the vanguard of the party. The flight to Hixon was quite short, only a matter of 60 miles, but even over the short distance one of our members managed to lose himself and took something like two hours for the journey. Naturally, he did not admit his navigational shortcomings and insisted that he was just "having a sightseeing tour of the Midlands".

Hixon was a hutted wartime camp but had much better facilities than Harlaxton. There was lots of hot water available on the community site and an excellent mess with a large horseshoe bar. As first arrivals we took off on a general hunting and scrounging expedition. We looked over the pile of station bicycles and selected the most roadworthy, we inspected all the living quarters and chose the driest and most convenient to the mess, to the flights, and of course, the one with the best stove. A shout of joy went up when we discovered the communal bathhouse and an even greater shout when scalding hot water gushed from the tap. However, the cold tap produced nothing at all and we had to fill the bath with hot water and wait for several hours before the temperature fell to a safe bathing limit.

The airfield at Hixon was larger and better equipped than our previous homes and it was a delight and a pleasure to take to the air at night in the faithful *Blenheim.* Memories are still fresh of the comfortable cockpit, the ease of handling, and the general all-round stability of this great machine, and the exhilarating nights prowling around the Midlands with the cockpit top open, alone in that dark sky except for the steady throb from the two Mercurys and the smooth rush of air overhead.

We had our suspicions that the days of the *Blenheims* were numbered when a couple of *Beaufort IIs* made their appearance on the unit. New courses were scheduled to convert to them whilst we finished off our time on the faithfuls. Towards the end of our stay at Hixon we were shaken from our afternoon siestas by the insistent and penetrating Tannoy: "Report to the flying wing office immediately." Everyone had wild reasons – a posting, leave, an enquiry into the party the night

On display at National Air Force Day at Rockcliffe last month was this 22-yr. old Bolingbroke *(Canadian version of the* Blenheim*) in the markings of No. 115 Sqn., the first RCAF unit to score a victory over an enemy submarine in Canadian waters. This museum aircraft was donated to the RCAF by Mr. G. A. Maude of Sidney, B.C, on National Air Force Day at Rockcliffe last month. So far as is known, the only other of this type thus preserved is a* Blenheim *IV in Finland.*



before, perhaps an investigation as to how the farmer's cow made its way into the WAAF officers' quarters. All these wild conjectures were dispelled when we reached the flights. We were informed that the 14 remaining *Blenheims* had to be ferried to the Bristol factory at Filton, their birthplace, to be scrapped.

The log books were held out by the flight commander like a pack of cards, and we were invited to draw one each. There were some anxious faces – for no one trusted 213, which was still considered a jinx aircraft, even after all these months. My roommate's face fell a trifle and it was obvious that he had drawn the joker. All the aircraft had been stripped of worthwhile equipment, including radios and navigational aids, and before takeoff we exchanged log books just in case something went wrong so that the court of enquiry would have the record book of the unfortunate aircraft.

We accepted this jaunt happily and agreed, radio or no radio, that we would go in a mass formation. One by one we took off from Hixon, circled the field until all 14 were ready, and then set course for Filton like a gaggle of migrating geese. I watched 213 with an anxious eye and at times felt a trifle apprehensive as it belched blue smoke from the starboard engine at regular intervals. A pleasant trip in good weather saw us arrive at Filton en masse. Each one of us had different ideas how to join the circuit and, without any radio communication with each other or with the tower, considerable confusion reigned. I found myself within striking distance of the end of the runway, reduced power, let down full flap and turned in on the approach. As I lined up with the runway I was fully conscious that this was the last *Blenheim* trip I would ever have and, what was more important, this was the last landing that this particular *Blenheim* would ever make and that it deserved a smooth and, if possible, a classical arrival. Carefully I nursed it in over the boundary, eased off the power, rounded out at the right height and held the aircraft off according to the book. It stalled and dropped onto the runway from a few inches on all three wheels. It was one of the best landings I had made for weeks but it was skillfully engineered as a tribute to a great machine.

The circuit and approach were now full of *Blenheims* at different heights and angles and I taxied quickly off the runway to dispersal. As I parked the aircraft, I offered the undercarriage locking pins to the ground mechanic. He waved them away and said there was no need for them since the aircraft were going to be broken up the following day. I jumped down from the cockpit, humped my parachute onto my back, gave the tail plane a friendly pat in the nature of a sincere farewell, and turned my back on the good old *Blenheim* forever.

Scenes From 20 Yrs. Ago

George Broomfield, ARCA, is a Canadian artist whose works are attracting increasing attention these days. Twenty years ago he was an RCAF equipment officer attached to No. 143 Wing, 2nd Tactical Air Force.

Despite the nomadic life and hazards of war-torn northwest Europe, he maintained an almost daily record in drawings and paintings of No. 143 Wing's progress from the Normandy beachhead to the German border. Recently he displayed in his studio at 232 Isabella Ave., Cooksville, Ont., a selection of these canvases to commemorate the 20th anniversary of D-Day.

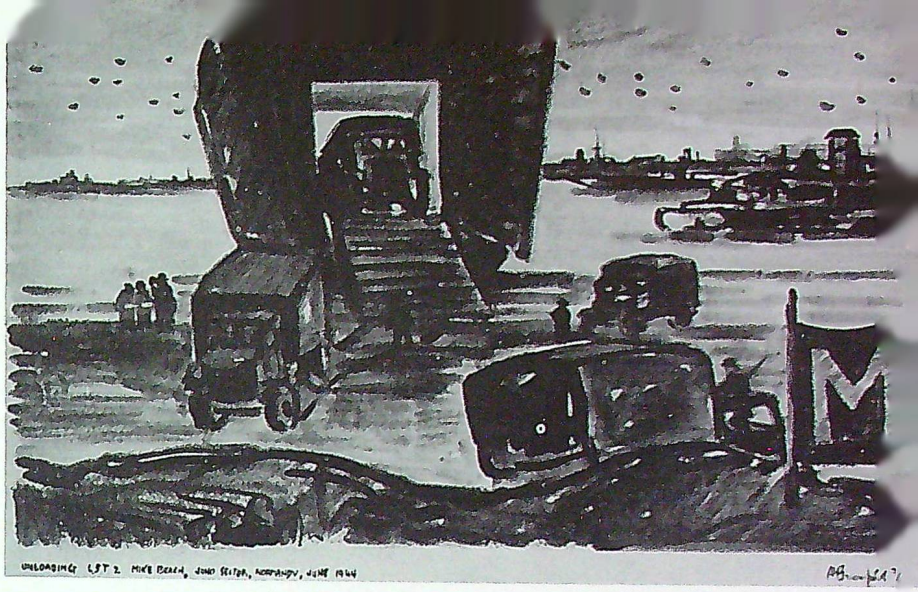
"The reaction of visitors suggests I do something with these works before I put them away for another 20 years," writes Mr. Broomfield. "If you feel anyone might be interested in seeing the complete set, it is still on exhibition."

Accompanying the reproductions on the opposite page are captions written by the artist.

BEACH LANDING FROM L.S.T., NORMANDY 1944

With first light next morning, our transport ran ashore and the large door-ramp came down ready for unloading. The first man to step down the slope had a rope tied around his waist as he had to jump in and find the best underfooting to shore. Fortunately, our L.S.T. ran ashore in only two feet of water which soon receded giving our vehicles a fairly dry landing. "Mike" beach area was ours and little time was wasted getting the load ashore and most carefully marshalled along the taped-off beach. Mines and general destruction of less than two weeks before (D-Day) would be too difficult to describe.

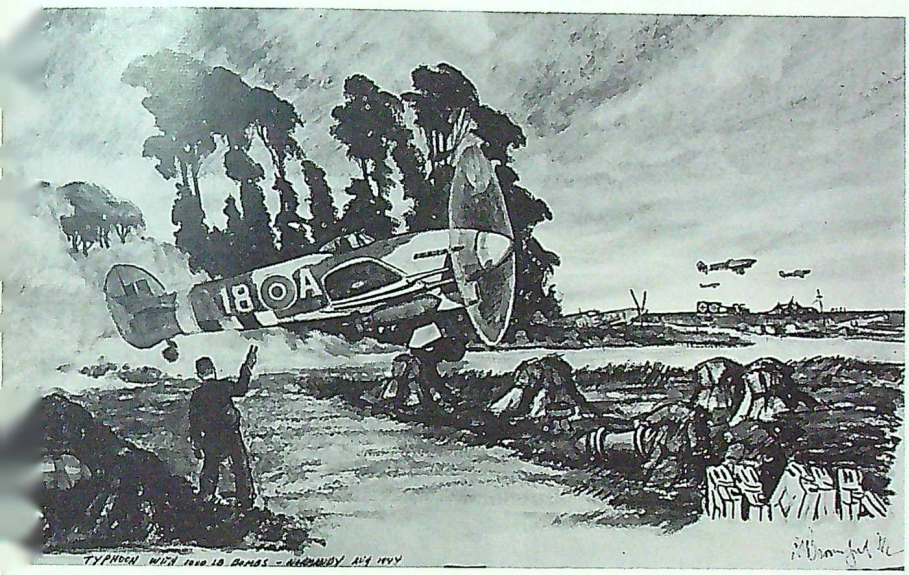
Next stop was for stripping our vehicles of waterproofing, then with foot hard down on the gas, no time was lost in reaching our pin-point on the map.



TYPHOON FIGHTER-BOMBER NEAR LANTHEUIL, JUST OUTSIDE CAEN

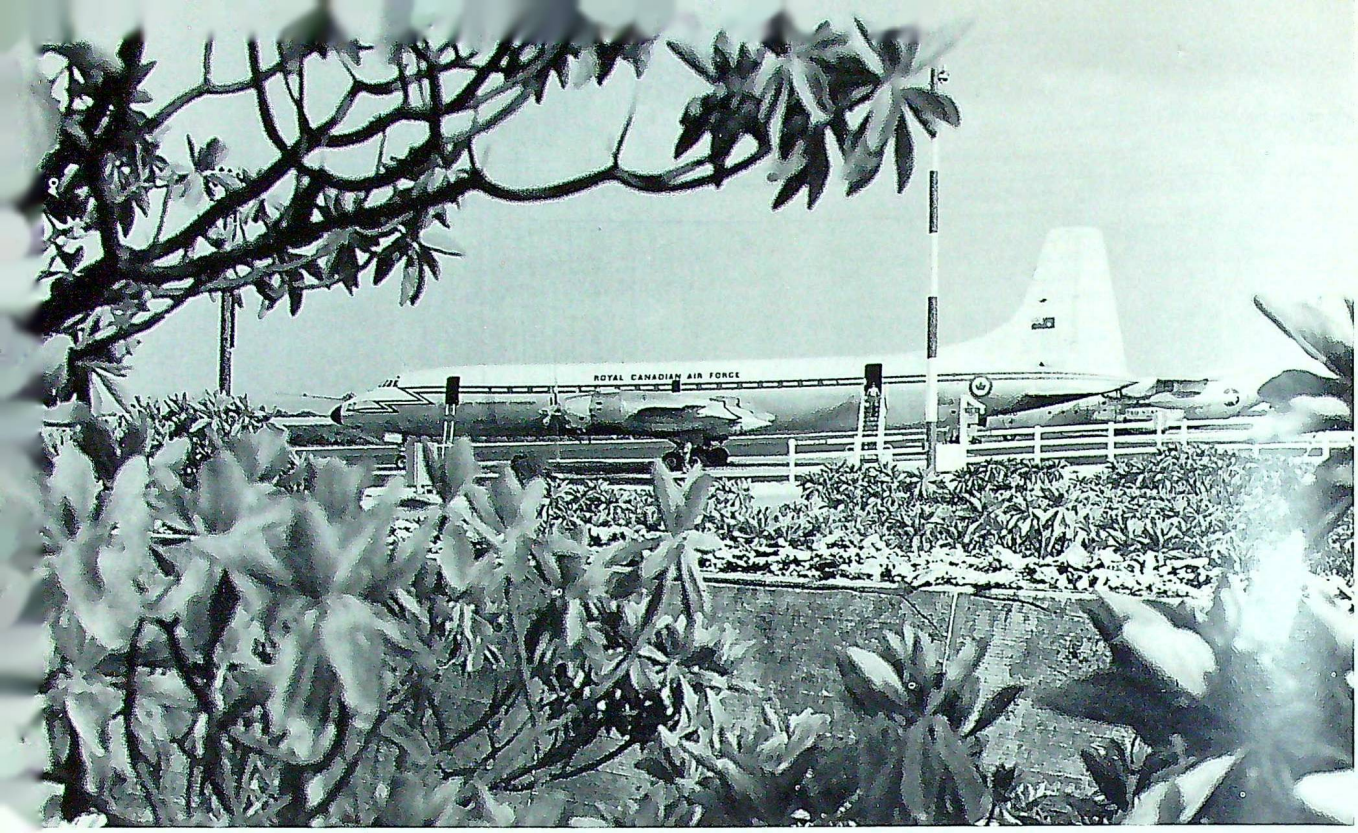
The Typhoon *aircraft, with its camouflage, D-Day black and white markings and two 1000-lb. bombs, always reminded you of a gigantic bug about to take off. The great sweep of the prop while taxiing out of dispersal areas raised the typical yellow Normandy dust in clouds during a heavy operation, which to German observers surely meant business and fair warning to keep their heads down.*

The lone stand of trees dead centre of the field provided a landmark from miles away, but little protection for those seeking shelter when things warmed up. In this area whenever possible shelters for working, etc., were below ground.



NO. 143 WING OPERATIONS VAN, MELSBROEK, BELGIUM, 1944

This sketch shows one half of the operations section functioning in the normal way, with the aircraft leaving for the Wing's new location. There, within 24 hours, the other half would be set up and maps marked with all in readiness for continued "Ops". No time was lost as the aircraft carried out missions between moves, and flew into their new field after a job briefed from the old field. Certainly the Germans were given little rest in spite of the ground base moving forward in 150-mile bounds.



Lush tropical growth frames No. 4 OTU Yukon *during crew-rest stop at Wake Island on round-the-world training trip.*

TRANSPORT TRAINING

By SQUADRON LEADER R. M. L. BOWDERY

Staff Officer Public Relations, Air Transport Command

AIR Transport Command is proud of its outstanding safety record, its operational efficiency and its quick reaction time. In July 1950 six *North Star* aircraft of No. 426 Sqn. from Montreal arrived at McChord Air Force Base on the west coast. Crews were briefed the next day and that same evening all six aircraft were on their way to Japan, thus inaugurating the RCAF's highly successful Korean airlift. During the Suez crisis in 1956, ATC's *Flying Boxcars* were operating out of Capodichino, Italy, into Egypt less than 48 hours after leaving Canada. The 1960 Congo crisis saw *North Star* aircraft airborne and on their way to Leopoldville less than three hours after the "go ahead" was received from Ottawa. The recent Cyprus airlift also emphasized the constant readiness and capability of Air Transport Command.

This spring a *Yukon* aircraft, loaded with freight for Canada's NATO squadrons and medical supplies for Canadians serving in Saigon, began its long trans-Atlantic flight from Trenton, Ont., to Marville, France. Unlike aircraft on a regular service flight, this particular *Yukon* carried a complement of three full crews – two made up of students under instruction at No. 4 Operational Training Unit, the third composed of a group of instructors from the OTU staff who would supervise and monitor the actions of the crews under training on this round-the-world flight.

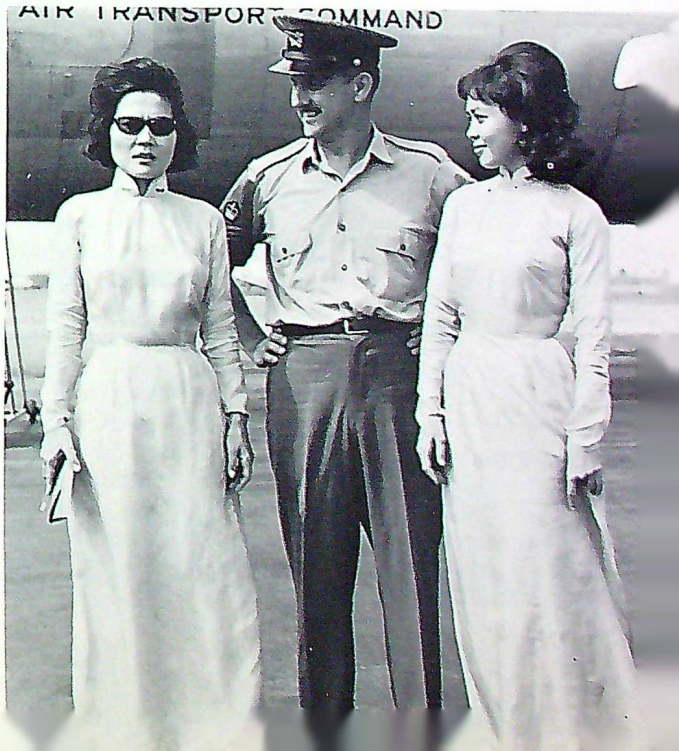
After unloading at Marville, the "working crew" was de-briefed by the instructors and the "relieving crew" received its pre-flight briefing for the Marville to Aden leg of their 22,000-mile journey. Similar briefing and de-briefings followed each landing as the aircraft continued through Saigon, Hong Kong, Wake Island, Honolulu and Vancouver and back to Trenton.

"These flights," commented W/C C. S. Olsen, officer commanding No.

W/C C. S. Olsen, OC of No. 4 OTU, and F/L R. T. A. Barnett, navigation instructor, check the route at RAF base in Aden. Nine stops were made during this 22,000-mile training flight.

"Nautilus Rex" (in the person of W/C C. S. Olsen) and "Prince of the Deep" (F/L G. W. Pinder) perform traditional dousing on F/O J. L. G. Verrault. Ceremony for all first-time Equator-crossers was held aboard No. 4 OTU Yukon *five miles above Indian Ocean.*

ROUNDEL doesn't mean to imply that senior NCOs let their juniors do all the work, but at Saigon while Cpl. P. J. Graves helps unload medical supplies, student flight engineer FS J. Sopaz gets acquainted with two pretty Indo-Chinese girls.



4 OTU, "provide our crews with invaluable training in world-wide operations. We intend to make them a regular routine for crews just prior to graduation to operational squadrons."

Operational training for Air Transport Command is carried out in a sprawling complex of buildings located in various parts of RCAF Stn. Trenton. Scene of aerial instruction for the long list of aircrew trades trained at the OTU is big arch-type No. 9 Hangar. The ground floor of No. 2 Admin. Bldg. on the south side of the station houses the OTU ground school where 400 students each year in 20 different courses spend long hours on the extensive classroom syllabus. Immediately to the south of the water tower lies a large white building conspicuously marked "4 FTTU". Here technical instruction on the *Yukon, Cosmopolitan, Dakota* and *Flying Boxcar* is given to ground and aircrews. (In 1963 No. 4 Field Technical Training Unit graduated 1000 students in a variety of 46 different courses.) Further to the south and attached to the station Rec. Hall is the OTU flight simulator. Two general purpose and one *Yukon* simulator provide plenty of opportunity for "front office" aircrew to fly from Trenton to Timbuctu, or from Dakar to Dar es Salaam, without leaving the confines of the simulator building.

In the years immediately after World War II transport squadrons used to do their own conversion training. As squadron duties became more onerous and transport aircraft more complex, this conversion to type was too demanding a task to be handled by the squadrons in addition to their operational commitments. Training was always competing with operations and usually came out second best. Also the problem of standardization of training became increasingly important. As a result, No. 4 (T) OTU was conceived and born at Dorval on 1 Mar. '52.

At first the unit trained only on *North Star* and *Dakota* aircraft. Squadron Leader P. L. Michel (ret.) was the first officer commanding, with F/L W. R. Lloyd (now W/C) initially in charge of *North Star* training and F/L E. C. Kerslake (now S/L) in charge of *Dakota* training. One of the original trio of *North Stars* (No. 508) is still with the OTU at Trenton. *Flying Boxcar* training was added to the OTU syllabus in the summer of 1952 when these aircraft began to arrive from the United States. During that same summer the OTU trained an initial course on the *Bristol Freighter.**

Initially the OTU trained only pilots and navigators, but gradually training expanded to include radio officers, flight engineers, and transportation technicians. Because of lack of accommodation and the growing congestion of air traffic at the Dorval airport, the unit was scheduled to move to Trenton in the fall of 1953. Repeated delays in the completion of No. 9 Hangar meant the move wasn't actually carried out until early 1954. In the meantime the OTU staff were being transferred on paper and gradually moved their families to the Trenton area. "It was probably the first time in RCAF history," mused one of the original staff, "where the wives and kids were settled in an area before their menfolk."

No. 4 Field Technical Training Unit's primary function was to provide technical training on *Flying Boxcar* aircraft, initially for technicians only but later for aircrew. With the advent of new transport aircraft it was decided that No. 4 FTTU should provide all the necessary technical training on all ATC types and that this training should be given at one location. This reorganization became a reality in the fall of 1959 and by Dec. '60 the FTTU had moved into a newly-renovated building which could house the entire staff and student body.

The FTTU now provides conversion training both for aircrew and groundcrew on the *Yukon, Cosmopolitan, Flying Boxcar, Albatross,* H-34 and CH-113 helicopters and plans are now underway to include *Hercules* training. Aircrew technical training is given on the *Dakota.* Telecommunications courses on radio and radar equipment used in ATC aircraft are given at the FTTU. Additionally, a course is given on the ignition analyzer and until recently technical courses on the *North Star* were given to both air and groundcrews. Now, *North Star* courses are conducted on an "as required" basis.

At present the school has an active list of 47 different courses and when necessary this list can readily be expanded to a total of 52 courses. The classroom accommodation limits the number of courses that can be conducted at one time to 13. Consequently, a great deal of administrative juggling of people is required between the technical trainers at the FTTU, the air trainers at No. 9 Hangar and the ground trainers at the 4 OTU ground school.

Simulator training has always been an important part of the OTU syllabus. Trainers have improved beyond measure from the Link Trainer of World War II days. Simulator training at the OTU received a real boost when the first of two general purpose trainers was delivered in 1960. The big *Yukon* operational flight trainer was brought to Trenton in Nov. '61 and was ready for full-scale use the following January. A gargantuan assembly that requires a specially air-conditioned room for its many electronic components, the OFT hums along earning its keep with a regular 12-hour day schedule.

Originally training groundcrew and flight engineers in engine handling, the OFT is now used primarily

*The OTU completed only the one course on this type of aircraft. Subsequent training on the *Freighter* was given at Langar, England, by the staff of the transport flight there.

Number 9 Hangar, home of the OTU, with Dakota, Cosmopolitan *and* North Star *aircraft on the line.*

A group of students in the Yukon *operational trainer get a check-out on fuel management from one of the flight engineer instructors.*

Sgt. J. L. Hamel (left) and Cpl. A. Woods (right), both students of No. 4 FTTU, use one of the school's training aids.

in the training of pilots and flight engineers. A pilot taking the first pilots' course at the OTU does 80 hours flying in the trainer before he even begins to fly the actual aircraft. Fully qualified pilots return to the trainer each month to carry out a four-hour exercise. Green ticket rides can and are given on the OFT; crews are checked in emergency procedures, let-down and approach proficiency on the trainer. Pilots concede that the trainer is harder to fly than the aircraft. Instructors gleefully admit that trainer exercises are dear to their hearts because "the situation is completely controlled throughout".

Instructors can set up any number of emergencies during a trainer run. They can cut engines, cause in-flight fires, loss of pressurization, simulate icing, bad weather, radio failure and in general, "make the trip pure hell" smilingly admits F/L R. Sierolawski, present officer commanding the simulator section. Although the machine is invaluable right now, future plans call for additional sophistication of the equipment with motion and closed-circuit TV to give added realism and increased training effectiveness. F/L J. Stockdale, who nursed the trainers through their initial growing pains before handing the section over to F/L Sierolawski in late 1963, mentioned that "even without major improvement, the trainers are world beaters in basic and continuation training for groundcrews as well as aircrews".

Ground training at the OTU is given in the basement of the No. 2 Admin. Bldg. at Trenton. Here, F/L R. Burns, chief ground instructor, and his 29 staff instructors keep the 20 different types of courses flowing smoothly through the school. Instruction is extremely diversified and course lengths vary from a mere three days for flight engineers, flight technicians and flight attendants to the full 12-week course for navigators and radio officers. (The flight engineers and flight technicians receive the greater part of their training on type at No. 4 FTTU.)

F/L R. E. Burn, chief ground instructor, indicates to W/C C. S. Olsen (seated), OC of No. 4 OTU, and S/L J. G. Wynn, chief flying instructor, how ground-school and flying courses are progressing.

Although course content varies from one course to another, all students are given the high altitude indoctrination course while at the OTU. The high altitude course is made up of runs in the decompression chamber to 25-30,000 feet and subjects trainees, under medical supervision, to anoxia and explosive decompression. "Wet" dinghy drills are also part of the ground school course. Students are given a dunking in the station swimming pool and take practical instruction in dinghy work.

Flight attendants are selected from airwomen volunteers who often arrive at the OTU not only with little or no knowledge of flying but sometimes with virtually no practical cooking experience. A chief steward from No. 412 Squadron at Uplands trains the girls in simple culinary projects. They cook a breakfast and then serve it to GIS members in a simulated *Yukon* passenger environment. Later they serve cold meals to a group of personnel in a *Yukon* on the ground. Next, they go on flights with student crews and serve hot meals en-route. They then progess to squadron duty and perform their flight attendant duties on regular service flights.

The OTU training is broken down into two distinct categories: piston training and turbo-prop training. There is a fairly large spread in pupil background, some students arriving right off the end of "the training pipe line", others with several years experience on jets or piston aircraft. *Dakota* training is provided

at No. 4 OTU for crews for the navigation school at Winnipeg, for communication and search and rescue units throughout the RCAF and for Nos. 412 and 435 Sqns. Crews are also trained on the piston-powered *Flying Boxcar* and, on an "as required" basis, on the *North Star* aircraft. The first turbo-prop course began in Feb. '61 on *Cosmopolitan* aircraft and later that year on *Yukons*. Pilots are given an initial course on the *Yukon* at No. 4 OTU which qualifies them as first officers. After acquiring experience with No. 437 or 412 Sqns. they return to the OTU for the 10-week advanced course and on graduation are qualified *Yukon* captains.

Correct phasing of air training and ground school instruction is a very important part of the OTU administration. This co-ordination is controlled by the "dart board" in F/L Burns' office where reference to the positioning of the coloured pins gives a constant visual picture of student flow.

A veteran transport pilot himself (he flew *North Stars* on the Korean airlift), W/C Olsen assumed command of the unit in 1963 on his return from UNEF Headquarters, Gaza, where he spent a term as senior air staff officer. Flying instruction given by OTU staffs is centered on Number 9 Hangar, where S/L J. G. Wynn is the chief flying instructor.

While primarily concerned with training, No. 4 OTU has long been active in the operational role as well. OTU crews and aircraft supported No. 436 Sqn.'s early efforts in the Suez airlift, operating out of Capodichino, Italy, into Abu Sweir in Egypt in 1956. OTU personnel were used in the initial stages of the Congo airlift in 1960. In the fall of 1963, when No. 426 Sqn. was disbanded, a *North Star* operational flight, commanded by F/L J. S. Schroder, was formed with the primary role of United Nations support and a secondary role of long range training for aircrew other than pilots. Members of the flight operate out of Pisa, Italy, into El Arish, Egypt, carrying UN personnel and supplies. During the RCAF operation in the Yemen *North Stars* of the OTU extended once a week to Sana on UN support duties. While passengers are not carried on OTU training flights these aircraft do transport freight throughout Canada and overseas. *Flying Boxcar* training flights carry freight to Resolute Bay and other northern bases as well as to RCAF units throughout Canada. The OTU makes use of regular Atlantic flights to train navigators and radio officers. Thus, No. 4 OTU gives its graduates the experience and self confidence they require to fulfil Air Transport Command's motto of "Versatile and Ready".

UNIQUE SPORTS CAR

BY BORROWING some of the thunder from several American, French, German and English cars, Leading Aircraftman Charles Kelly has built his own personal thunderbolt while stationed in Europe. A vehicle mechanic with the RCAF since enlisting in 1955, the 30 year-old airman was transferred to No. 1 Air Div. HQ in Metz in 1961.

For approximately $500, Kelly has practically hand-made an estimated $3000 worth of bright red lightning capable of at least 130 mph. Conditions have never been exactly suitable to find out the extreme top speed of the vehicle, which its creator estimates took 2000 off-duty hours to manufacture.

The running gear, wheels and axles were culled from wreckers' yards. The engine, from a Thunderbird, was retrieved from a farmer's field where it reposed, practically undamaged, after the car was wrecked. The frame is made of welded tubing to give a five-inch ground clearance. The most expensive single item, and one of the few parts bought new, was the custom-made soft top (price $60).

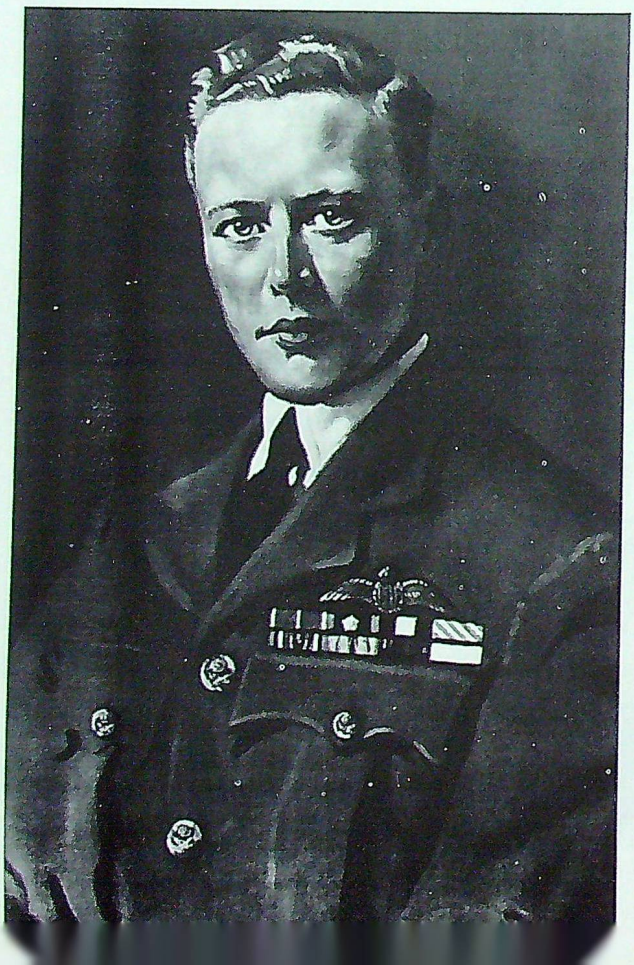
Registration proved a problem when no recognized auto could be pinned down as the major component. Kelly wrote letters, entered into negotiations with the appropriate authorities and, this spring, a new make of car was registered – a 1963 Kelly, with a short production run of one. It is scheduled for export to Canada soon, purely as the personal property of LAC Kelly. A man has to have something to show for a four-year stay in Europe.

SOUTH RUSSIAN ADVENTURE — 1919-20

THE WAR with Germany was finished, but as it turned out, it was not the end of the fighting as far as I was concerned. In the spring of 1919 a counter-revolution developed in Russia, various White armies being raised to fight the Bolsheviks. The Reds had abandoned the Allies during the war and had made a separate peace with the Germans. When the war ended the Reds remained hostile to Britain and, after General Kornelof's White Army had gained some successes in the Caucasus, the British government decided to send an air force contingent to support his forces. British troops were by that time already fighting in North Russia and Siberia in support of White armies in those areas.

I was chosen to command the RAF combatant detachment for duty in South Russia. All ranks had to be volunteers and I visited many RAF units in Britain to select members for the force. I was able to put together a fine body of men and we crossed through France aboard a special train and took ship in Italy for the Black Sea port of Novorissisk in South Russia. By the time we arrived General Kornelof had been killed and General Denikin had assumed command. His forces had met with sweeping successes and had occupied the major part of South Russia. We were the only British combatant force there and provided the only air force available to Denikin, whose forces were organized into three separate groups of armies – the Kuban Cossack Army on the Stalingrad front, the Don Cossack Army between Stalingrad and Kharkov, and the Volunteer Army in the Ukraine.

The author, as he appeared shortly after the end of World War I.



Our aircraft were DH9 and DH9a two-seater bomber-reconnaissance machines and Sopwith *Camel* single-seater fighters, all drawn from the aftermath of the war in the Middle East. They were formed into three separate flights, and as the flights were successively formed they were despatched to the far distant fronts. By the autumn of 1919 the front line of Denikin's armies extended for a thousand miles across South Russia and success seemed assured. Our headquarters was established at Krasnodar, and from there the three flights operated from special trains which took them to the various fronts on which they were employed. The different flights were usually located so far apart from one another and so far from the headquarters base that they seldom, if

OF A CANADIAN AIRMAN

Third of Five Parts

By AIR VICE MARSHAL RAYMOND COLLISHAW, CB, DSO, OBE, DSC, DFC

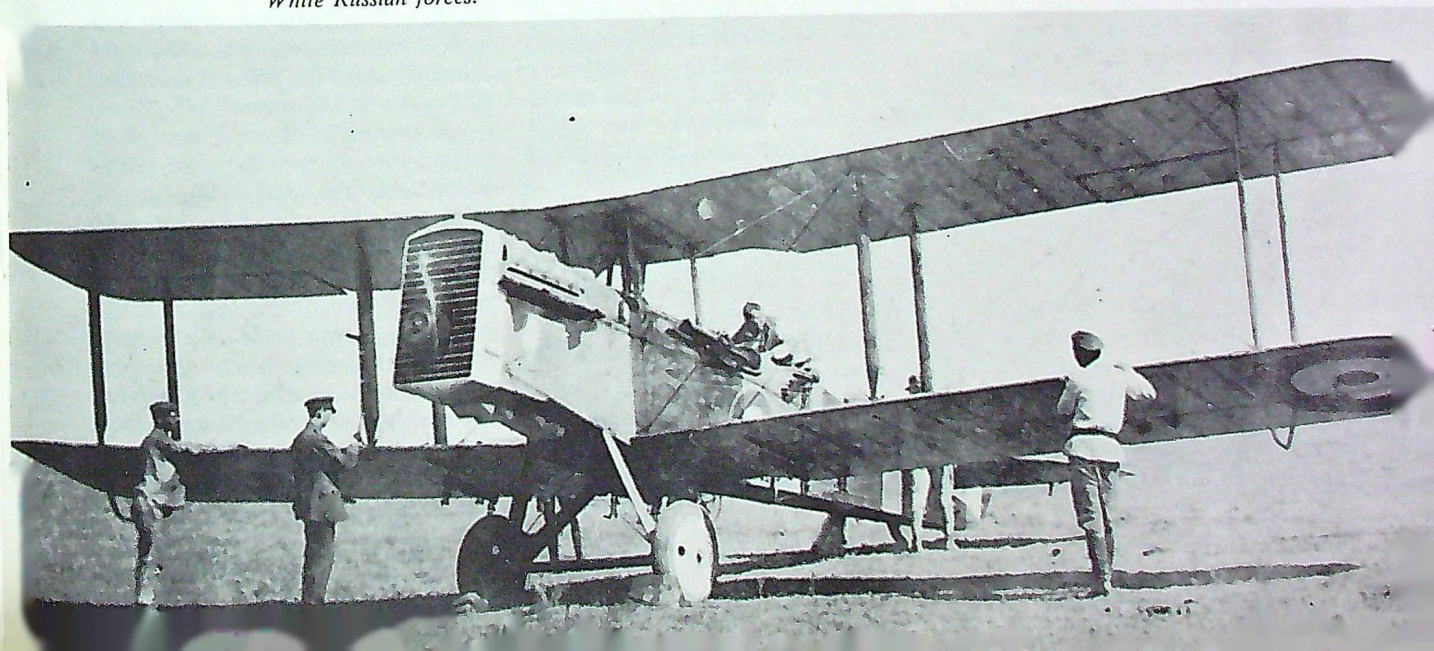
ever, met, but went ahead with their operations as best they could in co-operation with the local White Army commander.

Most of our flying was bombing and strafing attacks on ground targets and reconnaissance, and there was little of the fierce aerial fighting of which I had seen so much in France. A few German fighter pilots in German aircraft appeared with the Bolsheviks but they were soon shot down by our pilots, and thereafter we met with little aerial opposition.

Early in the campaign a fierce struggle developed for the possession of the strategic town of Stalingrad on the Volga, which the Whites had captured. The Reds had a river flotilla on the Volga and they massed a force of some 20 gunboats to shell the town, the idea being that an infantry assault would take the point while it was being bombarded. One of our bases was only 12 miles from Stalingrad and we operated a shuttle service, our planes landing and remaining only long enough to refuel, take on more bombs and ammunition, and then taking off again. I conceived the idea of using 230-pound anti-submarine bombs against the river vessels, and instructed my crews to try for near-misses rather than direct hits. These tactics worked well, the terrific under-water blast being extremely effective against the light gunboats. We managed to sink or disable most of these Red river craft and the remainder withdrew. Our attack on these ships was probably the earliest outstanding success by aircraft in sinking vessels by bombing.

On the Kuban Cossack Army front many thousands of cavalry were employed by both sides, and cavalry became the principal target of our machines in ground strafing. On one occasion one of our pilots was shot down in the midst of thousands of hostile cavalry, and while the observer kept them at bay with his machine gun, a second aircraft landed alongside and rescued both pilot and observer. As the Reds lacked an effective air force, the RAF detachment constituted a serious danger to them. They replied to our successes by announcing the frightful things that would happen to any of our flyers who might be captured. Some of the tortures that they promised would be the lot of any of our men taken prisoner were

Several Red prisoners-of-war are helping handle this DH9a being engine-tested. The RAF contingent under Collishaw's command used these machines to support General Denikin's White Russian forces.



DH9a bomber-reconnaissance aircraft of No. 47 Sqn., RAF, which operated in South Russia under command of Major R. Collishaw during 1919-20.

too dreadful to repeat in print.

Our attacks on Red cavalry on the open steppes, as well as on infantry, caused the Bolsheviks serious losses and there is no doubt that the rapid advance of the White armies owed much to the work done by my detachment. The White Army commanders were alert to the operational value of an unopposed air force, but they had little understanding of our limitations. We were thus frequently given tasks which were beyond our capacity.

The employment of masses of cavalry resulted in a front that was in many sections extremely fluid. Advances or retirements of as much as 70 miles a day were not unknown. This resulted in odd, and at times embarrassing, situations. On one occasion the Kuban Army commander proposed to employ a cavalry striking force against a Red base some 80 miles east of Stalingrad, and named a zero hour for our co-operation. I arranged to set up a temporary air base about 20 miles from the Reds, where our planes could be refuelled and re-armed as they returned from their attacks. We began our attacks at the appointed hour but there was no sign of the White forces with whom we were supposed to be working, and after several hours we broke off and prepared for a meal. A short time later a cloud of dust arose from the direction of the enemy and a hurried aerial reconnaissance showed that thousands of Red cavalry would very soon be all around us. Immediate action saved us just in time, and the aircraft were able to keep the Red cavalry at bay until we had withdrawn our motor vehicles. In the meantime, the White forces had disappeared.

While carrying out a reconnaissance flight on the Stalingrad front in the autumn of 1919 my machine was hit by a rifle bullet and we had to make a forced landing. My observer and I had to walk six miles to the nearest railway and then travel with some soldiers in a freight car. I must have been bitten by lice from the soldiers for only a few days later, after my return to Stalingrad, I came down with fever. It was not diagnosed as typhus, but the service doctor decided to send me to our main headquarters base as a precaution, with two walking-case sick airmen. It was five-day rail journey, and both the airmen had to take to their beds with dysentery. This was unfortunate for me, for I developed a full case of typhus, and there was no one to look after me. I was in a bed in one of the luggage vans and soon I was delirious. When the train halted at a village midway between Stalingrad and Krasnodar a refugee countess heard of my plight and had me moved from the train to the cottage she was occupying. I knew nothing of this, of course, and was unconscious for several weeks, while the old lady nursed me through a crisis. When consciousness came back I was extremely weak and only very gradually revived. As my strength began to return I found myself at a loss to account for my surroundings and as I could speak no Russian, and my benefactor no English, we could not communicate.

I had been missing from the RAF for six weeks when one of our aircraft landed nearby, and hearing of a British flyer who was ill in the area, the pilot sought me out. Soon another machine was sent to pick me up and take me to convalesce at our main base. Unfortunately, I was never able to express my thanks to the countess, as the Reds occupied that part of the country before I recovered and she disappeared. Anyone with a first-hand knowledge of typhus, and what it entails, will be able to imagine what she must have endured as an act of grace in nursing a strange, unconscious man for several weeks in a one-room cabin.

At the beginning of winter, 1919, Denikin's armies had reached their maximum point of advance and had occupied a vast area. Everywhere the White Armies had been victorious, and these successes had been repeated by Kolchak in Siberia and by the White Army on the Baltic. The chances of a general White victory seemed good. Alas! Rumours began to circulate that the policy of the White Army after victory would be to restore the ancient regime, with the landlords taking back possession of their estates. There was a perceptible weakening in the determination and will in the White Armies, while the Reds redoubled their efforts and their propaganda. The home front behind the Volunteer Army in the Ukraine declared for the Bolsheviks and General Denikin resigned, his command being taken over by General Wrangel. The Volunteer Army collapsed and while the Kuban and Don Armies resisted the Red advance for a few weeks, in a short time the masses of White troops, with their families and friends, joined in a mad rush for the sea or into the Caucasus.

During the retreat of the Volunteer Army which culminated in the final debacle, I was in an RAF train which gradually withdrew from the neighbourhood of Orel over a distance of 500 miles into the Crimea. We operated our aircraft from the open country adjacent to the train in winter conditions of snow and ice. As the whole of the Volunteer Army was in desperate retreat, our arms sometimes constituted the only real defence in the area. Aircraft serviceability gradually fell and then finally collapsed, and we were forced to save what few machines we could by despatching them to the rear.

Conditions on the railways were almost indescribable. There was neither fuel nor water for the locomotives. The people along the route had become intensely hostile and anxious to welcome the Reds. Forces of hostile irregulars were operating freely across the lines of communication. There were no trains going in the direction of the enemy – all were making their way as fast as they could in the other direction. The RAF train was armed with aircraft machine-gun turrets mounted on the roofs of some of the cars. The normal train crews had gone over to the Reds and airmen served as engineers and firemen on the two locomotives that pulled our train. As an act of mercy we had taken aboard several hundred Russian officers' wives and children and they now became a source of embarrassment to us. Typhus had broken out and they hid their dead on the train, rather than throw the corpses on to the edge of the right of way as I had ordered. This was perhaps a brutal order but it was necessary, for we could not afford to stop and dig graves in the hard-frozen ground.

Officers stood on guard, fully armed, night and day, in the locomotive cabs and on the roofs of the cars. Our lines of escape into the Caucasus had been cut off and there was a grave risk that we would also be cut off from the Crimea, our only other point of safety. As we passed through the towns we had to send out armed parties to commandeer wood for fuel. Water for the locomotives was obtained by the women holding out their skirts to be filled with snow, and then dumping it into the water tanks. The rail lines were congested and progress was slow,

This photo of a DH9a was probably taken at Ekaterinodar, in the Kuban, where No. 47 Sqn. made its headquarters after arriving in South Russia.

and day after day we crept along at some 10 miles an hour. I knew that the Bolsheviks were operating an armoured train armed with a 9-inch gun on the rail lines behind us, and when it was reported only a few stations away this increased our frustration over our slow progress.

While our train was halted for fuel at Balshoi Tokmak the enemy managed to release a run-away locomotive down an incline and it smashed into the rear of our train at high speed. Our train was turned into a shamble. The wooden trucks were telescoped but the steel coaches withstood the shock. Herculean efforts were required to thrust the smashed trucks off the rails and to join up the surviving steel coaches. Somehow it was done and the remnants of the train moved safely into the Crimea. Other RAF trains reached Novorossisk, having made it safely over the railway bridge at Rostok.

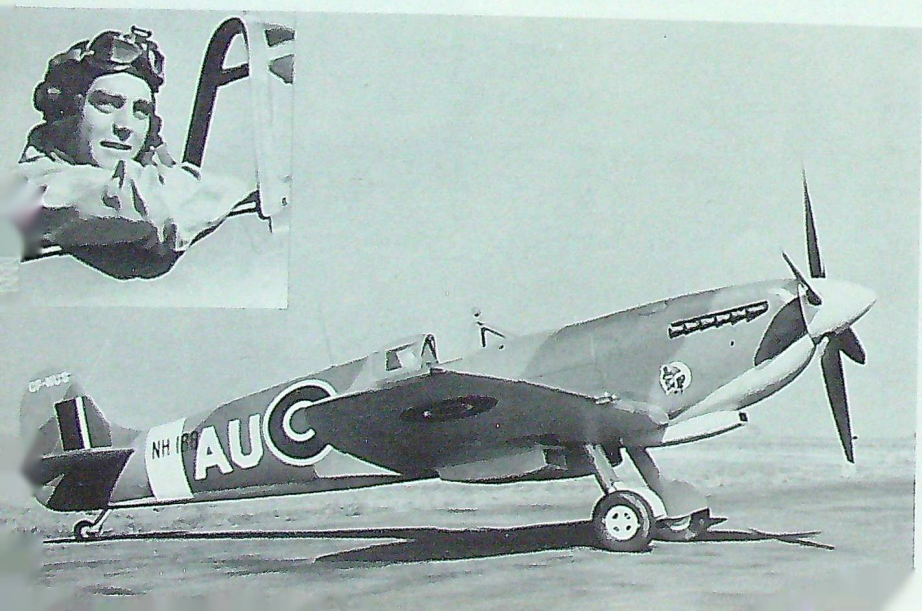
The RAF took over a Russian aircraft depot in the Crimea and we soon had enough aircraft for one squadron, which we assembled from our reserves carried on the train. Soon afterwards, while flying a reconnaissance over the country north of the Crimea then in Red hands, my aircraft was damaged by ground fire. The engine would not keep the machine in the air and we had to make a forced landing. The engine would still turn over enough, though, for us to taxi for miles over the frozen surface, and then across the frozen, intervening sea, and to reach the Crimea.

The Russian general in command in the Crimea was an unstable character, and whenever the Bolsheviks broke through the Perekop Neck defences all he could think of was to order the RAF detachment to repel them. On one occasion he issued written orders that all RAF pilots were, if necessary, to destroy themselves by diving into the ground, in the hope that this would inspire the White defenders to a final and supreme effort. Happily, I was able to interpret the order liberally.

By this time – January, 1920 – the RAF squadron was split into two portions. There was the one portion which I had taken into the Crimea and the other, which had managed to get into the Kuban country and on to the main base at Krasnodar. We continued the fight against the Reds as best we could, but at the end of March the British government withdrew the squadron. We went by ship to Constantinople and then on to Britain. Our South Russia venture was ended.

(to be continued)

SPITFIRE DONATED TO MUSEUM



This Spitfire Mark IX *aircraft has been donated to the National Aviation Museum by John Paterson of Fort William, Ont. (inset). The official presentation was carried out on National Air Force Day last month at RCAF Stn. Rockcliffe, when the* Spit *was flown by F/L G. Billing, who retires from the air force this summer.*

A few years ago Mr. Paterson acquired this particular aircraft as his personal machine, and it bears the marking of his old aircraft of World War II; the Aviation Museum will retain this marking permanently.

ROUNDEL

RCAF Sends *Caribou* Crew To Kashmir

Three pilots and five groundcrew technicians study the troubled part of the globe where they will serve for the next 12 months. With their Canadian-built *Caribou* aircraft the eight men will provide the only airlift facility for the 40 UN observers serving in Kashmir between India and Pakistan. In the mountainous terrain of that country it is estimated 15 minutes in an aircraft is equivalent in travelling distance to one day in a jeep.

The group which left Trenton on 1 June includes (l. to r., standing) FS Frank Johnson, Cpl. L. F. Burt, Sgt. L. R. Lewis, LAC C. L. Jebb and Cpl. P. F. Dagley. Seated (l. to r.) are F/L R. A. Last, S/L F. E. Haley (detachment commander) and F/L Brian Strawbridge.

Caribous Go "Down Under"

S/L C. Sugden, OC of No. 308 (Caribou) Sqn. of the RAAF, accepts mascot from G/C R. A. B. Ellis, CO of RCAF Stn. Downsview, prior to departure of first contingent of *Caribou* aircraft to Australia. RAAF members spent several weeks in Canada being checked out on the de Havilland-produced STOL aircraft before ferrying them, and the *Caribou* head, "down under".

Art Trott, director of Ottawa SPEBSQSA Chapter, directing 30-man chorus at Senneterre.

BARBERSHOPPING - A MAN'S RECREATION

By SQUADRON LEADER D. F. ARCHER

AN UNOFFICIAL movement to encourage participation by male members of the armed forces in the wholesome recreation of singing barbershop harmony continues to gain recruits. The "Air Force Four", a quartet of serving RCAF officers who are members of the Ottawa Chapter of the Society for the Preservation and Encouragement of Barbershop Quartet Singing in America (SPEBSQSA), the "Ottawa Chapter Chorus" and two other quartets within the chapter, the "Canadian Capitalaires" and the "Clef Hangers", have been visiting RCAF units and presenting programs of barbershop entertainment. As a result several individuals have indicated their interest in learning more about this style of singing.

Just what is barbershop harmony? It is nothing more than close four-part singing which requires a lead to sing the melody, a tenor to sing consistently above the lead, a bass to put the floor under the group and a baritone to squeeze a note in between which gives the chord its distinctive "ringing" quality. It is the "ring" in barbershop singing which is so much sought after and gives the vocalization the brilliance and luster which cannot be reproduced by any tempered or valved instrument. True barbershop harmony can only be produced accurately by the most versatile and manageable instrument in the world – the human voice.

Barbershoppers come from all walks of life and are drawn together not only because of a love of singing, but also out of a desire to serve their communities. Local chapters usually use the funds raised from their presentations to support their favourite charities. They also have an intense desire to help others find the fun and fellowship in the wonderful world of barbershop.

As many armed forces units are either isolated or semi-isolated, the pleasureable recreation to be found in barbershopping could prove a worthwhile and productive hobby for many service personnel who may find their recreational facilities somewhat limited. The Society has pledged its support and assistance to any group or individual in the Services who may wish to take up this fascinating hobby. Those who live in communities where there is a chapter are cordially invited to visit at any chapter meeting, but for personnel in isolated or semi-isolated areas, the Society has prepared sample packages of music and informative pamphlets which are available through the Ottawa Chapter of the SPEBSQSA.

You don't need to be a Caruso or a trained singer to sing barbershop harmony. All you have to do is be able to hold a tune and be interested enough to have your recreation officer forward a request for assistance through normal channels. The Society will forward the information you need and you'll be on your way to good fun and good fellowship. Barbershop is fine entertainment, but it's even more interesting for those who participate. How about you?

The "Air Force Four" is joined in close harmony by a junior miss at RCAF Stn. Mont Apica. L. to r.: F/L D. Keirstead, S/L D. Archer, S/L T. Madden, S/L L. Burrows.

"Capitalaires" perform their comic routine at St. Sylvestre. (L. to r.): Bill Taylor, Elmer Kelly, Ken Curry (Sgt., RCAF), Jim Bova (Cpl., RCAF).

Enthusiastic audience at a Pinetree Stn.

AIR CADET TOP PILOT

Air Cadet WO R. G. Ambrose, of No. 225 Taber Sqn., won the W. F. Tudhope Memorial Trophy for being judged the best amateur pilot under 19 years of age in the Royal Canadian Flying Clubs Association in 1963.

Here he receives the trophy from A/C J. A. Verner, chief staff officer at Training Command HQ, during the RCFCA's annual meeting in Winnipeg in April.

Chatham Wins Award

For the fifth time RCAF Stn. Chatham, N.B., has won first place in the annual National Fire Protective Association contest (DND division), an achievement that is unparalleled in the RCAF. Objective of the NFPA program is to advance, by science and education, the protection of lives and property from fire.

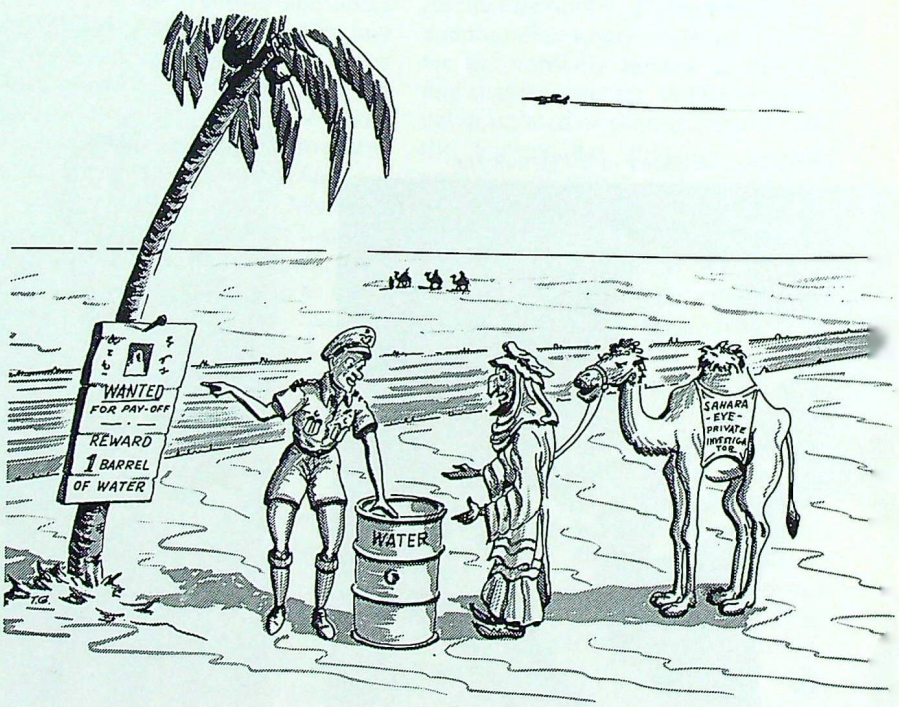
Presentation of the award to G/C J. R. Beggs, Chatham CO, was made recently by A/V/M M. M. Hendrick, AOC of Air Defence Command.

AIRPORT FOR RENT

DEEP in Egypt's Sinai Peninsula Canadian troops have a desert landing strip they rent on a yearly basis from a Bedouin sheik, but they are having trouble paying the rent. They have the money, all $2.48 of it, but they can't catch up to the sheik. Meetings have been arranged twice in a two-week period to hand over the fee, one Egyptian pound, but the sheik hasn't shown.

You would hardly expect to rent an airport anywhere these days for such a trifling sum, but there is a little more to the bargain than the money. In addition to the annual payment of $2.48 the Canadians are also committed to provide one barrel of water a day to the sheik's tribe. At least the deal calls for a barrel a day, but the Canadian soldiers always throw in a few more for good measure.

The whole business started back in 1960 when the reconnaissance squadron of the Fort Garry Horse needed a patch of level ground from which to fly scouting missions on their role as peace-keepers for the United Nations. The RCAF provide *Otter* aircraft and aircrew for the task and take the troopers winging over the desert wilderness. Today the reconnaissance squadron of the 8th Canadian Hussars (Princess Louise's) does the desert missions, and the commanding officer, Major L. M. Stone, hopes someone will soon spot the shy sheik and pay the rent.



The Suggestion Box

The following individuals have received awards from the 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 R. J. Leduc of Stn. Clinton suggested a modification to the loading jacks used for arming CF-104 aircraft with bombs.

LAC D. H. E. Buchanan of Stn. Greenwood suggested the installation of wider flange bushings on the nose cowl door hinge assemblies on *Argus* aircraft.

Mr. R. G. James of 1008 TSD Winnipeg made a suggestion concerning a specification for the repair, reconditioning, overhaul, modification and reduction to spares of electronic equipment.

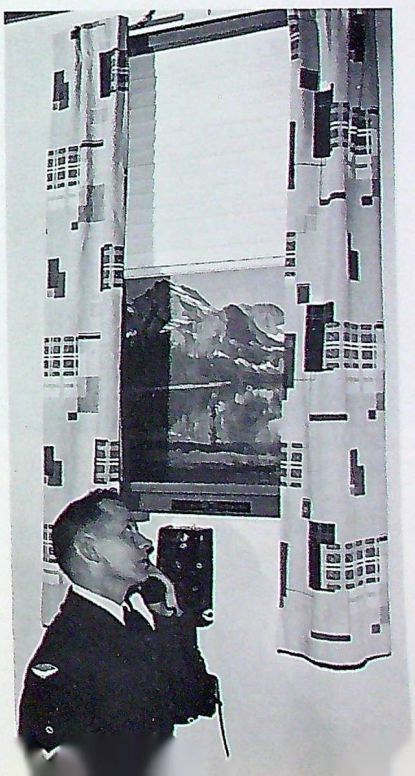
Other award winners:
F/L J. D. Mosgrove
F/L P. A. Houldsworth
WO1 G. C. Hacking
WO2 F. Falardeau
WO2 C. N. Vincent
FS C. E. Rix
FS H. W. O'Brien
FS W. F. Farr
FS C. E. Rix
Sgt. W. A. Plumridge
Sgt. C. H. Smith
Sgt. J. L. MacRae
Sgt. L. M. Reid
Sgt. H. L. Forshner
Cpl. A. J. Andrews
Cpl. J. M. W. Lambert
Cpl. J. R. M. Royer
Cpl. J. L. Archambault
Cpl. J. A. R. Peters
Cpl. E. Kuffner
Cpl. T. Fedorchuk
Cpl. R. D. Hedges
LAC R. D. Roy
LAC H. L. Swartz
LAC A. G. Bell
LAC H. J. Ashford
LAC J. L. Hunter
LAC F. D. Cook
Mr. G. H. Tearle

WORLD'S LOWEST WINDOW

The headquarters of Ottawa NORAD Sector at North Bay is hundreds of feet underground but the view from "Williams' Window" is unsurpassed.

This portable window frame, complete with drapes, venetian blind and sliding glass panels, was presented to G/C D. J. Williams by the construction engineering staff at RCAF Stn. Trenton when he was transferred to the windowless SAGE building at Northern NORAD Region. As such, it has many advantages over the average run-of-the-mill window. For one thing it can be moved with little trouble and with no damage to the wall; the "view" can be changed to match the season, and it can be kept open all summer without letting in a single fly or mosquito.

Here Cpl. Edward Sawatzky is in a wistful mood as he phones "topside" for a weather report.

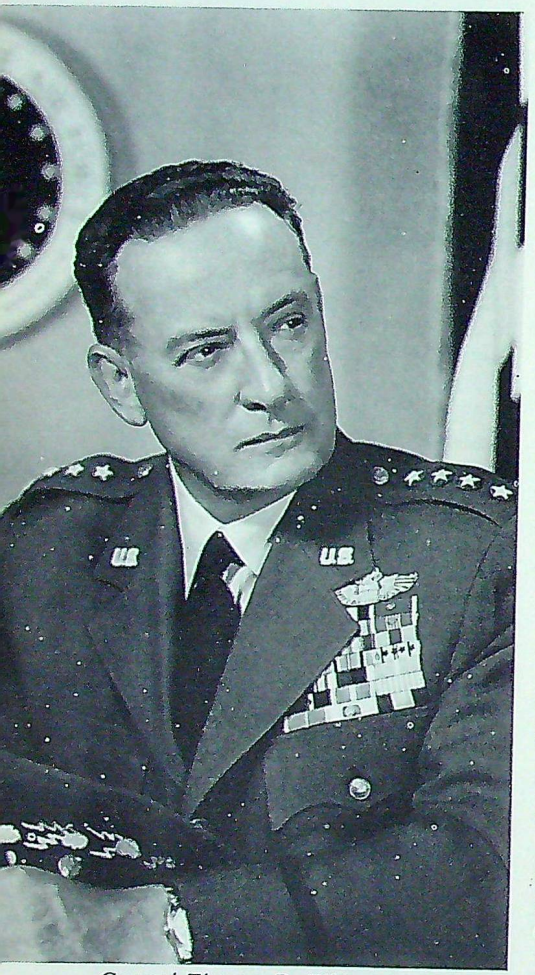


RCAF ASSOCIATION

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

THE ISLAND CONVENTION — CHARLOTTETOWN, P.E.I.

1st, 2nd and 3rd October 1964
15th ANNUAL GENERAL MEETING



General Thomas D. White, former chief of staff, USAF.

THIS year we join with the people of Prince Edward Island in marking the 100th anniversary of the first of three meetings held in Charlottetown which culminated in the creation of the Dominion of Canada.

The host wings are No. 201 (Charlottetown) and No. 200 (Summerside). All meetings will be held in the new Fathers of Confederation Memorial Building. The opening ceremonies will take place in the theatre, which provides a perfect setting for this colourful ceremony. There is a separate room for the regular meetings and special conference room for the symposiums. The annual dinner and the luncheons will be in the Charlottetown Hotel.

Registration fee this year will be $15.00 per person. Accommodation will be in the Charlottetown Hotel and adjacent motels. Wings have been given full details by bulletin.

Here are the highlights:

- President's welcoming reception: The Golf Club.
- Opening ceremonies: Parade and memorial services with the Lieutenant Governor of P.E.I., The Hon. W. J. MacDonald, taking the salute.
- Special Luncheons: speakers to be announced.
- Symposiums.
- Annual Dinner and Ball: General Thomas D. White, former USAF chief of staff, will be the guest speaker.
- Presentation of awards: RCAF Wing of the Year and Member of the Year Awards, Grand President's Cup, President's Cup, Vice President's Cup, Group Efficiency Award, Wing Bulletin Awards.
- Group at Homes.
- Sightseeing tours.
- Visit to RCAF Stn Summerside.
- A complete program for the ladies.

ANNUAL GROUP MEETINGS

The Presidents-elect are:

ALBERTA	Mr. Allan Craig, Edmonton
SASKATCHEWAN	Mr. Herbert J. Flook, Yorkton
MANITOBA-N.W. ONTARIO	Mr. John McCullough, Port Arthur
ONTARIO	Mr. Leon J. Schedlin, Toronto
QUEBEC	Mr. Jack Dinan, Quebec City
ATLANTIC	Mr. A. T. Goodwin, Moncton

Attendance at all group meetings was well above that of previous years, indicating a revival of interest in the affairs of the Association. Complete reports of these meetings will be distributed later. Traditional preludes to the annual national convention, the group meetings were without exception well arranged and much business was cleared.

Association Grand President A/M W. A. Curtis was guest speaker at the Alberta meeting held in Calgary.

National President A/M Hugh Campbell spoke at the Saskatchewan meeting in Yorkton, and also at the Ontario meeting in North Bay.

National Executive Council member Mr. H. M. Bell addressed the Manitoba-N.W. Ont. meeting held in Flin Flon.

Guest speaker at the Quebec group meeting was G/C E. H. M. Walsh, commanding officer of RCAF Stn. Bagotville.

RCAF Air Materiel Command AOC, A/V/M J. B. Millward, was guest speaker at the annual dinner of the Atlantic Group, whose meeting in Moncton was attended by Secretary-Manager J. C. Gray.

Mr. George Ault, Q.C., association legal adviser, represented the RCAFA at a meeting of the air force associations of the NATO countries in Turin, Italy, last month.

No. 443 Wing members J. L. Rain (past president), G. O. Beatty (president), and W. J. Hunt (director) display their new wing road sign placed at the entrance to Smiths Falls, Ont.

Head table at annual banquet of Manitoba-N.W. Ont. Group in Flin Flon (l. to r.): R. James Conner, Mayor of Flin Flon; Mrs. Eleanor Sparling; A/C James Verner; Mrs. Isabel Conner; Mr. Herb Bell; Mr. Ted Sparling; Mr. Terry Penton; Mrs. J. A. Verner; Mr. Howard Henry, Branch 73 Royal Canadian Legion; Mrs. Elizabeth Bell; Mr. W. E. McFadden; Mrs. Meta Matthews, Pres. 503 Ladies Auxiliary. (Photo courtesy Edgar Grandison, Flin Flon)

Letters to the Editor

NOS. 435-36 SQNS. RE-UNION

Dear Sir:

For the 18th consecutive year wartime members of Nos. 435 and 436 Sqns. are planning a re-union, to be held on 26 Sept. at the Coronet Motor Motel, Kitchener, Ont. A full-day's entertainment, including a dinner and speaker, is being organized.

We are definitely interested in all ex-India-Burma types, whether or not they served in these two squadrons, joining in the fun and fellowship. Further details may be obtained by contacting the undersigned.

Wm. G. Roberts,
Chairman, Re-union Committee,
Box 400, Bridgeport, Ont.

1964 VOLLEYBALL CHAMPS

Dear Sir:

RCAF Stn. Centralia has won the service-wide volleyball championship for the second time in three years. A great deal of the credit for their fine performance (they won all 18 games) is due to Cpl. George Kelly, Centralia's playing coach and manager.

Finalists in the 1964 competition, held at RCAF Stn. Downsview, were: Zone I, Cold Lake; Zone II, Winnipeg; Zone III, Centralia; Zone IV, Sydney.

F/O R. G. Wolfe,
Recreation Branch, AFHQ.

Back row, l. to r.: O/C D. R. McPhee, F/O D. W. Macaulay, LAC J. Wong, Cpl. G. R. Kelly. Front row, l. to r.: Cpl. A. E. Wiper, LAC G. C. Burke, S/L T. Reid, LAC P. G. Pirie.

ERRONEOUS DEMOTION

Dear Sir:

The "Airlift to Cyprus" illustrations (May '64) were most interesting. However, I had expected that a progressive journal like ROUNDEL would already have become familiar with the army ranks and insignia. I was therefore somewhat astonished to see my friend, Colonel E. A. C. Amy, described as Lieutenant-Colonel.

G/C I. H. Barclay, Commandant,
Canadian Forces Medical Service
Training Centre,
Camp Borden, Ont.

(Our apologies to Col. Amy. We certainly intended no slight . . . Editor.)

BOOK REQUEST

Dear Sir:

Can you help me locate two books which were published by University Press, but are now out of print? They are: "The RCAF Overseas, the First Four Years", and "The RCAF Overseas, the Sixth Year." I already have "The RCAF Overseas, the Fifth Year", but am anxious to complete the set.

William Smith Baker,
R.R. 3, Peterborough, Ont.

(Readers who can assist are asked to write Mr. Baker direct . . . Editor.)

EX-WD DRIVING INSTRUCTRESS

Dear Sir:

I read with great interest and enjoyment "Airwomen in the RCAF" (Mar. '64) and it has prompted me to write to tell you about my sideline while a mother and housewife: Fort William's only driving instructress.

After three years as an RCAF driver during the war, I decided to teach others to drive and with the exception of time out for marriage and a family (my husband was a wireless airgunner with No. 437 Sqn. and we now have two daughters, aged 13 and 4) have continued in this career. I know I could not have done this with full confidence if it hadn't been for my training in the RCAF.

Mrs. J. Chambers,
(formerly LAW Dorothy Grotke),
516 Luci Court,
Fort William, Ont.

INTEGRATION

Dear Sir:

No. 5 Supply Depot, RCAF, would appear to have the jump on other units, insofar as integration is concerned. We not only billet army and navy personnel, but also offer social amenities of our messes to members of the local RCMP detachment.

F/O E. P. Hakansson,
No. 5 SD, Moncton, N.B.

DIS-INTEGRATION

Dear Sir:

Recently I had the pleasure of meeting two senior officers of the Japan Air Self Defence Force. I was interested to learn that until a short time ago Japan had an integrated Self Defence Force. They are now in the process of subdivision into three distinct services.

F/L G. H. E. Moore,
RCAF Stn. Cold Lake, Alta.

"I certainly hope it doesn't rain today," one lady kangaroo remarked to another. "I just hate it when the children have to play inside."

A bargain hunter is often led astray by false profits.

AIRCRAFT ALBUM:

North American Mitchell

During World War II six RAF squadrons in the 2nd Tactical Air Force flew *Mitchells*, and one *Mitchell* wing was commanded by G/C C. R. Dunlap. Many RCAF officers and men attached to RAF units operated the type. The illustration depicts a *Mitchell II* of No. 180 Sqn. *Mitchells* were used at the OTU at Boundary Bay, B.C., for crews preparing to go to the Far East.

Following the war the *Mitchell* was supplied in quantity to RCAF auxiliary squadrons. It was used by the regular force as a navigational trainer and transport until its retirement in the spring of 1962.

The *Mitchell* was powered by two Wright Cyclones of 1,350 h.p. and had a top speed of 292 m.p.h. Wingspan was 67 feet 7 inches, length was 54 feet 1 inch, and loaded weight was 24,000 pounds.

Roger Duhamel

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