

the
OBSERVAIR



**Ottawa Chapter Newsletter
Canadian Aviation Historical Society**

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CHAIRMAN'S MESSAGE

I've always had a soft spot for flying boats and float planes. Last month, I watched the BBC documentary called *The Last African Flying Boat*. This award-winning documentary follows travel writer and journalist Alexander Frater as he retraces the former Imperial Airways African route from Alexandria, Egypt, to the Island of Mozambique, Mozambique (though the original Imperial Airways route finished in Cape Town, South Africa).

In the late-1930s, Imperial Airways operated Short C Class Empire flying boats to deliver mail and passengers throughout the African continent. In 1989 (when the documentary was filmed), the aircraft used was Canadian Vickers Canso A (c/n CV-357), belonging to entrepreneur Pierre Jaunet's Catalina Safari Company with the registration Z-CAT (the registration I will continue to use for clarity's sake). Nothing is mentioned in the documentary, however, of the aircraft's Canadian connection.



Z-CAT as CF-JCV in Austin Airways markings.
© www.aviationfilm.com

Z-CAT is an ex-RCAF aircraft (RCAF 11054), originally taken on strength on 20 March 1944 and serving with No. 5 (BR) Squadron until the end of the war. After the war, Z-CAT was declared surplus and became the civil registered CF-JCV. In civilian service, it was flown by a number of different Canadian bush airlines, including spending fourteen years with Austin Airways supplying isolated communities in mid- and eastern-Canada, supporting prospecting and the construction of the Mid-Canada Line.

In 1988, Z-CAT was purchased by Jaunet, who used it to fly charters until it was sold to the Catalina Club of New Zealand in 1994. In New Zealand, Z-CAT was registered as ZK-PBY and painted in the markings of Royal New Zealand Air Force Catalina NZ4017, XX-T of No. 6 Squadron; markings which Z-CAT can still be seen flying in today. Not bad for a 73-year old aircraft that had flown across oceans and operated out of some of the most remote parts of Canada and Africa.

For a personal tale of Canso fire tanker operations in British Columbia, see Robert S. Grant's story on page 5. Note, please accept my apologies for the lack of refreshments at the last meeting.

Kyle Huth
Chairman / Editor

The Observair is the newsletter of the Ottawa Chapter, Canadian Aviation Historical Society (CAHS), and is available with membership. Membership fees are payable in September.

Any material for *The Observair* newsletter should be directed to the Editor: Kyle Huth,

All matters relating to membership should be directed to the Secretary/ Treasurer: Mat Joost,

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PAST MEETING: DRONES – DEMOCRATIZING AVIATION: THE CANADIAN UAV INDUSTRY PAST, PRESENT, AND FUTURE



Mark Aruja © Rod Digney

There were 27 members and their guests on hand Thursday, 22 February 2018 to hear Mark Aruja's presentation on drones and the past, present, and future of the Canadian Unmanned Aerial Vehicle (UAV) industry. The presentation began with some impressive figures about the number of commercial UAV pilots trained in Canada; over 2000 in 2017 alone! According to Aruja, drones are attracting a younger generation of pilot/operator, partly because it gives them the ability to program the software and modify as needed.

In the last decade, there has been rapid growth and development in the UAV field. They are becoming cheaper and more accessible to the general public, meaning they can do jobs at a fraction of the cost of conventional aircraft. Because of this, UAVs have begun revolutionising a whole host of industries.

In May 2013, there was a highway accident in Saskatchewan and the disoriented victim wandered off into the snowy night. Royal Canadian Mounted Police (RCMP) and emergency rescue personnel were unable to locate the victim, even with the assistance of a helicopter. RCMP Corporal Doug Green used a Draganflyer X4-ES UAV (which the RCMP had been testing), built by Saskatoon-based Draganfly Innovations, to find the victim using thermal imaging, resulting in his rescue. This story was picked up a year later by American journalist and talk show host Katie Couric, who invited Cpl. Green onto her show to explain the rescue. The Draganflyer X4-ES used in that rescue is now in the Smithsonian National Air and Space Museum collection as the first small UAV to save a life. The RCMP now has 230 UAVs in service, making them the largest single user in Canada. The Ontario Provincial Police have also discovered the usefulness of UAVs in traffic control and forensic work.

Camera equipped UAVs have shown their effectiveness at being adapted to provide unique and cost effective solutions to a variety of tasks. In the real estate business, they have provided a valuable tool for conducting roof inspections (although currently against the latest Transport Canada regulations for safe drone operations). Ornithologist Dr. David Bird from McGill University in Montreal has pioneered the use of UAVs for studying birds.

The adaptability of UAVs means they can be fitted with a number of different sensors and tools to suit the required tasks. In agriculture, a UAV fitted with Light Detection and Ranging (LIDAR) sensors can be used to create drainage maps of farm fields. The resulting data can be uploaded into the latest laser grader farm implements that can automatically level the field, improving drainage and, therefore, field productivity. Other sensors can be used to help farmers track crop health, pinpointing stressed or sick plants. This means fertilizer or insecticide can be applied to the required plants as needed instead of applying it to whole fields, not only saving money, but also helping the environment by reducing the amount unnecessary fertilizer or insecticide being introduced.



Draganflyer X4-ES © www.draganfly.com

The development and growth of the UAV industry has been aided by developments in several unrelated fields, such as fuel cells, cell phones, and the autonomous vehicles. To provide asset management, the UAV industry is developing software that uses GPS technology in conjunction with existing cell phone networks to track UAVs and ensure their safe operation in non-restricted areas.

Today, there are hundreds of Canadian companies working in the UAV field. LeddarTech out of Quebec City is developing ground clearance avoidance technology. Bell Helicopter in Mirabel, Quebec, has just unveiled HYDRA (Hybrid Drive Train Research Aircraft), their unmanned propulsion research platform. Closer to home, the Ottawa Valley boasts a dozen or so companies working in the field, one of which is exploring the idea of delivering heart defibrillators to rural areas by UAV.

As we celebrate the 109th anniversary of powered flight in Canada, I would like to thank our speaker Mark Aruja for giving us a glimpse of what the future holds.

Kyle Huth



RAMBLING THROUGH RECORDS

RCAF file 866-1-53 (RG.24 Volume 3577) is titled "Semi-Official Correspondence – Mr. J.A. Wilson, Secretary, RCAF." There are considerable gaps after 1923 and nothing at all after 1937. The most interesting matter is the letters he exchanged with numerous parties, including Commander Richard E. Byrd and the Editor of *Aeroplane*, C.G. Grey.

Wilson was the Secretary of the newly-established Air Board. From 1920 to 1922, this body controlled and encouraged Canadian aviation. Its Regulations and Certificate Branch brought order to a confused system of barnstormers, entrepreneurs and flim-flam artists. The Civil Air Operations Branch was exploring commercial applications for aircraft, and then stepping aside to allow room for private firms. The Air Board also administered the part-time Canadian Air Force – a situation which would be like having the RCAF operating as a branch of Transport Canada.

Grey especially had a particular interest in developing Canadian frontier aviation. In part, this may have been a view that it was slightly exotic; he was also contemptuous of much in British aviation. In any case, J.A. Wilson – a true father of Canadian aviation – kept Grey supplied with news of developments here, in both the private and public fields. Indeed, the magazine editor was lavish in his praise, although some of it was unfair. Australians would hardly agree with his opinions expressed on 15 November 1920:

Taking it all round you people in Canada seem to be doing heap more than anybody else in the whole wide world, the Australian and South African Governments are doing nothing, the Indian Government seems to be calmly contemptuous, and all the South American Governments of course are merely out on the graft.

Much of Wilson's content about the nascent flying business in Canada was later boiled down for inclusion in official documents, notably Air Board Reports. Nevertheless, one glimpses a few new insights. In a letter to Colonel O.M. Biggar (Chairman of the Air Board) dated 22 December 1920, Wilson reported on a recent visit to Camp Borden. The refresher flying school was in good shape, and Major R.A. Logan was organizing an excellent Ground School for officers and enlisted men.

Nevertheless, the part-time personnel of the Canadian Air Force were hostile to the Civil Operations Branch. Wilson's letter may be described as rare CAF gossip:

There is still at Camp Borden a great prejudice against the Operations Branch and against Leckie personally I am sorry to say. This is almost altogether due to ignorance and if properly dealt with can be dispelled as the other prejudices have largely been by more intimate knowledge of the facts. I blame Scott Williams very much for this condition. He loses no opportunity of putting the Civil Operations Branch and their work in a wrong light and talks most ridiculous nonsense about their work. Unfortunately on account of his great ability as a pilot he is very popular in the camp. The officers and men admire him and there has been no one on the spot to counteract the prejudices against civil work up to date. I do not think there is any need for apprehension on this score as the truth usually wins out in the long run; still it is most unfortunate that this prejudice has been allowed to grow up.

Wilson's villain was Lieutenant-Colonel John Scott Williams, MC, AFC, who commanded Camp Borden, July 1920 to July 1921, before departing aviation for mining. Conversely, his preferred idol was Lieutenant-Colonel Robert Leckie, DSO, DSC, DFC. On 18 May 1921, writing to Grey, he noted,

Things don't always run smoothly, but on the whole, Leckie has every reason to be proud of his show. The Canadian Air Force, of course, is a much more difficult business to run. Good work is undoubtedly being done, but at the same time I cannot think that the same efficiency exists and we certainly do not get the same satisfaction out of our military end.



J.A. Wilson, Secretary, Canadian Air Board, 1922, Ottawa.

© www.bac-lac.gc.ca

Apart from aviation matters, the correspondence reveals something of Wilson himself. On 20 September 1921, writing to one "Pocaterra," he described an inspection tour of operations in British Columbia and Alberta. He took time off to enjoy the national parks: "I had one good day on the trail on one of the best ponies which I enjoyed thoroughly, though having been so little in the saddle for so many years, it made me somewhat stiff and sore. Another day I climbed one of the lower mountains and had a good look at the country from the top." A week later he supplied a similar report to C.G. Grey.

If there is a wistful note in the Wilson letters, we find it on 19 May 1922. The occasion was the departure of his old friend, Robert Leckie, who was returning to RAF duty. "I hope they find him some really useful employment where his talents will have some outlet, and do not simply place him on some station where routine will gradually enter his soul and destroy largely the training he had in the War and subsequently here in Canada....I hope that after a few years with the RAF he may return and bring with him to Canada, experiences in a wider field, so that he can still be of use to us."

And, in fact, Leckie was back in 1940, first on loan to the RCAF to help establish the BCATP and eventually to be Chief of the Air Staff (1944-1947).

Hugh Halliday

CANSO DAYS

In 1968, when I had hair, Flying Fireman Ltd. of Victoria, British Columbia, needed a co-pilot on a Canso water bomber. No training, multi-engine or instrument rating required – just get in and go. Well known in aviation, the captain with whom I would be flying had been driving airplanes since the 1920s and likely logged over 28,000 flying hours on everything from Wacos to Liberators and Sunderlands. As a young guy with a recent commercial pilot licence, I worshipped the man and looked forward to learning from a living legend.

On my first day at the Fireman's Prince George base, my hero looked across the spacious cockpit of CF-FFW and told me in a very nasty manner, never to touch the controls, just sit there and keep my mouth shut, adding that the company hired co-pilots only because regulations said they must. Crew Resource Management (CRM) did not exist in the 1960s. Bitterly disappointed by this and with no other job prospects, all I could do is hope he would change his attitude.



Canso CF-FFW at Prince George, B.C. in 1968.

© Robert S. Grant

Our Cansos were Fairey conversions with two long narrow drop doors and carried 800 gallons of water. To help keep the released load compact, an onboard system injected a pink powder called Gelgard into the central water tank where the mixture converted itself to foam. A small hatch secured by wing nuts on the tank top prevented water from sloshing into the fuselage. When the main wheels refused to lower, a co-pilot left his seat, groped back to the cover, climbed inside the tank with a metal device to poke through an aperture and pushed the wheel outward. My 135lb frame allowed me to slither inside. The forehead bruises healed quickly, but the pink colouring stayed under my skin for weeks!

When company captains began refresher training, I was ordered to sit in a seat behind the cockpit in case the wheels did not cooperate. Once, the aircraft shuddered badly during a simulated stall, the 104ft wing dropped and the aircraft entered a full spin. The world through the front windshield far ahead went blurry for a few seconds but the pilots recovered. During water pickup practices, I knew when the checkees encountered difficulty tracking straight across a lake. The "swish" of the hull slamming side-to-side began in what seemed like multiple minutes between each one. Eventually, the sound became an interrupted hiss and after about 14 seconds, the 34,000 pound gross weight airplane staggered away.

On one of the bombing missions, the captain who had 3,000 hours on type, aimed the lumbering creature directly at a small blaze smouldering at the bottom of a ridge. Wondering what the hell he was going to do, since no one bombed uphill, I watched the gauges, advanced throttles, glanced outside and found myself completely disoriented with no idea if we were upside down or right side up. The captain had performed a vertical stall turn after releasing the load and then slammed full rudder to pivot the Canso to the opposite direction. My fellow workers talked about "...the look on Grant's face" for the rest of the month.



Fairey dump door conversion, July 1966. © Robert S. Grant

Besides only occupying space in such a historic airplane, I learned as much as possible by helping maintenance mechanics. Millions of screws on the top of the wing secured the fuel tank covers and occasionally they needed removal for inspection. The day-long process took place before electric or pneumatic tools entered the aviation scene so every tiny screw had to be removed with a regular screwdriver. Many of the screw heads were stripped, but thankfully the Aircraft Maintenance Engineers (AMEs) felt sorry for the poor skinny flatlander from Ontario and patiently offered their advice. Sometimes, while working around the open fuel tanks, my pocket change would accidentally drop inside, and once I knocked a tool in. Luckily we were able to fish it out with wire and patience. As for the dimes and quarters, they may still be in CF-FFW wherever it is.

Every so often I would be given a break from sweeping airplane interiors, cleaning windshields, and refuelling itinerant airplanes enroute to Alaska, and be asked to do something like hold a steel bucking bar while AMEs used an air gun to rivet panels on a damaged Canso nose. Painfully cramped fingers, sore eardrums or nausea from zinc chromate paint made existence terrific as a Canso co-pilot. It seemed like the misery would end when a friend received upgrading to captain. To the best of my knowledge, we would eventually be assigned together and life would take on a brighter side. Sadly, he went south on a temporary deployment, crashed into a mountain and I never saw him again.

That summer, rain soaked central British Columbia almost daily and my logbook showed only 50 hours on CF-FFW. However, that was enough to buy an engagement ring for the lady I married that fall. Stranded in Prince George at season's end, I begged a ride on a Beech 18 bound for Victoria and didn't return to Prince George for decades. When I did – not a Canso in sight.

Robert S. Grant



RESEARCH CORNER

Please consider submitting your own research interest to the Editor for inclusion in future issues of the *Observair* Research Corner. Maybe you might be interested in joining the Research and Projects (*aka* Prayer) Group? We usually meet the second Tuesday of each month at 7:00 pm in the Board Room of the Canada Aviation and Space Museum. Please contact John Henderson if you are interested in attending. [_____](#)



PUBS & MAGS

Aeroplane (February 2018)

- 15pp database feature on the Noorduyt Norseman, including development, service, and flying the Norwegian Aviation Museum's UC-64A

Airliner World (February 2018)

- 9pp on Air Transat, including fleet list and route network
- 7pp on Nordic Seaplanes, a Danish carrier operating a refurbished DHC-6-300 (c/n 577, ex-Iranian)
- 7pp on the Bombardier C Series program, and the ownership agreement with Airbus

FlyPast (February 2018)

-1p on William George Barker, VC

Airways (March 2018)

- 3pp by Robert S. Grant on flying the DC-3

Bill Clark

THE HARVARD SAUSAGE MACHINE AT BAGOTVILLE

No. 1 Operational Training Unit (OTU) Bagotville, Quebec, began to function on 24 June 1942 with the first aircraft arriving on 14 July 1942 when 14 Harvard Mk. IIBs were received along with 11 more aircraft from No. 130(F) Squadron. A total of 45 Harvards were issued to No. 1 OTU from July 1942 to 9 June 1944 when the last one, FE934, arrived.

The first Harvard Category 'A' crash occurred on 24 August 1942 when the crew of FE392, Sergeant (Sgt.) A.R. McKay and Sgt. M.F. Pettibone (both RCAF), had the throttle fail to open up after a long series of gliding turns. Both pilots bailed out, landing without injury, but had to walk six miles through the woods to find a telephone.

From the above date until 9 January 1945, when all Harvard flying ceased at No. 1 OTU, a total of 14 Harvards were lost in Category 'A' crashes. Another four Harvards were involved in Category 'B' crashes. Among the 14 Category 'A' crashes where nine involving fatalities. Of the Category 'A' crashes, four were caused by mid-air collisions. This type of accident was particularly dangerous as the final results were all too often fatal.

Harvard Category 'A' crashes

FE383	15 October 1942	1 Fatal	FE397	4 November 1942	2 Fatal
FE386	15 October 1942	Nil Injury	FE398	1 May 1944	2 Fatal
FE387	20 September 1942	2 Fatal	FE399	28 September 1943	2 Fatal
FE389	10 September 1942	2 Fatal	FE498	1 June 1943	Slight Injury
FE392	24 August 1942	Nil Injury	FE501	19 August 1943	2 Fatal
FE393	21 January 1944	2 Fatal	3036*	9 December 1942	2 Fatal
FE394	8 October 1942	Nil Injury	3294*	9 December 1942	Nil Injury

Notes:

FE386	15 October 1942	pilot bailed out	3294*	9 December 1942	crew bailed out
FE394	8 October 1942	pilot bailed out	*	No. 130(F) Sqn.	
FE498	1 June 1943	pilot bailed out			

Personnel Involved in Crashes

P/O	T. Adamson	RAF	Missing	Mid-air	15 October 1942	FE383 with FE386
Sgt.	M. Klimenko	RCAF	Fatal	In a spin	20 September 1942	FE387
LAC	W.E. Meire	RCAF	Fatal	In a spin	20 September 1942	FE387
P/O	S. Soomsky	RCAF	Fatal	In a spin	10 September 1942	FE389
LAC	J.A. McKay	RCAF	Fatal	In a spin	10 September 1942	FE389
F/L	L.E. Price	RCAF	Fatal	Hit a mountain	21 January 1944	FE393
Capt.	A. Steinberg	Army	Fatal	Hit a mountain	21 January 1944	FE393
F/O	W.E. Copp	RAF	Fatal	In a spin	4 November 1942	FE397
P/O	Sutherland	RCAF	Fatal	In a spin	4 November 1942	FE397
F/O	Olmstead	RCAF	Fatal	Engine Failure	1 May 1944	FE398
P/O	J.R. Milne	RCAF	Fatal	Engine Failure	1 May 1944	FE398
Sgt.	C.H. McKimm	RCAF	Fatal	Failed Loop	28 September 1943	FE399
WO2	T.S. Turfus	RCAF	Fatal	Failed Loop	28 September 1943	FE399
P/O	R.B. Frost	RAF	Fatal	Flew into Ground	19 August 1943	FE501
P/O	W.E. Cook	RCAF	Fatal	Flew into Ground	19 August 1943	FE501
F/Sgt.	J.G. Bertrand	RCAF	Fatal	Mid-air	9 December 1942	3036 with 3294
Sgt.	C.J. Vallee	RCAF	Fatal	Mid-air	9 December 1942	3036 with 3294
F/L	C.W. Fox	RCAF	Slight Injury	Mid-air	1 June 1943	FE498 with Hurricane 5678

Disciplinary Measures

Trainee pilots involved in accidents were subject to disciplinary action for infractions of RCAF flying orders as per Canadian Air Publications 100 (C.A.P. 100). Punishment for violation of C.A.P. 100 covered a wide range of choices. Some of which are listed below (there were others):

Log Book Endorsed	Running around airfield in full flying kit	Cease training
7 days orderly officer	Washing aircraft	Grounded
7 days orderly sergeant.	Two hours dual landings	Placed under close arrest
Write 1,000 lines	Retarded one course	

R.H. "Bob" Smith

YOWza – Images of recent sightings at Ottawa’s Macdonald-Cartier International Airport (MCIA) (YOW)

This page is contributed and coordinated by CAHS Ottawa Chapter member Rod Digney



Mirabel-based Nolinor has recently operated a number of flights through Ottawa, some of them covering the regular First Air routes. Nolinor’s 35-year-old Boeing 737-200 (c/n 23049), C-GTUK, is seen departing YOW’s Runway 25 on 18 February 2018. © Will Clermont



Direct-to-the-ship all-inclusive cruise/air packages are again being offered this winter by Celebrity Cruise Lines using First Air. Here, First Air’s specially marked Boeing 737-436 (c/n 25839), C-FFNM, heads for de-icing prior to departure to Florida on 10 February 2018. © John Buffam



Beech A100 (c/n B-201) King Air, C-GAVI, of Wabusk Air seen on 24 February 2018. The Moosonee-based company operates a small fleet of aircraft on charter and cargo flights in the James Bay area and is partnered with Ornge for the provision of medevac service. © Michael Judge



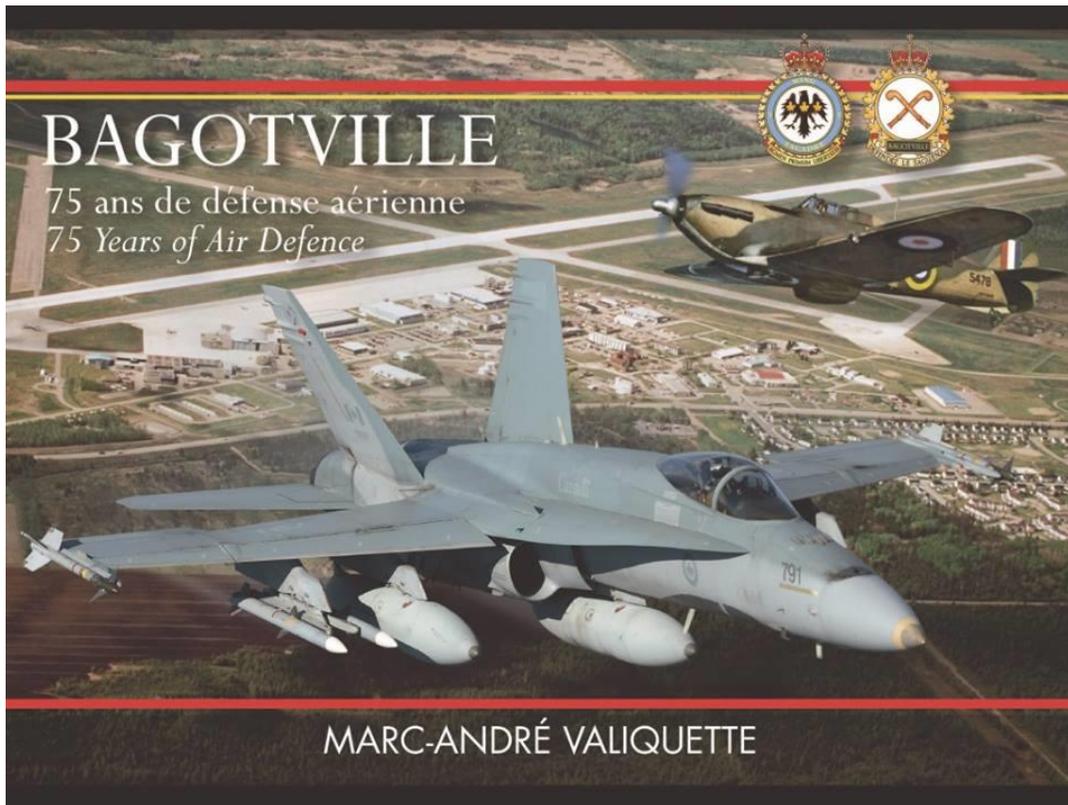
Macdonald-Cartier International Airport is host to many medevac flights, such as this one by Colorado-based AMR Air Ambulance with Gates Learjet 35A (c/n 325), N325NW, on 3 February 2018. © John Buffam



Above and Right: A surprise visitor to YOW on 21 February 2018 was Antonov Airlines An-124-100M-150 (msn 19530501006) *Ruslan*, UR-82008, that diverted here after poor visibility prevented its intended landing at Toronto (YYZ). After just a few hours on the ground, the giant cargo plane made a smoky takeoff from Runway 32 as it left for Montreal’s Mirabel Airport (YMX). © Bruce Brown



NEXT MEETING OF THE OTTAWA CHAPTER CANADIAN AVIATION HISTORICAL SOCIETY



BAGOTVILLE

75 Years of Air Defence

Marc-André Valiquette

Author and publisher Marc-André Valiquette returns to the CAHS Ottawa Chapter to talk about his latest book which explores the history of Canadian Forces Base Bagotville, Quebec from the Second World War to present day. This impressive work documents the aircraft, fighter squadrons, operational training units, base rescue flight, and related squadrons and units that have operated out of or in support of the air base. Copies of his book will be on sale after the presentation at a special price.

LOCATION: M. Bélanger Theatre, Canada Aviation and Space Museum, Rockcliffe

DATE/TIME: Thursday, 29 March 2018, 1930 Hours

LANDING FEES: \$1.00

Meetings include guest speakers, films, slide shows, coffee and donuts

Visitors and guests are always welcome