ON WINDSWEPT HEIGHTS
HISTORICAL HIGHLIGHTS OF CANADA’S AIR FORCE
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SUR DES SOMMETS BALAYÉS PAR LES VENTS
FAITS SAILLANTS HISTORIQUES DE LA FORCE AÉRIENNE DU CANADA
ON WINDSWEPT HEIGHTS
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On Windswept Heights:  
Historical Highlights of Canada’s Air Force

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1. MCpl Morgan Boutilier jumps out of a CC-130 Hercules.


3. Canada’s Second World War “ace of aces” Flying Officer Buzz Beurling meets Prime Minister MacKenzie King. Photo: F/S Jim Bent

FLIGHT PLAN

By Lieutenant-General Angus Watt
Chief of the Air Staff

Welcome to the first edition of On Windswept Heights. I am providing this little book to every member of the Air Force with one simple aim in mind: to enhance your individual understanding and appreciation of our great history.

It is obviously not an encyclopaedia nor a definitive official Air Force history. Rather it is a taste of our past, meant to be lively, interesting and informative, meant to whet your appetite to learn more about our history and heritage. This is important for inasmuch as we remain a very forward-looking, future-oriented and dynamic organization, much of our strength flows from our past — it is the bedrock upon which we have built much of our success and it is a source of immense pride to us all in “light blue.”

I would ask each of you to read this book and watch the DVD. I am sure that you will enjoy them. Over the next few years, I would like this book to serve as the catalyst to add “nuggets” of Air Force history to our everyday activities, especially parades, mess dinners and other ceremonial events. Let’s show our pride in our rich history!

Enjoy.

[Signature]
THE WINDSWEPT HEIGHTS

Make history cover to a spread,
add 4 photos

Bomber Command attacks

Photo: Cpl J.A. Wilson

Billy Bishop and Spitfire
Photo: F/S Jim Bad

CF-18 attéri
Photo: Cpl J.A. Wilson

F-86 Sabres on patrol
The history of Canada’s Air Force is the story of the men and women who had the guts, determination and vision to serve their country in the aviation arm of the Canadian Forces.

Canadians in the Air Force immediately distinguished themselves as fighter aces in the First World War. Though the years between the wars were modest ones with an often limited mandate to act as an aid to the civil power, the Royal Canadian Air Force grew to be the fourth largest air force in the world after the Second World War and play a world-class leadership role in the Cold War years as a major player in NATO and a joint partner in the continental air defence of North America through its membership in NORAD. Though the early years of unification provided new challenges, Canada’s Air Force regrouped and restored much of its heritage and traditions.

Today, it continues to play a leading role on the world stage as a multi-purpose, combat-capable force that fulfills a variety of domestic and international commitments.
When Canada entered the First World War on Aug. 4, 1914, it did so because it was part of the British Empire, which was at war with Germany and the Central Powers.

Canada’s Minister of Militia and Defence, Sam Hughes, put together the Canadian Expeditionary Force to fight overseas on the Western Front. It was cobbled together from militia units from across Canada. But Hughes also thought Canada should send an air force so he created the short-lived Canadian Aviation Corps (CAC) on Sept. 16, 1914.

Canadians were also invited to join Great Britain’s newly formed Royal Flying Corps (RFC) and Royal Naval Air Service (RNAS). Canadian pilots serving in the British forces would truly astound the world with their flying and shooting skills, winning more than 800 decorations. Three were awarded the highly coveted Victoria Cross – arguably the most revered decoration for bravery in the world: Major William (Billy) Bishop, Second Lieutenant Alan McLeod and Major William Barker.

“Canadians were invited to join Great Britain’s newly formed Royal Flying Corps (RFC)…”

Canadians took to combat flying so well that by the spring of 1918, the government of Prime Minister Robert Borden pressed for the development of a wing consisting of eight squadrons for service with the Canadian Corps in France. But Britain wanted to keep talented Canadian pilots and ground crew within the Royal Flying Corps. Their foot dragging succeeded in limiting the number of Canadian squadrons to be

Did you know…

By the Armistice in 1918, Britain’s Royal Flying Corps had quite a record for encouraging Canadians to join their ranks. The RFC had recruited approximately 16,663 Canadians and graduated 3,272 Canadian pilots and 137 observers.

Did you know…

The Canadian Aviation Corps wasn’t exactly a “corps” by any military standard: it only had two officers and one mechanic to maintain a Burgess-Dunne biplane that was picked up in Massachusetts! The plane itself was shipped to the Salisbury Plain in England but never flew. As it sat outside (not far from Stonehenge) in the horrible weather of the war’s first autumn and winter, it rotted away into history.
formed. However on Aug. 5, 1918 the British Air Ministry announced the formation of two RAF squadrons which were to be manned entirely by Canadians.

More than ten weeks later, the Canadian Government authorized the mobilization of the squadrons to proceed and as a result No. 1 Fighter Squadron under the command of Major A.E. McKeever, and No. 2 (Day Bomber) Squadron under the command of Major W.B. McKeever were mobilized at Upper Heyford. The CAF itself was nothing more than two RAF squadrons manned entirely by Canadians. A few weeks later in September 1918, the Royal Canadian Navy formed its own aviation arm – the Royal Canadian Naval Air Service – which was tasked with anti-submarine warfare.

A total of 22,812 Canadians served in the wartime air force – either in the Royal Flying Corps, the Royal Naval Air Service or the Royal Air Force.

During the First World War, 1,563 Canadians gave their lives as a result of their air force service.

“...A total of 22,812 Canadians served in the wartime air force...”

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During the First World War, 1,563 Canadians gave their lives as a result of their air force service.

Captain William “Wop” May, DFC, of Carberry, Man., served with the RAF’s No. 209 Squadron and came out of the First World War as a fighter pilot ace with seven victories. In 1929, Wop and Vic Horner wrote a dazzling page in Canadian aviation history when they flew an open cockpit Avro Avian to Fort Vermillion, Alta. in one of the first mercy flights of Canada’s air age. In 1932, May flew the aircraft that guided Royal Canadian Mounted Police officers in their hectic chase of Albert Johnson, “The Mad Trapper” of the Arctic.
The First World War added many new words and phrases to the English language. Some, like “trench foot” and “mustard gas” represented horrific changes to the way war was fought. Others, like “ace”, suggested something more glamorous than mud and machine guns. The public became fascinated with military pilots, and those who shot down five or more enemy aircraft were known as “air aces”.

“If aces suggested something more glamorous than mud and machine guns.”

**FOCUS ON THE NIEUPORT 17**

The Nieuport 17 was in widespread use by the British and French air forces during the First World War. The Nieuport seen here is a replica finished in the markings of the Aircraft flown by A/M William “Billy” Bishop.

**FOCUS ON THE SOPWITH CAMEL**

The Sopwith Camel, easily the best known airplane of the Great War, was quite fast for the era, reaching a top speed of 113 mph (181 km/h). The aircraft had a reputation for being uncomfortable to fly, but that didn’t stop pilots from destroying more enemy aircraft in the Sopwith Camel than with any other aircraft.
MEET AIR MARSHAL WILLIAM “BILLY” BISHOP, VC, CB, DSO & BAR, MC, DFC, ED

Air Marshal William Avery Bishop was one of the greatest aces of the war. However, he was not the most decorated Canadian – not quite. His fellow pilot and friend, William Barker, actually holds that title. But because Bishop was the third highest ace of the First World War (72 kills) and reputed by some to be the top ace in the British Empire, he is easily the most revered Canadian Air Force hero and one of the best-known Canadian military figures – at home and abroad. He remains the symbol of the scrappy Canadian fighter pilot who faced danger like it was tomorrow’s dinner.

Bishop, who was gifted with extraordinary eyesight and acute shooting skills, also possessed what Napoleon called “the courage of the early morning”. Then-Captain Bishop’s dawn raid on the German Estourmel aerodrome on June 2, 1917 earned him the Victoria Cross – the first won by a Canadian airman.

Between the wars, Bishop had some ups and downs in the private sector and his airline business with William Barker ultimately failed. But when the Second World War broke out, Bishop, who had already returned to military service in 1938, was appointed an air marshal by the Royal Canadian Air Force (RCAF) and put in charge of recruitment. He was entirely successful in this regard and remained an ambassador for Canada’s Air Force until his death in 1956.
The Canadian Air Force was created too late in the First World War for significant growth. Six more squadrons were planned for service in Europe, but with war’s end on Nov. 11, 1918, the plans were not implemented.

What would become of Canada’s infant Air Force? By Feb. 5, 1920 the two squadrons (still cooling their heels overseas) were disbanded and personnel sent back to Canada, where a new CAF was authorized by an Order-in-Council on Feb. 18, 1920. The CAF was given a provisional establishment of 1,340 officers and 3,905 airmen.

The CAF became part of a civilian Air Board whose operations included forest fire patrols, forestry surveys, aerial photography and anti-smuggling patrols.

Most of the smuggling during the 1920s and early 1930s was from Canada to the United States as enterprising rum-runners tried to satisfy an American demand for alcohol during Prohibition. But when not monitoring the whiskey trade or watching for runaway campfires, the CAF, now known as the Royal Canadian Air Force (RCAF), was taking aerial photographs of vast parts of uncharted Canadian territory, from which maps would be created. Until 1936, when the Department of Transport was given responsibility for civil aviation, and the possibility of another world war began to loom, the RCAF remained an air force dedicated to civilian interests.

Following the end of the First World War, military pilots returned home to Canada. They had learned how to pilot an aircraft while trench warfare raged below them and now they looked to applying their skill in the civilian world.

Aviation was still a relatively new game. Many of these returning pilots used their savings to purchase aircraft. Many of them became bush pilots, bringing needed supplies to remote northern communities and people moving across vast stretches of Canada.

There is a profound irony in the tale of the bush pilot. Military aviation produced the bush pilot. Later, bush pilots returned to uniform and in turn helped build the Royal Canadian Air Force.
What was it like in the RCAF between the world wars?

Well, it might be described as not very glamorous – but very busy. It was also a great way to see Canada. Wing Commander Harry Bryant, joined the RCAF in 1927, just three years after its creation. He spent 32 years in the RCAF and was posted an incredible 30 times during his career.

In 1929 he was part of the aircrew on Vickers Vedettes at Jericho Beach (near Vancouver), B.C. flying fisheries and anti-smuggling patrols.

Wanting to be a pilot, he was selected for the first NCO pilot course of 1931, where non-commissioned members could graduate as sergeant pilots.

Then, in 1932, Bryant was sent to the other coast of Canada, where he flew an experimental ship to shore service from Red Bay, N.L. to Montreal, Que. In 1933, he assisted the Royal Canadian Mounted Police chase rum-runners in Nova Scotia, New Brunswick and Quebec. After completing his flying instructor’s course at RCAF Station Trenton, Ont., Bryant was sent to No. 8 Service Flying Training School in Moncton, N.B. as a squadron commander.

Bryant travelled the world during the Second World War – to London, England to train flyers at the British Empire Flying Training School, to Cairo to command 216 Royal Air Force Transport Squadron and then Morocco as commanding officer of Royal Air Force Station Rabat/Sale. Then it was back to Jericho Beach in 1944.

Bryant retired in 1959 as the Air Force was celebrating its 35th anniversary and 50 years of powered flight in Canada. He died in 1996.

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On Jan. 1, 1923, the Department of National Defence was born with the amalgamation of the Department of Naval Services, the Department of Militia and Defence, and the Air Board.

On March 12, His Majesty King George V bestowed the designation “Royal” on the CAF but the Royal Canadian Air Force had to wait one year later, until April 1, 1924, to become a professional full-time service.

The RCAF began with 66 officers and 194 non-commissioned members in the Permanent Active Air Force (similar to today’s Regular Force) and four officers in the Non-Permanent Active Air Force (similar to the Reserve Force).

April 1, 1924 has been celebrated ever since as the birthday of the Air Force.
On Sept. 1, 1939, Germany invaded Poland and the Second World War began. Britain declared war on Germany on Sept. 3, and Canada declared war one week later. The RCAF would be a big part of the final victory (see box below). At 32 kills, the highest scoring Canadian ace of the war was Flight Lieutenant George “Buzz” Beurling, DSO, DFC, DFM and Bar.

The RCAF served with distinction in many significant operations and throughout the world, including:

- The Battle of Britain in 1940
- Protection for the Normandy invasion (D-Day) in 1944
- Operations over Egypt, Italy, Malta, Sicily
- Bombing raids over Germany and occupied Europe
- The Battle of the Atlantic
- Missions in Ceylon, India and Burma

The RCAF had 4,061 personnel, 23 under-equipped, under-strength squadrons and only 270 aircraft – two-thirds of these obsolete.

By 1945, the RCAF was the fourth largest air force in the world and had supported three large missions during the war:

- the Home War Establishment of operational squadrons to defend Canada
- the British Commonwealth Air Training Plan (BCATP) to train aircrew
- the Overseas War Establishment to support operational missions outside Canada in Fighter Command, Bomber Command, Coastal Command and the 2nd Tactical Air Force.

On Jan. 31, 1945, the RCAF reached its maximum size of 211,151 personnel:

- More than 100,000 were BCATP trainees or supporting training
- 46,000 were in the Overseas War Establishment
- 65,000 were in the Home War Establishment
- 249,600 men and women served in the RCAF during the war
- 17,034 RCAF personnel died, including 28 women and 1,066 ground crew
Then-Squadron Leader Leonard Birchall, was piloting his Catalina flying boat with the RCAF’s 413 Squadron on April 4, 1942 after eight hours on patrol over the Indian Ocean, when his crew spotted a large Japanese fleet approaching Ceylon (now Sri Lanka). He radioed the information to the Royal Navy’s Eastern Fleet headquarters, which allowed British forces to prepare for and repulse the attack on Ceylon, but not before Birchall and his crew were shot down. Because the warning allowed the Royal Navy to move valuable capital ships and merchant vessels out of harms way Winston Churchill called Birchall the “Saviour of Ceylon” for his actions.

Birchall spent the remainder of the war in Japanese prisoner of war (POW) camps, where, as the ranking senior officer at each establishment, he resisted Japanese cruelty (he was beaten on several occasions), fought to improve the living standards of the other POWs and succeeded in reducing the overall fatality rate in the camps from 30 per cent to less than two per cent.

Following the war, Birchall remained in the RCAF, eventually reaching the rank of air commodore. His last post was as commandant of Royal Military College, a position he retained in an honourary capacity for the rest of his life. He received the fifth clasp to his CD in 1997 for 62 years of service and was inducted into the Canadian Aviation Hall of Fame in 2001. His speech on leadership is considered a timeless classic: “Your leadership is judged not by your rank but by whether your men feel you have the knowledge, training and character that they will obey you unquestioningly, and that they can trust you with their lives. Men are shrewd judges of their leaders, especially when their own lives are at stake, and hence your knowledge, character and behaviour must be such that they are prepared to follow you, to trust your judgement and respect your decisions.”
“THE AERODROME OF DEMOCRACY” (1940–1945)

Canada trained the world to fly. That was the purpose of the British Commonwealth Air Training Plan (BCATP) that operated from airfields across Canada during the Second World War. Though entitled “Commonwealth” the BCATP truly was international in scope:

<table>
<thead>
<tr>
<th>Nationality and number of BCATP Graduates (1940-1945)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Canadian Air Force (RCAF)</td>
<td>72,835</td>
</tr>
<tr>
<td>Royal Australian Air Force (RAAF)</td>
<td>9,606</td>
</tr>
<tr>
<td>Royal New Zealand Air Force (RNZAF)</td>
<td>7,002</td>
</tr>
<tr>
<td>Royal Air Force (RAF), which included</td>
<td>42,110</td>
</tr>
<tr>
<td>448 Poles</td>
<td></td>
</tr>
<tr>
<td>677 Norwegians</td>
<td></td>
</tr>
<tr>
<td>800 Belgian and Dutch</td>
<td></td>
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<tr>
<td>900 Czechs</td>
<td></td>
</tr>
<tr>
<td>2,600 Free French</td>
<td></td>
</tr>
<tr>
<td>Naval Fleet Air Arm</td>
<td>5,296</td>
</tr>
</tbody>
</table>

That’s more than 130,000 air crew! It was one of the most successful air training programs in history.

The BCATP used the North American Harvard trainer, among other types of aircraft, to train pilots, navigators, bomb aimers, wireless operators and flight engineers. The program was so successful and so admired by the world that U.S. President Franklin Roosevelt called Canada “the aerodrome of democracy”.

Did you know...

Canada was selected as the site for the BCATP because of its plentiful airspace, aviation industry, closeness to the United States, access to fuel and safe distance from Axis bombing routes!
The Battle of Britain (1940)

“Never… was so much owed by so many to so few.”

By 1940, Nazi Germany had conquered France after a string of diplomatic and military victories. The Luftwaffe (the German air force) seemed unstoppable. U.S. public opinion was opposed to entering the war. Britain and the Commonwealth stood alone, and a German invasion of Great Britain was believed to be imminent.

But in the late summer and early fall of 1940, the Commonwealth airmen that British Prime Minister Winston Churchill called “the few” beat back superior numbers of German aircraft and prevented an invasion.

“Never in the field of human conflict was so much owed by so many to so few.”

Winston Churchill

The sight of Britain winning against the supposedly unstoppable German war machine was inspiring to many. Certainly it inspired Canada and in addition to providing pilots for RAF squadrons, we also sent one of our own: No. 1 Fighter Squadron RCAF. When it flew in the battle, the RCAF faced combat for the first time. Where Vimy Ridge had been the proving ground for the Canadian Army in the First World War, the Battle of Britain was the first opportunity for the RCAF to fight as Canada’s Air Force. Approximately, 103 Canadians flew in the Battle of Britain and 23 died.
The Battle of Britain was the first military confrontation won by air power and Germany’s first defeat in the war. The fighter pilot attained almost mythic appeal but they owed much of their success to outstanding ground crew, those aircraft mechanics who had to work around the clock to fix broken aircraft and have them in the air again for the next attack.

Did you know…

The first V-1 (German flying bomb) shot down by RCAF guns was claimed on the night of June 16–17, 1944 by a Mosquito crew of 418 (Intruder) Squadron.

Squadron Leader Ernest McNab, OBE, DFC, was the commanding officer of No. 1 Fighter Squadron, when it moved to Britain in June 1940. McNab did not sleep well before the first sorties of the Battle of Britain because his pilots had limited training in aerial combat and some of them had only 20 flying hours – they would be going up against very experienced German pilots. But on their second sortie on Aug. 19, 1940, the squadron destroyed three German aircraft and damaged three others. McNab had previously destroyed a Dornier 215 on Aug. 15, 1940 and won the RCAF’s first victory in the Battle of Britain.

In 1941, as part of plan to designate all RCAF squadrons in a “400 series,” the No. 1 was renamed 401 Fighter Squadron.

A remarkable aircraft, the Mosquito had great speed 425 mph or 680 km/h because it was made almost entirely out of wood! Although it was envisioned as a light bomber, the Mosquito served in night-fighter, anti-shipping and reconnaissance roles and was used by Pathfinder squadrons, who dropped flares to guide bombers towards their targets. The aircraft was constructed of balsawood from Ecuador and birch from Canada. Many were manufactured at the de Havilland aircraft plant in Downsview, Ont.
MEET PILOT OFFICER WILLIAM MCKNIGHT, DFC AND BAR

He was a “hat trick” champion when scoring had nothing to do with putting hockey pucks in the net and everything to do with knocking German aircraft from the skies.

Canada’s highest scoring ace of the Battle of Britain was Pilot Officer William McKnight, DFC and Bar, who downed 17 German planes in his short but illustrious career. Born in Edmonton, Alta. in 1918, McKnight shot down 10 planes during the Battle of France and scored six victories in four days over the beach of Dunkirk, while the British evacuated hundreds of thousands of troops from French soil before the Germans could push them into the sea. He epitomized the boisterous, “pushing the envelope” panache that is said to characterize fighter pilots, whether that carefree spirit comes to them by innate design or conscious imitation. While flying in France, McKnight is reputed to have “commandeered” a general’s staff car to help carry out a romantic liaison with a Paris beauty.

McKnight flew with the RAF’s 242 Squadron, which was dubbed “all Canadian” because so many Canucks served in it. The unit’s commander during the Battle of Britain was Squadron Leader Douglas Bader, a renowned ace and an incredible pilot who actually flew with two artificial legs. Bader was so impressed with the abilities of the young McKnight that he made the Canadian his wing man in the squadron.

During the Battle of Britain, McKnight had three kills in one day, when, on Aug. 30, 1940, he shot down two Messerschmitt 109s and a Heinkel 111, which the hockey-wise Canadians dubbed a “hat-trick.” Less than five months later, on Jan. 12, 1941, he was dead, his Hurricane aircraft lost over the English Channel. He has no known grave and was only 23 years old when he went missing.

S/L Douglas Bader (L) and P/O Bill McKnight in front of McKnight’s aircraft nose art. Courtesy: www.acesofww2.com
THE BATTLE OF THE ATLANTIC (1939–1945)

The Battle of the Atlantic was a struggle for control of the shipping lanes on the North Atlantic Ocean. It was as strategically important to win as the Battle of Britain, and it lasted as long as the Second World War itself. In order to continue fighting, Britain needed supplies, particularly from North America. Germany, on the other hand, was determined to sink that incoming shipping with their stealthy U-Boats (submarines).

The Allies eventually defeated the U-Boats but not before the Germans had sunk 2,900 Allied ships and 14 million tons of shipping. So feared was this undersea menace that the Allied war leaders at the 1943 Casablanca Conference declared the elimination of the U-Boat threat as its number one priority. Advances in technology like sonar enabled the ships of the Royal Navy, Royal Canadian Navy and later United States Navy to target the U-Boats for destruction. But it was the introduction of the U.S.-made B-24 Liberator bomber that equipped Coastal Command with a long-range patrol aircraft that helped close the “Atlantic Gap”, the part of the ocean where U-Boats had prowled unmolested because they were out of range of aerial support. It was a crucial factor in winning the war.

“Coastal Command destroyed more than one-quarter of all U-Boats...”

Coastal Command destroyed more than one-quarter of all German U-Boats during the war: 212 out of 800. RCAF squadrons in Coastal Command and in Canada accounted for 19 of these with more by RCAF crews in RAF squadrons.

The RCAF patrolled over the North Atlantic hunting submarines and providing air cover for the ship convoys that sailed from North America to Britain. When they sighted enemy subs, aircraft attacked first with bombs and in 1941 with depth charges and later acoustic torpedoes, which followed the noise made by the submarine.
Meet Flight Lieutenant David Hornell, VC

Flight Lieutenant David Hornell was born in Mimico, Ont. in 1910 and awarded the Victoria Cross (the Commonwealth’s highest award for valour) during his service with Coastal Command. He was only one of three RCAF members to receive the Victoria Cross during the Second World – unfortunately, unlike the Great War, when all three VC recipients survived their actions to enjoy their honours, Canada’s Air Force VC recipients in the next war did not live to receive the coveted medal.

How many times have you seen the Hollywood depiction of a wartime pilot who is hopelessly crippled by enemy fire but somehow manages to complete his mission only to have his plane crash? Hornell was a real life example of that kind of heroism.

F/L Hornell was the aircraft captain of a twin-engine amphibian aircraft (PBY-5A Canso) with 162 Squadron RCAF temporarily attached to Coastal Command and conducting anti-submarine warfare in the North Atlantic. Hornell saw a sub in the distance and turned to attack it; but the U-Boat had already seen Hornell’s aircraft and the sub commander returned some very heavy and accurate anti-aircraft fire. Just as he gained speed to attack the submarine, one of Hornell’s guns jammed and two shells hit his aircraft, starting a fire inside the plane and knocking out one engine. Despite the chaos, Hornell still managed to drop his depth charges right on target and he sent the U-Boat to the depths of the ocean.

After Hornell crash-landed into the sea, only one of the two inflatable dinghies was found. It was too small for everyone so they took turns sitting inside or hanging on to its side while in the water. Two of the crew members died during their 21-hour ordeal. By the time Hornell and the remaining crew were rescued, Hornell was blinded and completely exhausted; he died shortly after being picked up.
**BOMBER COMMAND (1939–1945)**

Most of the RCAF personnel serving overseas during the war were with Bomber Command, the only RAF Command with an all-RCAF group. No. 6 (RCAF) Group was activated on Jan. 1, 1943 with six squadrons. Two more joined in the following two days. Eventually, 14 RCAF squadrons belonged to the group. In 1944 its squadrons flew 25,353 sorties, dropped 86,503 tons of bombs and mines; they also had the lowest loss rate of any group flying four-engined aircraft in Bomber Command. In August 1944 alone, the Group flew 3,740 operational sorties and dropped 13,274 tons of bombs – more than the total dropped on London by the *Luftwaffe* during the entire war.

“*Approximately 10,000 of the 17,000 RCAF casualties lost their lives in Bomber Command.*”

German Armaments Minister Albert Speer called Bomber Command “a second front” in the Second World War because so many German troops were diverted by the bombing campaign.
Did you know...

Canada built Lancasters

For many Canadians, the Lancaster bomber was a symbol of Allied victory. For many in southern Ontario that symbol became a part of their everyday work. At its peak of production in 1944, a force of 10,000 workers – one-quarter of them women – laboured at the Victory Aircraft Plant in Malton, Ont. during the Second World War to produce 430 Mark X Lancasters. The aircraft were sent directly to Bomber Command’s No. 6 Group, which was composed entirely of RCAF squadrons and personnel. Eventually, the plant was producing one plane per day.

Other Canadians flew with RAF squadrons within Bomber Command. Regardless of where they served, the cost was high. Of the 17,100 RCAF casualties, 10,000 of these served in Bomber Command. The bombing campaign destroyed German industry, diverted German personnel and material from other theatres of the war and constituted a second front long before D-Day, the Allied invasion of France on June 6, 1944.

“For many Canadians, the Lancaster bomber was a symbol of victory.”

FOCUS ON THE LANCASTER

With its four powerful Merlin engines, the Lancaster was arguably the heavy bomber of the war. It was not as well armed as the U.S. B-17 Flying Fortress but, with a 14,000 pound bomb load, the “Lanc” packed a heavier bombing punch: about two and one half tons more than the American B-17G Flying Fortress. It also carried the famous “dam buster” bombs used against targets in the Ruhr Valley, Germany. The Lancaster was instrumental in defeating Nazi industry on the ground during the peak years of the Second World War.
Meet Wing Commander Earl Mayo, CD

Wing Commander Earl Mayo was one of those brave Canadians who flew missions over occupied Europe during the Second World War, flying for hours in darkness, not knowing what kind of resistance would be waiting when they arrived at their target, hoping to drop their bombs effectively and then praying that they could turn around and fly safely home. Most did not survive the 30 missions that bomber aircrew were expected to fly. Mayo flew a staggering 33 missions as a Halifax pilot with 427 (Lion) Squadron.

In an interview he said that he hoped that Canadians would appreciate the sacrifice that he and his fellow veterans made in Bomber Command and the contribution they made to winning the Second World War.

“I started out to be a fighter pilot, training on the Harvard. But the losses in Bomber Command were so great that they converted the whole course to twins (bombers),” he said. Soon, Mayo was flying over occupied Europe. “As a crew you all relied on one another.”

Mayo said the bomber crews particularly disliked German searchlights because they made it easier for the anti-aircraft shells and night fighters to find their targets. “We really enjoyed it when there was no moon, when it was completely dark. It took a lot of luck to get through a tour, especially during a night raid. Other aircraft went down and you wondered if you were next.”

Mayo continued his career with the RCAF after the war.

Did you know...

On Dec. 24, 1944, one of the RCAF’s more unusual missions saw 437 Squadron fly DC-3 Dakota aircraft from England to Antwerp and Melsbroek (both in Belgium) to deliver 20,000 pounds of Christmas puddings destined for troops bogged down in the mud along the Dutch-German border.
Wing Commander James Francis “Stocky” Edwards CM, DFC and Bar, DFM, CD was one of the RCAF flyers who squared off against Axis pilots and helped knock the enemy out of the air. He was only 19 when he joined the RCAF in October 1940. By the end of the war he had 20 confirmed kills (with probable kills, his score passes 30) and had risen from a leading aircraftman to wing commander.

He shot down most of these planes in the North African campaign, where British Commonwealth forces fought against German Field Marshall Erwin Rommel’s Afrika Korps. Edwards flew a P-40 Kittyhawk against the Messerschmitt (ME-109), faster and better armed than the P-40, but that never got the better of Edwards. “I would have liked to trade aircraft on most days of the week,” he said. “The ME-109 had a superior rate of climb and speed so you couldn’t make a mistake. If you didn’t get him the first time you’d be in real trouble.”

Then came the Italian campaign. Edwards traded his Kittyhawk for a Supermarine Spitfire VIII and served with No. 417 Squadron RCAF and No. 92 Squadron RAF. His success continued: on one day he destroyed three Focke Wulf 190s and another Messerschmitt 109 as the Luftwaffe was attempting to stop the U.S. Army from establishing a beachhead at Anzio, in southern Italy. In total he flew 373 operational sorties during the war and was never shot down.

In late 2008 Edwards was living in Comox, B.C. at 87 years of age, Canada’s greatest living Ace. His book, Kittyhawk Pilot, is an understated remembrance of his time in the RCAF.
Did you know...

On the night of June 14, 1944, F/L Walter Dinsdale won a very unusual aerial victory. He spotted a curious machine lumbering along at 11,000 feet. With the help of night glasses the crew identified a German JU-88 packed with explosives, coupled to a ME-109 that carried the pilot. Dinsdale fired a short burst from his cannons and shot the contraption down. The explosion lit up the whole countryside.

FOCUS ON D-DAY

D-Day: the sixth of June. It was the greatest amphibious landing in history. Under the command of General Dwight Eisenhower, Allied forces stormed five beaches on the coast of France with the full might of the Army, Navy and Air Force. The invasion was a complete surprise and within days, the Allies had established a beachhead on Normandy.

FOCUS ON NORTH AFRICA

Outside of the Soviet-German war on the Eastern Front, the largest tank battles in the Second World War occurred in North Africa, where the Commonwealth forces of Field Marshall Bernard Montgomery squared off against the Afrika Korps of German Field Marshall Erwin Rommel. With nothing but the desert sky between enemy tanks and RCAF planes, Canadians were able to attack German forces from above by gaining air superiority over the Luftwaffe. Defeating the Germans was vital for the Allies to achieve victory. Had Hitler won in North Africa, he could have had a free hand in the oil fields of the Middle East and possibly have linked his forces there with the German Army fighting in the southern Soviet Union.
MEET HONORARY COLONEL CHARLES W.
“CHARLEY” FOX, DFC AND BAR, CD

When the Air Force lost HCol Charley Fox, DFC and Bar, in October 2008, we lost more than a decorated Spitfire pilot veteran and an 88-year-old war hero – we lost one of our most beloved and capable spokespersons.

Fox was an inspiration to all who heard his anecdotes and experienced his love of life.

He had an impressive war record. Fox flew three sorties with 412 Fighter Squadron on D-Day, June 6, 1944; trained pilots with the British Commonwealth Air Training Plan; destroyed or damaged 153 enemy vehicles; and wounded Field Marshal Erwin Rommel, who was commanding German operations in Normandy at the time. Rommel was later implicated in a plot to assassinate Hitler, and committed suicide.

After six years of post-war service with the RCAF Auxiliary, Fox retired from military life, only to return as the honorary colonel of 412 (Transport) Squadron, located in Ottawa. He was also one of the busiest and most popular Air Force speakers available. During the last decade and a half of his life, Fox shared his experiences with a new generation, speaking of aerial combat to high school students and others, and founding the Torchbearers to promote the experiences of prisoners of war. Just months before he died, Fox received his Canadian Forces Decoration from Chief of the Air Staff, Lieutenant-General Angus Watt. His total service – including those as an honourary colonel – was 14 years: but his contribution to Canada was too large to tabulate.
THE GREAT ESCAPE (MARCH 25, 1944)

Celebrated in film, the “Great Escape” remains a tribute to Allied heroism, resourcefulness and tenacity. As well, it has a huge Canadian connection.

It was not an easy feat to escape from a German prisoner of war (POW) camp but RCAF Flight Lieutenant Wally Floody was put in charge of digging tunnels to do just that.

“Escape was the preferred course of action, the duty of every prisoner.”

The camp in question was Stalag Luft III in Sagan, Germany (now Zagan, Poland). It was run by the Luftwaffe exclusively for Allied aircrew who had been shot down and captured over occupied Europe. Those raised on television’s Hogan’s Heroes might well think that Luftwaffe POW camps offered endless opportunities for comedy at the hands of affable but incompetent camp prison guards, but reality was quite different. Escape was not only the preferred course of action, it was considered the duty of every prisoner.

The “Great Escape” is considered great not because it was largest mass exodus of POWs during the war but because it may have been the most elaborate and its consequences were tragic. This was a detailed operation that involved excavating three tunnels (“Tom” “Dick” and “Harry”) as well as obtaining a vast amount of material and equipment from the camp. After digging out the dirt, the prisoners hid it inside their clothing and spread it around the compound.

The Germans discovered tunnel “Tom” and destroyed it. “Dick” was deemed unsafe. But on March 25, 1944, 76 men escaped through “Harry”; all but three were recaptured.

Fifty, including six Canadians, were executed (contrary to the Geneva Convention). Three other Canadians were recaptured but not executed.

Meanwhile, F/L Wally Floody, who had supervised the engineering feat of excavating the tunnels, never had a chance to flee. He was transferred from Stalag Luft III just two weeks before the Great Escape. In 1946 he was awarded the Order of the British Empire for his contribution to the Great Escape.
HOLLYWOOD’S VIEW OF THE RCAF

There has never been a big budget Canadian film about the RCAF. In 2008, the Paul Gross’s Canadian production *Passchendaele* paid homage to soldiers of the Great War. But the rich history of the RCAF – with the romance of the bush pilots and the massive production of aircrew to meet the Nazi threat – has yet to be portrayed by Canadian film.

Nevertheless, Hollywood, which produced literally thousands of military-themed movies during the Second World War to boost morale and back the war effort, turned its attention to Canada in 1941. *Captains of the Clouds* starred some big names of the time: James Cagney, Dennis Morgan, Alan Hale Sr., and Brenda Marshall. Director Michael Curtiz, a prolific and gifted filmmaker, was also responsible for classics like *Yankee Doodle Dandy*, *Robin Hood* and *Casablanca*. *Captains of the Clouds* is no *Casablanca*, but the cast and crew did come to Canada to film sequences at North Bay, Ont., Ottawa and a host of RCAF Stations like Uplands, Jarvis and Trenton, all in Ontario. The film depicts the work of the British Commonwealth Air Training Plan while depicting the adjustments some bush pilots had to make when moving from individual flying to the military team concept.

Besides, Billy Bishop is in this movie – playing himself – and that’s a piece of history that makes this film worth watching.

Did you know...

When *Captains of the Clouds* premièred on Feb. 21, 1942, RCAF pilots flew copies of the film to major world cities from New York to Cairo.

Autographed photo of actor Alan Hale, Sr., a favourite co-star of Warner Bros. big names like James Cagney and Errol Flynn. Hale’s son, Alan Hale, Jr., resembled his father a great deal and is best remembered as “the Skipper” from *Gilligan’s Island*. Photo credit: F/S Jim Bent.

Some of the cast of *Captains of the Clouds* with RCAF officials at RCAF Station Rockcliffe in 1941. From left to right: Wing Commander Hurley (commanding officer of Rockcliffe), Dennis Morgan, James Cagney, Squadron Leader Harold Pearce, (officer in command of #1 Photographic Establishment), Alan Hale, Sr. Photo credit: F/S Jim Bent.
Friends no more. Although he was “Uncle Joe” during the war against Hitler, Soviet Premier Joseph Stalin appeared little better than the Nazi dictator by 1945; relations between the Western Allies and the Soviet Union fell through the floor when the Russians occupied Eastern Europe. Europe was divided in two: the western democracies and the East Bloc Soviet communist satellite countries. Germany, including Berlin itself, was carved up amongst the former allies. The Cold War was on and Canada was there from the beginning.

The first major stand-off between East and West was the Berlin Blockade in 1948 when the Soviets attempted to gain control of West Berlin by blocking allied land access to the city. The U.S.-led response was the Berlin Airlift, which brought millions of tons of food, fuel, clothing and medicine to the citizens of West Berlin from June 1948 until May 1949 when the Soviets lifted the blockade.

In 1949, Canada became a founding member of the North Atlantic Treaty Organization (NATO), a military alliance of collective security that was established to defend Europe against Soviet expansion. Canada sent troops to Europe but perhaps our largest contribution was the decision in 1951 to send an entire air division. The division’s aircraft patrolled the European skies for the next 40 years to help protect the continent against Soviet aggression.

Did you know...

The RCAF got its first helicopter, the Sikorsky H-5, in 1947.
OPERATION LEAP FROG

Operation Leap Frog referred to the ferrying of 11 RCAF squadrons and their Canadair F-86 Sabre aircraft from Canada to four European wings from May 1952 to September 1953. The squadrons made up No. 1 Air Division, which was headquartered at Metz, France. These wings were:

- **No. 1** Wing, Marville, France: 410, 439 and 441 Fighter Squadrons
- **No. 2** Wing, Grostenquin, France: 416, 421 and 430 Fight Squadrons
- **No. 3** Wing, Zweibrucken, Germany: 413, 427 and 434 Fighter Squadrons
- **No. 4** Wing, Baden-Soellingen, Germany: 414, 422 and 444 Fighter Squadrons

**Did you know...**

In 1958, Canada signed the most successful bilateral Air Force agreement in history: the North American Air Defense (NORAD) partnership between the RCAF and the United States Air Force. The “air” in NORAD has become “aerospace” in today’s high-tech world but this bi-national command, which centralizes operational control of continental air defenses, continues to be a model for international cooperation.

**FOCUS ON THE F-86 SABRE**

The most famous aircraft of the Cold War was the F-86 Sabre. Though produced for the United States Air Force by North American Aviation Inc., Canadair obtained a licence to produce the plane in Canada and improved upon an already great aircraft. The Canadair Sabre Marks 3, 5 and 6 all used variations of the Avro Orenda turbojet engine for added power. In addition to supplying the RCAF, Sabres were sold to West Germany, Columbia and South Africa.
For a generation of Air Force families, a posting to Europe was a welcome part of life in the Canadian military.

Lieutenant-Colonel Syd Burrows was one of those Cold War pilots who served in Europe. Burrows’ story is one of trial, perseverance and ultimate success. Burrows joined the RCAF in 1951, just as Canada was making a massive contribution (for a country this size) to the fight against communism. He was posted to No. 3 Wing at Zweibrucken, Germany that year, leading a section of four Sabres across the Atlantic in Operation Leap Frog III.

But he was about to experience a most unusual example of aviation trauma.

Then-Flying Officer Burrows had taken off as part of a four aircraft section from Baden-Soellingen, West Germany on the morning of Sept. 13, 1954 with a flight from 434 Squadron to simulate an air attack on Zweibrucken. It was a perfect day – until a hawk crashed into Burrows’ canopy, shattering the plexiglass and blinding him. His left eye filled with blood (there was no visor on pilots’ helmets in those days) but his right eye recovered enough so he could see the plane in front of him, and he explained over the radio what had happened to him.

At the edge of consciousness, Burrows managed to land the plane safely – saving it and his life, although he permanently lost the sight in his left eye. But he flew again for the RCAF and Canadian Forces – the first one-eyed pilot in the Forces – and adopted the moniker “Cyclops” ever after.
Korea: the communist North Koreans streamed across the South Korean border in 1950 and the first hot season of the Cold War was on. In the beginning, Korea was a see-saw war but it soon reached a stalemate. For many years, officialdom couldn’t decide whether to call it a “war” or a United Nations police action. For those involved, it was every bit a war.

While the Canadian Army contributed to the United Nations force that fought in the Korean War, RCAF pilots on exchange duties with the United States Air Force flew with the Americans to fight the North Koreans and their allies in the air. From 1950 to 1953, 22 RCAF pilots flew combat missions with American squadrons in the legendary F-86 Sabre fighter aircraft. The Sabre performed brilliantly against the Soviet MiG fighters that flew against it.

During Air Transport Command’s Operation Hawk, the RCAF also transported 13,000 personnel and 3,500 tons of freight to the Korean front. Six North Star transport aircraft from 426 Transport Squadron flew 599 flights with the USAF Military Air Transport Service.

Operating from McChord Air Force Base, Wash., 426 Squadron began operations on July 27, 1950 with the departure of three aircraft bound for Japan. Their route took them to Alaska, down the Aleutian Islands and perilously close to Soviet Kamchatka, where it was easy to stray into Russian airspace. Not a single passenger or aircrew was lost during the operation.
Lieutenant-Colonel Douglas “Duke” Warren was a flying officer when he was selected to be one of the few pilots to fly the Sabre against Soviet MiGs over Korea. Warren was no stranger to air combat, having first served with distinction in the Second World War. He was one of 60 RCAF pilots who supported the amphibious assault at Dieppe, France on Aug. 19, 1942. While Canadian soldiers were taking huge losses in this ill-fated attempt to invade Adolf Hitler’s Fortress Europe, Duke was flying a Spitfire over the beach, battling the German Luftwaffe and successfully shooting down one aircraft. Duke’s identical twin brother, Bruce, was also in the air that day.

King George VI awarded both brothers the Distinguished Flying Cross in March 1945, fewer than two months before the end of the Second World War. After presenting the medals to the brothers, the King said, “I don’t believe I have ever done this before.”

After serving in Korea, Warren came face to face with the Luftwaffe again – but this time as a friend not an adversary. In the Cold War world of the 1950s the West Germans were allies and part of NATO. Warren was sent to Oldenburg, West Germany as a pilot instructor to assist the post-war Luftwaffe form its Sabre Operational Training unit and to train West German pilots to fly the new jet. His second-in-command was none other than famed Luftwaffe pilot Erich Hartmann – the Second World War’s ace of aces. Hartmann had established the all-time record for aircraft shot down with 352 kills. This time he and Warren were on the same side.
Can you imagine an Air Force that was almost as large as the entire Canadian Forces today? That was the decade of the 1950s. In the Cold War era of Prime Minister Louis St. Laurent, defence budgets were big and the RCAF was a favourite recipient of that spending. The expansion was rapid: in 1949, following post-war demobilization, the RCAF numbered 18,970. By the end of 1952 it had grown to almost 50,000 and was larger than the Canadian Army.

**MISSILES OR JETS?**

The great aviation debate in the late 1950s concerned the relative merits of guided missiles and jet aircraft in protecting the North American continent from Soviet attack. The piloted aircraft was deemed obsolete by some; the future was seen in unmanned missile defence. The arguments for missiles were so strong that the Canadian government bought and deployed the Bomarc Missile in 1958.

Fifty-six missiles, first conventionally armed and later fitted with nuclear warheads, were situated in North Bay, Ont. and La Macaza, Que. from 1961 to 1972, although the warheads only arrived in 1963.

The last Bomarc was removed in 1972 and today the only ones left are disarmed missiles on display in museums and aviation parks.

**Focus On the Vampire**

Not referring to Dracula, the DH-100 Vampire was the RCAF’s first jet fighter acquired in large numbers (86 of them). It saw service from 1946 to 1958.

**Did you know...**

Of the 122 RCAF pilots who lost their lives during the Cold War in training accidents, 107 of them were Sabre pilots.

**Did you know...**

To celebrate the 100th anniversary of powered flight in Canada in 2009, a privately owned Sabre from Vintage Wings of Canada was restored and painted in Golden Hawks colours. As well, a Snowbirds Tutor aircraft was painted in the colours of the Centenaires, and a CF-18 Hornet was painted in Centennial of Flight colours.
COLD WAR AIRCRAFT

For most of the 1950s, it seemed like the Canadian aviation industry always made the right decisions and the RCAF always got the best aircraft. The Canadair version of the F-86 Sabre was the primary fighter of No. 1 Air Division until joined by the CF-100 Canuck, which was produced by A.V. Roe (Avro) Canada. Avro was one of the most successful aviation firms in the world during the 1950s. It had some of the best and the brightest aerospace engineers and the sharpest test pilots. After selling the Canuck to the Air Force, Avro came out with its masterpiece.

The CF-105 Arrow, rolled out in 1957, was the RCAF's choice for its next generation fighter and years ahead of its time. When it first flew in 1958, the awed spectators looked at each other, nodded and many thought, “Yep, this is the finest aircraft in the world.” It was fast (Mach 2, or 1,650 mph), manoeuvrable and looked like nothing else that was then sitting on the world’s tarmacs. But it wasn’t to fly for the RCAF. In February 1959 the government cancelled the Arrow.

The decision to shut down production of this classic, capable but very expensive aircraft has ignited “what if” debates amongst Air Force historians and aviation enthusiasts ever since.

For its next generation aircraft, the RCAF acquired used American-made CF-101 Voodoos (free of charge) and Canadair-produced CF-104 Starfighters. Both were around until the CF-18 Hornet was brought into service in 1982.

Believe it or not...

428 All-Weather Fighter Squadron, which had reformed at RCAF Station Uplands, Ont. in 1954, was the unit chosen to be re-equipped with the new CF-105 Avro Arrow. When the Arrow was cancelled, the squadron was stood-down and has never been reactivated. The squadron’s badge depicted a death’s head in a shroud and its motto was Usque Ad Finem or “To the Very End.”

FOCUS ON “THE CLUNK”

The CF-100 Canuck is the only in-service fighter aircraft to date designed and built entirely in Canada. It was in service from 1952 until 1981. It became known as the “Clunk”. Some say it received the moniker because of the noise the front landing gear made as it retracted into its well after takeoff. Others say it was because the aircraft was too strong and thus too heavy for its original role as an all-weather fighter interceptor.
THE “GOLDEN” AEROBATIC TEAMS

Before the Snowbirds and the Golden Centennaires aerobatic teams, the gilded F-86 Sabres flown by the Golden Hawks team thrilled the world and ruled Canadian air shows. The team was formed in 1959 to celebrate the 50th anniversary of powered flight in Canada as well as the 35th anniversary of the RCAF. However, their popularity and the support of then-Chief of the Air Staff Air Marshall Hugh Campbell extended their existence past 1959 and the team performed 317 shows until the flight ended in 1963 with a final show in Montreal, Que. The Golden Hawks captivated audiences by flying low, raising their canopies and waving at the crowd! Now that’s showmanship.


FOCUS ON THE CT-114 TUTOR

The Tutor was originally procured in the mid-1960s to train student pilots. It was replaced in 2000 by the CT-156 Harvard II and CT-155 Hawk. Today, the Tutor is flown primarily by 431 Squadron’s Snowbirds; it is also used in aircraft testing at the Aerospace Engineering Test Establishment (AETE) in Cold Lake, Alberta.

Photo: OCdt Timothy Templeman
Canada has always been a leader in peacekeeping, ever since the idea of a United Nations Peacekeeping Force was first proposed in 1956 by Lester Pearson, who was then the Canadian Ambassador to the United Nations. The peacekeepers were there to allow the disengagement of British, French, Egyptian and Israeli forces. The RCAF created 114 Air Transport Unit (ATU) to fly Canadian and other UN Emergency Force members from Italy to Egypt at the start of the mission, while 115 ATU operated in the Sinai providing support to the UN force.

The missions continued to roll out: in the Congo (1960-64) the RCAF operated the entire UN air force; in West New Guinea (1962-63) and in Yemen (1963-64) it provided the sole Canadian response.

Just before the 1967 Arab-Israeli War (the “Six Day War”) broke out, the Air Force actually evacuated the entire Canadian contingent of 700 Canadian peacekeepers with their equipment from the region in just three days! After the Arab-Israeli conflict of 1973, we again deployed Canadian peacekeepers to the region, with 116 ATU.

One of the saddest days for the Air Force occurred on Aug. 9, 1974 during Operation Danaca, supporting both the UN Emergency Force in the Sinai and the UN Disengagement Observer Force in the Golan Heights. A CC-115 Buffalo aircraft from 116 ATU was shot down over Syria, killing pilot Captain Gary Foster and eight other crew and passengers.

The Air Force continues to fly desperately needed personnel and supplies to hot spots around the world and Air Force personnel are routinely deployed on U.N.-sanctioned operations, such as the mission in Afghanistan.

Did you know...
The Golden Centennaires are a bittersweet Air Force memory. Created for only one year to celebrate the centennial of Canada in 1967, they were also the last RCAF aerobatic team. In February of the following year, the RCAF became a part of history and the Air Force became a formation within the new unified Canadian Armed Forces.
The Air Force is often asked to provide humanitarian assistance around the world. In 2008, as part of Op Unify, Air Force personnel medically evacuated New Orleans, LA. residents who were in the path of Hurricane Gustav. The Air Force is also responsible for transporting the Canadian Forces Disaster Assistance Response Team (DART) to provide relief work anywhere in the world. With the arrival of four CC-177 Globemaster III strategic airlifters in 2007–2008, the Air Force became better able to extend its helping hand across the globe.

Here are some of the humanitarian assistance missions since 1956:

- Greece, 1956, earthquake relief
- Chile, 1960, earthquake relief
- Morocco, 1960, earthquake relief
- Iran, 1962, earthquake relief
- Nigeria, 1968, famine relief
- Sudan, 1993, famine relief
- New Orleans, 2005, response to Hurricane Katrina
- Sri Lanka, 2005, tsunami relief
- Pakistan, 2005, earthquake relief
- New Orleans, 2008, response to Hurricane Gustav
- Peru, 1970, earthquake relief
- Nicaragua, 1972, earthquake relief
- West Africa, 1973, famine relief
- Algeria, 1980, earthquake relief
- Mexico City, 1985, earthquake relief
- Ethiopia, 1988, famine relief
- Florida, 1992, response to Hurricane Andrew

Did you know...

The Air Force began recruiting search and rescue technicians directly from “civvie street” in 2008. Previously, all SAR techs had to be members of the CF in other occupations before being permitted to transfer to the SAR tech occupation. Our search and rescue crews average over 8,500 incidents a year.
To date, Canada is the only member of the Commonwealth to unify its armed forces.

Unification has its roots in the concept of “integration,” which has been adopted by other Commonwealth nations and the United States. With integration, certain functions common to the Army, Navy and Air Force were assigned to one service and then shared by all three. For instance, instead of the Canadian Army, Royal Canadian Navy and RCAF, each having their own medical, dental and postal services, the Army was assigned these responsibilities and it provided access to the Navy and Air Force.

Unification started with Bill C-90 on July 16, 1964, creating one unified headquarters with Air Chief Marshal F.R. Miller as the first Chief of the Defence Staff. With the new Canadian Forces Headquarters (CFHQ) organized along functional lines, functional, command-based headquarters were initiated in April 1966.

Unification officially took place on Feb. 1, 1968, following Royal Assent of The Canadian Forces Reorganization Act. As a result, the Canadian Armed Forces, whose personnel wore a common green uniform and were assigned a common military rank structure, came into being.

Though the Canadian Forces remain unified today, much of the unique Army, Navy and Air Force cultures have returned.
Though the Navy was the service most opposed to unification, the Air Force received the shortest end of the stick, lacking even a command structure. The Air Force was spread out amongst five commands: Maritime (Navy), Mobile (Army), Air Defence, Air Transport and Training. No. 1 Canadian Air Division, which had been downgraded to 1 Canadian Air Group, became part of Canadian Forces Europe.

But it just wasn’t working. Lieutenant-General Bill Carr became the first commander of Air Command. He could see the need for change, and, as Vice Chief of the Defence Staff, was in a position to do something about it. He documented examples of air fleets not being utilized properly and recommended recognizing an air element within the Canadians Forces. On Sept. 2, 1975, Air Command, with its headquarters in Winnipeg, was created to restore better structure to Air Force operations. The Commander of Air Command was given command of all Canadian Forces air activities, including the former Naval Fleet Air Arm and Army Flying Corps.
Air Command immediately went to work restoring morale for Air Force personnel. RCAF heritage, symbols and traditions were adopted by Canada’s new Air Command.

In 1985, the Air Force regained its distinctive light blue uniforms, while the Navy received its dark blue and the Army retained green uniforms.

### AIR COMMAND GROUPS

In 1975, Air Command organized its command and control structure into five groups. This structure of groups remained in place until 1997.

<table>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
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<tr>
<td>Fighter Group (FG)</td>
<td>headquartered in North Bay, Ont., controlled fighter aircraft and liaised with the NORAD command centre in Colorado Springs.</td>
</tr>
<tr>
<td>Maritime Air Group (MAG)</td>
<td>headquartered in Halifax, N.S. with a detachment at Esquimalt, B.C., commanded maritime air assets.</td>
</tr>
<tr>
<td>Air Transport Group (ATG)</td>
<td>headquartered in Trenton, Ont., was responsible for air transport and search and rescue operations.</td>
</tr>
<tr>
<td>1 Canadian Air Group (1 CAG)</td>
<td>headquartered in Baden-Soellingen, West Germany was responsible for air operations in Europe.</td>
</tr>
<tr>
<td>Air Reserve Group (ARG)</td>
<td>was formed in 1976 with responsibility for Air Command reservists.</td>
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Operational control of aircraft assigned to 10 Tactical Air Group and Maritime Air Group remained with the commanders of Mobile (the Army) and Maritime (the Navy) Commands respectively.
The Cold War dominated military planning for more than 40 years. Although it is difficult to place the beginning of the Cold War at a particular moment in time, it is easier to identify its end – in 1989 the Berlin Wall was torn down and the Soviet hold on eastern Europe broke with it.

By 1992, Canada had closed down its last European fighter squadron in Baden-Soellingen, Germany. In the following decade, Canada’s Air Force had to grapple with a world dominated by regional conflict, fears of nuclear proliferation and terrorism.

1 CANADIAN AIR DIVISION

In 1997, the Air Force consolidated all of its air groups into a single command and control entity named 1 Canadian Air Division. All 13 wings across Canada were placed under its operational control. With its creation, the Commander of Air Command moved to National Defence Headquarters in Ottawa, Ont. and given the additional title of Chief of the Air Staff, an office that had not been seen since the end of the RCAF in 1968.

TRANSFORMATION

In 2005 the Canadian Forces began the process of transformation to better meet the challenges of the modern world – the so-called asymmetrical threat. The Air Force quickly moved to consolidate its own transformation process and indeed had begun the process before Canadian Forces-wide transformation was announced. The Air Force defined its personnel and material needs and prepared a plan to achieve those goals. The goal was to create an organization that was multi-purpose, appropriately equipped, operationally integrated and focussed on serving Canadians. The Air Force vision described it as: “An agile and combat-capable aerospace force with the reach and power essential to integrated Canadian Forces operations at home and abroad.”

Photo: Cpl Jonathan Wilson
The establishment of the Canadian Forces Aerospace Warfare Centre, release of Air Force doctrine, strategy and other keystone documents, equipment capitalization, a more robust presence in Afghanistan, modernization of Air Force occupations and training all contributed to the transformation of the Air Force to a modern, capable force for the 21st Century.

The Air Force continued to support a wide variety of domestic and international operations. It also provide support to naval and land defence policy objectives by providing an operationally ready, multi-purpose, and combat capable force. Its roles included:

- Surveillance and control of Canadian airspace
- World-wide airlift of Canadian Forces personnel and materiel
- Support to the operations of the navy and army
- Support to other government departments
- Search and rescue
- Humanitarian operations

Did you know...

The RCAF Women’s Division (WD) only offered women two-thirds of a man’s salary based on the rationale that it took three women to do the job of two men. Later, WD pay was boosted to 80 per cent of men’s, this time on the basis that women would not serve in combat. Not every man did either.

FOCUS ON WOMEN IN THE MODERN AIR FORCE

In 1979, then-Captains Deanna Brasseur, Leah Mosher and Nora Bottomley were the first women selected for pilot training in the CF. Brasseur and Captain Jane Foster became the first women to qualify as CF-18 fighter pilots in 1989. Six years later, Captain Mary Cameron-Kelly became the first woman in the world to command a maritime patrol crew on the CP-140 Aurora.
THE CAMPAIGN AGAINST TERRORISM

In addition to continuing traditional roles such as search and rescue, maritime patrol, transport and defence of the North American airspace, the Air Force became increasingly involved with Canada’s international commitments.

On Sept. 11, 2001, the world changed. On that day, extremist Islamic terrorists used passenger jets to attack the World Trade Centre in New York City and U.S. defence headquarters at the Pentagon in Virginia. The phrase “9-11” became as synonymous with treachery and brutality as “Pearl Harbor” has since the Second World War. The democracies had entered a new era of military planning with a campaign against terrorism.

Beginning in 2001, Canada has played a leading role in the campaign against world terrorism by contributing military personnel to Afghanistan, the training ground for the 9-11 terrorists and a country that had suffered under the authoritarian rule of the Taliban.

Canadians rebuilt vital infrastructure, enforced security, built democratic values and ensured that girls could go to school – something specifically forbidden by the Taliban. The Air Force was responsible for moving troops and materiel into this theatre of operations while many of its personnel served in the Afghanistan theatre of operations.
OTHER INTERNATIONAL OPERATIONS

In addition to Afghanistan, the Air Force participates in other operations around the world. Since 2001, we have been part of these operations:

- **Operation Altair**: Task Force Arabian Sea
- **Operation Bronze**: Task Force Balkans
- **Operation Snow Goose**: Task Force Cyprus
- **Operation Saturn**: Task Force Darfur
- **Operation Crocodile**: Task Force Democratic Republic of Congo
- **Operation Calumet**: Task Force El Gorah
- **Operation Sculpture**: Task Force Freetown
- **Operation Gladius**: Task Force Golan Heights
- **Operation Proteus**: Task Force Jerusalem
- **Operation Jade**: Task Force Middle East
- **Operation Hamlet**: Task Force Port-au-Prince (Haiti)
- **Operation Safari**: Task Force Sudan

“The Aurora guards the maritime approaches to Canada.”

The CP-140 Aurora, a strategic long-range patrol aircraft, was originally designed for anti-submarine warfare. It guards the maritime approaches to Canada for military threats while monitoring non-traditional threats like pollution, drug smuggling and driftnet fishing. It can also be employed as an intelligence surveillance and reconnaissance platform over sea and land while being used in a search and rescue capacity. The Aurora can fly at a maximum speed of 750 km/h (470 mph) and has a range of 9,622 km (6,014 miles) – that’s about a 17-hour trip!
With the acquisition of strategic airlift capability in the CC-177 Globemaster III, Canada’s Air Force gained a world-wide reach to deploy, supply and transfer resources to Afghanistan or anywhere they are required.

In late 2008, the Air Force took a significant transformational step in becoming an expeditionary air force, with the stand up of the Joint Task Force Afghanistan Air Wing, which was responsible for tactical medium-to-heavy-lift helicopters, escort helicopters, tactical airlift in-theatre and the next generation of tactical unmanned aerial vehicles.

“The Air Force took a step to becoming an expeditionary air force with the Joint Task Force-Afghanistan Air Wing.”

Did you know...

On July 14, 2006, for the first time since the Korean War, the Air Force parachuted supplies to support combat troops — including ammunition, food, and water — in Afghanistan.

Over more than four decades the Air Force resupplied Canadian Forces Station Alert in Nunavut, the most northerly permanently inhabited place in the world, in an effort called “Operation Boxtop.” On average, over a three week period, about 375,000 kg of freight moved and 1.8 million litres of fuel.
An institution’s heritage is like a person’s DNA; it’s what defines and characterizes the organization and explains why it functions in the manner that it does. Customs and traditions represent that heritage. These can be as light-hearted as a game of crud or as serious as the Victoria Cross. Canada’s Air Force, as the history in this book has demonstrated, has many customs and traditions that draw from its connection to the Royal Flying Corps and Royal Air Force, its life as the Royal Canadian Air Force and as a command within the Canadian Forces. As a Commonwealth military force, it respects, sustains and enriches the many traditions from Great Britain. Other aspects of the Air Force’s heritage are uniquely Canadian, a product of a three-ocean nation that is young, geographically massive and the destination of so many who sought a land of freedom and opportunity.

Canada’s Air Force celebrates its customs and traditions because they tells us where we have been, what we have accomplished and the standards that we must continue to achieve in the future.
While the Air Force is the younger sibling of the Army and Navy, it has nevertheless developed a wealth of symbols and heritage in its history. Many of these symbols were adapted from the Royal Air Force and are similar to symbols found in other Commonwealth air forces, such as the Royal New Zealand Air Force and the Royal Australian Air Force. Some of these traditions, such as Christmas Dinner, are also celebrated by the Army and Navy.

AIRCREW AND GROUNDCREW

In Canada’s Air Force, aircrew and groundcrew have always been two sides of the same coin – part of the same team. Aircrew refers to those members of the team directly involved with flying. They include pilots, navigators, flight engineers, loadmasters, sensor operators, flight stewards, search and rescue technicians, airgunners, wireless (radio) operators, observers, and aircrew specialists such as medical personnel and stewards supporting specific mission roles.

The aircrew wouldn’t be in the air without the groundcrew. In some instances, groundcrew has meant those personnel who repair aircraft, or at other times it meant all members of the non-aircrew group, i.e., clerks, air traffic controllers, supply personnel, fire fighters, aircraft technicians, and others.

CHRISTMAS DINNER

A traditional morale-builder, a special Christmas dinner is held during the Christmas season at Air Force wings across Canada. Officers serve non-commissioned members a full-course holiday feast, while the youngest member of the wing becomes wing commander for the day.
COLOURS

Every squadron takes pride in its “colours,” the flag bearing their squadron crest, motto and any Battle Honours earned. The colours are paraded during change of command ceremonies and are kept on display at the squadron’s wing, usually in the officers’ mess.

CRUD

No mess dinner is complete without the traditional game of crud, a unique game of Air Force pool that was created by the RCAF. Whether the idea for the game came as a result of a lack of pool cues or a playful volley of pool balls from one side of the mess to the other, crud makes a game of hockey appear slow. Crud players run around the pool table, and, using the cue ball, try to block or sink a striped shooter ball with the cue ball in one of the four corner pockets.

“DEAD ANTS”

A real oddity of RCAF mess life, the game “Dead Ants” was popular in the 1950s and 60s. An “Ant Master” was appointed at the beginning of the evening and each time he called out “dead ants” everyone in the mess was expected to fall on their backs and simulate ant expiry. The last one down had to buy a round of drinks. Anyone besides the ant master who used the phrase “dead ants” was also subject to the buy-a-drink-for-everyone rule. One could refer to the game as “deceased insects” and thus avoid the penalty.

ENSIGN

An ensign refers to the flag that identifies or symbolizes a unit or organization’s history and heritage. Often, the term is associated with naval and civilian ships. The RCAF ensign was a variant of the RAF’s, with the maple leaf roundel placed against the blue background and the Union Jack in the upper left-hand corner. With the creation of Air Command, the ensign remained the same except a Canadian flag replaced the Union Jack.

Did you know...

On Dec. 25, 1944, 402 Squadron was stationed at in Belgium. The squadron’s Spitfire Mk XIVs were out on a late mission when the pilots realized that they would not be back in time for the Christmas dinner. Returning later that evening, the pilots went to the mess hall, expecting leftovers. Instead, to their amazement and delight, they found the entire squadron waiting for their arrival. The dinner did not begin until the whole squadron was there.
EXPRESSIONS

Failure to understand the Air Force vernacular is definitely not “tickety-boo” and might be a real case of “no joy.” If you want to “fill your boots” you’ll have to know “the score.”

The Air Force speaks a language of its own. One of the reasons that the identities of the Navy, Army and Air Force have rebounded so vigorously is that the history and traditions of each are just so different. The Air Force has a unique military culture that some might describe as relaxed and egalitarian at times. The Air Force has also developed its own set of expressions that truly reflect its jaunty approach to military life.

**Bags of...** = Large quantities of...

**Bale out** = Jump from an aircraft or fail to show up at meeting

**Barn** = Hangar

**Bird** = Aircraft

**Buckshee** = Worthless or a freebie (as in “take the afternoon off – it’s buckshee”)

**Clag** = Cloud

**Coffin** = Case for aircraft missile

**Duff gen** = Incorrect information

**Fill your boots** = Take your fill

**Flak** = Anti-aircraft fire or verbal objection to policy. From the German Flugabwehrkanone, an aircraft defence cannon

**Flame-out** = Engine failure

**Flying a desk/mahogany bomber** = Aircrew on a ground tour

**FOD** = Foreign object debris or damage

**Hangar Queen** = An aircraft that is frequently under repairs and stripped for parts

**Headshed** = Headquarters

**Hero shot** = Picture of Air Force member in front of military hardware, usually a pilot posing in front of aircraft

**Jet Jockey** = Fighter pilot

**Morning Prayers** = Morning executive meeting of senior leadership, often with briefings and updates

**No joy** = No success

**Paul Bunyan** = Large metal crate for cargo

**Pax** = Passenger(s) aboard an aircraft

**Per Ardua Asbestos** = Fireproof; referring to someone who seems to avoid trouble

**Prang** = Aircraft crash

**Punched out** = Ejected from an aircraft

**Score** = The truth, the real situation

**Scotch mist** = Drizzle

**Snooze and booze** = An easy training course

**Sprog** = Novice

**Swag** = Scientific wild-assed guess

**Swan** = Easy course or duty assignment in great location
Tickety-boo = Everything is just fine
Wag = Wild-assen guess/Wireless Air Gunner

FLIGHT SUITS

Call it operational comfort wear. An Air Force flight suit compliments almost any figure and has enough pockets to accommodate everything on a pilot’s desk. When fighter jocks jumped into their Hurricanes or Spitfires during the Battle of Britain, they did so in their heavy wool dress uniform, complete with knotted tie. Something more was needed for bomber crews, who would freeze in the sub-zero temperatures at 15,000 feet. So the flight suit was issued, usually with a leather jacket lined with lamb’s wool for warmth.

The colours have changed over the years: RCAF blue-grey, unification green, tan, distinctive environmental blue. The colour then changed to an olive drab version that provided better camouflage for pilots in case of being shot down during combat operations and forced to take evasive action. Search and rescue technicians wear bright orange, for high visibility.

FLY-PAST

In order to commemorate an historical ceremony or a significant day, Air Force planes are tasked to perform a fly-past. Every year the famed Snowbirds participate in the Canada Day celebrations on Parliament Hill by flying over the crowd. At the annual Battle of Britain Day Parade, a fly-past composed of vintage aircraft helps to honour and remember the Air Force heroes of the past. A “fly-by” is related to a fly-past but usually just involves a fleeting Air Force presence at events that are less ceremonial in nature – such as a worthy community festival – if an aircraft is available and preferably near to the event.

Did you know...

During the 1950s, the RCAF Headquarters in Ottawa, Ont. were located on Elgin St. right across from the Lord Elgin Hotel. The Lord Elgin was known as HQE (Headquarters Elgin) by many RCAF personnel who ran across the street for dinner or a drink. There were so many RCAF personnel wearing uniforms in Ottawa’s downtown core in those days that personnel were told to wear their uniform only one day per week – perhaps in order that the public might not think that the RCAF had taken over the country.
“HIGH FLIGHT”

The adventure and thrill of aircraft flight was captured in all its glory by RCAF Pilot Officer John Gillespie Magee, Jr., (a volunteer from the United States) who wrote this homage to aviation that is now recognized as the Air Force's poem.

Oh, I have slipped the surly bonds of Earth
And danced the skies on laughter-silvered wings;
Sunward I've climbed, and joined the tumbling mirth
Of sun-split clouds - and done a hundred things
You have not dreamed of - wheeled and soared and swung
High in the sunlit silence; hovering there,
I've chased the shouting wing along, and flung
My eager craft through footless halls of air…

Up, the long, delirious, burning blue
I've topped the wind-swept heights with easy grace
Where never a lark, or even eagle flew –
And, while the silent lifting mind I've trod
The high untrespassed sanctity of space,
Put out my hand and touched the face of God.

Pilot Officer John Gillespie Magee, Jr.
Sept. 3, 1941

HONOURARY COLONELS

Noted individuals, sometimes but not always retired Air Force members, are appointed as honourary colonels of wings, squadrons or other formations. This practice not only honours the individual who accepts the nomination but provides another means for the Air Force to liaise with the public and opinion leaders.

INSIGNIA AND MOTTO OF THE RCAF

The motto Per ardua ad astra, which is Latin for “through adversity to the stars", was adopted by the RCAF when it was formed on April 1, 1924 and was displayed its crest. It replaced the original Sic itur ad astra of the Canadian Air Force. Later, the RCAF crest and motto were adopted by the modern Air Operations branch. Since the ascension of Queen Elizabeth II in 1953, the crest used by both the RCAF and today’s Air Operations branch displays the St. Edward's Crown (or Queen's Crown), rather than the Tudor Crown (or King’s Crown).
INSIGNIA AND MOTTO OF AIR COMMAND

The insignia for Air Command has a sky blue background and shows an eagle rising from a crown. The azure is the blue sky, the eagle is the Air Force, and the crown of stars represents Air Command.

The Latin motto adopted by Air Command, *Sic itur ad astra*, means “such is the pathway to the stars”. This motto is a return to that used by the Canadian Air Force when it was first formed in 1920.

FOCUS ON THE BIRD

The bird depicted on the crest has been the subject of much debate over the years, with some insisting it is an albatross and others maintaining the bird’s identity to be that of an eagle. Though the origins of this debate are murky, that has never stopped a heated argument! To set the record straight (again): it is an eagle.

MARCHPAST

A marchpast is a piece of music – which may or may not have lyrics – that is identified with a particular military unit and is usually played during parades and ceremonial occasion. Army regiments each have their own marchpasts. The Air Force has just one. The RCAF Marchpast, composed by Sir Walford Davies in 1918, was borrowed from the RAF.

> Through adversities we’ll conquer.  
> Blaze into the stars, a trail of glory  
> We’ll live on land and sea  
> ‘Til victory is won.  
> Men in blue the skies are winging,  
> In each heart one thought is ringing.  
> Fight for the right, God is our might,  
> We shall be free.

Did you know...

The Air Force won the gold in 1948 when the RCAF Flyers hockey team came in first at the Olympic Games held in St. Moritz, Switzerland. Named to the Canadian Sports Hall of Fame in 2008, the Flyers were not expected to win anything at the games – after all, they were current and ex-Air Force officers and non-commissioned members who just happened to play hockey in their spare time! But the Flyers surprised everyone and proved that the old Air Force adage of “max flex” means you can do just about anything in the line of duty!

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CD

Find out more on the CD “Flash”…  
Air Command Band CD,  
“Dance the Skies”
Mess dinners are common to all military services. These are formal occasions filled with pageantry, customs and traditions when the formal uniform (mess kit) is worn. While wings and squadrons may hold mess dinners to mark a variety of special occasions, the most important Air Force mess dinner is held every year on April 1, the birthday of the RCAF. During a multi-course dinner, toasts are proposed, glasses raised, music played and speeches heard—all to commemorate and celebrate the history and heritage of Canada’s Air Force.

The “Passing of the Port” is a key, if sometimes arcane, custom at a mess dinner. At the end of a mess dinner, port decanters are passed amongst the diners so they may pour themselves a small glass for the Loyal Toast (the toast to the reigning monarch). Which way is the port passed? Is the decanter placed on the table between diners or is it passed from hand to hand, never touching the table?

Did you know...

The RCAF had abs of steel?

If Canadians today are less than certain about the Air Force’s responsibilities, the RCAF enjoyed world-wide prestige in the 1950s. We helped win the Second World War… Won the Olympic gold… Best aviators in the world…and we started the first fitness craze! Long before the leg warmers and fitness videos of the 1980s or the abdominal crunching DVDs of today, the RCAF was promoting the 5BX and 10BX (BX for “basic exercises”) plans for men and women. The beauty of the system was that you didn’t need expensive equipment or a health club membership; it was created to keep aircrew in the far north in shape by using stand-alone aerobic exercises. Developed in 1956 by DND athlete and scientist Bill Orban, the program proved so popular that 23 million copies of the RCAF pamphlets were sold to the Canadian public and it was translated into 13 languages. References to 5BX or 10BX or RCAF exercise program can even be heard in film and TV productions of the period. The Air Force still receives requests for copies today; you may be able to find it in used book stores and the Air Force Association of Canada is still selling copies.
These questions become even more complicated when the dinners are tri-service or when Canadian Forces members wearing the uniform of one service attend the dinner of another service.

In the Air Force, port decanters are passed to the left, and the decanter does not touch the table until it requires replenishment or has reached the end of the table.

**MOOSE MILK**

There are many recipes for this uniquely Canadian drink but almost all call for rum – and lots of it. Some also include brandy. Add some coffee liqueur as well – all to a milk, cream and vanilla ice cream base with some sugar and a little nutmeg to enhance the flavour. Go to any Christmas celebration at an air wing in Canada and somebody will have mixed up a barrel of this memorable Air Force concoction.

**NOSE ART**

During the Second World War, pilots and aircrews with artistic talent often personalized the nose of their aircraft with painted pictures. In the male-dominated service of those years, the pictures were often take-offs of the popular “Varga” girls – paintings of scantily clad women by Alberto Vargas that were featured in magazines of the era. Other favourite themes were cartoons or scenes suggesting death and destruction for the enemy.

“*In the Air Force, port decanters are passed to the left...*”
Few organizations better promoted itself than the RCAF. After becoming the fourth largest air force in the world following the Second World War, the RCAF enjoyed huge national acclaim in the boom years of the 1950s, setting aircraft distance and speed records, charting the North Pole, defending Western Europe from communism and and was never hesitant about making the public aware of the Air Force’s accomplishments. The RCAF Office of Public Relations was responsible for telling that story. It employed some of the best writers, editors, photographers, designers and graphic artists in or out of uniform. Warrant Officer Class 1 Ray Tracy was one of those artists. A gifted cartoonist, Tracy was responsible for recording some of the funniest moments in Air Force uniform and his comic strips and caricatures spared no rank or occupation. Unfortunately, Tracy died prematurely at the age of 37. He left behind a legacy of art that deserves to be enjoyed by today’s Air Force – and generations to come.

**Did you know...**

**Russia made the Air Force blue?**

After wearing the khaki of the Royal Flying Corps and the navy blue of the first Canadian Air Force, the RCAF adopted the blue-grey of the RAF – which had picked up the material after a Russian cavalry regiment could no longer use it!

The RAF had originally purchased the material from the haberdashery of Burberry’s of London. An Imperial Russian cavalry regiment had originally ordered the fabric, but the unit did not survive the Russian Revolution of 1917 and the newly installed Communist regime had no need for the material. Burberry’s then sold the blue-grey material to the RAF at a bargain basement price.

The RCAF also had a tan-coloured summer uniform. With unification, the Air Force put on “rifle green” but was allowed to return to a light blue uniform in 1985 with the reintroduction of distinctive environmental uniforms for the Navy, Army and Air Force.
ROUNDDEL
The Roundel helps distinguish “our” aircraft from “theirs.” When the Royal Flying Corps (RFC) arrived in France in 1914, their pilots took hits from both friends and enemies so some mark of identification was needed.

The RFC borrowed an idea from the French, who were using a roundel of concentric red, white and blue circles based on the tri-colour flag of France. The British reversed the colour order, placing the blue on the outside and the red in the centre.

In 1940, during the Second World War, the RCAF was authorized to replace the inner red circle with the red maple leaf. But Canadian military aircraft only made the change in 1946. In 1965, the 11-point, stylized maple leaf of the new national flag became the centrepiece of Canada’s roundel, replacing the older, more naturalistic leaf.

The Roundel often represents the Air Force on publications and products of historical significance.

“SWOOSH”
The Air Force “swoosh” is a symbol that was developed in 1999 to commemorate the 75th anniversary of the Air Force. It’s often seen on publications, clothing and other more “relaxed” Air Force products.

TARTAN
The story of the RCAF tartan goes back to January 1942.

Group Captain Elmer G. Fullerton, station commander of No. 9 Service Flying Training School, RCAF Station Summerside, P.E.I., wanted to celebrate his Scottish heritage by organizing a “Robbie Burns Night” mess dinner. He borrowed bagpipes for his station band and searched for a suitable tartan to outfit the band in full Scottish regalia. G/C Fullerton decided to design an original pattern that represented the Air Force. With coloured pencils in hand, he produced the prototype using light blue, dark blue and maroon colours. The original sample of a proposed RCAF Tartan was created by Patricia Jenkins and Loom crofters of Gagetown, N.B., with the Gagetown weavers also adding a white line in the design.

G/C Fullerton ordered a sample of the material to be sent to RCAF Headquarters in Ottawa for approval. The design was endorsed by Air Council and Air Vice-Marshal J. A. Sully sent it off to Scotland’s Lord Lyon, King of Arms for approval in July 1942. The approval was granted on Aug. 15, 1942 and the design was officially registered as the RCAF tartan. Thus the RCAF became the first air...
force in the world to have its own distinctive tartan. The speed of the process from original concept to final approval in a period of eight months is truly awe-inspiring.

Since then, the distinctive RCAF tartan has been worn by both wartime and postwar Air Force pipe bands and continues in wear today bypipers and drummers of the Canadian Forces Air Command. It is used in other contexts as well, including the cummerbund worn with Air Force mess kit.

TGIF

Never let it be said that Canada’s Air Force doesn’t know when the weekend begins. Long before restaurants borrowed the expression, Thank God It’s Friday (TGIF) was an Air Force expression that captured the joy of reaching the end of another difficult work week and the anticipation of joining friends in the mess for a late afternoon libation.

WEDGE CAP

The Air Force wears a unique head-dress, the wedge cap, simply described in regulations as “worn on the right side of the head, centred front and back, with the front edge of the cap 2.5 cm (1 in.) above the right eyebrow.” It was adapted during the First World War, and was based on the army’s field service cap. This headdress was officially dubbed the wedge cap in 1941, and it probably became popular because it was easily stuffed in a pocket when a helmet was donned for flying. With its jaunty appearance, it remains the preferred headdress of airmen and women to this day.

WINGS

In the beginning, only pilots received wings – the badge that is sewn above the left-hand pocket of the tunic. Navigators and observers received half-wings. Today, navigators, now called air combat systems officers, receive full wings, as do search and rescue technicians, with the symbol in the centre of the badge signifying for what they are awarded. Other Air Force trades are designated with occupation badges.

ZAPPERS

Walk into any Air Force mess and you’ll find the evidence of “zapping.” Stickers on the walls, on the seats and tables and all over the bathroom that trumpet “14 Wing,” “407 Squadron” or just a silent roundel. These “zappers” are how transient Air Force air and ground crew, whether passing through to Winnipeg or Kandahar, leave a bit of unit identification when they visit Air Force bases around the world.
The Victoria Cross is the Commonwealth’s highest award for gallantry “in the face of the enemy.” It has precedence over every other military award in the Commonwealth. A Canadian version of the VC is virtually identical to the original British award. It was approved in 2008 with the basic change of the English “For Valour” being translated to the Latin “Pro Valore.” The following are brief excerpts from the citations of Air Force personnel who have been awarded the VC.

**FIRST WORLD WAR**

**Air Marshal William Avery Bishop, VC, CB, DSO and Bar, MC, DFC, ED CD**

Then-Captain Bishop was flying alone when he sighted a German aerodrome with seven aircraft on the ground, some with their engines running. First he attacked from 50 feet above, hitting a mechanic. One aircraft took flight, but Bishop, now at an altitude of 60 feet, destroyed it from above. A second aircraft got off the ground but Bishop fired 30 rounds into it at a range of 150 yards and sent it into a tree. Two more aircraft came after Bishop: the first he destroyed at 1,000 feet with the rest of his first drum of ammunition and the second he downed with a second drum of ammunition. He then flew home, avoiding pursuing enemy aircraft.

**Wing Commander William George Barker, VC, DSO and Bar, MC and two Bars**

Flying over the Forêt de Mormal in France, then-Lieutenant-Colonel Barker attacked and destroyed a German Fokker biplane. Another Fokker retaliated, shooting Barker in the right thigh but Barker destroyed it too. He was then pursued by a large formation of German Fokkers with another shooting him in the left thigh. Barker again managed to drive down two enemy aircraft but lost consciousness and control of his aircraft. He awoke to find another large formation of German aircraft pursuing him but Barker attacked again and shot down another aircraft. His left elbow was shattered in the process and he passed out from the pain. When he regained consciousness for the second time, he shot down one more German aircraft. Barker broke up a third formation of German planes before he crashed landed behind his own lines.
Second Lieutenant Alan McLeod, VC

Second Lieutenant Alan McLeod was attacked at 5,000 feet by eight German aircraft. While he flew the aircraft, his observer, Lieutenant Alex Hammond, shot down three of them. In the process, McLeod was wounded five times and a bullet hit the gas tank and set the aircraft on fire. McLeod climbed out of the cockpit and piloted the aircraft from the left side of the fuselage and allowed the observer to continue firing. When the plane crashed in “no-man’s land” Hammond had been wounded six times. Nonetheless, despite his own wounds and having a bomb dropped in his vicinity, McLeod dragged Hammond away from the burning aircraft before collapsing from exhaustion and blood loss.

SECOND WORLD WAR

Pilot Officer Andrew Mynarski, VC

Pilot Officer Andrew Mynarski was a gunner on a Lancaster when his aircraft was attacked by enemy fighters over Cambrai, France. As the aircraft crashed in flames, Mynarski went to the escape hatch, where he saw the rear gunner trapped in his turret. Mynarski crawled through the flames to reach the gunner, setting his parachute and clothing on fire. He was unable to release the gunner because both the hydraulic and manual release levers were broken. When all his efforts failed, Mynarski went back to the escape hatch, saluted the trapped gunner and jumped, but died as a result of his burns. The rear gunner miraculously escaped death and lived to tell of Mynarski’s heroism.

“Mynarski went back to the escape hatch... and jumped.”
Squadron Leader Ian Bazalgette, VC, DFC

Squadron Leader Ian Bazalgette was on a mission to Trossy St. Maximi, France with his Pathfinder squadron. Nearing his target, heavy anti-aircraft fire knocked out two of his Lancaster’s engines and started fires inside the plane. Despite the damage to his aircraft Bazalgette hit his target. While he battled smoke and flames, Bazalgette ordered his crew to bail out but he remained at the controls and successfully landed the aircraft. Tragically, the plane exploded and Bazalgette was killed, along with two injured aircrew, who were unable to jump to safety.

Flight-Lieutenant David E. Hornell, VC

For a complete description of F/L Hornell’s heroism, please see “Meet Flight Lieutenant David Hornell, VC”. Flight-Lieutenant David Hornell was the aircraft captain of a twin-engine amphibian aircraft with 162 Squadron conducting anti-submarine warfare in the north Atlantic. Sighting a sub, Hornell turned to attack but the U-Boat returned with sustained and accurate anti-aircraft fire. One of Hornell’s guns jammed and his aircraft was hit twice, starting a fire. Hornell still managed to drop his depth charges on the submarine and sank it. After Hornell crash-landed into the sea the crew found the inflatable dinghy was too small for everyone so they took turns sitting inside or hanging on to its side while in the water. Two of the crew members died during their 21-hour ordeal. By the time Hornell and the remaining crew were rescued, Hornell was blinded and completely exhausted; he died shortly after being picked up.

Lieutenant Robert Hampton Gray, VC

Lieutenant Robert Gray flew off the aircraft carrier HMS Formidable to lead an attack on Japanese shipping in Onagawa Wan (Bay) in the Island of Honshu, Japan. At Onagawa Bay, Gray and the other pilots dived to attack a number of Japanese ships but they were met by enemy fire from nearby army batteries and warships. Gray continued the attack against an enemy destroyer. Despite the furious barrage and taking several hits, Gray reached the destroyer and dropped his bombs but only after his plane had caught fire. Gray scored a direct hit, sinking the destroyer, but died in his burning aircraft. (Note: Lt Gray was a pilot with the Royal Canadian Navy, which maintained an aviation branch until the advent of unification in 1968.)
RCAF

Air Chief Marshal (A/C/M)
Air Marshal (A/M)
Air Vice-Marshal (A/V/M)
Air Commodore (A/C)
Group Captain (G/C)
Wing Commander (W/C)
Squadron Leader (S/L)
Flight Lieutenant (F/L)
Flying Officer (F/O)
Pilot Officer (P/O)
Officer Cadet (O/C)

Warrant Officer Class 1 (WO1)
Warrant Officer Class 2 (WO2)
Flight Sergeant (F/S)
Sergeant (Sgt)
Corporal (Cpl)
Leading Aircraftman (LAC)
Aircraftman First Class (AC1)
Aircraftman Second Class (AC2)

CANADIAN FORCES

General (Gen)
Lieutenant-General (LGen)
Major-General (MGen)
Brigadier-General (BGen)
Colonel (Col)
Lieutenant-Colonel (LCol)
Major (Maj)
Captain (Capt)
Lieutenant (Lt)
Second Lieutenant (2Lt)
Officer Cadet (OCdt)

Chief Warrant Officer (CWO)
Master Warrant Officer (MWO)
Warrant Officer (WO)
Sergeant (Sgt)
Master Corporal (MCpl)
Corporal (Cpl)
Private trained (Pte)

**Did you know...**

The first RCAF wings parade was on Dec. 20, 1924 at Camp Borden, Ont. The graduates were the first pilots fully trained by the RCAF in Canada. W/C Breadner, DSC, presented flying badges to F/L Higgins, P/O Carr-Harris, and P/Os Weaver, Slemon, Durmin and Anderson.
Here is a brief description of the honours and awards mentioned throughout *On Windswept Heights*.

If an individual’s award is annotated with “and Bar” it denotes a straight silver bar that is awarded for a further act or acts of valour, courage or devotion to duty.

<table>
<thead>
<tr>
<th>Honours and Awards</th>
<th>Description</th>
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<tr>
<td>Order of the British Empire (OBE)</td>
<td>Recipient may be invested as a commander, companion or member. Awarded for gallantry.</td>
</tr>
<tr>
<td>Order of Canada (OC)</td>
<td>Recipient may be invested as a companion, officer, or member. Awarded for a lifetime of achievement.</td>
</tr>
<tr>
<td>Distinguished Service Order (DSO)</td>
<td>The DSO was awarded to military officers only, rewarding individual instances of meritorious or distinguished service in war. The DSO is normally given for service under fire or under conditions equivalent to service in actual combat with the enemy.</td>
</tr>
<tr>
<td>Distinguished Flying Cross (DFC)</td>
<td>The DFC was awarded to officers and warrant officers for an act or acts of valour, courage or devotion to duty performed while flying in active operations against the enemy. The slip-on bar has an eagle in the centre with the year of the award engraved on the reverse.</td>
</tr>
<tr>
<td>Distinguished Flying Medal (DFM)</td>
<td>The DFM was awarded to non-commissioned members for an act or acts of valour, courage or devotion to duty performed while flying in active operations against the enemy.</td>
</tr>
<tr>
<td>Air Force Cross (AFC)</td>
<td>The AFC was awarded to officers and warrant officers for an act or acts of valour, courage or devotion to duty but not performed while flying in active operations against the enemy.</td>
</tr>
<tr>
<td>Canadian Forces Decoration (CD)</td>
<td>Awarded to officers and non-commissioned members with 12 years of un tarnished military service. Subsequent CDs are awarded for every 10 additional years of service.</td>
</tr>
</tbody>
</table>

To learn more about other honours and awards, visit the National Defence website at www.forces.gc.ca (for current honours) and Veterans Affairs Canada at www.vac-acc.gc.ca (for historical honours).
The Air Force remembers its history through annual ceremonies that recall the sacrifice and valour of its veterans. These are opportunities to honour the heroes, remember the fallen and remind current Air Force personnel of the rich heritage that it has inherited and must preserve for the future.

**BATTLE OF BRITAIN CEREMONIES**

Commemoration of the Battle of Britain occurs each year on the third Sunday of September. Although the battle raged from July 10 to Oct. 31, 1940, the peak of the conflict occurred in mid-August. The ceremony recognizes the heroic feat of everybody – pilots and ground crew from Britain, Canada, the Commonwealth and the entire world – in defeating the German Luftwaffe. Battle of Britain Day is the most honoured day of the year on the Air Force calendar, and is marked by parades and ceremonies at Air Force locations across the country. The national celebration is held in Ottawa.

**BATTLE OF THE ATLANTIC CEREMONIES**

The second most sacred day of the year for Canada’s Air Force is one we share with Canada’s Navy – the Battle of the Atlantic Parade. For six long, arduous years during the Second World War the sailors and airmen from the Royal Navy, Royal Air Force, Royal Canadian Navy, RCAF and United States Navy battled the U-Boat menace in the North Atlantic. On the first Sunday of May this long fight for oceanic supremacy is celebrated at cenotaphs across Canada with Navy and Air Force, serving and retired, commemorating the battle. Air Force personnel were responsible for destroying more than one-quarter of U-Boats sunk in the battle (212 out of 800).

**REMEMBRANCE DAY**

Every Nov. 11, Air Force members join their Army and Navy colleagues to pay homage to the fallen at Remembrance Day parades across Canada. The date commemorates the Armistice that ended the First World War and was signed “at the eleventh hour, on the eleventh day of the eleventh month” in 1918. The national Remembrance Day ceremony is at the National War Memorial in Ottawa, where uniformed personnel join supportive citizens to remember the sacrifice of veterans. Four sentries are posted at this event, one of these an Air Force sentry. The member is chosen from amongst many who are nominated for the honour based on exemplary performance of duty.
While this publication focuses on people, events and heritage, here are the key dates in Air Force history.

1909: The flight of the “Silver Dart” is the first powered, controlled, heavier-than-air flight in Canada in Baddeck, N.S. Later that year, its first flight at a military installation took place at Camp Petawawa, Ont.

1914: First World War begins; Canadian Aviation Corps founded and Canadians fly with Britain’s Royal Flying Corps.

1918: First World War ends; Nos. 1 and 2 Squadrons Canadian Air Force (CAF) created in England.

1919: No. 1 Canadian Wing, CAF formed in Britain.


1923: NDA passed previous year takes effect. Air Board ceases to exist as a separate government department.
1924: Royal Canadian Air Force becomes a permanent component of Canada's defence forces.

1926: First RCAF-trained pilots receive wings.

1938: RCAF Senior Air Officer authorized to report directly to Minister of National Defence.

1939: The Second World War begins: RCAF defends Canadian airspace, operates the British Commonwealth Air Training Plan (BCATP) and fights overseas with Britain's Fighter Command, Bomber Command and Coastal Command.

1940: The Battle of Britain; first time for RCAF in combat.

1940: RCAF Ensign approved by HM King George VI.

1940: The first intake of BCATP pupils for service flying training reported to No. 1 Service Flying Training School at Camp Borden.

1941: 400 Squadron series introduced.

1941: Canada declares war on Japan; RCAF contributes to missions in Ceylon, India and Burma.

1942: Canadian Women's Auxiliary Air Force renamed RCAF Women's Division.

1942: Six RCAF fighter and two army-cooperation squadrons provide air support for ill-fated Dieppe raid.

1943: No.6 RCAF Group becomes operational in Bomber Command.

1944: D-Day – the invasion of Normandy and liberation of Europe begins; Canadians contribute to aerial cover for invasion fleet.

1945: Victory in Europe (VE) and Victory in Japan (VJ) bring an end to the Second World War. Canada has the fourth largest air force in the world.

1946: Authorization given for RCAF aircraft to be marked with a roundel bearing a red maple leaf in the centre.

1948: RCAF participates in the Berlin Airlift, providing West Berlin with food, medicine and essential goods.


1951: Operation Leapfrog (Phase 1); RCAF begins deploying F-86 Sabre squadrons to No. 1 Canadian Air Division (headquartered at Metz, France) as part of its North Atlantic Treaty Organization (NATO) commitment.
1953: Korean War ends; RCAF continues to focus on European NATO commitments.
1958: CF-105 Arrow makes its maiden flight at Malton, Ont.
1958: NORAD Agreement signed.
1959: CF-105 Avro Arrow cancelled.
1967: Canadian Forces Re-organization act given Royal Assent.
1968: The three arms of the Canadian Forces are unified into a single organization. RCAF ceases to exist.
1974: A CC-115 Buffalo aircraft was shot down over Syria, killing pilot Captain Gary Foster and eight other crew and passengers.
1975: Air Command born.
1985: Air Force returns to its light blue distinctive environmental uniform.
1991: First Gulf War begins (and ends); Air Force conducts sweep and escort missions with CF-18s to support ground forces while CH-124 Sea Kings support the naval embargo of Iraq.
1992: Canadian Forces closes bases in Europe; 1 Canadian Air Group's fighter operations in Baden-Soellingen, Germany.
1992: Canadian Forces deploy on UN mission to Somalia. Sea King helicopters provide intelligence and reconnaissance as well as airborne transport services.
1993: Air Force bases designated as wings.
1997: 1 Canadian Air Division created, Air Command moves to Ottawa, Ont. and office of Chief of the Air Staff recreated.
1998: Deployment of CH-146 Griffon helicopters to Bosnia in support of NATO-led mission.
1999: Air Force CF-18s participate in NATO-led bombing of Kosovo.
2002: Air Force begins contribution to war in Afghanistan.
2008: Joint Task Force Air Wing deployed to Afghanistan. Notwithstanding Canada’s contribution of an air division of four fighter wings to NATO in the 1950s, and combatant units to both the Gulf War and the air campaign in Kosovo, this was the first time Canada despatched an organic air formation of this size to participate in an armed conflict since the Second World War.
Bibliography and Further Reading


Aces of World War Two | www.acesofww2.com
Air Force Association of Canada | www.airforce.ca
Canada’s Air Force | www.airforce.gc.ca
Canadian Military History Gateway | www.cmhg.gc.ca

Rich Thistle Art Gallery | www.richthistle.com
RCAF.com | www.rcaf.com
Veterans Affairs | www.vac-acc.gc.ca
The Royal Canadian Legion | www.legion.ca