



# ROUNDDEL

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## COVER CAPTION

Considerably improving the Argus-laden Greenwood tarmac landscape are (l. to r.): Sheila MacGregor, Lynne Bolduk and Corry Wyngaarden. For more information about airwomen in the RCAF, see the article beginning on page 18.

page

## ARTICLES

Nuclear Warheads — Peril or Protection? .....	2
RCAF Social Welfare in Europe .....	7
Requiem for a Giant .....	10
Airwomen in the RCAF .....	18
The Reluctant Volunteer .....	22
The Journey Back .....	26

## PICTURE STORIES

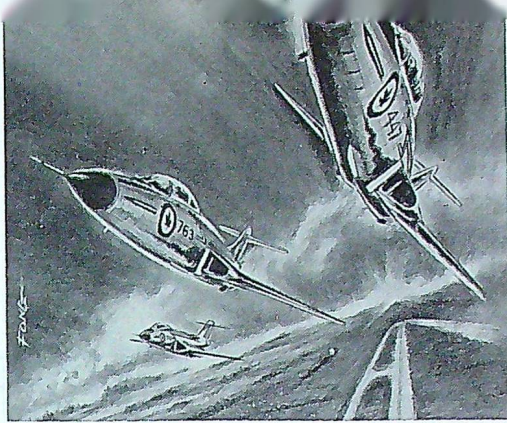
Operation Douala .....	15
Canadians at McChord .....	16

## FEATURETTES

Guidance Simplified .....	6
TSR-2 .....	6
Moose on the Tracks .....	25
Do-it-yourself Defence Display .....	29
An Air Force Earl .....	29

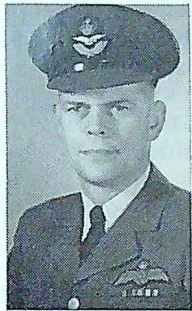
## DEPARTMENTS

On the Break .....	1
RCAF Association .....	30
Letters to the Editor .....	32
Aircraft Album .....	inside back cover



# ON THE BREAK

**HIGH-SPEED** jets and mammoth transport aircraft make the news, but people make the air force. It is with people, the RCAF's most precious commodity, that F/L L. B. MacQuarrie, author of "RCAF Social Welfare in Europe" (page 7), and his colleagues in the social welfare branch are concerned. A wartime pilot, F/L MacQuarrie rejoined the RCAF in 1955 and after two years in the field he attended the University of Toronto, graduating from its School of Social Work. Since returning from his overseas tour, he has been stationed at ATCHQ, Trenton.



F/L L. B.  
MacQuarrie



S/L A. P.  
Heathcote

**WRITING** "Requiem for a Giant" (page 10) was truly a labour of love for S/L A. P. Heathcote, now PAdO at AFHQ Administrative Unit. S/L Heathcote's first encounter with the *Lancaster* came near Christmas time in 1944 when he and his No. 444 (Porcupine) Sqn. mates converted from the *Halifax*. In the post-war years, as a member of the air historian's staff, S/L Heathcote wrote a number of squadron histories for *ROUNDEL* publication.

**THE AUTHOR** of "Airwomen in the RCAF" (page 18) is a versatile young lady. Flying Officer Rae Eckford had careers in two very divergent fields of endeavour before becoming a professional writer. Graduating from the University of British Columbia in 1950, Rae became a school teacher. For five years her pedagogical efforts were directed towards high school students

in Vancouver and Chilliwack. Then she owned and operated a ladies clothing store in the interior of B.C. In 1962 she joined the RCAF and is now one of three women PROs in the service. Rae has two hobbies: travelling and sport car driving, which blend nicely together. On two occasions she has driven alone from Ottawa to B.C. and back in her beloved MG.

**WHEN** the article on page 22 arrived on our editorial desk recently headed by the provocative title, "Jails I Have Known" we did a double-take. The article, we thought, must be from some ex-con who wanted to come clean. Our amazement gave away to amusement, however, as we read through this entertaining first-person account by F/L J. R. Smart of an escape and evasion exercise. An ex-RAF member who came to Canada and joined the RCAF Auxiliary in June 1953, F/L Smart decided to make the regular air force his career the following year. In the spring of 1955 he graduated as a pilot and after operational training was posted to No. 3 Wing. It was while serving as a jet pilot overseas that F/L Smart was subjected to the escapade which is now titled "The Reluctant Volunteer".

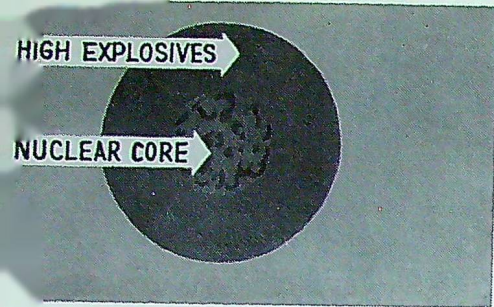


F/O Rae Eckford



F/L J. R. Smart

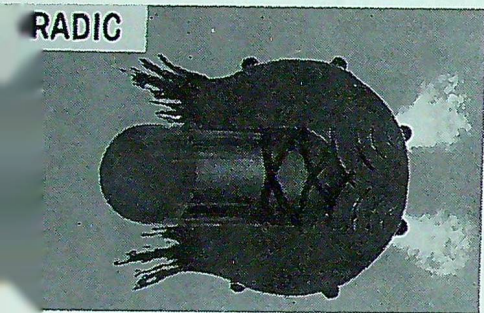
*A. Paton S/L*  
Editor.



A basic nuclear weapon consists of an inner core of initially sub-critical material and a layer of high explosive to which is attached a number of detonators to initiate the high explosive.

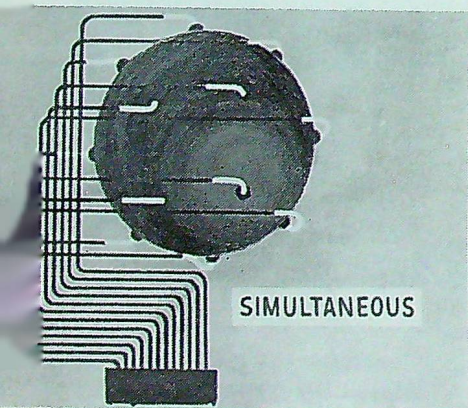
# NUCLEAR WARHEADS

## PERIL OR



The firing of a single detonator by any cause will simply blow the sub-critical fissionable mass out the opposite side and this will not result in a nuclear detonation.

For a fullscale nuclear detonation of an implosion type weapon, it is essential that all detonators must detonate at the same instant.



NEAR the only two Bomarc launching sites in Canada, RCAF Stns. North Bay, Ont., and La Macaza, Que., the arrival of atomic weapons earlier this year was met with only mild interest and curiosity. This attitude indicates that the local citizens do not share the misconceptions held in some quarters about nuclear weapons.

Since the first atomic bomb was exploded in 1945, scientists realized how necessary it was to construct nuclear weapons which would not inadvertently endanger the lives of military users and the public at large. As these weapons have been handled, transported from the manufacturers to the storage sites, rehandled, placed in aircraft, borne aloft, carried aboard ships and moved by trucks without a single accidental nuclear detonation occurring, the efforts of the scientists have indeed been successful.

From what source, then, have misconceptions arisen? Actually, over-zealous and inaccurate reporting has largely created false impressions about nuclear warheads. In 1960 a fire occurred at a Bomarc launching base in the eastern United States. Newspapers in the area carried the following headlines:

"THIS PLACE IS JUST LIKE A POWDER KEG", and "RADIATION SPREADS THRU AREA OF BASE". These headlines created apprehension and near-panic in some communities surrounding the base although, in fact, no one was injured and no damage was done to private property.

Actually, fear for the safety of the population in areas close to nuclear storage depots is largely unwarranted. It has been proven that if, by some remote chance, a mishap involving a nuclear warhead should occur, the extent of actual physical damage and loss of life would be far less than that of a service station fire, a hazard that is accepted and, for the most part, ignored by the urban population of today's world.

It is not difficult to understand why there is little danger from nuclear warheads while in storage, once the mechanics of nuclear explosions have been explained. A nuclear weapon consists of a sphere of plutonium or uranium about the size of a grapefruit surrounded by a layer of conventional high explosives which is needed to activate the nuclear core. Placed around the explosives are not one, but many detonators.

# PROTECTION?

Each detonator has its own wire that leads to the source of electrical energy necessary to activate it. When the electrical current is supplied simultaneously to all detonators, a fast burning wave or implosion is produced which travels toward the centre of the sphere, squeezing the nuclear core into a ball perhaps as small as an orange; an instantaneous chain reaction occurs releasing a small fraction of the mass as energy . . . and a nuclear explosion results.

All detonators must be triggered at the same instant or a ragged

and irregular burning wave will be formed which would blow the nuclear core apart rather than squeeze it. Thus, if for some strange and seemingly impossible reason, one or several detonators were triggered, no nuclear explosion could occur. This inherent, built-in safety factor makes an accidental nuclear blast, for all practical purposes, all but impossible.

Should a nuclear weapon be involved in an accident, the main danger would come from the non-nuclear explosion of the conventional high explosives. However, as

the quantity of high explosives in a nuclear weapon is an extremely small fraction of the quantity used in a comparable yield conventional bomb, that explosion would be minimal. Additionally, if the high explosives were to explode, radioactive contamination would not be a serious hazard as the unfissioned nuclear material would likely break into small particles.

Furthermore, if the high explosives were the type that tends to burn rather than explode, the uranium and plutonium would burn as well. In either case, in the form of

Nuclear warheads for Canadian Bomarc were flown to North Bay and La Macaza by USAF Globemaster. The barrel-like containers were then lowered from the aircraft's hold onto RCAF stake trucks.



smoke or small particles, the resulting alpha particles would be distributed over a relatively small area depending on wind velocity. Moreover, alpha particles are dangerous only when taken into the bloodstream; they will not penetrate the skin and can be easily washed from skin and clothing.

Nevertheless, should an accident involving a nuclear device occur, two safety rules should be followed:

- (a) everyone should keep a distance of at least 1,500 feet from the source of the explosion, and
- (b) no one should enter the area until it is declared safe by a decontamination team.

In addition to the inherent safety qualities of nuclear weapons, other safety measures have been incorporated to prevent the firing of a nuclear-armed weapon either by

accident or malice. Procedures for storage security, safety standards, inspection, maintenance and authorization for use have been carefully developed and agreed upon by the governments of Canada and the United States.

United States Air Force personnel act as custodians for the nuclear warheads at Canadian storage sites. The bases, however, will remain under Canadian command and control; the RCAF's security organization is responsible for the complex security measures at the storage sites. As a security precaution all nuclear warheads are protected by fences, gates and concrete vaults, and only carefully selected personnel are permitted to enter the storage area. In addition, elaborate alarm devices and round-the-clock armed guards provide further pro-

tection for the nuclear warheads.

As for safety standards, all applicable Canadian laws and United States nuclear safety rules are stringently followed by personnel involved with the security, maintenance and inspection of nuclear warheads. For instance, while the weapons are in storage or in the process of being transported, sources of electrical energy required to activate the warhead are not permitted anywhere near the nuclear warheads.

To prevent the unauthorized firing of a nuclear-armed Bomarc missile, an intricate system of checks and double checks has been agreed upon by the two governments. In the Bomarc control circuitry at the SAGE direction centres there are two locked switches both of which must be turned on before

On arrival at the Bomarc sites the trucks stopped for security clearance at the entry gate.



RCAF security guards, carbines at-the-ready, guard the Bomarc storage facilities at North Bay, Ontario.



a Bomarc can be launched. The keys to these two switches are held at all times by a designated Canadian and United States officer.

The actions that must be taken, then, before a Bomarc can be launched are:

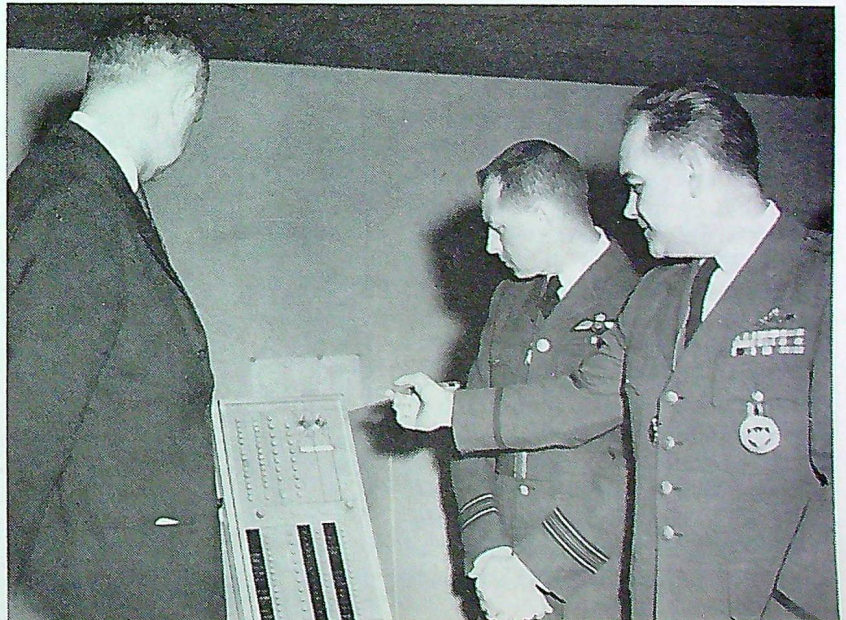
- (a) The Commander-in-Chief NORAD must have been notified that the President of the United States has authorized the release of weapons from U.S. custody for use by Canadian forces assigned to NORAD.
- (b) The Commander-in-Chief NORAD must also have received authorization from the Prime Minister or his authorized representative to release weapons for use by Canadian forces assigned to NORAD.
- (c) The United States custodial officer on duty in the SAGE direction centre must have received properly authenticated evidence that U.S. governmental release has been given; he would thereupon unlock the United States release switch.
- (d) The designated Canadian Officer on duty in the SAGE direction centre must also have received properly authenticated evidence Canadian governmental release has been given; he would thereupon unlock the second release switch.
- (e) At this point the weapon would be available for firing, but still would not be fired until the SAGE Sector Commander had authorized his Senior Weapons Director to commence using the Bomarc against hostile targets.

Therefore, under this system of checks and double checks it is impossible to fire a nuclear-armed missile either by accident or malice, or without the consent of both governments. (C)



Twenty-eight shelters house the Bomarc missiles at North Bay, Ontario, and La Macaza, Quebec.

Lt. Colonel P. D. Jessop (USAF) explains to Defence Minister Paul Hellyer how the SAGE Bomarc control panel operates while S/L K. N. Smith, Canadian designated officer, looks on. Each officer wears a key around his neck, which, when inserted in their respective locks, would release the nuclear-armed Bomarc for firing by the NORAD sector commander.



## GUIDANCE SIMPLIFIED

THE following is an excerpt from a report explaining, in simplified terms, the operation of a typical internal guidance system:

“How does the missile know where it is at all times? It knows this because it knows where it isn’t. By subtracting where it is from where it isn’t, (or where it isn’t from where it is, depending on which is greater) it obtains a difference or deviation. The Internal guidance system uses deviations to generate corrective commands to drive the missile from a position where it is to a position where it isn’t. The missile arrives at the position where it wasn’t; consequently,

the position where it was, is now the position where it isn’t.

“In the event that the position where it is now is not the same as the position where it originally wasn’t, the system will acquire a variation (variations are caused by external factors, and the discussion of these factors is not considered to be within the scope of this report) – the variation being the difference between where the missile is and where the missile wasn’t. If the variation is considered to be a significant factor, it too may be corrected by the internal guidance system.

“Moreover, the missile must now

know where it was, also. “The thought process” of the missile is as follows: Because a variation has modified some of the information which the missile had obtained, it is not sure where it is. However, it is sure where it isn’t and it knows where it was. It now subtracts where it should be from where it wasn’t (or vice-versa) and by differentiating this from the algebraic difference between where it shouldn’t be and where it was, it is able to obtain the difference between its deviation and its variation, this difference being called error. (This company also produces an extremely accurate command-guidance system, but this type of guidance does not lend itself to simplification of theory). . . .”

The Infernal Guidance Instructor

## TSR-2

A HIGHLY-VERSATILE aircraft which can carry out a variety of operational duties in all weather is being developed in Britain. The TSR-2 – tactical strike reconnaissance – will be able to fly at low level under defensive radar screens or, at high altitude, will fly at approximately twice the speed of sound. It will have a long range capability and short takeoff performance.

The TSR-2 is designed to carry either conventional or nuclear weapons on tactical missions or nuclear warloads in a strategic role. The aircraft will be powered by two Bristol Siddeley Olympus engines which is an advanced version of the turbojet engine in the RAF’s *Vulcan* bomber.



# RCAF SOCIAL WELFARE IN EUROPE

By FLIGHT LIEUTENANT L. B. MACQUARRIE

THE RCAF social welfare officer in Europe, like his colleagues in Canada, is a qualified social worker whose job in the airforce involves assisting people in much the same manner as would a social worker in a civilian community. His primary concern is to see that RCAF personnel and their dependents obtain the social services they require.

If the particular service required is readily available from a local welfare agency, then the area social welfare officer (ASWe10) will refer the case to this agency. Sometimes, however, air force families have difficulties securing particular community welfare services. This might be because of a lack of residence qualifications, or because of a lack of knowledge about welfare resources in an area into which they have just been transferred. Or it may be that suitable resources just do not exist, particularly in areas where isolated stations are located.

Whatever the particular difficulty, the ASWe10 attempts to overcome it either by prevailing upon the appropriate social agency to extend services to the RCAF member and his family, or by providing the required service himself. In extremely serious cases he may even seek to arrange transfer for a period of time to an area in which service is available.

The RCAF social worker performs these duties somewhat differently in Europe than he would in Canada, because the situations he encounters are often influenced by international implications, differences in overseas environment, and distances from Canada. The overseas ASWe10's work is further complicated because of the differences in social welfare resources.

For example, there are no Canadian adoption societies; no institutions to assist with the problems of handicapped children; no agencies to deal with marital counselling; or no visiting homemaker organizations. It is true that in a few locations in Europe some such services do exist; but more often than not the language problem, the lack of residence or citizenship qualifications, or already heavy case loads will prevent the European agencies from assisting.

This article will attempt to illustrate, mainly by means of typical case situations, something of the work of the social welfare officer overseas. None of these illustrations exactly describes an actual case — confidentiality and professional ethics demand this. All the examples do, however, represent situations which are typical of actual cases handled by ASWe10s in Europe.

## ADOPTION ARRANGEMENTS

Corporal and Mrs. Allan learned of their overseas transfer with mixed feelings. It was an opportunity both had looked forward to, but only a few weeks ago they had started discussions at the adoption agency which they hoped would lead to their adopting a child. This too was something they wanted very much. As they busied themselves with the many arrangements which had to be made before leaving for Europe, their spirits were dampened somewhat by the thought that the adoption would probably have to be dropped completely until their return to Canada.

At the local adoption agency their social worker was not optimistic about the possibilities of following

through with the adoption; but the Allans seemed to be good prospective parents and she thought it worth while to write the Provincial Child Welfare Department on their behalf. A few days before Cpl. Allan and his wife left for Trenton to catch their overseas flight, the social worker told them that their application would be kept open. The provincial department asked that upon their arrival overseas the Allans get in touch with the appropriate RCAF social welfare officer, who would then be taking over the case.

When the Allans were fairly well settled in their European home, the ASWe10 prepared the adoption home study required by the Canadian agency, outlining the important personal and environmental factors. This home study report, recommending placement, was then submitted to the adoption society for consideration. Eventually, the Allans were informed that a child was available for adoption by them. They were met by a Canadian-based ASWe10 as they arrived on leave in Canada for the big event. This same RCAF officer assisted with arrangements for their return to Europe with their new child.

#### ADOLESCENT ADAPTABILITY

When Sgt. Brown was transferred overseas, his 15-year-old son was having some difficulty at school. The Browns attributed this to their frequent moves during a period of the boy's earlier schooling, and to his current pre-occupation with sports. Gradually the lad's behavior at school and at home became more serious until finally the boy was apprehended by the air force police after he had been involved in an act of vandalism.

The social welfare officer discussed the problem with the boy, with his parents, and with the school teachers and principal. School officials felt that the boy was below average in his ability to cope with the academic educational program available overseas. The ASWe10 and the teacher both felt that the boy's inability to measure up to what was expected of him academically by the school, and by his parents, was an important factor in his rebellion and delinquent behaviour. The boy himself, now almost 17, was interested in finding work but there were no employment opportunities, either on the station or in the surrounding European community. Nor were there any special placement agencies to assist, nor any opportunities for vocational training. To complicate the problem, Sgt. Brown and his wife found it difficult to accept the fact that their son might not be capable of continuing further in school.

Gradually the ASWe10 was able to help the family and the boy plan realistically for his future. His grandparents in Canada agreed to look after him until the

parents returned home 18 months later. The ASWe10 in that city arranged for his admission to a school which would give him vocational training. By the time the Browns were repatriated, their son had finished his course and had found employment for which he was suited.

It has already been mentioned that, in addition to the resources being different, the actual social problems encountered overseas are often different from those presented to social welfare officers in Canada. In the first place, many have international implications which require the ASWe10 to work through such international organizations as International Social Service. Sometimes, when dependents are acquired overseas, either through marriage or adoption, complications involving immigration, citizenship, and passport action arise. The overseas ASWe10 maintains close relationships with authorities at Canadian and other embassies in order to facilitate handling of such cases.

#### PASSPORT PROBLEM

When LAC Clark's fiancée, a French citizen, was first medically examined and interviewed at the Canadian immigration offices in Paris, she fulfilled the requirements for admission to Canada, and subsequently the airman's CO granted them permission to marry. If LAC Clark had forwarded his bride's passport and marriage documents early enough for visa action, no problem would have arisen. Unfortunately, he neglected doing this until after the validity of the original medical examination had expired. A second medical examination became necessary. By the time Mrs. Clark had arranged to proceed to Paris for this medical, she had developed a tubercular condition and, under immigration regulations, was no longer acceptable for admission to Canada. In the meantime, the Clark's first child had been born.

Working closely with Canadian immigration officials, the social welfare officer made the necessary arrangements for Mrs. Clark's admission to Canada under other special regulations. Immigration officials advised that they could grant Mrs. Clark a visa if some Canadian province would assure that appropriate medical facilities would be made available to her should these be required. The overseas ASWe10 asked a welfare officer in Canada to visit the Provincial Health Department in the province of the airman's domicile and discuss this possibility. These discussions were held, and the provincial Minister of Health agreed to certify that treatment facilities would be available if necessary. Subsequently Mrs. Clark was given a visa permitting her to come to Canada with her husband at the end of his overseas tour.

Sometimes the differences in overseas problems are caused by the often intangible but very real pressures which being overseas can place on a family. Most happy and well integrated families adjust quite easily to the changes they encounter overseas. For a majority of families, in fact, being overseas represents a worthwhile experience and one that they make the most of. Occasionally, however, a family will experience some adjustment difficulties, especially at the beginning of their overseas tour. A few of these families will have had domestic or other difficulties before. Or it may be immaturity or inexperience which makes it difficult to adjust easily to the differences of overseas life, and to the long distances separating them from close relatives and familiar Canadian surroundings.

#### MARITAL ADJUSTMENT

The problem which F/O Donald brought to the welfare officer is a good case in point. He had requested the interview to discuss separating from his wife, and to discuss his wife's demand that she be returned immediately to Canada. He stated that Mrs. Donald was insisting on this, and that he had come to the conclusion that separation was the only solution to their impossible marriage. Apparently their domestic life had become filled with continuous hostility and even open conflict. RCAF records indicated that they had been married less than a year, and that they had been overseas only four months. Mrs. Donald revealed to the ASWe10 that she was expecting their first child in about six months time, a fact which she had not told her husband. Somewhat substandard housing had combined with Mrs. Donald's pregnancy to provide the last straws. By the time the welfare officer was asked to help, husband and wife were so emotionally involved in a negative way, that neither had the objectivity necessary to discuss their problems without a serious quarrel starting.

In the final result, the requests of this couple for separation and for the wife's repatriation proved unnecessary. The opportunity both F/O and Mrs. Donald had to discuss their respective points of view with the welfare officer and to "let off steam" helped considerably to ease the tension. The ASWe10's interpretation to husband and wife helped also to give them some insight into their difficulties in adjusting to marriage, in adjusting to being away from Canada, and in adjusting to Europe. Mrs. Donald herself provided an important lift to the marriage when she was successful in locating a comfortable apartment to replace their temporary, inadequate, accommodation.

Another important part of the welfare officer's work overseas concerns the type of situation commonly

referred in postings and careers circles as a "compassionate problem". Cases of this kind usually involve the mental or physical health of a dependent or close relative, and they are not of course peculiar to the overseas scene. There is a tendency, however, for a compassionate problem to be more serious when the serviceman is in Europe. Perhaps it would be more accurate to say not that the problem itself is more serious, but rather that its effect on the RCAF member is likely to be more serious. For when a serviceman or woman is so far from the relative concerned, communications may be difficult and visiting virtually impossible.

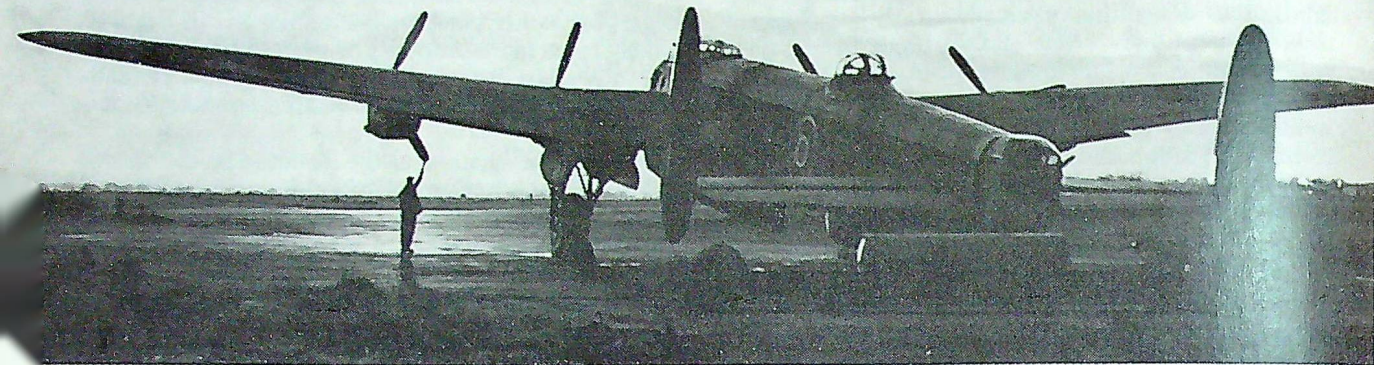
Thus it often occurs that the air force family cannot get complete and accurate information about circumstances which may be compassionate. Moreover, their uncertainties and anxieties may well be aggravated by feelings of helplessness and inadequacy which spring from their inability to do anything concrete to assist. In situations like this, the overseas ASWe10 acts as a communications link, requesting his Canadian colleague to investigate on the home front and report the facts. Often the problem dissolves when the true story is thus made known.

#### NOT ALL HAPPY ENDINGS

Not all cases have completely happy endings, and occasionally there will arise a social or medical problem which cannot be resolved in Europe. Sometimes, therefore, it may be necessary to recommend that a family return to Canada where the required facilities or services will be available. The RCAF's personnel screening program for overseas transfers does an important job of prevention here, but it is probably inevitable that there will be a few such cases which could not have been foreseen. But the screening program has already proven invaluable; and if screening continues to be done thoroughly and conscientiously it will go far towards eliminating most of the cases which fall into this category.

The reader has probably noticed how often in the handling of the hypothetical cases described it was necessary to ask a welfare officer in Canada to perform some important service. In several cases, European ASWe10s referred the matter to a colleague in Canada for a home visit, for an interview with a family doctor, or for a visit to a welfare agency or department to see about the availability of welfare services. Thus the case histories have served to point out another feature of social welfare in Europe — the extent to which overseas ASWe10s depend on the RCAF Social Welfare Branch in general, and on individual Canadian-based ASWe10s in particular.

# Requiem for a GIANT



By SQUADRON LEADER A. P. HEATHCOTE

THERE was nothing momentous to the world at large about 25 July 1939. Nor did the first test flight of a prototype aircraft from A. V. Roe's Woodford Airfield in England that day cause any great stir in international aviation circles. However, within six weeks the bloodiest war in history began, and from the obscure prototype a bomber evolved which contributed more than any other to the winning of World War II.

The prototype, built to an Air Ministry specification of 1936 for a twin-engined medium bomber, went into production. Shortly before the end of 1940 the production model entered squadron service with RAF Bomber Command as the *Manchester I*. It proved an operational failure. Its Vulture engines, under-powered and over-heating, could not lift it above the critical flak level, and on one engine it could not even remain airborne. In June 1942 the *Manchester* had to be taken off operations.

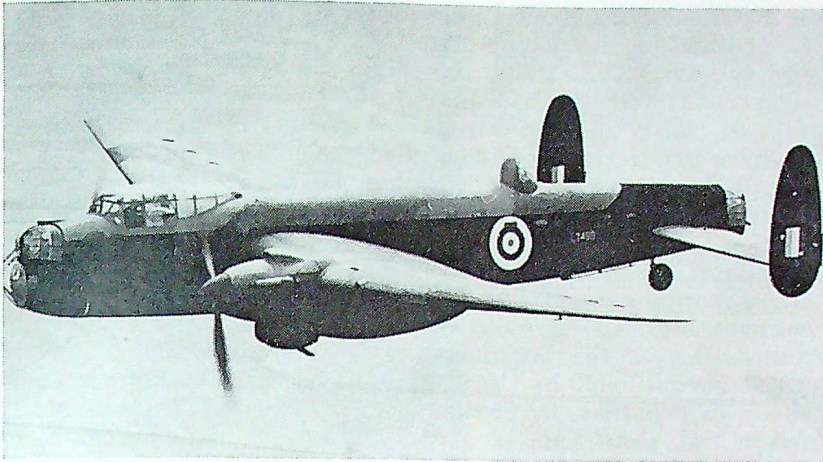
It did not die without next-of-kin, a happy fact attributable mainly to the far-sightedness of the late Roy Chadwick and his design team. In mid-1940, before *Manchester* production had even begun, they had insured against the possibility of the Vulture engine's failure by considering alternative power-plants. Engine installations were accordingly designed for a proposed *Manchester II*, with two Bristol Centaurus or Napier Sabre engines. Neither was ever installed, however, for the *Manchester II* went barely beyond the drawing-board. It was headed off by an inspiration to use not just two engines, but four, those being Rolls-Royce Merlin Xs.

The adaptability of the *Manchester's* airframe facilitated speedy construction of prototype *Manchester III*, which embodied about three-quarters of the Mark I's components. The main difference between the two variants lay in the Mark III's added 12 feet of wing centre-section and the two extra

engines it accommodated. This was modification enough to justify a change of name from *Manchester* to *Lancaster*.

The *Lancaster's* maiden flight took place on 9 Jan. '41. A second prototype, fitted with four 1280-h.p. Merlin XXs, was designed, built and test-flown within eight months. With its progressive modification and improvement, less and less of the original *Manchester* configuration remained and there finally emerged the *Lancaster I*, which reached the first squadrons early in 1942.

The operational debut of the new bomber — a sea-mining excursion to the Heligoland Bight on 3 March — gave little hint that the *Lancaster* was destined to be nocturnal anathema to the vast Nazi industrial complex. Nor did a low-level daylight penetration in mid-April to the M.A.N. Diesel Works at distant Augsburg, Bavaria, for which S/L John D. Nettleton earned the first of ten Victoria Crosses to be award-



The twin-engined *Manchester* was the predecessor of the *Lancaster*.

ed to *Lancaster* aircrew; or another audacious and historic intrusion by day to the arms factory at Le Creusot the following October. The latter pair of attacks were two early examples of devastating precision bombing by *Lancasters* in daylight. Still another attack delivered by day-flying *Lancs* was made in July 1942 on shipyards at Danzig, Poland. Involving a round trip of 1750 miles, that operation compared favourably, for distance flown, with the longest bomber operations of the war.

Yet, unquestionably the strongest image of the *Lancaster*, in the minds of many thousands who flew, fought, or simply feared it, was that of the night-time nemesis of Fortress Europe's war economy. One of the most fantastic, sensational and damaging aerial strokes of the European war was dealt by *Lancasters* of No. 617 Sqn. on 17 May '43, in what could be classified as a night of precision attack on a strategic target. The objective was to breach, simultaneously, the Mohne, Eder and Sorpe Dams,

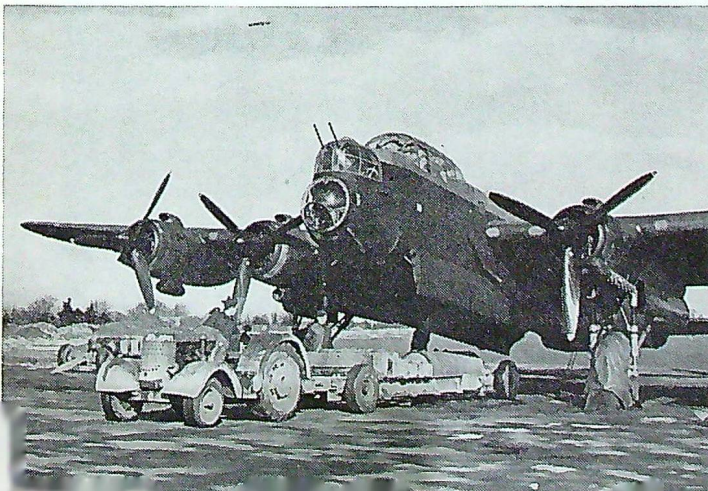
prime sources of hydro-electric power for the industry-packed Ruhr Valley.

Specially-modified *Lancasters* were the only aircraft able to house the ingenious "bouncing ball" bomb designed by Dr. Barnes Wallis specifically for this operation. No other aircraft on operations has dropped a bomb like it. Actually a cylindrical mine, it had first to be given a back-spin by a specially-installed motor and then released from 60 feet above the dam reservoir, bouncing in a manner calculated to bring it to rest at the base of the dam wall. A longer fall might cause premature detonation or fracture its casing; a shorter fall might cause it to sink prematurely. As no pressure altimeter was sensitive enough for the purpose, 617's *Lancs* each had to be fitted with an improvised visual-reference device so simple yet so accurate as to be without parallel in the annals of military aviation — two spotlights placed so that their downward-projecting beam formed a figure eight on the water when the aircraft was at the desired height.

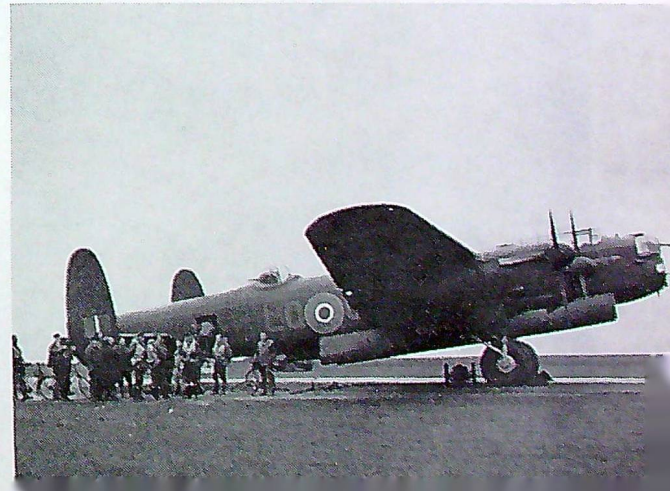
History has recorded the brilliant success of the unorthodox bombing system.\* W/C Guy Gibson and

\*THE DAM BUSTERS, Paul Brickhill, Evans Brothers Ltd., London, 1951.

Early production *Lancasters* had radial engines.



Later *Lancasters* had four inline Rolls Royce Merlin engines.



his crews, including 29 Canadians, scored bull's-eyes on the Mohne and Eder Dams, causing widespread flooding of the Ruhr and dislocating the valley's industry generally. Among the many decorations earned on the operation was a Victoria Cross by squadron commander Guy Gibson.

In their 38 months of war-time operations *Lancasters* attacked virtually every primary strategic target within effective range. From their cavernous bomb-bays fell some two-thirds of the shattering weight of bombs delivered by the entire RAF from January 1942 onward. Much the greater part of their total tonnage (608,612) was dropped in the great saturation raids on industrial centres, which became the trademark of Bomber Command.

Even while assisting in the progressive destruction and dislocation of Nazi industry in Europe, on the other side of the Atlantic the *Lancaster* was in fact a stimulus to a growing Canadian industry. Selected early in 1942 for production by Victory Aircraft Limited in Toronto, the *Lanc X* was fitted with Packard-built Merlin engines. The

first of 430 Canadian-built *Lancs*, bearing serial number KB700 and aptly christened "The Ruhr Express", was delivered to the RCAF on 6 Aug. '43. Ferried overseas in September by S/L (now A/C) R. J. Lane, DFC, and his crew, of No. 405 (Pathfinder) Sqn., it received its operational christening by marking Berlin on 22 November.

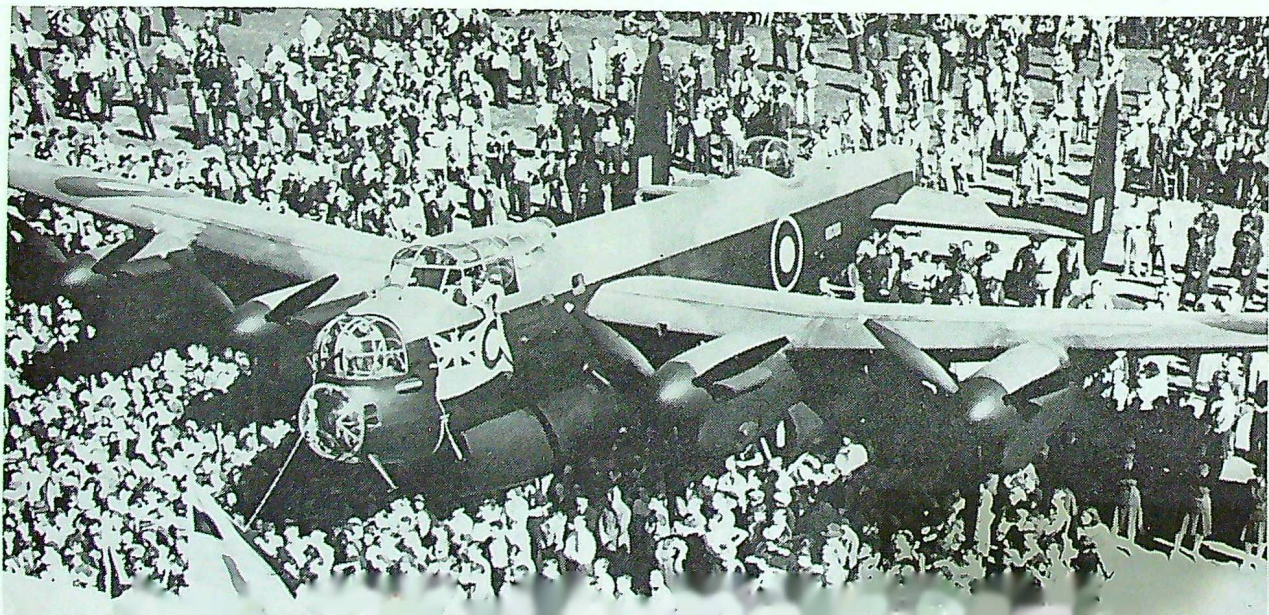
The *Lancaster* represents a milestone in the life of Canada's aircraft industry. It was the first four-engined aircraft built in Canada and, up to that time, by far the heaviest and most complex. Its manufacture, involving multifarious new problems associated with tooling-up and mass production, gave the young industry know-how and experience which were to prove invaluable in the post-war years.

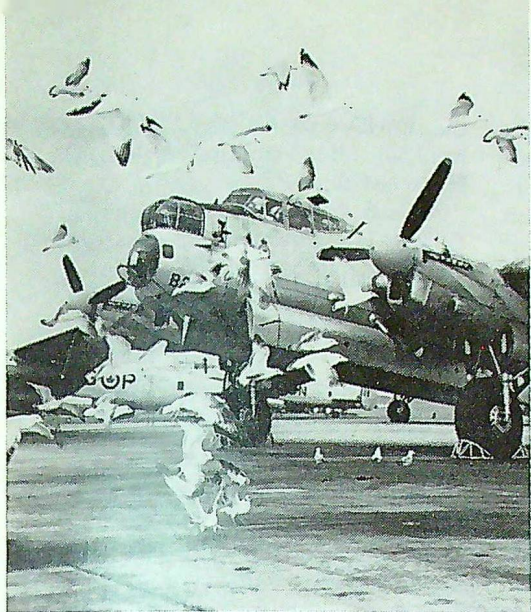
The "Ruhr Express" was not the first *Lancaster* to reach a Canadian squadron. Preceding it by several months were the British-built Mark IIIs and IIs (the latter with Bristol radial engines) acquired by Nos. 405 and 426 Sqns., respectively. In all, at least 59 squadrons of Bomber Command flew *Lancasters*, and 14 of those (12 on operations) belonged

to the RCAF's No. 6 Group. It was aboard a *Lancaster X* of No. 419 Sqn. that mid-upper gunner P/O A. C. Mynarski performed a conspicuous act of valour leading to his posthumous award of the Victoria Cross. He was the second member of the RCAF to receive the Commonwealth's highest decoration, and the only non-pilot among Canada's seven VCs of the air.

By 1944 *Lancasters* had largely replaced the *Halifaxes* and *Stirlings* as the backbone of Bomber Command. Their epic operations in 1944-45 alone were legion. They bludgeoned Berlin a dozen times, flooded the Wehrmacht on Walcheren Island by breaching a dyke at Westkapelle, blocked the Saumur Tunnel and sank the Tirpitz in Tromso Fjord with deep-penetration 12,000-lb. "tallboys". Their greatest weight-lifting feat of all was reserved for 14 Mar. '45, when a No. 617 Sqn. *Lanc* delivered to the Bielefeld Viaduct a bomb whose weight compared favourably to the basic weight (23,900 lbs.) of the carrier aircraft — the 11-ton "grand slam", air warfare's ultimate conventional weapon. No other aircraft

The "Ruhr Express", the first *Lancaster* built in Canada, comes off the production line in Toronto, 6 August 1943.





Photographic *Lancasters* of No. 408 Squadron carried out the momentous task of unrolling the map of Canada.

For many years in the post-war era *Lancasters* served in RCAF Maritime Air Command.

has dropped as heavy a bomb or bomb-load on a wartime operation, not even the B-29, which weighed more than twice the *Lancaster* and had some 3600 more horses working for it.

A lasting impression of the bomber's carrying capacity was gleaned by the aircrew themselves on operations of a tactical rather than strategic nature. Crews will not soon forget the sight of those long sticks of 20 500-pounders dropping at the rate of two-per-second from *Lancs* operating by day over Caen, the Falaise Gap, Boulogne, Calais and Cap Gris Nez, among other targets, in support of the Allied armies. Nor will the Wehrmacht, attacked as it so often was by hundreds of *Lancasters* in quick succession, each blasting a hellish half-mile pattern through its strong-points. Small wonder it was that Field Marshal von Rundstedt considered the "carpet-bombing" of his troops the most demoralizing form of attack experienced by German soldiers in the field.

If the lifting ability of A.V. Roe's heavyweight was remarkable, only slightly less remarkable were its flying characteristics. Aerodynam-

ically superb in every way, it possessed the light handling qualities of much smaller aircraft. With a bomb-load it was scarcely heavier on the controls than when empty. Yet its structure was unusually robust, enabling it to withstand the severe aerodynamic stress of a dive, loop or roll, besides extensive battle-damage.

A drama enacted thousands of times over war-torn Europe was the heavily-laden yet still-nimble *Lanc* being "stood on its ear" while corkscrewing violently to evade a night-fighter. The drama was given a day-time setting on 31 Mar. '45 when the Luftwaffe made its first and last large-scale interception by day of a Canadian heavy-bomber force. Without fighter cover because of a timing error, No. 6 Group's *Lancaster* gaggle was singled out over Hamburg for concentrated attack by some 30 *Messerschmitt* 262s, Germany's first operational jet interceptors. The *Lancs* fought back as never before. For the first time in anger their Browning .303s blazed away from all three turrets at once. Five of their number fell, but at least four and possibly seven jets also went

down in the biggest air-to-air battle fought by a Bomber Command formation in daylight.

To confine the *Lancaster's* war story to bombing in the strictest sense would be to overlook the vital contribution of the Pathfinders skippered by men such as Leonard Cheshire, VC, one of the war's greatest bomber pilots, Ian Bazalgette, a Canadian in the RAF and the only VC among Canadian bomber pilots, and Johnny Fauquier, the RCAF's top Pathfinder and only triple DSO; the sowing of thousands of mines in enemy harbours and seaplanes from the Frisian Islands to remote Pomerania Bay; and the air war's classic stroke of deceit — No. 617 Sqn.'s precise cross-Channel orbiting on D-Day eve, which, by the steady dropping of "window" (metallized paper strips that appeared on German radar screens as an approaching invasion fleet), created the false impression that landings were imminent on the Pas de Calais.

A soul-satisfying raid that smashed Hitler's mountain retreat at Berchtesgaden on 25 Apr. '45 was one of the last hostile acts by *Lancasters*. It was a fitting conclusion to the war-time log of an air-

craft which had done more than any other to end the Nazi regime.

In the late spring of 1945 *Lancasters* of the RCAF made more aviation history as eight Canadian squadrons ferried their Mark Xs home to Canada. Theirs was the first multi-squadron trans-Atlantic flight by any air force in the world.

Stripped of its war-paint, the one-time dark destroyer of Naziism became a gleaming-silver camera platform for photo survey operations by the RCAF in the Canadian north. In the decade from 1947 to 1957, *Lancs* of No. 408 Sqn. played an indispensable dual role in the aerosurvey of 3½ million square miles of Northern Canada and the Arctic Archipelago. They not only photographed vast uncharted areas along with their *Dakota* and *Mitchell* co-workers, but also fulfilled a vital complementary function that enabled our map-makers to determine with fine accuracy the position of any area photographed. For the latter purpose they were equipped with SHORAN, related to a war-time radar aid-to-navigation known as LORAN. So, in time of peace, they did further distinguish themselves by completing the gargantuan task of unrolling the map of Canada, using radar principles originally developed and applied in time of war.

A similar post-war assignment was carried out by RAF *Lancasters* of Bomber Command, which accomplished a 1,216,000-square-mile survey of East, Central and West

Africa in six years. A maritime version was in first-line use with Coastal Command for several years, until superseded by the *Shackleton*. The RAF's last *Lancaster* (retired in 1956) was, in fact, a maritime trainer.

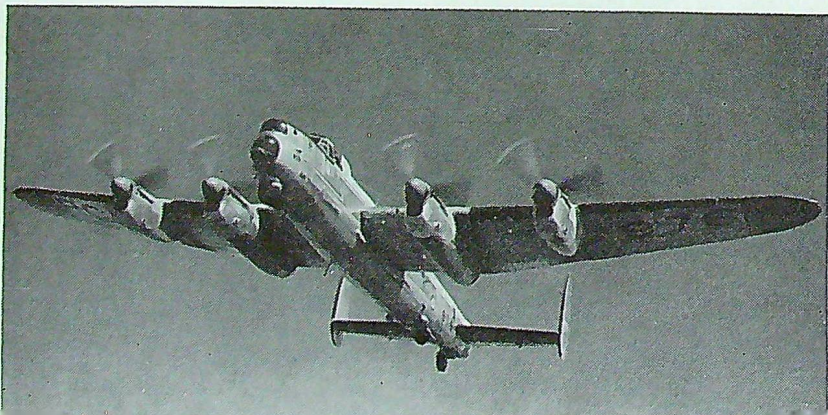
*Lancs* of the post-war RCAF also went seaward, with Nos. 405, 404 and 407 (Maritime Patrol) Sqns. Co-operating with NATO air and surface forces of the U.K. and the United States, they flew from such widely separated bases as Vancouver, Resolute Bay, Key West and St. Eval, England, on anti-submarine and anti-surface-raider exercises. Their gradual withdrawal from maritime reconnaissance duties in favour of the *Neptune* and *Argus* was completed in 1959, after a near-decade of distinguished service. As the Vancouver Sun expressed it on 13 May of that year, "It was such a sight as will never again be seen in western Canada. Fifty-eight thousand pounds of aircraft boiling down the runway, four 12-cylinder piston engines raging at their task of putting 5,000 take-off horsepower. A slamming roar of four propellers and 48 exhaust stacks, the screech of air through oil cooler grids, and the last *Lancaster* heaved itself into the air, awkwardly folding its stork-like under-carriage legs into the inboard engine nacelles. This was Tuesday. At 9:30 a.m. today the last *Lancaster* in the RCAF's Maritime Command, RX-219, took off to climb wearily over

the Rockies to Calgary. There it went into "dead storage" at the end of its last flight."

A third major peacetime function of RCAF *Lancasters* was that of search and rescue, undertaken as a primary function by SAR units and as a secondary function by maritime squadrons. By virtue of its endurance and long-range capabilities, the *Lanc* was particularly useful in search operations requiring coverage of broad expanses of the Canadian wilds.

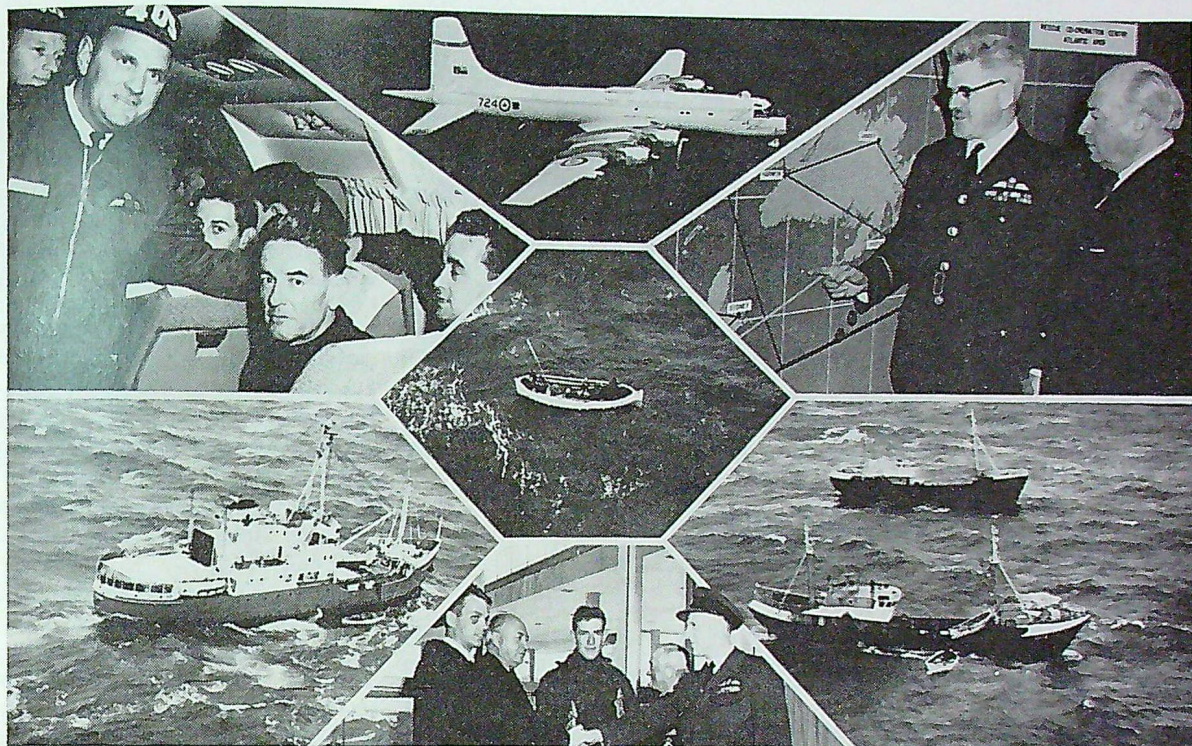
The honour of being the last unit of any air force to fly this fabulous aircraft must go to No. 408 Sqn, RCAF, which, with no little regret, says goodbye to its *Lancs* on 1 April after a 16-year association with them on photo and reconnaissance operations. To the eternal credit of the *Lancaster*, the RCAF is discontinuing its use, not because of inadequate performance, but because of excessive maintenance costs attributable to lack of spares, particularly engine parts.

In the post-*Lancaster* era may the grand champion be revered not as a relic of bygone air power, but as a symbol of quality in aircraft design; may it be considered not as relegated to obscurity, but as retired to immortality. If ever a monument be dedicated to aircraft that have fought for freedom's way, let a place of pre-eminence be reserved for the *Lancaster*, which towers above them all.



The final role for *Lancasters* in the RCAF was in the field of search and rescue.

# OPERATION DOUALA



THE RCAF Rescue Co-ordination Centre at Maritime Air Command Headquarters, Halifax, handled a total of 865 cases last year. One of the more dramatic incidents in the Atlantic area was the search and rescue operation involving the French vessel "Douala" which sank off the coast of Newfoundland on 21 December, with a loss of 12 lives. Seventeen were rescued.

An *Argus* anti-submarine aircraft, one of four ordered into the air search by A/C F. S. Carpenter, AFC, Air Officer Commanding, Maritime Air Command, spotted one of the lifeboats containing survivors and directed rescue ships to

the scene. The picture of the lifeboat was taken from the *Argus*. Reading clockwise from the *Argus* is A/C Carpenter and French Consul François Alabrune of Halifax, in the RCC marking on a map the spot where the "Douala" probably went down. Next are two of the vessels aiding in the rescue, the French trawler "Rodrique" in the foreground.

The bottom picture shows part of the welcoming ceremony at Halifax International Airport when M. Alabrune, F/L R. Thompson and Capt. D. B. Stampton, Canadian Coast Guard Rescue Officer, met two of the "Douala's" survivors

on their way home to France. The next photo shows the CCG ship, "Sir Humphrey Gilbert", commanded by Capt. G. S. Burdock, which assisted in the operation. Upper left, F/L W. C. Clarke, captain of the *Argus* aircraft which spotted the lifeboat, meets a party of the survivors.

The *Argus*, designed primarily for anti-submarine operations, has the capability of travelling 1500 miles from its base, approximately the distance from Newfoundland to Ireland, remain on patrol or air search for eight hours, and return the 1500 miles to base with an hour fuel reserve.



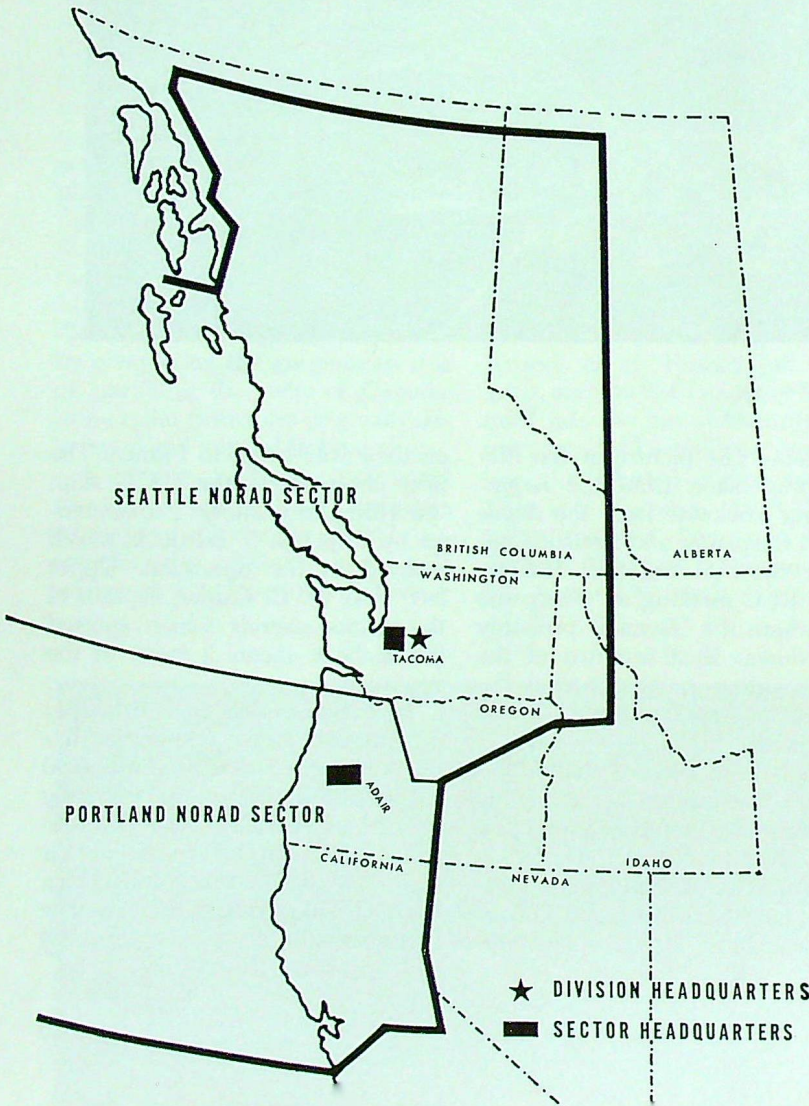
The flags of Canada and the USA fly in front of Seattle NORAD Sector Headquarters.

## CANADIANS AT McCHORD

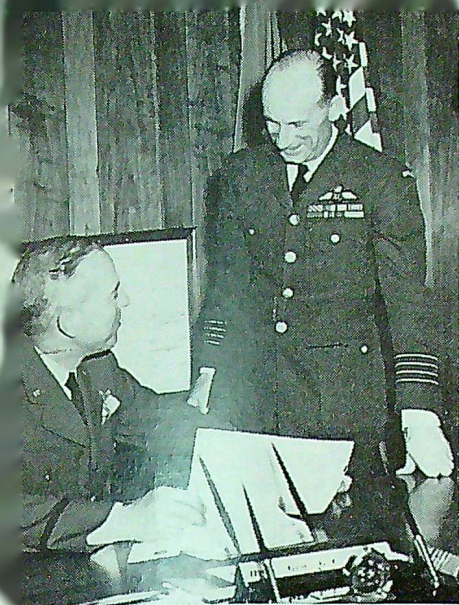
As part of Canada's contribution to North American air defence, Canadian servicemen have been stationed at several key NORAD installations in the United States for the past six years. One of these is the 25th NORAD Region HQ at McChord AFB, near Tacoma, Wash., whose area of responsibility encompasses the north-west corner of the USA, all of B.C. and part of Alberta. The 25th Region is divided into two sectors — Seattle and Portland (see map).

Commander of the Seattle Sector is USAF Big. Gen. C. Brown. The deputy commander is G/C R. S. Turnbull, DFC, AFC, DFM. Interspersed through-out the headquarters are many other Canadians holding responsible positions. For example, G/C D. G. Malloy, DFC, is assistant deputy for operations; S/L E. T. Williams is assistant director of communications and electronics; F/L W. J. Watson is director of intelligence. In all, over 40 RCAF personnel are stationed at the Seattle NORAD Sector HQ.

At the headquarters of the 25th NORAD Region, another 30 RCAF officers and other ranks along with ten Canadian Army personnel add their experience and talents to the defence of the Pacific Northwest.



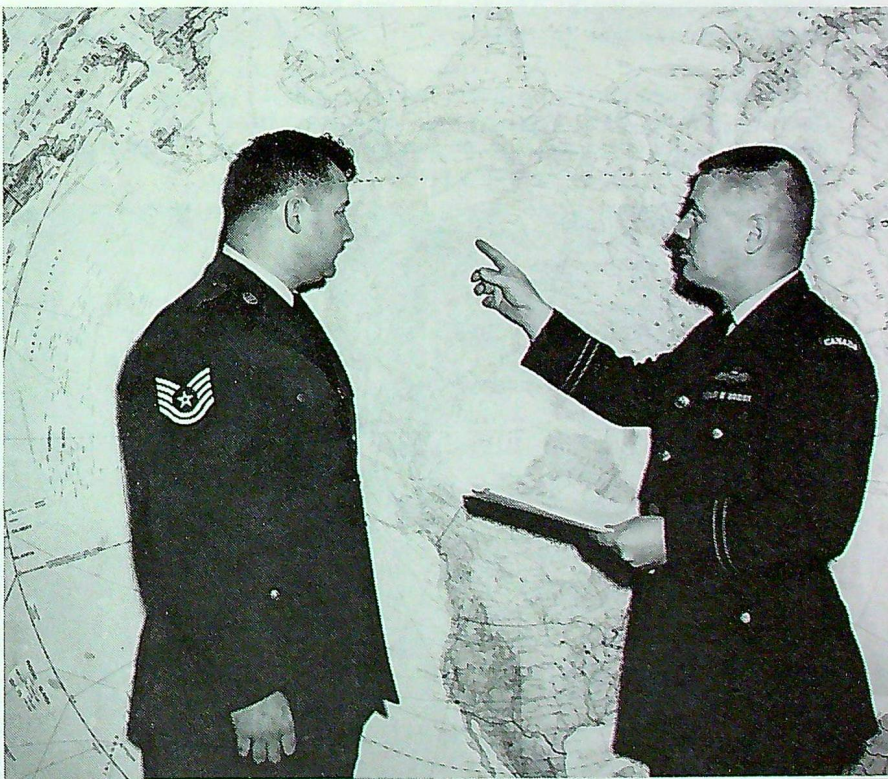
This map shows the boundaries of the 25th NORAD Region and its two Sectors.



Brig. Gen. G. C. Brown, commander of the Seattle NORAD Sector, and the assistant deputy for operations, G/C D. G. Malloy, discuss a forthcoming exercise.



Canadian and American personnel work together at a variety of tasks in NORAD. Shown here at the manual input section are (l. to r.): LAC L. E. Hansen, A3C Patricia Gillet (USAF) and A3C W. C. Moulton (USAF).



F/L W. J. Watson, director of intelligence, and his assistant T/Sgt. G. R. Groce (USAF) prepare a daily briefing for the sector commander.

# AIRWOMEN IN THE RCAF

By FLYING OFFICER G. R. ECKFORD  
Directorate of Public Relations

THE 51,000-strong RCAF regular force today includes approximately 1,200 airwomen — a group which, though small in numbers, makes an important contribution in a variety of trades.

The key to the present and future place of women in the RCAF is to be found in their adaptability as a group and as individuals. The very nature of their employer determines that women personnel must change and modify their thinking constantly as the situation demands. Though their history is just entering its third decade, there is nothing else dated about women in the RCAF. Nor is there anything static in their role,

for the ever-changing requirement of the air force has, over the last 20 years, brought about modifications in their status, their work, their quarters, and even their uniforms.

The RCAF was the first military service in this country to include women in its ranks during World War II. In 1941, under the guidance of the Women's Auxiliary Air Force of the RAF, Canadian women joined the RCAF in its time of greatest need. These women were destined to handle innumerable jobs, thereby releasing men for combat duties. Thus their motto became "that men may fly".

With the launching of the experi-

ment of having women in the air force came the inevitable "growing pains". Organizing any military component is a heavy and responsible task, but the unique challenge of bringing "WDs" into an all-male service presented a myriad of extra details and new problems. Not the least of the problems was the male outrage and disapproval of this invasion of their military privacy. The response to recruiting was overwhelmingly enthusiastic, for women were extremely proud of the opportunity to serve their country in such an active way. Perhaps it was this same pride which built such a sound framework for their future and ac-

Representatives of NATO air forces attending a tour and conference hosted by the Women's Royal Air Force at Headquarters Coastal Command, RAF, adjourn for lunch (l. to r.): S/L Betty Dalton, F/L Sheila Strang and F/O Emily Alexan-

der, of the RCAF; Air Commandant Dame Anne Stephens, the Director of WRAF; two officers of the Danish Air Force and two officers of the Netherlands Air Force.





LAW Lynne Bolduk, file clerk . . .



LAW Corry Wyngaarden,  
meteorology observer . . .



AW Sheila MacGregor,  
medical assistant.

Our covergirls represent three current airwomen's trades:

counts for the quiet pride with which airwomen wear their uniforms today.

Early organization called for ability and experience. The ability came with carefully chosen Canadian officers, the experience from a small group of British Women's Auxiliary Air Force officers invited to Canada for a period of six months. By invitation also Her Royal Highness Princess Alice, Countess of Athlone, became Air Commandant of the Women's Division.

From a tentative number of eight trades open to airwomen, the wartime list expanded to over 60 as it was discovered how varied were the jobs these women could do and do well. In addition to the many occupations considered "women's work", WDs were to be found in such specialist work as code and cypher, intelligence, and photographic interpretation. Among the positions they held were such new and interesting ones as met observers, radiographers, parachute workers, policewomen, transport drivers and wireless operators (ground). Some were even instructors in mathematics and aircraft recognition for aircrew.

Their assignments in the training and operational fields of the RCAF placed airwomen everywhere but in the air. In wartime-England Canadian WDs shared the hardships and dangers along with their male colleagues and the civilian populace. For their efforts, airwomen both at home and abroad, also shared in honours and awards. Records show that female officers and airwomen were awarded a total of one OBE, eight MBEs, 14 BEMs, six Associates of the Royal Red Cross and 27 Mention-in-Despatches.

The Women's Division reached its peak strength of over 15,000 in January 1944. Long before their disbandment at the end of 1946 their ability to perform a useful function in the RCAF had earned for the Women's Division the respect and confidence of the rest of the air force.

In 1951 the RCAF became the first military service in Canada to enroll women in the regular force in peacetime. In that year, the girls returned with a new name and a new look. Airwomen were placed on an equal status with men on matters of pay, discipline, privileges, opportunities for advancement. The

new look was pleasing to the eye, especially the introduction of the wedgie-type cap that is worn today. Beltless princess-style jackets gave a neater look to the uniform, while permission to wear pump-style dress shoes gave a brand new smartness to the whole uniform of the "regulars".

Trades for airwomen underwent modification from the wartime pattern; some not required during peacetime were discontinued, while others were re-established to suit the post-war air force. With the development of the air defence warning system, large numbers of personnel were trained to man the radar sites then being built. Airwomen, with characteristic patience and ability to concentrate, were found most suitable for this work.

Flying Officer Nettie Gramiak of Fort William, Ont., was one of the many recruits of 1951 who were trained as fighter control operators. As she recalls, these were times of great bewilderment for her and her classmates as they laboured to understand the complicated world of radar theory, meteorology and navigation. On transfer to her first radar unit, F/O Gramiak felt that she



Commissioned from the ranks, F/O Nettie Gramiak is now Assistant PadO at RCAF Station Greenwood.

had begun something worthwhile and said, "That's when I first began to appreciate the trade, but it wasn't until two years had passed that everything I had learned finally fell into place." In 1954 "Cloud 9" presented itself in the form of an overseas transfer. Typical of many serious-minded and ambitious career girls in the RCAF, F/O Gramiak's promotion was rapid; by 1961 she held the rank of flight sergeant. An important turning point in her career came in September 1962 when she received her commission and a subsequent position as assistant personnel administration officer at RCAF Station Greenwood. Well used to responsibility, she handles numerous personnel problems with all the ease of a young executive. F/O Gramiak is an outstanding example of the capability and career achievement attained by young women of the post-war, peacetime RCAF.



FS Millie Millen recently retired from the RCAF after 16 years service.

Flight Sergeant Millie Millen of Halifax can look back over the entire history of airwomen, for she has recently retired from the RCAF after a long and satisfying career which began in 1942. Adjustment to the service way of life was easy for her, since she belongs to a military family. Employed during the war years as a cypher clerk, she reenlisted in 1951 in a completely different field, that of an air force policewoman. During the next ten years she found her work in security and investigation interesting and very informative.

Why did she join? Chiefly a strong feeling of patriotism but also for the reasons most airwomen give if asked this question — the opportunity to learn a new trade, meet new people, have the security the service offers and to travel. A transfer to Metz in 1956 realized a dream for F/S Millen and firmly established the travel hobby she is most enthusiastic about today. A singular honour was hers when she was selected to become a member of the Coronation Contingent in 1953. Receiving the Coronation Medal at Buckingham Palace was the highlight of her career. In comparing the

"then and now" aspects of airwomen's careers, FS Millen says, "Then (during the war) the girls felt that their purpose was strong. Today the aim is more subtle. But the high standards in work, discipline and morals remain the same. Opportunities for a career are certainly there for those who wish to take advantage of them." On what makes the service career different from a civilian career she says, "Service people work together more closely and there is more freedom and more friendliness than is found in civilian work."

During the past decade airwomen's trades have undergone many changes as requirements have fluctuated. At present the concentration of numbers is in the more general fields such as clerical administration, supply, medical and dental assistant, with fewer girls employed in specialist trades. In 1961 a new trade emerged as a result of a steady increase in RCAF transportation of personnel and dependents. A small group of airwomen became flight attendants on Yukon passenger transports. They are, however, employed as attendants for a two-year period only, after



At a reception at RCAF Stn. Trenton, S/L Betty Dalton (centre) chats with Sgt. Ollie Szatkowski and WO II Pat Savage.



Airwomen are also generous in entertaining others. Here handing out presents at the Winnipeg Children's Hospital are (l. to r.): LAWs Marg Morrisette, Jean Wiegand and Shirley Tanner.

which they return to their original trade. Though airwomen strength has been reduced since the early '50s, they still serve on stations throughout Canada and in Europe.

An objective look at airwomen of today points up the fact that they compare very favourably with working girls in civilian life. As a product of air force vocational training and discipline, they are generally quite mature, poised and capable for their ages. Since military life is an organized way of life, they tend to learn quickly how to manage their work, time and money. Travel opportunities and the broad cross-section of people they mix with offers an environment conducive to personal development.

The perspective of Canadian service women must be both world-minded and up-to-date. Indicative of this keeping-current is their interest in meeting and exchanging viewpoints with their counterparts in other countries in support of NATO. In September 1962, three RCAF women officers, S/L Betty Dalton, F/L Sheila Strang and F/O

Emily Alexander attended a conference and tour of women officers of the NATO Air Forces at which the Women's Royal Air Force was the

Off-duty hours are times for dreams for LAW Geraldine Harrison at RCAF Stn. Foymount.

(Photo by Montaigne)



host service. Other services represented were Dutch, Danish and USAF.

Currently S/L Dalton is the AFHQ staff officer who acts as advisor and consultant on women personnel for the RCAF. She feels that, as far as women in Canadian armed forces (regular) are concerned, the RCAF has "blazed a trail" in numbers, in variety of trades, and in the scope of their service in Canada and overseas. Possessed of a definitely 1964 outlook, she has complete confidence in youth.

How do airwomen themselves look at the present and future? They know that they have an exacting position, since a peacetime force can afford to demand such high standards. Versatile in outlook, they are always aware of the constant possibility of a change in their status, their numbers and their jobs as the role of the RCAF changes. But they also know that, in war or in peace, they have done and are doing a worthwhile job for their country.



By FLIGHT LIEUTENANT J. R. SMART

It began on a Friday evening. (Looking back over a score of service years, I am struck by the inordinate number of incidents started during that traditional pause in the week.) At any rate, there I was at the close of a beautiful day, mellow and serene, indulging happily in the time-honoured custom of swapping lies and trading insults over an occasional brew in an RCAF mess nestled in the Palatinate area of Germany.

Our conversational group included the Chief Operations Officer (COpsO), also in a contented frame of mind because earlier that day he had led a section of four *Sabres* on a particularly successful "round robin". While he expounded on the relative merits of the Regent Palace and the Cumberland as London cultural centres, the COpsO was interrupted in mid-sentence by the Senior Duty Officer handing him a message flimsy. Small talk was suspended as we tigers waited for the message to be digested.

Eventually the COpsO looked up and said casually that volunteers were needed to participate in an exercise that the French were organizing. My ears pricked up at this, because the previous day I had been informed by an authoritative source (actually one of the German cleaners) that there was to be another in the series of escape and evasion exercises. The reason for my concern was that I am by nature a building-dweller. I eschew anything which smacks of the great outdoors. Since this type of exercise hinged upon one's ability to stay outdoors for several days, as well as to stay hidden from thousands of gendarmes bent on your capture and incarceration, I wasn't in the least interested. (About a year before I had been fingered for such an exercise, but had coincidentally developed an obscure back ailment which the medical officer diagnosed "oscillatory plumbism". This was fine by me — it got me out of the mud of Flanders Field, as it were — but

then I got to thinking that oscillatory means swinging, and plumbism is some sort of pig Latin for lead.)

I digress. Forewarned as I had been, I shook my head sadly and said that I had to go and see my ailing great aunt in Copenhagen, probably at the very time the exercise was being held. Rather unfairly, I thought, he observed that after my last visit to Copenhagen (when there had been a mild disagreement between the management of the Tivoli Gardens and some of our people) my chances of going there at any time were almost as good as my being promoted. I took his point.

Now, he laughed lightly, "Wouldn't you rather go to France?" A long time ago, in another service, in another country, I had been the recipient of some fatherly advice from the corporal in charge of my flight. "Mate," he had said, taking another swig of the glass of milk I had bought him in the NAAFI, "never volunteer for nuffink, 'cos if you do you'll end up wiv it in your



# IT VOLUNTEER

ear 'ole." I had never forgotten this pearl of wisdom, but it is difficult to express the credo to an officer of senior rank. I nodded noncommittally.

Next Monday morning I was briefed for the exercise and met Ed, my escaping and evading companion. We were dressed to masquerade as French civilians. My sagging spirits were not bolstered by the discovery that Ed's knowledge of the language was even less than mine, which went to the extent of knowing that if you go through the door marked "HOMMES" they can't arrest you. Not right away that is.

I was attired in an old football jersey, jeans and sports coat, with flying boots extant; Ed in the bottom half of an old working dress, T-shirt, running shoes and baseball cap. I sensed, rather than heard, the ripple of admiration which ran around the room when we entered. Not all of the evaders were happy with us though. A group of RAF types figured us for spies, and were all for debagging us and giving us a jolly good wiggling, but were restrained by some blunt remarks

from Ed, delivered in the pithy patois of North Battleford.

Our task was to go from A to B, cross-country a distance of some 30 miles, and stay out of the clutches of the bods who would be looking for us. We would be given three days to accomplish this, and the only admonition was not to give up too easily or we would be sorry. We were taken that evening in a blacked-out bus, from the station where the briefing was held, to point A. Ed and I jumped off the bus, full of enthusiasm at 2200 hrs. and at midnight we were safe in the arms of the gendarmes.

It happened this way. We were walking through a village, speculating on what we would do on arriving at point B, when a jeep crammed with soldiers swung around a corner. Ordinarily, being French civilians, we might have stopped to pass the time of day or night, but panic prevailed and we ran. I managed to go in the direction away from the troops and, on reaching a safe hiding place behind a lit lamppost, looked back to see how Ed was doing. He had not done

as well and was being dragged from behind a low road marker, shouting the while, "Maurice Richard, Maurice Richard!" (a ruse which failed to convince his captors he was French.) Several minutes later I, too, was caught in the net.

I must say the ride to the detention centre was quite comfortable. The French Army boys even offered us a Gauloise. The disillusionment set in when I was divested of my clothes in the interrogation room. In vain I claimed diplomatic immunity, and finally divulged my number, rank, name and date of birth. After further indignities, they led me away to a dank cold 10 ft. by 4 ft. cell, with a small window set high up in one wall. It was furnished, Bastille-fashion, with one old oil drum, half full of some unidentifiable, evil smelling fluid.

Escape and evasion exercises wouldn't be half the fun they are for the interrogators if there weren't any people around to interrogate. So it wasn't long before I was invited to meet the head inquisitor. "Invited" is probably the wrong word for having a paper bag shoved



"Dressed in unquestionably French attire . . ."

over one's head and being prodded with a rifle butt through the deepest puddles on a parade square, but we eventually made it to El Torquemada, who greeted me with an oily smile and a suggestion that I sign a confession admitting complicity in shoving cantharides into Paris' water supply. Not one to be taken in so easily, I merely rattled off my name-number bit. For that I stood with my nose against the wall for 15 minutes. Several times within the next few hours I was subjected to similar interviews, all equally uncommunicative, until I was sure that the point had been reached when under actual conditions, I would be stuck against a wall and offered a cigarette and a blindfold. I thought of myself turning down the blindfold disdainfully, but accepting the cigarette so as to send a last, blue curl of smoke into the crisp morning air as the volley crashed out.

What did happen was not so permanent, but equally as distasteful. The barracks where we were housed had originally been built sometime around the war of 1870, and the system of sanitation was of the same vintage. My interrogator's idea of gaining co-operation was to make me go around the "ablutions", and with a short stick, which he had thoughtfully supplied, clear the drains. Even now, years later, a faint sense of nausea hits me at the recollection.

After I had cleared some several million drains I was led, gagging slightly, back to my cell. Eventually I was called for another inquisition only to discover they had changed their tactics. This time a gently-mannered bloke was solicitous after my health, horrified with my travail in the drains, and insistent that I smoke some of his cigarettes. I did, but was not duped by his attitude.

Oh no. Change of pace sometimes works wonders, they must have thought, but not with me. All he got was the name, number, rank and date of birth. Wasn't born yesterday you know! Sure enough, the facade of friendliness came away like some soggy wall paper when I gave him the stiff upper. The whole treatment I got this time. Sudden explosions behind the head, small electric shocks, dousing with water, finishing up with a round of push ups. Would I talk? Never!

With an appreciative sign the interrogator leaned across the desk to offer me another cigarette. "You know," he said, "your performance here has been the finest exhibition of resistance to interrogation I have ever witnessed. Relax. The exercise is over as far as you are concerned. Please accept my congratulations". It was my turn to sigh with relief. I took his cigarette and relaxed. "Now that the thing is over, would you mind telling me just where you are from?" he inquired. Would I mind? Certainly not. It felt good just to watch his face as I told him all, and realized just how far he might have been ahead if I had told him hours previously.

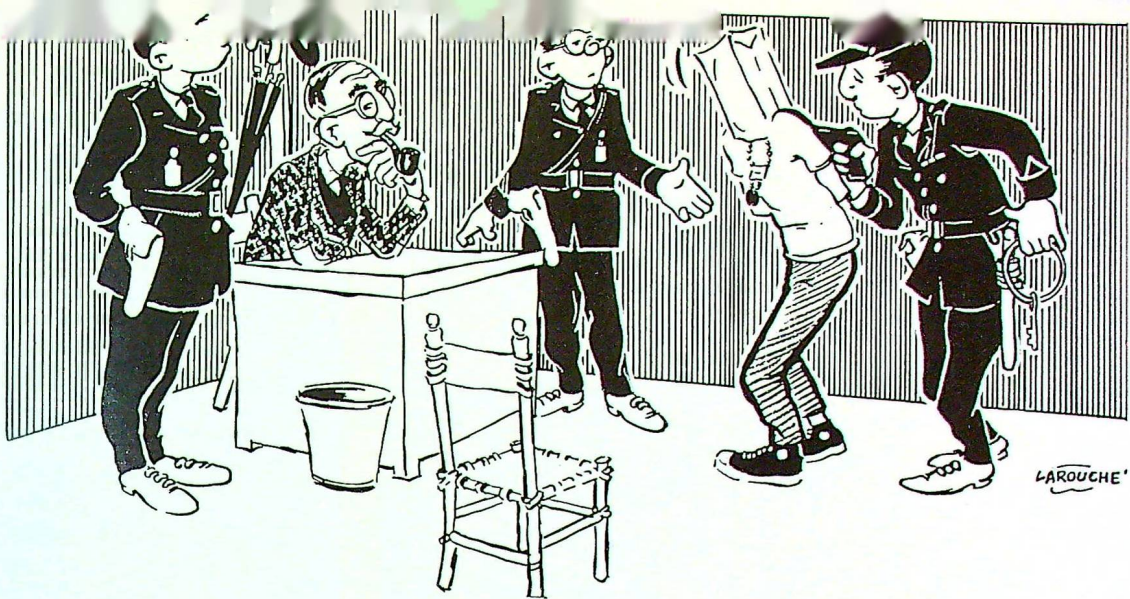
"So that's about all I can tell you," I concluded.

"That is more than enough," he said. "Guard, take this prisoner back to his cell."

"Here, wait a minute," I blustered, "I thought you said the exercise was over?"

"Oh, did I?" he murmured, "how very silly of me. Dear me, no. Another 24 hours to go. Time for some more drains yet".

I was led, gibbering, from the room. They didn't make me do any more cleaning, just left the cell door locked. This was infinitely worse. Made me go a trifle batty. At one point I even tried to escape. With the excuse that I had to attend to the call of nature, I had the guards let me outside, but I was tripped



"...they wouldn't get anything out of me."

and bound before I got 100 yards away.

By this time quite a number of prisoners were in the barracks, and in the morning they let us out of our cells, ostensibly for exercise. Offhandedly, the guards drew our attention to the fact that the main gate was wide open. Like a bunch

of steers, we edged that way, and finally charged through, yelling like maniacs and the guards nodding approvingly. Escape? So help me!

The following Friday who should step into the mess but the COpsO. He asked me how I had enjoyed the exercise, so I told him. He was a trifle taken aback at this but

chuckled indulgently, and mentioned that there was a ski course coming up, and would I like to put my name down. I merely said, "Sir, I would like to tell you what a corporal friend of mine told me some years ago."

## MOOSE ON THE TRACKS

Not responsible for train delays because of moose on the tracks," reads the note at the bottom of the train schedule.

The note means exactly what it says. During the winter months, moose are a real problem on the Alaskan Railroad, which runs trains between Anchorage and Fairbanks twice a week.

Deep snow covers the surrounding terrain, while the railroad track is clear. The moose feel that this right-of-way is their own private highway, and some are accidentally run over before the train can be stopped.

Others simply refuse to leave the

track and must be shot and dragged off the rails so the train can proceed. The trains kill a lot of moose, but the moose slaughter the railroad's schedule, too. It works out to something of a standoff.

The Alaskan Railroad, operated by the U.S. Department of Interior, covers 356 miles on a 12-hour schedule. The track is winding, and sub-zero temperatures and snowslides present hazards, in addition to the moose.

North American Air Defence Command's Ballistic Missile Early Warning Site II is plainly visible from the trains. Between Mt. McKinley and Arctic Circle, in the

midst of a frozen plain, the installation seems out of place. Its huge, "bed springs" antennas stand 16 stories high, 590 miles from the coast of Russian Siberia. It spreads two superimposed fans of radar energy 3,000 miles across the top of the world.

Described as a "miracle of performance" by Gen. John K. Gerhart, NORAD's commander in chief, the BMEWS radars contribute greatly to the security of the free world.

But it's a safe bet they mystify the moose.

Courtesy NORAD News Service.

# THE JOURNEY BACK

By LIEUTENANT H. K. MACDONALD  
No. 4 Canadian Infantry Brigade Group

A WARTIME serviceman, given the opportunity to visit in peacetime the places he knew so well in war, is invariably disappointed to find that nothing looks the same. Towns and villages have been rebuilt, new districts added, roads widened and new traffic interchanges constructed. Norman Welwood, a wartime flier with the RCAF, found this out recently. But, he was luckier than most; he found the place he was looking for.

Mr. Welwood was the sole survivor from an RCAF *Wellington* shot down near Hamburg on the night of 9 Nov. '42. Ever since, he wanted to visit the graves of his crew and, if possible, the crash site itself. He knew his crew-mates were buried at Sage Military Cemetery, near Oldenburg in northern Germany, but finding the crash site would be a problem as he had little information to begin with.

On the night of the crash Mr. Welwood was serving as a radio operator with No. 425 (Alouette) Sqn. flying from Dishforth, Yorkshire. After bombing Hamburg his aircraft headed for home. It didn't make it. North-west of Bremen the forward compartment of "Q" for Queenie received a direct hit by a

heavy anti-aircraft shell. Another shell burst just astern. As the stricken bomber plunged downward Sgt. Welwood called to the other crew members on the intercom. There was no reply.

He knew he had but minutes to save his own life. His parachute was stowed overhead on a rack but the explosion had knocked out the lights. He groped desperately in the dark wondering if he could locate the parachute and find the escape hatch in time. Thankfully he located the parachute, snapped it on the rings of his harness and gripped the handle of the hatch. It would not open. Precious seconds went by as the aircraft plunged downward. Finally he was able to pry up the hatch and jump through. The ground rushed up to meet him. In seconds he hit the ground in a ploughed field, a scant 60 yards from the fiercely burning aircraft which had crashed seconds before he landed. Sergeant Welwood did not know whether any of the others had been able to jump from the aircraft before it crashed.

He buried his parachute and moved away from the scene. He could see the lights of a farmhouse in the distance. It was a cold night



Herr Winter, police captain at Bad Zwischenahn (who was on the force in 1942 and investigated the crash), Mr. Welwood (left) and his driver peer at a map of the area.

and he knew he must find shelter, food and civilian clothing. As he approached the farmhouse a dog started barking so he moved on. Other farm buildings were nearby. Eventually he found a small building, some distance from the rest, with a loft filled with hay. Here he spent the night. He was awakened several times by the sound of ammunition exploding.

The following day the fields surrounding the crash were alive with Luftwaffe investigators collecting documents from the crashed *Wellington*. He was unaware that they had recovered the bodies of his five fellow crewmen; they in turn were unaware that a sixth man had survived the crash and was hiding nearby.

That night Sgt. Welwood crawled away from the barn. Before he left he made a meal from some potatoes he found in the building and as the night was bitterly cold he took an old coat hanging from a hook. He

tucked his flying boots under the coat and started walking down a country road toward the railway line which he knew was not far away. He had heard train whistles all day and knew the line was fairly busy. A train heading west would take him into Holland within a few hours and there he knew he could contact the Underground who would hide him and eventually help his escape.

Evading capture for four days, Sgt. Welwood was finally discovered in the railway yards at Leer, a few miles from the Dutch border. During two and a half years of imprisonment he participated in several unsuccessful escape attempts and survived a long trek on foot across Northern Europe in the closing stages of the war.

After the war Mr. Welwood learned from the family of the dead pilot that his crew had been buried in the civilian cemetery at Bad Zwischenahn, then re-interred in

Mr. Welwood inspects the barn where he hid after crashing in Germany in 1942.



Herr Hotz (centre), farm owner at the crash site, Mr. Welwood and his driver examine part of an aluminum ammunition box, possibly from the downed aircraft.

the British War Cemetery at Sage. And, with this much information to go on, Mr. Welwood last year made the journey back.

Along with Mr. Ed Blake (also an RCAF veteran), he set out to visit the graves of his crew and, hopefully, the crash site. The two men had little difficulty finding the cemetery but locating the crash site was to prove more difficult than they had imagined. The aircraft had crashed at night. In addition he had walked in the dark avoiding heavily-travelled roads so he did not see landmarks that he might remember 21 years later.

Mr. Welwood made his first call at the police station at Bad Zwischenahn. There, to his astonishment, the present police chief, Herr Winter, remembered investigating the crash of a *Wellington* with a Canadian crew in 1942. The aircraft crashed near the farming community of Azschhausen, five miles east of town. He remembered that there were five bodies in the

wreck. Many of the details tallied with Mr. Welwood's memory of the crash. The police chief was most surprised when Mr. Welwood told him he had been aboard the aircraft that night and had hidden within 300 yards of the crash. The police chief offered to take him to the scene.

At the crash site, the German farmers were positive the aircraft had come down during the afternoon of a hot day in July 1942. Mr. Welwood found this hard to understand because he knew Canadian bombers were not conducting daylight bombing operations in 1942. Furthermore, he didn't recognize any of the buildings and when the farmer produced a metal dinghy paddle at the scene, the two RCAF veterans recognized it as belonging to an American *Liberator*. Mr. Welwood was disappointed but after coming so far was unwilling to give up.

It was getting dark as he continued his inquiries over a three-

mile radius. He thought the land looked familiar. Eventually he found a country road leading down to a railway track. At the railway yard in Bad Zwischenahn he recognized the siding near the edge of town where he had boarded an empty boxcar. Working his way back along the rail line Mr. Welwood was sure the country road was the correct one. He drove north for about two miles and started enquiries again. Eventually he found a man who remembered an aircraft crash at night during the fall of 1942.

One lead led to another. Finally at 10.30 p.m. he arrived at the farm of Herr Frederick Hotz. The farmer's wife clearly recalled a night in November when a big aircraft crashed on their farm. Her husband was serving in the German Army at the time. Mr. Welwood asked the farmer if he could see the crash scene in the dark. The farmer showed him where the bomber had crashed and within a few minutes Mr. Welwood picked out the hedge where his parachute had tangled, pointed to the farmhouse where he had taken shelter. Herr Hotz invited him to come back in the daylight when he could take some photographs.

The following morning Mr. Welwood and Mr. Blake visited the farm where Sgt. Welwood had taken shelter. The former airman immediately recognized the small barn. The loft was filled with hay and there were potatoes in a big bin. He knew this was where he had slept that night. He climbed up into the loft and looked through the cracks in the loft door. Twenty-one years ago he had looked out through the same cracks to see the *Wellington* burning, its ammunition exploding.

Hopeful that he might find a part of the downed bomber, he and Mr. Blake started an exhaustive search of the area. After an hour the two



Mr. Welwood visits the graves of his crew in the Sage War Graves Cemetery near Oldenburg, Germany.

men found a crumpled rectangular box made of metal. It looked familiar. Mr. Welwood scratched the surface and found it made from an aluminium alloy. It appeared to be

an ammunition box from one of the *Wellington's* machine guns. Taking a small section as a souvenir, he headed for home. The journey back was over. ⊙

## BACK ISSUES AVAILABLE

From time to time back issues of *ROUNDEL* are returned to us to pass on to people requesting them to complete files or for libraries.

We have on hand at the present time issues that are listed below. They may be obtained on a first come first served basis, by writing to: Editor, *ROUNDEL*, Victoria Island, Ottawa 4, Ont.

1950 Jan. Sept. Dec.	1951 Apr. Oct.	1952 Jan.-Feb. Jul.-Aug. Oct. Nov. Dec.	1953 May Sept. Oct. Nov. Dec.	1954 Jan.-Feb. Jul.-Aug. Sept.
1955 All issues but Sept.		1956 All issues but Oct.		1958 All issues but Mar.
1959 All issues available		1960 All issues available		1961 May, Jun., Jul.-Aug., Nov. are not available.

# DO IT YOURSELF DEFENCE DISPLAY

IN THE RCAF's Air Defence Command, elaborate electronic assemblies and sophisticated weapons combine to form a defence system of great complexity. However, thanks to the efforts of five RCAF personnel, these intricacies are now neatly and simply explained by means of a technically-accurate and highly-educational model.

The display, which measures eight feet by eight feet, includes a model radar site, SAGE direction centre, a microwave link joining them, a hostile bomber aircraft and a *Voodoo* interceptor. A taped commentary tells briefly how the various components work together and describes a hypothetical attack in which the system detects the hostile intruder and guides the interceptor to the attack. A total of 43 lights shows visually what is being explained in the dialogue. The radar antennas rotate and the two aircraft move together along hidden tracks to add realism to the display. Electric lights and motors are turned on and off at the proper point in the commentary by means of an array of switches at the control panel.

Flying Officer A. D. Close, the communications and, later, radar officer at RCAF Stn. Kamloops, B.C. conceived and designed the working model. Helping build it were URTP Officer Cadet R. L. Olsen, Cpls. R. Massey and G. Miner, both radar techs., and Sgt. A. Bechard, a communication technician (ground). Together they spent many late evenings completing the ambitious project.

The model is intricate far beyond the original plans envisaged by its designer. Though simple in appear-

ance from the top, there are several hundred feet of wiring and some intricate linkages and pulley systems underneath.

In spite of the intricate design, the model worked without a hitch throughout Air Force Day at Kamloops last year and attracted much interest from adults and children alike. It was then sent to RCAF Stn. Baldy Hughes and RCAF Stn. Saskatoon Mountain for their shows, then indicated its sound construction by requiring only minor repairs upon its return to Kamloops.



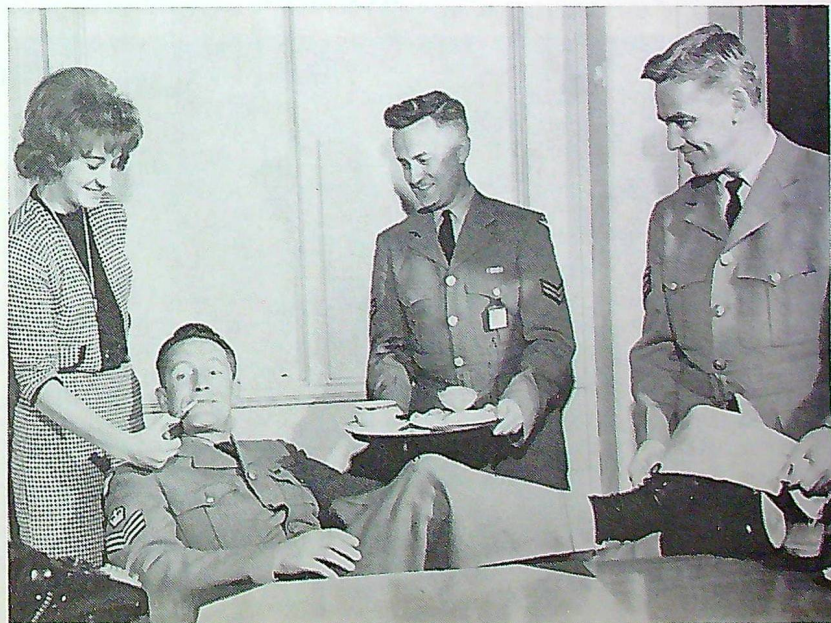
The Sage display model has the domes of a height finder and a surveillance radar cut away so that visitors can watch the movement of the antennas.

The display is now at ADCHQ and it will be displayed at a number of eastern sites this year.

## AN AIR FORCE EARL

To his friends in No. 11 TSU he is Flight Sergeant Chad Turnour, but in Debrett's Peerage he is listed as Rt. Hon. the Earl Winterton, a title he succeeded to upon the death last year of his cousin the sixth Earl of Winterton. Recently posted to the RCAF detachment at

Canadair, from Halifax, FS Turnour has two more years to serve prior to retirement and any worry about being an Earl. Giving him the "royal" treatment in the photo below are Yvette Lenarbre, Cpl. Norm Cousins and Sgt. Jim Laverty.





# RCAF ASSOCIATION

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

## Complimentary RCAFA Memberships now go to all Retiring Airmen

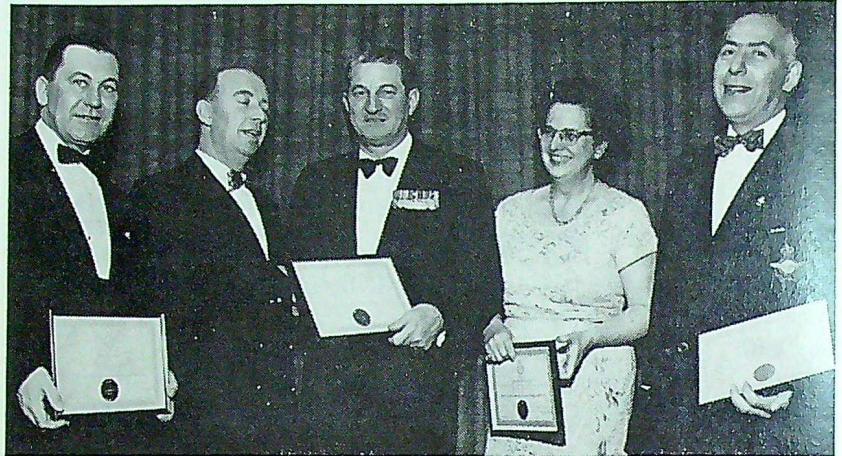
The National Executive Council has approved a plan to encourage RCAF personnel to become members of the Association on retirement. In conjunction with the RCAF, a procedure has been worked out whereby all personnel leaving the service will receive at the time of release a complimentary membership in the Association for one year.

In order that the individual receiving the complimentary membership knows something about the Association a card of welcome will be included. This will indicate where wings of the Association are located and suggest that the new member visit the wing in his area.

The plan was inaugurated at RCAF Station St. Hubert recently when on invitation of the Air Officer Commanding, A/V/M M. M. Hendricks, OBE, the Secretary-Manager presented cards numbered 1 to 4 to:

S/L D. J. Dewan, AFC  
S/L K. C. A. Smith, DFC  
S/L C. M. Griffin  
F/L S. L. V. Paulson

We in the Association are most appreciative of the co-operation we have received from the RCAF on this very important matter.



At a "Meet the National President" dinner held at RCAF Stn. St. Hubert, Awards of Merit were presented to members of No. 306 (Maple Leaf Wing) by Air Marshal Hugh L. Campbell (l to r): John A. Cooper, George Ellis, Air Marshal Hugh Campbell, Loraine Currie and George Cattiny.

## WINGS OF THE RCAFA:

### No. 404 (Kitchener-Waterloo) Wing

(Third in a series)

"Canada's most active Wing" — that is the boast of No. 404 (Kitchener-Waterloo) Wing. From organization night in May 1949 to the present, No. 404 has shown an enthusiasm and activity that is the equal of any wing in Canada. Because of the splendid direction and administration of its committee No. 404 Wing enjoys an excellent record of success, growth and activity, and

has the admiration and acceptance of the community.

Perhaps the most energetic project undertaken by the wing was the sponsorship of the first annual Kitchener-Waterloo Air Show in 1962. The show, first of its kind in the district, featured the Golden Hawks and the Red Knight. A 48-page booklet published in connection with the show was an outstanding presentation. The program was successful beyond expectations and certainly a major accomplish-

ment of the wing in line with the aims of the Association.

Throughout the years, No. 404 Wing has actively supported air cadets and is the sole sponsor of No. 80 Air Cadet Sqn. Some years ago, training quarters were purchased and have since been maintained and altered to meet the changing requirements. All present instructors, except one, are active members of the wing. Since the end of World War II 50 cadets of No. 80 Sqn. have joined the RCAF.

No. 404 Wing regularly attends commemorative parades throughout the year, with special emphasis placed on the Battle of Britain parade, observed on the Thursday evening closest to September 15th of each year. The program usually includes a parade to the cenotaph for the service and laying of a wreath, followed by a banquet at the wing quarters with a special speaker.

In April 1962 No. 404 Wing adopted its first foster child. Ammanuel Boutsakis, a Greek boy living on the island of Crete, was singled out to receive assistance from the wing. The adoption was so well received by the members that two months later a Chinese girl, Wong Wai, was also adopted as a foster child.

The wing has always enjoyed having its own quarters, albeit in different locations through the years. It now leases accommodation at 16 Dupont St., Waterloo, and is comfortably located with all required facilities.

Membership is a constant concern to the executive of No. 404, as it is with most wings. During the national campaign held in 1963, certain incentives were offered to the members, with the result that No. 404 Wing was the first to achieve its national quota, and later surpassed it. However, the executive is not content to rest on its laurels, and an energetic membership cam-

paign is continued throughout the year. From a small nucleus of dedicated members in 1949 the wing has now grown to a membership of 350.

Its aptly-named publication, 'Wing Ding', is mailed to all members and other wings across Canada to keep them informed of the activities and projects planned. The excellently-edited 10-page booklet, complete with pictures, covers information from their two adopted children, an editor's column, a list of coming events, reports on past projects and social events, and of course the news from the wing's ladies auxiliary.

On the social side, No. 404 Wing members have a wide range of activities to choose from. Such events as curling, bowling, shuffleboard and golf tournaments are keenly contested, with bingos, picnics, children's parties and dances regularly held. At least two social events each month are held for the entertainment of the members. Long-range planning, with the complete entertainment program for the year outlined at the first of each year, is the key to the success of 404's social activities.

As with most wings, 404 K-W has a most co-operative and busy ladies auxiliary, whose members readily lend their assistance to social projects and regularly contribute profits from their bazaars and bake sales to the treasury.

The accomplishments of No. 404 Wing were recognized in 1963 by National Headquarters when it was named 'Runner-Up Wing of the Year'. We look forward to the continued success and growth of No. 404 Kitchener-Waterloo Wing and congratulate its members on their past accomplishments.

### Wings provide special service

Some 30 wings across Canada have for a number of years made available, without charge, to deserving cases in their communities, crutches, wheel chairs and other sickroom equipment. These wings raise the money to buy this equipment through the sale of magazines. At the present time over 200 wheel chairs, 50 pairs of crutches, hospital beds, oxygen tents and inhalators are available at the different wings.

Mr. Donald Gillies, No. 404 (Kitchener-Waterloo) Wing's past president, welcomes new members into the Association.



# Letters to the Editor

## WHAT MAPLE LEAF?

Dear Sir:

I am attempting to identify the specific type of maple leaf that is used to centre the RCAF roundel.

Could you please supply me with this information?

John L. Mackay,  
Paul Davoud School  
RCAF Stn. North Bay, Ont.

*(The maple leaf we use is the Acer Saccharum, better known as the sugar maple, Canada's national emblem. — Editor.)*

## TUSKER TRAILER

Dear Sir:

Reference "The Tuskers' Tale" (Sept. '63), this article on the whole was very well done; however, to keep the records straight I would like to correct at least two errors.

You state that on 18 Aug. '41 the first Canadians arrived. On 8 Jul. '41 Sgt. B. C. Calloway, Sgt. Lumsden and Sgt. R. G. Shaw were the first Canadians to arrive, and on 9 Jul. '41 Sgt. B. A. Robertson (Black Robbie), Sgt. W. J. Robertson (White Robbie) and Sgt. Cote arrived. These six senior NCOs were all WAGs. Sgt. Cote was one of the five killed on the first fatal accident on 23 Aug. '41. With him were three RAF aircrew and one American.

It might be of interest to your readers to know that there are at least six people with more than three years service in the old No. 413 Sqn. who are still in the RCAF Regular. They are A/C L. J. Birchall, G/C L. H. Randall, G/C H. M. Walsh, S/L S. J. Granden, S/L T. C. Kelly and the undersigned. If this letter should come to the attention of any of our RAF gang who were with us at Sullom Voe or Koggola, I for one would like to hear from them.

F/L R. G. Shaw,  
RCAF Stn Camp Borden, Ont.

## TRADE TALK

Dear Sir:

Thank you for the photostory on "A day with ME Techs" (Dec. '63). We also should not forget the MSE (drivers), one of whose favourite slogans is "we doze, but never close, 24 hours around the clock". I have been with this trade for the past 25 years.

FS K. Neilly,  
MSE Tech,  
RCAF Stn. Chatham, N.B.

## IN KOREAN SKIES

Dear Sir:

F/O Halliday's two-part article on RCAF participation in Korean War jet fighting (Dec. '63, Jan-Feb. '64) was most interesting. Did you know that a Canadian naval pilot also won an American DFC during that conflict?

Lt. Cdr. J. J. MacBrien, RCN, was an exchange pilot flying a *Panther* jet from the aircraft carrier USS *Oriskany*. For leading a flight on an interdiction raid against a Communist supply, storage and warehouse area near Pukchong on 1 Feb. '53, he was cited for "extraordinary achievement" in accomplishing the mission. Despite marginal flying weather and heavy anti-aircraft fire, he displayed "courageous leadership and outstanding pilot skill . . . in the highest traditions of the United States Naval Service."



Lt. Cdr. MacBrien, the only RCN flyer to participate in the Korean War, left the navy in 1956 and is now Canadair's director of military systems.

Mr. E. C. Russell,  
Naval Historian,  
RCN, Ottawa, Ont.

## CREDIT UNION AIMS AT RECORD

Dear Sir:

Once again a Canadian military credit union is taking aim at a world record.

In 1961 the RCAF's Cold Lake Credit Union, drawn from a community of approximately 6,000 achieved assets of a million dollars in less than two years of operation. It has since gone on to reach two million dollars, and in the course of four years of operation has made loans

to its members totalling in excess of five million dollars.

Now another military credit union, the tri-service Defence HQ organization, is zeroing in on the Cold Lake record. Organized some 20 months ago, with a charter group of 22 persons including all ranks, the Defence HQ Credit Union registered slow progress at first, but after the first year commenced to record the type of advancement common to most military credit unions. As of the end of Dec. '63 they number 1,650 members, and their assets have topped \$850,000. The directors of the Defence HQ Credit Union are confident that this organization will equal (and quite possibly surpass) the Cold Lake Record of a million dollars in 23 months.

The business of the organization is conducted in an air-conditioned office located in the new National Defence Employees Assn. building, S/L G. A. Woolley (ret.) is fulltime manager of the operation. Assisting him is former F/L N. Norton.

W/C V. C. Stevens,  
for the Board of Directors,  
Defence HQ (Ottawa)  
Credit Union Ltd.

## WHERE ARE THEY?

Dear Sir:

Almost 20 years ago I met three British airmen, I believe they were Canadian, the crew members of a plane, which was shot down over southern Poland in early autumn of 1944.

At that time I was a partisan of the Polish Underground Army (A. K.). Our unit "BARBARA" — 1st battalion of the 16th Infantry Regiment A.K. — was operating under the command of Cpt. "LELIWA" in the area closed by the rivers: DUNAJEC and BIALA.

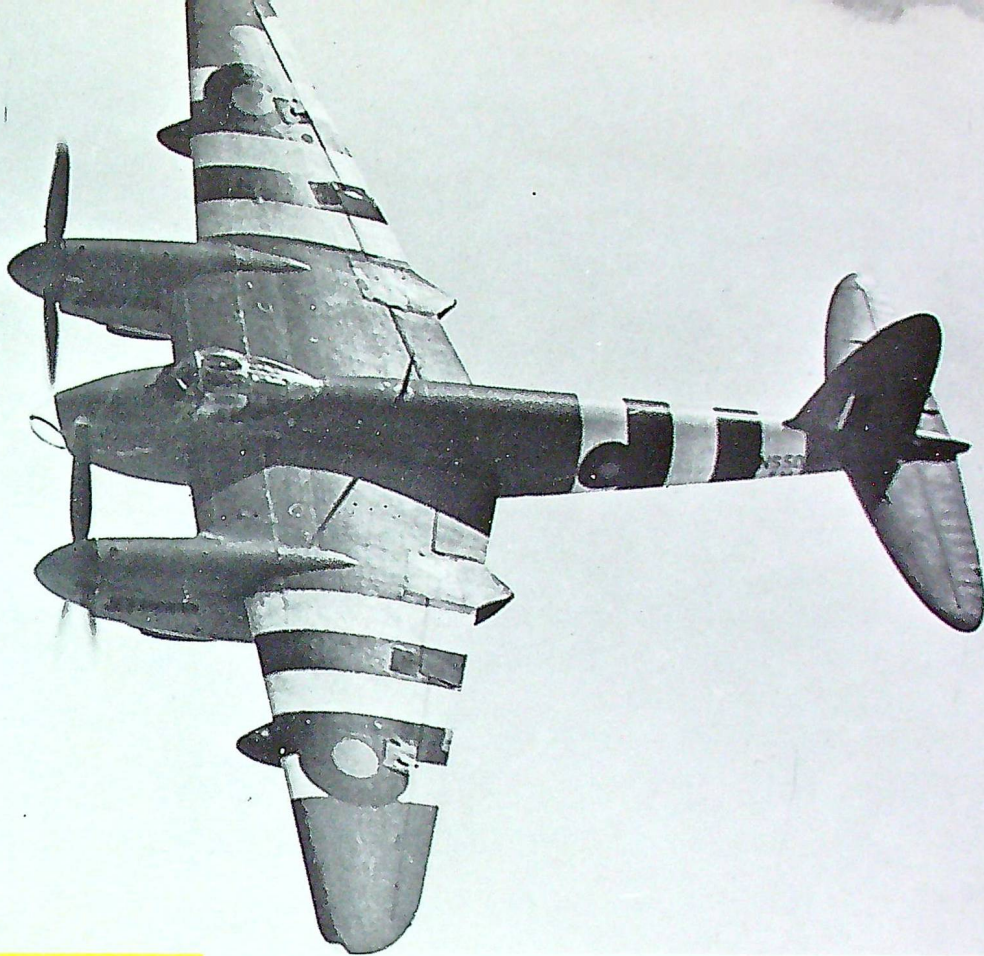
The three crew members of the crashed plane, whose names I do not know joined our unit at the village called JAMNA, near a small town CIEZKOWICE in the middle of September 1944, where we fought later on a 24 hour battle with the Germans.

I would appreciate very much, if you could print my letter in your magazine, so that these gentlemen upon reading it, if they are still alive, could contact the undersigned.

K. Bieniecki,  
5002, Fulton St.,  
Montreal 29, P.Q.

Surprising fact: The crewmen who sailed to America with Columbus got \$29 each for the round trip.

One of the greatest puzzles in life is how a fool and his money got together in the first place.



## AIRCRAFT ALBUM:

### *De Havilland Mosquito*

This aircraft was dubbed "The Wooden Wonder" and "The Termite's Dream" because of its plywood construction. It was probably the most versatile aircraft of the war, being used as a fighter, reconnaissance aircraft, bomber, anti-shipping aircraft, and even as a transport. Bomber and reconnaissance Mosquitos carried no guns, depending on their high speed for protection.

Four RCAF night fighter squadrons (Nos. 406, 409, 410, and 418) flew Mosquitos on operations. During the V-1 "Blitz" of 1944 Mosquitos of No. 409 destroyed ten of the pilotless aircraft, while No. 418 shot down 82 V-1s. In the closing weeks of the war, No. 404 Sqn. equipped with Mosquitos and carried out strikes on German shipping and U-boats in the Kattegat.

A total of 7,781 Mosquitos were built, including 1,032 in Canada. There were many versions. The Mark 30 night fighter had two Merlin 76 engines of 1,710 h.p. each. Top speed was 407 mph at 28,000 feet, and armament was four 20mm cannon in the nose. Wingspan was 52 feet 2 inches, and length 41 feet 9 inches.

*Roger Duhamel*

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