

VOXAIR



THE VOICE
of the AIR FORCE

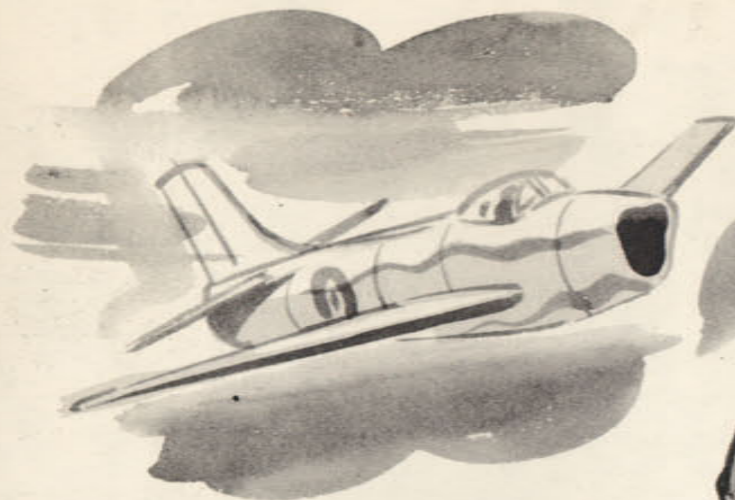
OFFICIAL PUBLICATION OF THE R.C.A.F. IN WINNIPEG



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VOXAIR

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THE VOICE
of the AIR FORCE

The views expressed by individuals in any article herein are not necessarily those of the RCAF or the staff of VOXAIR

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Volume 1
Number 1

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OFFICIAL PUBLICATION OF THE R.C.A.F. IN WINNIPEG

EDITORIAL

by Flying Officer F. G. Bolan

THERE HAS BEEN considerable optimism around the various units regarding the new R.C.A.F. Winnipeg magazine. It is therefore with great pleasure that we present to you the first issue of "VOXAIR."

One question that is predominant in all our minds is "Why VOXAIR?" Breaking the word down we have V-O-X, the latin word meaning voice, and A-I-R from Royal Canadian Air Force. Combining the two we arrived at our slogan "Voice of the Air Force."

To some this may seem like a very broad statement. However, when one realizes that we have from Air Cadets to Air Officers in our twenty-odd units, one begins to see that every part of the air force must be represented here—and so it is.

It can be seen that with such a wide variation in the function of our units, that it is exceedingly difficult to understand fully how we all fit into the R.C.A.F. It is the intention of VOXAIR to clarify this situation and present a picture that we hope will unite the units in a

common bond of understanding. As you scan our editorial content you will note that we have eleven unit editors who are responsible for gathering the material necessary to make this bond lasting.

In order that this publication may reach as many as possible it is to be published tri-weekly to coincide with the graduating course of the Air Navigation School.

We wish to take this opportunity to thank all those who submitted entries in our recent contest to name the magazine. Well over two hundred entries were received and the committee experienced considerable difficulty in arriving at the most suitable name. At this time we would like to tip our hats to the originator of VOXAIR—Flying Officer Callin. Well done!

As this, our first issue reaches you, we invite you to let us know just what you think of it. Remember—this is your magazine so give us your criticisms verbally or written. We, too, want a good magazine!

Cover Story . . .

OUR COVER SHOWS Flight Cadet H. Spikings of Windsor, Ontario, the honour graduate of the first course of navigators trained at 2 ANS, receiving his wings from the Right Honourable Hugh Montague, Viscount Trenchard, GCB, OM, GCVO, DSO, DCL, LLD, Marshall of the Royal Air Force.

Viscount Trenchard holds a unique position in the air forces of Britain and the Commonwealth. He, more than anyone else, deserves the title "Father of the Royal Air Force."

The son of an Army officer, Trenchard followed his father's profession and saw service in India, South Africa and West Africa, where he won his DSO. When the Royal Flying Corps was formed in 1912, Major Trenchard was one of the first officers seconded to it. Despite the fact that he had just

learned to fly, at his own expense in a civilian school, he immediately was made an instructor and later Assistant Commandant at the Central Flying School. From that time until his retirement in 1929, Trenchard's "singleness of purpose and faith in the men he commanded" helped to mould the doctrines and the traditions of Britain's air service.

In November, 1914, Trenchard was given command of a wing in the field, and by March, 1916, had become GOC the RFC in France. For almost two years he held this important post and then was recalled from France to become the first Chief of the Air Staff in the new Air Ministry that had been created in January, 1918. But Major-General Trenchard's heart was with his airmen in the field and after a few months he left his desk to return to France as creator and commander of the Independent Air

Force—the ancestor of the strategic bomber forces of 1939-45. After the war he again became Chief of the Air Staff, retaining that office for 11 years until his retirement at the end of 1929. The first CAS, Trenchard was also the first Marshal of the RAF, a rank which he received on January 1, 1927. He was created a peer in 1930 and in 1951 his long and distinguished career was crowned with a rare honour, the Order of Merit.



'PEG PERSONALITY

AC 1 James Donnachie McConnachie
"Scottie"

"SCOTTIE" McCONNACHIE is the airman you met at the station gas pump who said, "They will be thr-r-r-ee dollar-r-r-s and for-r-ty five cents please." He is an entertaining and cheerful fellow who has seen those far away places and has had many interesting experiences.

Scottie was born in 1925 in Greenock, the harbour city of Glasgow, Scotland. He left secondary school and worked as a welder apprentice at a ship yard for one year then transferred his labours to an aircraft factory for two years—a pattern that he followed three years later. He wanted to get back to ships, this time in the Merchant Navy. Dad McConnachie said "No"; Scottie said nothing, he merely signed.

His travels with the Merchant Navy took him to Newfoundland, Oran and Algiers in North Africa and Iceland—carrying all kinds of cargo from oil to troops. He served

on a ship, the Batory, which came into the headlines later when Gerhard Eisler, the German communist, escaped from United States to Poland.

Scottie's most memorable experience occurred when he took ship on an oil tanker despatched to a point 300 miles north of Iceland to refuel eleven destroyers and two cruisers engaged in searching and chasing the German battleship "Scharnhorst." Three days later the prey was sunk by the "Duke of York" after being slowed down by torpedoes from the Canadian destroyer "Huron," the British "Savage" and the Norwegian "Stord." Three days after the "Scharnhorst" was sunk, Scottie's ship was bombed and the crew were set adrift for two hours before being rescued by a Norwegian trawler. They were then transferred to a British corvette then to an Icelandic passenger ship and were landed at the American base at



Reykjavik before returning to Scotland.

Scottie planned to join another ship but here he followed his former pattern and transferred his allegiance to the air. He enlisted in the R.A.F. in 1945. After serving at Pershore with Transport Command, he was posted to Japan for Air Sea Rescue work and was demobilized in 1947.

He emigrated to Canada in 1948 and loudly insists that he is not a political refugee. In British Columbia, he got the sea spirit again and took employment at the Victoria dock yard, then later with the Canadian Pacific Railway. With the international situation becoming more cloudy, Scottie renewed his air force affiliations and enlisted in the R.C.A.F. in April 1951.

Life at Station Winnipeg is enhanced by Scottie and many, many others like him. With his humour and cheerfulness, Winnipeg is glad to have him.

14 Training Group Notes...

IT IS INTENDED to describe the function of 14 Training Group Headquarters, but to avoid any semblance of a formal treatise on the subject, the various duties will be related to the individual officers concerned.

As a result of greatly increased commitments for the R.C.A.F. air training programme which necessitated re-activation of many war time stations in Western Canada, it was decided to decentralize some degree of administrative and functional control over these units from T.C.H.Q. by forming 14 Training Group with Headquarters at Winnipeg. The Group Commander is therefore responsible to the Air Officer Commanding Training Command for the organization, administration and control of those stations, units and schools comprising 14 Training Group. Implementation of training policies and supervision and control of search and rescue operations in the Central Search and Rescue area are also responsibilities assigned to the Group Commander. Effective 1 September 1951, Air Commodore J. G. Bryans, C.B.E., C.D., was appointed Group Commander of 14 Training Group.

The Senior Air Staff Officer (S.A.S.O.) is Group Captain E. M. Mitchell, D.F.C., C.D. He is respon-

sible to the Group Commander for the supervision and co-ordination of the activities of senior staff officers at Group H.Q.'s. Except in matters of higher Group policy, he assumes all duties associated with the administration of personnel and material within the group, in accordance with the powers vested in the Group Commander. He deputizes for the Group Commander in his absence.

Wing Commander J. L. Bervin, A.F.C., C.D., has been attached to Group since November, 1951. As Staff Officer Air Training he is responsible for supervising the administration of all training within 14 Training Group.

The position of Senior Personnel Staff Officer is filled by Wing Commander D. Forbes, C.D. He is responsible to the Group Commander, through S.A.S.O., for all personnel administration within the group with the exception of postings, transfers and careers. These latter duties are carried out by T.C.H.Q.

As Senior Technical Staff Officer, Squadron Leader R. A. Skuce, M.B.E., is responsible to the Group Commander for all technical matters in 14 Training Group. This comprises of aircraft, armament and mobile equipment engineering,

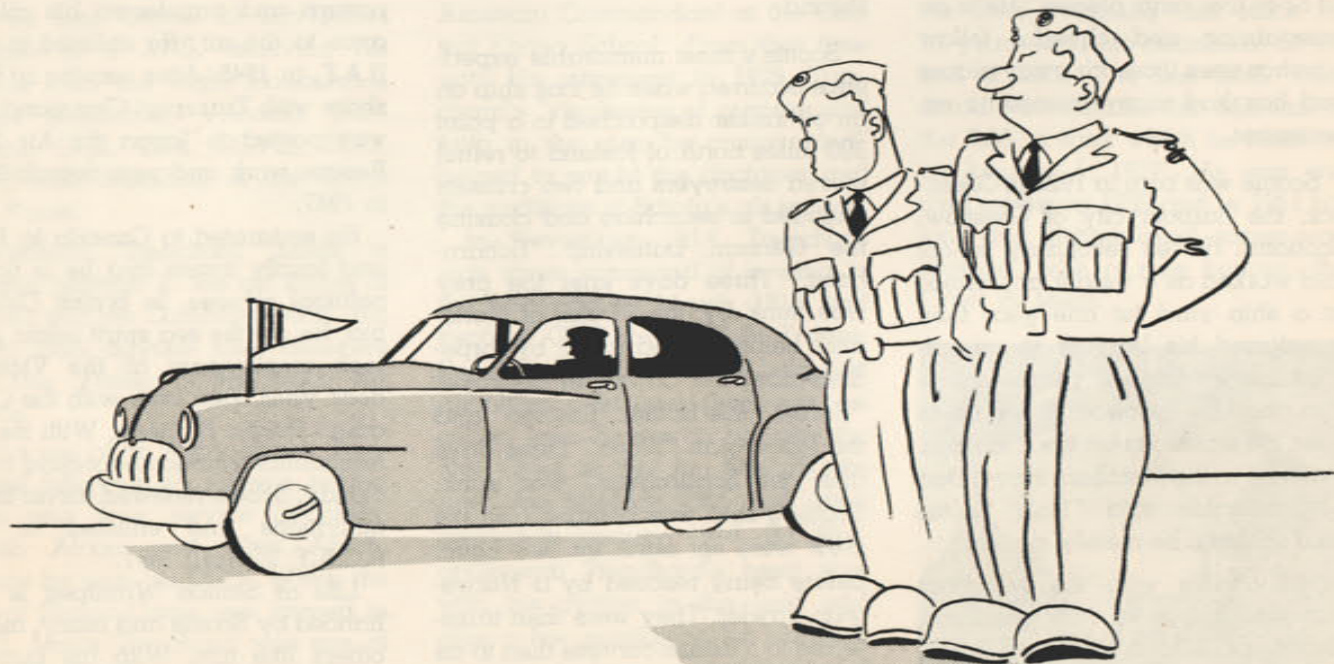
maintenance, construction engineering and supply. S/L Skuce is a graduate of R.C.A.F. Aeronautical Engineering School in Montreal.

The officer responsible for Telecommunication matters is Squadron Leader F. G. Winters, C.D. His career in the R.C.A.F. dates back to 1936 when he enlisted as a Wireless Operator Mechanic.

Squadron Leader D. V. Thomas is another officer that rose from the ranks. He enlisted in 1935 as an Armament Artificer. As Staff Officer Organization, he is responsible for co-ordinating all group plans and organization, establishments, accommodations and property requirements. This entails preparation of appreciations, briefs and plans concerning organization generally within group and necessitates maintenance of up to date records on all aspects of organization, establishments, strengths and accommodation.

The position of Group Accountant Officer is held by Squadron Leader H. G. P. Dymond. In his present position he is the specialist advisor to the Group Commander on all accounting matters and is also required to carry out inspections and audits at all units under group.

A continuation of this brief outline will be resumed in a later issue.



"I HEARD ONCE THAT THERE'S DYNAMITE IN CARS WITH FLAGS."

Recruiting . . .

THE STAFF of RU Wpg. joins with local units to wish The Voxair every success in its journalistic venture.

Recruiting — the lifeline of the RCAF. This theme may seem somewhat far fetched to many and not a few will scoff at the implication of these few words. But to prove our point, the following salient points are advanced to substantiate our allegation. During the six-month period ending 31st March, recruiting units throughout Canada have enrolled more than 6,500 personnel to help bolster the strength of the RCAF nearer the required quota. It can readily be seen that if recruiting was not carried out with a maximum effort the manning situation would present an acute

manpower problem for the RCAF. With our increased overseas commitments and the necessity of providing first-rate instruction for NATO aircrew trainees, it is conceivable that the manning of these units is of primary importance. However, more women and men are still urgently required to meet existing and future commitments of the RCAF.

Recruiting, generally, is now at a particularly difficult phase . . . that of having to compete with renewed seasonal activity in the various fields of construction and agriculture, which siphon off many likely prospects who might this day be serving members of the RCAF had they been the recipients of diplomatic persuasiveness at

the proper time. That is where YOU as a serving member of the RCAF (Regular) can be of particular assistance to the recruiting effort. Opportunities will arise when individuals approach you for some information concerning the Air Force and that is when it will prove advantageous to know YOUR Air Force. Familiarize yourself with the basic enlistment prerequisites and do not hesitate to point out the opportunities and advantages that a service career has to offer. Remember, it's YOUR Air Force and building up its strength to the required standard is of primary importance to all concerned. We know we can count on you for the utmost support.

(R. J. Orioux) Sgt.

JUNE 14
is
AIR FORCE DAY

Gates Open to the Public at 1 p.m.



INVITE YOUR FRIENDS — SHOW THEM YOUR AIR FORCE AT WORK

The University of Manitoba Squadron

IN 1948, the RCAF, realizing that the complex machines of war required skilled men to design and to maintain them, decided to increase its recruiting of university-trained men. As one means of reaching the university graduate, the University Reserve Training Plan was inaugurated to recruit into the Reserve suitable undergraduates. These young men were to be trained as junior officers, who, upon graduation, would fit into the Service in one of three places—into the Regular, the active Reserve (Auxiliary) and the inactive reserve (Supplementary). This put the RCAF into the business of training junior officers in all branches of the Service so that some would join the Regular upon graduation and the remainder would form a partially trained manpower pool of technical Officers.

The University of Manitoba Squadron (PR) is one of ten such organizations. To carry out its work it has a Commanding Officer of Squadron Leader rank and an Administrative Officer of Flight Lieutenant rank. Both of these men are University professors. Very broadly it might be said that their work consists of training and of liaison with the University. The real work is done by a Flight Lieutenant Resident Staff Officer and a Corporal clerk admin. F/L Deller and Cpl. de la Fontaine at present hold these two posts.

The strength of the different squadrons varies with the size of the university. The University of Manitoba squadron has an establishment of 100 Cadets in the three years. Cadets enter the Squadron after an interview board and a medical examination while attending first year of university. Training is in two phases—a winter lecture program and summer school.

The winter lectures are of general interest, topics such as RCAF history, Canadian geography, Principles of War, Air Power, the Roles of the Navy and Army are given.

The summer training is much more extensive. The first summer all cadets go to Reserve Officers School, held at RMC, Kingston where they receive a basic knowledge of the operation of the Air Force. After seven weeks there, they then go to trade schools for their particular branch for the rest of the summer. The second summer is spent at the trade school and if the Cadet is successful he is commissioned to the rank of Pilot Officer in the fall. In his last year the new P/O is posted to an active unit where he assists the appropriate technical officer.

The more glamorous part of the Service, the Aircrew trades, are not stressed in this scheme. The RCAF training of aircrew for the Regular and for NATO is too heavy to permit of the training of more than 70 university undergrads. These people attend the Reserve Officers School and then are sent to one of the aircrew schools for training. At the end of the second summer, if the Cadet is still in aircrew training, he is granted his wings and is commissioned. His third summer is spent with transport or Com Flight units as a member of the aircrew staff.

Great stress in this University Reserve Training Plan is laid on the technical training and for this reason recruiting is aimed particularly at the engineering students for the AE, CE, Armament, and Telecom branches. These people come not only from Engineering but also from Science courses where they study maths and physics. Of course all other branches

by Flight Lieutenant Deller

are represented including Medical, Padre and Physical Education.

Now that female officers are being enrolled into the RCAF it is expected that the University Squadrons will start recruiting female Flight Cadets, particularly for the Admin, Supply and Messing branches. It is felt that this will cause an even greater interest on the part of the 1st year university males in the URTP.

This summer it seems certain that some of these people will be posted to the various units around Stevenson Field. Perhaps a word or two to clear up misconceptions might be in order here. University students are just that—students. They go to school to learn and are in the Service for the summer for the same reason. You people in the Regular who have completed your training can help them, and incidentally your own Service, if you will remember this and aid them whenever you can.



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Silverwood's have the "KNOW-HOW"

Current Affairs

By Flying Officer D. H. P. Brown

Flying Officer D. H. P. Brown is an instructor in Effective Speaking and Current Affairs in 2 A.N.S. He was a navigator in the Middle East on torpedo bombers during the war, became a qualified member of the Goldfish Club after a ditching operation and later elected discharge. He was a radio announcer following the war and re-enlisted in the beginning of 1951.

The World Affairs Programme is just recently with us. Few, as yet, have had any actual contact with it. It is, as far as our service is concerned, an entirely new programme; involving an entirely new idea about what the well trained airman needs to know. It is a very large programme and will affect us all directly. It will be costly in time and in money as it requires a great deal of organization. All this being so it is obviously a programme which has been given very careful thought. The Minister and the Chiefs of Staff are fully behind it; and with the recognition that it is a long range plan which must not proceed without proper preparation, the programme is under way.

WE WILL all recall the fame of Cromwell's Citizen's Army, but too few of us will remember the basic tenet upon which this army was founded. Of his soldiers Cromwell stated, "He fights best, who knows why he fights, and loves what he knows." Let us apply this example to ourselves and examine it to see how it fits into today's scheme of things.

We are fighting today in Korea; we have troops in Germany and we are prepared to fight at any time in any place, to resist aggression and to protect our own democratic way of life. "Why do we wish to resist this 'aggression'?" "Why do we wish to preserve democracy?" "What is democracy?" To fit this in with Cromwell's statement, "Do we know why we fight?" Unfortunately, it is apparent in the case of a great number of us, that we cannot answer the question in the affirmative.

It was with this knowledge as a background that the Cabinet decided to form the Bureau of Current Affairs to supply the Armed Forces with information on World Affairs. Merely supplying pamphlets and brochures to all the various units would be of no advantage as it was also known from past experience; that too many of these items

eventually would be filed in waste paper baskets—unused. Thus in order to utilize the material provided to the fullest extent, it was decided that groups be formed to discuss World Affairs. These groups were to include every member of every unit in all the three services and were to be led by competent discussion leaders. This was and is a tremendous scheme and the problem of obtaining the discussion leaders was one of prime importance. The officers were the only members of the forces who were previously required to have a knowledge of World Affairs. In order to obtain qualified Group Discussion Leaders for World Affairs, it was merely necessary to give the officers a course in Discussion Leading Methods. STOP!! Yes the parallel is reasonably apparent, the Nazis did give information to their troops regularly. But please note the very great difference. In the case of the Nazi regime, the speakers were all graduates of the Heinrich Himmler school and were not dispensing truth but propaganda. Now, "Who voices the opinion in our case?" "Is it the Discussion Leader?" Certainly not. Every member of every discussion group is not only permitted to speak as often and as long as he wishes, but also every member is

encouraged to voice his opinions. The discussion leader is merely a chairman to keep the discussion centered around the problem of the group and is **not** (R) **not** to act as a political commissar. There are many other facets to discussion leading, many other qualities that are required to be a good discussion leader. All over Canada today, courses are being run by all units in order to teach the principles so that our groups may be led by efficient Group Discussion Leaders.

A good discussion group in World Affairs stimulates the desire for accurate information and helps us to overcome misconceptions and prejudices. By speaking and listening to others speak, we are training our speech habits and developing a respect for the opinion of others. Discussing problems of world importance and deciding on solutions to them broadens our outlook and helps to foster democratic thought and action. By doing all these things are we not therefore becoming better citizens of democracy? Are we not also proving it is better to be permitted to live in this manner rather than being told what to think? Possibly this may well be the most important of all, studying and discussing World Affairs makes us all better citizens of democracy and more Christian in our attitudes and thoughts toward our brothers. Will we then "know why we fight and love what we know?" To me, the answer is not yes, but definitely yes!

Total mileage operated—34,976 miles. Total gasoline consumption 5,000 gallons.

Why so many miles? Just take a look at the daily schedule that was issued to each section. That alone accounts for a good number of miles. Then there are hundreds of unscheduled trips each month that come up to meet unforeseen circumstances.

Let us not go too deeply into our problems on our first appearance in this magazine. This we can do in a later edition. We would like to take this opportunity of wishing Voxair every success in its venture.

THE ATOM—

Bomb or Benefit

By Flight Sergeant J. E. Marsh

THIS IS THE FIRST of a series of articles about the atom—what it is—where it fits into chemistry—what happens to it in an atomic pile and an "A" bomb and what part it plays in our new atomic age. In this and succeeding articles we shall try to explain such things as nuclear fission, radioisotope, plutonium, etc.—terms that are so casually tossed about in our daily newspapers.

In order to understand atomic energy, the causes and effect of an "A" bomb explosion and the commercial uses of radioisotope, one must understand something of the structure of matter and consequently something of the structure of an atom. Matter is something that has weight and occupies space. Listing a few types of matter we have wood, metal, rock, cloth and many others. Matter is indestructible. Undoubtedly certain types as wood, paper and cloth seem to be destroyed by burning in so far as their original characteristics are concerned but the chemical reaction simply changes the arrangements of the constituents into other types of matter as ash, carbon dioxide, water vapour, etc. This is the case in all chemical reactions or changes; certain materials disappear while others appear. Nothing has been lost, only the original usefulness or beauty has been destroyed. For the moment we will disregard the energy given off by the chemical change. If you will remember the basic principle of chemical changes or reactions we are well on our way to understand-

Flight Sergeant J. E. Marsh recently graduated from ABC Defence Course (Atomic, Bacteriological, Chemical) given at Camp Borden, Ontario, by the Royal Canadian Army Medical Corps. His knowledge of the subject in this article is best exemplified by the fact that Jim was top of the course with an average of 95 per cent. In this and succeeding articles, F/S Marsh hopes to bring home to you the very important part that the atom and its use will have on your future. We believe the knowledge contained in this article is extremely valuable to you.

ing such things as nuclear fission and chain reaction.

Wait! Before you throw the magazine away in disgust, because this stuff is about first year chemistry, please bear a bit longer and wade through the elementary stuff and then get on with the finer points of the atom.

Another characteristic of matter is that it is discontinuous; that is to say it is not as solid as we believe it to be. Consider the vastness of space occupied by the whole universe—sun, stars, planets, etc. Now compare it to the relative small bodies orbiting in this space. From this you can get some idea of the amount of space an atom occupies, when compared to the amount of substance in it.

Let's have a look at an atom. Matter is made up of approximately 92 naturally occurring elements, which when brought together in varying amounts and

combinations make up most of the known compounds. To name one of the more common we have water (H₂O). This compound is made up of 2 parts hydrogen and 1 part oxygen. Another is common table salt (NaCl) which contains two very poisonous elements, namely sodium and chlorine.

Some time ago the eminent chemist, Ivanovitch Mendeleeff, after analyzing a few of the more simple compounds, realized that there were far more elements in existence than were known at that time. Also that the elements differed in both weight and characteristics. Furthermore he realized that they could be arranged according to their increasing weight. This he did and found that periodically up the scale of increasing weights, certain elements had similar chemical characteristics. He, therefore, arranged them by weight in a straight line and as the similarity in chemical characteristics occurred, he placed them vertically adjacent and finally compiled a periodic chart of the known elements. An interesting feature of these experiments was that he discovered elements which although they could not be isolated at the time were known to exist because there was a position for them in the periodic chart.

Let us carry out a few of the first experiments which led to the compilation of the periodic chart. After several experiments with water in an electrical apparatus with an anode positive pole and a cathode negative pole, it was found in all

cases that 9 pounds of water when broken down into the constituent elements would always consist of one pound of hydrogen and eight pounds of oxygen and that there was twice as much hydrogen collected as oxygen. He therefore concluded that water by volume which was equal to two parts of hydrogen and one oxygen and that water by weight as stated above that by giving the weight of hydrogen the arbitrary figure of 1 the comparative weight of oxygen was 16. Since 2 parts of hydrogen only equal $\frac{1}{8}$ of the oxygen, in the formula H_2O then 1 part of hydrogen must equal only $\frac{1}{16}$ of the weight of oxygen. If H equals 1 then, by comparison oxygen equals 16 or is sixteen times heavier than hydrogen.



"H" is the atomic symbol for hydrogen.

"H¹" is the atomic weight of hydrogen.

From here on it is a simple matter to analyze other compounds which contain either hydrogen or oxygen. By comparing the weights of the other elements in the compound with that of either oxygen or hydrogen their atomic weights may be determined.

This procedure satisfied everyone for a time but Lord Rutherford. He discovered a slight discrepancy which we will discuss after we have had another look at the atom.

Here is an atom of hydrogen. Remember it was the lightest and



had an arbitrary weight of 1. It is made up of a central body called nucleus and an orbital body (because it travels in an orbital path

about the nucleus in much the same manner as the earth around the sun). If you remember the trick of the stone whirled around the head on the end of a string, you must realize that same attraction is necessary to counteract this tremendous centrifugal force in so tiny a universe to keep the outer body orbiting about the nucleus.

If you can recall the law of magnetism—unlike poles attract and like poles repel—you can see that we must have such an attraction existent in the atom. This was discovered to be true and applies to the atom thus: The central body, the nucleus, had a strong positive charge, so was called the proton. The orbital body had an equal negative charge and of course opposite to the proton. Do you recall the vast amount of space which the atom occupied when compared to the amount of substance? Here are a few dimensions:



Diameter of nucleus—
10-12 cms. or

$$\frac{1}{11,000,000,000,000} \text{ cms.}$$

Dia' of Atom 10^{-8} cms.

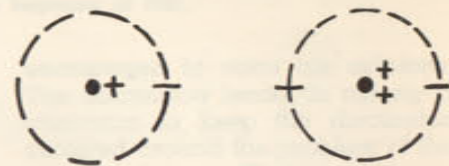
$$\text{or} \frac{1}{100,000,000} \text{ cms.}$$

Dia' of electron
 $\frac{1}{1,840}$ of Dia. of nucleus

Let us try a few "IFS." If the diameter of the nucleus were 1 inch then the electron would be orbiting on a path 10,000 inches (833 feet) away and its diameter would be approximately .00005 inches. From this you can readily see that there is far more space in matter than there is substance and the size of an electron is almost negligible when compared to the size of the nucleus. We can then conclude that almost all of the weight of the atom is in the nucleus.

From the lightest element we can advance to the heavier ones. Helium for example has two electrons,

therefore it will have two protons to maintain its magnetic balance. Consequently it will have twice the weight of hydrogen-atom and can be compared thus:



and by the atomic formula should look like this—

Hydrogen ${}^1_1\text{H}^1$ atomic symbol

1 atomic weight of 1

1 one porton

Helium ${}^2_2\text{He}^2$ atomic symbol

2 atomic weight of 2

2 two protons

From here on it would just be dandy if the atomic symbol for helium was 2He^2 , but it is not. It is 2He^4 .

Lord Rutherford worried about this discrepancy and made a guess that was very nearly correct. He assumed that there was something in the nucleus that added nothing to the atom but weight. It was later proved that such was the case—a particle weighing as much as the proton 1 and having both a positive and negative charge occurs in some of the atoms. These he called neutrons and accepted the added weight.

The only thing wrong with the whole thing was that every once in a while there occurs in most of the elements, atoms which were actually heavier than other atoms of the same elements. To reconcile this new phenomena with the original arrangement (which were previously arranged according to their weight) in the periodic table they remained in the same relative position on the chart and were given an atomic number equal to the number of protons in the nuclei and an atomic weight that was equal to the average of all the isotopes. For an example, the original hydrogen atom had 1 proton therefore an atomic weight of 1. So 1H^1 but occurring once in every 5,000 atoms of the hydrogen ele-

ment there is the heavy isotope of hydrogen which has one proton and neutron. An atomic weight of 2 thus, by the atomic formula 1H^2 , they called a heavy hydrogen atom and as we shall see later is quite handy to have around for an atomic explosion.

Many of the elements have as many as 6—even 10—isotopes, each having a varying atomic weight so the generally accepted form for an atom is in the isotope. Now we come to the hard bit. Some of the elements are quite stable. This means they are quite satisfied to be what they are and are more or less content. Such an element is lead. The atomic formula for lead is 82Pb^{207} approximately. Again it has 82 protons and therefore 82 electrons. This gives us an atomic weight of 207. It therefore has 207 minus 82 which equals 125 neutrons.

(To be continued)

... at the flicks

June 8—Sunday
at 6:15 and 8:30 p.m.

MR. LUCKY

A comedy story of an ace gambler starring
Cary Grant — Laraine Day
NEWS CARTOON

June 10, 11—Tues. and Wed.
at 7:30 p.m.

FROGMEN

Starring
Richard Widmark — Dana Andrews
CARTOON SHORT

June 12, 13—Thursday, Friday
at 7:30 p.m.

UNCONQUERED

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starring
Gary Cooper — Paulette Goddard
and a cast of 1000
CARTOON

(Continued from page 20)

ing of a Navigation Officer, a Flying Control Officer, a Meteorologist, communications technicians and operators with their respective equipment. The other Dakota carries the scanners, the Pararescue team and a load of drop-able emergency equipment for both aircraft, as well as the aircraft technicians necessary for maintenance. After obtaining clearances, the planes take off into the dusk and set heading for The Pas.

After a three-hour flight safe landing are made at The Pas airport. It is now past eleven p.m. and the aircrews leave for the local hotel in order to obtain the good night's sleep necessary to carry out an efficient search flight the next day.

Not so the Search HQ staff, who must remain for the rest of the night preparing for the aircrew briefing at 0700 hrs. next morning. Communications must be set up, all possible information gathered, search areas designated, tracks drawn on maps, signal frequencies selected, and innumerable other responsibilities carried out.

(To be continued)

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Early Days of the RCAF Auxiliary in Winnipeg

by Flight Lieutenant Bill Morriss

SUNDAY FLYERS! You've all heard it. Sometimes it has been "Weekend Warriors." However it was expressed it was applied to the reserve forces of the R.C.A.F. It can safely be assumed that the originators of the expression meant it to be humorous.

A member of the auxiliary is a strange beast. He is part civilian and part serviceman. He belongs completely to neither category. His wife sometimes wishes he would make up his mind whether he is fish, flesh or fowl. Then occasionally she may see him at home. To his boss he is that fellow who is always wanting some time off to go out with the air force. To the air force he is somebody who doesn't seem to put in as much time as he should. A wise man once said, "You can't serve two masters." Why then do so many men in Winnipeg turn out one or two nights a week and week-ends to labour over a bucket of bolts or keep his flying in trim?

It has been going on in Winnipeg for twenty years under a variety of names. First it was the "Non-permanent Active Force." Then came the war and it became the "Volunteer Reserve." The war ended and it became the "Auxiliary" then the "Reserve" and now the "Auxiliary" again. Whatever the name, these forces have built up a proud tradition. That tradition is still building after 20 years and the phrase "Sunday Flyer" or "Weekend Warrior" has become something of which to be proud. A glance over the past twenty years at the history of the City of Winnipeg 402 (FB) Squadron, Auxiliary R.C.A.F., will show why men are still willing to serve two masters and like it.

Things were not always as jammy as they are today. A comparison of things as they were in the beginning and the present large auxiliary in Winnipeg will show just how the reserve forces have grown. The story begins in 1932 when Number 12 Army Co-operation Squadron had its origination. It was the grandpappy of the present 402 Sqdn. with their Mustang and Harvard aircraft. The first Commanding Officer was Squadron Leader J. A. Sully, A.F.C., who later became Air Vice Marshall Sully as Air Member for Personnel. In those depression days it was hard to get into No. 12 Squadron. Many applied but the establishment was small. Those who made it took a fierce pride in their outfit even though discipline was severe. If you couldn't keep your end of the business going, there was always someone to take your place.

We were pitifully short of supplies and equipment. Space was limited. Parades took place two nights a week at Minto Armories along with the army. If the army were using the floor there was no drill parade that night. Quarters consisted of six rooms in the basement used for supplies, equipment and messes. Flying facilities, as now, were based at Stevenson Field. Here the flying was carried out on week-ends. These consisted of one very small hangar which was situated approximately where T.C.A. now have their large hangar and offices. Aircraft consisted of one Fleet Bi-plane, one Tiger Moth and four Avro Tutors. Not a very formidable or warlike line up! As one ex-air gunner remarked recently, "The first time I ever saw a machine gun on an airplane was at summer camp in 1936 when I saw a Westland Wapiti belonging to the permanent force." The upkeep of the air-

craft was excellent. There was only one minor engine failure in four years.

In 1937, when the number of Non-Permanent Squadrons was changed, No. 12 became No. 112 (AC) Squadron. Though the name changed and they became redesignated as the Auxiliary Active Air Force, the situation and operation remained the same. They continued to go to summer camp at Camp Shilo under canvas with the army. Training continued until 1939 and the outbreak of World War II. No. 112 along with Nos. 2 and 110 was chosen as a Canadian active service force unit. The squadron moved to Rockcliffe to continue training with the School of Army Co-operation before going overseas. About this time the squadron received the old "Lizzies" (Westland Lysanders) from England. The Lizzies didn't remain long in Canada but soon returned to England.

About 106 men from the Winnipeg Squadron left first to become members of 110 Squadron (Toronto). Consequently about half of the City of Toronto Squadron was composed of Winnipeg men. Both squadrons proceeded overseas in June 1940. While the Battle of Britain raged over Southern England, 112 continued to train as army co-operation. The fall of France before this had deferred their hopes of going into action in support of the Canadian army.

In December of that year, fighter squadrons were in great demand. 112 exchanged their Lizzies for Hurricanes. It was then re-numbered No. 2 (Fighter) Squadron under the command of Squadron Leader G. R. McGregor (later Group Captain McGregor, O.B.E., D.F.C.), who was noted for his work in the Battle of Britain. They continued their training until March of 1941 when the squadron was declared operational and the final numerical designation was made. The Squadron then became 402 and was known as the "Winnipeg Bears."

In Fighter Command they carried out valuable work both in Hurricanes and Spitfires but this period alone would fill a good sized book so we will not elaborate on it here. Let us suffice to say that the record book shows 50 aircraft (enemy) destroyed and about 90 probables. In addition, scores of locomotives, vehicles, vessels and many other targets were battered by cannon shell, bullet and bomb.

This sketchy history is but part of the reason why the "Weekend Warriors" keep working in their spare time. More developments will appear in a later issue.

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At left is our accredited Representative Andy Grierson, wartime R.C.A.F. pilot.



TODAY, Course 19, the third graduating class of navigators of 2 A.N.S. receive their wings. This group is comprised of both R.A.F. Acting Pilot Officers and R.C.A.F. Flight Cadets who are receiving their navigator's flying badge from the station commander, Group Captain L. H. Randall, D.F.C., C.D.

During their stay in Winnipeg, they received training in all the practical and theoretical phases of navigation plus celestial, maps and charts, compasses, instruments, armament, photography, meteorology, radio and radar, Morse, law, service writing, executive training, management, leadership, citizenship, organization and effective speaking.

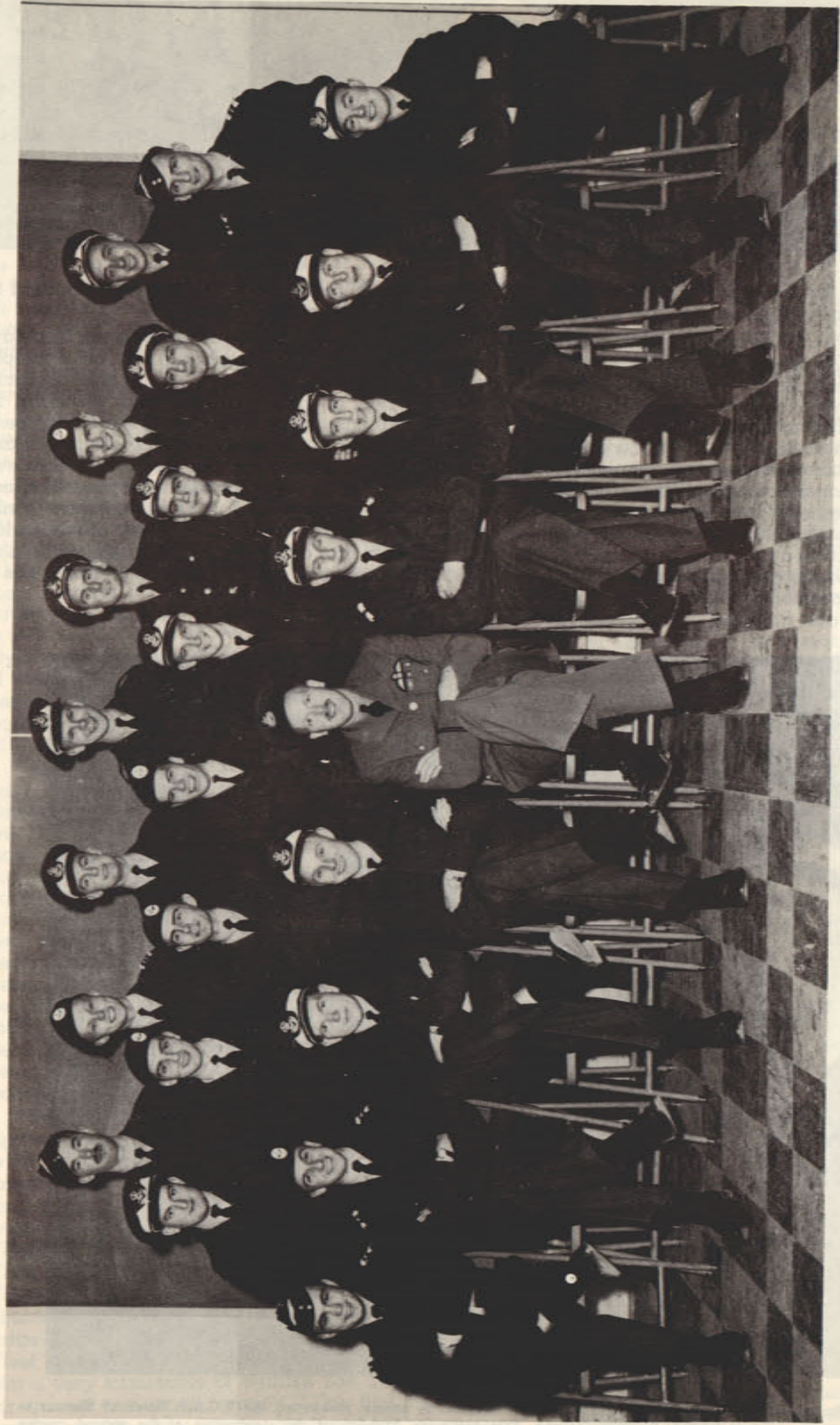
The members of this graduating class have carried the assignments and responsibilities of the cadet organ-

ization very efficiently and have set a high standard for present and future courses to maintain.

Wings parade day is one of the most exciting days in an aircrew man's life. It marks the successful completion of concentrated academic, flying and character training. When he has attained wings standard, he knows he still has a long way to go to reach top operational proficiency but he goes with the assurance and the confidence of getting over the hurdles. He has developed a pride in his trade because he knows that as a navigator trained in the R.C.A.F. he will not have to take a back step from any counterpart in any of the world's air forces. He is now equipped to take advanced training to the specifications of any of the various commands in any theatre or sphere of operations.

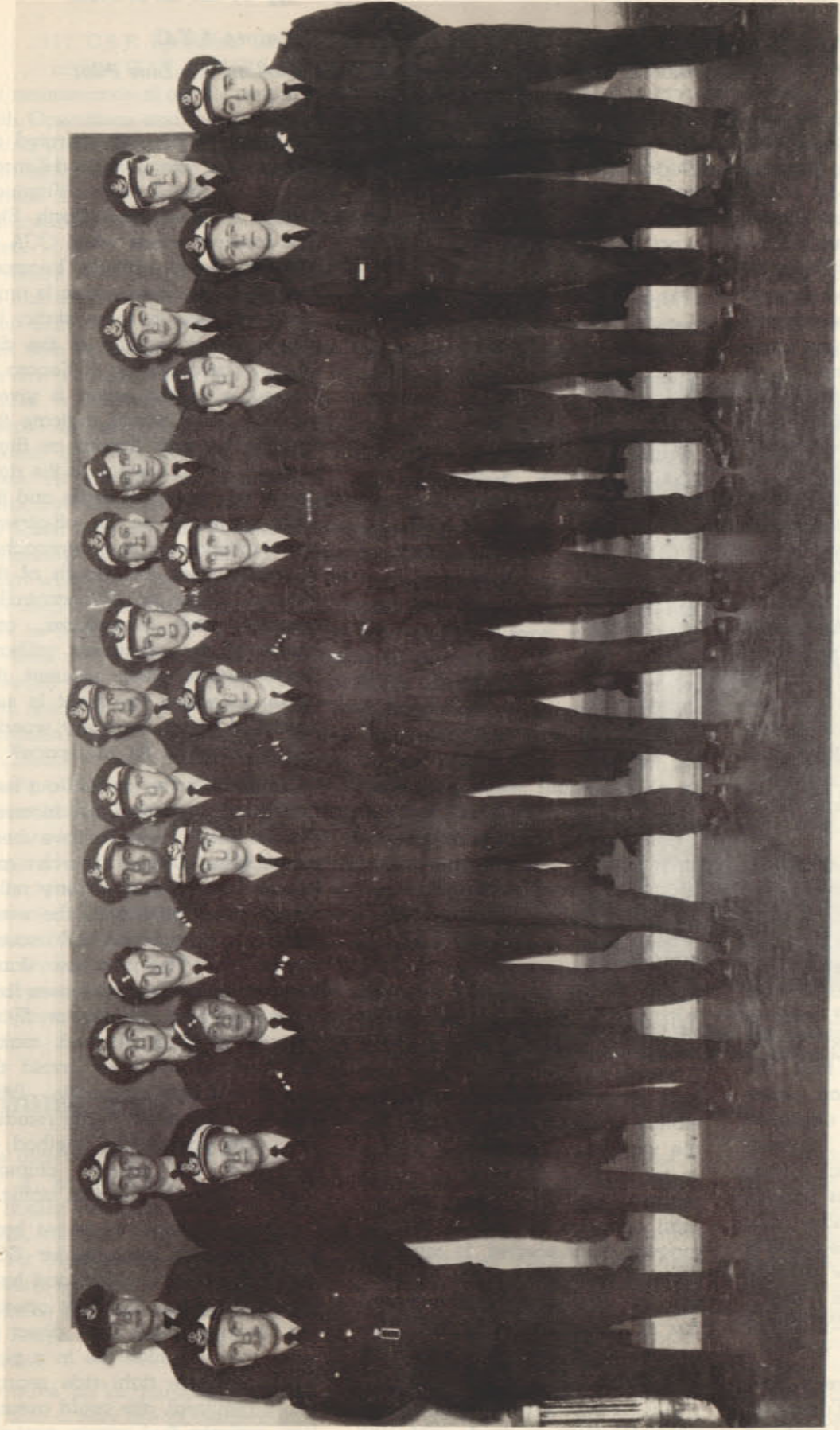


Air Commodore W. W. Brown, C.D. Chief Staff Officer of Training Command is shown presenting the R.C.A.F. Scroll of Honour to Pilot Officer Robert E. Morgan of Stewartstown, Northern Ireland. This ceremony highlighted the graduation of the second course of navigation from 2 A.N.S.



COURSE 19 WA

Back Row: F/C Wheeler, A/P/O's Marsh, Thompson, Dille, Quinton, Jones, Fawke.
Middle Row: A/P/O's Bartlett, Gilchrist, Duncan, Owers, Badenoch, Turner, Buckingham, F/C Dalphy.
Front Row: F/C Griffiths, A/P/O's Brown, Warren, Bentley, F/O G. Petzold, A/P/O's Roberts, Ayling, Russell, Sutton.
 (Course Director)



COURSE 19 WB

Back Row: A/P/O's Morgan, Booth, Pharaoh, Ball, Whitford, Dobson.
Middle Row: F/C Marlin, A/P/O's Wheeler, Moore, F/C, Laforge, A/P/O's Ashmead, Heywood.
Front Row: A/P/O's Wilcox, Howe, F/C Gaskin, A/P/O's Hollins, Curtis, Galley, F/C Paskaruk, A/P/O's Shaw, Hancock.
 Not included: A/P/O Bradley.

Thank God for Lots of Air By C. R. Brereton

Senior Area Traffic Controller, Winnipeg A.T.C.

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THE above title is not in any way intended to be profane. If there is any one thing for which those of us in Air Traffic Control or the airline business should be deeply grateful, it is our bountiful supply of air space; and, as air traffic continues to increase during the succeeding years, we may possibly have more and more reason for uttering these words of thanks. Even with today's volume of traffic, and controlling in a relatively quiet area, we occasionally have reason to feel very thankful and to wonder if certain crews feel likewise. If you never have, possibly you are overdue. Certain experiences at Montreal (some Ferry Command crews unable to understand a clearance, in English), and other busy spots during the days of the last war, made one feel that lots of air was the greatest argument against any form of traffic control. No matter what certain crews did, it seemed they just couldn't manage a collision.

Today, coincident with a marked increase in air traffic, airline and military operators are placing more and more accent upon ADF routes, direct routes, pressure pattern, etc. The airlines, enthusiastically pointing to savings involved, are, of course, mainly interested in the conservation of time and fuel. The military are, in addition, interested in the training and utilization of a navigator, and military instructions call for direct routing whenever a navigator is carried. It is a fact that we have now reached a point where the majority of IFR flight plans show at least a portion of the route as "direct." Airways routing is rapidly becoming a thing of the past.

The direct route between such places as Winnipeg - Edmonton, Winnipeg - Lethbridge, Lakehead-Kenora, Lakehead-Sault, Wiarton-

Sault, etc., etc., all put aircraft on what was previously considered the "wrong" side of the airway. In fact, it puts them off present airways for a goodly portion of their flights.

What about separation on such flights? If it is a certainty that uncontrolled routes must soon be a thing of the past, then how should they be set up into a system? How can they be efficiently controlled?

Altitude separation is fine until flight conditions, termination of flight, etc., require climb or descent through some other aircraft's altitude. Can two aircraft on ADF, or navigator's direct course, be certain that they are on the right side of a defined track? Where the route is short or where the fixes are numerous, no doubt the track can be accurate. Over lengthy routes the accuracy in compensating for drift and in estimating the fix ahead would seem to be very doubtful. The route from Lakehead to Kenora, for example, is particularly bad in that communication is often lost for a considerable portion of the flight.

Right side separation, even at best (same course of same radio range), is still the cause of much difference of opinion. One captain recently expressed the opinion that it should be used more freely and both aircraft be given more responsibility in effecting "well right." On the very next day another captain in the employ of the same airline refused "well right" from an aircraft operated by one of his colleagues, and elected to maintain altitude separation to the destination fix. Both aircraft were operating on the same leg of the same range on a common company frequency.

ATC controllers themselves are often reluctant to trust right side separation. It is often suspected

that some flights are operated as follows over the Lakehead-Kenora portion of the Toronto-Winnipeg route: A westbound North Star uses forecast winds when CCA to a much lower altitude becomes desirable. Radio reception is practically nil due to snow static, for approximately a third of the distance. The south leg of Kenora is crossed, a routine report is given, which to ATC would indicate the flight to be over Kenora as flight planned. No correction to the right side of the airway is made and the flight continues on an off-airway track until visual, and approaches Winnipeg from well south of the airway. When an ATC controller suspects such procedures, and knows of the off-airway military flights which often frequent the region in which the flight is suspected of being, is it any wonder we are thankful for air space?

It might also be pointed out here that having received the incorrect Kenora PX, it would have been some time before Search and Rescue began looking thirty miles south of the airway in the event that such a procedure had become necessary. The practice (fairly common, too) of reporting over fixes when not over the fix, or flying other than flight planned, makes the average controller avoid the use of right side separation. Properly used, however, it still remains the most satisfactory method of providing for altitude changes through opposite direction traffic.

During a period when we have had numerous requests for CCA due to ice or turbulence, and have requested certain flights to operate via airways rather than direct (in order that we might be in a position to provide right side separation if required), one could assume from remarks that certain captains feel we are doing so only to make

111 C&R As a Crewman Sees It . . . By Cpl. H. C. Fuller

111 C&R Servicing, under the able guidance of Sgt. G. N. ("GUS") Mouchet, is responsible for maintenance of all 111 aircraft, and, in co-operation with Operations and Air Movements Unit, for the servicing of all transient aircraft on Station Winnipeg. In connection with 111 maintenance, personnel from this section are often called upon to crew on 111 trips, both on communications and on search and rescue operations.

Since Winnipeg is a major refuelling base, situated as it is on the main Canadian east-west air route, aircraft arriving from both directions often keep the section with its hands full. Maintaining twenty-four hour service to anything from Austers to North Stars requires a considerable amount of experience, and keeps us busy with duties involving passengers, freight, gas, oil, repairs, storage, and daily inspections. At present a major problem is aircraft parking area, but the outlook is that this difficulty should soon be taken care of. The volume of aircraft handled has gradually increased with Air Force expansion to a point where we now service up to 300 various aircraft per month, and the prospect is that further expansion will be matched by a further increase in our work.

One of the more interesting phases of our work is crewing with 111 aircraft on communications or search and rescue trips. Communications now are generally confined to the transport of 14 Group staff officers to T.C.H.Q., A.F.H.Q., and the various training stations under 14 Group jurisdiction, though frequent miscellaneous transport assignments add a good deal of variety. In connection with 111's C&R function, the section is required to stand by at all times for emergencies which may take place anywhere in the large search area assigned to the flight. Until recently a Dakota specially equipped with a long range tank, skis, J.A.T.O., radar, etc., was used for this work. This airplane, which flew for two years in Burma during the war, and was rebuilt at Canadair after four years in storage at Weyburn,

Sask., finally came to an unhappy end last April. It had been with the flight for two years, and had flown quite a number of northern missions. Under the able captaincy of our two most experienced northern pilots, S/L J. H. Simpson, A.F.C. and F/L K. O. Moore, D.S.O., the flight has undertaken a great variety of searches, mercy flights, Red Cross blood-lifts, and so on, to some of the most remote and least accessible stations in the far north.

All in all, there is seldom a dull moment at 111 Servicing. The wide range of work involved in fulfilling section responsibilities afford an exceptional opportunity to broaden trade experience and knowledge.



The para-rescue team prepares! Corporals Wall and Savage are shown checking and assembling the dozens of articles to be dropped to the "survivors."

Thank God for Lots of Air (Continued from previous page)

life difficult rather than to prolong it. If, for example, when control is finally established east to Lakehead, we clear a westbound flight to fly airways over Graham and Kenora for such a reason, we can imagine that the resultant howl will be heard from the Atlantic to the Pacific.

I have, so far, purposely touched on only a very few of the problems that we face today. There are

many, many more, not the least of which will soon be the separation of high level, high speed, rapid descent jet traffic. The question is: How are we going to solve these problems? What are the answers? We in traffic control feel that the Canadian Air Line Pilots' Association is, to say the least, vitally interested. We in traffic control are vitally interested and feel we know a few of the answers. The R.C.A.F.

are vitally interested. The pilot flying IFR for a private concern is vitally interested. Do you in CALPA feel that there is proper and working liaison between your organization and ours, especially at the field level?

Thanking God for what we have is good, but I for one would like to see some of the answers. That air is becoming more crowded everyday.

Lets' talk about the weather

by D. M. Robertson

(Meteorologist-in-chief at the Department of Transport, Stevenson Field)

"All rivers run into the sea, yet the sea is not full; unto the place from whence the rivers came, thither they return again."

A BASIC CONCEPT in physics is that matters can not be created or destroyed, it can only be changed in form. It follows that the total amount of water available for our use is not subject to change but may appear in different forms as solid, liquid or gas. Reservoirs for this water are the oceans, soil and atmosphere.

Because the total amount of water does not change, it follows that there is a definite relationship between the amount of water existing in the oceans, the soil and the atmosphere.

Evaporation, either directly or indirectly through vegetation, takes moisture from the soil and this water is replenished by precipitation.

The water is continually passing through a cycle—ocean - atmosphere - precipitation - soil - lakes - rivers - oceans.

The atmosphere is the machine responsible for carrying the water from the oceans to the land. The water evaporates from the surface of the oceans and may be carried great distances by the air currents before being released as precipitation.

Unlike a river, the currents of the atmosphere do not follow fixed paths; direction and speed of the air current is continually changing. It is because of these changing currents that we experience air of different temperature and changes in temperature result moisture content. Major as we are invaded by air from the south or from the north. Its moisture content will be greater if the air has followed a direct path from the ocean area.

Air in the tropical regions is warm and has greater ability to hold moisture. Passing over the Gulf of Mexico or the adjacent oceans this air acquires large quantities of moisture which the air currents periodically carry to Canada.

Air from the northern or Arctic regions is cold and this reduces its ability to carry moisture but usually its path is over snow or cold dry

land surfaces and there is little moisture to be gained. However, it may reach southern Canada by a devious path, passing over the northern reaches of the Pacific or Atlantic oceans and so the moisture content becomes somewhat greater.

Moisture-carrying qualities of warm and cold air are in marked contrast. Air at 90 degrees F can hold eight times as much moisture as air at 32 degree F and over 300 times as much moisture as at 40 degrees. It is on currents of the warm moist air from the south that we must depend for our moisture.

Moisture in the air is of little value for vegetation unless released as rain or snow. In the dry years (1929-36) on the prairies there was ample moisture in the air; however, precipitation was light due to the lack of an agency to release the moisture.

To release moisture it is necessary to cool the air and thus decrease its ability to hold water. The water droplets on the outside of a cold glass of water in summer or the frost on windows during cold winter weather are examples of the adjacent layer of air being cooled sufficiently to release the moisture.

Clouds and precipitation is evidence of cooling in the atmosphere to the point where water droplets are formed. This cooling is a result of air being allowed to expand.

The same principle is applied in designing the electric refrigerator when compressed gas at room temperature is led into the storage compartment and allowed to expand. The temperature of the gas thus lowers markedly and cools the storage compartment.

The cooling necessary to reproduce clouds and rain is caused when air is carried upward to regions of lower pressure and allowed to expand. The rate of the decrease in temperature may be as much as 5½ degrees F. for a rise of 1,000 feet.

British Columbians are fortunate in having a built-in device for directing the air currents upward—the Rockies and the other mountain ranges. Air carried by currents off the Pacific Ocean are forced to rise

over this mountain barrier and in doing so the moisture is released as cloud and precipitation on the western slopes.

British Columbia can depend on more than ample supplies of precipitation because of the mountains but their gain is a loss to the prairies. Westward currents of air have lost a large portion of their moisture passing over the mountains.

On the prairies we must depend on moving mountains of cold dense air for our general rains. The prairies are subject to alternate invasions of strong currents of warm and cold air. It is only when these currents converge that they interact to cause an extensive area of rain so characteristic of the spring and fall.

When two currents of different temperatures converge, the warmer and less dense air is forced to rise up over the wedge of cold air. Cloud forms in the higher warm air and the precipitation falls into the cold air. This cloud and precipitation may extend over an area 1,000 miles in length and 500 miles in depth.

Those experiencing the rain are in the cold air and you have probably noted that temperatures are below normal on such occasions.

Local showers or thundershowers may form within the current of warm or cold air due to upward currents caused by local heating. When the surface of the earth is heated by the sun bubbles of air will rise similar to those within a pot of boiling water. If conditions are favorable the rising bubbles will carry the air sufficiently high to permit the release of large amounts of moisture.

The amount of precipitation at any one point will depend on the path of the currents carrying moisture from the oceans, the amount of moisture in the air, and the nature and location of the agency available for releasing the moisture. This atmospheric engine is so vast that we cannot exert any appreciable control.

The only possible control over the water cycle is through reducing the amount of water lost by evaporation and retarding the return of water to the ocean through runoff.

Shelter belts, dams, cultivation and good farming technique generally aid western Canada. Artificial ponds, however, tend to modify temperature but do not add any significant amount of moisture to the air.

Reproduced by courtesy of Winnipeg Tribune

Station Winnipeg Telecommunications By F/S E. McLachlan

WELCOME to the first issue of our new station magazine. In this current and subsequent issues it shall be our aim to familiarize everyone with out telecommunications personnel, our everyday duties, our sports activities, our play, etc.

To many, the term "Telecommunications" will not ring a bell. It was approximately a year and a half ago that the term and branch of "Signals" was changed to "Telecommunications." Thus when you are reading publications you will probably find the old term signals still used in many instances, further, various terminology was also changed. For example, the "Teletype Office" is now "Commcen."

The telecommunications section is responsible for all communications facilities on the station. This includes telecommunications equipment installed in aircraft, buildings,

marine craft, vehicles. We liaise with operations, training, and administrative branches. Heading our organization is the S. Tel. O. S/L G. H. Aitchison, and the Officer I/C Maintenance, F/O H. W. Grant. All branches of communication on the station are responsible to the S. Tel. O. and each of these branches or sections is supervised by senior NCO's.

In these sections we employ the following tradesmen and civilian personnel. Communications technicians, (both air radio and ground radio), communications operators, telegraph technicians, radio operators, teletype operators, clerks National Defence, telephone switchboard operators, radar technicians (air and ground).

By the time this issue is in circulation F/S Ogren, NCO I/C Com. Ops., and F/S Chenier, NCO I/C Ground Radar Maintenance, will

probably be basking in the sun aboard some luxury liner on their way to France. Sgt. Spafford, one of our supervisors in the joint tape relay centre will be mopping his brow in the humid climate of the District of Columbia, U.S.A. Oh, well, some of these days perhaps the remainder of our frustrated personnel will get their chance. We wish those that are leaving us good luck and hope to meet up with them again in the future.

In the next issue, we shall divulge the activity of our 24-hour service in the various sections of communication. Until then, enjoy the hot weather of Winnipeg which is making the headlines all over the continent. Yours truly will most likely be found sprawling on some beach adjacent to Winnipeg, staring at the beautiful women, a wonderful pastime, see you next issue then.

R.C.A.F. Ground Observer Corps By Flying Officer H. Meston

IN OCTOBER, 1951, the RCAF formed a new organization in this country to be officially designated as the RCAF Ground Observer Corps. This is to be a Corps comprised of civilian volunteers, trained and administered by the RCAF Regular Officers. The purpose of this Corps is to act as a supplement to the existing Radar Warning Screen, and to report to a central operations room, or Filter Centre, any aircraft seen or heard in the vicinity of each established post.

To effect this organization, GOBc detachments have been established in each province and are staffed by Regular air force officers. These officers are responsible for the Filter Centre in their respective areas and for the organization and establishment of the GOBc in that area. Each Filter Centre will be staffed by two officers and

four airmen, who are responsible for the administration and training of civilian volunteers as Filter room staff.

The GOBc detachment which has been established in Manitoba is to be known as 4 GOBc Unit, under command of Provincial Coordinator F/O W. W. Brown. In

... By Flying Officer D. Palmer

ONE OF CANADA'S vital defence measures, aircraft spotting and reporting, by the RCAF Ground Observer Corps now being organized across Canada, is to be extended into the Manitoba area in the near future to form yet another link in this nation's country wide security system.

Winnipeg is to be the centre for the Manitoba area, and F/O W. W. (Bill) Brown, a former member

addition No. 40 Filter Centre is to be set up in Winnipeg in the near future with F/O H. C. Meston and F/O G. Moll as Filter Centre Officers. At the present time we are in the early organization stages, and are not recruiting civilian volunteers for our Filter Centre until such time as the Filter Centre has been set up in Winnipeg.

of the Winnipeg Police Department, and a Winnipeg resident, is now setting up a headquarters in the city for the organization of the Observer Corps in Manitoba. In addition, F/O G. E. (George) Moll, from London, Ont., and F/O H. C. (Harold) Meston, from Windsor, Ont., will be busily engaged in this work, and in the establishment of a Filter Centre in Winnipeg. From the Filter Centre, the slender life lines will go out to observers at various



A Typical Search

THE early morning silence of the seaplane base at Lac Pierre in Northern Saskatchewan is broken by the roaring engine of a Fairchild seaplane on its take-off run. This event attracts no more than routine attention, since several commercial companies operate from this base; and no one could yet suspect that this particular aircraft is destined to be the object, before long, of an intensive search.

The Fairchild carries two men—the owner, an American sportsman, and his companion. The owner is an experienced pilot—experienced, that is, in flying over populated terrain, using radio navigation aids. He and his friend are confident and carefree, happily anticipating a week's excellent fishing in some secluded and untouched lake. They have left word at Lac Pierre that they intend to return in a week. Their destination for the first day is to be Race Falls, where they will refuel.

At cruising altitude the pilot levels off and sets course. His companion, who also has had flying experience, arranges his maps preparatory to navigating the trip. They cruise steadily northward under a serene blue sky, traversing a wonderland of lakes and rivers ill designed to foreshadow the harrowing ordeal which is to befall them . . .

Ten days later a government seaplane base agent puts through a phone call to the RCAF Rescue Co-ordination Centre at Winnipeg. He reports that a private Fairchild seaplane is three days overdue on a fishing trip between Lac Pierre and Race Falls. Aircraft of several civil companies have flown over the missing plane's proposed track, and have sighted nothing. A formal request is made that the RCAF commence searching. A signal is despatched to AFHQ, the search confirmed and a Searchmaster appointed.

The Searchmaster first informs the OC of the local Communications and Rescue Flight of the situation and proposes a time for the first briefing of aircrews. The Searchmaster and his staff then gather in the Operations Room and commence a thorough investigation by every possible means—radio, telephone, and telegraph—to ascertain whether any agency has had any word of the missing aircraft. This must be done as quickly as possible in order to prevent search aircraft from going off on a wild goose chase. All RCAF, army, navy, DOT, and civilian radio communications agencies in the north are contacted—a tedious, but necessary piece of detective work. The results are all negative, and the search begins in earnest.

Meanwhile the OC of the C&R Flight has gathered his aircrews

By S/L J. H. Simpson A.F.C.

and groundcrew NCO's together at unit HQ and briefed them on the general situation. The aircraft to be used are decided upon and the crews allotted. The crews then attend the initial briefing in the Operations Room.

It has been decided to set up Search HQ at The Pas, Man. The airdrome there is in good condition, and adequate fuel and accommodation is available. The aircraft are to be loaded and crews ready for takeoff at 2000 hrs. It is now 1700 hrs., so the crews are dismissed to go home and get sufficient clothing for at least a two-week operation.

By 2000 hours the two Dakotas are waiting on the tarmac, loaded and ready to take off for the advance Search base. Both aircraft are heavily loaded. In one is the Searchmaster and his staff consist-

(Continued on page 11)



GETTING THE "GEN." Briefing in the Operations Room before a search are from left to right: Group Captain E. M. Mitchell, DFC, Senior Air Staff Officer, 14 Training Group; Squadron Leader J. Simpson, AFC, Officer Commanding 111 Communication & Rescue Flight; Constable P. McLachlan, R.C.M.P.; Flight Lieutenant J. Douglas, 111 C & R Flight; Flying Officers R. Goodmanson and Lloyd Duke, Operation Officers.

Things to Come . . .

AIR FORCE DAY

One of the highlights on the air force calendar is Air Force Day which falls on Saturday, June 14th this year.

The day's programme is being co-ordinated by Wing Commander F. Y. Craig, D.F.C., Officer Commanding 2 A.N.S. who has disclosed "tentative" plans to Voxair. Skilled flying displays including a para-medical formation drop, aerobatics and rocket firing by Mustangs, a jet assisted take-off (J.A.T.O.) by a Dakota of 111 C & R Flight, a jet display and stunt flying by a Chipmunk aircraft will provide thrills to even the most experienced service personnel. Model aircraft will be on exhibition and air cadets will give their precision drill display. Many static displays have been arranged, too, that will give the visitors a broad picture of the air force at work. The public will be able to see rescue equipment, engines, panel boards and radar sets in operation along with many other interesting functions.

One of the day's highlights will be the wings presentation ceremony to the fourth graduating class of navigators of 2 A.N.S. Air Commodore J. G. Bryans, C.B.E., O.D. will present the brevets to the graduates. Wings Parade ceremonies will commence at 1:30 p.m.

To top it all off, a dance will be held in the Drill Hall in the evening for station personnel and their guests and navigation trainees will honour the graduating course with a dance in the Flight Cadets' Lounge.

Air Force Day is the occasion we have of showing visitors our purpose and our functions. It is the day when we throw open the guard room barriers and say: "Is there anything I can show you?" We are all salesmen for the day—we are all hosts. We, each one of us, have the responsibility of showing people **why** we are proud of our past achievements and confident of being able to cope with any emergency the future may have to offer.

. . . at the flicks

June 1—Sunday—6:15 and 8:30
MEET ME AFTER THE SHOW

A technicolor musical starring
Betty Grable — McDonald Carey
NEWS CARTOON

June 3, 4—Tues. and Wed.
at 7:30 p.m.

LIVES OF THE BENGAL LANCERS

A story of India produced by
Cecil B. DeMille
starring
Gary Cooper — Sir Guy Standing
Franchot Tone
CARTOON SHORT SUBJECT

June 5, 6—Thursday and Friday
at 7:30 p.m.

**PAINTING THE CLOUDS
WITH SUNSHINE**

A technicolor musical starring
Dennis Morgan — Gene Nelson
Virginia Mayo — Lucille Norman
CARTOON SHORT SUBJECT

YOU'RE FLYING
HIGH
WHEN YOU RIDE A

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"The Adj. and I..."

By Flying Officer S. D. Callin

ONCE UPON A TIME, when the world was a lovely place in which to live, and an old lady who had so many children she didn't know what to do, could find a nice comfortable place to live, without even the mention of rent, there was never heard upon the surface of the earth, such assorted phrases as P.M.Q., E.M.Q., T.M.Q., leases; or notice of intention to vacate; or notices to quit premises. Nor was there such an unhappy being as a "Housing Officer."

When Richard the Lion Heart and his brave crusaders decided to recruit a new man, did they worry about providing him with a trailer for his spouse and brood? Did King Arthur cogitate as to the possibility of finding accommodation for his knights' families?—No! His main worry was to find room at the round table near the bar for his new members.

Did anyone ever stop to think about the time, money and work spent because of one person's application for married quarters? In the first place—away far away, in the never never mustn't touch land is a place called command (sometimes called other things). There, various happenings take place and momentous decisions are made, including the one which says who is to have married quarters and who is not. Estimate the cost of that alone! This decision in the form of an AFRO arrives on the station and this is where the headache starts.

A very estimable person, whose official title is so long that I can not remember it, but who is usually just called "Adj."; and upon whose shoulders rests the weight of the world, that is our world, makes his presence and that of this particular AFRO known by either a horrible rasping sound over the telephone or else just a horrible rasping sound.

The problem then arises, who has points and if so, how many?

Hence the familiar application form for housing which causes no end of concern on the part of the applicant and the part of the records clerk who must check it; not to mention what happens to it after that.

The form, duly completed, arrives in the basket where it reposes until placed in its particular place in the file with the 326 others. Now comes the big day and the line forms on the left. Some poor unfortunate soul has had the misfortune to get himself transferred away from Winnipeg and his house will be vacated. Who will be the family to move in? This

causes a state of flap and confusion until a tome of irrefutable facts is consulted—this being a volume called QR (Air).

Aha!—it says here—or does it? Oh yes, a four room house is to be inhabited by none or one children (pardon the expression). So we must find the family with none or one children that has the highest points.

Amid multi exclamations of discontent and dissatisfaction and ONE of great joy and happiness, we cross off one name and hand over the keys to a little aluminium siding home in the west. Then and only then, reach for our hats and find someone to buy the coffee.

R.C.A.F. Ground Observer Corps (Continued from page 19)

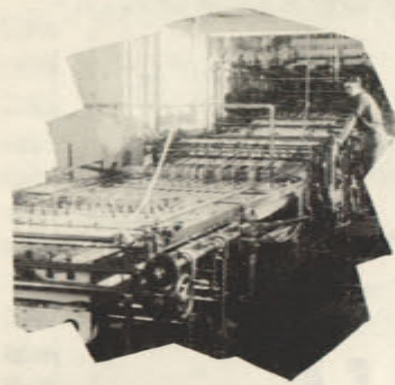
vantage points throughout Manitoba to supplement the radar networks by immediate reporting of any aircraft seen or heard in the area.

The complete system will be made up almost entirely of civilian personnel, volunteers of all ages, both men and women, working under RCAF instruction and administration. Patterned after the U.S. reporting system, with which the Canadian system will tie in, it will resemble the huge Royal Observer Corps organization used in the United Kingdom during the last war. Many air raid alarms in that country were based on reports from civilian spotters, who detected aircraft where the radar failed or was not in existence. Indeed, the successful air defence of Great Britain owed much to Royal Observer Corps personnel.

The recruiting of volunteers for this vital defence measure is expected to start in the near future, and preference will be given to men and women not normally qualified for regular military service. There will be a need for supervisors in each district to aid in the recruiting of Chief Observers

and Observers, and to generally assist in the establishment of Observer Posts in each district. The job of Observers will be confined generally to noting such information as to whether the aircraft is multi-, twin-, or single-engined, propeller or jet, its general direction, and altitude and the passing of this information to the Filter Centre where it will be plotted and recorded. The importance of this work cannot be too highly emphasized, since it can also play a big part in reporting "friendly" aircraft which may be in distress. Rescue work could thus be greatly simplified and speeded-up.

F/O Brown, F/O Moll and F/O Meston expect to become familiar figures through Manitoba and the Winnipeg area, as they go about the work of recruiting the necessary Filter Centre and Observer Volunteers and setting up the Corps in Manitoba. In addition to acquainting the public generally with details of the scheme, they will choose vantage points and Observers to tie in a system which will, by means of telephone and radio, keep the Winnipeg Centre fully informed of the movements of any aircraft in the area.



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