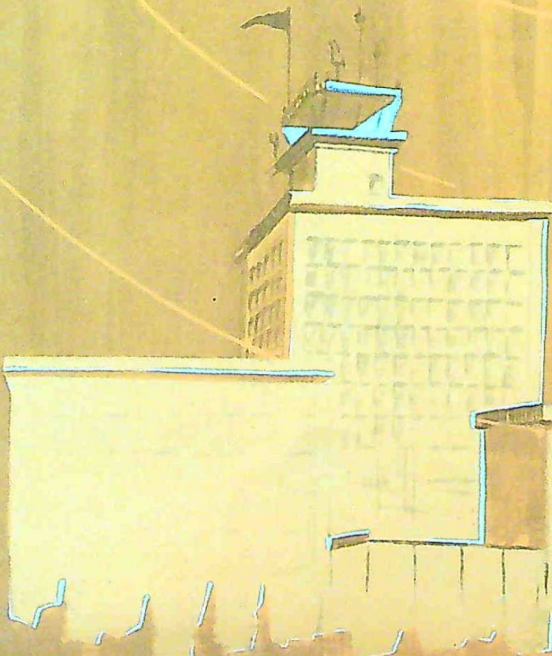
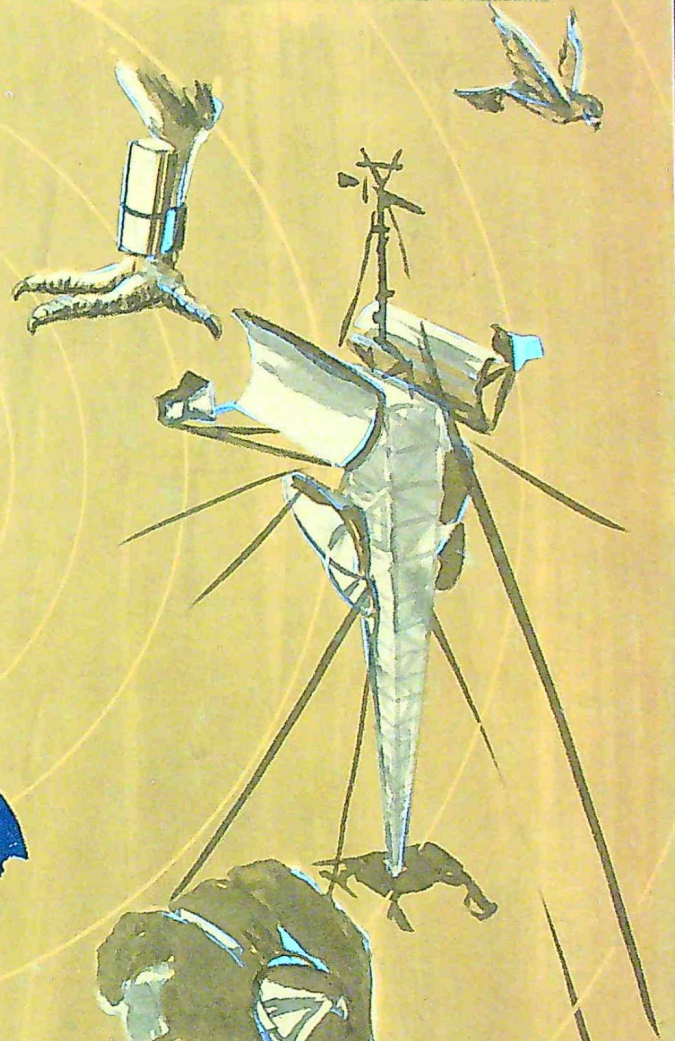


ROUNDEL

NOVEMBER 1964 VOL. 16, No. 9



ROUNDDEL

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COVER CAPTION

Fram carrier pigeon to tropospheric scatter-wave in a few decades is one way to describe the evolution of RCAF telecommunications. A three-part article on the subject begins on page 4.

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ON THE BREAK

THE CHILDREN of air force personnel at RCAF Stn. Summerside welcomed Queen Elizabeth II and Prince Philip to Canada last month with affectionate enthusiasm. Eight days later Her Majesty returned to London from RCAF Stn. Uplands, the cheers of air force children again ringing in her ears. In the interval, RCAF officers and airmen efficiently and effectively carried out their assigned roles – not least of whom were the RCAF photographers who recorded the events on pages 2 and 3.



G/C E. J. Gauthier

A THREE-PART article tracing “The Evolution of RCAF Telecommunications” begins on page 4. Part Two next month covers World War II days and the concluding part deals with the post-war era when telecommunications really came into its own.

Group Capt. E. J. Gauthier, author of the series, has been involved almost from the beginning with signals/wireless/radio/telecom – as this branch has been variously called throughout the past 30 years. G/C Gauthier joined the service in 1936, two years after the RCAF took over from the army responsibility for operating and maintaining its own radio communications. As an LAC, he was an original member of the instructional staff of the first RCAF wireless school set up at RCAF Stn. Trenton in 1937. Today he is director of telecommunications management and control at CFHQ, Ottawa.



F/L G. H. Lowes

ALTHOUGH HE was too modest to mention it, F/L George Lowes was one of the top students at the new French-language school

for officers at RCAF Stn. Saint Jean (see page 18). He is now back at his regular duties as deputy staff officer public relations at ADCHQ.

A native of Vancouver, F/L Lowes joined the RCAF in the administrative branch after graduating from U.B.C. in 1952. Tours at 2 Wing, Gros Tenquin, the Survival Training School (see page 22) and Holberg on the Pinetree Line followed. In July '62 he transferred to the public information field and has been based at St. Hubert ever since.

REGULAR FORCE readers, who according to the opinion poll results (see page 10) are not much interested in the RCAF Association section of ROUNDEL, should note that the RCAFA passed several resolutions at its recent national convention pertaining to the future welfare of those still in uniform. Indeed, the Association is more determined than ever to help preserve RCAF traditions and strength in the coming days.

The four-page report on the RCAFA's 15th anniversary convention at Charlottetown, beginning on page 28, merits the attention of all our readers.

At Paton s/l
Editor

EVOLUTION OF RCAF TELECOMMUNICATIONS

By GROUP CAPTAIN E. J. GAUTHIER,
Director of Telecom Management and Control, CFHQ

First of Three Parts

The sub-hunting aircraft 900 miles at sea cruises hour after hour above the turbulent ocean, searching with its many electronic eyes for some sign of an intruding vessel. Simultaneously, a transport aircraft recently departed from Trenton, Ont., is in radio contact with the Marville, France, ground radio station receiving weather reports and passing pertinent message traffic. An interceptor aircraft over the 55th parallel in Quebec, guided from the ground by the combination of radar and communication facilities, streaks toward an "unknown" which has been discovered by the electronic curtain guarding the country's aerospace. Operational and administrative messages are clicking across the country and the oceans by means of the intricate landline and radio circuits operated and maintained by RCAF personnel.

THE PRE-WAR ERA

TODAY'S varied uses and applications of electronics in the air force are a far cry from the RCAF telecommunications (signals, wireless) activities of some 25-30 years ago. In fact, it could be said that the RCAF Telecom. Branch received its first mandate 15 years before the branch was even born.

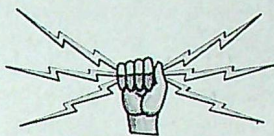
In 1919 the Air Board indicated after a survey that the most favourable field for future air operations "lay in the less thickly settled and less thoroughly explored portions of Canada". Accordingly, the activities of the Canadian Air Force were oriented towards our northland. This long-range objective was further defined after the first successful trans-Canada flight in 1920. Subsequent to this flight a report was published which stated that long-distance flying, both night and day, was feasible

if certain communication and navigation aids were available. Inevitably, as the activity of the young air force expanded, so did the communications organization necessary for its support.

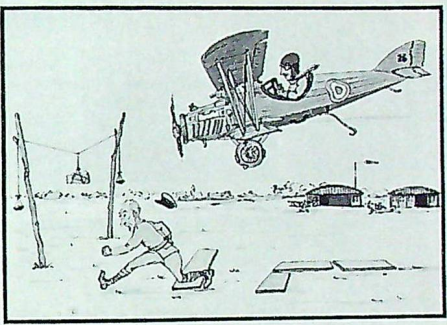
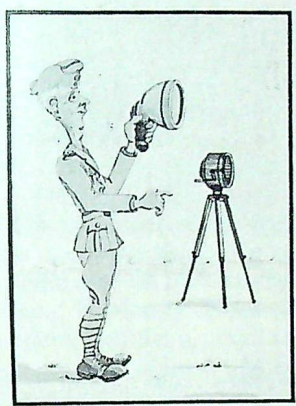
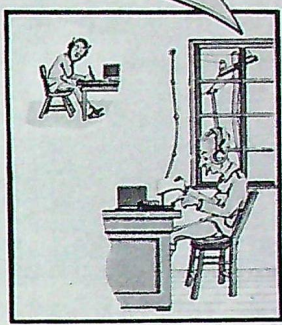
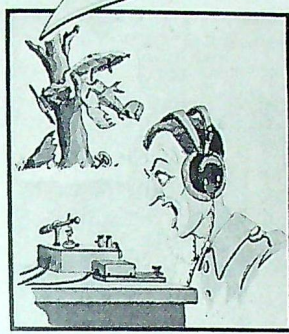
An early example of the value of radio communication in northern operations occurred during the Hudson Strait Expedition, a joint undertaking on the part of the Departments of Marine and National Defence. When the Federal Government decided to complete the Hudson Bay Railway and its northern terminal at Fort Churchill as a link in the northern grain route to Europe, it also decided to conduct a study in Hudson Strait to obtain information about weather and ice conditions, and to determine the facilities needed to ensure safe navigation.

Located by the expedition's first aerial reconnaissance operations in the summer of 1927, bases were established at Nottingham Island, Wakeham Bay, and Port Burwell. Radio stations were erected at these locations by members of the Royal Canadian Corps of Signals (RCCS) attached to the expedition, who were also responsible for the installation and maintenance of the aircraft radio transmitters. The ground radio stations were manned by operators supplied by the Department of Marine. The radio station at Wakeham Bay, the main base, maintained point-to-point communication with Ottawa and the other two bases. The six *Fokker* aircraft employed on the operation were equipped with one-way (transmit only) radio telephone and morse key radio, and while on patrol were required to

RCAF SIGNALS / TELECOMMUNICATIONS



1934



transmit reports to their respective bases every five minutes.

On the whole, radio communication proved very reliable. Nottingham Island, the most easterly base, frequently read transmissions from aircraft operating out of the base at Port Burwell, a distance of several hundred miles. Of 175 flights on which radio was used, only three experienced communications failure. On three other occasions, when a pilot was forced to land away from base, he was able to report his position and circumstances beforehand.

Confidence in the reliability of their communications undoubtedly enabled pilots to carry out their survey flights over that forbidding territory with a good deal more assurance than would otherwise have been the case. In addition, the fact that communication was maintained

between Wakeham Bay and Ottawa meant that reports and instructions could be exchanged regularly. The original plans for the survey were, in fact, changed on occasion as the result of these exchanges.

FORESTRY PATROL

From 1920 until the early 1930s the greater part of the flying done by the air force was carried out in support of various federal and provincial governments. Over 60 percent of this work consisted of forestry patrol flying. The most important aspect of this activity was forest fire reporting and suppression, although a good deal of work was also done in connection with timber and water resources surveys and forest pest control.

In 1921 the Air Board establish-

ed stations at Sioux Lookout in northern Ontario, at Victoria Beach, Norway House, and The Pas in Manitoba, and at High River in Alberta. From these bases, and from others established in ensuing years, daily patrols were flown during the months from June to October when the fire danger was greatest. These patrols kept under surveillance the forest area from Lake Nipigon in Ontario to the Crows-Nest, Bow, and Clear-Water forest reserves on the eastern slopes of the Rockies. While on patrol, aircraft pilots transmitted regular reports by radio-telephone to their bases, from which information could be relayed by telephone to forest ranger posts.

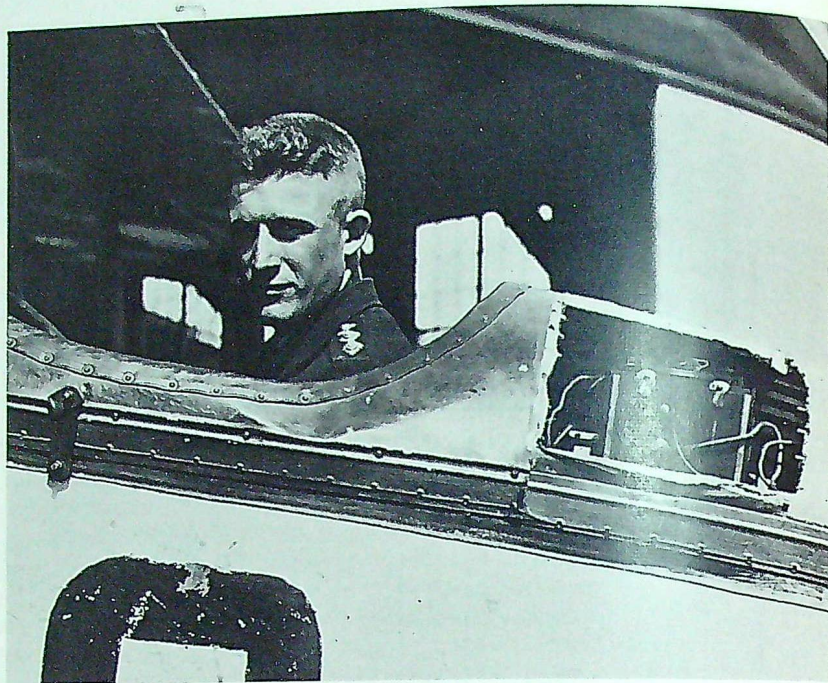
The value of air-ground radio communication on these operations was soon demonstrated. In August 1921 a very large fire broke out on

the western side of the Rockies and raged for 12 days. Unfortunately, the fire had started outside the area of the nearest forest patrol station, and had burned unobserved for several days before being reported by radio to High River from a patrol aircraft which was, at the time, 190 miles from base. Throughout the hectic week that followed, patrol aircraft continued to send comprehensive reports of the fire's advance. These reports, transmitted at extreme range, enabled the forest rangers to marshal their fire-fighting crews and equipment to best advantage, and thus contributed materially to the early curtailment of what might otherwise have been a runaway holocaust.

At the height of forest patrol activity during the period 1922-1931 the RCAF Communications System in Western Canada had expanded into three networks which included a total of 15 stations. These were the Manitoba Radio System with headquarters in Winnipeg, the Alberta-Saskatchewan Radio System with headquarters in Edmonton, and the British Columbia Radio System with headquarters in Vancouver.*

The activity of these western radio nets was by no means confined to their primary function. In fact, a good deal of effort was spent by the staffs in supplementing the rather sketchy commercial communications facilities in those relatively undeveloped areas. Representations to the Federal Government by commercial companies and local inhabitants resulted in the main stations of the

*Early in the 1920s, responsibility for the surveillance of their forest areas had been assumed by the provincial governments of Ontario and Quebec. The RCAF thereupon withdrew from this activity in favour of the provincial air services and commercial aircraft operators working under contract for the provincial governments.



F/L R. E. Grandy pilots JN-4 equipped with air-to-ground wireless externally mounted. Such gear was used for army co-operation work in the early 1920s.

Manitoba and Alberta-Saskatchewan radio systems being kept open year-round. Commercial traffic handled by these stations was passed by radio to system headquarters in Winnipeg or Edmonton, whence it was transferred to the commercial telegraph companies.

In 1931 control of forest resources (except in federal park areas) was transferred to the provincial governments of Manitoba, Saskatchewan and Alberta. These developments, plus sharply-restricted budgets imposed at the onset of the depression, signalled the decline of the RCAF Radio System in the prairie provinces and all but two of the stations (Winnipeg and Cormorant Lake) ceased operation that same year.

RADIO AIDS TO NAVIGATION

At the request of the RCAF and commercial pilots the RCCS staffs at

the western radio stations in the late summer of 1928 began routine broadcasting of weather reports.* Each morning and evening reports, prepared in a form most useful for aviation, were broadcast from High River, Edmonton, Prince Albert, Cormorant Lake and the combined forecasts were passed by the stations to local newspapers, flying clubs and aircraft companies. This was the beginning of the system of radio aids to air navigation.

Similarly in eastern Canada the development of air mail services re-

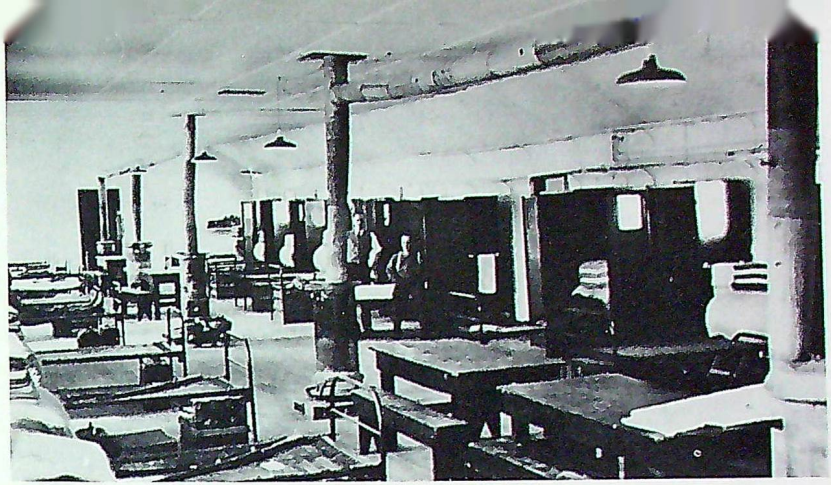
*Because weather information was so important in forest patrol operations, radio operators had been trained as weather observers. Their reports, including an estimate of the fire hazard in the area, were transmitted daily to the forest service headquarters in Winnipeg, where they were applied in planning patrols.

quired the establishment of various radio aids. In the fall of 1928 a small experimental station was erected at St. Hubert to assist in the air mail flights for the Post Office Department. The station received weather broadcasts from all Canadian and American stations in the eastern half of the continent and transmitted a forecast of weather conditions along the Montreal-Toronto and Ottawa-Montreal routes just before the mail planes took off. Further experimental work was planned for the summer of 1929 with radio beacons, radio direction finders and transmission of weather information to aircraft in flight.

In 1931 the number of RCCS personnel on duty with the RCAF was cut back because of the reduction in forestry patrol in the western provinces. On the other hand, wireless facilities along the North West Territories and Yukon system, the Ottawa-Camp Borden-St. Hubert-Toronto system, and the air mail routes were extended. A light-weight portable wireless set had been produced with which RCAF photographic detachments working over the Belcher Islands in Hudson Bay were able to maintain contact with Ottawa, thus providing the practicability of such equipment for communication with isolated detachments operating in the northern hinterland. In addition, an aircraft intercommunication set, particularly useful for aerial photography operations, had been developed - eliminating the need for the old speaking-tube or awkward hand signals.

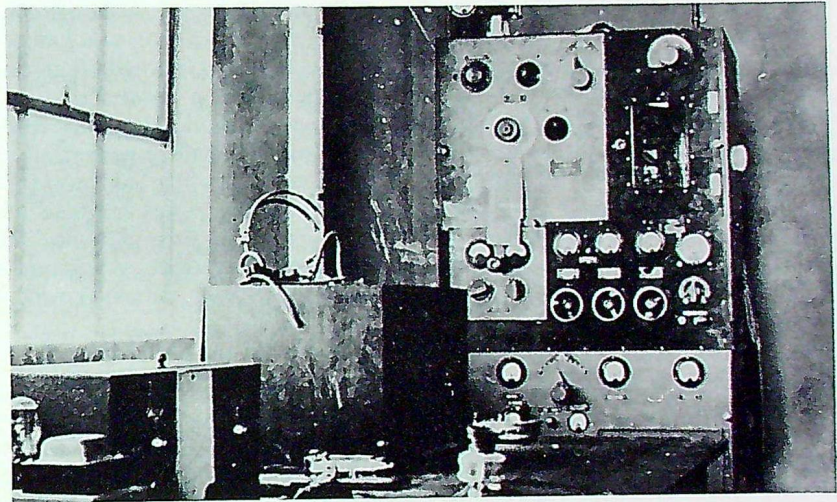
SIGNALS/WIRELESS ORGANIZATION AND TRAINING

Until 1934 the RCAF depended on the Army RCCS for the operation and maintenance of its radio communications. Several RCAF officers had been attached to the RCCS for a course of instruction, but the prime responsibility still rested with the



Trenton barracks where early RCAF signals trainees lived in 1936.

An "out station" for morse practise in the Trenton signals training laboratory.



signal corps. The introduction of wireless into RCAF service training and operations began in 1933. At that time several signalmen from the RCCS were attached to the RCAF School of Army Co-operation at Camp Borden and began installing available wireless equipment in the school's aircraft. This equipment included facilities for two-way radio telephony for close reconnaissance, and wireless telegraphy for artillery reconnaissance. The equipment available for this training was out of date. Orders were placed for new wireless material similar to that introduced in the Royal Air Force that

year. The RCAF at that time had no wireless mechanics of its own, so to remedy this major deficiency in technical personnel, the RCAF program for 1934-35 included the enlistment and training of a number of airmen in this trade. Four army personnel from the RCCS and three internal RCAF transferees constituted the first RCAF signals cadre.

In 1934 the first signals equipment was installed in the *Avro-Tutor* aircraft of the School of Army Co-operation at Camp Borden, commanded by S/L C. M. McEwan (A/V/M ret.). At the same time, a Met. School for officers was run by

F/L C. R. Slemon (A/M ret.). Data for the school were supplied by the daily reception of weather reports by the signals personnel.

The major increase in RCAF activities during 1934-35 was in training, including wireless courses for airmen at Camp Borden. A headquarters was set up in Ottawa and prospective applicants were screened for the new signals section. Two types of personnel were chosen: those with wireless experience, and those fresh from high school. The academic requirement was senior matriculation.

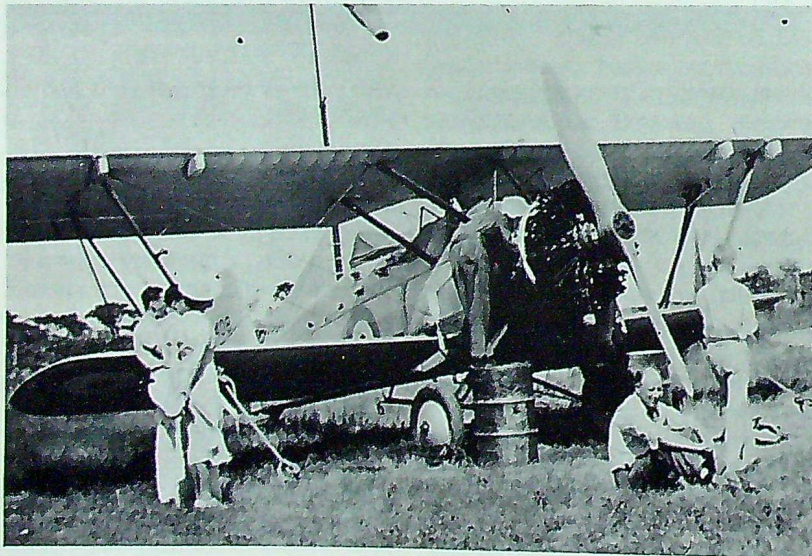
Training of the first course of wireless electrical mechanics (WEMs) commenced on 11 Oct. '34. Course 1A consisted of personnel with some wireless/radio background and was for a period of six months. Course 1B, for personnel with little or no radio operating or technical background, lasted 11 months. The chief instructor on these first WEM courses was F/L H. B. Godwin (A/V/M ret.), assisted by the original seven who formed the initial Signals cadre.

A desperate shortage of equipment and the need for camera obscura work in training necessitated the installation of a "fixed gap" spark transmitter in a Fairchild aircraft. This transmitter, operated by Cpl. W. E. Duncan (S/L ret.) caused much discomfort to the wives in the married quarters who were listening to the daily outpourings of the soap operas on the radio. So far as is known this was the only spark transmitter ever used by the RCAF. On the west coast the first installation, the RAF T21C (Morse only) was made in a Vancouver flying boat while the second installation was in a Fairchild on floats, for RCMP narcotics patrol. Although the equipment received from the RAF at this time was the RAF standard in use it was nevertheless obsolescent and compared unfavourably with that which was available commercially. For example, the wireless operator in the Avro-Tutor was required to operate the air/ground/radio in three possible modes, continuous wave (cw) for long distance keying,

modulated continuous wave (mcw) for short distance code, and radio telephone (R/T). The state of the art at this time in the RAF required that a separate transmitter and receiver set be installed in the aircraft for each of these modes in operation, so, if you were equipped in flight to do mcw, you could not use cw or R/T.

Most of the equipments operated in the 3-6 megacycle band had very low power. The problems of communication between airplane and ground were not interference but inadequate signal strength. The ranges were very short, 10 miles was good for R/T and 20 to 30 miles was good for mcw. The pilots operated the key and tuned the equipment by remote control from the front cockpit. All that the air gunner had to do was to reel out the trailing aerial and reel it in again – on an 8-inch diameter reel, plus or minus 150 feet of it. There was no such thing as radio communication between the crew, they had to operate by passing notes, hand signals or shouting through the Gossport tubes. The power for the radio equipment was produced by wind driven generators attached to the wings. These kept the battery charged and the battery in turn was used to operate motor generators to provide the power source.

Atlas aircraft of No. 2 (Army Co-op) Sqn., Ottawa. Note the windmill generator on starboard lower main plane which sustained batteries during flight.



ORIGINAL SIGNALS BRANCH

In July 1935 an RCAF Signals Branch was formed at NDHQ in the Air Staff Division under F/L J. G. W. Weston (RAF) as air signals adviser. As in other fields, the organization was being built up on lines similar to the RAF. F/L R. E. McBurney (A/V/M ret.) had been sent overseas in April 1935 to take the 14-month signals officers course in the RAF school at Cranwell. On completion of the course in the summer of 1936, he became the first RCAF officer to receive the specialist's symbol "s".

At home, two wireless telegraphy (w/t) operator courses (28 air-men) successfully completed their training and personnel were enlisted for two more courses. The training, originally given at Camp Borden, was moved to Trenton in February 1936, where a new training laboratory had been fitted out and w/t "out stations" were being prepared. At this time a qualification badge was introduced for wireless operators (wops), and wireless operator mechanics (woms). The badge was a hand grasping a thunderbolt and was worn on the right sleeve of the uniform above the rank badge.

Graduates from the initial wireless course had been transferred to duties with the RCMP preventative service – primarily on rum-runner patrol duty. The RCAF was now able to operate and maintain all the signals requirements for the RCMP preventative service in the Maritimes which previously had been provided by the RCCS. Two point-to-point RCAF circuits opened during 1936, one, between Trenton and Ottawa, the other between Vancouver and Esquimalt in conjunction with the RCCS and the Navy. During the year the Air Ministry carried out a series of long distance transmission tests which were received by both Dartmouth and Trenton. These tests gave the RCAF operators valuable experience in long distance operating, and also were of value in ascertaining suitable frequencies for such communications.

The concentration of training at Trenton was carried a step further by the organization of a Wireless School in 1937. The instructional staff included F/L H. B. Godwin (A/V/M ret.), F/O W. A. Orr (A/V/M ret.), F/O M. M. Hendrick (A/V/M ret.), F/O Miner (ret.), F/O McBurney (dec.), F/O D. G. Williams (S/L dec.), F/O D. Hutton (G/C dec.), FS S. R. Burbank (G/C ret.), FS B. Foster (S/L ret.), Cpl. H. R. Tre-



The wireless class at RCAF Stn. Trenton (Sept. '36 to Aug. '37). All were AC2s at this time. Back row (l. to r.): Gaudreau, C. Kidd (Lt./Col. ret.); P. McKenzie (F/L), A. McGee (S/L ret.), W. Yeo (WO dec.), D. Moon (ret.), E. Gauthier (G/C), G. T. Simoneau (WO2). Front row: (l. to r.): H. Hayes (F/L ret.) G. Clay (F/L dec.), H. H. Wood, B. Beck (W/C dec.), R. L. Rombough (WO1), F. Winters (S/L).

panier (W/C ret.), Cpl. G. Tutt (rel.), Cpl. E. Boyden (rel.), LAC E. J. Gauthier (G/C), Cpl. S. C. Jones (WO1 ret.) and LAC G. Simoneau (WO2).

Officers were sent annually to Britain to qualify as signals officers on the RAF Cranwell 14-month Signals Officers' Course; signals officers' short courses were also given in the school at Trenton, Ont.

In 1937 the RCAF was still short of personnel in the signals branch and training in the wireless school at Trenton was hampered by lack of adequate equipment; however, progress had been made in the re-equipment of the service. Most of the air and marine craft in squadrons and schools using wireless had been supplied with sets of RAF design, and modern ground station equipment had been provided for all service squadrons of the permanent force. Plans had been made to equip the stations at Vancouver, Ottawa and Dartmouth with high power transmitters for air/ground/air and point-to-point communications. Direction finding equipment for aircraft and ground stations was on order and planned for operation the following year. Commercial type transmitters and receivers were used in the air-

craft of detachments engaged in photographic operations; detachment ground stations were also equipped with commercial type equipment for air/ground/air and point-to-point operation. During the same period the RCAF used RAF equipment for its army co-operation and fighter aircraft, but this equipment did not differ very markedly in design or sophistication from the late World War I types, nor was it possible to get spare components or industrial support in Canada.

The twin factors of obsolescent design and inability to depend on overseas logistic support led the RCAF in 1939 to initiate the design and fabrication of a family of radio equipments by Canadian industry. These included a light-weight, rugged airborne transmitter (AT1) and receiver (AR2) designed and manufactured by the Northern Electric Co., a remotely-controlled ground transmitter (AT3) designed and built by RCA Victor and a companion airborne set (ATR5) produced by the Canadian Marconi Co. As the equipment later proved itself, it was made in large quantities to support the British Commonwealth Air Training Plan.

(to be continued)

What YOU Think of **ROUNDEL**

By **SQUADRON LEADER A. T. PATON, DFC**
Editor, **ROUNDEL**

ROUNDEL READERSHIP SURVEY

ROUNDEL is YOUR magazine and only with your help will it be able to fulfil its role of telling the RCAF story - past, present and future. Your preferences are our guidelines. If you particularly like certain types of articles or have any constructive criticisms concerning ROUNDEL, we are anxious to hear about them. The more thought and enthusiasm you give to this survey, the more accurate will be this index of our readers' wishes.

1. WHAT IS YOUR STATUS? RANK RCAF REGULAR RCAF ASSOCIATION
RCAF RESERVE CIVILIAN AIR CADET

2. IS ROUNDEL READILY AVAILABLE IF YOU WISH TO READ IT? YES NO

3. ROUNDEL PUBLISHES 10 TIMES A YEAR. HOW OFTEN DO YOU READ IT? (Check one only)
9-10 ISSUES 5-8 ISSUES 1-4 ISSUES NO ISSUES

4. HOW MUCH ROUNDEL DO YOU READ REGULARLY? (Check one only) ALL OF IT
ONLY THOSE PORTIONS TOUCHING ON YOUR JOB WHATEVER LOOKS INTERESTING PICTURES AND HEADLINES ONLY

5. CHECK YOUR DEGREE OF PREFERENCE FOR THESE TYPES OF ARTICLES:

DEGREE OF INTEREST	HISTORICAL	CURRENT OPERATIONS	TECHNICAL	SPACE SCIENCE	HUMOROUS	PERSONALITIES	AIR FORCE STATIONS
VERY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MODERATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. CHECK YOUR DEGREE OF PREFERENCE FOR THESE REGULAR ROUNDEL DEPARTMENTS:

DEGREE OF INTEREST	ON THE BREAK	THE SUGGESTION BOX	RCAF ASSOCIATION	ROYAL CANADIAN AIR CADETS	LETTERS TO THE EDITOR	AIRCRAFT ALBUM
VERY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MODERATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. WOULD YOU PREFER THE ROUNDEL: PRINTED ON THE PRESENT GLOSSY PAPER NON-GLOSSY PAPER

8. WOULD YOU CARE TO SEE ROUNDEL'S CONTENTS CHANGED IN ANY WAY? YES NO

➔ PLEASE elaborate, giving suggestions or ideas for articles in future issues. (You may use the back of this sheet for your comments)

LAST spring, for the first time in ROUNDEL's 15 years of publication, we decided to find out scientifically what you really think about your magazine. Specifically, we wanted to learn how effective is our distribution system, how much of ROUNDEL is actually read, what types of articles and regular departments are preferred, what changes you would like to see in format and content.

Accordingly, a questionnaire was prepared and presented personally by management engineering teams to pre-selected serving members of the RCAF. This all-ranks sample survey, conducted at RCAF Stns. Greenwood, Trenton, Centralia, Foymount, Portage la Prairie, Comox, Rockcliffe, Uplands and AFHQ, produced 1540 returns. Information from the completed questionnaires was then transferred to punch cards and fed to RCAF data calculating machines, which produced the following statistics. (We are informed that this sampling is huge by statistical standards. The Gallup Poll sometimes predicts election results with samples of only 400 voters.)

Meantime, a similar set of questionnaires was distributed to certain wings of the RCAF Association, whose 12,000 members receive ROUNDEL on an individual mailing

basis each issue. The conclusions drawn for this large section of the magazine's readership are based on the 202 completed forms received from these wings, but cannot be considered as accurate as the in-service figures.

The questionnaire was designed to be completed anonymously; we asked only that participants indicate their status (serving or retired) and rank.

An unusually large number of those surveyed took the trouble to comment in more detail on their likes, dislikes and ideas for future improvement in the space provided at the bottom of the questionnaire. These comments have been carefully reviewed by *ROUNDEL* staff and we hope to implement many of the suggestions. (One of the Association members, an anonymous retired A/V/M, appended the item appearing on page 14 to his completed questionnaire.)

A common complaint we have heard over the years from serving members of the RCAF is that *ROUNDEL* is hard to get hold of. Our in-service circulation is based on a 1 for 5 ratio, i.e. if a unit has 200 established positions, we instruct the Queen's Printer to send 40 copies in bulk to that address and hope that internal distribution will be made on the same scale.

We were pleasantly surprised, therefore, to learn that 89% said it is readily available to you on your stations. Presumably it was one of the 11% who do not have ready access to the magazine who made this worthwhile suggestion: "*ROUNDEL* should be put in a binder and placed in each section along with *EOS*, *AFROS*, etc. where it would be readily available to everyone." Not unnaturally, practically all RCAF Asso-

ciation members get the book each issue, due to the diligence of those at Association headquarters who keep the individual mailing lists up to date.

Replies to the question, "How often do you read *ROUNDEL*?", closely parallel those to the preceding one, which of course pleases the editorial staff. The fact that the book is available being no guarantee that it is actually of interest, we now know that you read it on the following basis:

How often do you read <i>ROUNDEL</i> ?		
	RCAF Regular	RCAF Association
9-10 issues	57%	91%
5-8 issues	32%	5%
1-4 issues	10%	3%
Never	1%	1%

Delving further into the field of reader interest, our pollsters then asked that you check one answer only to this question, with the following results:

How much of <i>ROUNDEL</i> do you read regularly?		
	RCAF Regular	RCAF Association
All of it	25%	60%
Only those portions touching on my job	2%	1%
Whatever looks interesting	72%	38%
Pictures and headlines only	1%	1%

Having thus given your answers to the general questions of availability and reader interest in the book as a whole, you were invited to state your degree of preference for specific types of articles. Over the years we have tried to strike a balance in *ROUNDEL* contents, bearing in mind our aim of presenting the RCAF story – past, present and future. Apparently the majority of you, both in and out of the service, prefer articles dealing with current operations, although those of a his-

torical nature run a close second. Many who wrote in comments at the bottom of the questionnaire expressed a desire for more information on the current defence forces' integration program – a request we will endeavour to fulfil in future issues. Others complained that *ROUNDEL* is too "officer-dominated". Our comment on that point is we have always tried to encourage contributions from and about airmen of all ranks but we just don't get enough. The solution to that problem is up

to you boys in the field.

Incidentally, we received more contradictory comments on this subject of content than on any other aspect of the book, which merely proves that we do try to cater to an audience of widely divergent views and opinions. The percentage of people in the "undecided" or "having no answer" category is extremely low in comparison to most surveys of this nature.

Your reaction to regular *ROUNDEL* departments was also solicited.

		RCAF Regular		RCAF Association	
		Answered	Not answered	Answered	Not answered
Historical	Very	46%		72%	
	Moderate	50%	2%	27%	4%
	None	4%		1%	
Current Operations	Very	66%		61%	
	Moderate	33%	2%	38%	7%
	None	1%		1%	
Technical	Very	42%		26%	
	Moderate	46%	3%	60%	13%
	None	12%		14%	
Space Science	Very	29%		43%	
	Moderate	53%	4%	51%	14%
	None	18%		6%	
Humorous	Very	50%		47%	
	Moderate	46%	3%	50%	10%
	None	4%		3%	
Personalities	Very	33%		51%	
	Moderate	54%	4%	43%	9%
	None	13%		6%	
Air Force Stations	Very	56%		55%	
	Moderate	40%	2%	41%	6%
	None	4%		4%	

As expected, the biggest divergence between in-service and ex-service reader preference came to light here. Serving members of the RCAF take a dim view of space being provided in their magazine for RCAF Association and Air Cadet activities; on the

other hand, these departments are extremely popular with our outside readership which constitutes more than 50% of our circulation. (2000 copies each issue are distributed to air cadet squadrons across the country by the Air Cadet League of Ca-

nada.) Tops in popularity with all readers is our Aircraft Album series, appearing each issue on the inside back cover.

We then threw in a question which we of the editorial staff had been wondering about for some

Check your degree of preference for these regular ROUNDEL departments:

		RCAF Regular		RCAF Association	
		Answered	Not answered	Answered	Not answered
On the Break	Very	40%		47%	
	Moderate	54%	3%	50%	14%
	None	6%		3%	
Suggestion Box	Very	41%		27%	
	Moderate	51%	3%	60%	15%
	None	8%		13%	
RCAF Association	Very	6%		91%	
	Moderate	48%	4%	8%	4%
	None	46%		1%	
Air Cadets	Very	3%		75%	
	Moderate	40%	4%	21%	11%
	None	57%		4%	
Letters to the Editor	Very	51%		52%	
	Moderate	44%	2%	44%	13%
	None	5%		4%	
Aircraft Album	Very	66%		72%	
	Moderate	31%	2%	25%	6%
	None	3%		3%	

time: "Would you prefer **ROUNDEL** printed on glossy or non-glossy paper?" While some of you were quite vehemently opposed to the present stock ("This is the only magazine I find hard to read, and I read many..."), the overwhelming majority favour it and we therefore do not contemplate any change.

Finally, we asked you if you would care to see **ROUNDEL's** format or contents changed in any way. Here's where we got a lot of worthwhile suggestions (the experts tell us an unusually high percentage took the extra effort to do so), but the fact remains that most of you think we're doing a pretty good job as it is.

So, there you have it, readers: your documented opinion of your service magazine. How do your personal answers stack up against the over-all statistics? We anticipate several letters to the editor as a result (if not, why else would that last page of the book rate so high in reader interest?). The editorial staff has pondered your considered


Would you prefer **ROUNDEL** printed on:

	RCAF Regular		RCAF Association	
	Answered	Not answered	Answered	Not answered
Glossy paper	93%	10%	87%	4%
Non-glossy paper	7%		13%	

Should **ROUNDEL'S** contents be changed in any way?

	RCAF Regular	RCAF Association
Yes	30%	32%
No	70%	68%

criticism, accepting the bouquets (such as "I appreciate the rare, if ever, occurrence of typographical errors which tells me of the great amount of work and thought that goes into the magazine's preparation") with modesty, and the brick-

bats (such as "let's get back to air force blue on the cover instead of the modernistic swill presently employed") with good grace. Thanks to all who co-operated in making this a worthwhile experiment in opinion sampling. 

GENESIS GUIDEPOSTS

*(The following comments were made by an anonymous retired A/V/M as a corollary to his completed questionnaire in the recent **ROUNDEL** readership survey. We think they merit reproduction here, even though he intended them merely as a spur to us to publish the "true saga of the RCAF". - Editor.)*

MANY Canadians think a large proportion of our current national problems and difficulties stem from inadequate knowledge of and pride in the origins and growth of our country. Similarly, the RCAF itself has current problems and difficulties. This situation was not unknown in the past.

The pre-war "past" is the real history of the RCAF, particularly the period 1920-1936 when many times it was doubtful if the air force could and would survive as a separate service. It was in this period that many techniques and much equipment were developed which, later, were used in the war and in

the post-war periods, albeit greatly refined and improved. While no military aircraft were developed in Canada during this period it was a result of RCAF "bush operations" and later of civilian operators that de Havilland of Canada developed its present world famous aircraft.

Your stories about certain air

stations have been very good but they tended, quite naturally, to deal with the "present". Little mention, if any, has been made of Air Force (Air Board) sub-stations or detachments operated seasonably by the major air stations – Shelburne, Yarmouth, N.S.; Shédiac, N.B.; Roberval, Anticosti, P.Q.; Parry Sound, Long Lac, Sioux Lookout, Ontario; Victoria Beach, Lac du Bonnet, Barrens River, Norway House, The Pas, Manitoba; Ladder Lake, Sask.; and Prince Rupert, B.C. And there were the photographic detachments sallying out each spring from Ottawa Air Station and Winnipeg Air Station and back when the ice formed on the northern lakes and rivers; plus the special crop and forest dusting aircraft and the Indian treaty-paying aircraft from the same two stations; and the anti-rum runner and fishery patrol aircraft from Dartmouth and Vancouver Air Stations.

It was from such places that two-man aircrews (pilot and crewman) plus air photographer for photo flights or a forester, a surveyor, a fisheries expert or a Mountie as a special observer operated in 1920-36 and it is from the photographs, sketches, reports and personal observations resulting from these flights – made sans radio, parachutes and adequate navigational equipment – that air maps and important natural resources data were gradually compiled.

And it is this data and the air recce. techniques and equipment developed by the RCAF in this particular period which, largely, has led to many of the tremendous post-war developments in Canada. For example, much of the North Shore of Gulf of St. Lawrence was photographed by aircraft from Dartmouth and Roberval Air Stations operating from Anticosti Island and Tadoussac – and there wasn't a good

size hamlet east of Tadoussac to Red Bay and few safe landing places for an ancient flying boat (circa HS2L).

Look at the same coastline today. The same story applies to the upper Saguenay River, the Peribonka, the Misstassini and Choubougouma areas of Quebec. Now all have industrial, power, mining, pulp and forestry developments bringing vast wealth and future possibilities to Quebec and Canada. All the way west of the Pacific it is the same story. Small crews of air force personnel, plus civil government specialist observers, prodding out into undeveloped and largely unknown areas which are now booming industrial developments. The western mining area of Ontario – from Sioux Lookout and Victoria Beach; Winnipeg River power and eastern Manitoba mineral area – from Victoria Beach; northeast Manitoba mining area – from Norway House; northern Manitoba to Churchill mineral area – from The Pas and the current Saskatchewan River/Lake Winnipeg power dam from the same base; the fishing, forestry and mining areas of northern Saskatchewan – from The Pas and Ladder Lake.

As members of the civil Government Air Operations, aircrews on field operations had to fend for themselves, their aircraft and equipment, and usually had to operate over unmapped or inaccurately mapped territory. The 1912 railway map of Canada was frequently used for photo flight-line plotting and there were few railways in the north. They soon became experts on such now-unknown techniques as gasoline drum rolling, wobble-pump refueling, cooking, clothes washing, all forms of repairs to aircraft, equipment and themselves, setting up camps, firewood supplies, bilge pumping, camera magazine reloading (under a blanket), fabric, wood and metal aircraft repairs, engine

repairs of every variety, propeller swinging or balancing, compass swinging (mostly a waste of time and effort because of highly mineralized terrain), anti-mosquito warfare, Indian sign language, crude versions of French and Scot tongues, and the never-ending upkeep of reports, logbooks, and financial paper work. If lucky, one sometimes landed at a spot of civilization and had a chance to clean up, talk to a non-Indian female, and forget the tough going.

A much-overlooked fact is that despite little use of rank and official uniform there was seldom need for disciplinary measures. It was a team effort and, until w/T was installed in the aircraft, a matter of common survival.

As stated, as far as is known this aspect of the air force story has not been reading for the 1937-1964 generation of airmen and Canadian children in general. However, many of the men engaged in the 1920-36 operations are alive and in Canada today and their personal knowledge of this period, plus official records to verify dates, etc., could provide a vast mass of material for many articles in future *ROUNDELS*, as well as a real, readable history of the early RCAF. Your recent series on the career of A/V/M Collishaw is a good example of what I have in mind.

In my opinion, however, the really "big" story is the important role of the old air force, circa 1920-36, in helping to bring about the tremendous development of economic and military growth in Canada.

(We trust that G/C Gauthier's article beginning on page 4 adds to the record of those early days. ROUNDEL over the years has published numerous between-the-wars stories, but we agree the full history should be written while those who lived through this era are still alive. – Editor.)

NIGERIANS FINISH CANADIAN TOUR



Mr. Mathew Mbu (right, in white), Nigerian Minister of State for Navy, chats with Nigerian students at RCAF Stn. Penhold.

EARLY in 1963 the RCAF welcomed 16 carefully-selected candidates of the Nigerian Air Force for training in Canada. This September they returned to their homeland, 11 of them having won pilot wings and graduated from the Flying Instructors' School, three as air traffic controllers and one as a supply officer. Only one of the 16 was repatriated early.

Prior to returning to Nigeria Lt. Jasper G. U. Onyeji wrote a letter to the CO of RCAF Stn. Moose Jaw, which said in part:

"At the end of a year and a half

of training here in Canada, I on behalf of the Nigerian Air Force officers say good-bye and thank you for the good gestures we have been shown.

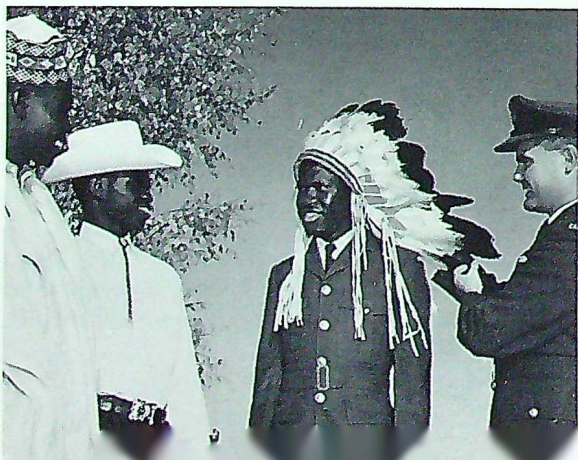
"We have in every respect enjoyed our stay here in Canada, including all phases of our training. To the RCAF personnel and a good many Canadians we have met, individually or collectively, who have contributed to our happiness even at personal sacrifice, we say a heartfelt thank you.

"We do hope that sometime, somewhere, we shall meet again."



Nigerian students pose in their native ceremonial dress.

A Nigerian student has an Indian headdress properly adjusted by F/O R. Elder.



Nigerian student-pilots march into ground school.





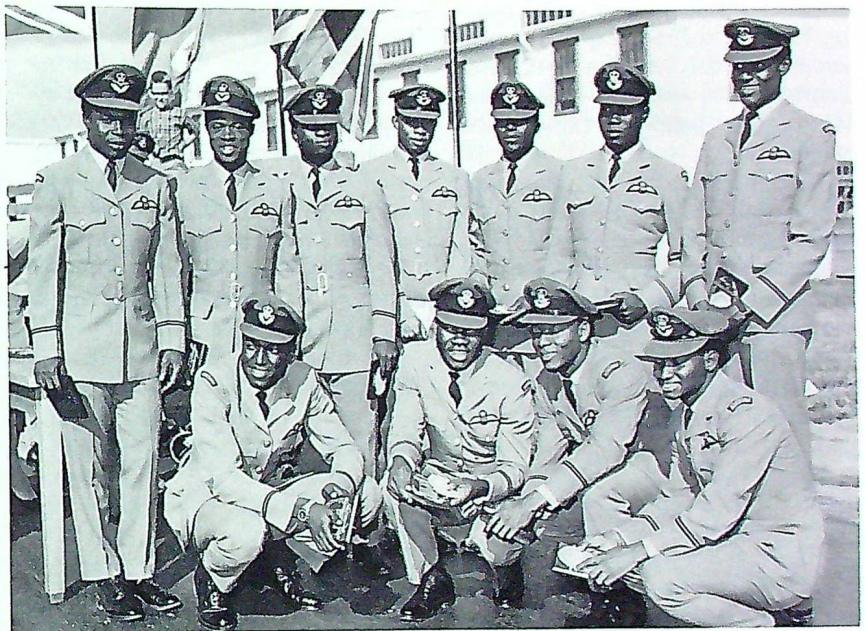
"And there I was at 10,000 feet . . ."



It was a long hard grind but it was worth it.

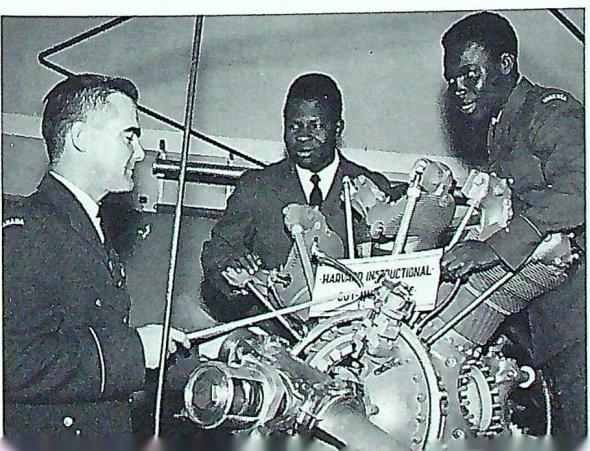


dress.



At the completion of their flying instructors' course, the Nigerian students were presented with special commemorative plaques by A/V/M C. H. Greenway, OBE, Air Officer Commanding, Training Command.

The Nigerian course director, F/O R. Elder, gives instruction on the Harvard engine.



F/L G. G. Ross explains the workings of a microphone to two of the Nigerian students who trained in Canada as air traffic controllers.



ICI, ON PARLE FRANCAIS

By FLIGHT LIEUTENANT G. H. LOWES
Air Defence Command Public Relations

I WAS one of 20 officers from various RCAF units on the first French-language course offered by the service at RCAF Stn St Jean, P.Q. For 13 years the RCAF had been teaching English to French-speaking personnel at this station but with Course One, which began last March, the pendulum swung the other way.

The course lasted 20 weeks and used the St. Cloud audio-visual method, Voix et Images de France (VIF), prepared by the French Ministry of Education. For those who had some background in French, this course was supplemented by an advanced phase prepared by the school. From a student's point of view: "commentçons".

The VIF course level selections were based on a series of audio and visual tests given during the first two days. The results of the tests established the level at which each officer would be placed. For those to whom the tests sounded like a garbled R/T transmission, the basic level became their home in French. The intermediate level consisted of others who know it was French but. . . . The advanced level knew the language was French, could repeat it as nearly French, and probably, most of all, knew they couldn't understand the French.

One nearly-universal result of these exams was a bruised ego, for even the three and four-year old children in the town were speaking

and understanding this "langue extraordinaire."

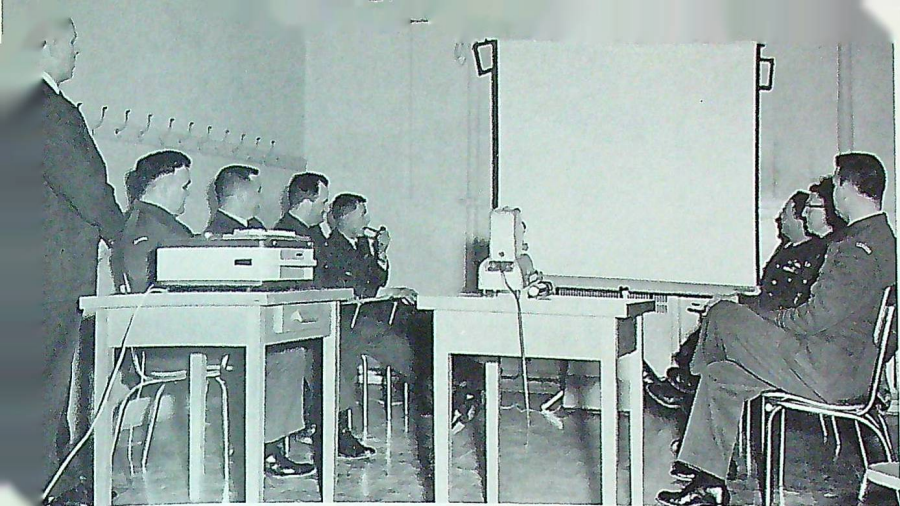
Our French contacts in VIF were the family Thibaut and their friends and Parisian neighbours. Here it must be noted that VIF teaches sound patterns rather than individual words, so for quite sometime in each lesson the French language underwent some rather startling transformation! We also became a "petit français" as the sound patterns took hold.

As proof of this "chose formidable" one of the students went to get a haircut and after taking the better part of 15 minutes to explain what he wanted and why he was slaughtering "la langue française" the barber asked in French where

Course No. 1 and staff of the French-language school at RCAF Stn. St. Jean (front row, l. to r.): F/L B. E. Desilets, Mrs. G. Gabelier, S/L D. R. Bird, G/C A. M. Cameron, S/L J. J. Guerin, Mrs. G. Bisailon, Mr. A. Frappier, Miss C. Charest, F/L J. P. G. Godbout, F/L J. H. McLeod, F/L L. W. Grip. Second row: Mr. P. Harbeck, F/L D. F. English, F/L J. D.

Lafferty, F/L O. M. Sweetman, F/L J. P. Moran, F/L L. Parakin, F/L R. S. Cowden, F/L G. E. Cragg, F/L J. D. Williams, Mr. G. Pelletier, F/L R. S. MacKenzie. Third row: F/L A. F. Gerdin, F/L G. H. Lowes, F/L W. J. Davidge, F/L P. C. Burham, F/L P. J. Caws, F/L W. J. Green, F/O E. W. Robertson, F/L H. L. Norquay.





Mr. D. L. Harbeck conducts class with aid of audio-visual equipment.

he lived – and in faultless French he replied “10 Place d’Italie à Paris!” After a moment of deadly silence the conversation resumed, this time in English; for the student had given the imaginary address of our amis, the family Thibaut!

Each night we would return to the language laboratory to practice our day’s lessons on the tape recorders. We tried manfully to be either a Charles Boyer or Maurice Chevalier but we still sounded just like English-speaking assassins of French.

Part of the course was devoted to phonetics and our instructor was as bubbly as a glass of champagne. He had us tongue-tied and resorting to basic Anglo-Saxon four-letter words to express ourselves. But in phonetics our basic self-confidence re-

ceived its greatest shocks for the very words every school-boy knows (“oui, non monsieur, madame, mademoiselle”) were being torn apart and thrown back at us till our lip and cheek muscles were aching. Our big trap was the simple exercise: “Je veux et j’exige.” After finally mastering this phrase, we bestowed upon it the honour of singing it loudly to the tune of a well-known hymn!

So the evenings, as well as resounding with the Thibauts et al, also echoed with a variety of “ee’s, ooo, uuus, ahs, and ohs” as we tried to sound French.

As we progressed along with *vir* the sound patterns and phrases became more complicated and more than one of us stared in complete amazement as our ears told us the

“voix” of France had just announced the children were wearing shepards pie (chapeaux de paille) or to be exact, straw hats! Even greater was our surprise when Madame Thibaut told her daughter she could not wear her black shoes because “smelts on Tuesday” (semelles sont usées), i.e. the soles were worn out. With phrases like this to hear, we were becoming convinced that France had outlawed absinthe not a bit too soon.

After eight weeks of the course many of us who dreamed at night woke up in cold sweats, for our dreams were all in French. Many a dream was retold with the hero (student) chasing Brigitte Bardot over fields of circumflex accents, only to have la Bardot break off the chase with a flirtatious wave and a “Mon-

L. to r.: F/L J. P. Godbout, course director; G/C A. M. Cameron, AFC, RCAF Stn. St. Jean commanding officer; G/C W. F. Davy, CFHQ director of ground training; S/L J. J. Guerin, School of French officer commanding.



sieur, smelts on Tuesday!"

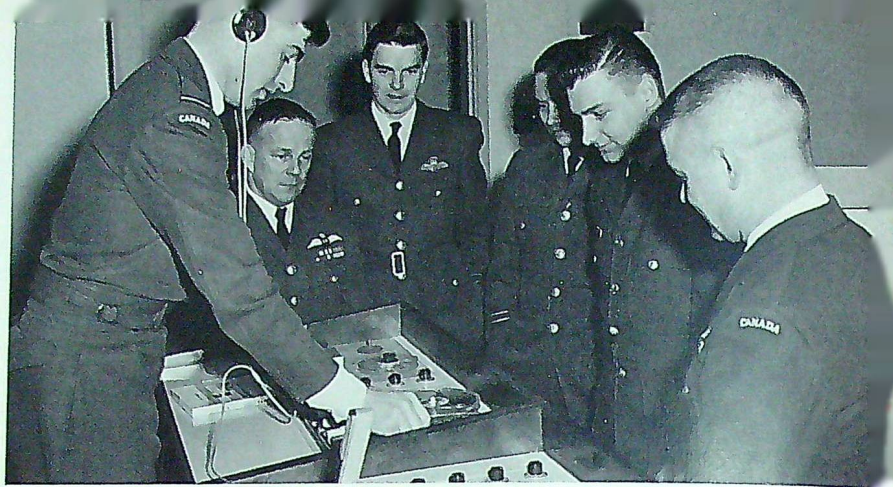
These dreams were aided by the fact that we had a lounge in our quarters complete with TV – that gave only French-language channels. It is a decided shock to hear Matt Dillon and Miss Kitty of Gunsmoke (Police des Plaines) speaking faultless French with a perceptible western drawl. Meanwhile, we students marched bravely on to share with the characters of Paris their life and their language.

Now, we were groping with the every day problems of going to the grocery, the druggist (for aspirins if nothing else), the post office and even "en vacances"! We also shared the frustrations of Paris traffic and common hazard – a lady in a telephone booth who knew how to "parle français très bien et long".

At this stage we moved into a third dimension, motion as well as sound and sight for we received French language films based on the VIF stories as well as few artistic masterpieces on French verbs, markets and farms.

While in class our scene of operations shifted to the parks of Paris, where "Claudine qui était étudiante à la Sorbonne" went in the evenings when "il fait beau." Claudine, we later discovered, was all-girl for one night she danced till 5 a.m. and "naturellement" the next day she "tombee de fatigue". Other of our Parisian friends went to the movies, where a great French epic "Buffalo Bill" was playing, still others read the papers, while others bought flowers, always red roses, for with Gallic logic the voice proclaimed they were for the same girl.

Towards the end of the VIF sequence we left Paris behind and went to the French countryside. Here we listened to farmers at work, at home, and discovered that French children can come home covered with mud, and like the snow. But



F/O G. N. Smith briefs students in one of school's language laboratories.

by this stage we were starting to understand the situations in French. Then at lesson 32 we said au revoir to VIF and prepared to tackle pluperfects, subjunctives and other "animaux incroyables" of the "forêt de grammaire".

The first exposure to French grammar was a relatively painless experience for we were to study the present tense of the verb "être" (to be). Then to our horror we found that être was irregular! "Pauvre être!" And with amazing regularity être proved to be quite irregular. We now knew what had been only suspect before: the Anglo-Saxon logic and "la logique française" were not even of the same family. For the next four weeks we tackled the syntaxes, the tenses, the partitives and even the occasional genetive as we sought the elusive animal bilinguality. As a break from grammar we discussed various topics, gave book resumes and even debated the question of Confederation in a breed of French that was perfectly comprehensible to us but that at times left our instructors feeling like Dr. Frankenstein. What we lacked in vocabulary we made up for in nerve. To borrow the old phrase: "We sure couldn't speak perfect French but we sure had guts!"

At night we even tackled French-language movies (triple features),

French-language cafes and lounges – all trying to improve our French. In one spot one of the braver students ordered a complete meal in French, only to have the waitress tell him rather icily she didn't speak French.

Then came a week of review followed by our final tests, which for the most part were a repeat of our qualifying tests at the commencement of the course. This is where most people received their biggest shock, for we were collectively speaking about 25% higher in the advanced group, about 40% higher in the intermediate group and over 100% better in the basic level.

Here the o.c. also let us in on a trade secret that did much to put things in perspective – we had acquired a vocabulary of 1500-5000 French words out of a total vocabulary of 60,000 or more words. We knew why there were still stretches of scrambled R/T in our aural comprehension. But we had the tools to finish the job.

"Ici, on parle français – mais un petit peu."

As a postscript, the course outlined above refers only to the advanced phase. The intermediate phase spent a longer portion on VIF and less on grammar while the basic level spent the entire 20 weeks on VIF.

412 SQUADRON RECEIVES ITS STANDARD



F/L W. E. Eichel holds No. 412 Sqn. standard during presentation ceremony at RCAF Stn. Uplands.

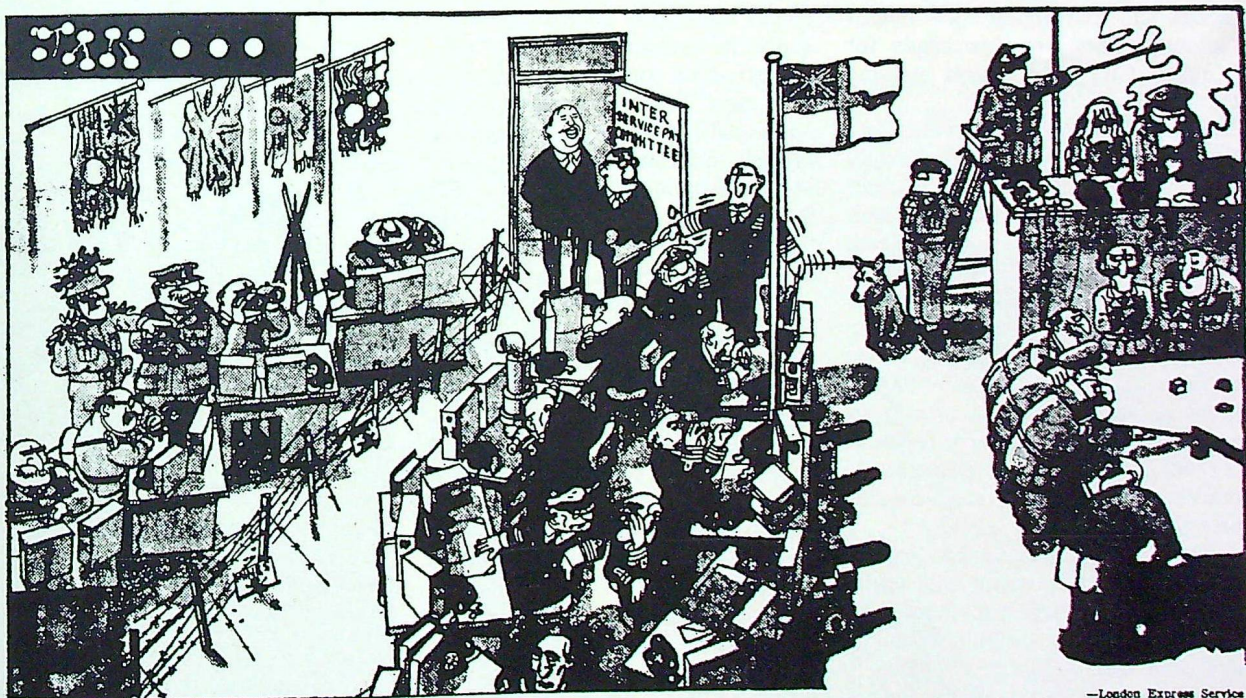
Number 412 Sqn., the air force's oldest transport squadron, was presented recently with its squadron standard. It is the first regular force squadron of the RCAF to receive this recognition. The Hon. W. E. Rowe, lieutenant governor of Ontario, made the presentation to the squadron's commanding officer, w/c M. G. Bryan, during an hour long ceremony at RCAF Stn. Uplands.

For a squadron to qualify for the award of the standard, King George VI laid down two alternative requirements: either the squadron must have been in existence for 25 years or it must have earned the King's (now the Queen's) appreciation for specially outstanding operations.

Number 412 Sqn. was formed 25

years ago this month when a communications flight was formed at Rockcliffe the day after World War II was declared. During the war the squadron, equipped with the famed *Spitfire* fighter, flew from bases in England and northwest Europe. During its wartime career as a fighter unit, No. 412 accounted for 106 aircraft destroyed, 11 probably destroyed and 46 damaged.

Today in a transport role, the "Falcon" Sqn. continues to add to its laurels. Now known as the RCAF's VIP squadron, its aircraft have visited nearly every country in the world. Most recent royal passengers were the Queen and her husband last month on a trip from Quebec City to Ottawa.



—London Express Service

"Of course, we're still having a certain amount of inter-service rivalry . . ."

CAMPING AT CRYSTAL CITY

By FLIGHT LIEUTENANT A. E. PATERSON
Alberta Area PRO

ARCTIC survival depends on morale, resourcefulness and ingenuity. Ask any of last winter's 117 "survivors" from the post-graduate phase of the RCAF Survival Training School's winter bush course.

After one day of classroom briefing at RCAF Stn. Namao (covering methods of making fires in the Arctic, the igloo, fighter-trench and arctic-tent shelters, the use of snow saws and knives, the layer principle of wearing clothing, prevention and care of frostbite and cooking) students are flown with full arctic gear to Resolute Bay, 1550 miles northeast. There Eskimo instructors give practical instructions during a one-day stopover. Students practise testing snow for shelters, cutting snow-blocks and assembling snow-houses (igloos). They are now ready for "Crystal City", the fastest growing community in the Arctic.

Located five miles from Resolute Bay, this survival school facility comprises a prefab hut for instructors and unfinished igloos for each four-men group of trainees. Within minutes of arriving at Crystal City the trainees begin the vital task of completing the snow-houses as they are to spend the first night in them. Each group then packs snow in the gaps between the snow-blocks (a process called 'chinking') to keep out the arctic wind, prepares food, makes snow benches to sleep on and prepares for the night ahead.

The men are divided into groups of two the next morning and, using the spiral construction method, they build igloos which are 'home' for the next four days and nights. This task can take one or two days, depending on the amount of available daylight.

Eskimos can do the same in 40 to 45 minutes.

Students are taught that some type of shelter is essential, be it only temporary. Man must provide himself with dry, dead airspace for insulation against the cold. To this end, the students build fighter trenches and para-igloos. Fighter trenches are box-shaped holes in the snow with a triangular entrance that houses a sleeping bag and are roofed with snow-blocks. They are good emergency shelters but too cramped to permit much movement without dislodging frost on clothing or the sleeping bag. In time, the occupant becomes damp without any chance to dry out. The para-igloo is an arctic tent with a three-foot wall of snow-blocks that is too cold for comfort, hence the rush to get an igloo built.

Instruction continues during these four days. Students practise laying out signals to attract aircraft and to provide information from ground-to-air, familiarization treks. The Survival School provides combat rations, slightly higher in calories than emergency ration packs as training conditions cause the expenditure of more energy than in a warmer environment. Fish are plentiful in most arctic lakes and students learn how to fish through four to eight-foot thick ice, using lines or nets of their own making, to supplement their rations. Hunting training is given also but, in conformity with arctic game preserve regulations it is strictly "practise only".

On the fifth day, the two-man teams erect arctic tents modified with sections of parachutes and walls of snow-blocks. They spend their last night sleeping in this para-igloo,

a chilling experience in an area where the greatest enemy is the penetrating cold and winds frequently gust to more than 40 miles per hour with the temperature possibly in the 50-below range.

After this long night, they return to Resolute Bay to write an examination and fly back to Namao where they are graduated from the Survival Training School, better equipped to meet the challenge of the Arctic should they be forced to bale-out or force-land in mid-winter. ©

Cpl. G. Raymond, one of S/L R. G. Connick's staff at the RCAF Survival Training School, shows how to fish through the ice at Crystal City.





New arrivals at Crystal City complete igloos for first night's shelter.



Tents are made from parachutes as first step in making para-igloos.



Jackoosie, one of the Eskimo instructors, demonstrates cutting snow blocks.

Survival school student tests para-igloo doorway.



Fighter trench provides tight squeeze but good shelter.





S/L R. H. Janzen (right), former QC of No. 103 Rescue Unit, receives unit badge from W/C E. J. Smith, acting CO of RCAF Stn. Greenwood. Air Dog 1st Class Albert, No. 103 RU's official mascot, and LAC Tuck, one of his handlers, observe the ceremony.

No. 103 RU Motto: "SEEK AND SAVE"

Although No. 103 Rescue Unit, at RCAF Stn. Greenwood opened its doors on 1 Nov. '47, up until this year it has not had an official unit badge.

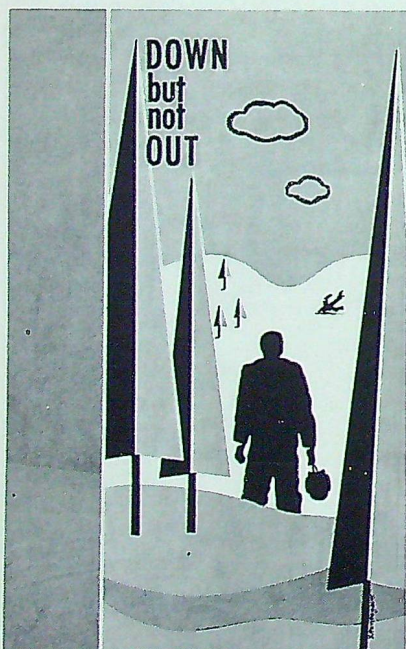
With the arrival of S/L R. H. Janzen, former officer commanding No. 103 RU, in 1961, a concerted effort was put forth to create a badge for the unit. However, it was more than two years before the official badge was approved by Her Majesty.

To begin with, a competition was held on the unit to select a badge design that would pertain closely to the unit's role. An appropriate entry was finally selected depicting a St. Bernard dog carrying the traditional keg of brandy.

The St. Bernard has had a long history of aiding persons in distress in the Swiss Alps. The dogs were used and trained by the Monks of the St. Bernard Hospice in the Alps for rescue work in the early 1700s. The Hospice Monks found that the dogs were excellent pathfinders in the snow and that they also possessed an uncanny sense of smell which made them valuable for finding lost and helpless persons overcome during storms. During the almost three centuries that the St. Bernards have been used in rescue work at the Hospice, it is estimated that they have been responsible for the saving of approximately 2500 lives.

Having chosen a St. Bernard dog for its symbol, No. 103 then selected the motto Seek and Save which clearly describes the unit's role. The proposed badge was then submitted to the College of Arms and given royal approval.

NEW SURVIVAL HANDBOOK AVAILABLE



A pocket-size publication bearing the intriguing title "Down but not Out", available from the Queen's Printer or Canadian government bookshops, could be instrumental someday in saving your life.

This book was written by the RCAF Survival Training School Staff and illustrated by Mr. Y. Armengand and Cpl. C. Rousseau. It was produced primarily to assist downed RCAF aircrew but will be of interest to everyone who ventures into Canada's vast forests or arctic tundra. The 185-page manual, which sells for \$3.00, covers a wide range of subjects from the psychology of survival to the construction of shelters and the care of equipment. Numerous illustrations help explain the many ways in which a person can exist under survival conditions.

The Suggestion Box

The following individuals have received awards from the Department of National Defence, for suggestions which have been officially adopted by the RCAF. Photographs of winners of \$100 or over appear below. Proper procedure for submitting suggestions is detailed in AFAO 99.00/01.



FS F. W. Marsh of No. 42 Radar Sqn Cold Lake and **LAC W. A. Snider** of CEPE Det. Cold Lake jointly made a suggestion concerning an electronic optical tracking system Theodolite test unit.



Cpl. D. Watson of CEPE Det. Cold Lake suggested a modification for the telemetry tape search.



LAC L. C. Arnold of Stn. Greenwood made a suggestion concerning a portable propeller tester.

Other award winners:

F/L G. M. Grant
 F/L G. S. Clark
 F/L C. E. Copeland
 F/O M. Horseman
 WO2 F. E. Davis
 WO2 S. R. Demaray
 FS A. F. Blazecka
 FS G. R. Newman
 FS T. A. Wall
 FS D. L. Canivet
 Sgt. J. T. Donak
 Sgt. C. P. Callander
 Sgt. R. A. Dun
 Sgt. C. I. MacKenzie

Sgt. S. U. Guinchard
 Cpl. R. J. K. Smith
 Cpl. G. T. Lauder
 Cpl. W. P. Martin
 Cpl. G. H. Rogers
 Cpl. W. K. Bacon
 Cpl. J. G. Caron
 Cpl. J. A. Laliberte
 Cpl. J. M. Morinville
 Cpl. J. G. Brouillette
 LAC K. C. O'Brien
 LAC H. E. Goddard
 LAC F. H. George
 LAC W. C. Baker

LAC G. R. Violette
 LAC B. B. Fostey
 LAC W. J. Fairley
 LAC A. P. Hiltz
 LAC R. G. Schock
 LAC J. R. Miller
 LAC J. L. Beaulne
 LAC R. Lesieur
 LAC C. L. Slemmin
 LAC D. J. Craig
 LAC J. A. Sams
 LAC R. A. Koopman
 Miss I. Szpiller
 Mr. H. Strehl

IN FLANDERS FIELDS



CANADIANS annually pay tribute to their war dead on 11 November at memorial services and wreath laying ceremonies across the nation. They are deeply gratified to know that year-round in Europe people tend the graves of those who died helping liberate their countries twice in the past 50 years.

Belgians have a special place in their hearts for the Canadian airmen and soldiers who stayed behind in Belgian soil. During September, the Belgian month of remembrance, Canadian memorials and cemeteries are decked with flowers and their custodians recall the events which happened long ago.

For instance, on 2 Nov. '44 a Canadian *Halifax* bomber crashed just outside the small village of Jalhay in the Belgian Ardennes Mountains, several miles east of Liege. All seven crew members, six RCAF and one RAF, died in the crash. The Canadians were F/O R. E. B. Pike, F/O H. F. LeNoury, FS F. J. Lazier, FS J. Judges, FS W. W. Lankin and FS W. H. Hanes.

Although the territory was still in German hands, Mr. Albert Adans went to the scene of the crash, recovered the bodies of the airmen and gave them a decent burial. Later when the territory was liberated, the bodies were moved to Hotton cemetery near Marche, Belgium. But Mr. Adans took it upon himself to erect a monument to the airmen at the place where they died.

Canadian airman stands at monument to the memory of more than 800 of his predecessors buried at Adegem, Belgium.



This monument was erected by Mr. Albert Adans of Jalhay, Belgium, to the memory of six Canadian and one English air-men killed in an aircraft crash near his home in November, 1944.



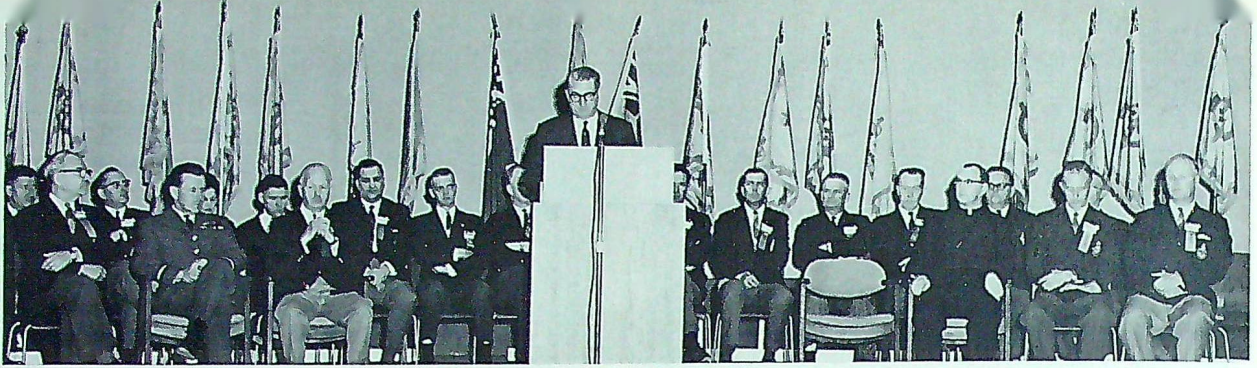
Canadian ambassador to Belgium, Mr. S. D. Pierce (left), presented plaque to Mr. Adans during annual ceremony at the Jalhay memorial this September.

In the woods he raised a large, irregularly shaped field stone, weighing approximately two tons, and on it placed a bronze plaque bearing the seven names. The monument was officially inaugurated at a ceremony on 16 Sept. '51, by the then-Canadian Ambassador to Belgium, Mr. Maurice Pope.

Each year Mr. Adans arranges a simple but touching remembrance ceremony at which representatives of the Canadian Embassy, the RCAF Air Division in Europe, and local dignitaries and citizens participate. This simple act of gratitude springs spontaneously from the hearts of the citizens in the area and particularly from the warm heart of Albert Adans. Following the annual ceremony, Mr. Adans is host at a "vin d'honneur", or reception, for all participants at his cafe. ©

Mr. Pierce lays wreath on behalf of Canadian people at the Adegem cemetery.





National president A/M Hugh Campbell at the rostrum during opening ceremonies of 15th anniversary convention.



RCAF Association 15th Anniversary Convention

By FLIGHT LIEUTENANT E. E. BOYD
RCAFA Liaison Officer, P.E.I.

Photos by CORPORAL DICK SHAW

PRINCE Edward Islanders dress-rehearsed their royal welcome for the Queen last month by hosting the 15th anniversary convention of the RCAF Association. Delegates departed the scene of their three-day deliberations barely 48 hours before Her Majesty officially opened the new Fathers of Confederation Buildings in Charlottetown.

In this historic setting close to 400 RCAFA members, led by their national president A/M Hugh Campbell, CBE (ret.), went on record as favouring retention of the separate identities of the armed forces; maintaining forces in NATO and NORAD

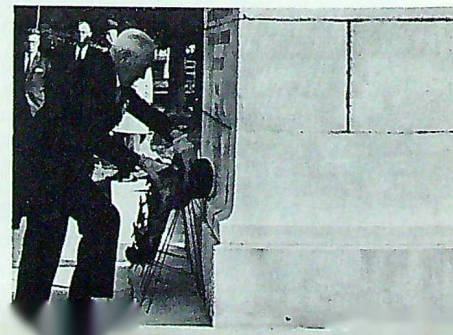
“commensurate with Canada’s fair share of responsibility”; and passed several resolutions recommending specific benefits for veterans and those soon to be retired from the regular forces.

The association’s determination to retain a vital voice in Canadian aviation matters is evidenced by the fact that national president-elect George Penfold and his 1964-65 executive now have a newly-created advisory committee, chaired by their grand president, A/M W. A. Curtis, CB, CBE, DSC (ret.) and composed of prominent Canadian businessmen from coast to coast.

Following registration of delegates, who came from all 10 provinces, in the Charlottetown Hotel on Wednesday, 30 Sept., A/M Campbell was host at the president’s reception in the nearby Fathers of Confederation Memorial Centre.

Next morning the convention was officially opened in the centre’s theater and the traditional parade to the cenotaph was followed by a memorial service, during which wreaths were laid by the Hon. W. J. MacDonald, lieutenant-governor of P.E.I., A/M Campbell, Mr. Pope McMahan and Mr. Bob Enman, respective presidents of the host

RCAFA convention delegates parade to Charlottetown cenotaph where P.E.I. Lt. Gov. W. J. MacDonald lays wreath in memory of fallen comrades.



wings, No. 201 (Charlottetown) and No. 200 (Summerside). The RCAF Central Band, a marching unit from RCAF Stn. Summerside and a flight of Royal Canadian Air Cadets participated with RCAFA delegates in the parade and memorial service.

During his president's annual report on Thursday, A/M Campbell commended the wings on their achievements over the past year. He made specific reference to the new quarters which a number of the wings had provided themselves and praised the wing bulletins for providing a very important and useful service in publicizing the functions of the association on the local level. He said that it was with great pleasure that he welcomed two wings, No. 449 (Orillia) and No. 318 (Chicoutimi), into the association.

A/M Campbell reported that His Excellency Governor General G. P. Vanier "has been graciously pleased to accept the title of Honorary Grand President of the Royal Canadian Air Force Association."

At luncheon on Thursday delegates were guests of Premier Walter R. Shaw and the province of P.E.I., then went back to the Confederation Centre for symposiums on membership, fund raising and wing annual programs - chaired by Messrs. H. M. Bell, G. F. K. Shaw and L. J. Schedlin, respectively. Before adjourning for the day, they attended a briefing on Air Defence Command by A/C A. C. Hull, DFC, chief staff officer from ADCHQ, St. Hubert.

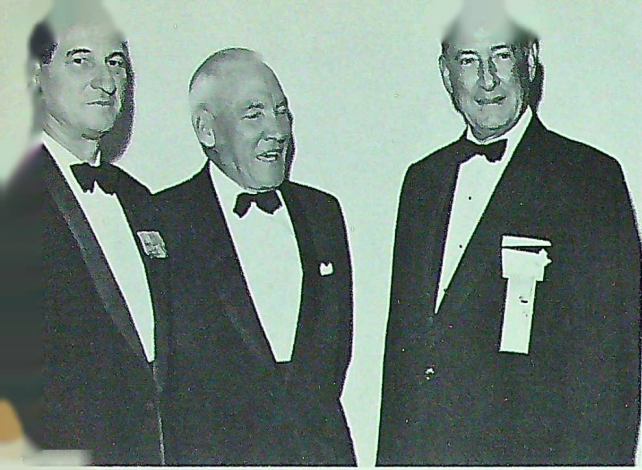
That evening the ballroom of the Charlottetown Hotel was the scene of fun and frolic as group "at homes" were held, featuring food and novelties peculiar to the different areas of Canada. Before retiring for the night, delegates sang and danced to the music of Don Messer's Islanders - Marg Osborne, Charlie Chamberlain and all the gang.

Friday morning's business ses-



Group "at homes" are ever-popular RCAFA convention social highlight, featuring local costumes, food and novelties. Top: Quebec Group. Centre: Ontario Group. Bottom: Alberta Group.





Head-table at annual banquet included (l. to r.): A/M Hugh Campbell, RCAFA national president; the Hon. W. J. MacDonald, P.E.I. lieutenant governor; Gen. Thomas D. White, USAF ret., guest speaker; A/M W. A. Curtis, grand president; His Worship Mayor A. W. Goudet of Charlottetown; A/V/M E. M. Reyno, 4 ATAF chief of staff.

sion was followed by a briefing on NATO operations from A/V/M E. M. Reyno, AFC, chief of staff at 4 ATAF HQ, Ramstein, Germany; after which RCAF awards were made by A/C G. G. Diamond, AFC, acting AMP and chief RCAFA liaison officer from Ottawa. His Worship Mayor A. W. Goudet and the City of Charlottetown hosted the delegates at luncheon that day before they returned for a full afternoon of business sessions.

Many prominent Canadians graced the head table Friday evening at the association's annual banquet. Guest of honour was Gen. Thomas D. White, retired USAF chief of staff,

who spoke on "The Role of an Air Force Association." After his address, Gen. White was presented with a plaque honouring him as an RCAFA life member, following which the confederation ball got underway.

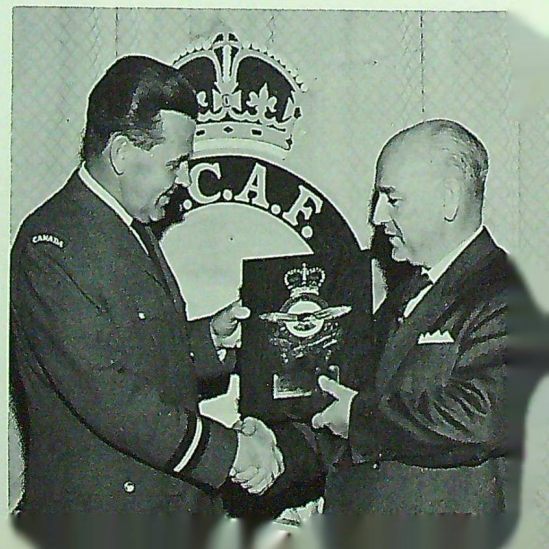
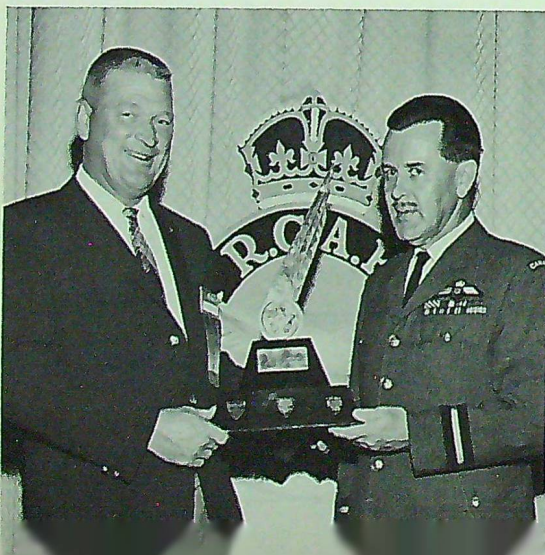
On Saturday morning the final business session and election of the new national executive council were held. Delegates then boarded buses for the 50-mile trip to RCAF Stn. Summerside where Mayor W. E. Jenkins and the Town of Summerside entertained at luncheon in the officers' mess. During the afternoon G/C A. G. Dagg and his staff conducted the RCAFA members on a tour of this Maritime Air Command

base, where two days later Queen arrived in Canada. They turned to Charlottetown via Summerside town, Green Gables the north shore area.

Final event was an infodance sponsored by the host wing on Saturday evening. The delegates began journeying home by air car and train Sunday morning praising the work of convention chairmen Pope McMahon and Liam Young and their committee from Nos. 200 and 201 Wings.

Next year's convention will be held in Regina, Sask. Even the most western hospitality will be hard-pressed to surpass that experienced in P.E.I. last month.

A/C G. G. Diamond presents RCAF awards to (left) M. Yule, president of No. 404 (Kitchener-Waterloo) "Wing of the Year", and to "Member of the Year" R. Lambert, No. 252 (Lord Beaverbrook) Wing, Fredericton.



MAJOR AWARD WINNERS

GRAND PRESIDENT'S TROPHY

Awarded to the wing (over 150 members) obtaining the greatest overall percentage increase in membership for the year: **No. 437 (York) Wing, Toronto.**

PRESIDENT'S TROPHY

Awarded to the wing (less than 150 members) obtaining the greatest overall percentage increase in membership for the year: **No. 446 (Brampton) Wing.**

VICE PRESIDENT'S TROPHY

Awarded to the wing member making the greatest contribution to the national membership drive: **John B. Harvey, No. 437 (York) Wing, Toronto.**

GROUP EFFICIENCY AWARD

Awarded to the group displaying the greatest efficiency in conducting the membership drive: **Alberta Group.**

PRESIDENT PENFOLD

Mr. George Penfold, of Don Mills, Ont., the new RCAFA national president, joined the RCAF in 1942 and served as an observer on Coastal Command operations and in India on transport work until the end of World War II.

He joined the RCAFA in 1951 and was elected to the Ontario group executive in 1955, serving as president of the group from 1957 to 1959. He has been an active member of the national executive council of the association since 1957, the last two years as first vice-president. He is also a member of the Ontario provincial committee of the Air Cadet League of Canada.

Mr. Penfold is merchant representative of Household Finance Corporation in Toronto.



A/V/M F. G. Wait, former grand president, makes presentation to G/C A. G. Dagg, CO of RCAF Stn. Summerside, as national president-elect G. E. Penfold and Summerside mayor W. E. Jenkins listen attentively.

1964-65 NATIONAL EXECUTIVE COUNCIL

Grand President: A/M W. A. Curtis, CB, CBE, DSC, Toronto, Ont.

National President: Mr. George E. Penfold, Don Mills, Ont.

Vice President: Mr. Herbert M. Bell, Winnipeg, Man.

Director 1-yr.: Mr. Thomas G. Farmer, North Bay, Ont.

Director 1-yr.: Miss Beth Rowand, Edmonton, Alta.

Director 2-yrs.: Mr. George A. Ault, QC, Ottawa, Ont.

Director 2-yrs.: Mr. F. A. Connolly, Fredericton, N.B.

Director 2-yrs.: Mr. Stanley H. Wootten, Winnipeg, Man.

WD Representative: Miss Catherine L. Fortune, Saint John, N.B.

Immediate Past President: A/M Hugh Campbell, CBE, Ottawa, Ont.

Director, Atlantic Group: Mr. A. T. Goodwin, Moncton, N.B.

Director, Quebec Group: Mr. J. H. T. Dinan, Quebec, P.Q.

Director, Ontario Group: Mr. Leon J. Schedlin, Toronto, Ont.

Director, Ontario Group: Mr. Donald G. Gillies, Waterloo, Ont.

Director, Man.-N.W. Ont. Group: Mr. John C. McCullough, Port Arthur, Ont.

Director Sask. Group: Mr. Herbert Flook, Yorkton, Sask.

Director Alberta Group: Mr. A. R. Craig, Edmonton, Alta.

Letters to the Editor

GROSTENQUIN CLOSING

Dear Sir:

There can be no doubt that a good deal of nostalgia attends the closing-down of an air base ("What Happens to a Community . . .", Sept. '64.). The times of hard work and hard play, the friendships that grew, the difficulties that were overcome, the sorrows that struck deeply, are all remembered. Indeed, a great variety of emotions are stirred in all who have had association with a closing unit.

I believe that No. 2 Wing, Grostenquin, established a distinctive place in the history of the RCAF. In an effort to retain something of this spirit for myself, I sat down on the deserted airfield one fine morning recently and wrote the accompanying piece. Should you decide to print it, please affix only my initials.

Can this be the place where once sound roared —

This silent, sombre swamp where nothing moves?

But look — watch birds wheel and soar to mock us now.

Listen — hear a distant cow low softly.

Hear a distant cock crow proudly;

From his dung-heap height

He crows his challenge.

He will be here long after we have gone.

But where rings now the sudden, stirring "Scramble Poppa, Scramble!"?

Where echo now the sprinting, frantic feet

Of crews? — the rising whine, the shriek, the roar

Of Orendas pushing comely craft, quick to slip their surly bonds?

Gone. All resounding uproar now has gone.

Now nothing can be heard

Except the birds, singing as they soar,

And the certain, everlasting crosswind,

Whispering through strangely uncropped grasses,

But vexing no one now.

Soon only shells of buildings will remain;

Rude steel which housed the men

Who wrested pride and glory from the swamp,

Who bred a lively spirit in the swamp.

The buildings are deserted, they decay:

Long may the spirit live!

Some we must leave behind in Gallic soil —

They fostered spirit, pride and glory,

too;

But now they rest beside the Lorraine Hill.

They rest.

They will be here long after we have gone.

A. J. B.

STATIONS, NOT BASES

Dear Sir:

Reference "What Happens to a Community When an Air Base Closes?" (Sept. '64), I was always under the impression that they were RCAF Stations. Is "air base" now an officially adopted term in the Canadian Air Force, or is this due to ignorance on the part of the *ROUNDEL* staff?

R. F. M. McInnis,
Ottawa, Ont.

(The answer is "no" to both questions. — Editor.)

WEST COAST CO-OPERATION

Dear Sir:

Everyone here, including W/C Inglis, is very pleased with the fine looking spread you gave "Transplant" (Sept. '64) — the photostory on the deployment of No. 409 Sqn. to Paine last summer.

Glad we could be of some help in providing an interesting story for your pages. The publicity has certainly been a great help to us and feather in our wind-sock.

John T. Wolcott,
1st Lt, USAF,
Information Officer,
Paine Field, Wash.

CREW COMMENDED

Dear Sir:

With reference to the Oct. '64 edition wherein you publicize the Sovereign's awards to F/L R. W. Cass and Cpl. P. E. Blank for their gallantry during Operation "Muisse" on 20 Feb. '64, prithe spread the glory in this incident fully!

The remainder of the crew of *Albatross* 9308 during this rescue received the first Commendations awarded by our newly-appointed Chief of Defence Staff, which stated, in part:

" . . . it is fully appreciated that only the concerted efforts of the whole crew enabled the rescue to achieve its successful and happy climax. The entire operation exemplified that superb teamwork which search and rescue operations demand and which, too often, is taken for granted."

Sgt. Shatterproof must be turning over his limbo at such obvious spurning of seven of his beloved "boys in the field" viz: F/Ls A. W. Chute and D. W. Rhodes, LACs G. O. Busch, L. E. Erickson, C. L. Lavender and J. D. MacDougall — of No. 103 RU, Greenwood, N.S. Let us spare that old warrior further vertigo and affirm that the entire crew's effort was not taken for granted.

F/L K. M. Morgan,
RCAF Records Office.

LIVING IT UP

Dear Sir:

The slip of a teletype operator's finger brightened the day for headquarters accounting officers, and ensured rapid approval of an airman's claim for interim lodgings, when this message came in reply to a query on the entitlement:

"CPL . . . ADVISES DUE TO EXTENDED PERIOD OF INTERIM LODGINGS THAT WOULD HAVE BEEN REQUIRED HE RENTED FURNISHED ACCOMMODATION ON 6 AUG AND WAS ABLE TO CARRY ON MORE OR LESS NORMAL LIVING UNTIL HIS PERMANENT ACCOMMODATION BECAME AVAILABLE."

S/L W. A. Bradshaw,
Directorate of Accounting,
CFHQ, Ottawa, Ont.

WINGED SENTRIES WANTED

Dear Sir:

In a recent issue of the *ROUNDEL* you had an article describing a new book "Winged Sentries/Sentinelles de l'Air" written by Mr. John Gordon. I have not seen this book in any book stores and would appreciate it if you could tell me where it can be purchased.

W/C J. E. Goldsmith,
Commanding Officer,
RCAF Station,
Senneterre, Quebec.

(This book may be purchased for \$3.25 from Seeley Publishing Co., Ltd., 1231 St. Catherine St. W, Montreal 25 . . . Editor)

ERRATUM

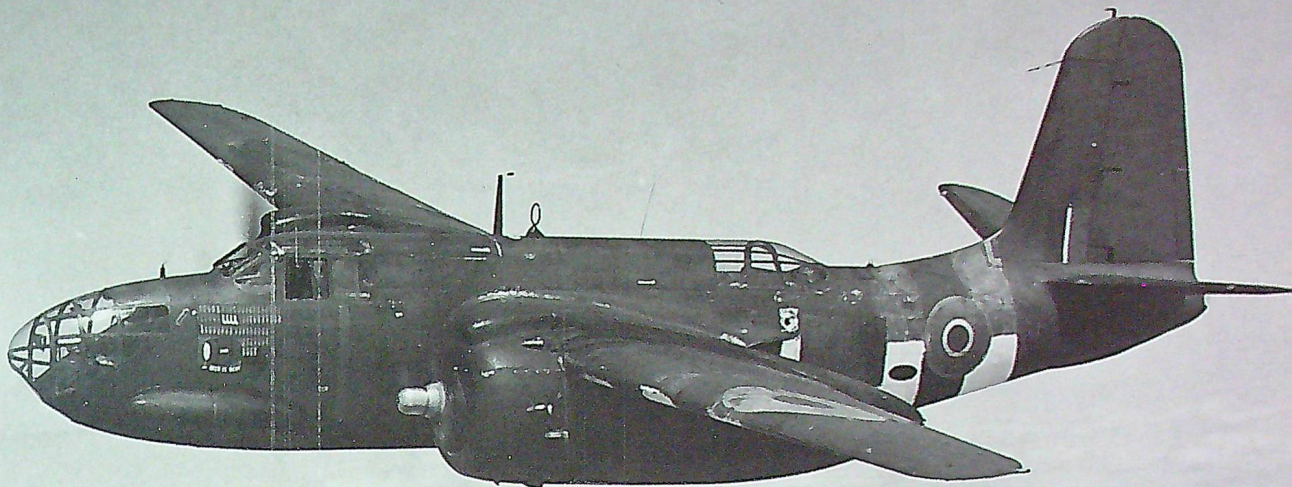
Dear Sir:

Thank you for the complimentary copy of *ROUNDEL* which contains my article on Programmed Instruction. ("Machines or Instructors?" Sept. '64) The cartoons accompanying the article are very well done and are most appropriate.

Let some person knowledgeable in the terminology of P.I. take us to task, I should like to point out that the proper word in line 12 of para 2 is "mathetics" vice "mathematics". Since the word is not in the dictionary and is unknown outside of P.I. terminology, the mistake is an easy one to make.

S/L W. H. Farrell,
Chief of Training Standards,
Central Officers School,
RCAF Stn. Centralia, Ont.

(The spelling in S/L Farrell's original manuscript was correct. We erred in changing it. — Editor.)



AIRCRAFT ALBUM:

Douglas Boston

The Boston and its fighter variant, the *Havoc*, were used as night intruders when such operations were still in the experimental stage. No. 418 Sqn. operated them from March 1942 until July 1943, when they were entirely replaced by *Mosquitos*. Other Bostons were flown as medium bombers over France and North Africa, where many Canadians became acquainted with the type.

Early versions of the *Boston III* had four .303 machine guns in the nose and twin hand-operated machine guns in the dorsal and ventral positions. Later models had the armament supplemented with a tray in the belly mounting four 20 mm. cannon. Power was two Wright Cyclones of 1,600 h.p. each, giving a top speed of 304 mph. Wing span was 61 feet 4 inches, length 47 feet, and loaded weight 25,000 lbs.

Roger Duhamel

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