

# The ROUNDDEL

Vol. 3, No. 12  
DECEMBER 1951



ROYAL CANADIAN AIR FORCE



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VOL. 3, No. 12

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# Christmas Greetings

I am extremely pleased to have this opportunity of wishing to all ranks of the Royal Canadian Air Force a very Merry Christmas and a Happy and Prosperous New Year.

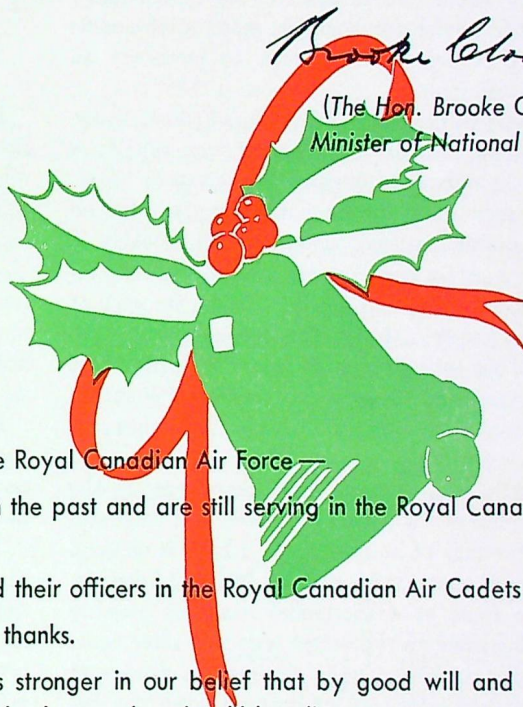
Looking back over the road we travelled in 1951, you of the R.C.A.F. may well feel proud of the year's work. Expansion has been the keynote of the passing year. It will be even more evident in 1952.

Let us press forward in the New Year with increased vigour. Confident in the knowledge that a strong Air Force embodies the true spirit of the Christmas season, Peace on Earth, and Good Will toward Men.



*Brooke Claxton*

(The Hon. Brooke Claxton)  
Minister of National Defence



To the men and women who serve in the Royal Canadian Air Force —

To those who have served with us in the past and are still serving in the Royal Canadian Air Force Association —

And to our young fellow-airmen and their officers in the Royal Canadian Air Cadets —

I send my greetings and extend my thanks.

May this Christmas season make us stronger in our belief that by good will and unselfish action we can do much to make the world a better place in which to live.

*W. A. Curtis*

(W. A. Curtis)  
Air Marshal  
Chief of the Air Staff

# Sgt. Shatterproof is not Dazzled

Sir:

Were I less dedicated to the service of His Majesty, I might be seduced from my duty by your flattering invitation to add my greetings to those of the Minister and the Chief of the Air Staff. But we Shatterproofs are not easily dazzled. We can walk the solemn heights where Air Vice-Marshals have their being, or we can plumb the depths in which W.O.1 Gallstone wallows; but the integrity of our purpose remains unshaken. To put the matter in a nutshell, Sir, the Christmas turkey would turn to ashes in my mouth had I failed to advise you that you stand a reasonable chance of being shortly torn to pieces by an infuriated mob.

If you will refer to "What's the Score?" in the September issue of "The Roundel," you will notice that the answer to question 2 is given as "(d)." This implies that the aerobatic manoeuvre known as "bunting" is legal. The error, Sir, is likely to prove a costly one — costly not only to the taxpayer, but also to Canada's family life and, of course, yourself. I pray that it may be corrected before our entire land is buried beneath the debris of aircraft and the shattered bodies of countless gallant young men whom "The Roundel" has sent to their deaths.

Should you, by some lucky chance, escape the vengeance of the nation's mothers, you must still face the fury of its fishermen. I have it on good authority that Air Marshal H. ("Gus") Edwards, whose fame as a sportsman has been steadily growing since his retirement, swooned three times in rapid succession upon reading the answer to question 17. He is, I understand, even now organizing an "on-to-Ottawa" march of the fiercest anglers in the country. What they will do when they get there, I prefer not to contemplate. But I would strongly urge that you begin to practice the mating-cry of the wall-eyed pike. It is said round the camp fires that this is the only thing that can appease the Air Marshal once his piscatorial pride has been outraged.



Before you close your copy of the September issue, I would draw your attention to yet a third mistake. It occurs in the ninth line of the first column on page 2. I am aware, both from personal experience and from observation, that every red-blooded Canadian has an eye for an uninhibited lass, but I can only speculate about what he would have for one who is merely "unhibited." Probably nothing. The point is a delicate one, however, and we will let it pass.

But a truce to all cavilling! Shatterproof has kept faith with his conscience, and his soul can now unfold to the spirit of Christmas like a flower to the sun.

To the health of the Brass, of the boys and girls in the field, and of all true people beneath whose eyes these lines may fall — I lift high the Yuletide noggin. May their wassail flow freely (through the proper channels) and may kindness and laughter preside over every table at which they sit. Mellowed but not unmanned beside the Fetlock hearth, Sgt. Shatterproof will be thinking of them.

# Service Writing

By Wing Commander M. W. Gall

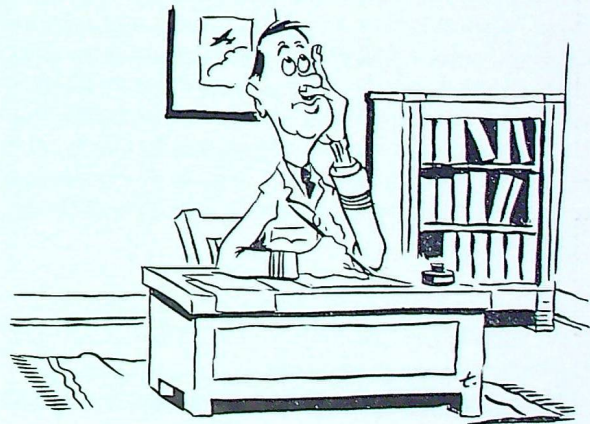
*(The author of this article joined the R.C.A.F. in 1938 and was trained as a pilot at Camp Borden. After the outbreak of war, he served with No. 10 B.R. Squadron in Newfoundland until posted to Training Command, where he spent two years. He was then sent overseas, and became the Commanding Officer of No. 428 Squadron in 6 Group. Returning to Canada after the war, he functioned as Chief Instructor at two flying training schools before being brought into A.F.H.Q. For some time past he has been a member of the Directing Staff at R.C.A.F. Staff College, Toronto.— EDITOR)*

PROBABLY THE MOST expressive language which has ever been spoken is the English that we know to-day. It is possible, in modern English, to say things and to give shades of meaning which are not susceptible of precise expression in any other tongue. English is a subtle, rich and complex language, and a facility in its use is achieved only by people of intelligence and discrimination.

Presumably the qualities of intelligence and discrimination may be ascribed to most Air Force personnel. There is no reason, therefore, why we in the Service should not be able to speak and write a better brand of the language than we do. The aim of this article is to examine a few of the elementary principles which must be observed in order to write lucid and comprehensible English.

There appears to be a popular misapprehension that an idea assumes dignity and weight if it is couched in ponderous or polysyllabic language. For instance, "All illumination must be extinguished before the premises are vacated," appeared in a notice several years ago. I suppose it meant "Turn out the lights before you leave the building," but I'm by no means sure. Its author probably imagined that phrasing his sentence in that ridiculous manner would earn him a reputation for scholarship. I fancy, however, that any reputation he acquired on that account was for abject lunacy.

Recently I saw a letter in which a school was referred to as an "educational facility," and what is more, they weren't going to start building it, they were going to "initiate its erection." If you can define "educational facility" precisely, send me your back copies of "The Roundel," and I'll eat them. The mystery created by "initiate its erection" is paralleled only by that surrounding the identity of the misguided gourmand who enriched Mrs. Murphy's famous chowder with one pair of overalls. Clear, unambiguous English, is good English. If you read the masters of English prose (or verse), you will find that you rarely have



to reread a sentence to grasp its meaning, and that even the most complicated ideas are phrased in simple, direct language. Longfellow earned a measure of immortality with a poem which began, very simply, "The day is done, and the darkness falls." Admittedly it is not a very complicated idea, but just think what some of our staff officers could do with it! I have know students who, at the beginning of the Staff College course, could have rearranged that thought in such a manner that you wouldn't know whether it was dawn, high-noon, or twilight.

Simplicity, then, is the key-note of effective English. Simplicity, among other things, involves the idea of brevity, or at least of succinctness. The point I want to make here is best illustrated perhaps by G. B. Shaw, who, it is reported, apologized for having written a long letter. He gave as his excuse the fact that he did not have time to write a short one.

The task of saying a thing simply and directly is, paradoxically enough, a rather complicated one. It requires several skills, the most important of which is a knowledge of the meaning of words — a great many words. It has been suggested to me that if a person had but a limited vocabulary, he would be forced to say things simply since he would have no other choice. The type of simplicity involved in this idea, of course, is that with which alienists and psychiatrists are concerned, and thus has nothing to do with us.

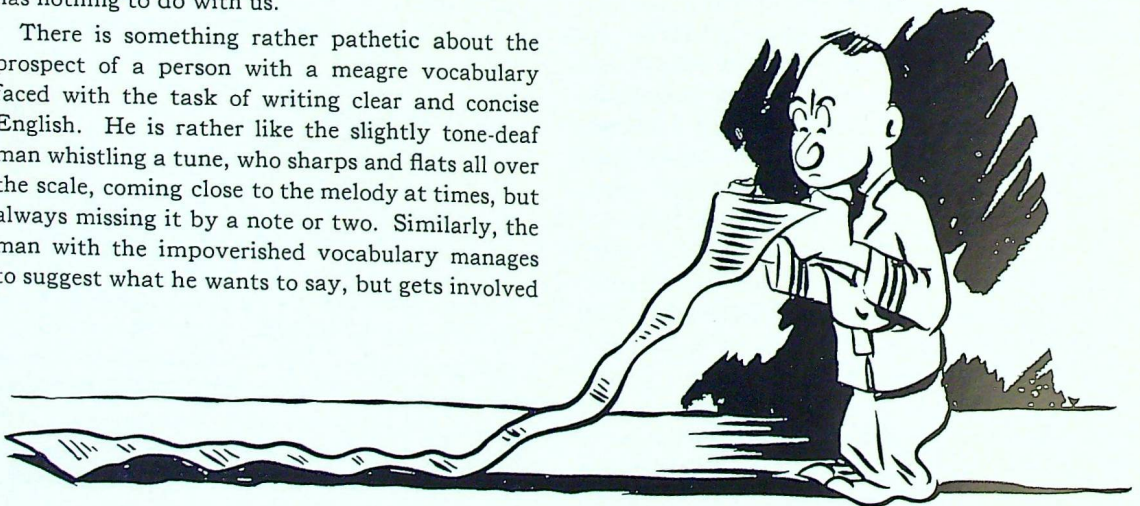
There is something rather pathetic about the prospect of a person with a meagre vocabulary faced with the task of writing clear and concise English. He is rather like the slightly tone-deaf man whistling a tune, who sharps and flats all over the scale, coming close to the melody at times, but always missing it by a note or two. Similarly, the man with the impoverished vocabulary manages to suggest what he wants to say, but gets involved

in such vague circumlocutions that his precise meaning is often in doubt.

An illustration of this is provided by a document in which the following errors occur: "advise" is used for "inform," "presume" for "assume," "compare with" for "compare to," "in that" for "because," "transpire" for "happen," and "while" for "although." There are also several phrases whose precise meaning will probably never be understood. For instance: "... the inconsistency in personnel strength fluctuations must be stabilized." The perpetrator of this goulash of errors, in a flash of illumination not often accorded such a pedestrian mind, concluded by explaining how his readers could get a fuller explanation, should the directions contained in his document not be clearly understood. One sees his point.

There are several generalizations one can make about the use of words. Here are the three most important of them:

- Use the concrete word in preference to the abstract one. Be precise and specific. If you mean "school," don't say "educational facility." If you mean "war," say "war" and not "hostilities." There is, of course, one obvious exception to this precept. If you wish to be equivocal, by all means use the abstract word. At the court of inquiry you can always say



that you meant something else, and your position will be unassailable.

- Select the familiar word in preference to the strange one, and the short word in lieu of the long one. You will be more generally understood if you say "prominent jaw" rather than "prognathous," or "small" rather than "diminutive." However, if the word which renders your meaning most precisely has eight or nine syllables, by all means use it.
- Avoid superfluous words, clichés, and euphemisms. Consider the phrase, "This headquarters is not prepared to concur in the recommendations made by, etc." The man who wrote that letter was, perhaps, too polite to say simply, "We do not agree." You and I, who see things more clearly, easily recognize the fact that the author of the letter was "waffling." We are not interested in the headquarters' state of readiness to accept a certain position. What we want to know is, do we get the persimmon seeds or not.

In an earlier paragraph I said that the task of writing simple, effective English involved several skills, one of which is a knowledge of the use of words. Another skill is a knowledge of the elements of English grammar. Admittedly a knowledge of grammar, by itself, will not qualify a person as a writer, any more than a knowledge of the rules of football will make him a gridiron star. Nevertheless, a knowledge of grammar is essential to the man who expects to construct, correctly, the basic unit of expression — the sentence.

For example, consider this sentence: "Oscar, George's twin brother, reported to the Station where George was the adjutant, drunk from drinking applejack." Question: which twin has the hangover?

This type of error is illustrative of a class of misconstruction which makes some writing confusing. For the benefit of anyone who cares, the error in the sentence quoted is known to grammarians (who, incidentally, didn't invent grammar; they merely complicated it) as a "dangling modifier." The dangling modifier provides a clue to a much greater offender, for which, as nearly as

I know, there is no name but awkwardness and obscurity.

There are many sentences which, although often grammatically correct, manage to conceal their meaning at first reading with remarkable cunning. They are almost always long sentences. They contain not one idea, but several; and some of these are qualifications, reservations, and conditions to the main theme. All Service writing is peppered with these types of sentences, and not only is their meaning sometimes obscure, but I have seen many which rendered meanings other than those intended by their authors.

There is a simple precept which, if observed, will keep your writing free of the type of obscurity we have been talking about. It has been found (by Dr. Rudolph Flesch) that writing which averages seventeen words to the sentence is clear and comprehensible. Literary English contains a higher average, and writing aimed at school children considerably less. You can set your own standard.

There is a great deal more that might be (and, indeed, has been) said about the writing of English, but the foregoing will do for a start. Keep it simple — and if you don't win any Nobel prizes for literature in the next year, take the matter up with the editor of "The Roundel," who asked me to write this article. Meanwhile, you may find some additional hints in the following quotations from a few of the world's admitted "lords of language." I have taken them from the chapter-headings of Sir Ernest Gowers' "Plain Words."

*Essentially style resembles good manners. It comes of endeavouring to understand others, of thinking for them rather than yourself — of thinking, that is, with the heart as well as the head . . . So (says Fénelon) . . . "your words will be fewer and more effectual, and while you make less ado, what you do will be more profitable.*

(Sir Arthur Quiller-Couch)

*I do here, in the name of all the learned and polite persons of the nation, complain . . . that our Language is extremely imperfect; that its daily improvements are by no means*



*in proportion to its daily corruptions; that the pretenders to polish and refine it have chiefly multiplied abuses and absurdities; and that in many instances it offends against every part of grammar.*

(Swift)

*Even in the best writers you sometimes find words and sentences which hang on so loosely you may blow 'em off; Milton's are all substance and weight; fewer would not have serv'd the turn, and more would have been superfluous.*

(Jonathan Richardson)

*The leading rule is to be content to be commonplace.*

(Henry Taylor)

*He that will write well in any tongue, must follow this counsel of Aristotle, to speak as the common people do, to think as wise men do.*

(Roger Ascham)

*Do but take care to express yourself in a plain, easy Manner, in well-chosen, significant and decent Terms, and to give a harmonious and pleasing Turn to your Periods: study to explain your Thoughts, and set them in the truest Light, labouring as much as possible, not to leave them dark nor intricate, but clear and intelligible.*

(Cervantes)

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## AND HOW!

Right along beside the highway was a little tepee, and out in front of it sat an old Indian Chief, soaking up the life-giving sunlight and fresh air of Wyoming.

There was a sign on a post next to the tepee which read:

**"ME HAVE BEST MEMORY IN WORLD —  
ONE DOLLAR"**

I have always known that elephants had fabulous memories . . . maybe Indians were like that, too.

Just across the road was a gas station. I needed some . . . and while the attendant was filling the tank I wandered over to where the old chief sat.

"So you have the best memory in the world?" I asked.

By way of answer he held out his hand. Sometimes I catch on quickly . . . I shelled out a buck.

"Tell me, Chief . . . what did you have for breakfast 20 years ago today?"

Without a moment's hesitation he replied:

"Eggs!"

The next day at the office I told all the boys about my experience with the old Indian Chief.

"Mason, you got rooked — everybody has eggs for breakfast. That old Indian was just too smart for you! Sure he had eggs for breakfast! — 20 years ago, too!"

Then they all laughed like hell.

A couple of weeks later I was on my return trip. As I rounded a curve in the road I spotted the little tepee. Sure enough, there sat the old Indian with his sign.

I pulled into the gas station and strolled across the road. In my best Indian manner I greeted the old Chief:

"How!"

His startling reply completely dispelled any doubts regarding the depth of his memory:

"SCRAMBLED!"

(Capt. Russell Mason, in the  
"Sourdough Sentinel": U.S.A.F.)

# B.F.'s and M.E.-

## 2. Dash Bored

*(This is the second in a series of articles submitted to "The Roundel" by the Directorate of Maintenance Services at A.F.H.Q. The first, which dealt with the art and science of backing-up, appeared in our July-August issue.—EDITOR)*

IT USED TO BE said that a lot of automobiles were sold on the strength of a fancy dash panel. There is also a school of thought which claims that a lot more vehicles could be saved from premature ruin by that same instrument panel.

Playing hookey from this school is the B.F. with a wide eye for fancy trimmings and a blind eye for the instruments.

One of the first lessons the Sergeant taught him was to keep his eyes on the road — and he took the Sarge at his word. Thus, the instrument panel, not falling into that rigid line of vision, gets as much attention as a debutante who doesn't use Pond's.

But if the B.F. stops to think about it (we're joking, of course), the manufacturer must have had some reason for putting in all those fancy little dials and gauges. Give up? Well, trusting souls that they are, the whole idea was to tip you off on impending trouble before it becomes serious; to keep you informed, as you bowl merrily along, of the proper functioning of the hundred and one hard-working bits and pieces that keep you rolling.

To save you stopping at a garage every five minutes to see if the generator is generating, the

cooling system cooling, the oil pump pumping, and so on — they put all the information right under your nose on a simple plain panel. The instrument panel, they said, would be the corner stone of the whole preventive maintenance structure.

But they forgot about B.F.'s. They left it up to our friend to keep an eye on all the needles and gauges. What's more, they left it up to him to recognize the symptoms of up-and-coming trouble before something drastic happened.

That, if we may say so — and I guess we have — is where they tripped over their slide rules. For a dyed-in-the-wood B.F. never looks for trouble: he waits for it to catch up with him. Which it usually does.

To illustrate: an extra high reading on the heat indicator doesn't mean summer's here. Rather it's a warning that something cooks. It may be caused by any number of things, from a shortage of the right liquids in the rad or crankcase to wrongly adjusted carburetion or ignition.

If a tachometer is there, it can point the finger to an engine clutch or propeller shaft that's being knocked dizzy by over-speeding, regardless of road-speed.

An oil pressure gauge keeps tab on whether or not an engine is getting its lubrication — full crankcase or not.

You get the idea. But our guess is that — until the makers incorporate sirens, bells, and whistles, with a boxing glove that shoots a straight left to the ear when the instruments have something to tell — B.F.'s will continue to drive a vehicle by the seat of their pants. That is, unless they suddenly realize that a hitch caught in time saves nine times the repair effort needed later in a workshop.



# A.M.E.S. 894: Part 7

## The Story of a Mobile Radar Unit in North Africa

By Marshall S. Killen

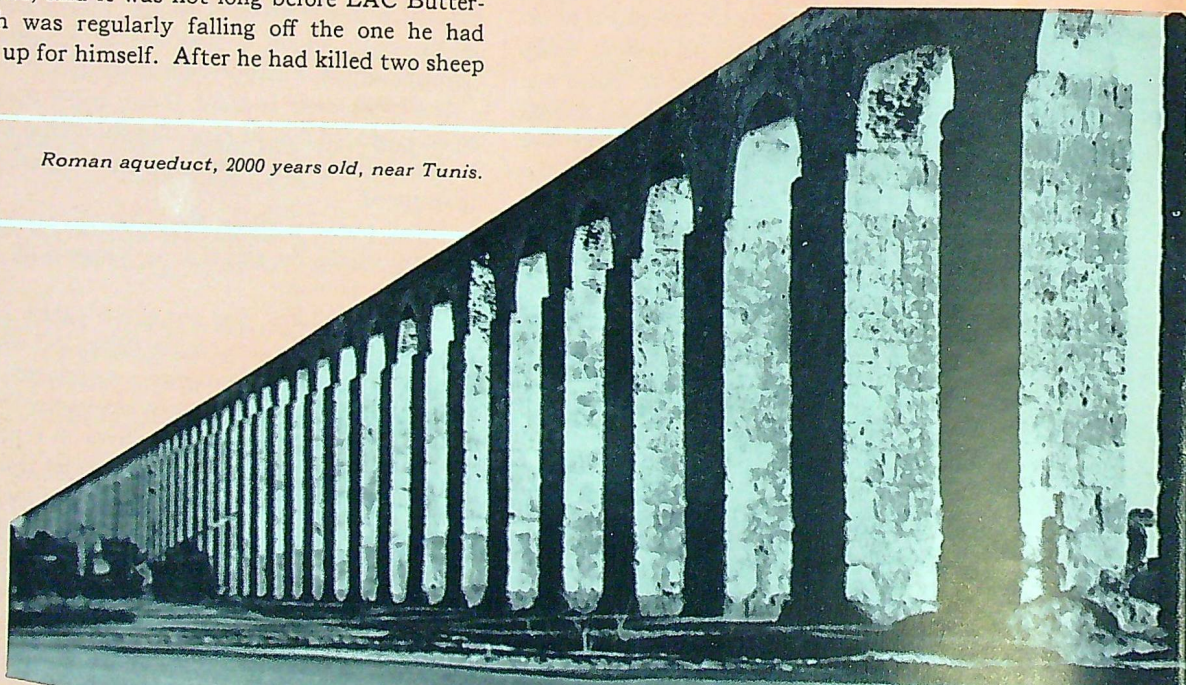
### THE UNIT'S LAST VICTORY

THREE DAYS AFTER the fall of Tunis, Sergeant Valeriotte went to the city with an R.A.F. officer who had been posted to No. 242 Group Headquarters, near Carthage. Forty-eight hours later he arrived back in camp with a refrigerator, two enemy motor-cycles, lots of German and Italian rifles, as well as several cases of excellent German mineral water. LAC Butterworth, who was the driver on this trip, brought back with him a very sore chest: he had picked up a loaded Italian carbine and pulled the trigger without first opening the breech. These guns have the strongest kick I have ever experienced. We quickly registered the motor-cycles with the Military Police in Bône, and it was not long before LAC Butterworth was regularly falling off the one he had fixed up for himself. After he had killed two sheep

belonging to the Arabs and had damaged himself and two others of the crew, I decided to confine him to transport with four wheels.

On May 20th, Flying Officer Vesey was instructed to proceed on duty to Carthage. I went along with him. LAC Connor drove the Humber, and we spent the night in Tunis at the Hotel Majestic. Curfew was still in force, so that there was neither light nor water anywhere in the city. We got up at dawn and left for Carthage, about 14 miles north of the city. En route, we passed through El Alouina airfield, which had been the

*Roman aqueduct, 2000 years old, near Tunis.*



enemy's most important air-base in Tunisia. No matter where we looked over the vast aerodrome, we could see nothing but wrecked aircraft and hangars. One huge six-motored Me. 323 powered glider had apparently landed and been destroyed before its cargo could be unloaded. The latter must have consisted to a large extent of airmail, for bundles of letters were scattered around the aircraft and many had been blown across the field.

At Carthage, we had our breakfast among the famous ruins which date back to the days of the Punic Wars. These are close to the palace of the Bey of Tunis, and it was here that a few days later Prime Minister Churchill spoke to the victorious units of the British Army. As we lit our fires near the stumps of the marble columns, numerous little groups of men could be seen doing the same thing in the fields round about. Burnt-out German tanks and troop-carrying trucks lay along the roadsides and in the fields throughout the area.

By 0800 hours we were on our way back to Morris, making the return trip via Bizerta and Mateur. Most of the bridges between Tunis, Bizerta, and Mateur, had been demolished by the Germans, and the pontoon bridges, which were being used in their stead, were not sufficient to take care of the volume of traffic. In some places we had to wait as much as two hours before we could get across. Half-way to Bizerta, a row of Allied tanks was spread out across a hillside, still lying where they had been knocked out during an attack on the hill-top. Both going to and coming from Tunis, the roads were crowded with trucks full of happy Italians and scowling Germans, all on their way to the prison "cages." In most cases there was only one British Tommy to every three or four trucks, and invariably it would be Italians who were driving the vehicles.

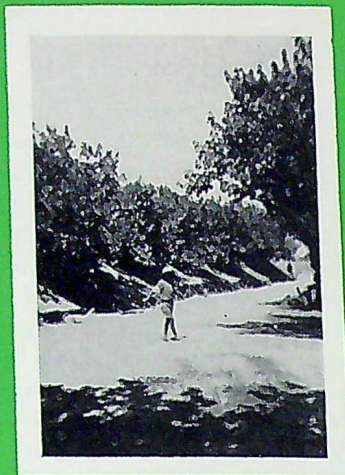
Close to A.M.E.S. 894 was one of the largest cages, known as P.O.W. 212. After it had been in use for a few days, it became so full that the Italians were camping in the fields nearby. Although the Germans were always kept behind barbed wire, nobody seemed to worry about the "Eyeteys," as we called them. As long as they got good food and kind treatment, they were happy and worked really hard.

Sergeant Valeriotte and I went to the P.O.W. camp soon after it opened and found out that Italian prisoners could be obtained daily for labour purposes. Accordingly, we requisitioned seven each morning at 0700 hours and returned them at 1700 hours in the evening. After a few days we noticed that great competition existed among the prisoners to get on the A.M.E.S. 894 truck instead of going to one of the Army units. The reason for our popularity appeared to be, firstly, Sergeant Valeriotte's knowledge of Italian, and secondly, the fact that work at our camp was easier and more congenial than the work at stores depots or on road-gangs. Shortly afterwards, permission was obtained to select seven prisoners who would be allowed to live with us all the time, provided I vouched for their good behaviour and custody. We chose an M.T. mechanic, two carpenters, a chef, a barber, a batman-waiter, and a sailor who said he was good at everything and who was such a clown that he kept us laughing continually. These seven men were given a tent close to mine, and from the moment they arrived they responded to the kind treatment they received by doing everything in their power to be useful. They were issued with used British battledress with a red patch sewn on the back, but apart from this distinguishing mark they looked like the rest of the crew. Each prisoner was paid twenty-five cents per day for skilled labour and twelve cents for unskilled work such as cleaning and dish-washing. Their rations were supposed to be slightly lower than ours in quantity, but, as they ate with the airmen, it was found impossible to make the required differentiation. They were also allowed to purchase such things as toilet necessities and cigarettes from the unit canteen, the cost being deducted from their pay at a later date.

At the end of three months, with the help of our own lads, the seven Italians had rebuilt the entire camp. A large 3-truck garage (complete with inspection pit), toilets, hot and cold showers, and two new Messes, had been erected. Flower gardens had been laid out, and each sleeping-tent had been raised two feet on wooden walls. Sixty truck-loads of lumber were carted from the Bône docks for this work, and the Royal Engineers supplied



*L to r.: Flt. Sgt. Maxim, A.C.I Child, and Sgt. Valeriote at Cape Bon after von Arnim's surrender.*



*Domestic site: Morris.*

the cement and bricks, while the U.S. Army gave us the piping for the showers, toilets and sewers, and roofing for the buildings. Several 200-gallon gasoline tanks from wrecked aircraft made hot water reservoirs, and 100-gallon tanks with the wash-hand basins from Douglas transports were used in several of the tents for washing purposes.

On the technical site, too, numerous notable improvements had been made. A large workshop, office, and rest-room were built close to the transmitter and receiver tenders in such a manner that the two tenders and the three new rooms formed one building. The antenna, which until now had had to be turned around manually, was converted to automatic operation by the ingenuity of the mechanics and the use of a bicycle wheel and a captured Italian 2 h.p. motor. This released the operators from the particularly unpopular job of sitting in the aerial tender for two hours at a stretch with nothing to do but turn two wooden cranks back and forth as instructed by the operator in the ops. tender.

Before the construction work on the technical site had been started, however, the transmitter tender caught fire and was completely destroyed. The fire was probably caused by a poorly designed fuse and switch panel, and — thanks to radar security precautions — it speedily got out of

control. Regulations required that there should be in each technical vehicle a four-gallon can of gasoline, with the cap partly unscrewed, ready to ignite in the event of an attack by airborne troops. In addition, the secret document cabinet near the fuse panel contained two rubber flasks of gasoline and sulphur for the purpose of destroying documents in case of necessity. LAC Butterworth, at great risk to himself, drove the burning vehicle away from the rest of the technical convoy. The gasoline tanks of the burning tender were full, and long before he jumped out we expected to see him go sky-high at any moment. He was subsequently recommended and awarded a decoration for his bravery on this occasion.

Shortly after this incident, I flew to Algiers to see about getting a replacement for the burned-out transmitter. While waiting at Maison Blanche aerodrome outside Algiers for a Beaufighter to warm up, a big York transport landed on the runway and out stepped Mr. Churchill accompanied by several other V.I.P.'s. Later the same day, after I had returned to Bône, a new radar transmitter, temporarily mounted in a 3-ton Thornycroft truck, arrived for us. It was a Canadian-built transmitter and seemed to be a great improvement over the one we had lost. It was the first Canadian equipment we had seen,

and we noticed that a lot of superfluous gadgets had been eliminated and that the racks and panels were laid out in a neater and more convenient style. The only drawback was that it had been built for 110-volt operation, while our power supply was 220 volts. This necessitated the installation of a fairly large power transformer. As soon as the new transmitter was in operation, we returned the one we had been forced to borrow from A.M.E.S. 897; and within a week the latter unit was on its way to the invasion of the island of Pantellaria.

American radar units equipped with modern equipment had begun to arrive in the Bône area in April, and our mechanics were in constant demand to assist with the installation of these units (which were far from mobile) and in helping the British Army and Navy with their radar troubles. It was good publicity for the R.A.F., but it put quite a strain on our men, as they had to do their own tour of duty on the technical site as well as doing these outside jobs. The U.S. station erected on Cap Takouche ran into lots of snags at first, and for several weeks a mechanic from 894 or 895 was always there. A.M.E.S. 895 pulled out from Cap Takouche as soon as the Americans were operational, and moved to Cape Rosa, a headland 30 miles east of 894. It was impossible to get into their new location except by sea, although several months later an Italian labour battalion built a sort of rough road in from La Calle. The 895 crew led a miserable and isolated life on Cape Rosa for many months, and in the end Headquarters transferred them to Bône and replaced them with the 894 crew.

The first week of June was a busy one. First of all, a Beaufighter, which had been sent to the sector to carry out a series of test flights with the Bône radar stations, came to grief one mile north of our site when one motor fell out. The pilot made a skilful belly-landing but the aircraft was a write-off, and the equipment and all the movable parts had to be dismantled and sent to Bône. Next, one third of our crew developed yellow jaundice and were taken to hospital. Then three men from neighbouring units were drowned while bathing in the sea north of us. To finish off the

week, the tent in which the Army liaison personnel lived was set on fire by the reflection from a tin lid, and burned to the ground.

On June 15th, the 6th Armoured Division, fresh from its Tunisian victories, turned in off the main road and drove past our sites before setting up camp in the fields beyond. After counting more than eighteen hundred vehicles, we gave up. Our nice roads, which we had resurfaced ourselves, never looked the same afterwards. A few days previously, all the R.A.F. Regiment personnel from the various radar units had been collected and taken in to the aerodrome to form a guard of honour for some V.I.P. who was coming to Bône. We knew, when a whole armoured division was sent to the area, that it must be somebody very important. On June 17th, we plotted one aircraft, with numerous fighters as escort, coming in from the west, and from the importance that Sector Ops. was paying to this formation we knew that this must herald the arrival of the expected V.I.P. Just before noon, His Majesty King George VI arrived on the aerodrome, accompanied by Air Marshal Tedder who, after the King had inspected the guard of honour, complimented the officers and men upon their excellent performance.

On my way back from Bône that afternoon, I had the pleasure of seeing the King, escorted by armoured elements of the North Irish Horse, on his way to the airport. The official car had broken down and His Majesty was riding in an ordinary army utility car.

On June 27th, No. 219 U.S. Nightfighter Squadron arrived at Bône to take over the night defence of the sector. The personnel of this squadron were so keen that, during the month of July, A.M.E.S. 894 alone controlled sixty-nine practice interceptions for them, and of these, sixty-seven were successful. As there was little or no enemy activity at night in our sector from July onwards, the squadron had small chance to see real action until it left Africa for Europe. The last heavy raid at night on Bône took place on June 30th. The enemy strength on this occasion was more than fifty aircraft, which was large for them, although at this time Allied raids from North Africa on Sardinia and southern Europe usually comprised



more than 500 aircraft. The enemy had been using chandelier flares all through the campaign, but on this particular night he illuminated the entire area more brightly than ever before. What with his flares and the searchlights, the tracers from the ack-ack with their red streamer effect, shell-bursts from the heavy stuff, and the bluish white explosions of the rockets, we were treated to a magnificent fireworks display.

Most of the local French and Arabs had air raid shelters of a sort dug close to their dwellings, but for the greater part they consisted only of large holes in the ground covered over with heavy planks and earth. They did not afford much protection, and during the rainy season they were always half full of water. They must have been very uncomfortable for the people who were forced to spend hours in them every night.

As I have said earlier, after we had been a month or two at Morris the local French families took us to their bosoms. For my part, I had become particularly friendly with M. Jean Latrille, the mayor of Randon, a pretty little French village four miles away. M. Latrille had a seven-thousand-acre farm on which he grew all sorts of fruit, as well as wheat, oats, and cotton. I usually had three or four meals each week with the family, which included, besides Mme. Latrille, eight lovely children. At the height of the grape season, more than six hundred Arabs were employed on the farm and in the huge vineyard where the grapes were turned into *vin blanc* or *vin rouge*. In the First World War, M. Latrille had been a French Artillery Liaison officer in England, and therefore he spoke English well. His children and his attractive wife, however, spoke only a very little English, so I had to learn French quickly — albeit ungrammatically. At the height of the Salerno

landings in Italy, when many badly-burned Canadian and British soldiers were brought to the 5th General Hospital, the Latrilles and other French farmers nearby kept the hospital supplied with lemons.

July 1943 seemed to be taken up with inspections. No fewer than three Group Captains and four Wing Commanders inspected the Station on various dates during the month. One of them was Wing Commander Swinney, who was a particular friend of mine and who unknowingly saved my life when, on July 12th, he came with Group Captain Rhys-Jones to inspect our unit. I had been in the habit of flying with the Hudson Reconnaissance Squadron stationed at Bône and was due to take off at 0200 hours next morning. When the two inspecting officers arrived and Wing Commander Swinney said that he would need me next day, a meteorological corporal from Sector went in my place. Next afternoon, the padre came out and told us that the Hudson was already six hours overdue. The aircraft never did return, so it can only be surmised that it tangled with a U-boat and was shot down before being able to signal base.

That July was also memorable for two interceptions. The first took place on the night of the 13th, when Group Captain Rhys-Jones, driving Wing Commander Swinney's Humber car, successfully intercepted an Arab and his cart travelling along the road without lights. The second occurred on the 24th, which saw the last successful interception made by A.M.E.S. 894. One aircraft was destroyed and another damaged. Later in the year several hostiles were counted as probables or damaged, but this was the unit's last confirmed victory.

(To be concluded)

## DUTY

The destiny of mankind is not decided by material computation. When great causes are on the move in the world . . . we learn that we are spirits, not animals, and that something is going on in space and time, and beyond space and time, which, whether we like it or not, spells duty.

(Winston Churchill, 1944)

# The ROYAL CANADIAN

# AIR CADETS



By Arthur Macdonald, Air Cadet League of Canada

## CHRISTMAS THOUGHTS

FOR THE ROYAL CANADIAN AIR CADETS, Christmas 1951 is more than just a time of well-wishing. As an eventful year draws to a close, everyone connected with the air cadets can feel a glow of pride at what has been accomplished. But, while taking stock, we should not fail to remind ourselves that there is an important job to be done in 1952.

The most vital task facing the League at this time is the 50% expansion campaign launched about one year ago. Target of the drive is to bring Air Cadet strength across Canada up to 22,500 and also to make every possible improvement in the calibre of the lads undertaking training. Phase "A" of the expansion campaign (to boost the strength of existing squadrons) met with considerable success, and Air Cadet training swelled to 17,000 shortly after the drive commenced. We are now in the midst of phase "B," which calls for the opening of a number of new units along with further efforts to expand every squadron to the limit of its capacity.

To the promising new squadrons which have become airborne in the past few months, we extend a hearty welcome and a sincere wish that next Christmas will see them on a par with our finest units. To our older and well-established squadrons we offer the Compliments of the Season and a reminder that the enrolment campaign can only succeed through the very best efforts of everyone connected with the movement.

## EXECUTIVE'S FALL MEETING

A highlight of the Air Cadet year just passed was the regular fall meeting of the League's National Executive Committee. Held in Ottawa, the Executive session gave the League's top officials an opportunity to review the accomplishments of the past year and also to lay plans for increased activity in 1951. The directors were particularly proud of the following achievements:

- A new record was set in scholarship flying training, the total of 242 fully qualified candidates being the highest on record. The percentage results at the final tests were better than in any previous year and, at the last accounting, over 70% of this year's trainees had already obtained private pilot's license.
- The expanded exchange visits programme, including no less than seven countries, was an outstanding success. Every attempt will be made to include further European countries next year, a matter which will receive the personal attention of the League's roving Director of External Relationships, C. Douglas Taylor.
- A total of 13 League scholarships were awarded to graduate air cadets to permit them to attend the Canadian Services Colleges at Royal Roads and R.M.C. The Air Cadet League Aeronautical Engineering Scholarship went to Cadet Warrant Officer Roy S. Swanson, of Port Arthur, who is presently attending the University of Toronto.
- Air Cadet rifle teams gave an excellent account of themselves at the D.C.R.A. summer shoot at Connaught Ranges, Ottawa. The air cadets carried off more than their share of trophies, an outstanding achievement being the winning of the inter-Service cadet match.
- The International Drill Competition held at Toronto was the most colourful event ever staged by the League. Congratulations are extended to the Scottish entry for winning the Trophy, and we can also be proud of the Canadian team, which gave a superb demonstration of precision drill.



Toronto air cadets march into the grandstand in the Canadian National Exhibition grounds shortly before the entry of Princess Elizabeth and Prince Philip. (Photo: Bruce M. Young.)

General Manager G. M. Ross receives scroll from Air Vice-Marshal Miller. On right of picture is League President H. L. Garner. (Photo: Capital Press.)





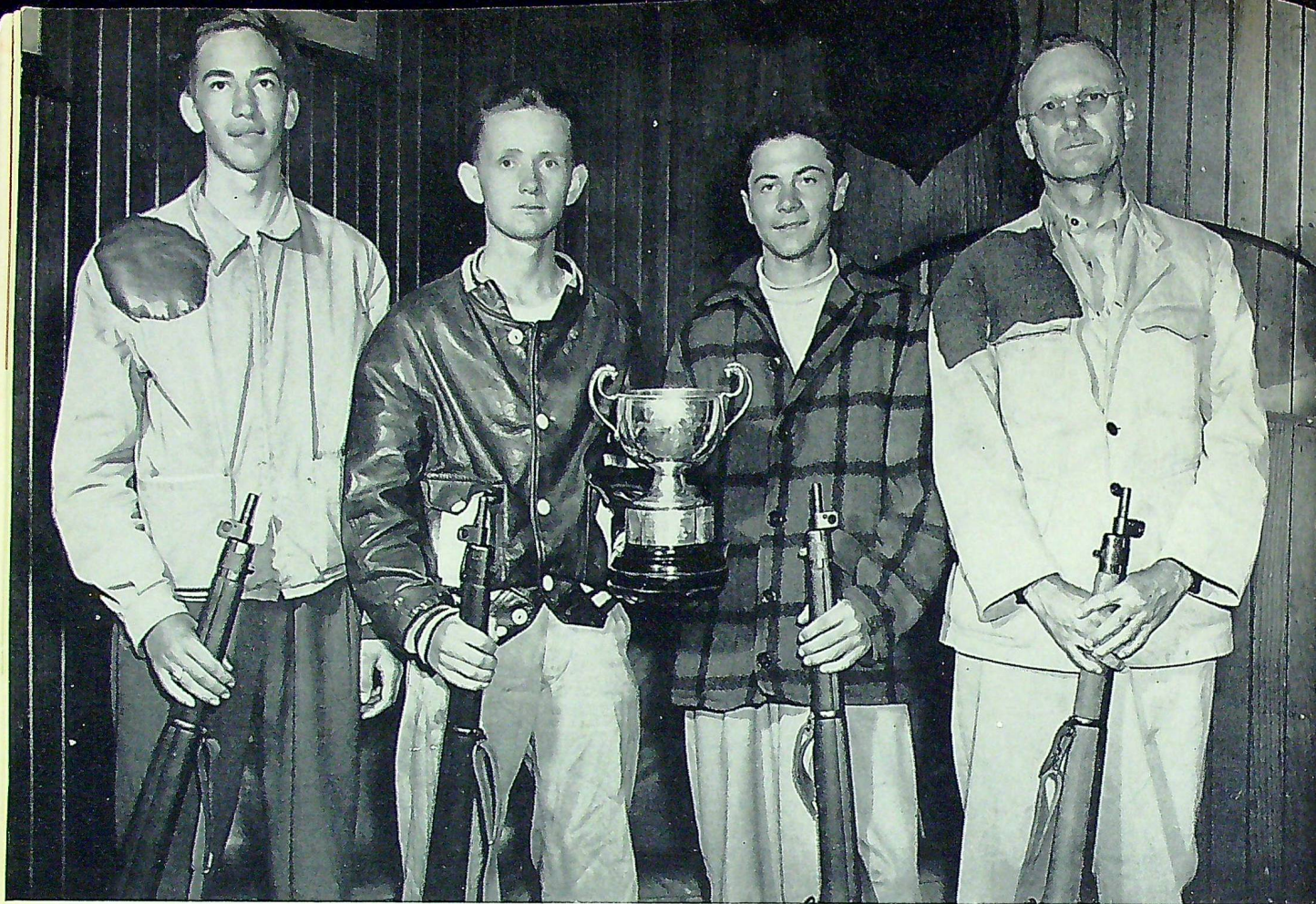
*The R.C.A.C. team that won the Col. Harrison Inter-Cadet Trophy at the D.C.R.A. shoot at the Connaught Ranges, Ottawa, last August. Seated (l. to r.): Sgt. Tara Sangha, 89 Sqn.; Flt. Sgt. J. A. Brown, 176 Sqn.; Maj. A. E. Evans, 89 Sqn. instructor and coach of team; Flt. Sgt. R. Campbell, 176 Sqn.; Sgt. M. Todd, 89 Sqn. Standing (l. to r.): W. J. Griffiths, Air Cadet League representative; Sgt. J. A. Brown, 89 Sqn.; Flt. Sgt. L. B. Crawford, 221 Sqn.; Capt. T. J. Minshell, 176 Sqn. instructor and ass't coach of team; Cadet J. Hurst, 191 Sqn.; Cadet R. Handley, 191 Sqn.*

The Executive also made a number of recommendations covering the 1950 programme, several of which are of considerable interest to squadrons.

Recognizing that some units have been failing to observe the minimum Air Cadet age limit, the Executive has ordered promulgation of a new regulation calling for all cadets to lodge birth certificates with their squadrons immediately

after enrolment. Complete details will be issued through Air Cadet League Headquarters and R.C.A.F. Command Bulletins.

The meeting also approved a change in the qualifying procedure for scholarship flying training. In future, medical examinations will precede the written qualifying tests, and this may mean that squadrons will be asked to assume the cost of



*The R.C.A.C. team that won the Senator MacDonald Trophy at the Connaught Ranges, Ottawa, last August. Left to right: Cadets J. Hurst, B. Whitmore, R. Handley, and Capt. T. J. Minshell — all of the Gordon Bell High School Air Cadet Squadron, Winnipeg.*

medical examinations over the quota of 300 paid for by the Department of National Defence.

Returning to the subject of exchange visits, the meeting was in favour of a suggestion to select and train a special reception flight of 25 Canadian air cadets to act as hosts for the visiting cadet parties.

During the full-day meeting, the League officials were joined by the R.C.A.F. Air Members, whose excellent co-operation has meant so much to the League over the past several years.

One of the day's most pleasant happenings took place during the luncheon, when Air Vice-Marshal F. R. Miller, C.B.E., acting on behalf of the Chief of the Air Staff, presented an attractive scroll to League General Manager, George M. Ross. The citation reads as follows:

*"Presented to George Morrison Ross on behalf of all members of the Royal Canadian Air Force, in sincere appreciation of the meritorious manner in which he, as General Manager of the Air Cadet League of Canada, stimulated interest in aviation and in the R.C.A.F. through his services to the Royal Canadian Air Cadets."*



### MOST ENTHUSIASTIC CADET

Top candidate for the title of Canada's most enthusiastic air cadet is fifteen-year-old Dale Morley, of 217 (Princeton) Squadron.

Young Dale lives on the 4,400-ft. summit of Allison Pass, 50 miles west of Princeton on the new Hope-Princeton Highway. Allison Pass is not a town, it is merely a camp for road maintenance crews at the highest part of the road in the Cascade Mountain range. Dale starts hitchhiking to Princeton early in the afternoon to attend the early Tuesday night parade. After the parade, he wanders over to the bus depot to wait for the 1:30 a.m. westbound bus, which does not reach his home until three o'clock in the morning.

Last year, when he was only 14 years old, Air Cadet Morley missed only a single parade, and on that occasion a huge snow-slide had blocked the new highway.

There is no school at Allison Pass, so Dale is obtaining his formal education by means of a correspondence course. In spite of this handicap, he surprised his officers and instructors last April by knocking off the second highest marks of the squadron in the annual examination on meteorology, navigation and airmanship.



*Air Cadet Dale Morley.*

If there is another air cadet in Canada who can compete with Cadet Dale Morley for sheer unbridled enthusiasm, "The Roundel" would like to hear about him.

### AN APOLOGY

Sgt. Shatterproof has already castigated us for our carelessness in the September issue. Now, just as we are going to press, he sends us a thunderous signal to point out yet another—and more flagrant—error that occurred in the October issue. We extend our sincere apologies to "The Loomcrofters", of Gagetown, N.B. for the omission in that month's "Letter to the Editor". The second sentence of the fourth paragraph should, of course, begin "This they have not done" instead of "This they have done". Sgt. Shatterproof's signal ends: "SUGGEST JANUARY ISSUE BE DEVOTED TO ERRATA AND ADDENDA FOR 1951."

### JUSTICE

Do as much as you can as individuals, influence your rulers as much as you can as citizens of free communities, to develop, strengthen, and purify international law — international law which rises above the separate nations, just as the municipal law of a community rises above its separate citizens . . . Without justice we can have no guarantee of permanent peace. With justice the peace of the world is unassailable.

*(Lord Courtney of Penwith: 1908).*

# The Royal Visitors at Trenton

On Friday, October the 12th, their Royal Highnesses, the Princess Elizabeth and the Duke of Edinburgh, visited R.C.A.F. Station Trenton. We reproduce here a few of the photographs taken on that memorable occasion.

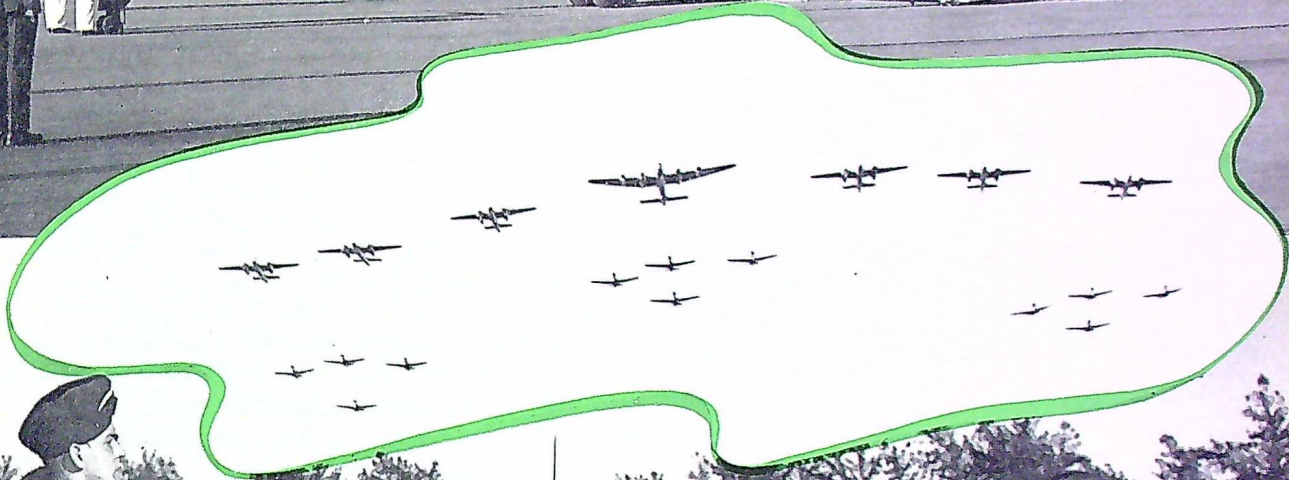
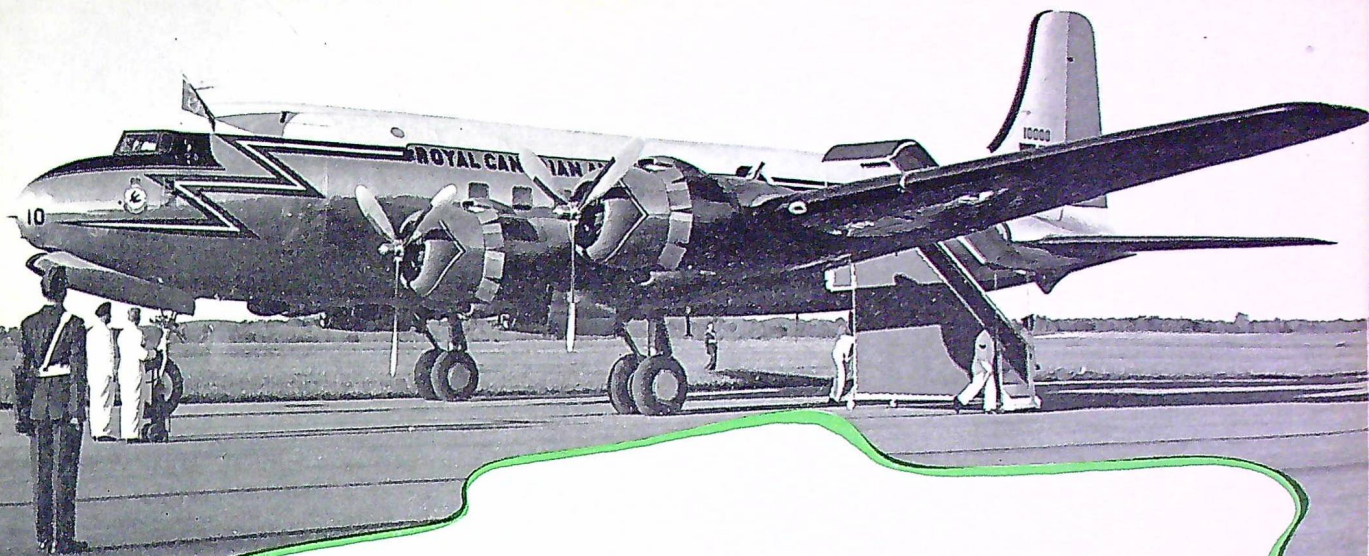


*Air Vice-Marshal Slemon presents the Royal Visitor with four silver keys to the Memorial Gates.*

*The R.C.A.F.'s gift to the Princess and the Duke. Each key fits one of the four Memorial Gates.*

*Accompanied by Group Captain G. P. Dunlop, A.F.C., Princess Elizabeth passes through the Memorial Gates.*





*The R.C.A.F. C-5, which was their Highnesses' private aircraft throughout their Canadian tour, just before the Royal Couple's take-off from Trenton.*

*Led by a Lancaster, two flights of Mitchells and twelve Mustangs fly over the Station during the Royal Visit.*

*Princess Elizabeth inspects the Royal Guard. Accompanying her is Flt. Lt. J. M. Wicken, and behind her (left to right) are seen the Hon. Brooke Claxton, the Duke of Edinburgh, and Air Vice-Marshal C. R. Slemon, C.B., C.B.E.*

# Operation X

By Sgt. J. H. Bélanger, R.C.A.F. Station Lachine.

*(It is almost eighteen months since Sgt. Bélanger tuned his lyre and gave out with his "Idyll of the South Atlantic." In "Operation X," frustrated by "the equivocation of military procedure," he contents himself with a few atmospheric chords.—EDITOR).*

THERE USED TO BE A TIME when everything could be printed about anything, but those happy days are forever past. Of late, a directive has been issued by Air Transport Command to the effect that, where our Northern bases (such as Resolute Bay) are concerned, it is a sin to write about, or publish unauthorized pictures of, installations, equipment, or operations. "Furthermore," says A.T.C. with the equivocation which is so often characteristic of military procedure, "this Command wishes to encourage release to the Press of stories dealing with Service life on these Northern Outposts."

Thus, any would-be writer is doomed from the start to compounded frustration. Notwithstanding the restrictions involved, however, I am going to attempt to comply with A.T.C.'s wishes. I am picking up my ball-point in order to jot down a few disconnected notes about nothing at all.

\* \* \*

Currently, in the R.C.A.F., everything from a corn roast to a transoceanic airlift is termed "an operation." I do not believe, therefore, that I am transgressing the spirit of the regulations by referring to this task upon which my companions and I are engaged at Resolute Bay as "Operation X."

When our party moved in, we had only a faint idea about how long we'd stay. Up here, the weather can be very nasty. At times one may even be snowed in for weeks. Weather is one thing against which the stubbornness of man is of little avail. It stays nice and cool right through the summer — a fact which should (but doesn't seem to) attract tourists. The permafrost never goes underground.

By the time we land here, we have left the trees far behind us, and our first impression of the snowy landscape is one of such nudity as the Pilgrim Fathers would have described as "shocking." The place was called Resolute Bay, of course, because no one but a damn fool would ever try to settle there.

The Air Force has been here for a while now. Presumably, there are military considerations involved, although I do not understand what they are. Surely no sensible aggressor would waste his



*Kneeling (l. to r.): LAC's Nobert, Hunter, Cpl. Fafard.  
Standing: LAC Kielley, Sgt. Giguère, Cpl. Trudel, LAC Logan.*

time around here. There are many more accessible bridgeheads upon this hemisphere. I am thinking of the sandy beaches of Acapulco and Viña del Mar. It would be a pleasure to operate in such places. Unhappily, my concepts of strategy have yet to gain any recognition.

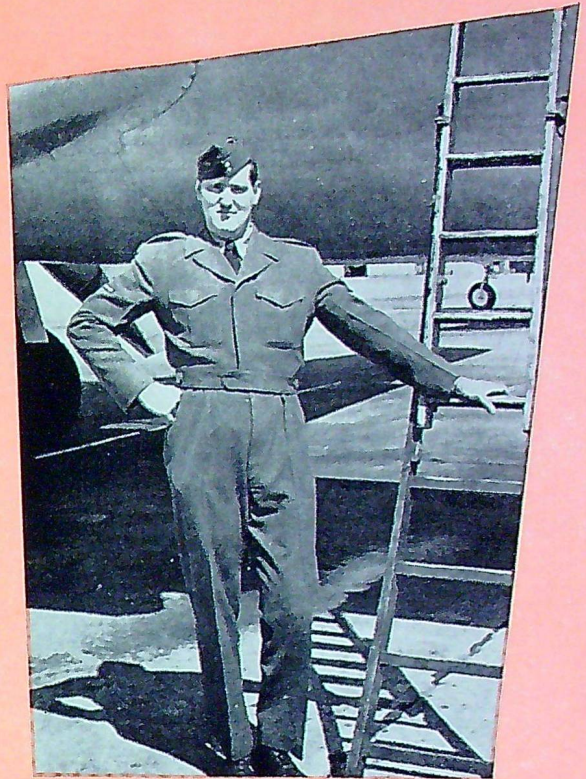
\* \* \*

This year, the men are well equipped, and Operation X can proceed smoothly. The weather is good and there is a large stock of malt drinks in tins. None the less, the timing of this operation is exceedingly bad. When I reflect upon the amount of effort that has been spent by highly-paid individuals in planning and in working out the necessary details for the operation, I can find no excuse for the carelessness of its timing. Think of it! So many sports-conscious people being taken away from home, just before the Stanley Cup finals! Another complaint I have to register is that it is far easier to pick up Russian programmes on the Mess's short-wave receiver than it is to get broadcasts from home. No doubt we shall one day hear the Soviet claiming sovereignty over the very camp-site from which we are listening.

However, whatever may be the shape of tomorrow, to-day's work must be done. And one of the airmen who make an essential contribution to the work of to-day is an efficient flight engineer from our Lachine North Star Squadron. He answers to the name of "Pierre." It is Pierre's responsibility, during flights, to keep an eye on engine performance and generally to keep his aircraft airworthy. One thing that Pierre hates above all, is seeing one engine go out of synchronism with the next.

There are many Macs in the Air Force; and there are many Moes and Smitties. But there is only one Pierre. To the limited number of people who have looked into the matter, Pierre is really Cpl. Henri Leblanc, from New Brunswick. At an indeterminate point in his career, someone began calling him Pierre, and the name stuck. "The next thing I knew, everybody was calling me Pierre. I did not mind that, though." As Pierre will tell you in his own inimitable prose: "If I was somebody else, I can think of a lot worse names I could call myself."

\* \* \*



*Bears avoid him.*

Since the time that No. 426 Sqn. and R.C.A.F. Stn. Lachine have been handling air transport matters pertaining to Resolute Bay, a number of contingents have been expedited periodically to execute duties of a recurring nature at the arctic base. Many of the men on such parties have displayed much courage, initiative, and co-operation, in order to insure that our operations in the Far North should proceed smoothly despite all natural handicaps.

These men are of all ranks and all categories. I must ignore many of the most noteworthy contributors, as my acquaintance with their functions is not sufficient to do them justice. There is one chap, however, whom I'd like to mention, as he has been on just about all such operations except this last one. I refer to Lippy. Because of the extensive ramifications of 901 A.T.H. Unit throughout the country, I have no doubt that Lippy is one of the more widely known airmen in Canada.

*Musk oxen at Resolute Bay.*

*LAC Turner at work on North Star engine.*

*Refuelling-shack.*



Lippy first joined up as A.C.2 Durocher. Though no kin of the genial mentor of the Dodgers and Giants, Lippy was fortunate enough to inherit the famous man's nickname. Incidentally, Lippy's own qualifications for the title are by no means mean. Apart from his popularity for other reasons, his help is readily appreciated when the fork lift or the caterpillar is not available. It is a matter of no import for him to pick up a ten-gallon oil drum and hold it on one shoulder as he placidly ascends the aircraft step-ladder. What animal power the man has!

Lippy is somewhere over six feet tall, and, depending on the canteen facilities available, his weight oscillates between 225 and 275 lbs. One morning in Resolute, I saw him going to work carrying a gun. Polar bears had previously been sighted in the vicinity, and a current regulation made it mandatory that a weapon be carried by anyone venturing away from the buildings. I could not but reflect, however, that the regulation was needless in Lippy's case. He could have travelled about in perfect safety. Surely no bear but an exceptionally foolish one would ever pick a scrap with Lippy!

Shortly after my arrival, I noticed that the natives (airmen who have been here for a while) carry a hunting-knife on their belts, and it took a while to satisfy myself that none of these men are animated with homicidal intentions. Had I stopped to think, though, the absurdity of such an idea would have been obvious to me from the first. There is no money out here, there is no liquor, and there are no women. It follows naturally that there is no crime.

But there is a great deal of talk. As the news is scarce, the conversations do not have too much direction, and many arguments tend to be inconclusive. It is not uncommon to hear someone place a bet on a matter the truth of which could not be ascertained outside a major library. The object of it all, of course, is not winning the bet, but winning the argument.

One such disquisition centered around the husky dogs which live on camp. As I have said, there are no trees, and dogs have learned to dispense with them. Doubt was expressed whether the dogs, confronted once more with trees or fire hydrants, would revert to traditional canine behavior. Unfortunately, no one present could give a forthright answer, and the matter remains to this day to be elucidated.

One thing about which there is sure to be agreement, is the liberality and the democratic sense of our American neighbors. There are a few transient Yanks here — "Put some pesos in the pot, boys!" — and we were soon made witnesses of their democracy in action. There is an eight-gallon can in the lounge hallway where a supply of drinking water is kept. One day, when Cpl. Joe Hagan wanted a drink, he went out and stood in the queue. Ahead of him was a Yank, rather timidly watching a 200 lb husky peacefully lap up water from the top of the can.

"You mean," Joe inquired, "that you've been watching him drink out of there all along?"

"Sure," the Yank shot back, "he was here first, wasn't he?"

## Merry Christmas to All...

It has been said of many Empires, young and old, that the sun never sets over them. In a somewhat restricted sense, Canada too has an empire over which, at times, the sun will not set. At this date (April) it is light in the North almost around the clock. The sun sets all right, but it never goes much below the horizon; and neither does the quarter moon.

In contrast, the stars will not rise. There are only two objects in the sky which might be construed as stars, but they are no such things. The more beautiful one is Venus, which shines so brilliantly after sunset that it is almost possible to resolve it into a crescent; while the other body is probably Saturn inside its rings, showing dimly low in the South, riding the ecliptic, not far from opposition.

It is somehow comforting to note that the heavens in these parts are as thinly populated as the earth . . .

# ★ What's the Score?

We are indebted for this month's questionnaire to Pilot Officer J. E. Ruch, who (as Sgt. Shatterproof rather discouragingly expresses it) "spent the past summer sacrificing his youth on the bleak altar of 'The Roundel'." Among the other results of Pilot Officer Ruch's self-immolation was the study of the Reserve University Flights which appeared in our November issue.

Correct answers to the following questions are shown on page 48. If the average score of the Editorial Committee is any criterion, readers who get more than 13 can regard themselves as pretty knowledgeable citizens of the world.

1. The direct antecedent of the United Nations Charter is:
  - (a) The Magna Charta.
  - (b) The Atlantic Charter.
  - (c) The North Atlantic Treaty.
  - (d) The Rush-Bagot Treaty.
2. The first declaration of the principles and purposes of U.N. was signed on:
  - (a) 14 Aug. 1941.
  - (b) 2 Jan. 1942.
  - (c) 30 Oct. 1943.
  - (d) 26 June 1945.
3. N.A.T.O. is the abbreviation for:
  - (a) North American Treaty Organization.
  - (b) North Atlantic Treaty Organization.
  - (c) North Atlantic Triangle Organization.
  - (d) North American Territorial Organization.
4. The U.N. Charter:
  - (a) Was signed on 26 June 1945.
  - (b) Was lettered on vellum by Salvador ("Soft-Watch") Dali.
  - (c) Is kept in the vaults of the Bank of England.
  - (d) Contains the same number of words as the Book of Revelations.
5. The R.C.A.F.'s current annual training commitment for N.A.T.O. is:
  - (a) 68 pilots, 48 navigators.
  - (b) 1400 pilots and navigators.
  - (c) 850 radio officers.
  - (d) 900 groundcrew of all technical trades, and 300 aircrew.
6. The R.C.A.F. instructs N.A.T.O. trainees in:
  - (a) English only.
  - (b) English, Dutch, and French only.
  - (c) English, Dutch, Norwegian, and French only.
  - (d) English and French only.
7. *Not* a principal organ of U.N. is:
  - (a) The Pan-Asiatic Council.
  - (b) The Secretariat.
  - (c) The International Court of Justice.
  - (d) The Trusteeship Council.
8. The "working-languages" of U.N. do not include:
  - (a) English.
  - (b) Russian.
  - (c) Spanish.
  - (d) French.
9. In the U.S.A., M.A.P. stands for:
  - (a) Military Assistance Programme.
  - (b) Mutual Aid Programme.
  - (c) Ministry of Armament Production.
  - (d) Maximum Aircraft Potential.
10. N.A.T.O. will regard an armed attack on any one of its members as:
  - (a) An attack upon all members.
  - (b) An act of God.
  - (c) An attack upon the one nation only.
  - (d) A matter to be dealt with only by the U.N. Security Council.
11. A specialized agency related to U.N. is:
  - (a) W.H.O.
  - (b) W.H.I.C.H.
  - (c) W.H.A.T.
  - (d) W.H.Y.
12. U.N.E.S.C.O. is the abbreviation for "United Nations —":
  - (a) Economic and Social Customs Organization.
  - (b) Economic, Social, and Cultural Organization.
  - (c) European Supervisory Control Organization.
  - (d) Emergency Supply Co-operative Organization.
13. The Security Council does not contain representatives from:
  - (a) Canada.
  - (b) Russia.
  - (c) England.
  - (d) The United States.

14. S.H.A.P.E. is the abbreviation for:
- Staff Headquarters, Atomic Power Establishment.
  - Society of Hydraulic, Automotive, and Petroleum Engineers.
  - Special Housing Administration for Prominent Expatriates.
  - Supreme Headquarters, Allied Powers, Europe.
15. The presidency of the Security Council is:
- Held by Mr. Trygve Lie.
  - Held by each member state in turn for a period of one month.
  - Held by the representative of the most influential nation.
  - Held in rotation by each of the Big Five for a three-month period.
16. Not a member of the U.N. is:
- Yemen.
  - El Salvador.
  - Afghanistan.
  - Hydunderabad.
17. Secretary General of U.N. is:
- Dean Acheson.
  - Warren Austin.
  - Sir Gladwyn Jebb.
  - Trygve Lie.
18. The number of nations represented in U.N. is at present:
- 39.
  - 46.
  - 52.
  - 60.



19. Headquarters of S.H.A.P.E. are in:
- Paris, France.
  - London, England.
  - Ottawa, Canada.
  - Flushing Meadows, New York.
20. Member nations of N.A.T.O. at present (Nov. 7th) number:
- 51.
  - 52.
  - 12.
  - 15.

### Milton on England

Methinks I see in my mind a noble and puissant Nation, rousing herself like a strong man after sleep, and shaking her invincible locks. Methinks I see her as an Eagle mewing her mighty youth, and kindling her undazzled eyes at the full midday beam, purging and unscaling her long abused sight at the fountain itself of heavenly radiance, while the whole noise of timorous and flocking birds . . . flutter about, amazed at what she means, and in their envious gabble would prognosticate a year of sects and schisms.

# Personnel Movements



## SEPTEMBER 1951: OFFICERS

W/C J. A. N. Buchan — R.C.A.F. Stn. Edmonton to T.A.G.H.Q., Edmonton.  
 S/L A. C. Burt — R.C.A.F. Stn. London to 2 P.S.U., London.  
 S/L J. F. Edwards, D.F.C., D.F.M. — R.C.A.F. Stn. St. Hubert to 1 Grp. H.Q. (R.), Montreal.  
 S/L W. G. Harvey — R.C.A.F. Stn. Summerside to T.C.H.Q., Trenton.  
 S/L G. R. Hodgins — R.C.A.F. Stn. Centralia to 14 T.G.H.Q., Winnipeg.  
 S/L J. Hudson, D.F.C. — R.C.A.F. Stn. St. Hubert to R.C.A.F. Stn. Calgary.  
 W/C R. B. Ingalls, D.S.O., D.F.C. — C.J.S. London to S.C., Toronto.  
 W/C D. J. G. Jackson — R.C.A.F. Stn. Rockcliffe to C.J.S. Washington.  
 S/L J. L. G. Lacombe — 2 A.N.S., Winnipeg, to 1 A.N.S., Summerside.  
 S/L E. C. R. Likeness — A.D.C.H.Q., St. Hubert, to A.F.H.Q.  
 S/L H. F. Monnon — A.T.C.H.Q., Lachine, to R.C.A.F. Stn. Goose Bay.  
 S/L H. M. Sutherland — 1 O.S.C., London, to A.F.H.Q.  
 S/L W. J. Young, D.S.O., M.B.E. — A.D.C.H.Q., St. Hubert, to 12 A.D.G.H.Q., Vancouver.

## OCTOBER 1951: OFFICERS

S/L T. G. Anderson, A.F.C. — 4 A.C.W.U., Uplands, to 5 A.C.W.U., Scarboro.  
 W/C G. S. Austin — A.F.H.Q. to R.C.A.F. Stn. Lachine.  
 W/C K. E. Ball, M.B.E. — A.F.H.Q. to A.M.C.H.Q., Ottawa.  
 G/C R. H. Bray — A.F.H.Q. to A.D.C.H.Q., St. Hubert.  
 S/L A. J. P. Byford, D.F.C. — 426 (T) Sqn., Dorval, to A.F.H.Q.  
 S/L J. J. P. Davignon — A.D.C.H.Q., St. Hubert, to 1 F.W.H.Q., U.K.  
 S/L W. M. Garton — 1 A.R.O.S., Clinton, to R.C.A.F. Stn. London.  
 S/L G. O. Godson, A.F.C. — A.A.S., Trenton, to T.C.H.Q., Trenton.  
 S/L W. A. Goodall — C.J.S. London to 1 S.D., Weston.  
 G/C E. B. Hale, D.F.C. — C.J.S. London to 1 F.W.H.Q., U.K.  
 S/L H. J. Hemsley — 11 T.S.U., Montreal, to 1 F.W.H.Q., U.K.  
 S/L C. Hunsley — 2 S.D., Vancouver, to R.C.A.F. Stn. Sea Island.

G/C A. G. Kenyon — 405 (M.R.) Sqn., Greenwood, to R.C.A.F. Stn. Summerside.  
 S/L W. W. Laughland — R.C.A.F. Stn. St. Johns, P.Q., to 1 F.W.H.Q., U.K.  
 G/C Z. L. Leigh, O.B.E., E.D. — A.F.H.Q. to A.T.C.H.Q., Lachine.  
 W/C H. G. Marriott — T.A.G.H.Q., Edmonton, to 12 A.D.G.H.Q., Vancouver.  
 W/C J. D. Munroe — R.C.A.F. Stn. Edmonton to A.F.H.Q.  
 S/L L. E. A. Myles — 6 R.D., Trenton, to R.C.A.F. Stn. Summerside.  
 W/C E. E. Parks — A.M.C.H.Q., Ottawa, to A.F.H.Q.  
 W/C W. P. Pleasance, D.F.C. — A.F.H.Q. to 405 (M.R.) Sqn., Greenwood.  
 S/L W. S. Quint — C.J.S. Washington to A.D.C.H.Q., St. Hubert.  
 S/L F. N. Sheffield — 1 A.N.S., Summerside, to T.C.H.Q., Trenton.  
 S/L R. A. Skuce, M.B.E. — T.C.H.Q., Trenton, to 14 T.G.H.Q., Winnipeg.  
 W/C H. M. Smith, D.F.C. — A.T.C.H.Q., Lachine, to 408 (P) Sqn., Rockcliffe.  
 W/C T. H. Spear — C.J.S. London to 1 F.W.H.Q., U.K.  
 S/L N. J. Thompson — R.C.A.F. Stn. Sea Island to 12 A.D.G.H.Q., Vancouver.  
 S/L P. V. K. Tripe, D.F.C. — C.J.S. Washington to A.D.C.H.Q., St. Hubert.  
 S/L L. P. Valiquet — T.C.H.Q., Trenton, to A.F.H.Q.  
 W/C H. C. Vinnicombe — A.F.H.Q. to A.D.C.H.Q., St. Hubert.  
 S/L W. Whiteford — R.C.A.F. Stn. Sea Island to 12 A.D.G.H.Q., Vancouver.  
 W/C D. A. Willis, D.F.C. — R.C.A.F. Stn. Summerside to C.J.S. London.  
 S/L L. A. Wright — I.A.M., Toronto, to T.A.G.H.Q., Edmonton.

## SEPTEMBER 1951: WARRANT OFFICERS

WO1 E. Bartlett — 2 C.M.U., Calgary, to A.M.C.H.Q., Ottawa.  
 WO2 J. R. Bélanger — R.C.A.F. Stn. St. Johns, P.Q., to S. of E., St. Johns, P.Q.  
 WO2 J. P. Niven — 1 T.T.S., Aylmer, to R.C.A.F. Station Bagotville.  
 WO2 J. C. Wallis — 2 C.M.U., Calgary, to A.M.C.H.Q., Ottawa.  
 WO2 R. J. Watson — S.C., Toronto, to R.C.A.F. Stn. Trenton.



### OCTOBER 1951: WARRANT OFFICERS

WO2 W. F. Balfour — 1 I.F.S., Centralia, to 2 T.T.S.,  
Camp Borden.  
WO1 L. R. Cousins — 6 R.D., Trenton, to A.M.C.H.Q.,  
Ottawa.  
WO2 J. G. Hayman — 2 T.T.S., Camp Borden, to 10 E.U.,  
Camp Borden.  
WO2 D. J. Hunt — 438 (F) Sqn. (R.), St. Hubert, to 3001  
T.T.U. (R.), Montreal.  
WO2 M. J. MacLennan — T.C.H.Q., Trenton, to R.C.A.F.  
Stn. Clinton.

WO2 M. J. Slater — R.C.A.F. Stn. Edmonton to T.A.G.H.Q.,  
Edmonton.  
WO2 R. W. Tiller — R.C.A.F. Stn. Whitehorse to A.F.H.Q.  
WO2 T. A. Wilkins — A.M.C.H.Q., Ottawa, to 1 F.W.H.Q.,  
U.K.  
WO2 L. S. Williams — R.C.A.F. Stn. Greenwood to 1  
F.W.H.Q., U.K.  
WO1 W. H. Wingate — R.C.A.F. Stn. Gimli to R.C.A.F.  
Stn. Winnipeg.  
WO2 W. E. Young — R.C.A.F. Stn. Aylmer to R.C.A.F.  
Stn. Centralia.

### KEY TO TRADE DESIGNATIONS

A.A.S. — Air Armament School  
A.C.W.U. — Aircraft Control & Warning Unit  
A.D.C.H.Q. — Air Defence Command H.Q.  
A.D.G.H.Q. — Air Defence Group H.Q.  
A.M.C.H.Q. — Air Materiel Command H.Q.  
A.N.S. — Air Navigation School  
A.R.O.S. — Air Radio Officers' School  
A.T.C.H.Q. — Air Transport Command H.Q.  
C.J.S. — Canadian Joint Staff  
C.M.U. — Construction & Maintenance Unit  
E.U. — Examination Unit  
(F.) — Fighter  
F.W.H.Q. — Fighter Wing H.Q.  
I.A.M. — Institute of Aviation Medicine  
I.F.S. — Instrument Flying School

(M.R.) — Maritime Reconnaissance  
O.S.C. — Officers' Selection Centre  
(P.) — Photographic  
P.S.U. — Personnel Selection Unit  
(R.) — Reserve  
R.D. — Repair Depot  
S.C. — Staff College  
S.D. — Supply Depot  
S. of E. — School of English  
(T.) — Transport  
T.A.G.H.Q. — Tactical Air Group H.Q.  
T.C.H.Q. — Training Command H.Q.  
T.S.U. — Technical Services Unit  
T.T.S. — Technical Training School  
T.T.U. — Technical Training Unit

## Aircraft Nomenclature

There is a fascination about this important business of aircraft nomenclature. The right name may be the inspiration of a moment or it may be decided only after lengthy deliberation and research. But difficulties notwithstanding, the now-accepted practice of resurrecting family names seems to us a pity when brand-new titles, equally pulse-quickening, suggest themselves; nor does it yet appear necessary for one manufacturer to "borrow" a name from another, as is occasionally done.

As we have said, good names are becoming scarce; but a few minutes' thought brings a string of new ones to mind; malevolent names like Fiend, Wraith, Scourge, Spectre and Terror; elemental, like Storm and Zephyr; noble, like Galahad, Champion, Strongbow, Paladin, Conqueror and Excalibur; names of weapons — Falchion, Javelin, Stiletto; mighty names such as Cromwell and Marlborough; mythical ones like Unicorn and Centaur; and stirring British names like Sherwood and Stornoway.

(*"Flight"*: U.K.)

## The Suggestion Box



The personnel whose photographs appear on this page have received letters of thanks from the Chief of the Air Staff for suggestions which have been officially adopted by the R.C.A.F.



*Sgt. W. W. Baron.*

Sgt. W. W. Baron, of Training Command Headquarters, has adapted an ordinary alarm-clock to serve as an automatic timing-device for use in conjunction with various tests at Recruiting Units. It eliminates the possibility of errors, obviates the necessity of writing down the starting and stopping times on individual cards, and enables any number of tests to be conducted simultaneously and timed accurately regardless of the various times of their commencement.



*Flt. Sgt. J. L. Davidson.*

Flt. Sgt. J. L. Davidson, of R.C.A.F. Station St. Hubert, has suggested certain changes in procedure that will materially contribute to the accuracy of records in cases where airmen's reclassification has for any reason been deferred.



*Sgt. H. M. Rule.*

Sgt. H. M. Rule, of No. 12 Technical Services Unit, has made valuable suggestions in connection with the palletization of equipment in Service warehouses. His modifications to the present location system will save a great many man-hours.

# Heraldry and the Badges of the Royal Air Forces

By Gerald W. Wollaston, Garter King of Arms

*(This article was prepared as the foreword to an official Air Ministry pamphlet, published in 1944, which gave an account of the badges of the Commonwealth Air Forces.—EDITOR).*

THERE ARE A FEW PEOPLE with a great knowledge of heraldry, and many others with little knowledge of it, who think that heraldry ceased with the Middle Ages, and that it has no interest to-day save as a purely antiquarian study. No opinion could be more erroneous.

Heraldry first made its appearance in the United Kingdom, so far as evidence exists, about the middle of the twelfth century. Its object was twofold: to identify one person from another in battle, when mediaeval armour completely encased the wearer and rendered him indistinguishable save by the banner, shield and surcoat of his arms; and to identify him in the more peaceful avocations of business transactions, when writing was not commonly practised, and great men, instead of signing documents, affixed to them seals of their arms.

It is easy to appreciate in these circumstances the great importance which heraldry assumed in those early days. History, notoriously, repeats itself, and conditions to-day would seem to be tending to reproduce those conditions which first created heraldry and fostered its display. The modern army is mechanized. Tanks, armoured cars, lorries and other such vehicles, propel and conceal the individual soldier; steel ships and aeroplanes disguise those who sail, fly and fight them; and it has been rumoured that in some armies soldiers are to be seen to-day clad in steel armour. On the other side of the picture, everyone knows that writing is done by the typewriter, and many people seem unable even to sign their names legibly. Who, then, will say that there is no scope for heraldry to-day?

Heraldry is both a science and an art. The stately pageantry of a coronation, the chapels of the orders of chivalry at Windsor, Westminster, St. Paul's and elsewhere, the cloister roof at Canterbury, and many another noble example, testify to the glorious effect of heraldry as decorative art. It is a science because it is governed by rules which ensure that a coat of arms does effect its primary object of identifying the person to whom it belongs.

To enable it to do so, it is manifestly necessary that heraldry should be controlled. Many sad stories could be told of the uncontrolled use of the science — of the bachelor who displayed the arms borne by his father, omitting to notice that they impaled the arms of his mother, and so depicted himself as having married his mother — of the spinster who used her father's crest, ignorant of the fact that a crest is exclusive to the male sex in heraldry. But these are the exceptions. In the main, people who desire, or have occasion, to display heraldry seek authority to guide them in the right path.

The control of heraldry is entrusted, in general, to the officers of the College of Arms, who are appointed by the Sovereign for this purpose. The granting of new arms is the prerogative of the Sovereign as the fountain of honour, and this prerogative he delegates, by letters-patent under the Great Seal, to the Kings of Arms — Garter, Clarenceux and Norroy in England, Lyon in Scotland, and Ulster in Ireland. They alone have the right to grant arms as representatives of the Sovereign.

Heraldic insignia consist of arms, crests and badges. Arms are borne on a shield, and crests on a helmet, corresponding to their original uses. Badges are a separate category. They are devices which stand alone, distinct from shield and helmet and the warlike panoply of the owner, and were used — as they are to-day — to mark and identify property. Possibly they are the oldest form of heraldic insignia. Shakespeare refers to the “household badge” of the Earls of Warwick, and the common practice of identifying retainers by this household badge is perpetuated to-day in the Yeoman of the Guard, who wear on their uniforms the combined rose, thistle and shamrock, one of the many royal badges appertaining to the Sovereign.

It is with badges that we are concerned in the Royal Air Forces. It is common to speak of “the crest” of a regiment or of an air force unit. This is a misnomer. The crest is the device which the knight bore on his helmet, sometimes in battle, but more generally in the joust or tournament. It was made of hardened leather, or some other solid and durable material, and firmly fastened to the helmet, its attachment to which was adjusted by a twisted cord of silk, generally of two colours, encircling the helmet and called in heraldry a “wreath.” Save as an adjunct to the helmet, the crest had no other use. Its representation, pictorially, divorced from the helmet and standing on a straight bar intended to represent the circular wreath, is a later and incorrect usage. The crest and helmet, therefore, are entirely inappropriate to regiments and air force units.

As long ago as the eighteenth century it was laid down by royal warrant that no regiment might bear on its colours the arms or crest of its colonel. Before that time regiments were generally raised, and for the most part supported, by the officers who commanded them and who assumed a proprietary right over them. It was the custom for a commanding officer to place his arms or crest on the colours and accoutrements of his regiment. But by the time the above-quoted royal warrant was issued it had become established that regiments are the King’s regiments, and that any

badges borne on their colours must be royal badges, or badges sanctioned by the Sovereign, and not the property of an individual. This rule against displaying arms and crests of individuals and corporations has since been generally enforced in regimental colours, though of course it is permissible to take some charge from the arms and adopt it as a badge. When air force badges were instituted, a similar rule was laid down, for the same reasons. It is a rule at which no one in the Services will cavil.

Badges, not crests, are used by the armed forces of the Crown. Every ship in the Navy has its badge, every regiment has a badge in the centre of its colours, indicative of the regiment, and every air force unit also should have its badge. These various devices, appropriately, are heraldic in nature, and are controlled by heraldic officers, though not by the College of Arms as such. The Inspector of Naval Badges, the Inspector of Regimental Colours, and the Inspector of the Royal Air Forces, are all officers of the College of Arms, but they hold their appointments, respectively, under the Admiralty, the War Office and the Air Ministry as separate appointments. Air force badges are generally designed to bear some allusion to the services or associations of the units to which they are assigned, and many of them are happy adaptations of symbols and heraldic charges which are both decorative and allusive. All such badges receive the sanction of the Sovereign before they are issued and recorded.

In this connection a further point of interest may be mentioned. There have long existed in heraldry different types of crowns, or coronets, associated with the Services or with various aspects of civil life. The Naval Crown consists of the sterns and sails of ships alternating. The Mural Crown resembles the turreted top of a tower. The Eastern Crown is ornamented with triangular spikes. The Celestial Crown has these spikes terminating in stars. These are generally granted with armorial bearings to persons distinguished in those walks of life to which they specially refer. The Kings of Arms have recently decided to add to these a new crown indicative of

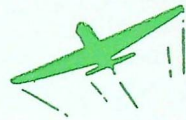
association with the air, to be called an Astral Crown, and to consist of wings and stars alternating. Such a crown has been sanctioned by the King for No. 1 Flying Training School (R.A.F.), and it will be available to be granted, with armorial bearings, to distinguished officers in the Royal Air Forces and to persons or corporations especially connected with aviation, whether military or civil.

It was stated at the beginning of this article that heraldry is a living force to-day no less than it was in mediaeval times, and it has been shown that, increasingly, at least during this present century, it has been used for the very purposes, in war, for which it was originally established.

Strange as it may seem, heraldry has ever evoked in men the strongest feelings. In the fourteenth and fifteenth centuries the fiercest controversies raged over the right to use certain arms. Both the historic dispute between Scrope and Grosvenor as to the right to use the arms "azure a bend or" (whence was derived the name of a hardly less famous racehorse many centuries later), and the great contest between Lord Hastings and Lord Grey de Ruthyn about their arms, lasted

for years, and at least one of the disputants spent long periods in prison rather than forego his rights. Is this all dead and forgotten? Not many years ago a controversy arose which nearly produced a civil war in one of our Dominions over the use of a national flag. That flag was heraldry. Our Union flag is pure heraldry; indeed, in the form of a coat of arms, it is to-day one of the royal badges. The Royal Standard is heraldry in its most perfect form; all its four quarterings date from the beginnings of our history, and it is the King's coat of arms.

Who then shall say that heraldry is dead? In lesser spheres, every coat of arms is a source of pride to the family which bears it. It stands in the same relation to a family as a flag does to a nation; it identifies its members, whether in life or death; and it stands a monument in many a cathedral, many a church, and many a hall, to those who, in greater or less degree, have contributed to the history, welfare and development of our land. It has been said with truth, many centuries ago, that "things more excellent than any symbol are expressed through symbols."



## VETERAN PILOT

**D**URING A VISIT of U.S.A.F. Thunderjets to Spain, a few favoured Spanish pilots were invited to fly in and to pilot a two-seater. The senior in age and rank was the Infante Alfonso, cousin of the late King Alfonso. He took his pilot's ticket at Mourmelon in October 1910, and has flown continuously for more than 40 years.

During the Spanish Civil War he commanded a Brigade of Savoia three-engined bombers and

piloted his own bomber in more than 200 sorties, though then more than 50 years of age. During 1950 he logged 190 hours in his own Moth. Writing to a friend, he regretted that his first few rolls with the Thunderjet were a bit out of truth, but said that he improved when he got the feel of it. Pretty good going for a man of more than 60 years of age.

(*"The Aeroplane:" U.K.*)

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# ROYAL CANADIAN AIR FORCE

# Association



*(All material in this section is provided by the R.C.A.F. Association and does not necessarily reflect the official views of the Royal Canadian Air Force.—EDITOR)*

## WELCOMING THE ROYAL COUPLE

THE R.C.A.F. ASSOCIATION standard was flown in public for the first time during the visit of H.R.H. Princess Elizabeth and the Duke of Edinburgh to Ottawa. Rushed to completion for the event, the flag was in the Colour Party for the ceremony at the National War Memorial when the Princess laid a wreath in memory of the fallen of two world wars.

Vincent Courtemanche, treasurer of No. 410 (Ottawa and District) Wing, carried the colours. D. G. Holley, vice-president, was the deputy commander of the honour guard. Miss Lillian Smith, the secretary, represented the National President in the enclosure around the cenotaph and was presented to both their Royal Highnesses. Wearing the Association's distinctive wedge cap, many members were present in the veterans' guard and among the crowd.

From the time the Royal Party stepped on to Canadian soil at Dorval airport, Association members were prominent in giving a royal welcome to the Prince and Princess. Leading Airwoman Roberta Richards, who was secretary of No. 251 (Madawaska) Wing, of Edmundston, N.B., before she rejoined the R.C.A.F., was selected as secretarial assistant to Princess Elizabeth during the trans-Canada tour.

## OUR THIRD COMPETITION

The first competition for a \$10 monthly prize for public relations projects closed on November

15th. As announced in "Wings at Home," it was for Wings only. The second competition, open to all Association members, was announced in the last issue of "The Roundel." Its closing date is December 15th.

In future, all competitions will be open to all members, although — as originally stated — it will be designed one month to appeal to Wings and the next month to members-at-large. This month the subject will be ASSOCIATION ASSISTANCE TO R.C.A.F. RECRUITING. Closing date is January 15th.

Members-at-large may write on how they might be of assistance to Air Force recruiting, whereas Wings may be judged by the best account of what any particular Wing is doing on "Operation Recruiting."

We also plan to give a citation for the best public relations job done during the year. A suitably engraved scroll will be presented to the winning Wing or individual during the deliberations of the Third Annual Convention. The keener the competition for this honour, the more it will please National Headquarters.

## BOOKS FOR THE R.C.A.F. OVERSEAS

The association has volunteered to gather books for R.C.A.F. personnel serving overseas. First contributions will be to No. 1 Fighter Wing, North Luffenham, England, where the Commanding Officer is endeavouring to set up a fiction library.

A General Bulletin was sent to all Wings suggesting that they establish collection centres and



*No. 302 Executive. Seated (l. to r.): P. J. Haberlin, secretary treasurer; Mrs. Esmé Gagné, director; W. N. Le Gallais, president, Miss Aline Bélanger, director; M. Manuel, vice president. Standing (l. to r.): P. Delaney, director; R. Le Cours, publicist and corresponding sec'y; A. Doiron, director; P. A. Faguy, director.*

give publicity to the project to enlist public support. Books collected should be sent to National Headquarters, 424 Metcalfe Street, Ottawa 4, whence they will be forwarded to A.F.H.Q. for transhipment overseas. A Book Fund is also being established for the purpose of purchasing new books. Contributions earmarked for the fund should be sent to National Head-

quarters. Pocket-books and light non-fiction are acceptable. National Headquarters are willing to pay express charges to Ottawa. Contributions from members-at-large will be gratefully accepted.

The project is in line with a resolution passed at the Second Annual Convention that possibilities of providing amenities for R.C.A.F. personnel be explored.

## QUOTAS FOR "OPERATION RECRUITING"

As the result of correspondence between the National President and the Chief of the Air Staff, an agreement was reached whereby recruiting quotas would be given to various Wings of the R.C.A.F. Association. Quotas will be allotted to Wings on a competitive basis in the hope that it will stimulate "Operation Recruiting."

Following a general discussion between officers of the R.C.A.F.'s Directorate of Personnel Manning and Association officers from National Headquarters, the following decisions were made:

The Directorate of Personnel Manning will provide the Association with statistical information on the recruiting potential of various areas to enable R.C.A.F.A. to prepare recruiting quotas for Wings.

The Association will be responsible for producing the quotas and issuing them.

Quotas issued to the Wings will be the number of prospective recruits who are referred to the Recruiting Unit by the Wing.

"Wings at Home" will be used to issue instructions or information originating from A.F.H.Q. and considered to be of benefit to the Wings' recruiting campaign, and also for publishing results of the recruiting competition.

D.P.M. will instruct Recruiting Units that they are to maintain statistics of contacts and enrolments resulting directly from the activities of Association Wings operating in conjunction with the respective units.

Statistics are to be submitted to A.F.H.Q. in a separate return by signal at the end of each month.

A.F.H.Q. will despatch a co-ordinated return to the R.C.A.F. Association monthly which will provide sufficient information to publish results.

## GROUND OBSERVER CORPS

Wings were advised that 48 short-term commissions in the R.C.A.F. were open for service at filter centres of the Ground Observer Corps.

They were also told that co-ordinators still had to be appointed for the Prairie Provinces and Newfoundland, money voted for the filter centres, accommodation found, and the centres set up. Not until all this is done, it was stated, could organization proceed as regards area supervisors, chief observers, and observers. It is in the second organizational programme that the Association's assistance will be chiefly valuable. Quite a few members have already volunteered to Wings for this work.

National Headquarters have provided names of Association members in Ontario, the only province for which area breakdowns have been given to the Ground Observer Corps. The next step is for the provincial co-ordinator to get in touch with Wings and/or selected individuals. Setting up basic organization of the Corps is taking far more time than even those most intimately connected with it at first contemplated.

This is one project in which we hope members-at-large will play no less important a rôle than the Wings.

## PERMANENT ADDRESSES FOR WINGS

A General Bulletin was sent to Wings suggesting that they obtain permanent postal addresses.

R.C.A.F. Routine Order No. 613 outlined the willingness of the Association to be of assistance to R.C.A.F. personnel (on temporary duty or on leave) in contacting ex-R.C.A.F. personnel in the area. An appendix to the order gave the names and addresses of presidents and secretaries of various Wings across Canada.

While the order was being prepared, the list had to be changed several times, and by time of publication was already out-of-date. As quite a few Wings do not have permanent quarters as yet, a post office box would be valuable both to Association members and to the general public who wish to make contact with Wings. A listing in the local telephone directory is also highly desirable.

When permanent addresses have been obtained by all Wings, an amendment to R.C.A.F. Routine Order No. 613 will be issued providing this information.

## OF THIS AND THAT

The Association has taken out a corporate membership in the United Nations Association in the name of three national officers, as this is an organization which the R.C.A.F.A., by its very nature and purpose, should be supporting. In this manner, we obtain copies of U.N. literature. As presently constituted, fees for a corporate membership on a Wing basis would be prohibitively



*At No. 406 Wing's banquet and dance for personnel of R.C.A.F. Station North Bay. Seated (l. to r.): Sgt. Geraldine Turcott, of the local Recruiting Unit; Mrs. G. L. Ward, Mrs. J. O'Sullivan. Standing: Cpl. J. Scott, Flt. Sgt. A. H. Kritsch, Sgt. E. F. Biesenthal. (Photo: "North Bay Nugget".)*

expensive, but the national office of U.N.A. has been asked to consider making a change that will enable all Wings to hold corporate membership at a fee within their reach.

National Headquarters has also received the first publication of the Bureau of Current Affairs of the Department of National Defence. "The Threat to Canada," by historian Edgar McInnis, constitutes Volume 1, No. 1. Discussions have been held with Mr. H. R. Low, the Director of the Bureau, on how the Association and the Bureau might co-operate.

During a visit to Toronto made by National President Air Vice-Marshal A. L. Morfee, C.B., C.B.E., (ret.), conversations took place with representatives of the aircraft industry on the subject of mutual co-operation. (In the United States, the industry is a staunch supporter of the Air Force Association.) Air Vice-Marshal Morfee also addressed, at R.C.A.F. Station Toronto, a mass-meeting of the two Toronto Wings as well as representatives of other veterans' organizations.

The fourth issue of "Wings at Home" was considerably enlarged and improved. The cover,



designed by Ray Tracy, was printed, and the two main divisions of "news" and "opinion" had attractively-drawn division sheets. The number of pages was brought up to 33. Wings are gradually beginning to provide more material on their activities.

To effect a saving by purchase in quantity, and to enable Wings to buy two-colour letterheads in small lots when desired, National Headquarters has been considering the central purchase of letterheads and envelopes. All Wings have been requested to obtain quotations from local printers. The Association Crest and "Royal Canadian Air Force Association" would be printed in blue ink on the first run, and Wing information in another colour (probably red) on the second run. In this way, each Wing would have a letterhead of its own, while retaining a certain amount of uniformity.

Jinx Falkenberg and her husband Tex McCrary were so impressed with their reception at No. 410 (Ottawa and District) Wing's Second Annual Air Force Reunion that they wish to return to Ottawa with a show of stage and radio stars and present a "Wing-Ding" at the next Annual Convention.

#### EXECUTIVE CHANGES

##### No. 302, Quebec City

President	W. M. LeGallais (re-elected)
Vice-President	M. Manuel
Secretary-Treasurer	P. J. Haberlin (re-elected)
Executive Members	Mrs. Esmé Gagné Miss Alline Bélanger A. Doiron P. A. Faguy A. Lavigueur P. Delaney René LeCours

##### No. 150, St. John's, Newfoundland

President	Robert Grouchy
First Vice-President	Stanley Malloy
Second Vice-President	Herbert Morgan
Treasurer	Jack Barton
Secretary	John Pike

##### No. 400, Guelph

President	John Kendall
Vice-President	Wally Tobey
Treasurer	Bill Maxwell
Secretary	Bill Cutten

##### No. 426, Brockville

President	Donald Shotter
Vice-President	Fred Henderson
Secretary	Arthur Farrow
Treasurer	Bud Allen

##### No. 108, Yarmouth

President	George Herrington
Secretary	R. Cecil Wall

##### No. 307, Point-aux-Trembles

President	George Stewart
Vice-President	Elwin Leblanc
Secretary	Stanley Force
Treasurer	Les Gibson
Directors	Fred Lefebvre John King Bill Oliver

#### WATCHING THE WINGS

Some of our Wings have become really carried away by "Operation Recruiting." After the enlistment of two members of the executive and four other members of the Kirkland Lake Wing, word now comes that Claude Fournier is back in the R.C.A.F. shortly after he was appointed chairman of the recruiting committee for No. 420 (Oshawa) Wing.

No. 424 (Cornwall) Wing has a recruiting counsellors' committee in operation, with temporary quarters in the old City Hall. On the first evening, seven interviews took place, of which three look promising. H. Stansel is the chairman, and interviews are planned for each Wednesday night.

No. 420 (Oshawa) Wing held two successful social events during the fall — a Hallowe'en dance, and a corn-roast and old-time dance. The Wing now owns a television set, which is proving an attraction for the open nights at the clubrooms on Wednesday, Friday, and Saturday.

No. 418 (Belleville) Wing has formed a Ladies' Auxiliary. Officers are:

President	Doreen Stovin
Secretary	Mavis McLean
Treasurer	Peg Godwin
Executive Members	Bernice Day Grace Knowlton

The ladies are helping in the redecoration of the new clubrooms. A dance inaugurated the fall season.



To stimulate a spirit of competition, No. 703 (Central Alberta) Wing, Red Deer, has instituted "Squadrons." This is an experiment which other Wings will follow with interest. Red Deer has also decided to operate a Civil Defence Centre.

No. 101 (Atlantic) Wing, Halifax, has obtained new quarters.

No. 600 (Regina) Wing has received quite a few volunteers for civil defence work and for the Ground Observer Corps. John Probe, co-ordinator of civil defence for the province, spoke to a general meeting of the Wing.

Throughout the summer season, No. 416 (Kingston) Wing continued to hold successful dances, and extensive plans for the winter season have been prepared, including a New Year's Eve

dance. The Wing conducted a raffle for an automobile, which was won by Bill Blake. Kingston has been particularly active in recruiting for the R.C.A.F. Thirty-three persons are already wearing Air Force blue as the result of the Wing's efforts.

Wing Cdr. Maurice Lipton, A.F.C., Commanding Officer of R.C.A.F. Station Gimli, was guest speaker at the first fall meeting of No. 500 (Winnipeg) Wing.

No. 406 (North Bay) Wing staged a dinner and dance to welcome officers and men of the new R.C.A.F. base and to give them the opportunity of meeting civic and area dignitaries.

No. 426 (Brockville) Wing is planning a visit to Rockcliffe Station as a sort of a "refresher course" in the R.C.A.F.

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## Signals from the Stars

By Arthur C. Clarke, B.Sc., F.R.A.S.

*(Reprinted by courtesy of "The Radar Bulletin": U.K.)*

**O**F ALL THE GREAT technical developments of the Second World War, radar is probably the one which was most quickly adapted to peaceful uses. As we all know, it is now playing a major rôle in sea and air transport: what is not so well known, however, is the influence it has had on fundamental scientific research.

The development of radar gave Man a new sense, a sense akin to sight in certain respects, but of course operating in the long-wave region of the spectrum. Now the acquisition of a new sense inevitably means a change in our picture of the universe around us: that change is now in progress and even in the few years since the War some remarkable discoveries have been made. In some of these, true radar methods have been used. Radio pulses have been sent out into space, and echoes received back from meteor trails and from

the Moon. In the near future, it should also be possible to get echoes from Mars and Venus.

More important, however, have been the experiments in which we have used Nature's own transmitters and have simply searched the sky with sensitive receivers until "signals" were found. As long ago as 1932 Jansky discovered that radio "noise" could be picked up on metre wavelengths from the general direction of the Milky Way, but not until after the War were there receivers sensitive enough, and arrays directional enough, to investigate this phenomenon thoroughly. It has now been discovered that radio emissions can be received from all parts of the sky, but the areas of greatest intensity coincide with the position of the Milky Way — that faint band of stars surrounding the Earth. Even if clouds had prevented us from ever seeing the stars — as may

well be the case on the planet Venus — it is an interesting thought that radio methods would have enabled us to detect the Milky Way.

In addition to this general background of radio noise, several individual point sources have also been discovered and their positions fixed with some accuracy. The curious fact about these is that whereas some are of constant intensity, others fluctuate rapidly — they “twinkle,” in fact. The origin of these signals is a complete mystery, since in most cases there are no outstanding visible objects in the parts of the sky from which they originate. One of them has, however, been identified with a nebula which is known to be the remnants of a star that exploded over a thousand years ago, and is still surrounded by enormous layers of incandescent gas. The radio waves may originate from electrical processes (discharges, perhaps) in this gas; but this explanation is still speculative.

Much of this work on “radio astronomy” has been done by a group of scientists at Jodrell Bank, near Manchester. (It has been pointed out that this is the only kind of astronomy which would be really practicable around Manchester!) At Jodrell Bank a receiving array no less than 200 feet in diameter has been constructed, giving a reasonably narrow polar diagram even on metre wavelengths. Quite recently, using this enormous reflector, radio emissions have been picked up from the Great Nebula in Andromeda — the nearest of all the other island universes. It has long been known that the Andromeda Nebula was similar to our own Milky Way system, and this latest discovery confirms the resemblance. Whatever may be the sources of our own galaxy’s radio emissions, the Andromeda Nebula contains them as well — and they are powerful enough to be detected after their waves have been travelling for 750,000 years!

It was natural to suspect that the sources of these cosmic radio signals might be the stars, and as our sun is a fairly typical star, attempts were

made to detect its radio emissions. At first these failed; but in 1942 severe interference on an Army radar set was found to be due to a large sunspot crossing the sun’s disc. We now know that the sun has a normal, fairly low radio emission — a kind of background hiss, as it were — but on occasion solar disturbances can increase this level many thousand-fold. If we could see the sun by its radio waves instead of its light, it would normally appear as a faint disc with a bright, diffuse rim, fluctuating continually, and occasionally erupting in bursts of tremendous brilliance.

It thus seems probable that all stars, just like the sun, emit some radio waves: but this cannot account for the total intensity of the radio emissions we receive from the Milky Way as a whole. Some of it may come from the great gas clouds which occupy much of interstellar space (particularly near the centre of our universe). The point sources we have just discovered may be hitherto unsuspected objects which have been christened “radio stars.” These, unlike our own sun, would emit very little in the visible region, but would be tremendously powerful generators of metre and centimetre waves. Attempts are now being made to decide what kind of star could behave in this extraordinary manner. If our sun had been such a star — instead of the feeble and sporadic radio transmitter it is — we could never have developed radio communication on this earth. All our signals would have been swamped by the tremendous background of interference.

The whole history of radio astronomy, brief though it is, shows how progress in one branch of science may have totally unexpected results in another. Certainly when we were plotting “hostiles” back in 1940 none of us ever imagined that, ten years later, virtually the same equipment would be used to detect radio waves that had started their journey before Man appeared on this planet!

# Take a Bowl of Horsehair . . .

by Flt. Lt. P. J. Evans, R.A.F.

*(Flight Lieutenant Evans, joint editor of the new five volume edition of A.P. 1234, the Manual of Air Navigation, tells of a little book he came across during his researches. It bore the title "Air Navigation for Flight Officers," and was written in 1917 by a naval officer. It contains one or two things you won't necessarily see in the new manual.—EDITOR)*

*(Reprinted by courtesy of "Air Clues": R.A.F.)*

SOME PEOPLE would remark that it is perhaps a little unfair to drag such a well-meaning book from honourable retirement just for the fun of taking the "mickey" out of it. However, in spite of the 70,000 feet/700 m.p.h. boys, I still think he's a poor man who can't draw some sort of lesson from the experience of the past which will help him in the future. And for this reason, perhaps I may be excused my measure of levity.

Every book has a preface and this one is no exception.

"The work is undertaken," it says, "in the hope that it may prove of assistance to Flight Officers, as it condenses into a small compass all the subjects of navigation which they are required to know."

A sweeping statement this, as we are to see.

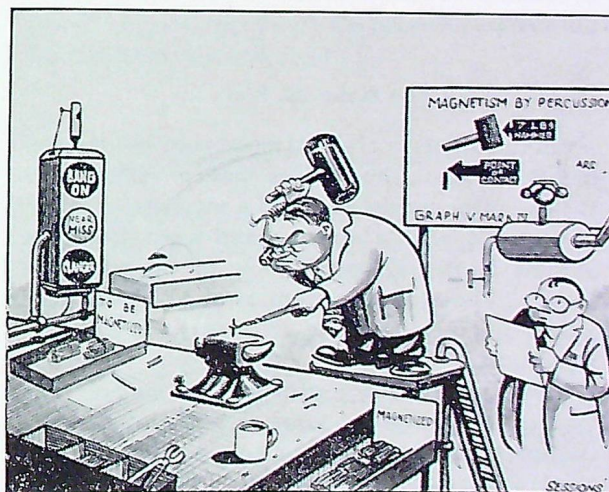
## Smart Practice

One of the first things we are apparently "required to know" makes itself evident in Chapter 1, which deals with the subject of magnetism. "Like Poles repel. Unlike Poles attract," says the book, adjuring us to memorize this rule well. "By doing so" — we are assured — "compass adjustment with regard to the placing of the adjusting magnet will be quite easy to understand."

That the ease of understanding of a problem which has worried aircraft designers and others from time immemorial is attributable almost entirely to naval smartness soon becomes fairly evident. Nothing but the smartest will do when it

comes to magnetism. Magnetism by percussion is achieved by "smartly" tapping their iron bar with a hammer (p. 11); single touch magnetism involves drawing a magnet "smartly" along the bar to be magnetized (p. 12); while the divided touch method requires just as much smartness — if not twice as much, since two magnets are used (p. 13). The fourth method uses an electro-magnet and no "smartly," so perhaps the mechanization here has deprived the Navy of much of its basic smartness. If so, I can only say I am sorry.

On the other hand, a grim warning is contained on page 15. "Ordinary temperatures have no



*Magnetism by percussion is achieved by "smartly" tapping the iron bar with a hammer . . .*

effect on the permanent magnets used for compass adjustments," says the good book. "If, however, they are heated to between 1,300 and 1,500 degrees F., they will become demagnetized." What happens to the pilot under such conditions is not specified. No doubt any medical textbook of the period would answer the question.

### Liquid and Liquor

On the subject of compasses, a modern school of thought decries the learning of "nuts and bolts" by the navigator. No such scruples existed in the old days, however. "The liquid used in a compass," says the compasses chapter (p. 25), "is two parts distilled water to one part pure alcohol, the object of the alcohol being to prevent freezing. However, a slightly higher percentage of alcohol gives better results at low temperatures and all the later pattern compasses are now filled with a mixture of three parts of distilled water to two parts of alcohol."

I can almost visualize the papers for the 1918 Spec. N. entrance exam. now:

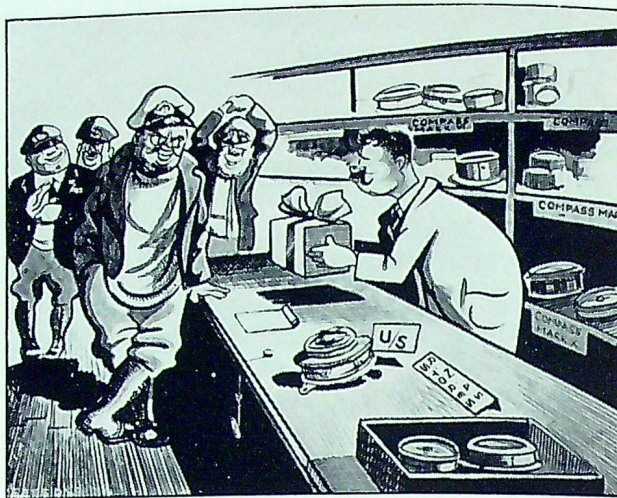
"You are the navigation officer of a Sopwith Camel Squadron, detailed to fly over the North Pole. What action would you take to ensure that the compasses do not freeze?"

And I'll bet some of their answers would beat mine, too . . .

### You Make the Bed . . .

On the question of siting a compass, the requirements are much the same as those of today, while the essential requirements of a magnetic compass are pretty well a direct hand-down from the Wright Brothers' day. Some of the means of meeting these requirements may, however, seem a little quaint. Take the first one, for instance — steadiness.

"After numerous experiments," we are told, "it was found that the most efficient way to damp the existent vibrations was to place the compass bowl in a bed of horsehair. This effectually deadened shocks. The horsehair is placed in a light outer containing case and the bowl rests lightly on



. . . the drawing of a new compass is considered to be a good thing . . .

it. This method was found generally much more preferable to the gimbaled type of suspension . . ."

And a fig for your helical bronze and leaf springs, Sir!

A careful explanation of the compass markings is given to readers who might not be familiar with "what is known as the New Style," due emphasis being laid on the fact that the card "is graduated from 0 to 360, running with the hands of a watch, so that North is represented by 0 or 360, North-east by 45, etc."

### Old Compasses for New

Finally, the age-old advice is given to those boys who never grow up — the tinkerers and the mechanically-minded. "If it cannot be repaired," admonishes the section on broken pivots, "the compass should be returned to store, and a new one drawn in lieu." The drawing of a new compass is considered to be a good thing, since "a well-placed compass whose behaviour is good, and whose errors are known and can be trusted, is a great relief to a pilot making a flight, when objects below are hidden by cloud, fog, etc." (p. 43). To ensure that the compass is in good working order, page 66 lays down in no uncertain terms that all compasses should be tested "now and again."

Part of the test is the deflection of the card from its normal position of rest, the object being to observe whether or not it returns to its old position. "If not," says the book, "it is probable that something is wrong." How simple the solution and how right they were!

### Fallible Forecasting

Meteorology, always a sore subject with aviator and civilian alike, comes in for its fair share of attention, as is right and just in a book which tells Flight Officers all that they are required to know, and here the fledgling is given a few notes from which it is hoped that he will be able to "deduce, from his own observations, the type of weather he is likely to encounter."

Excuses for bad forecasting were not uncommon, however, even in those days, for, as the book remarked then, and meteorologists have been quoting ever since, "even the best observatories, equipped as they are with every improved type of instrument, and with all their telegraphic facilities, are sometimes very much out in their forecasts, so that he (the pilot) need not wonder at the very frequent apparent failures of his attempts."

Unsuccessful as they might have been, however, the 1917 pilot's attempts at weather forecasting

at least had the support of Admiral Fitzroy's weather rules, given on page 89. No doubt the weather office, with its improved types of instruments and telegraphic facilities, felt themselves superior to such jargon and suffered accordingly.

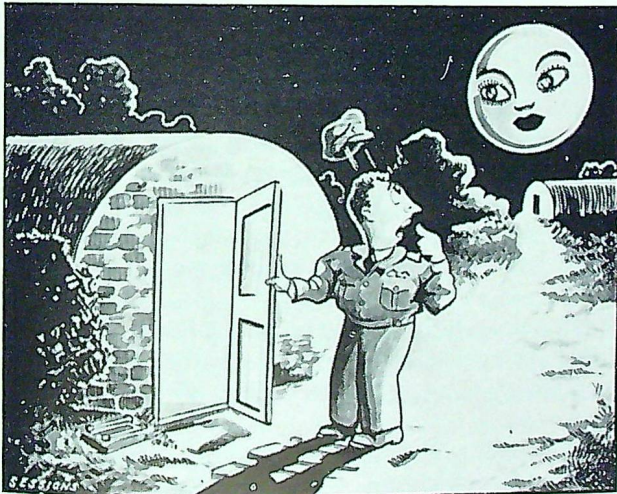
"Whether clear or otherwise, a rosy sky at sunset indicates fine weather," says the worthy Admiral, "while the darker or angrier the colour of the red in the morning sky, the worse the coming bad weather will prove to be." Sentiments not unheard of, even in these modern times, though seldom in mid-air.

### Astro Gnostic!

Also given its rightful place is that much abused and little used universal aid known as Astro. But the beginner must not think that this is an easy subject. Far from it. "Indeed," we are warned, "when looking for stars *at night* (italics are mine), it often happens that the constellations they are in may be upside down." However, certain basic facts cannot be altered, and these are included — no doubt to give the beginner confidence. Thus we are enjoined to remember when seeking our star at night that "if the declination is less than (or south of) the observer's latitude, it will cross the meridian south of him: if equal to the latitude, it will cross the meridian directly overhead: if greater than (or north of) the observer's latitude, it will always be north of him."

### Moon of their Delight?

Readers of the more formal R.A.F. publications might be a little surprised at the feminine gender attributed to the moon on page 125, where it is stated that "her declination changes rapidly." They might even be embarrassed by the subsequent talk of the positioning of "her lower limb" prior to observing her. However, Flight Officers are hardy men and their minds were doubtless invariably on their work. They are at least spared all the tedium of learning about sextants, which are not even mentioned.



... a little surprised at the feminine gender attributed to the moon ...

### Problem Children

The vector triangle — nowadays described as the basis of D.R. — was not necessarily thought to be so in those days, since it makes its appearance under the heading: "Problems of Chart Work which may be found useful at Times." To the other problems in basic navigation contained in the book, we might be forgiven for applying the remark made at a conference on the new A.P. 1234 by a Very Senior Officer, who said he didn't see what was wrong with the old book, except that the speeds seemed a bit low. As a case in point, the air-to-air interception problem quotes a 40-mile-an-hour enemy being vigorously pursued by a 70-mile-an-hour interception, the whole glorious chase lasting some 48 minutes.

### Flaw in the Fix

The Ancients were not unaware of the importance of fixing position while in the air. Indeed, it is categorically stated (p. 177) that:

"In an aeroplane, one of the best methods of fixing one's position is to be able to read a chart or map thoroughly so that, if flying over the land, one can tell just what spot is vertically under a machine."

There is, however, an obvious flaw in this argument, and the book is quick to pick it up with the statement that "this is not always possible in seaplanes." It then goes on to give one or two methods of fixing, the last of which, it is pointed out, is more suitable for airships and balloons, "where there is a great deal more room than on an aeroplane."

### Don't Pick it up by its Legs!

The usual methods are flogged — the "cross bearings method," and the "doubling the angle on the bow method," but the author really lets himself go on the subject of the Station Pointer, to which he devotes 10 pages. Not that there is anything difficult about the Station Pointer. On the contrary, as he explains, the subject is a very simple one. "Fixing by Station Pointer does not call for the use of a compass," he says. "All that

is required is a sextant and an instrument known as a Station Pointer."

This is simplicity itself, thinks the reader, rushing off to order a dozen or more. But wait a moment: there is a snag even in this, the simplest of devices; and we are soon advised of it. "Never," cautions the book, "pick a Station Pointer up by its legs, but only by the graduated circle." No doubt this defect was mainly responsible for the instrument's gradual decline and fall into disuse. One cannot go on for ever with an instrument which turns savage when picked up by the legs.

### Knick-Knacks for Navigation

Well, there you have it — a pretty representative selection of "all the things" a Flight Officer was "required to know" the year before the R.A.F. was formed. Armed with his compass which had been tested "now and again," properly mounted in horsehair; his Station Pointer, carried carefully by the graduated circle; and a chart for working out "problems which might be found useful," the old-time Flight Officer would leap joyfully into the air, casting a scornful look at the blazing red morning sky, to check the met.

Nowadays his modern counterpart — the navigator — armed with "a good stock of sharp pencils, one or two india rubbers, a penknife in a handy place, a protractor, a pair of serviceable dividers, a long ruler, time-speed scales, the current Air Almanac, appropriate volumes of Astronomical Navigation Tables, pro formas as required, Astrograph films, message pads, maps" (old A.P. 1234), synoptic meteorological forecast, Gee box, H2S, Rebecca, A.P.I., G.P.I., D.R.C., V.H.F., etc., etc., lumbers into the air a little less rapidly and jerkily and proceeds to do roughly the same job.

Much could be argued on both sides in regard to relative speeds, heights, and weather minima of operation — all of which would serve no useful purpose.

One thing, however, is abundantly clear. That is that in navigation — as in so many other things — in a parody of the popular song: "It ain't what you use, it's the way that you use it . . ."

# An Interesting Legal Case

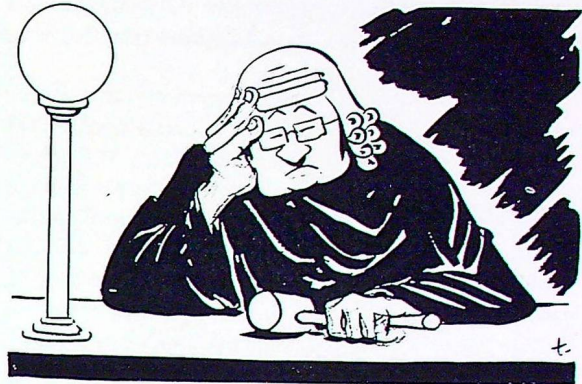
(Reprinted by courtesy of "The Aeroplane")

A COURT MARTIAL of unusual interest was recently adjudicated at an Air Station just outside the Rocket Defence Zone. The interest lay in the fact that no fewer than three subjects lately much in the public eye were discussed, i.e., the nuisance of low-flying aircraft, the dropping of mysterious missiles, apparently from aircraft, and the existence of flying saucers.

The accused, Group Captain S. Claus, attached to the Benevolent Fund, was charged under two headings, unauthorized low-flying and the dropping of heavier-than-air missiles from a height. He was persecuted (*verb. sap.*) by Squadron Leader Probe, the eminent legal eagle, and defended by Flight-Lieutenant S. Careless (*sap*) of R.A.F. Doomey-in-the-Spring; accused's cry of "God rest ye merry, gentlemen" was, by instruction of the President, entered as a plea of "Not Guilty."

In opening his case, Squadron Leader Probe showed all the eloquence and impartiality expected on these occasions. He reminded the Court that an accused was legally innocent until proved guilty; in this case, however, as he was clearly guilty, the question did not arise. The prosecution, in view of the long record of undetected crime of the accused, did not demand a harsh or vindictive penalty; after the sentence of boiling in oil had been carried out there would be no objection to the next-of-skin utilizing Service transport to remove the remains (on repayment).

The defending officer attempted to open with a plea in Bar, but the President countered this cleverly by closing it for the duration of the trial. On resuming in Court, the defence admitted that low-flying had been committed, but pleaded that it was in the line of duty; accuracy of pin-pointing was essential in this work and operation at rooftop level was inevitable. The hazard, it was claimed, was not confined to the public; defending



counsel expanded on "the ever-present peril of being pranged by a prong." Inquiry by the Court elucidated that he was referring to television aerials. The low speed involved in such operations, added the defence, added to the dangers by increasing vulnerability from hostile elements on the ground; the accused was, it was suggested, "a stooge for a Scrooge." An interpolation from a bronzed officer-under-instruction "Snowballs at all?" was erased from the Court record by the President.

Later a sharp interchange on the question of missiles from aircraft between the prosecuting officer and a defence witness, Miss Gertie Gigglewater, was recorded verbatim:—

Q.—"Have you read in the daily Press of mysterious lumps of ice having recently fallen, apparently from aircraft, and the dangers attendant thereto?"

A.—"Don't read the Press — only the 'Mirror.'"

Q.—"Are you aware that such missiles composed apparently of frozen — ah — liquid have been stated to be lethal? Are you aware of their supposed place of origin in the aircraft concerned?"

A.—"Oh, you naughty!"

Q.—"Do you consider that, by dropping missiles down chimneys and even precipitating himself suddenly through bedroom fireplaces, the accused might well cause considerable alarm and despondency?"

A.—“Oh, I dunno — a girl can’t be too fussy these days. Why, last year, my mum’s lodger . . .” (here the Court went suddenly into camera and remained so for what seemed an unnecessarily long time).

What the prosecution described as “a red herring” was drawn across the judicial trail by the evidence of ex-Police Constable Bert Booze, an eye-witness. He stated, “Seen it clearly I did a large bulbous object” (here an objection by the accused was overruled) “proceeding without visible means of support on a course purporting to lead to a Point A in the approximate direction of B. Cor I said to the missus I said look it is a flying saucer nonsense she said you have been drinking again that is as may be I said but whisky could not make me see anything like that there saucer she said what about those rats last New Year rats I said these are not rats but reindeer well shut the window you old fool before it wets the carpet she said during which time the object in question passed out of sight at an approximate rate of knots witnessed my hand thereto Booze B.”

“Lit up in any way?” queried the defence.

“Not more than my usual,” was the ready response.

Here a junior member of the Court, having obtained the President’s permission to ask a question, was understood to inquire of the witness where he could get it these days.

In an impassioned final address the defending officer protested against the levity and prejudice with which the case had been treated in some quarters. In certain officers’ messes odds of two to one had been laid on a conviction. He pleaded for fairness and leniency; was it not the season of goodwill? He himself had been quite ready to accept six to four.

In closing he referred movingly to the charm and value of old tradition and legend. Did the Court, he asked, or did the Court not, believe in fairies? —

The Court told him.

The Court’s decision has not yet been promulgated, but it is understood that, as is customary, whichever way the verdict goes it will be accompanied by the normal posting of the accused to Greenland.— C.N.F.N.

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### Wordsworth on Military Power

Woe be to that country whose military power is irresistible! I deprecate such an event for Great Britain scarcely less than for any other land . . . If a nation have nothing to oppose or to fear without, it cannot escape decay and concussion within . . . Indefinite progress, undoubtedly, there ought to be somewhere; but let that be in knowledge, in science, in civilization . . . But progress in conquest cannot be indefinite . . . My prayer, as a patriot, is that we may always have, somewhere or other, enemies capable of resisting us, and keeping us at arm’s length.

# MACH

(Reprinted by courtesy of "The Bee-Hive": United Aircraft Corporation.)



Professor Ernst Mach.

A HOT-TEMPERED German physicist who finally made his peace on this earth thirty-five years ago in Munich at the age of seventy-eight would be completely disgusted if he could return to learn why his surname is now in common use.

Professor Ernst Mach would find that his fame rested, not on his exhaustive and beloved work on the philosophy of science, but on a common term used to express the speed of aircraft in these jet-propelled times.

The expression is "Mach number," and the pronunciation is "Mock." While the proper phonetics would probably give the nineteenth century scholar no particular pleasure, it would certainly irritate him less than "Mac," or "Match."

The life and career of the distinguished scientist, who wore a beard appropriate to the Austro-Hungarian empire, is less known now than the meaning of the term, Mach number. The question: "What is a Mach number?" is sometimes asked. But it is seldom that anyone inquires: "What is, or was, a Mach?"

The first question may be easier to answer than the second. The Mach number is the ratio of the speed of flight to the speed of sound. Mach number 1 is flight at the speed of sound. Half the speed of sound, for example, is Mach number

.5 and a speed of twice that of sound would be Mach number 2. When an airplane has a top speed equal to that of sound, the aircraft is said to be a Mach 1 airplane.

Mach 1, or the speed of sound, is 761 miles an hour, but not always. At this point the aeronautical engineers rub their hands briskly and move in to point out that the speed of sound changes according to the temperature and density of the air. The speed of sound is 761 miles an hour at sea level with the temperature at 59 degrees. But the higher an airplane flies, within limits, into the cold thin upper air, the slower sound travels.

The Mach number is important because pilots and designers are much more interested in their airplanes' proximity to the so-called sonic barrier than they are in groundspeeds. The sonic barrier, reached when an object attains the speed of sound, consists of air piling ahead of the moving object. Shock waves are formed, and the aircraft is subjected to severe stress. The swept-back wings of jet aircraft provide one way of splitting the sonic barrier.

There were no jet airplanes — in fact no airplanes at all — when Ernst Mach first looked into the ratio between the speed of flow of gas and the speed of sound. The ratio that has proved so

handy in modern aeronautics had its genesis in the 1880's, some fifteen years before the Wright Brothers made their first flight.

Mach, who at the time was professor of physics at Prague University, and a Professor Salcher, of the Marine Academy in Fiume, carried out the experiments with cannon shells. With the assistance of the Royal Austrian Navy, which provided the gunfire at Fiume, the scientists took some eighty photographs of shells in flight. Fired at different muzzle velocities past metal plates of a condenser attached to a Leyden jar (or battery), the shells took their own high-speed photographs by causing the discharge of sparks.

In discussing the visible shock waves produced by the shells in these early Schlieren photographs, Mach commented that sound waves from the end of a rod moving through fluid would "have as an envelope a cone." From this analysis came the term "Mach angle," which scientists handed about in their papers until it came out as Mach number about twenty years ago.

Although academic, Mach's life was not a quiet one. A man of strong convictions, he expressed his opinions vigorously in feuding with various schools of philosophy and physics. His own ideas on the nature of space, time and motion were the basis of a movement known as "positivism"; it

is said that Mach's philosophy influenced Einstein.

His exasperated schoolteachers believed him a "slow" boy, and it was not until his father, Johann, took him in hand that he began making progress in mathematics and physics. Mach's father, who had been a tutor, whetted the boy's interest in science with simple experiments at home. One demonstration especially intrigued the boy. It consisted of pushing inverted tumblers into a tub of water to show the pressure of the air captured in the glasses. So began a study which included, in 1889, the first photographs of supersonic air jets.

Mach would not believe that to-day his name is recalled in connection with work that was comparatively trifling. But the high-speed aircraft and rockets of this second half of the twentieth century make it certain that his name will be used more and more frequently. That is true, at least, in the English-speaking world. Nor does Mach lack the Russian disapproval which usually indicates a scientist's pre-eminence in his field. In Russia the term is often "Bairstow number," (Professor Leonard Bairstow, English aerodynamicist) instead of Mach number. One of the persons with whom Mach differed philosophically, you see, was Nikolai Lenin.

## Repeat That, Please

. . . I think TCA needs some competition. My husband phoned your office and made a reservation for my son and I to fly to Halifax on a Saturday. He made this reservation on Tuesday . . . and asked them if possible to get two seats for Sunday . . . in which case he would cancel the Saturday reservation. Friday night when he went to get the tickets, he was told they had cancelled the Saturday reservation and were holding only one seat for Sunday. This was useless to us so we got tickets on the train. Then this Sunday TCA called to see if I wanted a limousine to the airport . . . my reservation wasn't cancelled after all.

(From a passenger's letter. "Between Ourselves": T.C.A.)



# The R.A.F. Flying College

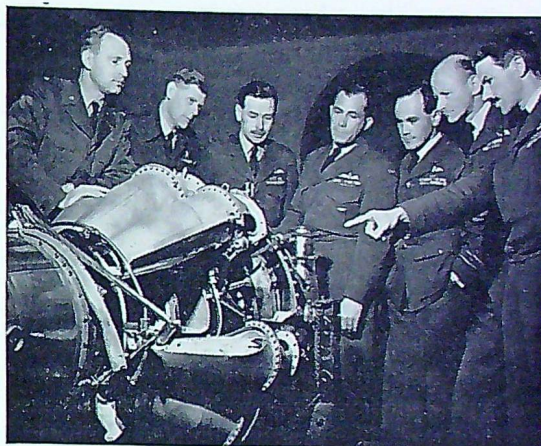
A SELECT GROUP OF R.A.F. squadron-leaders and wing-commanders are spending a year at the newest "university" of the Services — the Royal Air Force Flying College at Manby, Lincolnshire. They are the envy of their colleagues throughout the Service, and are destined for unit and higher formation commands in tomorrow's all-jet Air Force. For this reason they have to undergo a comprehensive course in every aspect of flying and air warfare. The Air Council decided to run this course, and succeeding courses, when it became plain that, with the tremendous complexity and speed of modern aircraft, only men specially trained in technical spheres, tactics, and character, can hope for the vital commanding posts.

Formed in 1949, the College, best described as a College of Military Aviation, has as a directive the shaping of the thoughts of its students to the most efficient use of modern aircraft as weapons. Its aims are to produce forceful commanders, appreciating all the problems in a modern air striking-force. The student's studies, therefore, bring in problems of aircraft and engine design, high-speed and high-altitude flight, weather, etc. Detailed study of aircraft rôles—bomber, fighter, transport, maritime, as well as support for land and sea forces — have to be carried out both from the point of view of the aircrew as well as the commander of the Force.

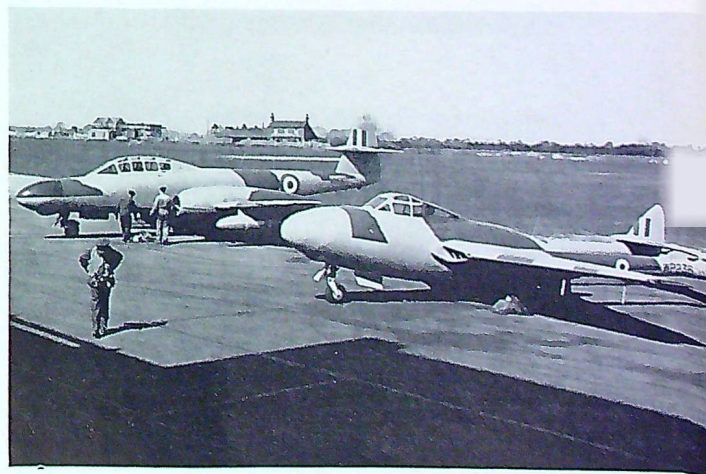
Course students and staff instructors embody a huge fund of knowledge and experience. Officers from all Commonwealth and the United States Air Forces attend, facilitating exchange of views. The organization is on university lines: students work in syndicates of eight, under a squadron-leader supervisor of studies. Each subject has a small staff of specialist instructors.



Students leaving classroom block. Second from right is Sqn. Ldr. J. MacKay, D.F.C. (R.C.A.F.)



A syndicate studies the Derwent. Sqn. Ldr. R. J. Lawlor, D.F.C. (R.C.A.F.), is in centre of Group.



Meteor and Vampire nightfighters at the College.

Students fly for many hours during the course in all types of modern aircraft. They act as pilots and navigators and carry out all crew duties. Air exercises are backed by study of aerodynamics, physics, mathematics, weapons theory and practice.

The College has a wonderful selection of models and sectionalized equipments in its classrooms. There is also a wind tunnel for physics work on models under varying aerodynamic conditions.

During the latter part of the course, students visit formations of other Services, to examine and discuss their part in operations and the support

they require. Visits are also made to aircraft factories and research establishments.

The last month is usually spent overseas with Commonwealth and United States Air Forces, and students gain practical experience in long-distance flights to get there. During these flights, students take it in turns to act as formation commander, aircraft captain, and to perform various other functions.

Great competition exists at the moment to get on this Course, which allows a successful student to put the letters "p.f.c." after his name (passed flying college").

## Letters to the Editor ★ ★ ★

### A WORD OF CRITICISM

Dear Sir:

The R.C.A.F. Association's section of the September issue of "The Roundel" states that a new magazine, "Wings at Home", is to be distributed by Association Headquarters, but to R.C.A.F.A. Wings only. If this is the case, why not drop the Association section out of "The Roundel", print more copies of the new magazine, and put a yearly subscription rate on it for all who want it and who ordinarily will not see it because there are no Wings in their (as in my own) vicinity?

What we need in "The Roundel" is more of the type of stories where we ex-braves can reminisce about days gone by, see more of Tracy's pictures, read more of Canadian and Canadian-Overseas squadrons' work, and more stories of individual persons (such as "Miss Mark Remembers" — and her cat). Shatterproof we must certainly keep.

How about a story on the squadron known as 8 B.R.? This was one of the oldest R.C.A.F. Squadrons, and I'm sure that the preparation of its history would be worth the work involved.

John A. Hill (R.C.A.F.A.)

*(We thank Mr. Hill for his constructive criticism. Such letters, which are all too rare, are of considerable help to the Editorial Committee. No. 8 B.R. Squadron, by the way, was formed in 1935 and disbanded in May 1945. His suggestion has been passed to the Air Historian, and in due course the Squadron's history will appear.—*

EDITOR.)

### CANADIAN ARMY'S FLAG

Dear Sir:

For several years, as I have crawled past National Defence Headquarters in the five-o'clock rush, I have tried to while away the creeping minutes by studying the three ensigns which fly above the main door. Of the identity of two there was no doubt. One was obviously the ensign of the R.C.N. (and R.N.), and the other was unquestionably the ensign of the R.C.A.F. But the exact significance of the ensign in the

centre provoked speculation. I knew that it was, by origin in 1892, the ensign for Canadian registered merchant vessels which, in recent years, had also been designated as the Canadian flag pending adoption of another national ensign. Now, I was not aware that the Canadian merchant navy (with all respect to its gallant services) was a part of the Department of National Defence; so, in my musings, I concluded that the red ensign was flown to mark the building as Canadian government property in which the Headquarters of the R.C.N. and R.C.A.F. were housed — leaving the Canadian Army out in the cold.

But the covers of this year's July-August and September issues of "The Roundel" have thrown some doubt upon my interpretation. The captions for both covers state that the central flag in the display of three is "the ensign of the Canadian Army". Is this correct? Has the red ensign been designated officially as the ensign of the Canadian Army?

Early in the Second World War there was some talk of adopting a distinctive ensign for the Canadian Army, and a design was produced. It is variously referred to as "the Canadian Army Flag", "the battle-flag of the Canadian Army overseas", and "the Canadian Army Commander's flag". At one time copies of this flag could be bought in stores, but they are apparently no longer on sale. What has happened to this Canadian Army (or Army Commander) flag?

"N. Sign"

### Answers to What's the Score?

- |         |         |         |         |
|---------|---------|---------|---------|
| 1: (b)  | 2: (b)  | 3: (b)  | 4: (a)  |
| 5: (b)  | 6: (a)  | 7: (a)  | 8: (b)  |
| 9: (a)  | 10: (a) | 11: (a) | 12: (b) |
| 13: (a) | 14: (d) | 15: (b) | 16: (d) |
| 17: (d) | 18: (c) | 19: (a) | 20: (c) |

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