



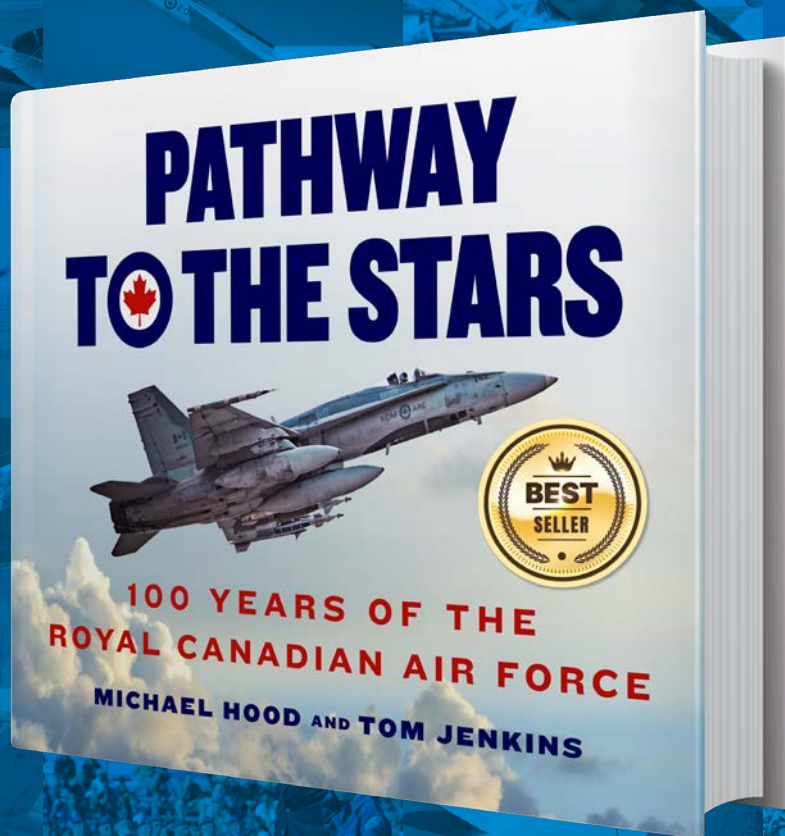
# AVIATION NATION

How Canadians Contributed to  
Flight and Space Around the World



Michael Hood and Tom Jenkins  
Illustrated by Josh Rivers

# Soar with 100 years of RCAF history



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## RCAF FOUNDATION FONDATION de l'ARC

Hey future aviators! This booklet celebrates aviation in Canada and includes stories about famous aviators, flights, aircraft, and innovators.

It's proudly brought to you by the Royal Canadian Air Force (RCAF) Foundation and is a sampling from a book slated for future publication called *Aviation Nation* (so keep your eyes peeled!).

The RCAF Foundation's mission is to support the Royal Canadian Air Force by inspiring young people like you with community-based fun and educational programs and special events that honour both the RCAF and aviation in Canada. The Foundation works hard to ensure that aviation continues to grow as an important part of Canada's future.

This year, we're celebrating the RCAF's Centennial—100 years of the Air Force in Canada!

To find out more about the Foundation and Centennial celebrations, including podcasts, specials events, and videos (on our YouTube channel), visit our website <https://rcaffoundation.ca/> or follow us: @rcaf\_foundation.

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## **The Silver Dart:** *From Sleigh to Skis to Skies*

The flight of the Silver Dart on February 23, 1909 marked the birth of aviation in Canada.

One winter's day in Nova Scotia, a horse-drawn sleigh pulled the Silver Dart onto a frozen lake called Bras d'Or. Helped along by volunteers on skates, the plane taxied on the ice. With a roar, the Silver Dart caught some air, flying 9 meters high at 65 kilometres an hour. It traveled a distance of 800 meters, making history as the first powered flight in Canada.

But the Silver Dart wasn't just any old plane—it was built by a group led by Alexander Graham Bell (you might recognize him as the inventor of the telephone). Aviation pioneer Douglas McCurdy (who was part of Bell's group) piloted the Silver Dart, named for the silver rubberized fabric that covered the plane.

When the Canadian Army showed interest in the plane, it was sent to Petawawa in Ontario to occupy the first hanger built in Canada. Here, the Silver Dart would fly over 200 times before being damaged beyond repair in a crash landing.

February 23 commemorates the first flight of the Silver Dart as Canada's National Aviation Day. A replica of the plane is on display at the Aviation and Space Museum in Ottawa—a reminder of how one little plane had a big impact on our aviation history.

# THE SNOWBIRDS



## **The Snowbirds:** *A Team of Many Firsts*

The Snowbirds are special for more reasons than just their death-defying acrobatic feats. They're also a team of many firsts.

They were the first group of aerobatic pilots to become an official RCAF squadron: 431 Demonstration Squadron based at 15 Wing Moose Jaw in Saskatchewan. The Snowbirds were also the first to perform their stunts to music, making their shows even more exciting and entertaining.

In November of 2000, you guessed it—another first. Captain Maryse Carmichael joined the Snowbirds, making her the first woman to fly with them as a demonstration pilot. And if this wasn't enough, Captain Carmichael eventually became Commanding Officer of the Snowbirds. Following her specialized maneuvers in the sky and on the ground, many women have since joined the Snowbirds to fill all sorts of important jobs in the squadron.



## The RCAF Roundel:

### *A Maple Leaf Marks the Spot*

A roundel (pronounced *rown-del*) is a special round sticker or badge used on military planes to identify their nationality. The Royal Canadian Air Force has its very own roundel with an interesting history.

Back during the First World War, with all the planes flying around, it was hard to tell the difference between friend or foe. The British Royal Air Force (RAF for short) noticed that the French used roundels on their planes to show they were the good guys. The roundels were made up of concentric or nested rings that matched the colour of the French flag. They worked so well that the RAF copied the French, using the colours of Britain's Union Jack—red, white, and blue.

During the Second World War, when Canada's air force was in its fledgling stage, it adopted the RAF roundel. But after the war, as the Royal Canadian Air Force (or RCAF) grew, it wanted an insignia that was more Canadian. And so the 11-point Maple Leaf from the Canadian flag replaced the red dot at the centre of the roundel.

The RCAF Roundel is more than a cool design on a plane. It's a badge of honour for over 100 years of tradition, pride, and a rich history of Canada's contributions in the air.



## **William Barker:** *A Hero's Hero*

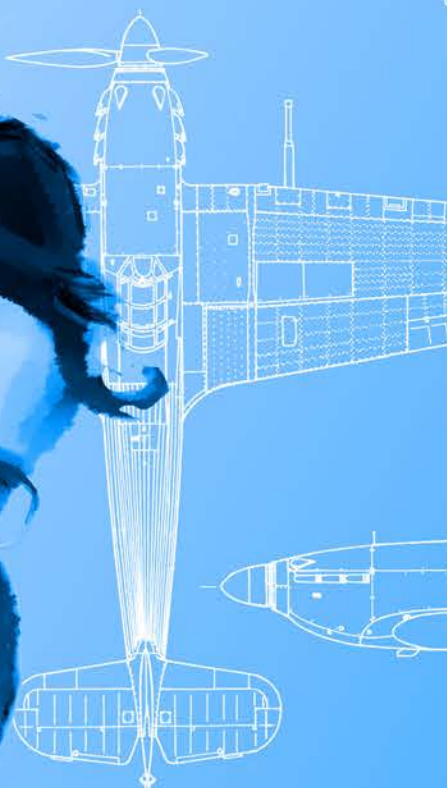
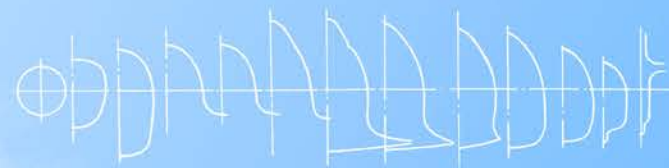
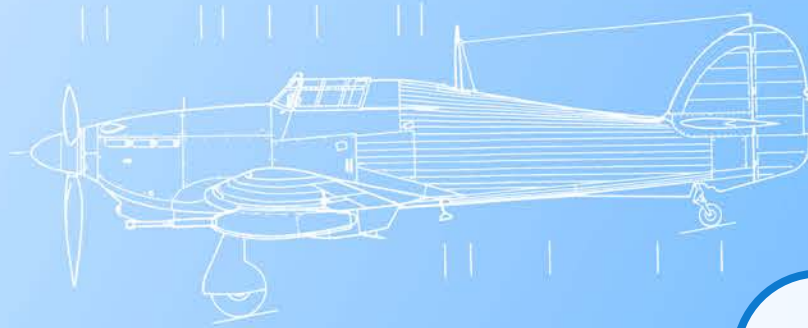
Have you ever been to an airshow and felt the thrill of fighter jets flying overhead in formation, performing breathtaking barrel rolls and loop-de-loops? Well, the first person to do this in Canada was William “Billy” Barker. He led the very first airshow in 1919 at the Canadian National Exhibition (CNE) in Toronto.

Barker’s flying career began in the First World War. Billy Bishop called him “the greatest pilot who ever lived.” Like Bishop, Barker was one of Canada’s top flying aces, winning 50 victories and 12 medals for his bravery, including the Victoria Cross.

After the war, Barker did a lot to advance the aviation industry in Canada. He started a company with Billy Bishop called Bishop-Barker Aeroplanes Limited and flew the first airmail between Canada and the United States. Barker even became Wing Commander in the Canadian Air Force. In an achievement unrelated to flying (at least in the air), Barker was also the first President of the hockey team, the Toronto Maple Leafs!

Sadly, Barker’s career ended at age 35 in a tragic flying accident. His heroics were largely overlooked until 2011, when a plaque was placed on his tomb honouring him as “the most decorated war hero in Canada’s history.” William Barker, the unsung hero of the skies, will always be a Canadian legend!

# ELSIE MACGILL



## **Elsie MacGill:** *Queen of the Hurricanes*

Elizabeth “Elsie” MacGill showed the world that with enough drive, anyone can aim high.

Elsie was the first woman engineer in Canada. She earned two degrees: one in electrical engineering and a master’s in aeronautical engineering. This was unheard of in 1929. But it was at a Canadian company called Can Car that Elsie really made her mark. Working as Chief Aeronautical Engineer, she designed, built, and tested the Maple Leaf II Trainer—the first plane engineered by a Canadian woman! But Elsie didn’t stop there.

During the Second World War, Can Car was tasked with building Hawker Hurricane fighters. Elsie took charge, converting the factory into an airplane assembly line. She was just 35 years old at the time! Many of the workers in the factory were women, and under Elsie’s direction they built over 1,400 Hurricanes. Nicknamed “Queen of the Hurricanes,” there’s even a comic book about Elsie MacGill’s story.

Elsie believed that technology and engineering would make the world a better place. A rising star, she did more than build planes that helped to win the war; she was an advocate for women’s rights in science and engineering. Elsie MacGill made such an imprint on Canada’s aviation industry that her face is even featured on a commemorative loonie!





## **The Carty Brothers:** *Flying as a Family Affair*

For five of the Carty brothers from New Brunswick, flying was a family affair. Following in their father's footsteps, they kept the family tradition of service strong and joined the RCAF.

Adolphus, the eldest, was a mechanic and his brother, William, was a flight inspector. Brother Clyde was an RCAF firefighter and Donald, an equipment assistant. Their younger brother, Gerry, joined when he was only 18, one of the youngest officers in the RCAF.

Top of his class, Gerry was promoted to Flight Lieutenant at 19 years old. As a member of Bomber Command, Gerry had one of the most dangerous jobs during the Second World War. He flew 35 missions in planes called Wellingtons and Lancasters when it was rare to see Black Canadians serving as aircrew.

All five Carty brothers returned home from the war as decorated heroes, a talented bunch who broke down barriers for all Black Canadians who wanted to serve in the military. But their inspiring story doesn't end there. Youngest of the brothers, Robert and Malcolm, joined the Army and Air Cadets, respectively. In fact, at the time this book was written, seven members of the Carty family were serving in the Canadian Armed Forces!

# THE PARABELLES



## **The Parabelles:** *Getting a Jump on Pararescue*

Although their name means “parachuting beauties,” Canada’s first pararescue nurses were brave, adventurous, and challenged the stereotypes of women at the time.

In 1951, the RCAF opened up pararescue to medical personnel. Five qualified nurses answered the call: Muriel Beaton, Marion MacDonald, Isabelle Thomson, Marian Neilly, and Anne Peeden. Just like today’s Search and Rescue Technicians (SAR Techs), these women had to go through rigorous training. They learned how to jump out of airplanes into rugged terrain, find and treat the lost or injured, and survive in the wilderness. And they did this all wearing suits made for men and awkward caged helmets that looked like hockey masks.

Gracie MacEachern, the first Canadian woman to complete an operational jump, blamed the oversized equipment for an accident. During a rescue, she snagged a tree and slipped out of her harness. Gracie dangled by her foot for two hours before freeing herself. Climbing down, she then spent the night in the wild before joining her team the next day. Gracie was a true survivalist like all the Parabelles!

For their hard work and courage, the Parabelles earned a special badge as qualified RCAF pararescue personnel. The first women to wear a badge for flying operations, they redefined the roles for women serving in the RCAF.

JEREMY HANSEN



## Jeremy Hansen: *Over the Moon*

Canadian Space Agency (CSA) astronaut Colonel Jeremy Hansen is not just any astronaut; he's one of four astronauts representing the CSA at NASA. In 2023, he was assigned to fly around the Moon!

Being an astronaut is a dream come true for Jeremy. After joining the Air Cadet Program, he got both his glider and private pilot licenses. Jeremy learned about space science and physics at the Royal Military College, and then became a fighter pilot. He flew CF-18 jets and completed NORAD operations in the Arctic. Jeremy was selected by the CSA in 2009 and he graduated from Astronaut Candidate Training at NASA in 2011.

Jeremy was a capcom at NASA's Mission Control Center, the person who talks to astronauts on the International Space Station from the ground. Jeremy also learned how to live in space-like conditions and has spent time living both underground and underwater! He was the first Canadian to be entrusted with leading a NASA astronaut class, which means that he was in charge of training astronaut candidates from the United States and Canada.

When space calls, Colonel Jeremy Hansen will be ready. He is currently preparing for the Artemis II mission, the first crewed flight test of the Orion spacecraft. He'll be the first Canadian—and first non-American—ever to reach the Moon!

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