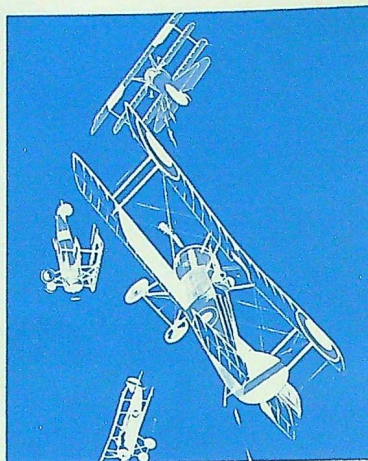


PROZOR



MAY 1964
VOL. 16, No. 4



COVER CAPTION

This World War I dogfight introduces the five part serial by A/V/M Raymond Collishaw beginning on page 5.

ROUNDEL

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

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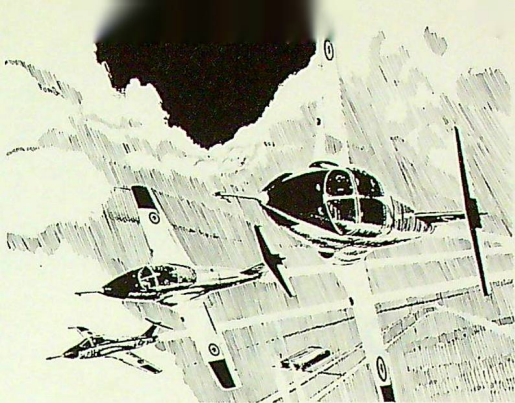
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ON THE BREAK

TOPPING the best seller list of Queen's Printer publications across Canada last month was a plain-looking, 30-page booklet: "White Paper on Defence" by the Hon. Paul Hellyer and the Hon. Lucien Cardin, national defence minister and associate minister, respectively. No other document since the end of World War II has created such widespread interest in affairs military; none has contained such radical proposals for their re-organization.

First step towards a unified defence force for Canada, recommends the White Paper, is integration at the top. The government's choice as first chief of staff of the Canadian armed forces is A/C/M F. R. Miller, CBE, an ex-deputy minister who since June 1960 has been chairman of the chiefs of staff committee.

After the White Paper was tabled in the House of Commons, A/M C. R. Dunlap, CBE, chief of the air staff, issued the statement appearing on pages 2 and 3 of this issue.

ARRANGING A/V/M Raymond Colishaw's personal papers into the five-part serial beginning on page 5 was one of **ROUNDEL's** more prolific contributors in recent years — Mr. Ron Dodds of the directorate of air force history. Ron has specialized in World War I aerial history since assuming his present job in 1961 and is now working on the final draft of a book about the early days of military aviation in Canada.

Our thanks also to these contributors of feature articles in this issue:

F/L Ted Paterson, extolling the accomplishments of the *Hercules* in "Workhorse of Air Transport Command" (page 13), is based at the same location as these aircraft (RCAF Stn. Namao) and has logged many hours in them on public relations duties over the past three years.

Mr. H. H. Coulson, author of "Mediterranean Mission" (page 18), was a bomber pilot in World War I and assistant air historian at RCAF Overseas HQ in World War II. He now works for the Civil Service Federation in Ottawa.

Cpl. Cal Smith, author of "Fingerprinting the Forces" (page 25), left the air force recently to pursue his journalistic career on civvy street. A Victoria, B.C., newspaperman before joining the RCAF in 1951, he spent ten years in the telecommunications trade before switching to public relations at AFHQ.

F/L Dave Fry, describing the origin of "Mu Sigma" (page 28), has more than a passing interest in this modern-day navigational aid. Now AMC staff officer public relations, he recalls from first-hand experience during World War II the laborious procedures required to navigate RAF transport aircraft in the Far East.



F/L A. E. Paterson



Mr. H. H. Coulson



Cpl. C. C. Smith



F/L D. G. Fry

A. E. Paterson 5/12
Editor.

Statement To All RCAF Personnel

By AIR MARSHAL C. R. DUNLAP, CBE,
Chief of the Air Staff



THE Minister of National Defence recently announced the Government's intentions in defence policy for the next 10 years, including far-reaching changes which will govern the organization, composition and administration of the armed forces in Canada. The object of these changes has been clearly set out by the minister in the "White Paper on Defence" which has been distributed for perusal by every member of the services, and requires no further elaboration on my part. These changes are being made to promote increased efficiency and economy in a modern military environment which involves an increasingly greater interdependence of arms, a vastly increased complexity in weapon technology, and a corresponding increase in costs.

It is not my purpose to elaborate further on the objectives of the Government's plan but to explain to you what the long and short term effects on the RCAF are likely to be. You will recognize at once that measures being taken are breaking entirely new ground in the development of military organization. Therefore, it is not possible to forecast with complete accuracy all the ramifications that may be experienced.

It is the Government's intention to unify all the armed forces into one cohesive fighting force. This unification will mean first the combining and strengthening of policy-making staffs of the three services into a single staff under a Chief of the Defence Staff. It is expected that this will be the least difficult phase and that the appropriate staffs and organization can be put together in a relatively short time. Further steps towards unification including, ultimately, the formation of a single service, will take a somewhat longer period of evolution. On the other hand, if meaningful economies are to be made in order to provide more of the available funds for capital expenditures on major equipment, this process cannot be too prolonged.

The RCAF is well prepared for this process. We have considerable experience in operating in integrated organizations under unified command, both in North America and

Europe. This is true of our air defence role, of our maritime role, and of the role of No. 1 Air Division. Furthermore, we are already organized on a functional basis. Therefore, we are well fitted to play our part in the process of unification. It will be necessary, of course, to plan these further steps towards unification carefully. Providing this is done, I believe the RCAF and later the air element in a unified service can continue to perform its function efficiently.

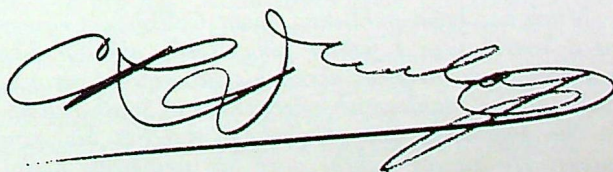
Any re-organization must recognize the spirit and traditions of the individual services. In particular, the spirit nurtured over the past 40 years in the RCAF, which has enabled it to achieve exceptionally high standards of performance, must be maintained. The record of devotion to duty in the RCAF has been outstanding among the world's fighting forces. The loyalty of the RCAF has been two-fold, first to our country, and secondly to our service. We shall now be required to draw additional strength from that first loyalty during the re-organization and re-building phase of this country's armed forces. I am confident that in time the loyalty of one's service that has provided exceptional performance in the past will be equally forthcoming in the new modern force that Canada is now pioneering.

The importance of air power has in no way diminished. Indeed in certain respects it has increased, notably in the requirement to be able to move forces, including the necessary air elements, quickly over long distances to all parts of the world. There remains a need for North American air defence. The role of the aircraft in maritime operations is still important, and there is a continuing requirement for tactical air forces in Europe. Furthermore, it is being increasingly recognized that there is no substitute for the flexibility inherent in manned aircraft. On the other hand, the interdependence of the navy, army and air force, and the integration of these forces for particular roles, has become increasingly important. Therefore, although there is no fundamental change in the overall importance of the role that the RCAF is now performing, there will be changes in em-

phasis and there will be changes in organization to meet the requirements of a more closely-knit military structure.

All of you must wonder what the outlook now is for your own career. First of all, I believe that your opportunities in this respect could be enhanced in a unified service. There will be no obstacle to any suitably-qualified airman filling any position in the new and larger organization. Therefore, generally speaking, opportunities for an interesting career and for advancement will have been enlarged rather than narrowed. It is intended, of course, that there be reductions in size of headquarters' staffs and of other non-operational formations, and also in certain specific areas where our requirements have recently been reduced. In general, personnel affected will normally be close to release or retirement and, so far as possible, reductions will be achieved through attrition arising from retirements at compulsory release ages and other normal causes. In cases where releases must be effected before compulsory release age, I am confident that reasonable financial adjustments will be devised.

I believe that the proposed organization changes and the ultimate unification of the three armed services are sound in principle and will result in maximum military effectiveness. These results can only be achieved, however, if all of us lend our positive support and are prepared to participate wholeheartedly. I am proud of the record which the RCAF has established in the past 40 years. Like you, I shall regret in many ways the day when the RCAF ceases to exist as a separate service. Our motto is not, however, without meaning. We have always been progressive and ready to move forward when circumstances required. Faced as we are with a force reduction and a major organizational change — a situation which is not confined to our service alone — I am sure that the personnel of the RCAF will display the necessary fortitude, vigour and flexibility not only to adjust to the new circumstances but to participate positively in their fulfillment.



MEMORIES OF A

FOREWORD

ONE of Canada's greatest flyers of all time is Air Vice Marshal Raymond Collishaw, CB, DSO, OBE, DSC, DFC, who left his native Nanaimo, B.C. in 1915 to become a top-scoring allied fighter "ace" in World War I. He was more than a courageous and skillful fighter pilot. More significant than his personal victories was his leadership. Whether it was a flight or a squadron, any formation under Collishaw's command rapidly gained a wide reputation for high morale, efficiency and an unquenchable determination to press the attack.

Collishaw stayed in the RAF after the war and saw more aerial combat, against the Reds in South Russia and in Persia, and in operations against rebellious tribesmen in Kurdistan and Iraq. He served aboard a Royal Navy carrier and took a five-squadron force of bombers out to the Sudan at the time of the Abyssinian crisis.

He was in Egypt when Italy entered World War II and as commander of the RAF operational squadrons there he showed that the wiles he had learned and developed as a fighter pilot had not been forgotten. Commanding a numerically inferior force, he kept the enemy's air force on the defensive by a series of stratagems and attacks. He retired from the RAF in 1943, closing a distinguished career in military flying that, for its combination of brilliance, length, and operational service against the enemy, is matched by few, if any, other Canadians.

Much has been published about Collishaw's career as a World War I fighter pilot. Little, though, has ever appeared in print about his subsequent service, including his nightmarish experiences in South Russia. In the following story Collishaw sketches his own career. He passes lightly over his numerous aerial

combats and makes little mention of his many awards. He refers to the French Croix de Guerre that he received early in 1917, but makes no reference to the DSO and Bar, DSC, and DFC that he won before the war's end. Neither does he mention the Czarist Orders of St. Anne, 2nd Class with Swords; St. Stanislas, 2nd Class with Swords; and St. Vladimir, that he was awarded by the Russians, during his service with Denikin. Nor does he mention the OBE that the British government gave him after his South Russian service, or the CB that he was awarded for his work during World War II.

Born in Nanaimo in 1893, Collishaw served aboard vessels of the Fisheries Protection Service of the Naval Service before World War I. When the Royal Naval Air Service began a limited recruiting campaign in Canada in early 1915 he was accepted as a pilot candidate — subject to his learning to fly at his own expense. He attended the Curtiss Flying School in Toronto but the school closed for the winter before he could begin his training. As it turned out, the RNAS accepted a group of candidates caught in this situation, Collishaw being one of them. Commissioned a temporary probationary flight sub-lieutenant, he sailed from New York in January 1916, and attended RNAS ground and flying training schools in England. It is at this point that Collishaw's own account of his career begins.

Now living in West Vancouver, B.C., A/V/M Collishaw is as active as ever, having been busy — and successful — in mineral development in British Columbia.

R. V. DODDS,
RCAF Directorate of Air Force History.

CANADIAN AIRMAN

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

First of Five Parts

FRANCE AND BELGIUM - 1916-18



Major R. Collishaw in cockpit of
Sopwith Camel.

AFTER completing service training in England in 1916 I was sent to an RNAS station in Yorkshire, where I flew night patrols against raiding German Zeppelins. Navigational aids were primitive, resulting in some odd occurrences. On one occasion I spent eight hours above the clouds with another pilot, hoping to spot a Zeppelin in the bright moonlight. When we went down through the clouds at daybreak we saw a coastline with the sea extending to the west. We thought we were over the Danish coast, but then I spotted a fishing village which was familiar. It was Tintagel in Cornwall, where I had spent a holiday, and we landed at a nearby airfield.

In mid-1916 I was sent to Manston, in Kent, where the RNAS was assembling a special bomber force to operate from bases in the Vosges area, in northeastern France, against German industrial targets. Almost all the pilots were Canadian and the force flew *Sopwith 1½ Strutter* bombers and fighters. The bomber version was a single-seater with a Vickers machine-gun synchronized to fire forward through the propeller arc. The fighter version was a two-seater, and in addition to its forward-firing Vickers, the rear cockpit had one or two Lewis guns mounted on brackets, which were fired by

the gunner. Both versions had an endurance of eight hours or more.

While at Manston a friend and I were looking forward to a date we had made with two young ladies from the nearby town when orders came through for us to fly out to France within a matter of hours. Anxious to let our lady friends know we would not be able to keep our appointment for that evening, we flew over the town to drop a note in their back gardens. We were at 50 feet, between two rows of semi-detached houses when the engine cut, and down we came. We tore down a series of garden walls, and the rear of the house in which our "dates" lived. I am afraid that they and the neighbors were not pleased!

No. 3 (NAVAL) WING

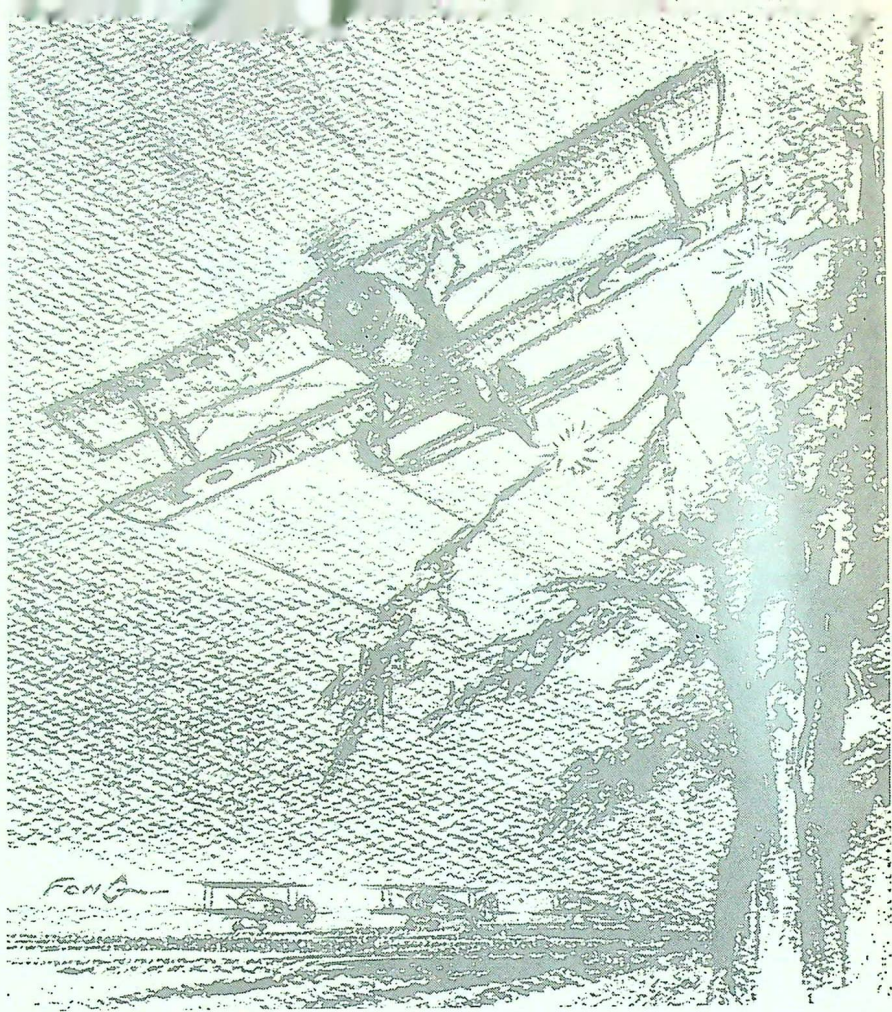
No. 3 (Naval) Wing was based at Luxeuil-les-Bains.* Arriving there in August 1916, I was on hand for the wing's first big raid (against an arms works at Oberndorf on October 12) and I flew one of the fighters which provided protection for the bombers. My formation encountered enemy fighters near the target and my *1½ Strutter* was hit. I had to limp home with a damaged engine, running a gauntlet of ground fire as I passed through a gorge in the Vosges mountains.

* ROUNDEL, July-Aug. '68.

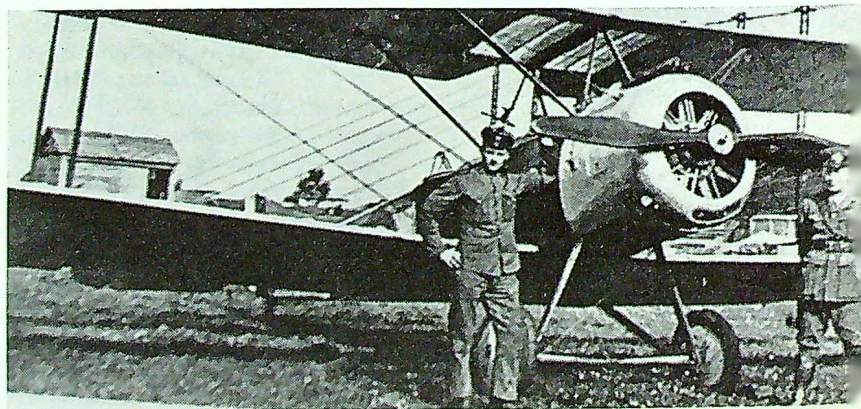
After several months at Luxeuil No. 3 Wing moved to Ochey, a few miles south of Toul, which put us closer to our main targets, the steel works in the Saar area and northern Lorraine. I was detailed to ferry a new machine from Luxeuil to the new base and took off without a gunner in the rear cockpit. Enroute I was jumped on by enemy fighters and a bullet passed through my goggles, temporarily blinding me. Diving into German territory, I shook off my pursuers momentarily, but they caught up with me and I flew deeper into Germany in an effort to shake them off. Finally I did so and, after flying back towards French territory, prepared to land at an aerodrome I saw below. I put down and taxied in among the aircraft parked on the ground, and then it dawned on me that they bore the German iron cross markings. I jammed the throttle forward and managed to take off, although I clipped off the tops of two trees close to the field.

By now I was completely lost. As I passed over a series of trenches everyone on both sides took pot shots at me, riddling my machine. It was raining so hard I could hardly see and when I arrived over another aerodrome I decided to land, whether it be theirs or ours. Happily it turned out to be French, located within a few miles of the lines behind Verdun.

No. 3 Wing employed two different methods of bombing: formation and in-line. For the first method the squadron leader used a periscopic sight and led the bombers over the target in formation. As the leader released his bombs, so did the pilots of the other machines, the result being pattern bombing. The other method was for the leader to break off formation, the others forming in line behind him. Each bomber released its bombs singly, as it passed over the target.



Flight Sub-Lieutenant Collishaw (right) and Air Gunner Townsend are photographed in Ochey, France in October 1916. The two fliers were operating with No. 3 (Naval) Wing at that time.





Both bomber and fighter versions of the Sopwith 1 1/2 Strutter aircraft were used by No. 3 (Naval) Wing.

Some of the pilots became horribly lost as they returned from bombing raids. The "championship" was held by one pilot who was determined to avoid landing on the German side of the lines. He kept flying to the westward, not realizing the strength of the following wind, and when he put down he found he was on the Spanish frontier, where he crashed his machine on a race course. He was posted missing and it was two weeks before we learned what had happened. A working party was sent to repair his aircraft and a month later he was able to take off. He got as far as Paris and crashed his machine again, at another race course. More repairs followed and he again took off for his base. Halfway to base he crashed at yet another race course! This time he hit and killed a race horse. It was a mare, in foal, and he had to sign a statement admitting that he had in fact killed *two* horses.

Although No. 3 Wing continued its operations until April 1917, I was selected with several others in January for new fighter squadrons that the RNAS was forming, to help the hard-pressed RFC on the western front. We were told we could select the type of fighter we wished to fly. Some of us chose quadruplanes, some triplanes, and others better-known types. Alas! When we

arrived on the Somme front we found we were to fly worn-out *Sopwith Pups* and there was no hope of getting new fighters for many months to come.

While flying with Three Wing I had gained considerable air-fighting experience and had destroyed three or four enemy aircraft and damaged a number of others. I was perhaps a bit over-confident, and although I knew that air operations over the Somme front were more intensive than those we had experienced, I was not prepared for the tempo that prevailed.

THE SOMME BATTLE

I joined No. 3 (Naval) Sqn. on the Somme front on 1 Feb. '17, at a time when the enemy held the upper hand in the air. The new German *Fokker* fighter was superior to any of our machines, and while strong numerically our quality was poor. Our tactics were to maintain offensive patrols over the enemy's lines, and when the Germans had counted our numbers they were able to send up a stronger force to engage our machines. We usually found ourselves outnumbered whenever any serious engagements occurred. My squadron's prime task was to escort RFC reconnaissance machines, which flew deep into enemy territory. The reconnaissance plane flew usually at

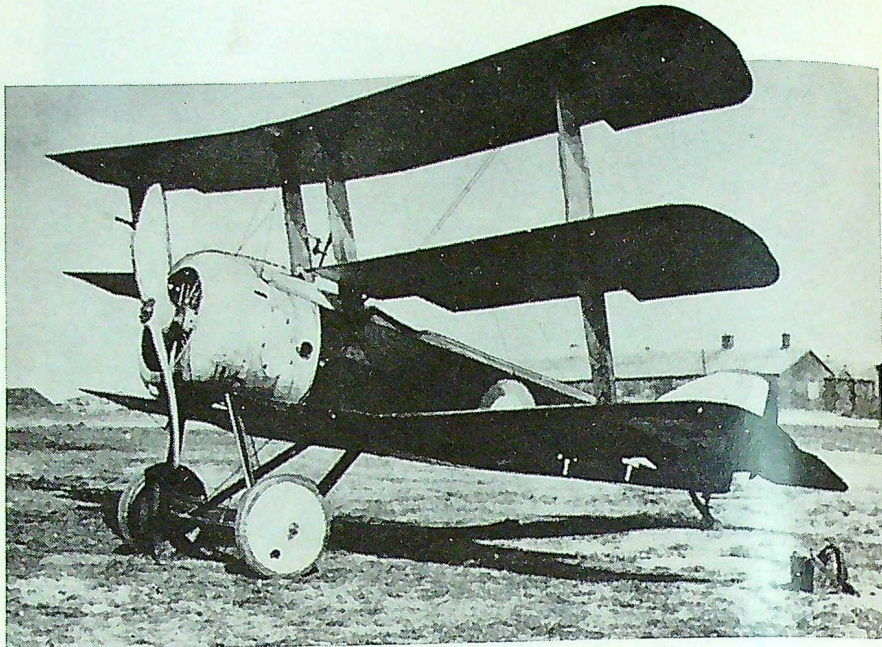
about 12,000 ft., with the three flights of the protective fighter squadron deployed above them at intervals, up to 19,000 ft. It was a point of honour with the escorting fighters not to allow any of the reconnaissance machines to be shot down by attacking enemy fighters, and in fact few were so lost. On the other hand, the fighters lost more heavily.

I had a considerable number of air combats during this period with No. 3 (N) Sqn., but my stay with the unit was cut short by a severe case of frostbite. On one flight my "*Pup*" was badly damaged by an enemy fighter's bullets, and my goggles were smashed. I had to take them off, as well as my helmet, and when I reached base my face swelled so badly that I could not see properly. Given sick leave, I went to England and while there I was told that I had been awarded the Croix de Guerre with Palm by the French, for the aircraft I had shot down while with No. 3 Wing on the Vosges front. I had destroyed several enemy planes while flying with No. 3 (N) Sqn., before my frostbite, but most of my combats were indecisive.

SPRING 1917

After sick leave in England I was given command of a flight in No. 10 (Naval) Sqn. in Belgium, operating on the North Sea front. It was quiet by comparison with the Somme front and the work was mainly escorting bomber squadrons attacking naval targets. These included the Zeebrugge and Bruges lock

Collishaw flew the *Sopwith Triplane* when he led the famed "Black Flight" which scored many victories.



gates, to keep the enemy from using Bruges as a submarine base. During this period of comparative calm I had the opportunity to train a sizeable number of inexperienced pilots, and to show them how to operate as a team. Later on we enjoyed considerable success, flying the new *Sopwith Triplane*.

In mid-May 1917, we were shifted to the Ypres front, where both sides were very active in the air. The RFC, to whom our naval squadron was attached, was striving to gain air superiority in preparation for the Messines battle. The five British armies in France had a number of fighter squadrons allocated to them, to operate behind the enemy lines on each army front. Normally each squadron provided a flight to fly at maximum height on offensive patrol, 10 miles over the enemy lines, for a two-hour period. It was simple for the enemy to count our numbers and as convenient, to send up superior forces to engage us. We usually found ourselves outnumbered when an aerial battle evolved, and our casualties were heavy. The newest and least experienced pilots often succeeded one another as casualties,

falling to the enemy's fighters before they had chance to learn the skills and wiles of air combat.

It was the experienced flight commanders who led their formations into combat. The advantage normally went, of course, to the formation at the higher altitude. As two opposing fighter formations sighted one another they would each struggle to gain altitude. Then, once having gained a height advantage, it would dive on the enemy, who turned to meet their attackers. Often, as both formations realized that maximum altitude had been reached with no appreciable height advantage for either, they would turn towards one another and a head-on engagement resulted. As the two formations approached, the enemy's tracer bullets seemed to be aimed directly at one's eyes, and there was a temptation to lower one's head as much as possible, just peeping along the sight to aim the guns. There was always the fear of collision. Each pilot would hold on until the last second, pouring fire at the enemy, and there was always a feeling of surprise that one's plane had not smashed into one of the enemy's.

DOG FIGHTING

After this initial assault the combat between two fighter formations broke into the so-called "dog fight", or series of individual combats. Pilots selected individual opponents and the pair became "waltzing partners", each manoeuvring to gain a position on the enemy's tail. This usually went to the pilot whose machine had the tighter turning capability, assuming that they were more or less equally matched. I do not mean to imply that the dog fight was a leisurely affair. Far from it. Decisions were made in split seconds, and a pilot had perhaps only a fraction of a second when his enemy appeared in his gun sights. These dog fights often came down to low altitudes and were watched by thousands of troops on both sides.

Fighter operations were intense during this 1917 period and pilots were constantly called on to fly at least three patrols a day. Almost all these patrols resulted in air combat.

While offensive patrols were usually flown by flight and/or squadron formations, fighter sweeps were carried out in which as many as 175 of our machines took part.

While they swept the enemy planes from the sky — temporarily — they failed to produce large German losses. The enemy planes simply disappeared when our over-size formations came in sight. Furthermore, these fighter sweeps weakened the normal patrols flown on that day, and they did not really achieve any material success.

During June and July 1917, when the air battle was raging, No. 10 (N) Squadron was credited with shooting down some 70 enemy planes, and "B" Flight, which I led, was fortunate enough to put up a good show. Our losses increased, though, and it was sad as one by one my old comrades, many of whom had flown with me on the Vosges front, disappeared.

THREE TIMES LUCKY

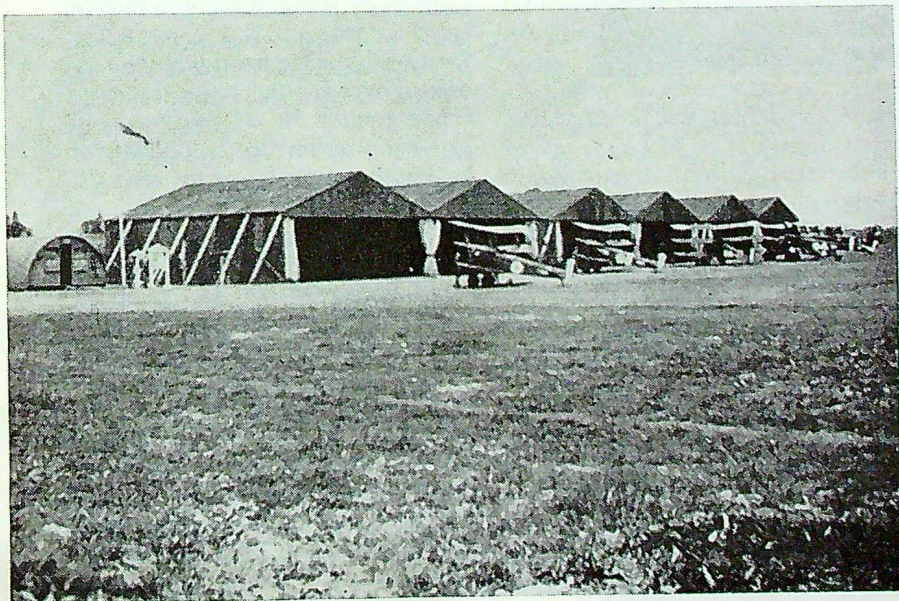
I was shot down three times. On one occasion my controls were shot away at 16,000 feet and my triplane went down in a hair-raising series of cartwheels and dives. We had no parachutes and there was absolutely nothing I could do. Just as it was about to crash into a hillside on the front line it took an upward swerve. I climbed out of the wreckage bruised and shaken but intact.

On a second occasion I had to take violent action to avoid a collision and I was flung right out of the cockpit. Somehow I managed to grab on to the centre section and I clung there as the machine, with its engine on full power, went through a series of breath-taking

dives, climbs and falling leaves. It fell 10,000 feet before I managed to climb back into the cockpit and regain control. I felt a much-shaken flyer, but it was an awe-inspiring experience.

My third experience was gentler, but it seemed to last a long time, and provided for earnest reflection on one's past. The circular engine cowling and the metal fuselage side plates of the Sopwith Triplane were held in place by a cable. A burst from a German anti-aircraft shell cut the cable on my machine and one of the large side plates blew back, to lodge vertically across the front of the three starboard wings. This caused the triplane to go into a spin to the right, and about all I could do was to vary the rate of spin. The aircraft came down from 15,000 feet, spinning slowly, and it took nearly half an hour to reach the ground. It was a toss-up whether I would land in our territory or behind the German lines, and I knew that as I reached a lower altitude I was going to be greeted by a barrage of anti-aircraft and small arms fire. I discovered, though, after a little experimenting, that by putting on throttle as the machine turned in the direction of French territory and by reducing engine speed as it faced the German lines, I could make some sort of gradual headway. Although the triplane crashed heavily, I escaped with no more than a bad shaking, and I was behind our own lines.

A line-up of "Triplanes" in front of the hangars at Droglandt, France in July 1917.



LIVING IT UP

In 1917 fighter squadrons in the Messines and Passchendaele battles normally enjoyed a half-day holiday each week. These breaks provided an outlet for high spirits and the tensions of combat flying. On these "early closings" pilots of a squadron were driven to a nearby town where a spree usually developed. At a late hour the pilots were mustered, usually with some diffi-

culty, from establishments respectable and otherwise, and returned to base. But they had to fly the inevitable dawn patrol, which was always an interesting event for those just back from a night out.

Suffering from hangovers, the pilots took off and followed their flight commander over the enemy lines, the flame of warlike spirit but dimly flickering, and most thinking of getting back to breakfast and bed. But if an engagement with the enemy resulted, and it often did, the excitement of the battle dissipated the hangovers, and the animated pilots who returned to their mess bore little resemblance to the dispirited and glum group who had taken off two hours before.

"A short life and a gay one" was truly the outlook of the fighter pilot of those days. Few thought much about the future, for the life of a fighter pilot was too delicately balanced on the scales. Yet the circumstances resulted in a state of brotherhood, unselfishness and generosity, quite foreign to the normal peacetime outlook and behaviour of the men concerned.

Our aerodrome at Droglandt had runways, which few fields boasted, and it was probably the first field of its type. The rotary engines which powered the triplanes were overhauled every 30 hours in the squadron workshops, and to meet the demands most of the squadron ground personnel worked at night, leaving only a small day party to handle the planes as they took off and returned. There was a good deal of opposition in the RFC to speeding up the rate of fire of the machine guns. It should have been obvious that a rapid rate of fire at the proper moment would produce the best results, but the armament advisors were obsessed with the idea that an extended fire endurance was essential. I assisted in producing a gadget that speeded up the rate of fire of our guns and

it was stealthily fitted to our machines. I feel that this boosted fire power played a large part in our successes. Later on I fitted .5 calibre French machine guns to my plane and used tracer ammunition, and I am sure that this was responsible for much of my own success.

It was the custom in France for army commanders to encourage fighter pilots with personal telegrams congratulating them on particular exploits or successes. One army commander issued an illuminated document whenever a pilot was mentioned in his dispatches, and these were highly prized. The daily RFC communique summarizing events was known as "Comic Cuts" — a reputation ill deserved. These communiques emerged after fantastic stories had been published during the early stages of the war concerning the exploits of various flyers.

The principal difference between the German and the allied fighter squadrons in both major wars came from the German policy of selecting pilots of outstanding ability for special units, used to gain local air superiority needed for the success of particular army aspirations. The allies did not do this, on the ground that it was better to sustain an average value. Under the allied system, some squadrons quite outshone the others and keen young pilots always tried to be posted to the better squadrons. A remarkable feature of the allied policy was that the most experienced and distinguished fighter pilots constantly advocated the formation of special squadrons, but the idea was frowned upon by higher authority. Nevertheless, the German policy was very successful. In both major wars, the allies were able to produce overwhelming numerical strength and it is fair to say that it was the "big stick" that succeeded, rather than the policy adopted.

By the end of 1917 air fighting

tactics had developed along lines which tended to assure success to the more experienced and able individualists. Until then, only a few fighter pilots had distinguished themselves and there were few who were outstanding. By the end of 1917, though, the competitive spirit had entered into the lives of the high-scoring pilots, and by 1918 the competition to lead the field became intense. In 1917 fighter pilots generally operated as a team whereas in 1918 the aspirations of individuals caused some flight and squadron commanders to use their formations to screen the leaders while they added to their scores by personally destroying successive aircraft.

As the casualties in Naval Ten increased there was an inevitable weakening of what had been a well-trained and experienced squadron, and its eager fighting spirit declined. Gradually the burden of leadership and responsibility rested more heavily on my shoulders, and I began to feel the strain. Fighter pilots having finished an operational tour in France were at this time given a rest period, and Canadians were permitted to return to Canada on leave. So it was that in early August, 1917, I came home for a rest, leaving behind me the air battles over the front. By this time I had fought 80 air combats and had been personally credited with having destroyed 31 enemy aircraft, with some 38 possibles.

I stayed in Canada for several months and visited as many families as possible who had lost pilots in France. Little was known about flying in Canada then, and I had a lot of silly questions put to me. One old lady, whose grandson was in the RFC, asked me how high I went up in my balloon. There was, though, much enthusiasm for aviation and large numbers had volunteered for the two British flying services. *(to be continued)*

B.C. MOUNTAIN RESCUE

Story by SERGEANT BILL JOHANSON
Photos by CORPORAL JIM COCHRANE

"THANK God for the RCAF and the Mountain Rescue Group!"

This was the heartfelt comment of Leslie Douglas of Coquitlam, B.C., following the dramatic rescue of his 19-year-old son, Fred, who was plucked to safety from an icy gorge following a 1,000-foot fall down the side of Mount Blanshard.

The rescue operation swung into high gear following a telephone call from the RCMP detachment at Haney, a Fraser Valley town in the shadow of B.C.'s Coast Range. Two mountain climbers had just arrived at the RCMP office, saying their companion had fallen down a mountainside, and the police asked the RCAF's Rescue Co-ordination Centre in Vancouver for helicopter assistance. RCC alerted the helicopter crew and also informed the Vancouver Mountain Rescue Group. Within hours, a six-man ground party (including two RCAF para-rescue men) was aboard the helicopter and heading for the scene but darkness fell before they were able to reach the injured youth. They camped overnight on the mountainside.


Before daybreak the following morning, eight more members of the civilian volunteer Mountain Rescue Group turned up at RCAF Station Vancouver to offer their assistance to No. 121 Composite Unit. Here they were met by F/L H. C. Miller, pilot, and F/L Bob Hughes, co-pilot of the rescue helicopter, and Cpl. Jim Scobey, para-rescue airman.

At dawn the helicopter made its second flight to Mount Blanshard, carrying four of the volunteers and all the necessary mountain climbing accoutrements. The 'copter landed

and, after unloading passengers and gear, returned to base for the others. Loaded once again, the helicopter took off but while airborne enroute to the scene, received a radio message saying the first mountain rescue group had located the injured mountaineer.

This necessitated a change in plans. The third mountain rescue party was landed at Pitt Meadows airport. The lightened "chopper" lifted once again and homed in on a radio signal from the rescue scene. The two pilots had to brave strong winds and overcome "extremely

dangerous" flying conditions before reaching the scene, according to the mountain rescue group. Once there, F/L Miller had to touch down on one wheel and hold the chopper on full power. The injured youth was eased up on a stretcher by the mountain rescue group. The RCAF crew flew him to Vancouver General Hospital and then went back for his rescuers.

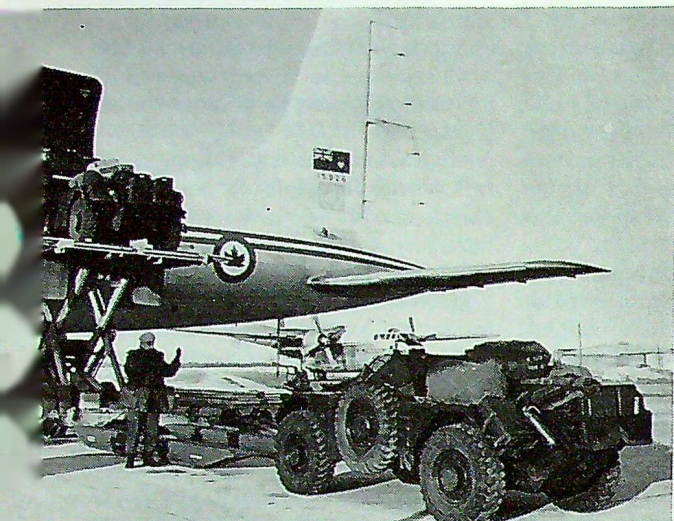
Fred Douglas, his face battered, his body a mass of bruises, declared happily from his hospital bed, "I am sure I feel a lot better than I look." 



In the photo (above) a Vertol helicopter from No. 121 Search and Rescue Flight at RCAF Station Vancouver, nears Mount Blanshard and (below) RCAF personnel and ambulance attendants remove the injured mountaineer for trip to hospital.



Airlift to Cyprus



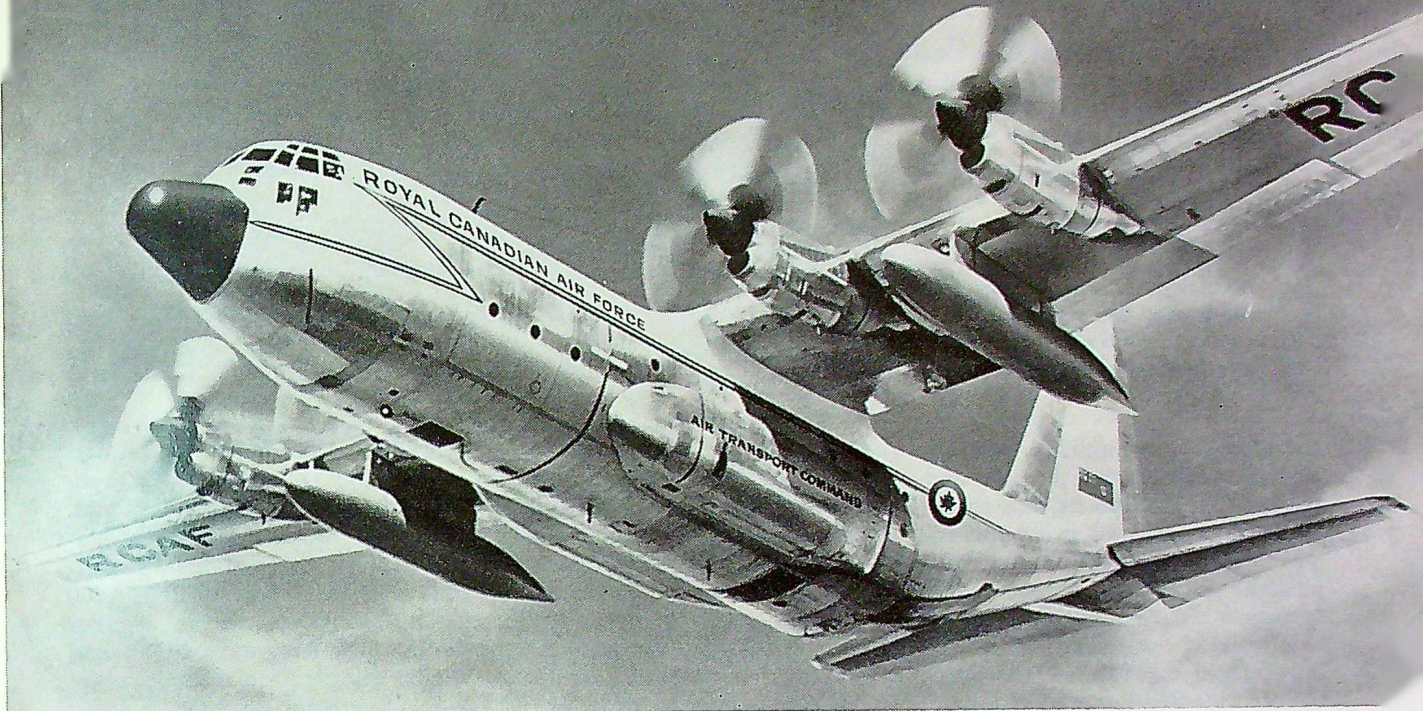
Ferret armoured cars are loaded onto an RCAF Yukon (left) while (right) a Hercules takes jeeps and trailers on board. This activity took place during the airlift to Cyprus.

General Georges P. Vanier, Governor General of Canada, bid farewell to men of the famed "Van Doos" Regiment.



Lt.-Col. E. A. C. Amy, who heads the Canadian Army forces in Cyprus, looks at a map of the island with W/C R. K. Trumley, RCAF Detachment Commander in Cyprus.





One of the RCAF's newest acquisitions, a C-130E *Hercules*.

WORKHORSE OF AIR TRANSPORT COMMAND

By FLIGHT LIEUTENANT A. E. F. PATERSON,
Alberta Area PRO

RCAF *Hercules* aircraft made international news recently when they and *Yukons* of Air Transport Command carried Canadian troops to strife-torn Cyprus. At the height of the air-lift the government announced that a newer and improved

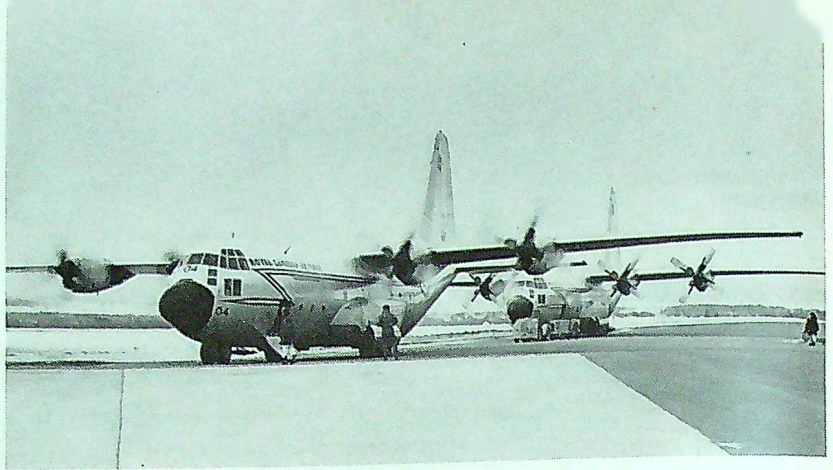
version of the *Hercules* is slated for service with the RCAF. Deliveries of 16 C-130E aircraft will begin late this year and will be completed by the fall of 1965.

These new transports will serve with No. 436 Sqn., at present based

at RCAF Stn. Downsview, No. 435 Sqn. at Namao, and No. 4 Operational Training Unit at Trenton. The four *Hercules* now being flown by No. 435 Sqn. will be transferred to No. 408 Sqn. at Rivers, Man.

Since the fall of 1960 these four

Two *Hercules* prepare to takeoff from Ancienne-Lorette, Quebec, bound for Cyprus with men and equipment of the Royal 22nd Regiment.



C-130Bs have compiled a startling list of achievements. Frozen and fresh foodstuffs, trucks and snowmobiles, gravel and lumber, fuel-oil and soft drinks, Christmas trees and jet fighters have been some of the items on their manifests as they have carried out their tasks as the bulk-freight carriers of the RCAF.

The four *Hercules* have jointly logged the equivalent of more than six million miles or 12 round-trips to the Moon on supply trips to the Arctic, in support of the United Nations peace-keeping operations in Egypt, New Guinea, Indo-China, Yemen, Congo and Cyprus, in ferrying CF-104 *Starfighters* to the RCAF's NATO Air Division in Europe, and in domestic logistic operations.

Major Arctic operations, spring and fall resupply and the "Boxtop" series, are flown annually. Last month two *Hercules* airlifted 1,875,880 lbs. of cargo (1,645,200 lbs. of which was fuel oil) to four joint Arctic weather stations operated by the US Weather Bureau and Canada's Department of Transport. On a typical ten-day Arctic operation each C-130B is airborne for 60 per cent of the available air time. The average turn-around time for servicing functions is 25-30 minutes, requiring two 12-hour shifts of eight technicians. Cold weather has not presented major problems, even though servicing of the aircraft is completed without shelter.

Largest of the Arctic airlifts was Operation Boxtop Seven in August 1962. The Boxtop operation (so named because the operation to top of the world was previously carried out by C-119 *Flying Boxcars*) required the delivery of 3,773,212 pounds of supplies to the weather station at Alert, 520 miles from the North Pole. To carry out the task, two *Hercules* operated from the USAF base at Thule, Greenland, where supplies had been landed from ships during the ice-free summer season.

Taking advantage of the Arctic summer's 24 hours of daylight, the *Hercules* were flown round-the-clock by four aircrews working in two shifts. A flight departure from Thule was made every three hours for two weeks, for a total of 113 round-trips of 880 miles to the short, dirt airstrip at Alert. Six thousand drums of fuel oil, comprising two-thirds at the total cargo, were airlifted in 73 drum-loads with turnaround times at Alert averaging 17 minutes.

Experiments were made during the winter of 1962 to perfect an airborne bulk-fuel container to be carried by the *Hercules*. The design found suitable for Arctic conditions was five collapsible Neoprene rubber tanks, each of 800 imperial gallons capacity. The four-ply tanks were installed in the cargo compartment and coupled individually to a manifold running along the

cargo-hold floor. The fuel cargo was loaded and discharged using small, portable gas-engine pumps.

The five tanks, nicknamed blubber bags, were used for the first time in April 1963, to airlift 192,260 gallons of fuel-oil to the weather stations manned by Canadian and American personnel at Eureka, Mould Bay and Isachsen, located on the northern rim of the Canadian Arctic. Temporarily located at the RCAF's forward-supply base, Resolute Bay, 569 miles inside the Arctic circle, were 18 officers and 32 airmen. They worked round-the-clock on alternate shifts to operate the *Hercules* on its 43 bulk-fuel delivery flights, averaging 750 miles a round-trip. The system reduced loading time to 24 minutes from the one-and-a-half hours previously required with drum loads, and resulted in significant savings in manpower and materials.

For the past year, a C-130B *Hercules* departed from Montreal every three days for France or Germany carrying a *Starfighter* in its cargo compartment, which can accommodate a box roughly the size of a railroad car.

Operation Santa Claus, the supply drop of Christmas trees, food, mail and packages to isolated Arctic and sub-Arctic posts has become an annual event for the Namao-based *Hercules*. Prior to 1962, two aircraft were required to paradrop Christmas supplies by moonlight to

20 lonely outposts. Most posts are manned by personnel of the RCMP, the DOT and the US Weather Bureau; others are small settlements of Eskimos or Indians. In 1962, for the first time a single *Hercules* flew the 10,000-mile operation. The three-day Christmas supply drop is carried out at the request of the post office and transport depart-

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The major differences between the C-130E *Hercules* and the B version are increased range and load-carrying capability. The C-130E can carry 10,000 more pounds of payload than the C-130B with 1,000 miles further range.



MAHOGANY SCULPTOR

IN the skilled and patient hands of Cpl. R. Anderson of RCAF Station Winnipeg, a simple block of grained mahogany slowly sheds its austere existence as a geometrically plain and angular object. Many painstaking, but artistically satisfying hours later, it emerges as another of his superbly-crafted works in sculptured wood.

Although a virtual newcomer to the field, Cpl. Anderson has already earned a growing recognition among critics and patrons of this ancient art form. Recently, one of his works, *Weeping Angel*, was on display at the Canadian Handicrafts Guild in Winnipeg.

Cpl. Anderson first became interested in wood carving while serving at RCAF Stn. St. Jean. Although he has no formal training in this art, and indeed had no inkling of his latent talent, the carvings he saw while in Quebec presented a challenge to him and it was not long before he had become highly skilled at creating small animals, totem poles and Indian figurines. The encouragement of early success led to the creation of larger and more demanding projects, and also to the development during the same period of his own particular method of artistic form and expression.

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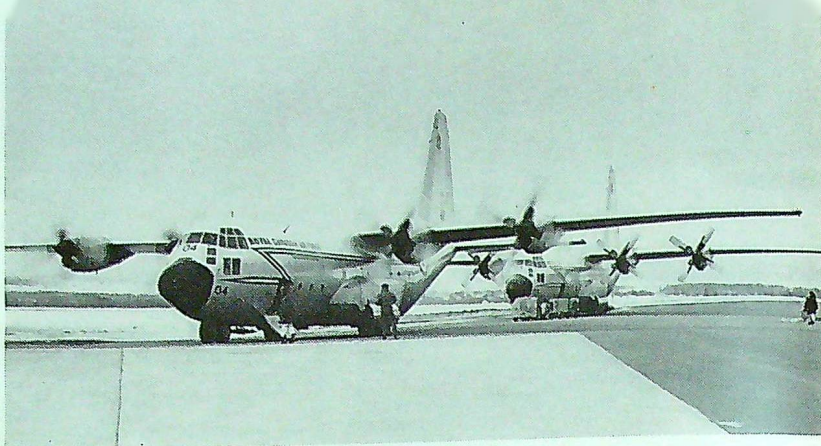
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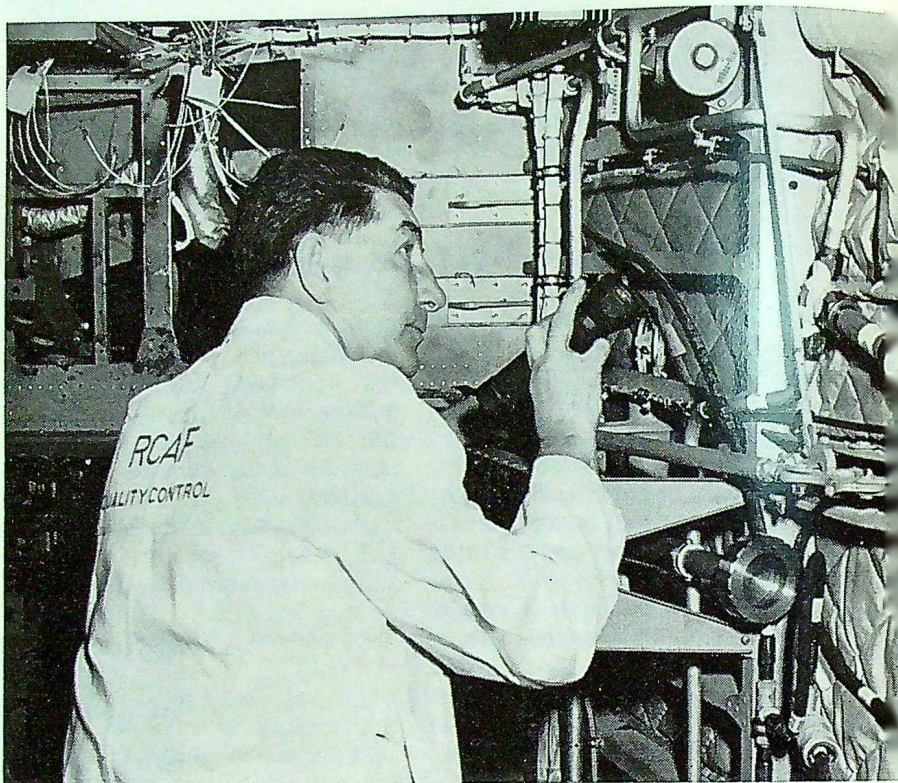
Tutors Roll on Monorails at Canadair

FULL-SCALE production of the *Tutor* jet trainer, designed and developed by Canadair Ltd. in close technical collaboration with the RCAF, is now in progress at Canadair's Cartierville plant in Montreal. First of 190 to come off the line was officially accepted last October. Since then the RCAF's Central Experimental and Proving Establishment has been conducting extensive acceptance trials in preparation for the *Tutor's* introduction into Training Command later this year.

Canadair has adopted an automobile-type overhead monorail system for movement of fuselage and wings along the final assembly line. Two monorails carry the left-hand and right-hand wings towards a third monorail which carries main fuselage sections. These three components come off the monorails at the same time and the wings are then attached to the main fuselage. Undercarriage units are added, the General Electric J85 turbojet engine (built under licence in Canada by Orenda Engines Ltd. in Toronto) is installed and the rear fuselage — complete with tail surfaces — is then attached.

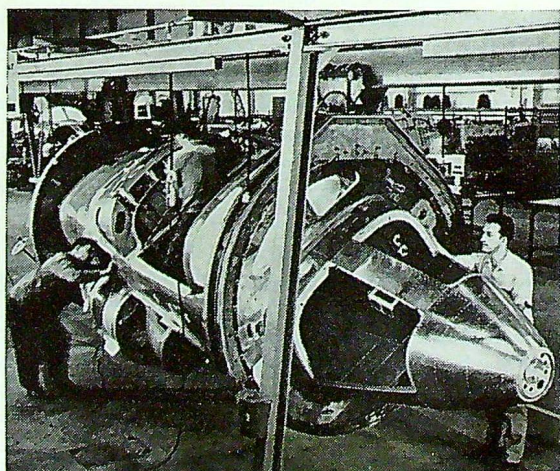
Working closely with Canadair employees in the plant are RCAF personnel of No. 1102 Technical Services Detachment, commanded by W/C G. W. Reid. Waiting to accept the *Tutors* from Canadair test pilots are CEPE pilots led by S/L A. Bowman. 

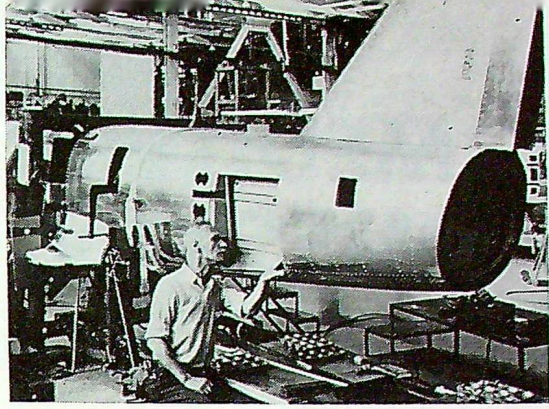
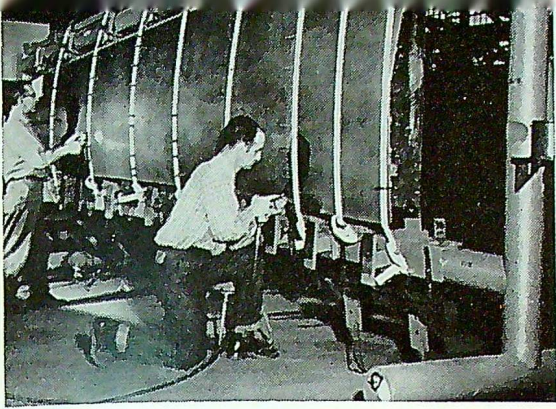
Photos courtesy CANADAIR



RCAF quality control inspectors keep close tabs on *Tutor* aircraft during their construction.

A front fuselage section is suspended in doughnut rings from the monorail.

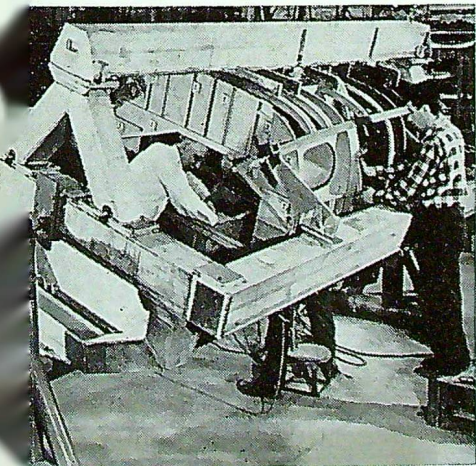




Basic wing structures (left) are built as sub-assemblies and transferred to the monorails for completion while (right) the rear fuselage and tail unit are introduced to the assembly line where the front fuselage and the wings come off the monorail.

A finished aircraft is turned over to F/L C. P. Loubser, an RCAF test pilot, for an acceptance flight.

The centre section of a *Tutor* fuselage is sub-assembled before transfer to the monorail final assembly line.



MEDITERRANEAN MISSION

By Mr. H. H. COULSON, Former Associate Air Historian

AT the Casablanca conference in mid-January 1943, President Roosevelt and Prime Minister Churchill decided that, on the completion of the African campaign, the "soft under-belly" of Europe should be attacked prior to the opening of a "second front" in France. The first target would be the island of Sicily which, when captured, could be used as a base for operations against the European mainland. The date for launching the Sicilian invasion was set as 10 July 1943. The code name for the operation was "Husky".

From a strategic point of view, preparatory bombing of enemy installations began as soon as the Tunisian campaign ended. Field Marshal Alexander later recorded:

"During (this) phase, targets were mainly strategic but a steady program of interference with the enemy ground and air buildup in Sicily was carried out. A particularly heavy scale of attack was directed against the Messina rail

ferry. By 1 June, only one of the original five ferry boats was still in operation and the harbour facilities at both ends were heavily damaged. The traffic was continued by lighters and small craft. From about D-7 the air forces went over to a concentrated and powerful attack on the enemy air force; enemy airfields in the island were attacked both by bomber aircraft and, when within range, by fighter sweeps. Radar installations, which would give warning of the approaching invasion fleets, were also successfully attacked. We were thus able to ensure air superiority over the landing beaches and very shortly, when the captured airfields in the southeast came into use, over the whole island."

The Canadian contribution to this operation was, on land, the 1st Canadian Division which served as part of the Eighth Army and, in the air, No. 331 Wing under the command of G/C C.R. Dunlap.*

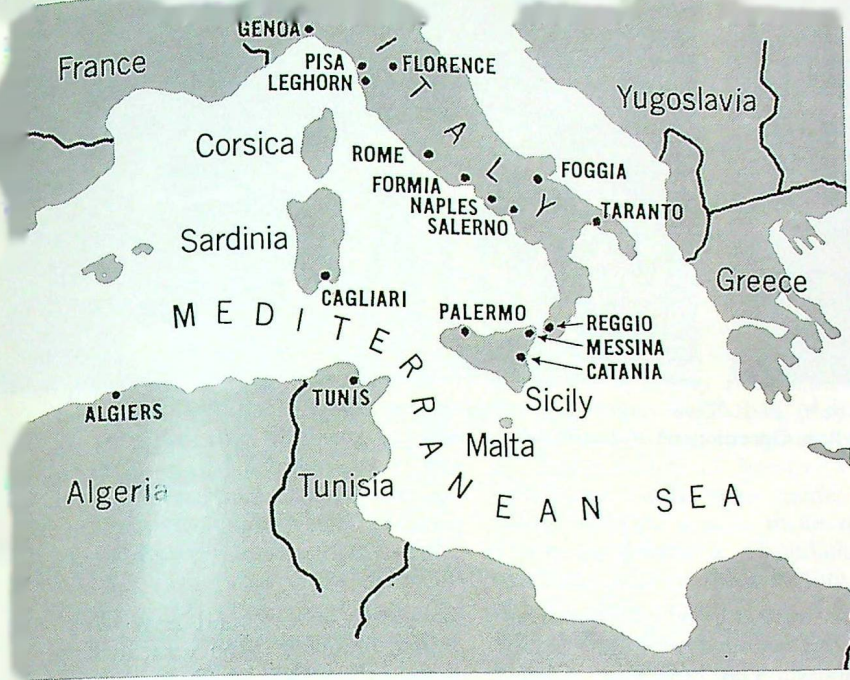
*Now A/M Dunlap, Chief of the Air Staff.

This wing formed part of the North West African Strategic Air Force, commanded by Maj.-Gen. James Doolittle (U.S.A.).

At the time No. 331 Wing was formed, the program of "Canadianisation" of the RCAF units in the United Kingdom was in full swing under the driving hand of A/M Harold Edwards, the AOC-in-C of the RCAF Overseas. In his eyes, No. 331 Wing offered a superb opportunity to achieve the first complete Canadian unit at the wing level. It is not surprising, therefore, that this was firmly stated as one of the objectives to be accomplished. Also, it was made abundantly clear to G/C Dunlap that the operational accomplishments of the wing were to excel all others — to this end, the support of A/M Edwards was magnificent in the organization phase, throughout the process of selecting the key per-

A desert conference is held by (l. to r.): W/C J. St. Pierre, G/C C. R. Dunlap (now Chief of the Air Staff), W/C G. Roy and W/C D. McIntosh.





sonnel for the wing headquarters, and during all subsequent phases.

The operational element of the wing consisted of three squadrons detached from No. 6 Group: No. 420 (Snowy Owl), commanded by W/C D. McIntosh, DFC; No. 424 (Tiger) led by W/C G. A. Roy, DFC; and No. 425 (Alouette) commanded by W/C J. M. W. St. Pierre.

The *Wellington* aircraft with which the three squadrons were equipped were flown out to Africa at the beginning of June. No. 420 lost two crews to enemy action in the Bay of Biscay, while one crew of No. 425 had to bale out over Portugal when their aircraft was damaged by the enemy. The aircraft were held at Telergma, an airfield in Algeria near the ancient city of Constantine, throughout the first two weeks of June, pending completion and stocking of the two new airfields in Tunisia.

Ground crew left Liverpool on 16 May on the SS "Samaria" and the SS "Duchess of York", arriving at Algiers on the 27th. After two weeks in the neighbourhood of Algiers, the movement of the men and equipment towards Tunisia

began. For the bulk of the ground crew, this was a lengthy and tedious rail journey in the most primitive of cars, each of which bore the inscription "40 men or eight horses". Concurrently, a convoy of motor vehicles comprising petrol tankers, aircraft servicing vans, trucks, staff cars and motorcycles, all driven by Canadians who had never before seen this part of the world, wended its way through the mountains towards the distant objective. That these rail and road convoys, involving 2,000 men and vast quantities of equipment, should have arrived at their new Tunisian bases within hours of the 60 aircraft from Telergma was a remarkable example of co-ordination, regarded by all as a good omen on that first day on the desert, 19 June 1943.

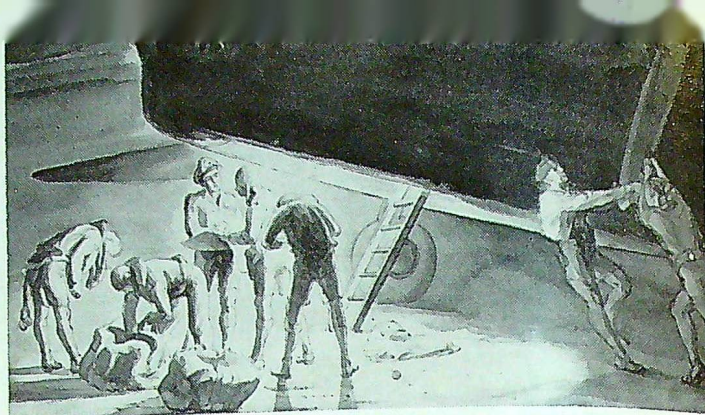
Great was the activity in those opening hours and days. Up from that parched and barren soil sprang tents of all descriptions: tents for cooking and messing, for the operations and intelligence activities, for supplies and equipment, for hospitals and housing, and all the other requirements peculiar to the operation of major airfields. Spirits

ran high, and most everyone seemed oblivious to the temperature which averaged about 110° F in the shade. Then all of a sudden discomfort struck, as the wind — the dreaded Sirocco — swept in from the Sahara, bringing temperatures as high as 128° F. This, combined with an initial scarcity of water and the many physical disorders which seem to multiply in the intense heat, threw life in Africa into violent contrast to the standard of living at the former bases in Yorkshire.

The aerodromes selected by G/C Dunlap were prepared by U.S. army engineers. One airfield called Zina was created from a piece of level ground heavily-overgrown with thistles, about 22 kilometres southwest of Kairouan; the second, about 15 kilometres further on, was named Pavillier. Runways, perimeter tracks and dispersals were made by knocking down the brittle thistles and compacting the surface with rubber-tired rollers.

Operational activities of the wing can be considered in three phases. From 26 June to 9 July, they took part in the pre-invasion attacks on Sicily; from 10 July to 17 August, in the actual invasion operations, and thereafter until 2 September in the pre-invasion attacks on Italy.

The first raid, on the night of 26/27 June, was against Sciacca, a town on the southwest coast of Sicily, where the 150th Wing of the Italian Air Force was stationed. No. 420 Sqn. despatched five aircraft, one of which attacked the town, the rest (except for one which had to turn back) dropping their bombs on the aerodrome. No. 425 Sqn. detailed ten crews, but one was unable to take off and another failed to return. A fair amount of accurate heavy flak was encountered over the target and staggered searchlights were co-operating with enemy fighters. Over the coast of Sicily a *JU 88* opened fire on F/L C.M. Blakeney's aircraft. Although the



"Show Night In Tunisia" (left) and "Zero Hour" (right), two water colour paintings by F/O P. A. Goranson, an official RCAF war artist.

wireless operator was wounded, the rear-gunner got in a burst, and three minutes later something resembling an aircraft was seen burning on the water. One *JU 88* was claimed as destroyed.

The next night Villa San Giovanni was the target. This town, on the mainland of Italy, was the terminus for the train ferry service with the island of Sicily. The defences were weak, consisting of inaccurate, heavy, predicted flak which burst below the aircraft, and light flak "hosepiped"* up the beams of searchlights. A dummy fire, designed to draw our bombers away from the target, burned with a yellowish glow three or four miles southeast of the town. No. 420 Sqn. sent 13 aircraft, one crew failing to return.

No. 424 Sqn., with eight aircraft detailed on its first mission from North Africa, ran into a series of mishaps. During take-off one of the eight dropped its 4,000-pounder but the crew, being unaware of this, went on to the target as if nothing untoward had happened. Another punctured a tire on take-off, dropped its 4,000-pounder and ground-

looped near the end of the runway. Fortunately, neither of these bombs exploded. The remaining aircraft took off and reached Villa San Giovanni, six dropping their loads on the target. No. 424 Sqn., however, did not concur in the generally-expressed opinion that the operation was a success.

Then the attention of the Wing was concentrated on Messina, the chief port of Sicily, and the escape hole through which the enemy would bolt to the mainland should he be swept out of Sicily. Canadian-manned *Wellingtons* on two successive nights attacked Messina, sustaining the loss of four crews — one of which, on ditching five miles off Sfax in Tunisia, was rescued by an American *L.C.I.** Photographs taken three days later showed that the main building of the central railway station, previously damaged, had been hit again, six sheds near the freight yards had been badly impaired and some residential blocks in the area had suffered, too. A factory to the south of the yards was in precarious condition and a barrack block had been struck as well. A motor vessel in the harbour,

previously on fire, had now sunk. A final attack in June was on Cagliari, in southern Sardinia, where Nos. 420 and 424 Sqn. did extensive damage to docks, railway station, and barracks.

In July No. 331 Wing, operating as part of No. 205 Group (RAF), flew on two nights in every three, supplying an average of 27 aircraft a night. They began their attacks on the ports by bombing Reggio and Villa San Giovanni, bases on the mainland through which the Germans shipped supplies to Sicily.

When Operation "Husky" had been decided upon, a Western Task Force composed of United States personnel was detailed to invade the northwest side of Sicily and an Eastern Task Force comprising British naval and military forces was to attack the southeast corner of the island. In preparation for the invasion, attacks were made on enemy aerodromes and landing grounds in Sardinia, Sicily, and on the mainland of Italy by the combined Allied Air Forces. Villacidro, an aerodrome in the southwest corner of Sardinia from which the enemy could advantageously attack the invasion fleet and supply convoys, was the target for the Canadian Wing on 4 July. To the west of Catania in Sicily lay Gerbini air-

*Fired from guns whose muzzles moved with the searchlight beams.

*Landing craft infantry.

field and its satellites.* The Wing attacked it on the 5th, 8th, and 10th, the last being timed as part of Operation "Snowboots" in which the airborne troops supporting the Western Task Force landed in Sicily.

The occasion was marked by a tragic occurrence at Pavillier. Three of the eight aircraft detailed for operations by No. 424 Sqn. had taken off, but as the fourth was about to become airborne, it blew up, killing all the members of the crew. Crews that reached Gerbini returned to report weak defences, one adding the information that the whole of the east coast of Sicily appeared to be a mass of flame. As a matter of fact photographs on the 9th had shown Gerbini and seven of its eleven satellites to be completely knocked out.

Another pre-invasion target was the aerodrome at Catania which together with its satellites formed one of the most important systems of airfields in Sicily. It was successfully attacked on 7 July.

*From this aerodrome numerous attacks on Malta had been launched.

After the invasion the attention of the Wing was diverted to the mainland aerodromes of Monte Corvino, near Salerno, and Capodichino, near Naples. So poor were the defences at the former that on 11 July, the day on which the Canadian Army made contact with the Americans at Ragusa, it was possible for some of our aircraft to machine-gun enemy aircraft on the ground, and no less than 40 of these were known to have been destroyed either by bullets or bombs. Two subsequent raids were made on Monte Corvino just to make sure it was incapacitated. Capodichino was attacked four times in July by No. 331 Wing aircraft. The defences here were slightly better, consisting of 20 to 30 searchlights, both light and heavy flak, and enemy night fighters equipped with searchlights.

On ten nights in July attacks were made on enemy camps and lines of communication on Sicily, Sardinia and on the mainland. Cagliari in southern Sardinia, first attacked by the Wing on 30 June, had a repeat performance on 1 July. Again weak defences allowed a successful attack to be made. At Olbia in northern Sardinia next day

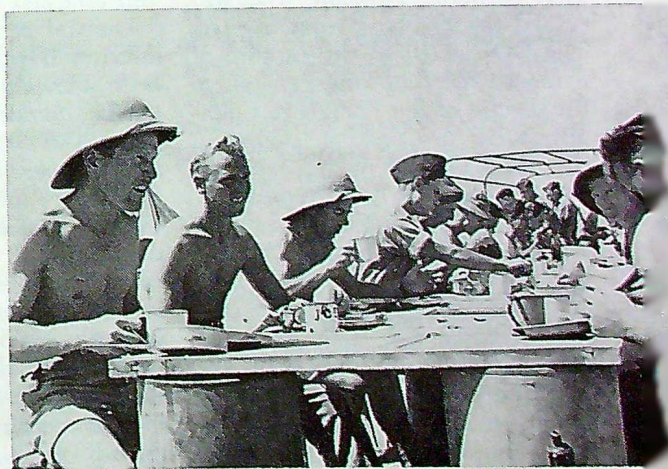
crews thought that they had hit an arsenal, so spectacular were the explosions on the ground. One crew ran out of petrol on the return trip and landed in three feet of water on the beach at Sfax. The seaplane base at Lido di Roma was bombed on 3 July and leaflets were dropped on Rome itself. Trapani, on the west coast of Sicily, was attacked the same night in an operation described by the participating crews as "a good effort".

On the night of the landings in Sicily all three squadrons participated to the full. The Wing despatched 13 aircraft to Catania on the east coast, one of the objectives of the 13th Corps, where freight yards and military installations were the objective; six to attack the aerodrome at Caltagirone to the southwest of Catania, at which the 30th Corps was driving; 14 to bomb railway communications and the seaplane base at Syracuse, south of Catania; and five to patrol off the south coast of Sicily with radio-jamming equipment to confuse the enemy's radio location devices. This was the first time that jamming had been employed in a joint operation; it was intended to mask the scale

G/C C. R. Dunlap attends a traditional Arabic meal.



RCAF personnel dine in typical Tunisian sunshine.





A group of RCAF fliers walk from their Wellington bomber (l. to r.): Sgts D. Coope and E. R. Dupin, F/O C. Barry and Sgts. H. Barnaby, W. Sutherland and M. Ivey.

Members of No. 331 (RCAF) Wing gather around the "postman".

of effort and in particular to blind the enemy to the impending arrival of the large paratroop formations.

Pilot Officer V. D. Ardis of No. 420 Sqn. dropped his 4,000-pounder in an effort to destroy the barracks and railway station at Syracuse. Photographs showed that he achieved his object. Indeed, the whole attack seems to have been outstandingly successful according to the General Officer Commanding, First Airborne Division, who witnessed the bombing from the sea. The GOC credited the capture of Syracuse the following evening to the success of this operation. Caltagirone fell to Canadian troops on the 16th, Catania being captured by the British early in August.

After attacks on Enna, an objective of the 30th Corps where the Canadian Army was to cut the road to Catania in the centre of Sicily, and Messina, the main port for enemy communications with the mainland on the east side of the island, on 12 and 13 July respectively, the attentions of the Wing

shifted to the mainland. Naples was the target on the 14th, photographic reconnaissance the next day showing very heavy damage to the freight yards and central station, trains, fuel installations, and the industrial areas north and south of the railway. This was not enough. The Wing returned to Naples on the 20th and 30th and achieved a good concentration in the vicinity of the freight yards and docks. They also attacked Salerno on the 22nd.

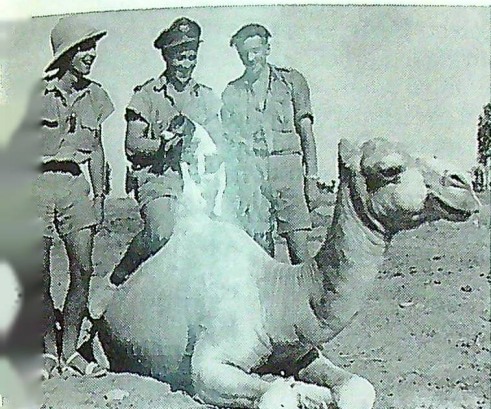
Disaster struck in the dispersal area on 6 July. The Sirocco had been blowing and the heat was terrific. Suddenly, at 2000 hours, just a short time before the *Wellingtons* were due to be marshalled for take-off, one of them exploded. The explosion scattered flaming debris in all directions, starting many fires. The aircraft in the adjacent dispersal was alight almost instantly and others were threatened. While the dead and injured airmen were being rushed away from the scene of the first explosion, the adjacent aircraft, just 100 yards

away and now a fiery mass, let go with an ear-splitting blast as its 5,000 pounds of bombs exploded. This, in turn, scattered more burning debris. By the almost superhuman efforts of everybody on the camp, from G/C Dunlap to aircraftmen, the fires were subdued. Many deeds of bravery were recorded, not only in assisting in the removal of the wounded but also in taxiing aircraft to a place of safety.

On 24 July a wind and rain storm caused a good deal of misery. Tents, including the headquarters mess marquee, were blown down and the camp became a sea of mud. Emergency shelter for the night had to be found in aircraft, equipment tents and the camp hospital.

In August No. 331 Wing made 790 sorties and dropped 1,319 tons of bombs and nearly two million pamphlets. For the most part attacks were launched against enemy positions and lines of communication in an effort to hamper the German attempt to make a Dunkirk of the eastern beaches of Sicily as

Getting checked-out on a camel are (l. to r.): F/O R. Fletcher, F/O A. Kirley (holding Daisy) and P/O R. Demers.



the campaign there drew to its close. Points on the mainland, too, where the enemy might be preparing to organize resistance to any projected invasion of Italy or through which escaping troops might pass, were not neglected. The island capitulated on 17 Aug. '43. In 38 days the Germans had lost 24,000 killed.

Following the successful completion of the Sicilian campaign, the *Wellingtons* were called upon to play a part in the systematic dislocation of Italian communications. They began on 19 August with Foggia, near the Gulf of Manfredonia on the Adriatic coast, site of one of the most important aerodromes in southern Italy. There the Germans had created an extensive satellite system of airfields capable of handling hundreds of planes. The next night they attacked the freight yards at Villa Literno, just north of Naples, and on the 21st did the same at Battipaglia, south of Salerno. Operations against similar targets at Bagnoli, Torre Annunziata, Taranto and Salerno followed

— while at the same time some of the Canadian aircraft ranged as far afield as Leghorn, Pisa, Genoa, and Rapallo dropping leaflets in the paper offensive. In all these actions the three squadrons reported successful attacks and had no losses to record.

The impending collapse of the Italians — they surrendered on 8 Sept. — brought a flock of rumours that the Wing would shortly return to England. When the three squadrons departed from the UK for Africa, it was stipulated by the AOC-in-C of Bomber Command, A/C/M Sir Arthur Harris, that they would be spared on loan for three months only. As soon as the three months were up, pressure was exerted to speed their return. A/C/M Sir Arthur Tedder, on the other hand, was equally insistent that they could not depart from his command until the assault on the mainland of Italy was firmly established. Uncertainty prevailed as to the immediate future — a decision one way or the other was critical as far as the Wing was concerned, for a move from existing airfields could not be delayed many more days due to the approach of the wet season after which their bases would be untenable. By the end of September things were settled in favour of Tedder, and the squadrons moved to Hani East on the Kairouan-Sousse road.

Throughout September the wing was operational on all but nine nights. Ports and bases attacked included Aversa, Battipaglia, Formia and Gaeta. Crews reported virtually no opposition during these raids, but the damage they caused on the targets was extensive.

By 18 Sept. all the German troops had been withdrawn from Sardinia to Corsica but clashes with the population of this island apparently led to a decision to withdraw from there, too. No. 331 was one of five wings instructed to attack Bastia,

the only good port on the island of Corsica, on the night of the 21st. Docks, warehouses, the mole,* oil tanks, all received direct hits. There were no casualties among the Canadian crews. The next night the freight yards at Formia were attacked again. On the 24th they attacked the port of Leghorn to which troops escaping from Corsica were apparently heading. A typical report of the raid was that of Sgt. D. R. MacKenzie's crew which ran as follows:

Time up, 1935. Time down, 0135. This aircraft carrying six 500 lb. bombs arrived over the target at 2202 hours. Ships were seen steaming out of the harbour. Bombing was concentrated on this point. Numerous landing craft were seen in the harbour. A power plant was seen to blow up and give out bluish sparks. Some light and heavy inaccurate flak from the harbour. Three searchlights were operating. Good trip.

On 3 Sept., the day that the Eighth Army in Operation "Baytown" crossed the Straits of Messina, No. 331 again bombed Capodichino. The attack on this aerodrome, which was near the strong concentration of enemy troops in the Naples area, indicated no decline in the size or determination of the enemy's fighter forces. No. 331 Wing despatched 30 crews with two 4,000-pounders and more than 430 of the 250-lb. variety. That these attacks were of value is indicated by the fact that when the Allied invasion craft were being assembled in east Sicilian harbours the enemy made no attempt to attack them with bombers.

Attacks on aerodromes at Grazzanise, Viterbo, Frosimone, Cerveteri and Cisterna di Littoria followed throughout the next two weeks. The Pisa/San Giusto aerodrome was attacked on 23 Sept. Of the more than 30 *JU 52s* and *ME 323s* that were known to be there, at least ten were destroyed and fires were started that could be seen 90

*Artificial harbour.

miles away.

Attacks in September were concentrated on the routes being used by the enemy as he retreated northwards or where he had concentrated troops to contain the Allied landings south of Naples. To assist General Mark Clark's Fifth Army that had begun landing operations in the Gulf of Salerno on the 9th, 49 aircraft (22 of which were supplied by the Wing) dropped 90 tons of bombs on the road junction at Formia. Photographs showed the Rome-Naples line cut, the road blocked, and part of the sea-wall blown away.

But the enemy did not easily give up. He began to concentrate against General Clark the elements of six armoured and motorized divisions and prepared to launch attacks from the south. To offset this, the Canadians dropped 38 tons of bombs on a road junction northwest of Salerno on 12 Sept., and later photographs showed that the four roads leading to Castelnuovo were blocked. Still the enemy forced the pace. On the 13th his armour pierced the Allied position at Battipaglia and on the Sele River. To save the Allied forces from being cut in two, a bombing attack was made on a road five miles east of Pompeii. A five-mile stretch of this road was subjected to a rain of 164 tons of bombs. Fires were started among the enemy vehicles that were drawn up there and one aircraft machine-gunned the road east of Anгри from 1,500 feet. Photographs showed railways and roads cut, but the route to Salerno unfortunately remained open.

On 14 Sept. the situation was critical. Units of the 29th Panzer Division and the Herman Goering Division had succeeded in reinforcing the 16th Panzer Grenadier Division. The beaches were under enemy shell fire. A British naval bombardment and a powerful Allied air offensive turned the tide.

No. 205 Group, the parent unit of 331 Wing, put over 120 aircraft into the air in an attack on the Battipaglia-Eboli road, southeast of Salerno, which was bombed constantly for two and a half hours. Forty-three Canadian aircraft took part in the operation and dropped 78 tons of bombs on freight yards, roads, and railways. Photographs showed that the enemy communication lines had suffered a severe blow. As a result of all this the Allied forces were reinforced by fresh landings and the enemy counter-attack was held, though not yet broken.

Next day the roads between Torre Annunziata and Pompeii were attacked by 129 bombers (43 of them Canadian). Then Allied ground forces took the initiative. Albanella, Altavilla, and Battipaglia were all recaptured in the next three days as the Allied bombers pounded the enemy airfields. Communications again became the objective on the 19th, the Wing attacking a road bridge across the Calore River north of Benevento. The bridge received a direct hit and the local station and yards were cratered. The last attack in September was on a road in the Naples area. Allied troops were deploying onto the plain to the north of Naples by the 28th and a call went out for aircraft to attack the road junction at Formia. Nos. 231 and 331 Wings dropped 74 tons of bombs on the railway and mole, the main road, and electric installations.

There were only four operations in October, two against Formia, one against Civitavecchia north of Rome and one against Grosseto, halfway between Rome and Leghorn. In addition to all these bombing attacks, RCAF *Wellington* crews dropped millions of leaflets on various targets in Italy and the neighbouring islands of Corsica and Sardinia during Sept. and Oct., the effects of which were more difficult

to assess than the bombings.

On the completion of their tour of duty in Africa the Group diarist recorded that the Canadian Wing had made 2,127 sorties and dropped 3,745.5 tons of bombs and at least ten million leaflets. They had materially assisted in making airfields in Sicily and Italy untenable and freight yards unusable. They had dovetailed their operations with those of other Allied Air Forces to win the strategic battle of communications. They had helped to decide the fate of southern Italy before a single Allied soldier had been landed in that unhappy country. German prisoners bore eloquent testimony to the effectiveness of their work in making the enemy's nights sleepless and in undermining their morale. Even the value of their leaflet-dropping was admitted by Gen. George Patton, who had been one of its staunchest opponents.

Analysis of the photographic sequences taken by each aircraft on their bombing approach to the target clearly demonstrated that the determination of the crews and the precision of their attacks was second to none in that theatre of operations. The Wing had more than met the fondest hopes of its commander, G/C Dunlap, to say nothing of the injunctions of A/M Edwards, the AOC-in-C, RCAF Overseas.

On 16 Oct. '43 No. 420 Sqn., and on the 18th Nos. 424 and 425, left Hani East and after sundry misadventures, not the least of which was the loss of half a train carrying their rations, they sailed for England from Algiers. The SS "Samarra" docked at Liverpool on 6 Nov., where snow and rain were soon being contrasted with the "almost monotonous nice weather in Africa". Distance soon lent enchantment to the view.





FINGERPRINTING THE FORCES

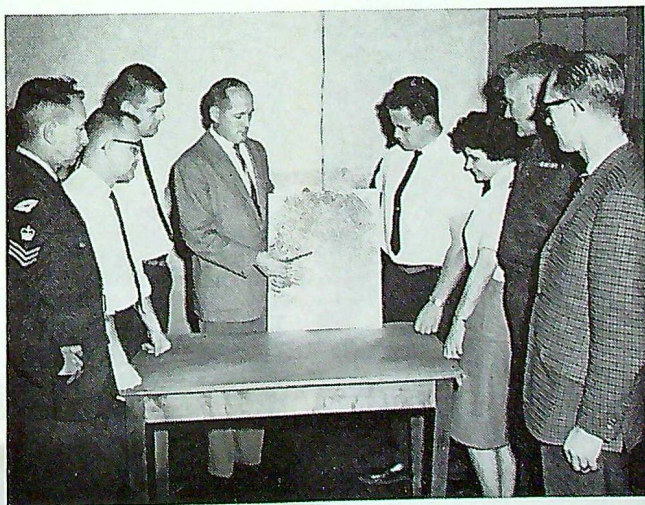
By CORPORAL C. C. SMITH

"We come into the world with the indelible stamp of individuality imprinted in our hands. We change, develop, grow old, yet the minute record of self we carry on the bulb of our fingers remains immutable and fixed."

J. Edgar Hoover, Director
Federal Bureau of Investigation, USA.



S/L G. F. Stubinski, Officer Commanding CAFIB, consults with his second-in-command, WO1 E. J. McCarthy, on the identification policies of the Bureau (above) while (below) ex-RCMP Sgt. R. Duck, head of the fingerprint section, conducts a course in fingerprint classification for CAFIB's personnel.



THE unique features contained in the inked impressions of people's fingerprints have attracted attention for hundreds of years. Yet most of us have been inclined to associate fingerprinting with crime alone, and as a result are not aware of the tremendous value of our own fingerprints.

Gradually, however, this aversion is being erased as fingerprinting proves increasingly valuable in a variety of fields. Not too long ago, in the tragic crash of a TCA jet airliner near St. Therese, Que., a few victims were identified by their fingerprints — recorded a number of years earlier while they served in the armed forces.

In the business world this identification technique is fast becoming recognized as an important aid to personnel management; many United States industries have already adopted fingerprinting as a prerequisite to employment. Voluntary fingerprinting, too, is becoming popular in the U.S., illustrated by the fact that more than half of the voluminous FBI collection is composed of the prints of non-criminal citizens. Certainly, fingerprints in themselves are not a badge of crime

and should not be regarded as a penalty, but rather as an asset.

The Canadian Armed Forces Identification Bureau (CAFIB) in Ottawa, a pioneer of non-criminal fingerprinting in Canada, provides positive personal identification for the 175,000 personnel of the armed forces and the DND.* To fulfil this requirement, wallet-sized identification cards are issued with the bearer's signature and photograph permanently embedded in plastic. But the "heart" of this system, ensuring that each person with a national defence "T" card is who he claims to be, is the fingerprint section.

Prior to the establishment of the CAFIB in 1947 as one of the first tri-service organizations in Canada, each service was responsible for its own identification system, with a resultant duplication of effort and

lack of liaison between the three forces. Often a deserter from one found it a relatively simple matter to change his name and join one of the others. Similarly, persons with criminal records found it advantageous to seek refuge in one of the services.

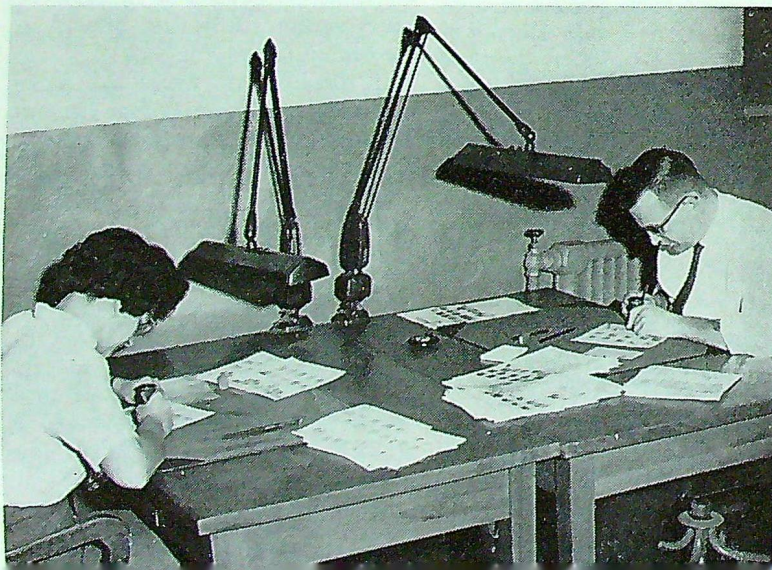
Today, however, CAFIB has increased the efficiency of identification in the military — with a cost saving in excess of 50 per cent — to the point where it is no longer possible for a recruit to disguise his true identity. CAFIB retains fingerprint records of every person ever released for cause from the military or Department of National Defence, as well as those of all serving members. When a new recruit is enlisted his fingerprints are sent to Ottawa for a check against the files.

In the past year alone these fingerprint checks have turned up some 281 applicants who had previously been released for cause — 65 of whom attempted to conceal the fact. In all cases the pattern was

similar: a man released from one of the armed forces for unsatisfactory conduct tries some months later to enlist in one of the other services, using an assumed name, dyed hair, or otherwise changed appearance. Under the recruiting process, however, his fingerprints are taken and forwarded to CAFIB where a comparison with previously-recorded prints quickly penetrates his disguise. The recruiting or manning unit is informed, the fingerprint records annotated, and the card returned to the files.

Although the bureau's fingerprint files are used to prevent non-desirables from being enlisted, they are never used for criminal investigation purposes. Ex-RCMP Sgt. R. Duck, head of the bureau's fingerprint section, says CAFIB's 10-finger classification system is basically the same as that in use with the RCMP, FBI and Scotland Yard, but that law-enforcement agencies have an additional set of files with which they can identify fingerprints taken

* Criminals' fingerprints are taken and filed by the RCMP.



Fingerprint technicians Mrs. M. Cousineau and Mr. R. Gravelle, classify new sets of fingerprints according to their individual characteristics. After each set is classified, it is checked and double checked before being filed.

from scenes of crimes, where only single prints are available.

Aside from scene-of-crime purposes, though, it doesn't really matter whether one finger or ten are used in fingerprinting — except for filing and searching convenience — as even a single print offers no chance of duplication. One expert said that if every man, woman and child in the world, including babies, were to put strokes on a paper at the rate of three per second, night and day, without sleep or food for 8,512,812 years, the total number of marks would equal the number of fingerprints required for a single repetition. And the chances of duplicating all ten fingers would require a full column of zeros to express.

Fingerprints, remaining exactly the same for life, are an infallible method of identification no matter what classification methods are used. A print taken from the fingers of an infant within a few hours of its birth will still be accurate when


its owner is wrinkled and old.

A striking example of this constancy was noted a couple of years ago in the Air France disaster when a Boeing 707 crashed in Paris, killing 132 persons. In 1937, a seven-year old girl and her parents had been fingerprinted for civilian identification purposes during a tour of FBI Headquarters in Washington. Twenty-five years later, a continent away, the quarter century-old prints identified her as one of the Air France crash victims at the age of 32.

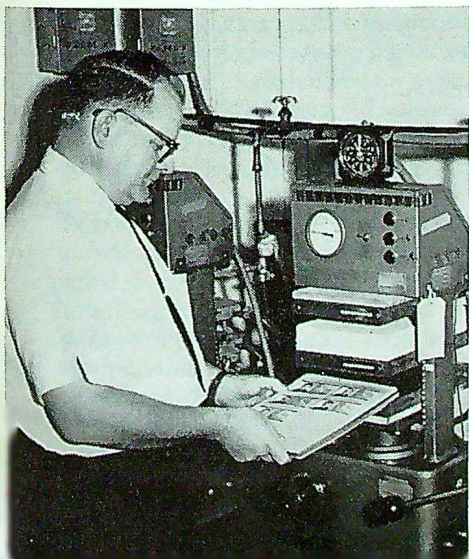
Similarly, CAFIB's records show many examples of assistance in the identification of accident, drowning and other violent death victims. In 1962 the sheriff's office of a Missouri city contacted the bureau for assistance in identifying a murder victim who was found to be a former member of the RCN. Also last year, a drowning victim at Petawawa was identified as a soldier from the nearby army base, and a body found at the scene of a serious fire in Cal-

gary was identified as a former Canadian soldier.

"We are unique in the field of military fingerprinting," says S/L G. F. Stubinski, CAFIB's officer commanding. "While other countries rely mainly on their police fingerprint bureaux, we have compiled the second largest collection of prints in Canada. With these as a nucleus, we cannot help but go forward, as long as we remain alert to the technological changes and advances in identification techniques. In fact, even now we are constantly adding new sets of fingerprints to our files, and have extended identification assistance to other government departments without interference to DND requirements."

"In short," he added, "as one of the first tri-service organizations in Canada, the Canadian Armed Forces Identification Bureau intends to remain a model for other unified military departments and a pioneer in the field of voluntary fingerprinting in Canada." 

Mr. E. Leclaire inserts another set of cards in one of the 20-ton lamination presses.



Army WO1 R. J. McCarthy double checks serial numbers of the weekly "I" card returns being processed by Mrs. Patsy Quintal.



FS G. R. Steeves and Mr. R. Duck check on some prints in CAFIB's files.



UNLIKE Aladdin, the *Starfighter* pilot doesn't have to rub a lamp to summon up a genie: he has merely to twist a dial. Instantly a new kind of genie — an electronic computer — tells him exactly how far and in what direction he must fly his supersonic thunderbolt to reach any of 12 selected positions. And it does all this without so much as a look at the ground after take-off.

Four pounds of human brain and 80 pounds of computer, working together in the cockpit of the CF-104, make an effective team. But behind this example of co-operation between man and machine lies an even more amazing story. It concerns a team of brains exploiting the enormous appetite for work and the lightning-fast, unerring logic of a ten-ton computer. It is the story of the RCAF's Mu Sigma tables.

Mu and Sigma are letters of the Greek alphabet. In our story they stand for reference co-ordinates derived by changing latitude and longitude into terms the *Starfighter's* LN-3 computer system can use. Said in so few words that sounds quite simple but in practice it involves some very fancy maths. For instance, just to calculate the equivalents of one "lat and long" position takes a practised mathematician about 20 minutes.*

One way of obtaining Mu Sigma data for airborne computer use would have been to issue each squadron with a set of logarithm tables, complete with competent mathematician, and to suffer the inevitable 20-minute delay any time a flight plan changed. Another way — infinitely preferable and, therefore, the chosen way — was to pre-

pare sets of Mu Sigma conversion tables in advance for each area of operations.

Work on preparing the first Canadian set of tables started in May 1962 at the Cold Lake Operational Training Unit under the direction of a specialist navigation officer. It was a crash program restricted to the production of tables for local use by pilots under training on the then new CF-104 jets. Because of the project's limited nature it was possible to use the NCR102A computer installed for air armament evaluation work at the Primrose Lake weapons range.

The Cold Lake pioneers experienced many teething troubles and, understandably, some errors crept into the first set of tables produced. But the initial work was a big step forward and proved of great value in the second phase of the Mu Sigma project: the preparation of a much larger set of tables for use by *Starfighter* pilots with the Air Division in Europe.

It was the summer of 1962 and the Air Division's CF-104s were due to start operating in Europe in January 1963. Providing the necessary conversion tables for the whole of the Air Division area of operations thus became a very urgent task, one which was beyond the capacity of the Cold Lake computer. Because of this the project was referred back to Air Force Headquarters.

In Ottawa the Directorate of Ancillary and Telecommunications Requirements studied the problem and drew up detailed specifications for the layout and content of the tables. The project was then passed on to AFHQ's Directorate of Radar and Data Processing who conferred with the computer men of Air Materiel Command's Data Processing and Ground Environment staffs.

Could the IBM 705 take time out from its task of regulating the flow of RCAF supplies to tackle the

MU SIGMA

By FLIGHT LIEUTENANT D. G. FRY
Air Materiel Command Staff Officer
Public Relations

monumental task? If not, the job would have to be undertaken outside the service at a cost of many thousands of dollars.

The challenge was accepted and soon fired the imaginations of all those involved. Project officers from AFHQ worked with AMC service and civilian staff, pooling their talents as mathematicians and computer programmers, working day and night, weekdays and weekends, preparing the necessary formulae and translating these into terms understood by the IBM computer. This last step, incidentally, required the services of a new brand of bilingual RCAF officer: one who speaks English and "fortran", as the special computer language of "formula translation" is briefly called.

It took just less than one month of highly concentrated effort, involving a great deal of overtime per man, to calculate, program and double-check everything before the work could be entrusted to the computer. For, as computer men are quick to admit, their servant is just too faithful. The machine won't make mistakes once it has been given the correct data to work from and, even if a computer malfunction does occur, the machine stops itself. An automatic typewriter on the master console then types out a diagnosis of what went wrong and what the operator must do to

*By using a slide rule it is possible to make a rough calculation in a few minutes. However, no known slide rule can produce the "accurate to five decimal places" standard set for the RCAF's strike-reconnaissance force.



F/L B. Rollins of AFHQ (right) discusses computer program with Mr. K. Andrew and F/L M. Norris, data processing experts at AMCHQ. This trio programmed the IBM 705 which completed a lifetime of calculations in less than one day. Diagram on blackboard shows samples of "fortran", the special language programmers use in talking to their computers.

set things right. But as the computer men also admit, "If you put garbage in you'll get garbage out" – computed at lightning speed and automatically typed with extreme accuracy. That is a rather round-about way of saying the machine is only as good as the men who run it.

After everything had been checked and double checked, the button was pushed and the electronic wizard silently set about its enormous task. The only signs that the work was in progress were the blinking of neon circuit lights and the movements of airmen and airwomen working in relays to change reel after reel of magnetic tape.

It took the computer only 22 hours to complete a lifetime of calculations without so much as overheating a tube or blowing a fuse. The magnetic tapes were then fed into the high-speed printer which zipped out ten full-width lines of figures every second.

Speed was not the machine's only advantage. A skilled mathemati-

cian, being human, could have made mistakes which, without an equally long process of verification, could have passed unnoticed. The computer couldn't. Given the correct input and proper program instructions, it had to be right from start to finish.

Several days ahead of target date, the page-printed tables were picked up from AMCHQ and taken across the Ottawa River to yet another member of the production team, the Queen's Printer, whose major plant is in Hull. There again automation took over as page after fact-crammed page was photographed, reduced in size and printed in 200 copies. And once again, thanks to the elimination of the human element in typesetting, absolute impossibility of error was added to the advantage of speed.


The Air Division received its supply of Mu Sigma tables in good time for the start of CF-104 operations and all members of the production team were justly proud of the achievement.

The story might have ended there. However, the West German Air Force was to get Canadian-built *Starfighters* and several other European nations were considering adding the sleek jet to their arsenals. NATO would need Mu Sigma tables to cover a much greater area of Europe. SHAPE made its requirements known and the RCAF got the job.

The increase in area of coverage meant that the computer programming team had to extend its work and prepare to produce four volumes of tables instead of two. Some minor changes in format were also required to meet the NATO specifications, but previous experience with fortran and the similarity of the new work to the old were great assets.

What was to be AMC's longest continuous computer run started one morning at 0700 hours. Just 36 hours later the task was completed without a single computer malfunction or stoppage because of programming error. It would have taken a skilled mathematician, working 24 hours a day without a single break, 83 years to make the same number of calculations.

The typesetting of the mathematician's finished work would also have been a long and tedious task. But to the electronic printer, rippling along at 600 lines a minute, it was easy. Five hours were sufficient to produce 1,958 pages of error-free type which, thanks to the automatic photo-printing process employed by the Queen's Printer, remained free of the transcription errors inevitable with manually-produced type.

In the late summer of 1963 nearly 500 four-volume sets of MU Sigma tables were delivered to Marville for distribution to eight NATO countries. They now serve as silent, useful reminders of the versatility of the RCAF team and the capability of its electronic genie. 



RCAF ASSOCIATION

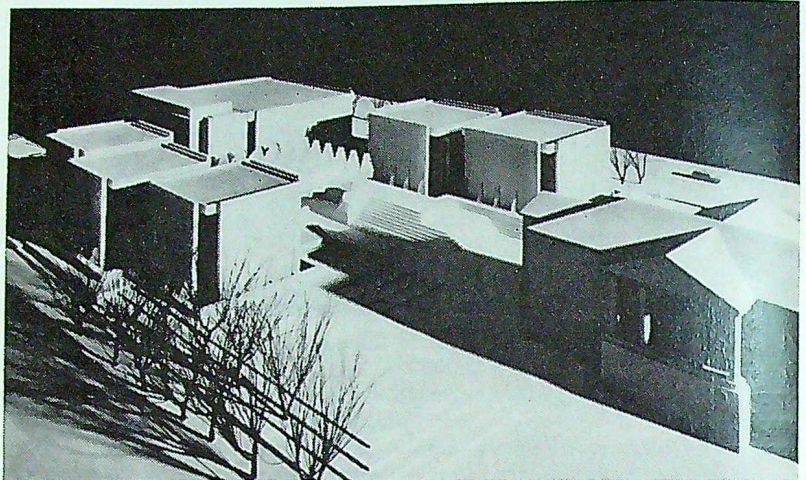
This section of ROUNDEL is prepared by Association Headquarters, 424 Metcalfe St., Ottawa, Ontario.

FIFTEENTH NATIONAL CONVENTION CHARLOTTETOWN OCTOBER 1-2-3, 1964

Plan now to attend the 1964 National Convention. All Wings are requested to name their delegates early and be in a position to give these names to National Office when they are requested. In order to avoid a flood of cancellations at the last minute, it is proposed to ask all delegates — Accredited and Fraternal — to include their registration fee with their registration slip. The amount of the registration fee has not been determined but as soon as this is worked out an announcement will be made.

RESERVATION PROCEDURE

The accommodation situation in Charlottetown is different to any we have had before. Delegates will be accommodated in the hotel and five motels. All reservations will be handled by Miss O'Hara at National Office. Requests for rooms and suites should be addressed to Miss O'Hara, Convention Registration, RCAF Association, 424 Metcalfe Street, Ottawa 4. Reservations will be confirmed on a first come first served basis effective June 1st.



Fathers of Confederation Memorial Building, Charlottetown. Contained in this complex are the finest facilities for conventions in Canada. It is here that the Association will hold its business meetings during the 15th Annual Convention.

NEW AWARD INAUGURATED

A new award, the order of the Golden Buffalo, has been instituted by No. 500 (City of Winnipeg) Wing. Designed to recognize outstanding service to the RCAF Association, and to be awarded only to those of particular merit, the Order of the Golden Buffalo consists of a beautiful bronze buffalo mounted on a marble base.

At a wing meeting on February 17th the new award was presented

for the first time to Herbert M. Bell (left) by past president A. W. Aldrich. In making the presentation, Mr. Aldrich stated that no one in the Association held a greater claim to such recognition than Herb Bell, whose continuing and untiring service on behalf of the Association was unequalled. Congratulations on behalf of the RCAF were offered by A/V/M C. H. Greenway, Air Officer Commanding Training Command.



WINGS OF THE RCAFA

No. 503 (Flin Flon) Wing

(fifth in a series)

ONE of the aims of the RCAFA Association is "To sponsor and encourage aeronautics in all its branches, and to provide a means whereby ex-air force personnel and the public may be kept abreast of all the changes in aviation and all that they imply, both from a military and civil standpoint."

It is to achieve these worthy aims that No. 503 Wing has dedicated itself.

The Wing, one of the newest in the Association, held its organizational meeting in March 1961, and has never looked back. Considerable credit is due to such men as Hugh Anderson, Herb Bell and Steve Coote of No. 500 (City of Winnipeg) Wing and No. 503 Wing Charter President Joe van Nes, for it was their inspiration and efforts that resulted in the enthusiastic beginning experienced in Flin Flon. Steve Coote presented the coveted Charter at a banquet held here on May 15th 1961.

The Wing's first project was to assume the sponsorship of No. 302 (Flin Flon) Squadron, Royal Canadian Air Cadets. This squadron had for many years been administered by a local civilian group, most of whom became regular or associate members of the Wing on its formation, and they have continued their cadet work, with added assistance from the Wing in supplying officers,

instructors, fund raising support and most recently two new trophies for the best second and third year cadets.

Less than a year after the formation of No. 503 Wing, an idea was conceived to stage the first-ever air show in Northern Manitoba, to coincide with the official opening of the new million dollar Flin Flon Municipal Airport. "Operation Flypast" became the code name of this project and for many long months members spent countless hours on the planning and organization of this event, for not only were they responsible for the entire air show, but also for the actual official opening itself. The entire story of "Operation Flypast" could fill this publication, but suffice it to say that on 26 May 1962, over 8,000 residents of this area witnessed an air show second to none. Among the many varied highlights featured were: The Red Knight, the Milt Haradence *Mustang*, RCAF *Albatross*, *Otter*, and *Expeditor* aircraft, a search and rescue para drop, the National Aeronautical and Space Administration (NASA) Mercury Capsule display, and two RCN *Banshee* jets flown by local area Navy pilots, and brought here directly from HMCS Shearwater, N.S. The intense interest that was aroused resulted in the declaration of a civic holiday and the accolades of the Department of Transport whose representatives declared the air show "One of the very best in the country."

Through the years many prominent speakers, both service and civilian, have been guests of the Wing at regular or dinner meeting and the usual practice has been to have these people interviewed by the local news media, and by this means their message has received widespread dispersal to the general public.

In February of 1963, the first edition of "503 Magazine" was

broadcast over radio station CFAR Flin Flon, and this has been a regular feature every second Sunday since. This is a half-hour program of news, interviews, and various taped reports pertaining to past, present and future developments in aviation and aerospace. It is produced, edited, and broadcast by Wing members. Each day's mail brings at least a dozen news stories or similar items, from over 55 different agencies from whom we have solicited a continuing supply of information; they range from RCAF Public relations sources, through manufacturers, airlines, other national air forces, NASA, to a membership in the National Aerospace Educational Council. The material received is read, excerpted, edited and prepared for broadcast. A recent feature of the program has been a twelve-part series entitled "Our Date With History" prepared in co-operation with the North American Air Defence Command.

At the present time the Wing is feverishly engaged in preparing for the 13th Annual Convention of the Manitoba and Northwest Ontario Group to be held in Flin Flon May 15th to 18th. Certainly a moving spirit behind this and all other Wing activities is our enthusiastic Ladies Auxiliary. Presentation of the Wing Colours to No. 503 Wing will highlight the opening ceremonies of this convention.

No. 503 Wing, under the leadership of president Pat Donahay, has approximately 100 members including one ex-member of the CAF, veterans of the RAF and former members of the USAF who are now associate members of the Wing. No. 503 has engaged in many useful projects in the past and will continue to do so in the future. One such project which is of special interest is that of having a standing committee from the Wing represent the RCAF Benevolent Fund in this area.

Letters to the Editor

made in Grahame White Biplane on 11 Sept. 1913 from London's Hendon Aerodrome. — Editor.)

"AIRWOMEN" KEY WORD

Dear Sir:

F/O Eckford has written a very interesting article on "Airwomen in the RCAF" (Mar. '64). I feel, however, I cannot leave unchallenged her claims of RCAF "firsts" in the enrolment of women in war in 1941 and in peace in 1951.

Nursing sisters have served with distinction in the Royal Canadian Army Medical Corps in war since the Boer War in 1899 and in peace since 1906. Dietitians and physiotherapists have served in war and peace since 1940 and occupational therapists since 1943.

Col. J. D. Galloway,
Commanding Officer,
Canadian Forces Hospital, Kingston.

(Women indeed served as mentioned, but as commissioned officers, not "in the ranks." The title, theme and emphasis of Miss Eckford's article was "airwomen", even though a few of her examples were subsequently commissioned. — Editor.)

COUGARS CONGREGATE

Dear Sir:

This summer we hope to have as many as possible of those who served in No. 410 Sqn. (overseas) meet in Winnipeg on 11 and 12 July. Final arrangements have not been made but ex-members are requested to contact Percy Macklem, 23 Handyside Ave., Winnipeg 8. Also, if anyone knows the address of a fellow member, we would like it forwarded so that contact can be made.

Last July an Alberta re-union was held here and was so successful that we decided to try for Dominion-wide one at Winnipeg. From all reports it looks as though it will be a real success.

F. Spencer Goddard,
Box 4, Site 1,
R.R. 1, Edmonton, Alta.

NEW ZEALAND GREETINGS

Dear Sir:

To those of the Royal New Zealand Air Force who served in Canada as trainees, instructors or staff within the Commonwealth Air Training Plan, the most heart-warming experience since World War II was the recent visit of the RCAF Chief of the Air Staff, A/M C. R. Dunlap, and Mrs. Dunlap to participate in the 1964 RNZAF air display.

The first visit of a serving RCAF CAS to New Zealand crowned the friendly relations that grew between our two services during the war, and reminds us of the splendid assistance and co-operation extended to RNZAF airmen by personnel of the RCAF, as well as by the Canadian people. Those sentiments were expressed by the Rt. Hon. Keith Holyoake, New

Zealand prime minister, and A/V/M I. G. Morrison, RNZAF chief of the air staff, on 14 July '62 at a ceremonial tree-planting in the Air Forces Garden of Remembrance in Vancouver's Stanley Park.

It is hoped that further visits will not be long delayed.

T. W. White, G/C (ret.),
20 Rugby St., Levin, N.Z.
(Wartime head of NZ Air Mission
in Ottawa)

"ORIGINAL" AIRWOMAN

Dear Sir:

Reference "Airwomen in the RCAF" (Mar. '64), I believe I was one of the first women to join the RFC in 1917 — as a transport driver in England. At that time the RFC had no women's section and I was obliged to join the Women's Legion, employed by the Army and then attached to the RFC.

We did all our own road repairs and serviced the cars — not easy in those days of acetylene head lamps, double spare tires and no self-starters. When the WRAF was formed a few months later I was offered a commission, but declined and continued as driver for Brig. Gen. Godman, CO of Southern Command HQ at Salisbury. I became a sergeant in charge of 30 or more women in the transport section.

My brother, Col. L. A. Strange, OBE, DSO, MC, DFC, was also in the RFC and in World War II started and commanded Britain's first parachute troops. He is perhaps the oldest combat officer of World War I still holding a flying certificate.

I have been a member of the RCAF Association for some 14 years, having joined No. 415 (Prince Edward) Wing in Picton, Ont., where I lived before coming to Vancouver Island.

Mrs. D. P. Pyke,
(nee M. S. Strange),
R.R. 2, Sidney, B.C.

(Mrs. Pyke enclosed in her letter a souvenir certificate of a passenger flight she

SLINKY PORCUPINE

Dear Sir:

S/L Heathcote's "Requiem for a Giant" (Mar. '64) will be very well received by many Lancaster fans. May I suggest ROUNDEL correct the error in the "On the Break" introduction to this article? S/L Heathcote flew his first "second dicky" trip with our crew on 25 Aug. '44 in a Halifax III of No. 433 (not 444) Sqn. We did not convert to Lancs, but stayed with the Hally as our crew had "five or less" to complete our tour at the time of conversion.

W. H. Miller,
246 King Edward Ave.,
London, Ont.

(The error in numbering No. 433 (Porcupine) Sqn. was ours, not S/L Heathcote's. As he said himself when the typographical gremlin was belatedly spotted, "What kind of an animal would you get if you crossed a porcupine with a cobra?" No. 444 (Cobra) Sqn. was a post-war unit. — Editor.)

SQUADRON RE-UNION

Dear Sir:

We are planning a re-union of the officers of No. 423 AW (F) Sqn. The re-union is to take place in Winnipeg on the Victoria Day week-end of May 15-18. If accommodation or further information is needed, please contact the undersigned.

F/L R. Wood,
442 Grunacus Blvd.,
Winnipeg 22, Man.

Taxation: The art of so picking the goose as to secure the greatest amount of feathers with the least amount of squawking.

ANONYMOUS

AVAILABLE FROM THE RCAF HISTORIAN

Approximately 250 paper back books depicting the history of No. 7 Air Observer School, Portage la Prairie, from 1941 to 1945, are available on request from the office of the air force historian. These books are of particular interest to the many servicemen and civilians who served at Portage la Prairie during World War II. Copies of this book are free of charge and may be obtained by writing to:

Directorate of Air Force History,
AFHQ,
Ottawa 4, Ont.



AIRCRAFT ALBUM:

Vickers Wellington

Famed for its geodetic construction, the *Wellington* was designed by Barnes Wallis, who was also responsible for weapons which broke the Ruhr Dams. The aircraft was known affectionately as "Wimpy" after the cartoon character, J. Wellington Wimpy.

Wellingtons were in action from the outbreak of hostilities until VJ-Day, flying as bombers, mine sweepers, patrol bombers, anti-shipping aircraft, air/sea rescue, transports and glider tugs. Eleven RCAF bomber squadrons flew *Wellingtons* from 1941 until 1944. Two other RCAF squadrons, Nos. 407 and 415, flew *Wellingtons* in Coastal Command. No. 407 sank four U-Boats with *Wellingtons* fitted with Leigh-lights. No. 415 attacked German shipping with *Wellingtons* until the summer of 1944, when the squadron converted to *Halifaxes* and was transferred to Bomber Command.

The *Wellington II* had two Merlin Xs of 1130 hp and was armed with six .303 cal. guns in nose, tail and waist positions. Bomb load was 4,500 pounds over a range of 1,400 miles, and top speed was 247 mph. Other versions had Bristol Pegasus, Bristol Hercules, or Pratt and Whitney twin Wasp engines. *Wellingtons* remained in RAF service as transports and trainers until 1953.

Roger Duhamel

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